

OUR REF: 5941 – Stage 3

21 April 2023

The Chief Executive Officer
Gold Coast City Council
PO Box 5042
GOLD COAST MC 9729

Dear Sir / Madam,

RE: DEVELOPMENT APPLICATION – DEVELOPMENT PERMIT FOR RECONFIGURING A LOT – COMMUNITY TITLE SUBDIVISION (STAGE 3 – TO CREATE FOUR INDUSTRIAL LOTS; COMMON PROPERTY; PUBLIC STORMWATER LOT; PUBLIC OPEN SPACE CONSERVATION LOT AND NEW PUBLIC ROAD); AND OPERATIONAL WORK – CHANGE TO GROUND LEVEL AND VEGETATION CLEARING.

AT: LOT 504 HOMESTEAD DRIVE, STAPYLTON QLD 4207 (LOT 504 ON SP329485)

Gassman Development Perspectives (GDP) are pleased to lodge an application on behalf of the Applicant, FPI Queensland Pty Ltd, over the above property. The application seeks a development permit for Reconfiguring a Lot for Stage 3 of the overall Vantage Industrial Estate. The proposed reconfiguration will involve a community title subdivision seeking to create four industrial lots, common property, public stormwater lot, public open space conservation lot and new public road. The reconfiguration is to be supported by Operational Work for Change to Ground Level and Vegetation Clearing.

As such, the specific permit this application is seeking is as follows:

- Development Permit for Reconfiguring a Lot – Community Title Subdivision (Stage 3 – to create four industrial lots; common property; public stormwater lot; public open space conservation lot and new public road);
- Operational Work – Change to Ground Level; and
- Operational Work – Vegetation Clearing.

Please find attached to this correspondence the following:

1. Completed Development Assessment Form 1 and Land Owner's Consent form;
2. One copy of the Planning Assessment Report prepared by this office and dated April 2023, including:
 - a. Current Decision Notice MIN/2020/659;
 - b. Proposal Plans;
 - c. Code Assessment;

- d. Change to Ground Level Drawings;
- e. Stormwater Management Plan;
- f. Engineering Services Report;
- g. Landscape Intent Plan;
- h. Traffic Impact Assessment;
- i. Community Management Statement;
- j. Open Space Management Plan;
- k. Rehabilitation Management Plan; and
- l. Vegetation Management Plan.

The prescribed fee will be paid following receipt of the electronic fee invoice. A calculation of the fees has been determined as follows:

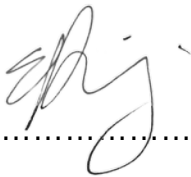
Table 1 – Application Fee Calculation				
Aspect	Description	Fee	Multiplier	Total Fee
Reconfiguring a Lot	Code Assessment	\$931.00 / lot (4 lots)	100%	\$3,724.00
Operational Work (Change to Ground Level)	Major Works	\$3,656.00	50% (more than one development type)	\$1,828.00
Operational Work (Vegetation Clearing)	Tree works linked to a development application (16 to 500 trees)	\$1,102.00	50% (more than one development type)	\$551.00
TOTAL:				\$6,103.00

We look forward to Council's consideration of this application. If you have any questions or require any further information regarding this matter, please do not hesitate to contact myself on the office detailed provided therein.

If you have any further queries, please do not hesitate to contact the undersigned.

Yours faithfully,

GASSMAN DEVELOPMENT PERSPECTIVES



ERIKA DI LUIGI
TOWN PLANNER

DEVELOPMENT APPLICATION

REQUESTING DEVELOPMENT PERMITS FOR:

- o RECONFIGURING A LOT – COMMUNITY TITLE SUBDIVISION (STAGE 3 – TO CREATE FOUR INDUSTRIAL LOTS AND COMMON PROPERTY; PUBLIC STORMWATER LOT; PUBLIC OPEN SPACE CONSERVATION LOT AND NEW PUBLIC ROAD);
- o OPERATIONAL WORK – CHANGE TO GROUND LEVEL; AND
- o OPERATIONAL WORK – VEGETATION CLEARING.

Vantage Industrial Estate

Lot 504 Homestead Drive, Stapylton

Lot 504 on SP329485

Prepared for FPI Queensland Pty Ltd

April 2023

VantageYatala



g a s s m a n
development
perspectives

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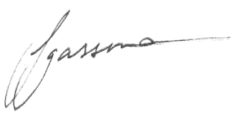
GDP DOCUMENT CONTROL

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Revision / Checking History

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1.	Erika Di Luigi	Fraser Gassman

Approval for Issue

Rev. No.	Name	Position	Signature	Date
1.	Fraser Gassman	Senior Town Planner		21 April 2023

Final Distribution

FPI Queensland Pty Ltd (Client)	1 electronic copy
Gold Coast City Council (Assessment Manager)	1 electronic copy
GDP File	1 electronic copy

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1.0 INTRODUCTION

Gassman Development Perspectives (GDP) has been engaged by FPI Queensland Pty Ltd (Applicant) to prepare a Code assessable Combined Development Application requesting a development permit for Reconfiguring a Lot – Community Title Subdivision (Stage 3 – to create four industrial lots; common property; public stormwater lot; public open space conservation lot and new public road); Operational Work – Change to Ground Level; and Operational Work – Vegetation Clearing at Lot 504 Homestead Drive, Stapylton (Lot 504 on SP329485) (formerly Lot 502 Homestead Drive, Stapylton - Lot 502 SP316137).

The proposal is to develop the subject land as Stage 3 of the approved industrial estate over the subject site (commonly referred to as 'Vantage'). The proposed industrial lots will range in allotment areas from 7,564m² to 76,350m². The proposal is unique in that it proposes a Community Title Scheme over the industrial lots, specifically to deliver small-scale park and amenity facilities for the immediate workforce ('Wellbeing Precinct'). All core infrastructure, such as roads and stormwater basins are still to be designed to Council specifications and dedicated as public assets.

An approval was originally granted by Gold Coast City Council on 6 May 2013 for a Preliminary Approval (section 242 of *Sustainable Planning Act 2009*), for making a Material Change of Use (Impact Assessment) to override the Planning Scheme for Industry Uses. The Preliminary Approval contained variations to the *Gold Coast Planning Scheme 2003* version 1.2, that amended the Yatala Enterprise Area Place Code, approved a Land Use Classification and Staging Plan, Type of Assessment and Tables of Development of the Yatala Enterprise Area Local Area Plan.

The M38 Industrial Estate Park Place Code is approved via this Preliminary Approval and incorporates specific tables of development, definitions, relevant codes, specific requirements and Land Use Classification / Precincts relevant to the subject site. The subdivision proposed is in accordance with the provision of this Place Code.

A full assessment of the relevant State, Regional and local planning instruments has been provided as part of this report. As a result of this assessment, the proposal is considered to be generally appropriate in the context of the location and the zoning of the subject site.

2.0 SUMMARY TABLES

Table 1 - Site Details	
Site Address	Lot 504 Homestead Drive, Stapylton (formerly Lot 502 Homestead Drive, Stapylton)
Real Property Description	Lot 504 on SP329485 (formerly Lot 502 on SP316137)
Site Area	469,600m ² (46.96ha)
Name of Owner(s)	Australand Industrial No. 89 Pty Limited
Local Authority	Council of the City of Gold Coast

Table 2 - State Planning Summary	
Regional Plan	South East Queensland Regional Plan 2017
Regional Plan Land Use Designation	Urban Footprint

Table 3 - Local Planning Summary	
Planning Scheme Zone	
N/A as varied by existing Preliminary Approval	
Preliminary Approval Documents	
- M38 Industrial Estate Place Code - M38 Industrial Park Land Use Classification and Staging Plan	
Preliminary Approval Land Use Classification	
- Precinct B – General Impact Business and Industry - Precinct C – Limited General Impact Business and Industry	
Preliminary Approval Stage Number	
3	
Defined Use and Approval sought	
- Development Permit for Reconfiguring a Lot – Community Title Subdivision (Vantage Stage 3 – to create four industrial lots; common property; public stormwater lot; public open space lot and new public road); and - Development Permit for Operational Work – Change to Ground Level.	
Level of Assessment	
Code Assessable	
Potential Applicable Council Codes	
- M38 Industrial Estate Place Code - Changes to Ground Level and Creation of New Waterbodies Code - Landscape Work - Reconfiguring a Lot - Vegetation Management - Works for Infrastructure - Bushfire Management Areas	

- Canals and Waterways
- Car Parking, Access and Transport Integration
- Cultural Heritage (Historic)
- Cultural Heritage (Indigenous)
- Flood Affected Areas
- Natural Wetland Areas and Natural Waterways
- Nature Conservation
- Rail Corridor Environs
- Road Traffic Noise Management
- Sediment and Erosion Control
- Service Roads (Pacific Motorway)
- Steep Slopes or Unstable Soils
- Unsewered Land

3.0 SITE DESCRIPTION AND SURROUNDING LAND USES

The overall subject site is irregular in shape and is situated on the southern side of Homestead Drive and Fairway Street and on the eastern side of Christensen Road. The site is located within the Gold Coast suburb of Stapylton (4207). The subject has only recently been registered and sealed, and was formerly known as Lot 502 Homestead Drive, Stapylton - Lot 502 on SP316137.

3.1 SITE LOCATION

In terms of locational context, the overall subject site is located approximately:

- 500 metres from the Pacific Motorway, Yatala north interchange;
- 5.5 kilometres from the Beenleigh CBD;
- Five kilometres from Beenleigh Transit Centre;
- 30 minutes from Southport CBD; and
- 30 minutes from Brisbane CBD.

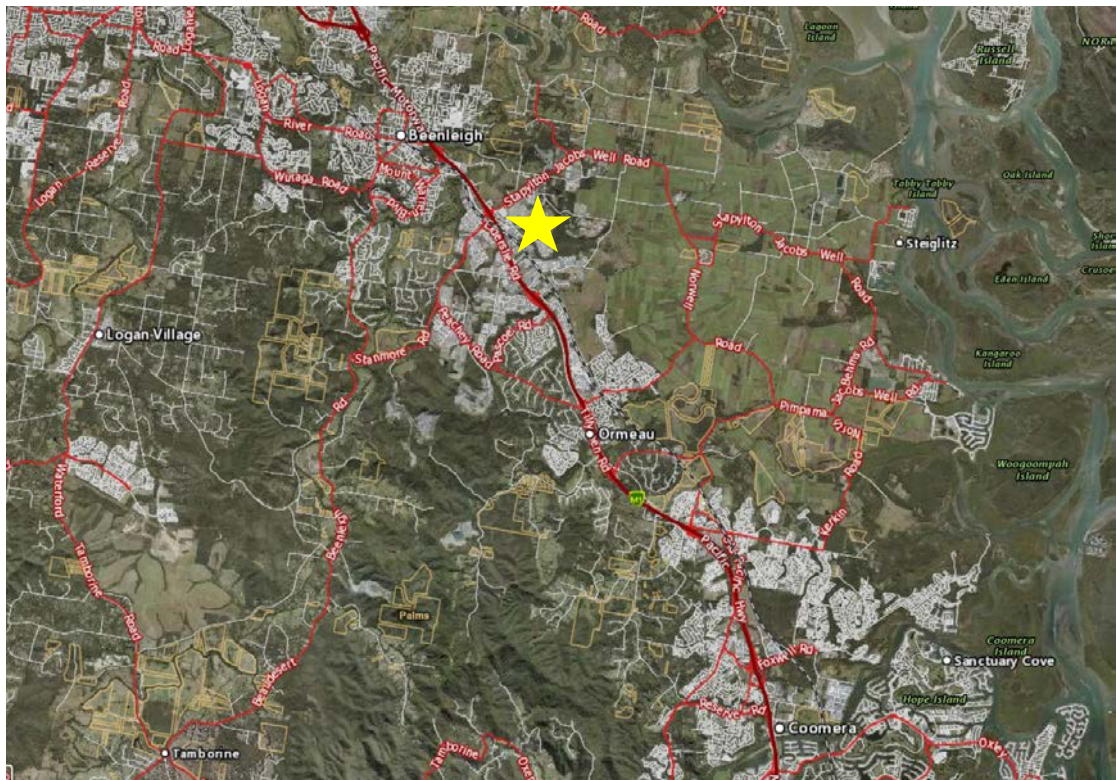


Figure 1 - Location Aerial (QLD Globe, 2023)



3.2 LAND OWNERSHIP AND ENCUMBRANCES

The subject site consists of a single freehold allotment owned by Australand Industrial No. 89 Pty Limited.

There are a number of approved easements over the subject site which were established as part of Stage 2 of the overall Vantage Industrial Estate (refer to most recent approval MIN/2022/245 for further details).

3.3 EXISTING LAND USES

The subject land is vacant; predominantly cleared; and resembles a civil construction site as it has been provisionally prepared to accommodate this industrial subdivision (and adjoining Stage 1 and 2 areas) through the undertaking of bulk earthworks and vegetation clearing.

3.4 SURROUNDING LAND USES

To the immediate north west of the site is Stapylton Jacobs Well Road and farming land which is predominantly flood-prone. Further north lies the BP Service Centre and Shell service station along Henry Hester Drive.

The site immediately abuts a range of industrial uses to the north which are predominantly included within Stage 1 of the Vantage Industrial Estate. In addition, other industrial uses are present along De Bortoli Road, Emeri Street, and Angel Road such as Dick Johnson Racing,

Fabtex and Yatala Landscape supplies. Two large warehousing sites are also located to the immediate north of the site.

Centrally located, the site adjoins a freehold lot that accommodates an existing industrial operation for a company called Amgrow that undertakes various agricultural focussed soil conditioning and fertiliser activities as well as storage and distribution of their product.

To the immediate east of the site lies the Stapylton land-fill and recycling centre which is heavily buffered from the site with vegetation. Further east and south-east along Quarry Road and Rossmanns Road lie the Stapylton Landfill and a deactivated quarry.

To the west of the subject side including west of Christensen Road, lie a range of low and medium impact industrial uses. To the north-west of the site, lying closest to Stapylton Jacobs Well Road is 'The Lodge' residential estate.

Further south west lies the Henry Hester service road / Stapylton-Jacobs Well interchange (Exit 38) for the Pacific Motorway. Beyond the Motorway to the immediate west lie more industrial uses such as the Caterpillar, Carlton United Brewery, etc which form part of the Yatala Enterprise Area.

3.5 FRONTAGE AND ACCESS

The subject site is bound by Homestead Drive and Fairway Street to the north, Christensen Road to the west and Christensen Road South to the south-west.

Formal access only exists off Homestead Drive.

3.6 TOPOGRAPHY AND VIEWS

The overall subject site is quite undulating, with a strong fall from east to west. The subject site does not hold any significant views.

3.7 FLOODING AND STORMWATER

The subject site is not subject to any flooding.

3.8 WETLANDS/WATERWAYS

No significant wetlands or waterways exist over the subject land.

3.9 CONSERVATION /HERITAGE AREAS

There are no buildings or parks within the immediate proximity of the subject site that are conservation or heritage areas.

3.10 RELEVANT APPROVALS

MIN/2020/659 – Overarching Preliminary Approval

On 6 May 2013, Council approved a Preliminary Approval for making a Material Change of Use to override the Planning Scheme for industry uses is associated with this subject site (most recent minor change approved 8 December 2020). This Preliminary Approval includes an endorsed Place Code and Land Use Classification Plan and supports industrial land uses and industrial subdivision within the relevant industrial land use precincts. An extract of the current approved Plan of Development is outlined in **Figure 3** below:

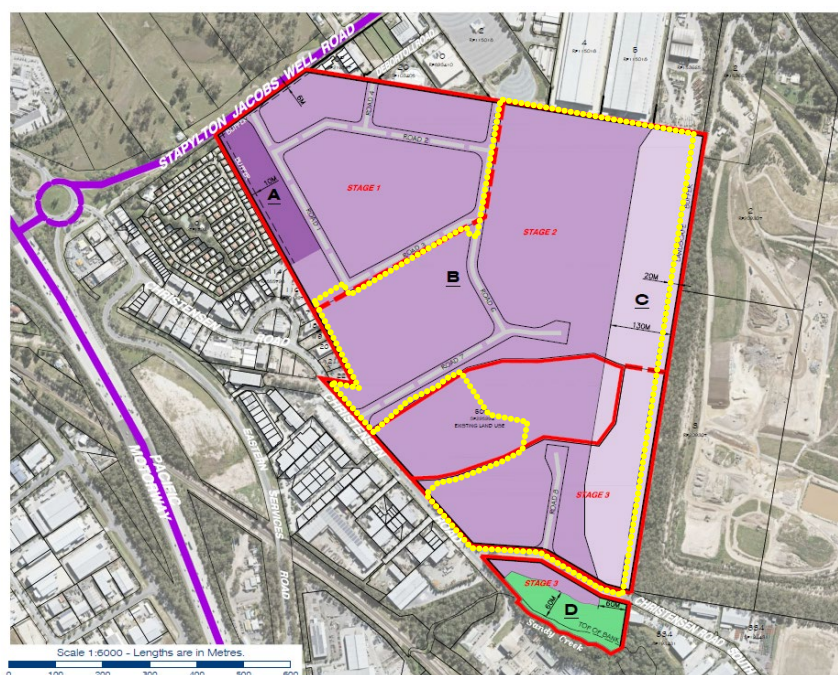


Figure 3 – Preliminary Approval Plan of Development extract – MIN/2020/659 (GDP File, 2023)

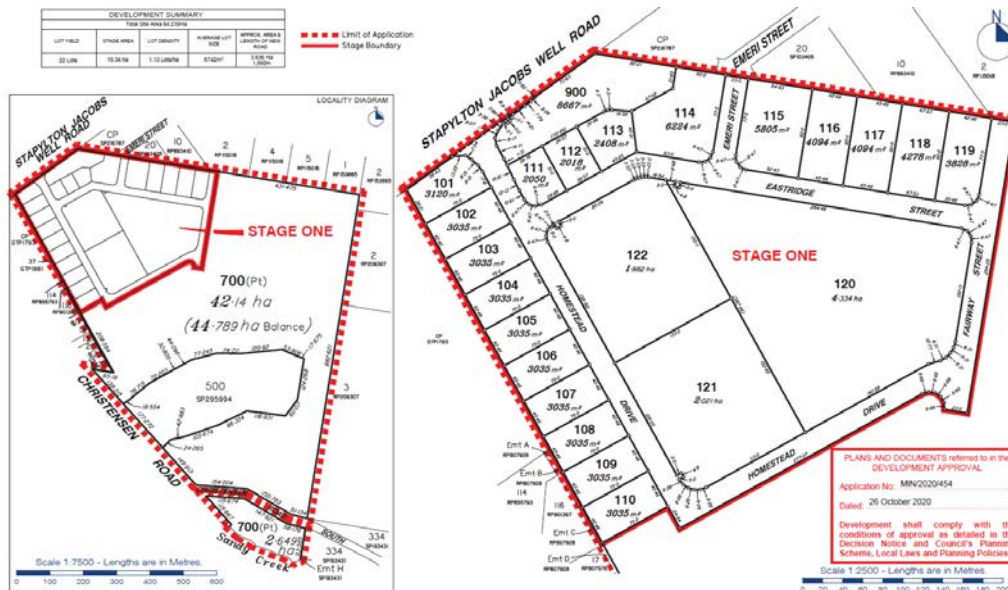
As shown within **Figure 3** above, the proposed Stage 3 development area is wholly located within the Precinct B and Precinct C areas. A copy of this most recently approved version of the Preliminary Approval is included at **Appendix B** for Council's convenience.

OPW201801218 and OPW201801219

This application involved the creation of large scale flat industrial pads and facilitated vegetation clearing of the subject site with the exception of a 20-metre landscape buffer along the eastern boundary adjoining the Council landfill. All the works associated with this approval have been completed.

ROL/2020/123

This application represents the first stage of subdivision for the Vantage Industrial Estate. The application was for a community title subdivision seeking to divide one lot into 22 lots in preparation for the future industrial uses envisaged under the Preliminary Approval. The application was approved 19 February 2021. A number of minor change applications were subsequently approved, with the most recent approval being MIN/2020/454. An extract of the current approved Plan of development for Stage 1 is provided in **Figure 4** below:



- Realignment of the Stage 2 boundary to exclude the Health and Wellbeing precinct, so that it may be reconfigured and delivered wholly as part of Stage 3 (this application).
- Realignment of 'New Road 2' fronting Lot 202 and 203 to facilitate a road extension into the future Stage 3 area. 'New Road 2' will no longer end in a cul-de-sac in front of Lot 202 and will instead provide access to future Stage 3 (which will no longer propose primary access via Christensen Road – discussed further in Sections 4.4 and 7.5 below).
- Provision of a temporary easement over Lot 203 in favour of Lot 202 which will enable access to Lot 202 while awaiting the delivery of the road network for Stage 3.
- Division of Stage 2 into two sub-stages (Stage 2A and Stage 2B) to allow sub-stage 2A to be delivered immediately, with sub-stage 2B to be delivered at a later date that aligns more closely with the delivery of roads as part of future Stage 3.

An extract of the proposed amended layout for Stage 2 is provided in **Figure 6** below.

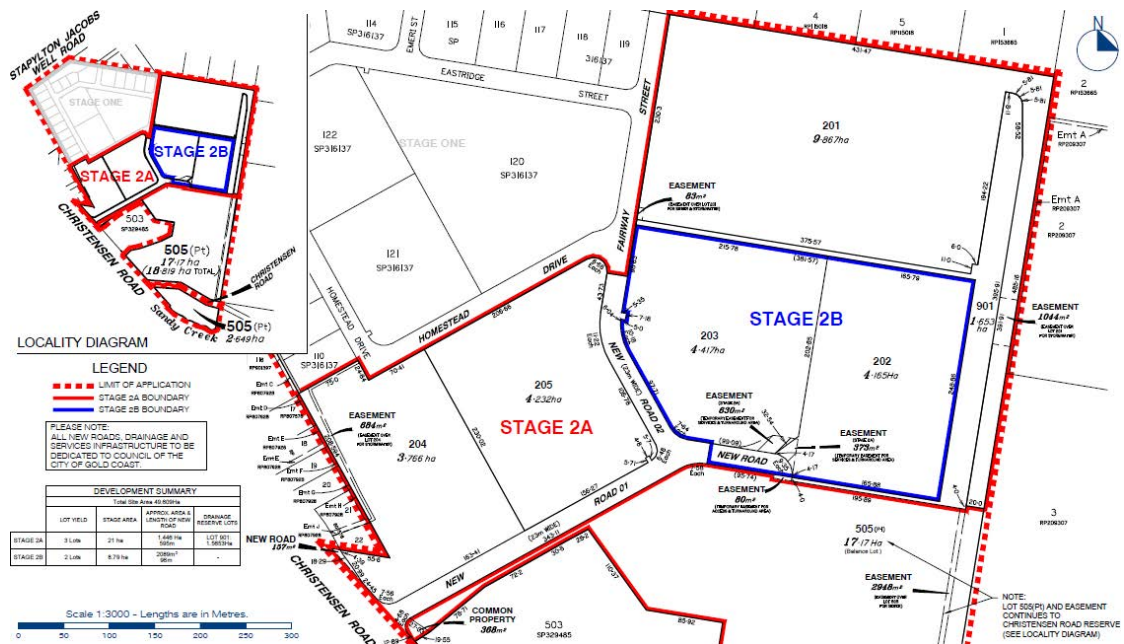


Figure 6 – Proposed amended Stage 2 layout – MIN/2023/142 (GDP file, 2023)

ROL/2022/50

On 11 August 2022, Council approved a boundary realignment over the subject site (formerly known as Lot 502 Homestead Drive, Stapylton (Lot 502 on SP316137)) and 82 Christensen Road South, Stapylton – Lot 503 on SP329 485 (formerly Lot 500 SP295994), resulting in additional land being allocated to the Vantage Industrial Estate. Following this boundary realignment, changes to the overall masterplan applying to approved Stage 2 and future Stage 3 (this application) of the Vantage Industrial Estate were required to deliver a more logical and efficient lot layout. This drove the recent lodgement of MIN2023/142 for Stage 2 and changed the proposed access to the Stage 3 from Christensen Road to the proposed

road extension from Stage 2. This matter is discussed further in *Sections 4.4 and 7.5* below. An extract of the approved boundary realignment is shown in **Figure 7** below.

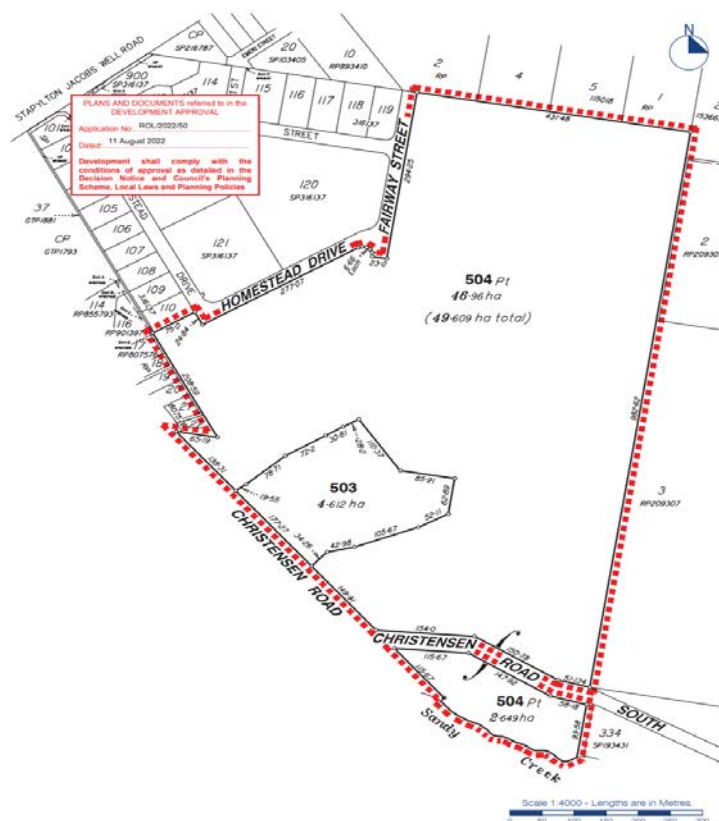


Figure 7 – Approved boundary realignment – ROL/2022/50 (GDP file, 2023)

MIN/2023/64

On 24 February 2023 a development application was submitted to Council seeking a minor change to Preliminary Approval MIN/2020/659. This application sought a minor change to the approved Land Use Classification and Staging Plan to reflect the proposed changes to Stage 2 and future Stage 3 (this application) driven by boundary realignment ROL/2022/50. In particular, the application seeks realignment of the Stage 2 and 3 boundaries, as well as the removal of 'Road 8' previously providing access to Stage 3 from Christensen Road, and the subsequent extension of 'New Road 2' which is to now provide access to Stage 3 via Stage 2 only.

This application also included correction of some legacy errors within the approved documentation, namely inconsistencies between the approved acoustic reporting and conditions, and historical references to a 'Stage 4' which no longer exists.

This application is currently undergoing assessment with Council and will be considered concurrently with this application, although it is understood that MIN/2023/64 must be approved prior to this application being approved.

4.0 THE PROPOSED DEVELOPMENT

4.1 OVERVIEW

The proposed development seeks to formalise Stage 3 of the Vantage Industrial Estate. Stage 3 will consist of four industrial lots; common property; public stormwater lot; public open space conservation lot and new public road. The proposed development layout is shown below in **Figure 8** and is also provided within **Appendix C**.

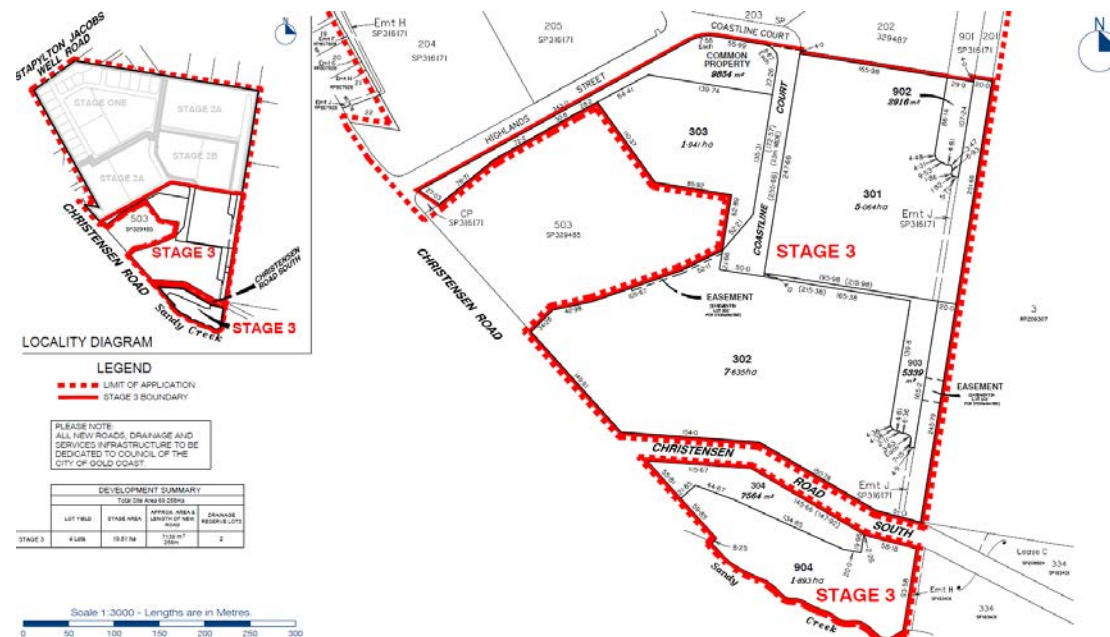


Figure 8 – Proposed Plan of Development (GDP File, 2023)

4.2 RECONFIGURING A LOT – COMMUNITY TITLE SUBDIVISION

The proposed lot details are provided within **Table 4**.

Table 4 – Proposed Lot Details			
Lot	Area (hectares)	Purpose	Access and services
301	5.06	Industrial	New road (Coastline Court)
302	7.64	Industrial	New road (Coastline Court)
303	1.94	Industrial	New road (Coastline Court)
304	0.76	Industrial	Christensen Road South
902	0.29	Public Open Space (Stormwater)	Easement J
903	0.53	Public Open Space (Stormwater)	New road (Coastline Court)
904	1.89	Public Open Space (Conservation)	Christensen Road South

Common Property	0.99	Private park and amenities	Stage 2 Coastline Court and New road (Coastline Court)
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Whilst providing Planning Scheme compliant lots and layout design, the proposed subdivision will be subject to a CTS. A copy of the proposed Community Management Scheme is provided within **Appendix J**.

The tenure arrangements sought are to allow for a unique park and amenity area to be established with the proposed park lot to service the immediate workforce of the estate. As well as providing beautified open space and lunch setting/seating areas, a range of fitness equipment will be provided. This ties in to envisaged walking and running circuits around the estate that will utilise the standard Council footpath within proposed road reserves.

4.3 CHANGE TO GROUND LEVEL

The proposed subdivision is supported by a detailed earthworks strategy for the subject site that will provide at grade access to each lot and ready to build industrial development pads.

4.4 SERVICING AND ACCESS

Each new lot will be serviced by reticulated water, sewer, power and telecommunications as detailed within the Engineering Services Report (**Appendix G**). Sufficient frontages are available to allow future industrial crossovers to be established to the new road in accordance with Council requirements.

Access to Lots 301, 302 and 303 within Stage 3 is provided from one external location, being Stage 2 (via Coastline Court). Lot 304 is to be accessed via Christensen Road South. Internally, Stage 3 proposes the extension of Coastline Court to service the proposed lots. It is acknowledged that historically (as per the preliminary approval), part of Stage 3 was also to be accessed via a cul-de-sac off Christensen Road South, however, due to the recent boundary realignment (ROL/2022/50), the envisaged layout and access to Stage 3 has been amended to a more logical layout, and the cul-de-sac has been removed. This has driven the recent minor change to the preliminary approval (MIN/2023/64), which is currently undergoing assessment with Council.

All new roads proposed are that of an Industrial Collector standard with a 23 metre road reserve, regardless of the fact some only require Industrial Access standard. This is a commonly sought-after outcome within new industrial estates to ensure safe vehicular movements and parking for both heavy and light vehicles.

Two stormwater basins are proposed within Proposed Lot 903 and 903, designed to achieve compliance with Council Land Development Guidelines. This is proposed to be dedicated to Council as a future public asset. Access to the basins is achieved via an access handle on the southern end of Lot 301 and an access easement (Easement J) through proposed Lot 301 and 302.

4.5 PARK, AMENITIES AND LANDSCAPING

The proposed development includes a park and amenities (Health and Wellbeing Precinct) within common property that will service the entire Vantage industrial estate. The “Health and Wellbeing Precinct”, the first of its kind implemented within an industrial estate in Queensland, will include embellishments and facilities such as park shelters, gym equipment and a basketball court to service the immediate industrial work force. Provision of such facilities are lacking in many industrial estates across the Yatala Enterprise Area (YEA), which does not allow workers to leave their workplace and disconnect during a break in an outdoor, well landscaped setting. The “Health and Wellbeing Precinct” and all park embellishments are to remain under the ownership and management of the future Body Corporate of the industrial estate, as per the approved Community Management Statement. For the avoidance of any doubt, no part of this land will be dedicated to Council or require any future management/maintenance from Council.

Public landscaping will be provided along the frontage to Highlands Street and Coastline Court in accordance with Council’s standard requirements, including footpaths, street trees and turfed verge. Future landscaping of private lot batters and road frontages is to be undertaken by future lot owners as part of subsequent use and building approvals over each lot.

A vegetated buffer zone consisting of an undisturbed 10-metre existing vegetation strip and 10-meter landscaped strip (totalling 20 metres), will be provided along the eastern boundary of Stage 3, compliant with the requirements of the Preliminary Approval.

All public and private landscape works are further detailed within the Landscape Intent Plan provided in **Appendix H**.

4.6 OPEN SPACE CONSERVATION

The development proposes to dedicate an area of public open space to Council for conservation purposes. Proposed Lot 904 is located to the south of Christensen Road South and comprises approximately 1.89ha adjoining Sandy Creek. The area is being dedicated as open space to ensure the ecological functionality and viability of the Sandy Creek corridor is maintained, as well as seeking to protect areas identified as Of Concern Regional Ecosystems. Notably, the OSA will also maintain the koala habitat area corridor that currently exists following Sandy Creek to the east, connecting the site to a larger area of mapped koala habitat area. Rehabilitation works are also proposed to occur within Lot 904 to improve the quality of native vegetation and habitat within the 60 metre buffer to Sandy Creek.

For further details, please refer to the Open Space Management Plan and Rehabilitation Management Plan provided within **Attachment K** and **L**.

4.6 SUMMARY OF SUPPORTING SPECIALIST REPORTS/DOCUMENTATION

In support of this development application, the following specialist information has been commissioned and accompanies this planning assessment report.

Table 5 - Supporting Specialist Reports/Documentation			
CATEGORY	CONSULTANT	TITLE OF DOCUMENTS	LOCATION
Preliminary Approval	Gassman Development Perspectives	Current Decision Notice MIN/2020/659	Appendix B
Plans and Drawings	Gassman Development Perspectives	Proposed ROL Plan	Appendix C
Code Assessment	Gassman Development Perspectives	Code Assessment	Appendix D
Engineering	Gassman Development Perspectives	Change to Ground Level Drawings	Appendix E
		Stormwater Management Plan	Appendix F
		Engineering Services Report	Appendix G
Landscape	Gassman Development Perspectives	Landscape Intent Plan	Appendix H
Traffic	Rytenskild Traffic Group	Traffic Impact Assessment	Appendix I
Community Title	Fraser's Property Australia	Community Management Statement	Appendix J
Environmental	Gassman Development Perspectives	Open Space Management Plan	Appendix K
		Rehabilitation Management Plan	Appendix L
		Vegetation Management Plan	Appendix M

5.0 STATE AND REGIONAL PLANNING FRAMEWORK ASSESSMENT

5.1 STATE LEGISLATION

5.1.1 PLANNING ACT 2016 (PA)

The PA is the principal Act legislating planning and development in Queensland. The purpose of the PA is to establish an efficient, effective, transparent, integrated, coordinated, and accountable system of land use planning, development assessment and related matters that facilitates the achievement of ecological sustainability.

Ecological sustainability is a balance that integrates:

- (a) the protection of ecological processes and natural systems at local, regional, state, and wider levels; and
- (b) economic development; and
- (c) the maintenance of the cultural, economic, physical and social wellbeing of people and communities.

The proposed development seeks approval for the following aspects of assessable development defined under Schedule 2 of the PA:

- Reconfiguring a Lot; and
- Operational Work.

Section 45(3) of the PA specifies those matters that must be addressed as part of any code assessable development application. This includes:

- assessment against the assessment benchmarks in a categorising instrument for the development; and
- having regard to any matters prescribed by regulation.

The information contained in this report and the development application addresses all of the above matters (where relevant) and is sufficient for Council to make an informed assessment of the proposed development. It is noted that a 'categorising instrument' is defined under the PA as a regulation or local categorising instrument that does any or all of the following—

- categorises development as prohibited, assessable or accepted development;
- specifies the categories of assessment required for different types of assessable development;
- sets out the matters (the assessment benchmarks) that an assessment manager must assess assessable development against.

In this case, the approved M38 Industrial Estate Place Code is the applicable categorising instrument and contains aspects of the proposed development.

5.2 SUBORDINATE LEGISLATION

5.2.1 PLANNING REGULATION 2017

The PR supports the principal planning laws by outlining the mechanics for the operation of the PA. It outlines all planning processes, including:

- the categorisation of development applications and the matters development applications must consider (in addition to applicable assessment benchmarks);
- identification of the assessment manager and referral agencies for development applications; and
- the matters for a particular development that trigger state interests.

Section 27(1) of the PR specifies the following matters required to be considered for a code assessable development application:

- the matters stated in Schedules 9 and 10 of the PR for the development; and
- if the prescribed assessment manager is a person other than the chief executive (i.e. the Local Government)—
 - the regional plan for a region, to the extent the regional plan is not identified in the Planning Scheme as being appropriately integrated in the Planning Scheme; and
 - the State Planning Policy, to the extent the State Planning Policy is not identified in the Planning Scheme as being appropriately integrated in the Planning Scheme; and
 - for designated premises—the designation for the premises; and
- any temporary State Planning Policy applying to the premises; and
- any development approval for, and any lawful use of, the premises or adjacent premises; and
- the common material.

Section 31(2) of the PR goes on to state that:

- an assessment manager may consider a matter mentioned in Section 27(1) only to the extent the assessment manager considers the matter is relevant to the development; and
- if an assessment manager is required to carry out code assessment against assessment benchmarks in an instrument stated in Section 27(1), this section does not require the assessment manager to also have regard to the assessment benchmarks.

It is noted that Schedule 9 of the PR relates to Building Work under the *Building Act 1975*, and Schedule 10 relates to all other assessable development.

The abovementioned matters are addressed in the following sections.

5.2.1.1 REFERRAL REQUIREMENTS

Schedule 10 of the PR identifies the assessment benchmarks and referral arrangements that apply to particular types of development. Assessment benchmarks and matters a referral agency must consider for particular types of development generally includes the State Development Assessment Provisions (SDAPs).

The State Assessment and Referral Agency (SARA) also provides development assessment mapping to assist in the determination of referral requirements.

Of note, the subject site is located within four state mapping areas that may require referral. These are discussed in further details below to determine their applicability to the proposed development. Please note that SARA's mapping has not yet been updated to reflect the new lot layout following approved boundary realignment ROL/2022/50.

Queensland Waterways for Waterway Barrier Works

The subject site is burdened by multiple mapped state waterways of low and moderate risk levels, as shown in **Figure 9** below.

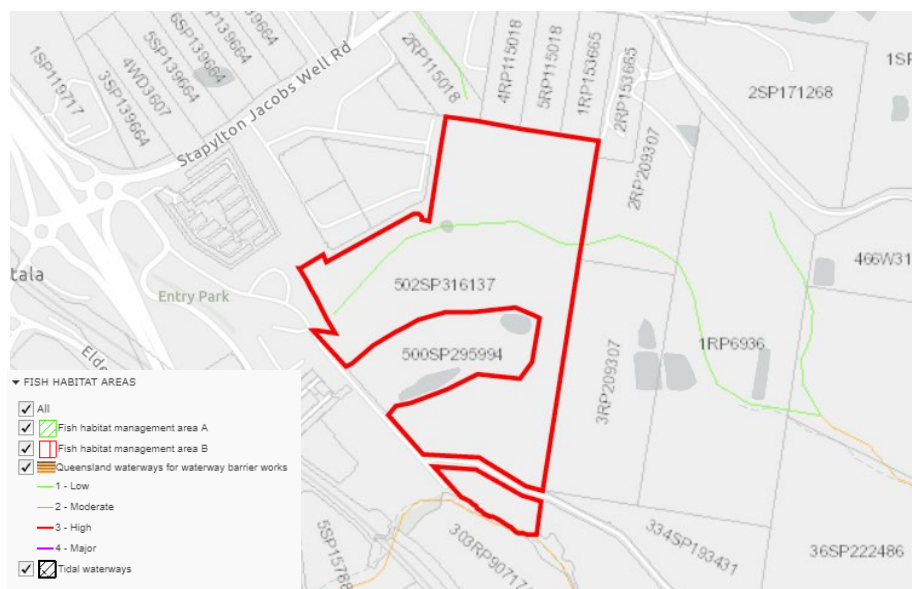


Figure 9 – Mapped state waterways impacting the subject site (SARA mapping, 2023)

A single mapped low-risk waterway traverses the subject site from east to west. However, the mapped waterway does not intersect the proposed Stage 3 works area in any way. It is also noted this waterway has been removed by historic approvals over the subject site. Therefore, this matter does not trigger referral.

Water Resources

The subject site is mapped within the Water resource planning area boundaries, as shown in **Figure 10** below.

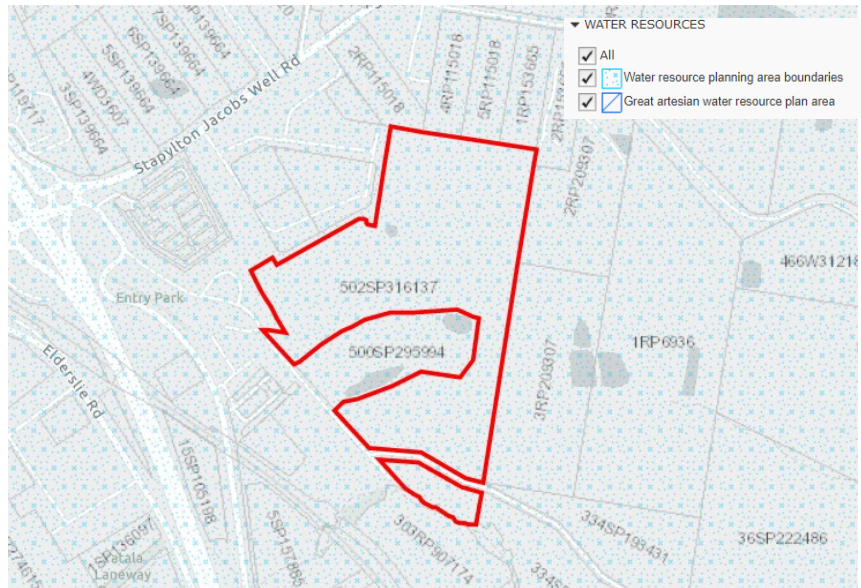


Figure 10 – Mapped water resource planning area boundaries impacting the subject site (SARA mapping, 2023)

However, the application does not involve Operational Work that involves taking or interfering with water, the removal of quarry material from a watercourse or lake, referable dams, or the construction of a levee. Therefore, the application does not require referral under Schedule 10, Part 19, Division 1, 2, 3 or 4 of the PR.

Regulated Vegetation

The subject site is mapped as having both Category X and B (least concern and of concern) regulated vegetation mapping layers, as shown in **Figure 11**.

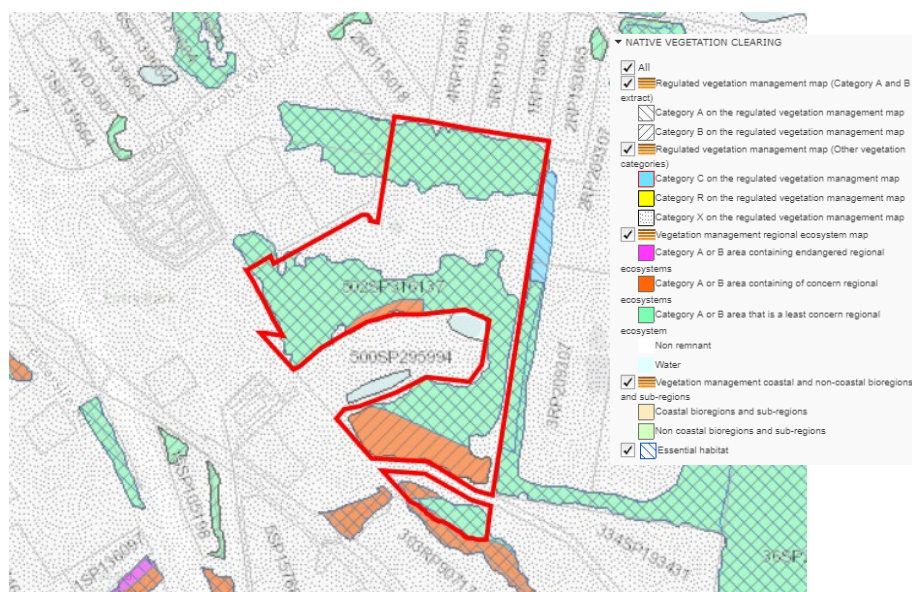


Figure 11 – Mapped regulated vegetation (SARA mapping, 2023)

As mentioned earlier within this report, the developable extent of the subject site under the Preliminary Approval has been lawfully cleared and is no longer subject to any vegetation within these mapped areas. The proposal does include provision for vegetation clearing, which is required along road reserve and 'left over' trees in the historical Amgrow lot, however, these are all within Category X areas. Based on the above, this matter does not trigger referral.

Koala Habitat Area

The subject site is mapped as having Core koala habitat areas, as shown in **Figure 12**.

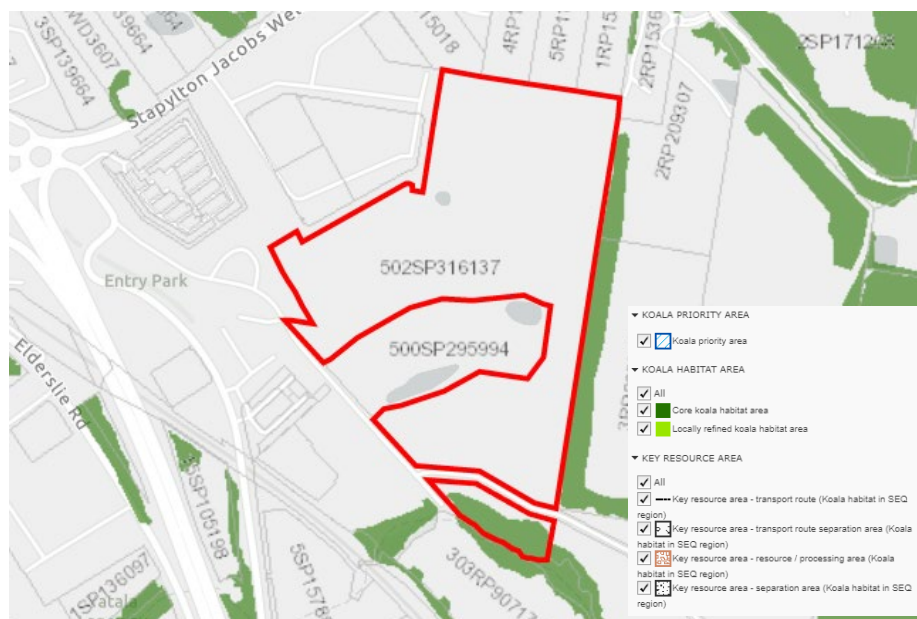


Figure 12 – Mapped Koala habitat areas (SARA mapping, 2023)

As mentioned earlier within this report, the developable extent of the subject site under the Preliminary Approval has been lawfully cleared and is no longer subject to any vegetation and in turn, any koala habitat. Remaining vegetation on the southern side of the subject site will be retained in accordance with the existing Preliminary Approval. Notwithstanding the above, these approvals were given prior to 7 February 2020, which means this trigger would not apply regardless.

Therefore, no impact to koala habitat will result from the proposed development. Based on the above, this matter does not trigger referral.

Threshold Triggers

The PR also identifies a number of uses, works and lot reconfigurations that can be triggered for referral based on their size, type or intensity.

Given the subject site is 46.96 hectares and proposes future industrial lots and significant earthworks, the development application will exceed thresholds identified within Schedule 20 of the PR, specifically items 42 and 43. Given the above, this development application will

require referral under Schedule 10, Part 9, Division 4, Subdivision 1, Table 1 – Aspect of development stated in Schedule 20.

Referral Summary

In summary of the above, the following matters are triggered for referral:

- Schedule 10, Part 9, Division 4, Subdivision 1, Table 1 – Aspect of development stated in Schedule 20.

5.3 STATE PLANNING INSTRUMENTS

5.3.1 STATE PLANNING POLICY

The Queensland State Planning Policy (SPP) is a key component of Queensland's planning system. The SPP expresses the state's interests in land use planning and development. Promoting these state interests through plan making and development decisions of state and local government, has the purpose of securing a liveable, sustainable and prosperous Queensland.

The SPP applies, to the extent relevant, when:

- 1) making or amending a local planning instrument;
- 2) making or amending a regional plan;
- 3) designating premises for infrastructure;
- 4) local government is assessing a development application, if its planning scheme has not yet appropriately integrated the relevant SPP state interest policies; or
- 5) an assessment manager or referral agency other than local government is assessing a development application.

As this development application will be assessed by Council of the City of Gold Coast as assessment manager, point 4 above is relevant in this instance.

Depending on how well the state interests are integrated into a planning scheme, different parts of the SPP can be applicable to a development application and require assessment. More specifically, Part B of the SPP (Application and operation) identifies that:

- Part C (Purpose and guiding principles) and Part D (The State interest statements) require assessment by development applications **requiring referral agency assessment**;
- Part C, D, and E (State interest policies and Assessment benchmarks) require assessment by development applications **where particular State interest policies are not yet appropriately integrated into the applicable planning scheme**.

Section 2.1 of the Planning Scheme identifies that the state interest policies not yet appropriately integrated into the planning scheme are 'Natural hazards, risk and resilience (coastal hazards)'.

The subject site is not impacted by any matters regarding coastal hazards, and therefore, an SPP assessment is not considered necessary in this instance.

5.3.2 SOUTH EAST QUEENSLAND REGIONAL PLAN 2017

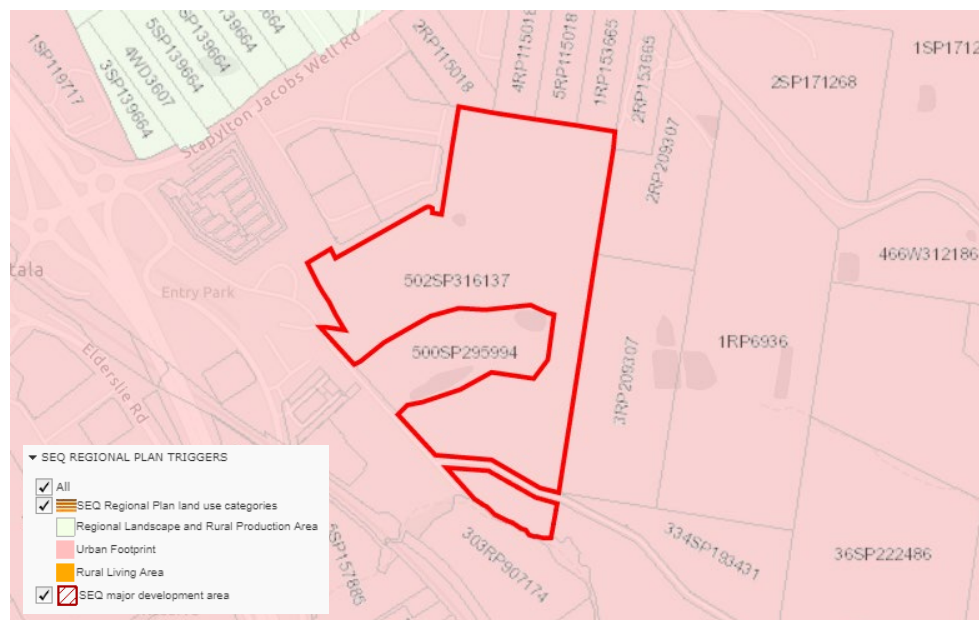


Figure 13 – South East Queensland Regional Plan 2017 mapping (SARA mapping, 2023)

The subject site is located wholly within the Urban Footprint under the *South East Queensland Regional Plan 2017*, as shown in **Figure 13**.

The intent of the Urban Footprint is to encourage land uses which are defined as 'Urban Purposes' for residential, industrial and commercial use. The development located within the Urban Footprint is within the required intent of this classification. It is considered that the development is consistent with the intent of the Urban Footprint as it represents an urban use within an urban area.

5.3.3 STATE DEVELOPMENT ASSESSMENT PROVISIONS (SDAP)

SDAP set out the matters of interest to the state and provides the criteria for assessing development applications where the State government is the assessment manager or a referral agency.

Referral is triggered for thresholds exceeded under Schedule 20 of the PR. Therefore, the proposed development will require any assessment against State code 6: Protection of state transport networks. This assessment is provided as part of the Traffic Impact Assessment, which has been provided within **Appendix I**.

6.0 LOCAL PLANNING ASSESSMENT

6.1 OVERVIEW

The following is a review of the Local Planning Instruments that apply to the subject site and the proposed development.

6.2 RELEVANT LAND USE CLASSIFICATION / PRECINCTS

As per the current M38 Industrial Estate Place Code this land is divided into the following Land Use Precincts:

- Precinct A – Low Impact and Service Industry;
- Precinct B – General Impact Business and Industry;
- Precinct C – Limited General Impact Business and Industry; and
- Precinct D – Open Space/Reserve.

Please refer to **Figure 14** below, showing proposed development (Stage 3) located within both Precincts B and C.

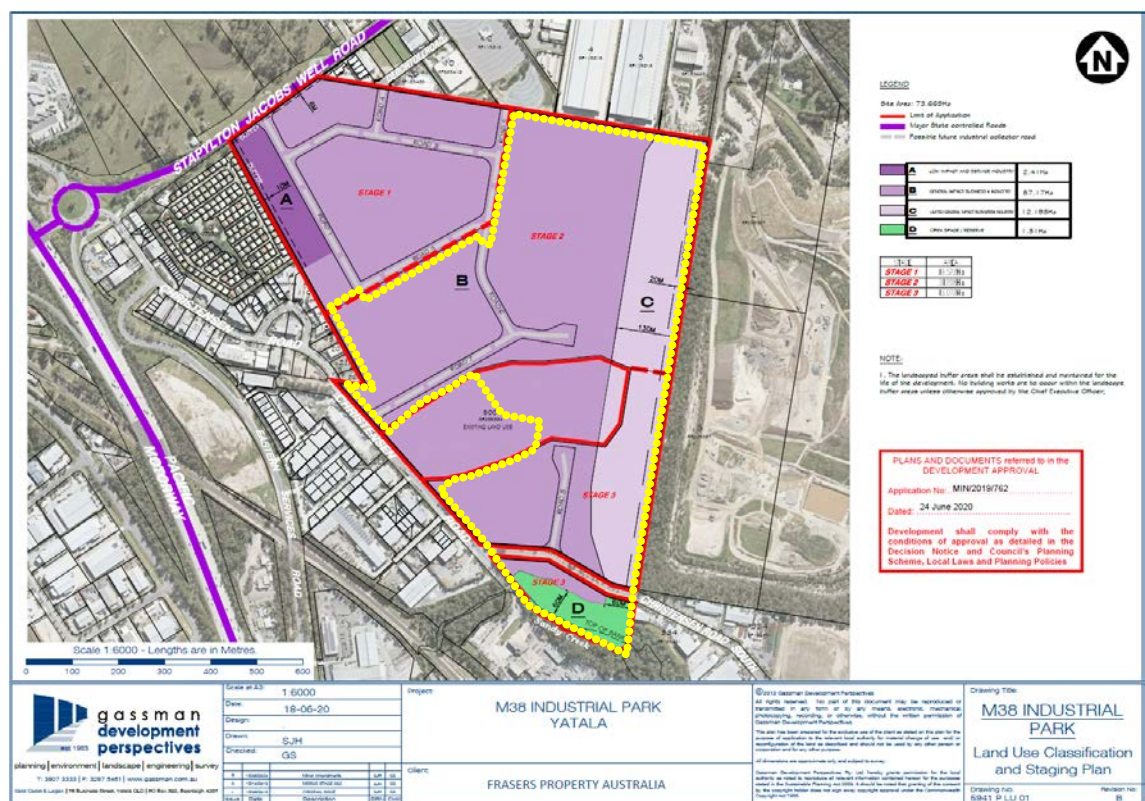


Figure 14 – Approved Land Use Classification and Staging Plan - MIN/2020/659 (GDP file, 2023)

6.3 LEVEL OF ASSESSMENT

The M38 Industrial Estate Place Code approved variations to the *Gold Coast Planning Scheme 2003*, version 1.2, that affected the Place Code, Type of Assessment and Tables of Development of the Yatala Enterprise Area Local Area Plan, in determining the level of assessment for development applications.

The M38 Industrial Estate Place Code was accordingly approved that incorporated the new tables of development and applies to this development application. As per Table F of the Place Code, Reconfiguring a Lot that entails only a Community Title Subdivision is considered Code Assessable within Precincts B and C.

6.4 M38 INDUSTRIAL ESTATE PLACE CODE

The proposed development is located within Precinct B - General Impact Business and Industry and Precinct C - Limited General Impact Business and Industry.

The Place Code Intent of Precinct B (General Impact Business and Industry) states:

The majority of the land-uses promoted in this precinct, which covers the bulk of the developed site, are consistent with those itemised within the Precinct 1 land use designation of the YEA LAP. Those that are not, are industrially related and befit the future development prospects of the site and the YEA LAP generally. The ultimate intent of this precinct is to promote the land uses and allotment sizes that would ordinarily be located within Precinct 1 land located within the YEA LAP. It is also noted that the proposed subdivision lot-size parameters from Precinct 1 of the YEA LAP have been adopted within this precinct.

The Place Code Intent of Precinct C (Limited General Impact Business and Industry) states:

The land-uses promoted in this precinct are similar to that of Precinct B and Precinct 1 of the YEA LAP. This precinct is however responsive to established nearby heavy industrial uses and mindful of likely odour impacts and therefore food industry and related uses are not envisaged within this precinct.

The Stage 3 subdivision will ensure the intent of each precinct can be achieved through delivery of development ready, serviced lots to provide for future land uses envisaged within each precinct.

6.5 IDENTIFIED CONSTRAINTS AND OVERLAYS

The following is a summary of the relevant identified overlays that apply to the subject land. Their applicability to the proposed development is discussed further in **Table 6** below.

6.5.1 POTENTIAL BUSHFIRE HAZARD AREAS OVERLAY MAPPING (OM10-1)

The subject site is located within the Potential Bushfire Hazard Areas overlay mapping identified in the category of low and medium bushfire hazard areas, reference is made to **Figure 15** below for relevant mapping.

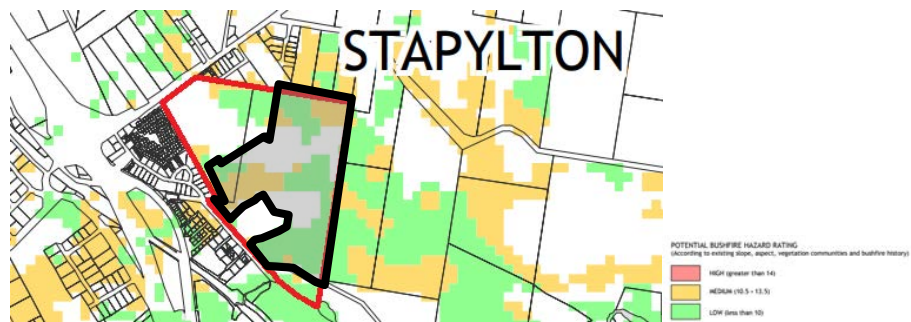


Figure 15 - Potential Bushfire Hazard Overlay Mapping (OM10-1) (Council mapping, 2022)

6.5.2 NATURAL WETLAND AND WATERWAYS AREAS OVERLAY MAPPING (OM11 - 1)

The subject site is located within the Natural Wetland and Waterways Areas overlay identified as 'other natural waterways', reference is made to **Figure 16** below for relevant mapping.

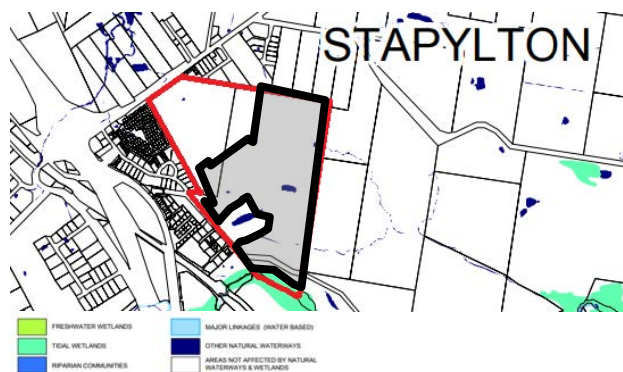


Figure 16 - Natural Wetland and Waterway Areas Overlay Mapping (OM11-1) (Council mapping, 2022)

6.5.3 ACID SULPHATE SOILS OVERLAY MAPING (OM14-1)

The subject site is located within the Acid Sulphate Soil Hazard Areas Overlay Mapping. Reference is made to **Figure 17** below for relevant mapping.



Figure 17 - Acid Sulphate Soil Hazard Areas Overlay Mapping (OM14-1) (Council mapping, 2022)

6.5.4 NATURAL HAZARD (FLOOD) MANAGEMENT AREAS OVERLAY MAPPING (OM17-5)

The subject site is located within the Natural Hazard (Flood) Management Areas Overlay Mapping and identified within the Designated flood affected area, reference is made to **Figure 18** below for relevant mapping.

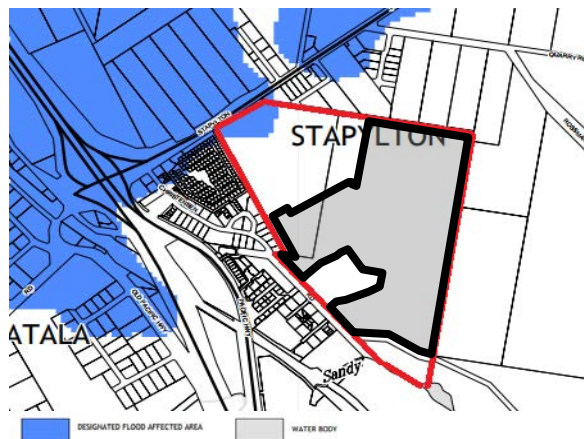


Figure 18 - Natural Hazard (Flood) Management Areas Overlay Mapping (OM17-5) (Council mapping, 2020)

The subject site is located within the Conservation Strategy Plan Overlay Mapping, and identified within the 'major areas of existing bushland committed to development', and 'existing remnant vegetation area and other natural systems'.

[illegible]

6.5.6 SCENIC TOURIST ROUTES OVERLAY MAPPING (OM22-1)

STAPYLTON

SCENIC TOURIST ROUTES - LAND

SCENIC TOURIST ROUTES - WATER

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6.5.7 EXTRACTIVE RESOURCES OVERLAY MAPPING (OM23-1)

The subject site is located within the Extractive Resources Overlay Mapping – Haul routes (Stapylton Jacobs Well Road), reference is made to **Figure 21** below for relevant mapping.

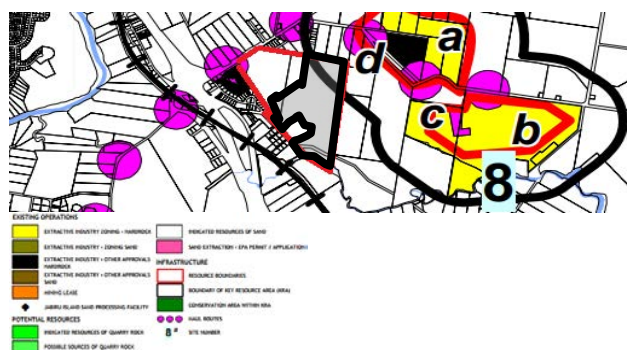


Figure 21 - Extractive Resources Overlay Mapping (OM23-1) (Council mapping, 2020)

6.6 APPLICABLE CODES

The table below lists the potentially applicable codes and their relevance to the proposed development on the subject site. A response to each of the applicable requirements under each relevant code has been provided in the Appendices of this report.

Table 6 - Relevant Local Planning Codes	
Place Code	
M38 Industrial Estate Place Code	Applicable - The M38 Industrial Estate Place Code is listed as a relevant code for assessment, therefore this code has been addressed in Appendix D of this report.
Specific Development Codes	
Changes to Ground Level Creation of Waterbodies	Applicable - The Changes to Ground Level and New Waterbodies code is listed as a relevant code for assessment within the Place Code, therefore this code has been addressed in Appendix D of this report.
Landscape Work	Not Applicable - No Operational Work application has been lodged for landscape work, therefore a detailed assessment and consideration of this application against the code was not considered applicable in this particular instance.
Reconfiguring a Lot	Applicable - The Reconfiguring a Lot code is listed as a relevant code for assessment within the Place Code. Therefore, this code has been addressed in Appendix D of this report.
Vegetation Management	Applicable - Operational Work application has been lodged for vegetation clearing. Therefore, this code has been addressed in Appendix D of this report.
Works for Infrastructure	Applicable - The Works for Infrastructure code is listed as a relevant code for assessment within the Place Code. Therefore, this code has been addressed in Appendix D

Table 6 - Relevant Local Planning Codes	
	of this report.
Constraint Codes	
Bushfire Management Areas	Not Applicable – The subject site has been predominantly cleared under historical approvals, therefore a detailed assessment and consideration of this application against the code was not considered applicable in this particular instance.
Canals and Waterways	Not Applicable – The Stage 3 area proposed is located completely outside of any mapped waterway, therefore a detailed assessment and consideration of this application against the code was not considered applicable in this particular instance.
Car parking, Access and Transport Integration	Not Applicable - The proposal is for the subdivision of land only, therefore a detailed assessment and consideration against the code was not considered applicable in this particular instance.
Cultural Heritage (Historic)	Not Applicable - The subject property is not known to be a listed property, therefore a detailed assessment and consideration of this application against this code was not considered applicable in this particular instance.
Cultural Heritage (Indigenous)	Not Applicable - The subject property is not known to be a site of indigenous cultural heritage, therefore a detailed assessment and consideration of this application against this code was not considered applicable in this particular instance.
Flood Affected Areas	Not Applicable – The Stage 3 area proposed is located completely outside of any mapped flood affected areas, therefore a detailed assessment and consideration of this application against the code was not considered applicable in this particular instance.
Nature Conservation	Not Applicable – The Stage 3 area proposed is located within a historically cleared area and will not require any further clearing, therefore a detailed assessment and consideration of this application against the code was not considered applicable in this particular instance.
Natural Wetland Areas and Natural Waterways	Not Applicable - As there is no change proposed to the existing land use or conditions of the land, it is considered that a detailed assessment and consideration of this code was not considered applicable in this instance.
Rail Corridor Environs	Not Applicable - The subject property is not near or within a rail corridor, therefore a detailed assessment and consideration of this application against this code was not considered applicable in this particular instance.
Road, Traffic Noise Management	Not Applicable - The proposed industrial subdivision does not include or involve a noise sensitive land use. Therefore, a detailed assessment and consideration of this

Table 6 - Relevant Local Planning Codes	
	application against the code was not considered applicable in this particular instance.
Sediment and Erosion Control	Applicable - As the proposal involves earthworks, an assessment against this code has been addressed in Appendix D of this report.
Service Roads (Pacific Motorway)	Not Applicable - The subject site is not located on the Pacific Highway service road, therefore, a detailed assessment and consideration of this application against the code was not considered applicable in this particular instance.
Steep Slopes or Unstable Soils	Not Applicable - The subject land is not identified within an area of 'land slip risk of instability', therefore a detailed assessment and consideration of this application against the constraint code was not considered applicable in this particular instance.
Unsewered Land	Not Applicable - The proposed industrial lots will be connected to Council's reticulated sewerage system, therefore a detailed assessment of this application against the constraint code was not considered applicable in this particular instance.

7.0 KEY CONSIDERATIONS

In addition to the detailed assessment of this proposed development against the Preliminary Approval and M38 Industrial Estate Place Code, the following key matters are considered relevant to the consideration and determination of this development application.

7.1 COMPLIANCE WITH PRELIMINARY APPROVAL

Stage 3 of the Vantage Industrial Estate will deliver an envisaged industrial product consistent with the outcomes prescribed within the overarching Preliminary Approval. Importantly, essential aspects of the Preliminary Approval are also reflected within Stage 3, including road access to Stage 3 via extension of 'New Road 2', and maintenance of the 20 metre vegetation buffer along the eastern boundary.

As discussed previously within this report, a minor change application is currently being assessed by Council which is seeking amendment to the Land Use Classification and Staging Plan approved under the preliminary approval to allow for changed access to Stage 3. Previously, access to Stage 3 was provided from Christensen Road via 'Road 8'. However, since the reallocation of land resulting from recent boundary realignment ROL/2022/50, changes to the master plan layout of Stage 3 were required to enable a more efficient and logical lot and road layout. Specifically, 'Road 8' has been removed and access to Stage 3 is now proposed via extension of 'New Road 2 (Coastline Court)' from Stage 2.

The minor change application is being assessed concurrently with this application, however it is understood that the minor change application must be approved prior to Council issuing a decision for Stage 3 (this application).

7.2 COMMUNITY TITLE SUBDIVISION

Formulation of a CTS over the proposed industrial lots provides an opportunity for a higher quality and functioning industrial estate, along with maintenance and management benefits. Specifically, the primary reason for lodging this type of subdivision as opposed to freehold lots, is to allow the delivery of a small-scale park and supporting embellishments. Outside of this, the proposed subdivision will effectively operate as per a standard freehold subdivision.

Importantly, common property safety is achieved in various ways uniquely available to a community title arrangement. The estate will benefit from roaming security patrolling by both car and foot through out the estate. Further, security cameras will be installed throughout the estate to deter undesirable activity and increase safety for users of the open space. All footpaths, exercise equipment and communal spaces will be well lit and have been designed to create high visibility and casual surveillance from other users.

The Community Management Scheme is provided within **Appendix J**.

7.3 LOT SIZE AND LAYOUT SUITABILITY

The lot layout achieves compliance with that previously envisaged and approved under the existing Preliminary Approval. Generally speaking, the lot size proposed are that suited to larger scale warehouse and distribution operators, with many of these lots having been

designed to suit specific end users. Lot 304 is the only small-scale lot proposed as part of Stage 3. Given its location and shape constraint resulting from the adjacent open space conservation area, its delivery as an individual land parcel is the most suitable outcome, with the lot to be most likely to accommodate small-scale users.

7.4 ASSETS TO BE DEDICATED TO COUNCIL

The proposed subdivision, whilst community title in nature for the industrial lots, does still involve the creation and dedication of all the typical Council assets in the form of public roads, infrastructure services and stormwater devices.

Importantly, all these elements have been designed in the identical manner as to which they would if a more traditional full freehold industrial land subdivision was proposed. This design approach has ensured that each and every element is compliant with the design requirements and expectations of Council such that they can be accepted by Council without any impact or hinderance on their operation.

There is no aspect of proposed community title land that will hinder access to or the operation of these assets.

7.5 ACCESS AND ROAD NETWORK

Access to Lots 301, 302 and 303 within Stage 3 is provided from one external location, being Stage 2 (via Coastline Court). Lot 304 is to be accessed via Christensen Road South. Internally, Stage 3 proposes the extension of Coastline Court to service the proposed lots. It is acknowledged that historically (as per the preliminary approval), part of Stage 3 was also to be accessed via a cul-de-sac off Christensen Road South, however, due to the recent boundary realignment (ROL/2022/50), the envisaged layout and access to Stage 3 has been amended to a more logical layout, and the cul-de-sac has been removed. This has driven the recent minor change to the preliminary approval (MIN/2023/64), which is currently undergoing assessment with Council.

To support the proposed amended road network layout, a Traffic Impact Assessment has been prepared by Rytenskild Traffic Engineering (refer **Attachment I**) which demonstrates that the proposed road network functions safely and efficiently, including the Christensen Road/Highlands Street intersection, despite the cul-de-sac being removed.

8.0 SUMMARY OF FINDINGS AND CONCLUSION

The proposal will formalise Stage 3 of the approved industrial estate over the subject site (commonly referred to as 'Vantage'). The proposed industrial lots will range in allotment areas from 7,564m² to 76,350m², with landscaped buffers provided along new road frontages. The unique Community Title Scheme titling arrangements over the industrial lots will allow delivery of a small-scale park and amenity facilities ("Health and Wellbeing Precinct") for the immediate workforce. All core infrastructure, such as roads and stormwater basins are still to be designed to Council specifications and dedicated as public assets.

The proposed development will be:

- Consistent with the State and regional planning provisions applicable to the subject site;
- Consistent with the planning principles in the Planning Scheme, namely the M38 Industrial Estate Place Code;
- Consistent with the Preliminary Approval that applies over the land;
- Consistent with the intent and content of the industrial precincts;
- Generally in accordance with the performance criteria and acceptable solutions of the applicable development codes; and
- Appropriate within the context of the site and its surrounds without adversely impacting on the surrounding area and land uses.

The proposed development is appropriate within the context of the site and the planning framework for the area. Accordingly, it is requested that this application be favourably considered.

APPENDIX A

FORMS AND CONSENT



DA Form 1 – Development application details

Approved form (version 1.3 effective 28 September 2020) made under section 282 of the Planning Act 2016.

This form **must** be used to make a development application **involving code assessment or impact assessment**, except when applying for development involving only building work.

For a development application involving **building work only**, use *DA Form 2 – Building work details*.

For a development application involving **building work associated with any other type of assessable development (i.e. material change of use, operational work or reconfiguring a lot)**, use this form (*DA Form 1*) and parts 4 to 6 of *DA Form 2 – Building work details*.

Unless stated otherwise, all parts of this form **must** be completed in full and all required supporting information **must** accompany the development application.

One or more additional pages may be attached as a schedule to this development application if there is insufficient space on the form to include all the necessary information.

This form and any other form relevant to the development application must be used to make a development application relating to strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994*, and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*. For the purpose of assessing a development application relating to strategic port land and Brisbane core port land, any reference to a planning scheme is taken to mean a land use plan for the strategic port land, Brisbane port land use plan for Brisbane core port land, or a land use plan for airport land.

Note: All terms used in this form have the meaning given under the Planning Act 2016, the Planning Regulation 2017, or the Development Assessment Rules (DA Rules).

PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) (individual or company full name)	FPI Pty Ltd c/- Gassman Development Perspectives Pty Ltd
Contact name (only applicable for companies)	Fraser Gassman
Postal address (P.O. Box or street address)	PO Box 392
Suburb	Beenleigh
State	QLD
Postcode	4207
Country	Australia
Contact number	07 3807 3333
Email address (non-mandatory)	mail@gassman.com.au
Mobile number (non-mandatory)	
Fax number (non-mandatory)	
Applicant's reference number(s) (if applicable)	5941 – Stage 3

2) Owner's consent	
2.1) Is written consent of the owner required for this development application?	
☒ Yes – the written consent of the owner(s) is attached to this development application	
☐ No – proceed to 3)	

PART 2 – LOCATION DETAILS

3) Location of the premises (complete 3.1) or 3.2), and 3.3) as applicable)

Note: Provide details below and attach a site plan for any or all premises part of the development application. For further information, see [DA Forms Guide: Relevant plans](#).

3.1) Street address and lot on plan

- ☐ Street address **AND** lot on plan (all lots must be listed), **or**
☐ Street address **AND** lot on plan for an adjoining or adjacent property of the premises (appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon. All lots must be listed).

a)	Unit No.	Street No.	Street Name and Type	Suburb
		Lot 504	Homestead Drive	Stapylton
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)
	4207	504	SP329485	City of Gold Coast Council
b)	Unit No.	Street No.	Street Name and Type	Suburb
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)

3.2) Coordinates of premises (appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay)

Note: Place each set of coordinates in a separate row.

- ☐ Coordinates of premises by longitude and latitude

Longitude(s)	Latitude(s)	Datum	Local Government Area(s) (if applicable)
		☐ WGS84 ☐ GDA94 ☐ Other:	

- ☐ Coordinates of premises by easting and northing

Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) (if applicable)
		☐ 54 ☐ 55 ☐ 56	☐ WGS84 ☐ GDA94 ☐ Other:	

3.3) Additional premises

- ☐ Additional premises are relevant to this development application and the details of these premises have been attached in a schedule to this development application
☒ Not required

4) Identify any of the following that apply to the premises and provide any relevant details

- ☐ In or adjacent to a water body or watercourse or in or above an aquifer

Name of water body, watercourse or aquifer:

- ☐ On strategic port land under the *Transport Infrastructure Act 1994*

Lot on plan description of strategic port land:

Name of port authority for the lot:

- ☐ In a tidal area

Name of local government for the tidal area (if applicable):

Name of port authority for tidal area (if applicable):

- ☐ On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*

Name of airport:

☐ Listed on the Environmental Management Register (EMR) under the <i>Environmental Protection Act 1994</i>
EMR site identification:
☐ Listed on the Contaminated Land Register (CLR) under the <i>Environmental Protection Act 1994</i>
CLR site identification:

5) Are there any existing easements over the premises?

Note: Easement uses vary throughout Queensland and are to be identified correctly and accurately. For further information on easements and how they may affect the proposed development, see [DA Forms Guide](#).

- ☒ Yes – All easement locations, types and dimensions are included in plans submitted with this development application
- ☐ No

PART 3 – DEVELOPMENT DETAILS

Section 1 – Aspects of development

6.1) Provide details about the first development aspect

a) What is the type of development? *(tick only one box)*

- ☐ Material change of use ☒ Reconfiguring a lot ☐ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

- ☒ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

- ☒ Code assessment ☐ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):*

Reconfiguring a Lot – Community Title Subdivision (Stage 3 – to create four industrial lots; common property; public stormwater lot; public open space conservation lot and new public road)

e) Relevant plans

Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see [DA Forms guide: Relevant plans](#).

- ☒ Relevant plans of the proposed development are attached to the development application

6.2) Provide details about the second development aspect

a) What is the type of development? *(tick only one box)*

- ☐ Material change of use ☐ Reconfiguring a lot ☒ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

- ☒ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

- ☒ Code assessment ☐ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):*

Operational Work for Change to Ground Level and Vegetation Clearing

e) Relevant plans

Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see [DA Forms Guide: Relevant plans](#).

- ☒ Relevant plans of the proposed development are attached to the development application

6.3) Additional aspects of development

- ☐ Additional aspects of development are relevant to this development application and the details for these aspects that would be required under Part 3 Section 1 of this form have been attached to this development application
- ☒ Not required

Section 2 – Further development details

7) Does the proposed development application involve any of the following?	
Material change of use	☐ Yes – complete division 1 if assessable against a local planning instrument
Reconfiguring a lot	☒ Yes – complete division 2
Operational work	☒ Yes – complete division 3
Building work	☐ Yes – complete <i>DA Form 2 – Building work details</i>

Division 1 – Material change of use

Note: This division is only required to be completed if any part of the development application involves a material change of use assessable against a local planning instrument.

8.1) Describe the proposed material change of use			
Provide a general description of the proposed use	Provide the planning scheme definition (include each definition in a new row)	Number of dwelling units (if applicable)	Gross floor area (m ²) (if applicable)
8.2) Does the proposed use involve the use of existing buildings on the premises?			
☐ Yes			
☐ No			

Division 2 – Reconfiguring a lot

Note: This division is only required to be completed if any part of the development application involves reconfiguring a lot.

9.1) What is the total number of existing lots making up the premises?	
1	
9.2) What is the nature of the lot reconfiguration? (tick all applicable boxes)	
☒ Subdivision (complete 10))	☐ Dividing land into parts by agreement (complete 11))
☐ Boundary realignment (complete 12))	☐ Creating or changing an easement giving access to a lot from a constructed road (complete 13))

10) Subdivision				
10.1) For this development, how many lots are being created and what is the intended use of those lots:				
Intended use of lots created	Residential	Commercial	Industrial	Other, please specify:
Number of lots created			4 lots and common property	2 x Public Open Space (Stormwater) 1 x Public Open Space (Conservation)
10.2) Will the subdivision be staged?				
☐ Yes – provide additional details below				
☒ No				
How many stages will the works include?				
What stage(s) will this development application apply to?				

11) Dividing land into parts by agreement – how many parts are being created and what is the intended use of the parts?				
Intended use of parts created	Residential	Commercial	Industrial	Other, please specify:
Number of parts created				

12) Boundary realignment			
12.1) What are the current and proposed areas for each lot comprising the premises?			
Current lot		Proposed lot	
Lot on plan description	Area (m ²)	Lot on plan description	Area (m ²)
12.2) What is the reason for the boundary realignment?			

13) What are the dimensions and nature of any existing easements being changed and/or any proposed easement? (attach schedule if there are more than two easements)				
Existing or proposed?	Width (m)	Length (m)	Purpose of the easement? (e.g. pedestrian access)	Identify the land/lot(s) benefitted by the easement

Division 3 – Operational work

Note: This division is only required to be completed if any part of the development application involves operational work.

14.1) What is the nature of the operational work?	
☐ Road work ☐ Drainage work ☐ Landscaping ☐ Other – please specify:	☐ Stormwater ☒ Earthworks ☐ Signage ☐ Water infrastructure ☐ Sewage infrastructure ☒ Clearing vegetation
14.2) Is the operational work necessary to facilitate the creation of new lots? (e.g. subdivision)	
☒ Yes – specify number of new lots:	4
☐ No	
14.3) What is the monetary value of the proposed operational work? (include GST, materials and labour)	
\$unknown	

PART 4 – ASSESSMENT MANAGER DETAILS

15) Identify the assessment manager(s) who will be assessing this development application
City of Gold Coast Council
16) Has the local government agreed to apply a superseded planning scheme for this development application?
☐ Yes – a copy of the decision notice is attached to this development application ☐ The local government is taken to have agreed to the superseded planning scheme request – relevant documents attached ☒ No

PART 5 – REFERRAL DETAILS

17) Does this development application include any aspects that have any referral requirements?

Note: A development application will require referral if prescribed by the Planning Regulation 2017.

☒ No, there are no referral requirements relevant to any development aspects identified in this development application – proceed to Part 6

Matters requiring referral to the **Chief Executive of the Planning Act 2016:**

- ☐ Clearing native vegetation
- ☐ Contaminated land (*unexploded ordnance*)
- ☐ Environmentally relevant activities (ERA) (*only if the ERA has not been devolved to a local government*)
- ☐ Fisheries – aquaculture
- ☐ Fisheries – declared fish habitat area
- ☐ Fisheries – marine plants
- ☐ Fisheries – waterway barrier works
- ☐ Hazardous chemical facilities
- ☐ Heritage places – Queensland heritage place (*on or near a Queensland heritage place*)
- ☐ Infrastructure-related referrals – designated premises
- ☐ Infrastructure-related referrals – state transport infrastructure
- ☐ Infrastructure-related referrals – State transport corridor and future State transport corridor
- ☐ Infrastructure-related referrals – State-controlled transport tunnels and future state-controlled transport tunnels
- ☐ Infrastructure-related referrals – near a state-controlled road intersection
- ☐ Koala habitat in SEQ region – interfering with koala habitat in koala habitat areas outside koala priority areas
- ☐ Koala habitat in SEQ region – key resource areas
- ☐ Ports – Brisbane core port land – near a State transport corridor or future State transport corridor
- ☐ Ports – Brisbane core port land – environmentally relevant activity (ERA)
- ☐ Ports – Brisbane core port land – tidal works or work in a coastal management district
- ☐ Ports – Brisbane core port land – hazardous chemical facility
- ☐ Ports – Brisbane core port land – taking or interfering with water
- ☐ Ports – Brisbane core port land – referable dams
- ☐ Ports – Brisbane core port land – fisheries
- ☐ Ports – Land within Port of Brisbane's port limits (*below high-water mark*)
- ☐ SEQ development area
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – tourist activity or sport and recreation activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – community activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – indoor recreation
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – urban activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – combined use
- ☐ Tidal works or works in a coastal management district
- ☐ Reconfiguring a lot in a coastal management district or for a canal
- ☐ Erosion prone area in a coastal management district
- ☐ Urban design
- ☐ Water-related development – taking or interfering with water
- ☐ Water-related development – removing quarry material (*from a watercourse or lake*)
- ☐ Water-related development – referable dams
- ☐ Water-related development – levees (*category 3 levees only*)
- ☐ Wetland protection area

Matters requiring referral to the **local government:**

- ☐ Airport land
- ☐ Environmentally relevant activities (ERA) (*only if the ERA has been devolved to local government*)

☐ Heritage places – Local heritage places
Matters requiring referral to the Chief Executive of the distribution entity or transmission entity:
☐ Infrastructure-related referrals – Electricity infrastructure
Matters requiring referral to:
• The Chief Executive of the holder of the licence, if not an individual • The holder of the licence, if the holder of the licence is an individual
☐ Infrastructure-related referrals – Oil and gas infrastructure
Matters requiring referral to the Brisbane City Council:
☐ Ports – Brisbane core port land
Matters requiring referral to the Minister responsible for administering the <i>Transport Infrastructure Act 1994</i>:
☐ Ports – Brisbane core port land <i>(where inconsistent with the Brisbane port LUP for transport reasons)</i>
☐ Ports – Strategic port land
Matters requiring referral to the relevant port operator , if applicant is not port operator:
☐ Ports – Land within Port of Brisbane's port limits <i>(below high-water mark)</i>
Matters requiring referral to the Chief Executive of the relevant port authority:
☐ Ports – Land within limits of another port <i>(below high-water mark)</i>
Matters requiring referral to the Gold Coast Waterways Authority:
☐ Tidal works or work in a coastal management district <i>(in Gold Coast waters)</i>
Matters requiring referral to the Queensland Fire and Emergency Service:
☐ Tidal works or work in a coastal management district <i>(involving a marina (more than six vessel berths))</i>

18) Has any referral agency provided a referral response for this development application?		
☐ Yes – referral response(s) received and listed below are attached to this development application		
☐ No		
Referral requirement	Referral agency	Date of referral response
Identify and describe any changes made to the proposed development application that was the subject of the referral response and this development application, or include details in a schedule to this development application <i>(if applicable)</i> .		

PART 6 – INFORMATION REQUEST

19) Information request under Part 3 of the DA Rules
☒ I agree to receive an information request if determined necessary for this development application
☐ I do not agree to accept an information request for this development application
Note: By not agreeing to accept an information request I, the applicant, acknowledge:
• that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties • Part 3 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules.
Further advice about information requests is contained in the DA Forms Guide .

PART 7 – FURTHER DETAILS

20) Are there any associated development applications or current approvals? (e.g. a preliminary approval)			
☒ Yes – provide details below or include details in a schedule to this development application ☐ No			
List of approval/development application references	Reference number	Date	Assessment manager
☒ Approval ☒ Development application	Preliminary Approval - MCU201100650 (original preliminary approval) - MIN/2020/659 (most recent minor change approval) - MIN/2023/64 (most recent submitted minor change application – currently undergoing assessment)	- MCU201100650 – 4 March 2013 - MIN/2020/659 – 3 December 2020 - MIN/2023/64 - Lodged 24 February 2023	City of Gold Coast Council
☒ Approval ☒ Development application	Stage 2 Approval - COM/2020/262 (original Stage 2 approval) - MIN/2022/245 (most recent minor change approval) - MIN/2023/143 (most recent submitted minor change application – currently undergoing assessment)	- COM/2020/262 – 30 April 2021 - MIN/2022/245 – 19 July 2022 - MIN/2023/142 – Lodged 30 March 2023	City of Gold Coast Council

21) Has the portable long service leave levy been paid? (only applicable to development applications involving building work or operational work)		
☐ Yes – a copy of the receipted QLeave form is attached to this development application ☐ No – I, the applicant will provide evidence that the portable long service leave levy has been paid before the assessment manager decides the development application. I acknowledge that the assessment manager may give a development approval only if I provide evidence that the portable long service leave levy has been paid ☒ Not applicable (e.g. building and construction work is less than \$150,000 excluding GST)		
Amount paid	Date paid (dd/mm/yy)	QLeave levy number (A, B or E)
\$		

22) Is this development application in response to a show cause notice or required as a result of an enforcement notice?
☐ Yes – show cause or enforcement notice is attached ☒ No

23) Further legislative requirements
<u>Environmentally relevant activities</u>
23.1) Is this development application also taken to be an application for an environmental authority for an Environmentally Relevant Activity (ERA) under section 115 of the <i>Environmental Protection Act 1994</i> ?

☐ Yes – the required attachment (form ESR/2015/1791) for an application for an environmental authority accompanies this development application, and details are provided in the table below

☒ No

Note: Application for an environmental authority can be found by searching “ESR/2015/1791” as a search term at www.qld.gov.au. An ERA requires an environmental authority to operate. See www.business.qld.gov.au for further information.

Proposed ERA number:

Proposed ERA threshold:

Proposed ERA name:

☐ Multiple ERAs are applicable to this development application and the details have been attached in a schedule to this development application.

Hazardous chemical facilities

23.2) Is this development application for a **hazardous chemical facility**?

☐ Yes – Form 69: Notification of a facility exceeding 10% of schedule 15 threshold is attached to this development application

☒ No

Note: See www.business.qld.gov.au for further information about hazardous chemical notifications.

Clearing native vegetation

23.3) Does this development application involve **clearing native vegetation** that requires written confirmation that the chief executive of the *Vegetation Management Act 1999* is satisfied the clearing is for a relevant purpose under section 22A of the *Vegetation Management Act 1999*?

☐ Yes – this development application includes written confirmation from the chief executive of the *Vegetation Management Act 1999* (s22A determination)

☒ No

Note: 1. Where a development application for operational work or material change of use requires a s22A determination and this is not included, the development application is prohibited development.
2. See <https://www.qld.gov.au/environment/land/vegetation/applying> for further information on how to obtain a s22A determination.

Environmental offsets

23.4) Is this development application taken to be a prescribed activity that may have a significant residual impact on a **prescribed environmental matter** under the *Environmental Offsets Act 2014*?

☐ Yes – I acknowledge that an environmental offset must be provided for any prescribed activity assessed as having a significant residual impact on a prescribed environmental matter

☒ No

Note: The environmental offset section of the Queensland Government's website can be accessed at www.qld.gov.au for further information on environmental offsets.

Koala habitat in SEQ Region

23.5) Does this development application involve a material change of use, reconfiguring a lot or operational work which is assessable development under Schedule 10, Part 10 of the Planning Regulation 2017?

☐ Yes – the development application involves premises in the koala habitat area in the koala priority area

☐ Yes – the development application involves premises in the koala habitat area outside the koala priority area

☒ No

Note: If a koala habitat area determination has been obtained for this premises and is current over the land, it should be provided as part of this development application. See koala habitat area guidance materials at www.des.qld.gov.au for further information.

Water resources

23.6) Does this development application involve **taking or interfering with underground water through an artesian or subartesian bore, taking or interfering with water in a watercourse, lake or spring, or taking overland flow water under the Water Act 2000**?

☐ Yes – the relevant template is completed and attached to this development application and I acknowledge that a relevant authorisation or licence under the *Water Act 2000* may be required prior to commencing development

☒ No

Note: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au for further information.

DA templates are available from <https://planning.dsdmip.qld.gov.au/>. If the development application involves:

- Taking or interfering with underground water through an artesian or subartesian bore: complete DA Form 1 Template 1
- Taking or interfering with water in a watercourse, lake or spring: complete DA Form 1 Template 2
- Taking overland flow water: complete DA Form 1 Template 3.

Waterway barrier works

23.7) Does this application involve **waterway barrier works**?

- ☐ Yes – the relevant template is completed and attached to this development application
- ☒ No

DA templates are available from <https://planning.dsdmp.qld.gov.au/>. For a development application involving waterway barrier works, complete DA Form 1 Template 4.

Marine activities

23.8) Does this development application involve **aquaculture, works within a declared fish habitat area or removal, disturbance or destruction of marine plants**?

- ☐ Yes – an associated resource allocation authority is attached to this development application, if required under the *Fisheries Act 1994*
- ☒ No

Note: See guidance materials at www.daf.qld.gov.au for further information.

Quarry materials from a watercourse or lake

23.9) Does this development application involve the **removal of quarry materials from a watercourse or lake** under the *Water Act 2000*?

- ☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
- ☒ No

Note: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au and www.business.qld.gov.au for further information.

Quarry materials from land under tidal waters

23.10) Does this development application involve the **removal of quarry materials from land under tidal water** under the *Coastal Protection and Management Act 1995*?

- ☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
- ☒ No

Note: Contact the Department of Environment and Science at www.des.qld.gov.au for further information.

Referable dams

23.11) Does this development application involve a **referable dam** required to be failure impact assessed under section 343 of the *Water Supply (Safety and Reliability) Act 2008* (the *Water Supply Act*)?

- ☐ Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the *Water Supply Act* is attached to this development application
- ☒ No

Note: See guidance materials at www.dnrme.qld.gov.au for further information.

Tidal work or development within a coastal management district

23.12) Does this development application involve **tidal work or development in a coastal management district**?

- ☐ Yes – the following is included with this development application:
- ☐ Evidence the proposal meets the code for assessable development that is prescribed tidal work (*only required if application involves prescribed tidal work*)
 - ☐ A certificate of title
- ☒ No

Note: See guidance materials at www.des.qld.gov.au for further information.

Queensland and local heritage places

23.13) Does this development application propose development on or adjoining a place entered in the **Queensland heritage register** or on a place entered in a local government's **Local Heritage Register**?

- ☐ Yes – details of the heritage place are provided in the table below
- ☒ No

Note: See guidance materials at www.des.qld.gov.au for information requirements regarding development of Queensland heritage places.

Name of the heritage place:

Place ID:

Brothels

23.14) Does this development application involve a **material change of use for a brothel**?

- ☐ Yes – this development application demonstrates how the proposal meets the code for a development application for a brothel under Schedule 3 of the *Prostitution Regulation 2014*
- ☒ No

Decision under section 62 of the *Transport Infrastructure Act 1994*

23.15) Does this development application involve new or changed access to a state-controlled road?

- ☐ Yes – this application will be taken to be an application for a decision under section 62 of the *Transport Infrastructure Act 1994* (subject to the conditions in section 75 of the *Transport Infrastructure Act 1994* being satisfied)
- ☒ No

Walkable neighbourhoods assessment benchmarks under Schedule 12A of the Planning Regulation

23.16) Does this development application involve reconfiguring a lot into 2 or more lots in certain residential zones (except rural residential zones), where at least one road is created or extended?

- ☐ Yes – Schedule 12A is applicable to the development application and the assessment benchmarks contained in schedule 12A have been considered
- ☒ No

Note: See guidance materials at www.planning.dsdmip.qld.gov.au for further information.

PART 8 – CHECKLIST AND APPLICANT DECLARATION

24) Development application checklist

I have identified the assessment manager in question 15 and all relevant referral requirement(s) in question 17

☒ Yes

Note: See the *Planning Regulation 2017* for referral requirements

If building work is associated with the proposed development, Parts 4 to 6 of [DA Form 2 – Building work details](#) have been completed and attached to this development application

☐ Yes
☒ Not applicable

Supporting information addressing any applicable assessment benchmarks is with the development application

Note: This is a mandatory requirement and includes any relevant templates under question 23, a planning report and any technical reports required by the relevant categorising instruments (e.g. local government planning schemes, State Planning Policy, State Development Assessment Provisions). For further information, see [DA Forms Guide: Planning Report Template](#).

☒ Yes

Relevant plans of the development are attached to this development application

Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see [DA Forms Guide: Relevant plans](#).

☒ Yes

The portable long service leave levy for QLeave has been paid, or will be paid before a development permit is issued (see 21)

☐ Yes
☒ Not applicable

25) Applicant declaration

- ☒ By making this development application, I declare that all information in this development application is true and correct
- ☒ Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications from the assessment manager and any referral agency for the development application where written information is required or permitted pursuant to sections 11 and 12 of the *Electronic Transactions Act 2001*

Note: It is unlawful to intentionally provide false or misleading information.

Privacy – Personal information collected in this form will be used by the assessment manager and/or chosen assessment manager, any relevant referral agency and/or building certifier (including any professional advisers which may be engaged by those entities) while processing, assessing and deciding the development application. All information relating to this development application may be available for inspection and purchase, and/or published on the assessment manager's and/or referral agency's website.

Personal information will not be disclosed for a purpose unrelated to the *Planning Act 2016*, Planning Regulation 2017 and the DA Rules except where:

- such disclosure is in accordance with the provisions about public access to documents contained in the *Planning Act 2016* and the Planning Regulation 2017, and the access rules made under the *Planning Act 2016* and Planning Regulation 2017; or
- required by other legislation (including the *Right to Information Act 2009*); or
- otherwise required by law.

This information may be stored in relevant databases. The information collected will be retained as required by the *Public Records Act 2002*.

PART 9 – FOR COMPLETION OF THE ASSESSMENT MANAGER – FOR OFFICE USE ONLY

Date received: Reference number(s):

Notification of engagement of alternative assessment manager

Prescribed assessment manager	
Name of chosen assessment manager	
Date chosen assessment manager engaged	
Contact number of chosen assessment manager	
Relevant licence number(s) of chosen assessment manager	

QLeave notification and payment

Note: For completion by assessment manager if applicable

Description of the work	
QLeave project number	
Amount paid (\$)	Date paid (dd/mm/yy)
Date receipted form sighted by assessment manager	
Name of officer who sighted the form	

APPENDIX B

CURRENT PRELIMINARY APPROVAL DECISION NOTICE - MIN/2020/659



Our reference: MIN/2020/659

Your reference: 5941

Decision notice— change application approval including amended suite of development conditions for MIN/2019/762

(Given under section 83(1) of the *Planning Act 2016*.)

The Council of the City of Gold Coast received your change application made under section 78 of the *Planning Act 2016* on 20 November 2020 for the development approval dated 30 June 2020.

Date of decision notice: 8 December 2020

Applicant details

Applicant name:	Frasers Property Australia Pty Ltd
Applicant contact details:	C/- Gassman Development Perspectives PO Box 392 Beenleigh QLD 4207

Application details

Application number:	MIN/2020/659
Approval sought:	Minor change to development permit for Preliminary Approval for making a Material Change of Use to override the Planning Scheme for industry uses.
Details of the change:	Change Condition 53 to reflect amendments to general wastewater servicing arrangement; and Cancellation of Condition 55 as it is no longer relevant to the approval.
Original Application number	MCU201100650
Details of original decision	Preliminary Approval for making a Material Change of Use to override the Planning Scheme for industry uses.
Date of original decision	04 March 2013
Most recent change application number	MIN/2019/762
Date of most recent change application	30 June 2020

Location details

Street address:	82 Christensen Road South, 60 Stapylton Jacobs Well Road & 31 Yellowwood Road, Stapylton QLD 4207
Real property description:	Lot 500 SP295994, Lot 501 SP295994 & Lot 4 RP6843

Decision

Date of decision:	3 December 2020
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Decision details: Under Delegated Authority, the Executive Coordinator Planning Assessment of the City Development Branch of Council has resolved to approve the change in full and amend the existing conditions of approval.

Affected Entity(s) for the application

Not applicable – no part of the application required referral to an affected entity.

Details of the approval

Preliminary approval overriding the Planning Scheme in accordance with section 242 of the *Sustainable Planning Act 2009*

Minor change to Preliminary Approval for making a Material Change of Use to override the Planning Scheme for industry uses.

Conditions

Amended conditions of approval for preliminary approval, which overrides the Planning Scheme for a material change of use for Industrial uses are enclosed in this notice.

A full suite of development conditions for the development approval is also enclosed in this notice.

Further development permits

The following development permits are required to be obtained before the development can be carried out:

- Development permit;
- Operational works; and
- Application to work on the City's Infrastructure.

Notwithstanding the above, other approvals/development permits may be required.

Properly made submissions

Not applicable—No part of the application required public notification.

Currency period for the approval

This approval will lapse on 03 May 2023 in accordance with MCU201601390 dated 1 November 2016.

Approved plans and drawings

The approved change(s) does not affect the approved plans and drawings. The original approved plans and drawings are attached and are identified in the conditions imposed by Council in the amended suite of development conditions.

Appeal rights

Applicant	You have appeal rights in relation to this decision. An appeal may be made against a responsible entity's decision for a change application. An appeal must be started within 20 business days after this notice is given to you. An appeal may be made to the Planning and Environment Court or, for certain matters which are identified in section 1(2) of Schedule 1 of the <i>Planning Act 2016</i>, to a development tribunal.
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	An appeal is started by lodging a notice of appeal with the registrar of the Planning and Environment Court or a development tribunal, as applicable. The notice of appeal must be in the approved form, succinctly state the grounds of the appeal and be accompanied by the required fee. An appellant to the Planning and Environment Court must give a copy of the notice of appeal, within 10 business days after the appeal is started, to the persons identified in section 230(3) of the <i>Planning Act 2016</i>. A person who is appealing to the Planning and Environment Court must comply with the rules of the court that apply to the appeal. An extract of Chapter 6, Part 1 and Schedule 1 of the <i>Planning Act 2016</i> is attached to this notice, which sets out further information about the appeal rights.
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For further information please contact Alex Ponomareva, Planner, on p: 07 5582 8866 or via email mail@goldcoast.qld.gov.au who will be pleased to assist.

AUTHORISED BY



Karley Lawler
Supervising Planner (North)
For the Chief Executive Officer
 Council of the City of Gold Coast

enc:

Amended conditions imposed by Council, as the Responsible Entity
 Amended suite of development conditions for development approval MIN/2020/659

Attach:

Appeal rights extracts

Amended conditions imposed by Council as the Responsible Entity

Condition 53 currently reads:

53 General wastewater servicing arrangement

Unless otherwise determined by Gold Cast Water, the wastewater servicing arrangements shall be generally in accordance with the following:

- a Connect part of Stage 1 that naturally drains to Pump Station BE45, to BE45, via De Bortoli Street;
- b Connect the remaining part of Stage 1 and part of Stage 2 that naturally drains to the proposed new pump station (refer to drawing no.C028-AA003837-04 dated 15/6/2012 prepared by Hyder Consulting) located near Stapylton-Jacobs Well Road;
- c The balance of Stage 2, Stage 3 and Stage 4 shall gravitate into Council's future wastewater network;
- d The balance of Stage 2 and Stage 3 shall gravitate into Stage 4 (no pump station is permitted); and
- e A temporary pump station sited in Stage 4 may be permitted where the wastewater network in Christensen Road remains unavailable (the wastewater network in Christensen Road serving lot 334 on SP193431 is serviced by a private pump station and therefore not currently available).

Is changed to read as follows:

53 General wastewater servicing arrangement

Unless otherwise determined by Gold Cast Water, the wastewater servicing arrangements shall be generally in accordance with the following:

- a Connect Stage 1 to Council's existing live 100mm diameter sewer rising main located within the southern verge of Stapylton Jacobs Well Road via an interim trunk sewer pump station to be contained within the Stage 1 road reserve extent (refer to drawing no. 5941 ENG EXTSEW SK003 Rev B prepared by Gassman Development Perspectives dated 12-11-2020);
- b The balance of Stage 2, Stage 3 and Stage 4 shall gravitate into Council's future trunk wastewater network located on the Christensen Road frontage of the subject site.

Condition 55 currently reads:

55 Wastewater reticulation schematic plan

- a The applicant must submit to Gold Coast Water a wastewater reticulation schematic plan for the proposed development that:
 - i Demonstrates how the development is to be connected to Council's wastewater network,
 - ii Provides the following details:
 - A Average and peak weather flows;
 - B Emergency storage;
 - C Septicity and odour; and
 - D Pump duty points.
 - iii Makes allowance for any external catchments that may drain through the subject site; and
 - iv Accommodates the extension of the wastewater main to the upstream property boundary to provide for future wastewater connectivity of the upstream external catchment.

- b The applicant must obtain Gold Coast Water approval of the wastewater reticulation schematic plan prior to making any development application for a Development Permit or Building Work.

Is cancelled.

Amended suite of development conditions for development approval MIN/2020/659

For ease of reference only, a consolidated set of the conditions, incorporating the above changes, of the Preliminary Approval dated 30 June 2020 for making a Material Change of Use to override the Planning Scheme for industry uses is set out below:

NATURE OF DECISION

- A** Under Delegated Authority the Manager of the City Development Branch decides as follows in respect of the applicant's representations:
- B** Under Delegated Authority the Manager of the City Development Branch gives a new decision notice approving the issue of preliminary approval for material change of use to override the Planning Scheme for Industry Uses, subject to the following conditions:
- 1 The issue of a preliminary approval for a material change of use for Industry land uses;**
 - 2 The following variations to the effect of the planning scheme:**
 - a Type of assessment

The following tables of development vary the effect of Section A/B/C/D/E/F/G of the Yatala Enterprise Area Local Area Plan Table of Development for determining the type of assessment for the approved material change of use and operational work relating to the approved material change of use:

A: Material Change of Use

Exempt	Self Assessable	Code Assessable	Impact Assessable
Precinct A (Low Impact and Service Industry)			
Agriculture	Café	Bulk Garden Supplies	Motor Vehicle Repairs n.e.i
Animal Husbandry	Car Park	Caretakers Residence	Salvage Yard
Conservation (natural area management)	Convenience Shop	Estate Sales Office	Service Station
Low-Impact Telecommunications Facility	Low Impact Industry	Family Accommodation	Transport Terminal
	Milk Depot	Food Industry	
	Service Industry	Industry	
Minor Change in the scale or intensity of an existing lawful use	Take-Away Food Premises	Manufacturer's Shop	
Park	Temporary Use	Outdoor Storage Area	
Public Utility	Warehouse	Rural Industry	
		Telecommunications Facilities n.e.i.	

Precinct B (General Impact Business and Industry)			
Agriculture Animal Husbandry Conservation (natural area management) Low-Impact Telecommunications Facility Minor Change in the scale or intensity of an existing lawful use Park Public Utility	Café Car Park Convenience Shop Industry Low Impact Industry Manufacturer's Shop Milk Depot Outdoor Storage Area Service Industry Take-Away Food Premises Temporary Use Warehouse	Bulk Garden Supplies Caretakers Residence Food Industry Rural Industry Telecommunications Facilities n.e.i. Transport Terminal	Motor Vehicle Repairs n.e.i Salvage Yard Service Station

Precinct C (Limited General Impact Business and Industry)			
Agriculture Animal Husbandry Conservation (natural area management) Low-Impact Telecommunications Facility Minor Change in the scale or intensity of an existing lawful use Park Public Utility	Car Park Industry Low Impact Industry Manufacturer's Shop Outdoor Storage Area Service Industry Temporary Use Warehouse	Bulk Garden Supplies Caretakers Residence Rural Industry Telecommunications Facilities n.e.i Transport Terminal	Café Convenience Shop Food Industry Milk Depot Motor Vehicle Repairs n.e.i Salvage Yard Service Station Take-Away Food Premises

Precinct D (Open Space/Reserve)			
Conservation (natural area management) Low-Impact Telecommunications Facility Minor Change in the scale or intensity of an existing lawful use Park Public Utility	Temporary Use	Telecommunications Facility n.e.i	Agriculture

B: OPERATIONAL WORKS - CHANGE TO GROUND LEVEL

Exempt	Self Assessable	Code Assessable	Impact Assessable
Operational Work that involves extraction, excavation or fill that:			
		Exceeds a volume of 100 cubic metres of fill or excavation, or is closer than 20 metres from the allotment boundary and is within or adjoins an allotment containing places, sites, or landscapes of indigenous cultural heritage significance listed on the Queensland Heritage Register – Cultural Records (Landscapes Queensland and Queensland Estate) Act 1987; OR is located on land which is the subject of a native title claim; OR Is located on land that is known to the owner and/or the developer to be of indigenous cultural heritage value	

C: OPERATIONAL WORKS - ADVERTISING DEVICE

Exempt	Self Assessable	Code Assessable	Impact Assessable
	Advertising Device that is: a) not illuminated, nor animated, and where the total area of signage per street frontage does not exceed the following for each precinct: Precinct A:20 m² b) not on land with frontage to an arterial road or any State controlled road	Advertising Devices n.e.i.	

D: OPERATIONAL WORKS - INFRASTRUCTURE AND LANDSCAPE WORK

Exempt	Self Assessable	Code Assessable	Impact Assessable
Minor Landscape Work		Landscape Work n.e.i. Works for Infrastructure	

E: OPERATIONAL WORKS - VEGETATION CLEARING

Exempt	Self Assessable	Code Assessable	Impact Assessable
Precinct A and B and C (Low Impact and Service Industry, General Impact Business and Industry and Limited General Impact Business and Industry)			
	Results in the removal of, or damage to, vegetation that is equal to, or in excess of, 40 centimetres in girth (circumference) measured at 1.3 metres above average ground level, and complies with the Acceptable Solutions of Specific Development Code 36 – Vegetation Management; OR Results in the removal of, or damage to, vegetation that is equal to, or in excess of, four metres in height, and complies with the Acceptable Solutions of Specific Development Code 36 – Vegetation Management.	Results in the removal of, or damage to, vegetation that is equal to, or in excess of, 40 centimetres in girth (circumference) measured at 1.3 metres above average ground level, and provides an alternative solution to the Acceptable Solutions of Specific Development Code 36 – Vegetation Management; OR Results in the removal of, or damage to, vegetation that is equal to, or in excess of, four metres in height, and provides an alternative solution to the Acceptable Solutions of Specific Development Code 36 – Vegetation Management; or Results in the removal of, or damage to the existing wedge-tailed eagles nest (Aquila audax) in the north eastern corner of Precinct C, which is not in accordance with the vegetation removal requirements detailed in the approved relocation plan required by the conditions of this Development Permit.	

F: RECONFIGURATION OF A LOT

Exempt	Self Assessable	Code Assessable	Impact Assessable
Precinct A and B (Low Impact and Service Industry and General Impact Business and Industry)			
		Results in no lots with an area less than 2,000m ² ; OR Entails only a Community Title Subdivision (including Standard Format Plan and/or Volumetric Lots), or a Volumetric Lot within a building, or a leasehold subdivision of an existing approved development	
Precinct C (Limited General Impact business and Industry)			
		Results in no lots with an area less than 10,000m ² .	
Precinct D (Open Space/Reserve)			
		Results in no lots with an area less than 20 hectares; OR Entails only a Community Title Subdivision (including Standard Format Plans and/or Volumetric Lots), or a Volumetric Lot within a building, or a leasehold subdivision of an existing or approved development.	

b Codes varying the effect of the planning scheme

Subject to the amendments listed in this Decision Notice, the following code varies the effect of the planning scheme code/s listed for the approved material change of use:

New Code	Existing code varied by new code
Generations Industrial Park Place Code	Yatala Enterprise Area Local Area Plan

c The Preliminary Approval pursuant to section 242 of SPA 2009 does not seek to override any further Specific Development Codes or Constraint Codes of the Gold Coast Planning Scheme 2003, version 1.2.

C The conditions that attach to this preliminary approval are as follows:

APPROVED PLANS/DRAWINGS/DOCUMENTS

1 Approved plans/drawings/documents

Undertake and maintain the development generally in accordance with the following plans/drawings/documents:

Title	Author	Date	Reference No.	Ver.
M38 Industrial Estate Place Code	Gassman Development Perspectives	June 2020	-	-
M38 Industrial Estate Land Use Classification and Staging Plan	Gassman Development Perspectives	18.06.2020	5941 P LU 01	B

The conditions of this approval are to be read in conjunction with the attached stamped approved drawings. Where a conflict occurs between the conditions of this approval and the stamped approved drawings, the conditions of this approval shall take precedence.

2 Staged construction of development

- a Subject to the changes required by Condition 1 within section B of this Decision Notice, the stages as shown on the following plan are approved (subject to the relevant Operational Works approvals):
 - i Land Use Classification and Staging Plan, drawing 5941 P LU 01, Revision B, dated 18/06/2020 and prepared by Gassman Development Perspectives.
- b The construction of the development must be in sequence of the stages shown on the approved staging plan.
- c Deleted.
- d Any subsequent proposed amendments to the approved staging plan (including sequence of development) must be approved in writing by the Chief Executive Officer.

3 Decision notice and approved plans/drawings to be submitted with subsequent application

A copy of this decision notice and accompanying stamped approved plans/drawings must be submitted with any building development application or operational works application relating to or arising from this development approval.

4 Any deviations require further approval

Any proposed deviation from the approved plans/drawings as a result of on-site or in-situ conditions must not be made unless amended plans/drawings are submitted and approved by Council. The development must be carried out in accordance with the approved amended plans/drawings.

ADVERTISING

5 Advertising device

No advertising device is to be placed on the premises without the necessary development permit for operational work (advertising device) and/or approval under Council's Local Law No.16 (Licensing) 2008 and Subordinate Local Law No. 16.8 (Advertisement) 2008. The Applicant should contact Council's Health, Regulatory and Lifeguard Services Branch on (07) 5581 6668 to discuss approval requirements.

AMENITY

6 No nuisance from lighting

All lighting devices must be positioned on the premises and shielded to the satisfaction of the Chief Executive Officer so as not to cause glare or other nuisance to surrounding development and motorists

7 Restricted paint colours

Buildings and structures must not be painted in highly reflective, bright or obtrusive colours.

8 Location of equipment and ventilation/air-condition units

All service equipment, mechanical ventilation and air-condition units associated with the use of the premises must be installed and located to the satisfaction of the Chief Executive Officer so as not to cause nuisance or disturbance to persons outside the curtilage of the premises.

CITY TRANSPORT

9 Staged development

In accordance with Condition 1 of this Decision Notice the stages as shown on Approved Plan titled Land Use Classification and Staging Plan, drawing 5941 P LU 01, Revision B, dated 18/06/2020 and prepared by Gassman Development Perspectives, are approved for the purposes of construction (subject to the relevant Operational Work approvals) and compliance assessment of subdivision plans, subject to the following requirements:

- a The future Operational Works application can cover more than one stage. However, the engineering plans must be split into the individual stages shown on the approved staging plan.
- b The construction of any approved operational works (including provision of "as constructed" information) and compliance assessment of subdivision plans must be in the sequence (i.e. order) of the stages shown on the approved staging plan. To be clear, the subdivision plan for stage 1 must be approved by Council before (or at the same time as) the stage 2 subdivision plan, and so on.
- c Subdivision plans must correspond to the stages as shown on the approved staging plan.
- d Any subsequent proposed amendments to the stage boundaries or the sequence of development must be first approved by Council as a change to the reconfiguration of a lot development approval and any operational work development approval.

10 External Roadworks

Prior to the issue of any development approval associated with the relevant stage, functional road layout plans (including land dedications) must be submitted for the following:

- a the upgrade of Christensen Road and Christensen Road South;
- b the intersection of Christensen Road South and proposed new road;
- c the intersection of Christensen Road and proposed new road;
- d the intersection of Christensen Road and the Eastern Service Road;
- e the re-prioritisation of the intersection of Christensen Road and Christensen Road South.

The functional road layout plans must be supported by a Traffic Impact Assessment Report, and must be completed at no cost to Council and to the satisfaction of the Chief Executive Officer.

Advice Note: Any identified roadworks supported by Council will be conditioned for construction as part of future development applications.

11 Land dedication for road widening

Land must be dedicated to Council for road widening purposes. All land to be dedicated to Council must be completed at no cost to Council and to the satisfaction of the Chief Executive Officer, the timing of which will be determined as part of each subsequent application.

ACID SULFATE SOILS AND GROUNDWATER

12 Approved acid sulfate soil management plan must be complied with

- a All works must be undertaken with due regard to the possibility of encountering acid sulfate soils.
- b The applicant must comply with the approved acid sulfate soil management plan, being Acid Sulfate Soil investigation, Lot 1 on RP 6882 and Lot 240 on W31320 Stapylton Jacobs Well Road and Christensen Road, Stapylton, prepared by ADG consulting and dated August 2011, in the carrying out of works and in the testing, treatment and management of acid sulfate soils.

VEGETATION MANAGEMENT

13 Staged tree clearing

Tree clearing onsite must be staged in accordance with the approved staging development plan as required by Condition no.1 of this Decision Notice.

14 Vegetation works OPW application required

This approval does not approve vegetation clearing or damage. Prior to commencement of such works, a development application for operational work (vegetation works) must be made to and approved by Council for any works proposing clearing or damage to any Protected Vegetation. The application must be accompanied by a copy of each of the following plans (and, where a plan has already been approved, that plan must be accompanied by the corresponding approval documentation (i.e. decision notice or letter of approval)):

- a The approved MCU layout plan.
- b The approved bushfire management plan/site specific Bushfire Hazard letter.
- c Plans clearly identifying which vegetation is proposed to be removed and which vegetation is proposed to be retained.
- d A letter from an EPA-approved spotter-catcher together with any necessary fauna management plan or a QPWS-endorsed fauna translocation management plan.
- e A sediment and erosion control and construction management plan.

For this condition 'Protected Vegetation' is defined as vegetation that is:

- i equal to, or in excess of, 40 centimetres in girth (circumference) measured at 1.3 metres above average ground level irrespective of the domain or LAP; or
- ii equal to, or in excess of, four metres in height in the Rural, Park Living or Emerging Communities Domains, Burleigh Ridge LAP, Coomera LAP (Precincts 7, 9 and 10), Coomera Town Centre (Precincts 8, 10 and 11), Currumbin Hill LAP, Eagleby LAP (Precinct 6), East Coomera/Yawalpah Conservation LAP, Guragunbah LAP, Hope Island LAP (Precinct 3), Mudgeeraba Village LAP, Nerang LAP (Precincts 9 and 10), South Stradbroke LAP, Uplands Dr and Woodlands Way LAP, West Burleigh Township LAP or Yatala Enterprise Area LAP.

LANDSCAPING

15 Detailed landscape plan to be submitted for approval relating to landscape buffers within Stage 1, 2 and 4.

- a A landscape buffer ten (10) metres wide for the length of the western property boundary of Precinct A, six (6) metres wide for the entire length of the subject site adjoining the Stapylton Jacobs Well Road frontage and twenty (20) metres wide for the length of the eastern boundary of Precinct C, the applicant must submit to Council for approval a detailed landscape plan, by making a development application for operational work (landscape work).
- b Approval of proposed landscaping plan must be obtained prior to the commencement of works relating to relating to the corresponding stages, being stages 1, 2 and 4, of this development. The approved landscape work must be completed prior to the commencement of use of any part of the corresponding stage, being stages 1, 2 or 4 of this development.
- c Without limiting the requirements of the planning scheme's Landscape Work Specific Development Code, the detailed landscape plan must:

- i Be prepared by a qualified landscape architect or similar landscape design professional;
- ii Be in general accordance with the Statement of Landscape Intent, being:

Drawing Title	Author	Date	Drawing No.	Ver
Landscape Intent	Gassman Development Perspectives	21 February 2020	1-5	C

- iii Reflect the approved layout (including any amendments to that layout required by these conditions) and the conditions of this approval; and
 - iv Comply with Planning Scheme Policy 13 – Landscape Strategy Part 2 – Landscape Works Documentation Manual.
- d The required landscaping plan for the northern boundary must demonstrate
 - i A landscaped buffer six (6) metres wide for the entire length of the subject site adjoining

- the Stapylton Jacobs Well Road frontage; and
- ii That the buffers contain dense tree planting to soften and screen the development.
- e The required landscaping plan for the western boundary must demonstrate
 - i A buffer ten (10) metres wide for the length of the western property boundary of Precinct A;
 - ii A solid fence with a maximum height of 2.4 metres designed and located in accordance with acoustic report prepared by Acoustic Works dated 18 December 2019 (reference: 2019338 R01B), located wholly within the subject site, for the length of the western property boundary of Precinct A. The fence must be of a durable fencing material with a minimum life span of 20 years. The fencing material and colour must be nominated;
 - iii Dense tree planting, at grade, with a minimum width of three (3) metres along the western boundary for the entire length of Precinct A;
 - iv Where a minimum batter of 1V:3H can be achieved, landscaping must be provided within the entire ten (10) metre width;
 - v Maximum batter grade of 1V:1.1H within the remaining seven (7) metres.
- f The required landscaping plan for the eastern boundary must demonstrate
 - i A landscape buffer with a minimum width of twenty (20) metres for the entire length of the eastern property boundary, within Precinct C;
 - ii That the buffer contains dense tree planting to soften and screen the development;
 - iii An undisturbed corridor with a width of ten (10) metres from the boundary, where all existing vegetation is retained and no earthworks are permitted to encroach;
 - iv Earthworks, where required, must not encroach the ten (10) metre undisturbed corridor;
 - v All batters proposed within the buffer area have a maximum grade of 1V:2H where the batter is within fill and 1V:3H where the batter is within cut. The cut batter may have a maximum grade of 1V:2H, provided it is over-excavated, micro-benched and incorporates a minimum 400mm soil depth, as per correspondence from Douglas Partners, Project 90520.00. L.002.docx, Dated 24 January 2019 titled Batter Treatment.

COVENANT AREA – PROHIBITED ACTIVITIES, MANAGEMENT AND COVENANT

- 16 Cancelled**
- 17 Cancelled**
- 18 Cancelled**
- 19 Cancelled**
- 20 Cancelled**
- 21 Cancelled**
- 22 Cancelled**
- 23 Cancelled**

OPEN SPACE

24 Transfer of open space

- a The applicant must transfer to Council the areas of public open space listed below, as identified on the plans indicated (subject to any amendments required by these conditions):

Purpose	Description on Plan	Plan Reference
Conservation Area	Area D – Open Space/Reserve	Land Use Classification and Staging Plan, drawing 5941 P LU 01, Revision B, dated 18/06/2020 and prepared by Gassman Development Perspectives.

- b The land identified in paragraph (a) must be transferred in fee simple as 'Public Open Space' to Council of the City of Gold Coast as Trustee.

- c Council will hold the land in trust for community infrastructure and may use the land, or permit the land to be used, for purposes that do not compromise the purpose for which the land is dedicated.
- d The applicant must lodge the transfer documents with Council at the same time as lodgement of the subdivision plans for Stage 4 or, if no subdivision plans are required, prior to the commencement of any use within Stage 4 of this development.
- e Where subdivision plans are required, the applicant must provide Council with evidence of the transfer of the land identified in paragraph (a) within 30 days of the registration of the subdivision plan that shows the entirety of the land identified in paragraph (a).
- f The transfer of the land to Council must be at no cost to Council.

OPEN SPACE MANAGEMENT PLAN

25 Preparation of open space management plan (OSMP) to be submitted for approval addressing all areas of land to be transferred to Council as public open space

- a An Open Space Management Plan ('OSMP') must be prepared, addressing all areas of land to be transferred to Council, specifically the area of land south of Christensen Road to be dedicated to Council as public open space.
- b The OSMP must be submitted and approved by the Chief Executive Officer prior to the approval of any development permit for operational works (change to ground level, bulk earthworks, tree works, landscaping, whichever comes first) within Stage 4 of this development. The OSMP is not an approved report until a Council approved letter has been issued in respect of it.
- c The OSMP must be prepared by a suitably qualified professional and must be:
 - ii In accordance with Council's Open Space Management Guideline: Guideline for the preparation of Reports and Plans associated with the dedication of Public Open Space (November 2007, Version 1); and
 - iii Generally in accordance with:
 - A The approved reconfiguration layout (including any amendments required by these conditions).
 - B Relevant conditions of approval.
- d The submitted OSMP must demonstrate compliance with the Open Space requirements in Section 6 of the Planning Scheme Policy 11 – Land Development Guidelines, Standard Specifications and Drawings and must address the following site-specific issue:
 - ii Detail a rehabilitated sixty (60) metre buffer from the high bank of Sandy Creek.

26 Compliance assessment of OSMP

The OSMP is a document requiring compliance assessment under the Sustainable Planning Act 2009. A request for compliance assessment must be made in accordance with the Sustainable Planning Act 2009 for a compliance certificate approving the document, in accordance with the following:

Matters or things against which the document must be assessed	• The planning scheme's Landscape Works Specific Development Code; • The planning scheme's Vegetation Management Specific Development Code; • The planning scheme's Bushfire Management Areas Constraint Code; • The planning scheme's Canals and Waterways Constraint Code; • The planning scheme's Cultural Heritage (Indigenous) Constraint Code; • The planning scheme's Natural Wetland Areas and Natural Waterways Constraint Code; • The planning scheme's Nature Conservation Constraint Code; • Policy 10 – Guidelines for Preparing Management Plans and Plans of Development; • Planning Scheme Policy 11 – Land Development Guidelines; • Planning Scheme Policy 17 – Site Analysis; and • Council's Open Space Management Guideline: Guideline for the preparation of Reports and Plans associated with the dedication of Public Open Space (November 2007, Version 1).
Compliance assessor	Gold Coast City Council
When the request for compliance assessment must be made	Prior to the approval of any development applications for operational work (inclusive of change to ground level, works for infrastructure, vegetation clearing or landscape work) for Stage 4.

The OSMP is not an approved report until a compliance certificate has been issued in respect of it.

27 Compliance certificate with future operational work development applications

A copy of compliance certificate for the OSMP must be provided with any future operational work development applications for Stage 4.

28 Compliance with OSMP prior to acceptance of open space 'On Maintenance'

- a All works specified in the OSMP and any conditions imposed on the compliance certificate must be carried out in accordance with the approved plan at no cost to Council and to the satisfaction of the Chief Executive Officer, prior to Council accepting the open space 'On Maintenance' in accordance with Planning Scheme Policy 11 – Land Development Guidelines, Standard Specifications and Drawings.
- b The applicant must provide certification from a qualified professional that all works in the approved OSMP and associated design drawings have been implemented on-site in accordance with the OSMP and the conditions of approval as stated on the compliance certificate approving the OSMP. This certification must be provided to the Council prior to accepting the works 'On Maintenance'.

29 Revegetation to use Local Provenance Stock

- a All revegetation for the purposes of ecological rehabilitation and restoration must be undertaken using only local provenance plant stock in accordance with Appendix 1A of Open Space Management Guideline: Guideline for the preparation of Reports and Plans associated with the dedication of Public Open Space (November 2007, Version 1).

- b Unless otherwise approved to the satisfaction of the Chief Executive Officer, local provenance plant stock is to be sourced from seed or vegetative material located no further than 10 kilometres from the subject site.

ACOUSTICS

30 Acoustic report

- a The development must be designed and constructed in accordance with all recommendations outlined in acoustic report prepared by Acoustic Works dated 18 December 2019 (reference: 2019338).
- b Any alteration to the design or construction of the development that prevents the recommendations of the approved acoustic report being implemented will require an amended acoustic report to be submitted and approved by Council prior to Building Approval.
- c Hours of operation within Precinct A are restricted to between 7:00am and 8:00pm Monday to Friday.

31 Acoustic barrier

A continuous line of buildings adjacent to the full extent of the western property boundary adjoining the residential development as per the recommendations within approved acoustic report prepared by Acoustic Works dated 18 December 2019 (reference: 2019338) is to be provided ensuring the following treatment is incorporated:

- a Buildings to be a minimum 5m high;
- b No gaps to be present between buildings;
- c Buildings to be constructed of solid concrete or masonry with a minimum thickness of 100mm;
- d No openings (other than emergency doors) are to be located on the western façade facing the residential properties. Any doors are to be a minimum 45mm thick solid core door with a minimum density of 25kg/m² with acoustic gasket seals around the top and sides and a seal the base;
- e Insulation blanket is to be installed in the roof of the buildings with a minimum thickness of 75mm;
- f Any penetrations through the western building façade should be acoustically treated to ensure the acoustic rating is maintained; and
- g Any alteration to the design or construction of the development that prevents the above recommendations being implemented will require an amended acoustic report to be submitted and approved by Council prior to Building Approval.

32 Landscape buffer

A minimum ten (10) metre wide buffer is to be provided along the length of the western property boundary of Precinct A in accordance with the submitted Statement of Landscape Intent, revision C, dated 21 February 2020, prepared by Gassman Development Perspectives.

33 Certificate of Compliance

Prior to occupation of any premise within Precinct A of the development, a Certificate of Compliance from a suitably qualified acoustic professional is to be provided so as to confirm that buildings have been constructed in accordance with the recommendations within approved acoustic report prepared by Acoustic Works dated 18 December 2019 (reference: 2019338).

34 An acoustic report required for future MCU (Code and Impact Assessable) development applications within Precinct A

An acoustic report must be submitted and approved by Council for all future Material Change of Use (Code and Impact Assessable) development applications within Precinct A.

- a The report must detail:
 - i The expected impact of noise from mechanical plant and equipment from buildings within Precinct A on nearby noise sensitive dwellings;

- ii An assessment conducted in accordance with AS1055.1-3: 1997 Acoustics – Description and Measurement of Environmental Noise and the Environmental Protection Act 1994 and Subordinate Regulations and Policies; and
 - iii The required control measures to ensure compliance with the relevant noise level criteria.
- f The development must be designed and constructed in accordance with any recommendations of the approved acoustic report and any other conditions imposed in the approval of the report.

35 Hours of operation within Precinct A

Hours of operation within Precinct A are restricted to between 7:00am and 8:00pm Monday to Friday or to the satisfaction of the Chief Executive Officer.

36 Delivery and Collection Activities within Precinct A

Delivery and collection activities within Precinct A are restricted to between 7:00am and 8:00pm Monday to Friday or to the satisfaction of the Chief Executive Officer.

HYDRAULICS AND STORMWATER MANAGEMENT

37 No worsening of hydraulic conditions

The development must be designed and constructed so as to result in:

- a No increase in peak flow rates downstream from the site;
- b No increase in flood levels external to the site; and
- c No increase in duration of inundation external to the site that could cause loss or damage.

38 Alteration of overland flow paths

Overland flow paths on the site must not be altered in a way that inhibits or alters the characteristics of existing overland flows on other properties or that creates an increase in flood damage on other properties.

39 Certification of earthworks compliance with hydraulic report

Immediately after completion of the bulk earthworks, the applicant must submit to Council a certification from a Registered Professional Engineer Queensland (RPEQ) specialising in hydraulics stating that the bulk earthworks comply with Section 4 of the approved report, being 'Generations Industrial Park – Stormwater Management Plan', dated 20 June 2012 and prepared by Hyder Consulting Pty Ltd and no loss of flood plain storage has occurred as a result of the earthworks. The certification must be accompanied by calculations and as constructed data that:

- a Includes existing and proposed triangulated surface meshes which can be produced by computer terrain modelling software packages such as Civil-Cad, 12D or KEAYS; and
- b Has been compared with the pre-development surface levels to ensure that no loss of floodplain storage has occurred.

40 Use of land for flood storage purposes only

The part of Lot 4 on RP6843 that is identified as Excavation below RL8.6m AHD in Figure 4.6 (Compensatory Excavation for Flood Storage Volume Balance) of the stormwater management report, being 'Generations Industrial Park – Stormwater Management Plan', dated 20 June 2012 and prepared by Hyder Consulting Pty Ltd must be used solely for the purposes of flood storage/conveyance and not be used for any purposes that involve the construction of any building, structures or earthworks. This obligation applies independently of any registered covenant.

41 Flood storage covenant

Prior to the earlier of compliance assessment of the subdivision plan or the commencement of the use of the premises, an instrument of covenant must be registered on the title/s of the lot/s. The following requirements must be complied with in the preparation and lodgement of the instrument of covenant:

- a The applicant is responsible for the preparation of the instrument of covenant and any necessary subdivision plan to enable registration of the covenant and for lodgement of the covenant for registration.

- b The instrument must be in a form capable of registration pursuant to section 97A(3)(a) of the Land Title Act 1994.
- c The part of Lot 4 on RP6843 that is identified as Excavation below RL8.6m AHD in Figure 4.6 (Compensatory Excavation for Flood Storage Volume Balance) of the stormwater management report, being 'Generations Industrial Park – Stormwater Management Plan', dated 20 June 2012 and prepared by Hyder Consulting Pty Ltd must be shown and identified as a 'Flood Covenant Area' on the face of the subdivision plan in addition to any covenant descriptor (e.g. Covenant 'A').
- d The applicant must provide a draft of the covenant to Council for written approval.
- e The parties to the covenant are to be the registered owner of the lot (as covenantor) and the Council (as covenantee).
- f The instrument must include a purpose statement that articulates:
 - i That the covenantor acknowledges that the Flood Covenant Area contributes to the existing flood storage capacity of the floodplain and watercourse system, as well as maintaining existing flood conveyance capacity of the watercourse system; and
 - ii That to ensure the flood storage/flood conveyance function of the Flood Covenant Area is not adversely affected, it is critical the Flood Covenant Area be used solely for the purposes of flood storage/conveyance and not be used for any purposes that involve the construction of any building, structures or earthworks.
- g The instrument must expressly set out in full as obligations of the covenantor that:
 - i The Flood Covenant Area must be used for the purpose of flood storage/conveyance; and
 - ii The Flood Covenant Area must not be used for any purposes involving buildings, structures or earthworks that result in a loss of flood plain storage or conveyance capacity (cross sectional area) of the watercourse.
- h If the instrument is requisitioned or refused registration by the Registrar of Titles, the applicant shall amend the document to include a covenant/s which, as nearly as practicable, addresses the objective sought to be achieved by this condition. A draft of the amended document is to be provided to Council for written approval.

42 Amendment of and compliance with stormwater management plan

- a The submitted stormwater management plan, being 'Generations Industrial Park – Stormwater Management Plan', dated 20 June 2012 and prepared by Hyder Consulting Pty Ltd, is approved, subject to the following amendments:
 - i GPTs must be selected in accordance with Section 13.12.2.2 of the Council's Land Development Guidelines (GCCC, 2007).
 - ii Pollutant removal efficiency of GPTs must not be higher than the Council's acceptable value 50% TSS, 20% TP and no removal of TN. The applicant must provide additional bioretention basin/swale if requires to achieve the Council's pollutant load reduction target (80% TSS, 60% TP, 45% TN and 90% GP).
- b All works must be carried out and completed and all maintenance and monitoring implemented by the applicant in accordance with the amended stormwater management plan, prior to a request for compliance assessment of the subdivision plan or, if no subdivision plan is required, prior to the commencement of the use of the premises.

43 Certification that stormwater management treatment train implemented

- a The applicant must provide to Council certification from a Registered Professional Engineer Queensland (RPEQ) specialising in stormwater that the stormwater management treatment train in the approved (as amended) stormwater management plan and associated design drawings has been installed on-site and is functioning as designed.
- b Certification must be provided prior to the earlier of compliance assessment of the subdivision plan or the commencement of the use of the premises.

44 SQIDs maintenance management plan

In accordance with Vol 3 (Section 13) of the Land Development Guidelines, the applicant must submit to Council for approval, before Council will accept the works 'On Maintenance', a SQID Maintenance Management Plan (MMP) that is:

- a prepared by a Registered Professional Engineer Queensland (RPEQ) specialising in stormwater; and
- b developed in accordance with Council's Water Sensitive Urban Design Guidelines (2007), and with reference to the Water by Design document "Maintaining Vegetated Stormwater Assets" Version 1 February 2012.

The MMP should be a concise document suitable for use by field staff in carrying out day-to-day maintenance activities. The MMP must include, but not necessarily be limited to, the following key information:

- i Design intent and description of the device(s)
- ii The location and specific dimensions of the device(s)
- iii Approved / designed water quality objectives
- iv Water quality monitoring procedures
- v Monitoring frequency
- vi Specifications and procedures for device(s) maintenance
- vii Plant and equipment access details for maintenance activities
- viii Maintenance activity schedule defining frequency, area (m²) per maintenance zone, hours, staff, plant and equipment, approximate costs per rotation, and per annum
- ix Performance indicators / intervention levels / triggers for reactive maintenance
- x Any necessary preventative maintenance measures
- xi Acceptable solutions for specific items, i.e. acceptable plant species substitutions based on availability, hydraulic conductivity, water quality objectives, etc
- xii Defined maintenance zones, i.e. shallow water zone – 350m², ephemeral planting zone – 600m², etc (for wetlands in particular)
- xiii Approximate lifecycle maintenance costs

Prior to acceptance for 'Off Maintenance' the applicant must submit a report to Council providing details of water quality performance monitoring including any recommendations or corrective action taken throughout the maintenance / defects liability period ('On Maintenance').

Information note:

The term Stormwater Quality Improvement Devices (SQID) is used to describe all built WSUD features, e.g. grassed swales, gross pollutant traps and various basins (detention, retention and sedimentation, etc).

EROSION AND SEDIMENT CONTROL

45 Erosion and sediment control

- a Sediment, erosion and dust control measures must be implemented generally in accordance with the approved report, being "Generations Industrial Park – Stormwater Management Plan" dated 20 June 2012 prepared by Hyder Consulting Pty Ltd and the Best Practice Erosion & Sediment Control (IECA Australasia, November 2008). Additional sediment, erosion and dust control measures must be implemented as directed by Council officers upon site inspection.
- b Immediately after backfilling behind all kerbing:
 - i A turf strip 1 metre wide must be placed behind all kerbing; and
 - ii A turf strip must be placed at 90 degrees to the kerb every 10 metres to prevent scouring along the turf edge,
in accordance with Figure 2.5 (Application of Grassed Filter Strips down a slope) of the Best Practice Erosion & Sediment Control (IECA Australasia, November 2008).
- c Immediately after completion of the construction of an open drain:

- i The open drain must be turfed, unless approved otherwise in a Council approved stormwater management plan; and
 - ii A turf strip must be placed at 90 degrees to the invert every 10 metres to prevent scouring along the turf edge. Reinforced turf must be used where invert grades exceed 5%.
- d Sediment control structures (e.g. sediment fence) must be placed at the base of all materials imported on-site to trap any sediment runoff.
- e The following inspection program must be carried out until the site is fully rehabilitated:
 - i Regular inspections to ensure that adequate erosion control measures are in place and in good condition both during and after construction; and
 - ii Inspections after each storm event to assess the adequacy of the erosion control measures. The applicant must make good any damage or non-performing erosion control devices and clean up any sediment that has left the site or is on the roads within and external to the site.
- f To minimise unvegetated areas:
 - i Construction activities must be staged;
 - ii Filled areas must be seeded immediately on completion; and
 - iii No area should remain exposed (unvegetated) for more than 2 weeks unless construction work is being undertaken on that area.
- g All water from the site, including dewatering discharge, must be directed through a sediment pond prior to leaving the site. The sediment ponds or other approved devices are to be maintained in good condition until the site is fully rehabilitated.
- h Prior to discharging of any water from the site during construction, including dewatering discharge, the applicant must achieve the water quality objectives in Table 8.2.1 of the Queensland Water Quality Guidelines (DERM, September 2009).
- i Water quality must be monitored in accordance with Section 7.5 of the Best Practice Erosion & Sediment Control (IECA Australasia, November 2008) and compared with water quality objectives. A monitoring report must be prepared and retained at the site office and made available to Council's inspectors upon request. The applicant must notify Council's Contributed Asset Section and Department of Environmental and Resource Management of any non-compliance to water quality objectives and the corrective actions taken by the applicant within 48 hours of the non-compliance.
- j Water quality samples must be collected monthly during the first rainfall event of greater than 25mm in 24 hours. The sampling frequency shall be increased to fortnightly in case of any non-compliance to the construction phase water quality objectives until the above water quality objectives are achieved through additional corrective measures.

46 Construction of sediment basin

- a The sediment basin(s) proposed for construction phase must be designed in accordance with Appendix B of the Best Practice Erosion and Sediment Control (IECA Australasia, November 2008).
- b Each sediment basin must have the capacity to treat flows to current best practice standards and as a minimum must be designed to contain all the stormwater runoff from the 85th percentile 5 day rainfall depth and in addition be designed to store 2 months sediment from the receiving catchment, as determined using the Revised Universal Soil Loss Equation.
- c Sediment basins must be dewatered as soon as practicable after each rainfall event.
- d Sediment basins and associated structures such as inlets, outlets and spillways are designed and constructed to be structurally sound for 10 year ARI rainfall event under normal circumstances.
- e A high-flow bypass system must be included (if necessary) to prevent any potential re-suspension of accumulated sediment from the basin during major storm events.
- f Accumulated sediment from basins and other controls must be removed and disposed of appropriately without causing water contamination.

47 Inspections and reporting

- a All erosion and sediment control measures must be inspected on a weekly basis and following runoff events until the site is fully rehabilitated.
- b All drainage control structures such as Diversion Banks, Diversion Channels and Temporary Culvert Protections must be inspected daily to ensure they have not been damaged by machinery and are serviceable in readiness for the next rainfall event.
- c Where inspection indicates a non-conformance, a Non-Conformance Report must be generated. This report must include but not limited to the following:
 - i Details of the nature and cause of non-conformance; and
 - ii Details of the required corrective actions.
Corrective actions must be carried out within 24 hours where practicable or as agreed with the Construction Superintendent.
- d A monthly summary of Erosion and Sediment Control (ESC) performances must be compiled and retained at the site office and made available to Council's inspectors upon request. This report must include but not limited to the following:
 - i ESC Inspection Checklists;
 - ii Description of any incidents of non-conformance;
 - iii Results of corrective action; and
 - iv Revisions to the ESCP.

48 Detailed design and certification of erosion and sediment control measures

- a The development application for operational work (change to ground level and/or works for infrastructure) must be accompanied by site specific detailed design of erosion & sediment control measures, including (but not limited to) details of:
 - i Catchment boundary and overland flow path;
 - ii Estimated soil loss from each catchment;
 - iii Length, width and depth of each sediment basin;
 - iv Spillway details and levels;
 - v Energy dissipation/scour protection;
 - vi High flow bypass (if requires);
 - vii Value of each parameter used in the calculation of soil loss and volume of sediment basins;
 - viii Cross section, capacity and spacing of each catch/diversion drain;
 - ix Spacing of silt fences;
 - x Frequency and location of water quality monitoring;
 - xi Maintenance requirements and frequencies;
 - xii Maintenance access; and
 - xiii Contingency measures in case of failure to achieve the water quality objectives.
- b The applicant must also submit a certification from a qualified professional confirming that the above detailed drawings are prepared in accordance with the Best Practice Erosion & Sediment Control (IECA Australasia, November 2008) and best industry practices.

GEOTECHNICAL

49 Geotechnical report to be complied with

All future earthworks over the subject site must be designed following the advice and recommendations of the geotechnical report, being 'Broad Geotechnical Assessment, Proposed Industrial Development, Lot 1 on RP6882 and Lot 240 on W31320, Stapylton Jacobs Well Road and Christensen Road, Stapylton', prepared by Morrison Geotechnic Pty Ltd, Job No. GE11/002 and dated February 2011.

50 Retaining structures design

- a Retaining structures and associated footings must be designed in accordance with AS 4678 – 2002 Earth-retaining structures.

- b Retaining structures and associated footings must comply with the Planning Scheme Policy 11 - Land Development Guidelines, Standard Specifications and Drawings including in particular, but not limited to:
 - i Section 3.2.7 (Cut/fill batters and earth retaining structures); and
 - ii Section 7.7 (Building near or over Council water, sewer and/or stormwater services).
- c Retaining structures over the subject site must not exceed 5.0 metres in height.
- d Retaining structures must be made of durable materials not subject to rot and insect attack and have a minimum design life of 60 years.

51 Cut and fill batters design

- a Cut/fill batters must be constructed in accordance with section 3.2.7 of Planning Scheme Policy 11 - Land Development Guidelines, Standard Specifications and Drawings.
- b All platforms resulting from cutting/filling must have a minimum slope of 1 in 150 and comply with Planning Scheme Policy 11 – Land Development Guidelines, Standard Specifications and Drawings for drainage of allotments to the street.
- c Benching is required where any proposed freestanding batter height exceeds 2.5 metres. The minimum width of benching must be 1 metre with a minimum slope of 1 in 100 towards the lower face. The absolute maximum height of any freestanding cut/fill batter with benching is 5 metres, unless otherwise approved in writing by the Chief Executive Officer.

WASTEWATER

52 Reduced infiltration gravity wastewater reticulation

The development must be connected to reduced infiltration gravity wastewater reticulation by gravity solution, at the applicant's cost.

53 General wastewater servicing arrangement

Unless otherwise determined by Gold Coast Water, the wastewater servicing arrangements shall be generally in accordance with the following:

- a Connect Stage 1 to Council's existing live 100mm diameter sewer rising main located within the southern verge of Stapylton Jacobs Well Road via an interim trunk sewer pump station to be contained within the Stage 1 road reserve extent (refer to drawing no. 5941 ENG EXTSEW SK003 Rev B prepared by Gassman Development Perspectives dated 12-11-2020);
- b The balance of Stage 2, Stage 3 and Stage 4 shall gravitate into Council's future trunk wastewater network located on the Christensen Road frontage of the subject site.

54 Connection point

The applicant must submit to Gold Coast Water and obtain approval prior to making any development application for a Development Permit or Building Work:

- a Pump Station BE45 catchment (part of Stage 1):
 - i Demonstrate development can be connected by gravity to BE45,
- b Proposed new pump station near Stapylton-Jacobs Well Road (balance of Stage 1 and part of Stage 2 that's drains to this new pump station):
 - i Demonstrate that downstream wastewater infrastructure has sufficient capacity to accommodate the new wastewater pump station;
 - ii Demonstrate an ability to deliver the new wastewater pump station in time to service the proposed development.
- c Long Term Strategy (balance of Stage 2, Stage 3 and Stage 4):
 - i Demonstrate that balance of Stage 2 and Stage 3 gravitate to Stage 4; and
 - ii Demonstrate that downstream wastewater infrastructure has sufficient capacity to accommodate the development.

Note: The development is out of sequence in respect of wastewater services. The wastewater network scenario may change as a result of the future planning of the Beenleigh, Stapylton and Pimpama Wastewater Treatment plants. The applicant is advised to liaise with Gold Coast Water.

55 Cancelled

56 Wastewater pump stations

Wastewater pump stations, rising main and emergency storage must be designed and constructed in accordance with Council's Policy 11 – Land Development Guidelines standards, at no cost to Council and are to:

- a Provide legal access to the pump station,
- b Provide a separate electrical power,
- c Provide a separate water service and meter.

57 Location and transfer of wastewater pump station land

The site of any wastewater pump station and associated access driveways, that will be owned and maintained by Council, must be transferred, in freehold and at the applicant's cost, at the earlier of making an application for Building Work, request for a compliance assessment for a Development Permit or prior to the commencement of the use.

58 Completion of external wastewater connections

All external wastewater connections (including the completion of all infrastructure downstream of the development site to the point of connection and approved augmentation works) must be completed in accordance with engineering plans approved by Council prior to the earlier of making an application for Building Work, request for a compliance assessment for a Development Permit or commencement of the use of the premises.

59 Connections – arrangements with Gold Coast Water

All live connections are to be performed by Gold Coast Water at the applicant's cost. The applicant must liaise with Gold Coast Water's Field Services and Construction Branch (phone 5581 7564) to make arrangements for the connection and to obtain a quotation for the work.

60 No building work over/within Council's wastewater infrastructure easements and minimum distance from Gold Coast Water infrastructure

- a No structure or building work is permitted over/within any public utility easements (Gold Coast Water/Council).
- b All proposed buildings and structures must be located a minimum distance of 2 metres from Gold Coast Water infrastructure (i.e. Water or wastewater infrastructure that become contributed assets) and comply with Gold Coast City Council Planning Scheme Policy 11 – Land Development Guidelines, Standard Specifications and Drawings.

WATER SUPPLY RETICULATION

61 Cancelled

62 Design, construction and standard of water supply reticulation

The design, construction and standard of the required water supply reticulation infrastructure to be carried out by the applicant (including all water supply reticulation infrastructure to be dedicated to Council) must be in accordance with Gold Coast City Council Planning Scheme Policy 11 – Land Development Guidelines, Standard Specifications and Drawings.

63 Connection point

- a The existing 225mm main in Stapylton Jacobs Well Road, De Bortoli Street and Christensen Road must be used as the potable water supply connection point, unless otherwise approved by Gold Coast Water.
- b Deleted.
- c Deleted.
- d Deleted.

64 Water reticulation schematic plan and network analysis

- a The applicant must submit to Gold Coast Water and obtain approval of a potable water reticulation schematic plan and network analysis of the overall development prior to the earlier

of the making of any development applications for Operational Work (works for infrastructure) or for Plumbing and Drainage Work.

- b In preparing the plan/analysis, the applicant must liaise with Gold Coast Water to ensure appropriate allowance is made for connectivity with external mains and external demands.

65 Cancelled

66 Supply standard

The applicant must provide water supply to the standard specified in Section 4 and 7 of Gold Coast City Council's Land Development Guidelines.

67 Fire loading

Fire loading must not exceed 30L/s for commercial and industrial uses, unless otherwise approved by Gold Coast Water.

68 Cancelled

REFERRAL AGENCY CONDITIONS

69 Cancelled

FAUNA MANAGEMENT

70 Relocation of active Wedge-tailed eagles nest within Precinct C

Prior to any clearing within Precinct C, a relocation program shall be developed by the applicant, lodged with Council and approved by Council for the relocation of the active wedge-tailed eagles nest (*Aquila audax*). The program shall detail the specific requirements for the relocation of the nest. All works shall occur in accordance with the requirements of the relocation program and in liaison with Councils Environmental Planning section.

Please note, a relocation pole of similar height and dimension to the existing nesting tree will be required.

ADVISORY NOTES TO APPLICANT

A Referral agencies

The referral agencies (and their addresses) for the application are listed below.

Any referral agency conditions are identified in the conditions of approval.

Referral agency	Address	Jurisdiction
Department of Natural Resources and Mines (Previously Department of Environment and Resource Management)	Permit and Licence Management GPO BOX 2454 BRISBANE QLD 4001	Concurrence and Advice Agency – For the purposes of the Vegetation Management Act and for the purposes of the Environmental Protection Act
Department of Transport and Main Roads	South Coast Region Land Management PO BOX 442 NERANG QLD 4211	Concurrence Agency – for the purposes of the Transport Infrastructure Act
Department of State Development Infrastructure and Planning	PO BOX 15009 CITY EAST QLD 4002	Concurrence Agency – for the purposes of the Act

B Properly made submissions

There were properly made submissions about the application. The name and address of the principal submitter for each properly made submission is attached to the decision notice.

C Rights of appeal

The applicant has a right of appeal to the Planning and Environment Court regarding this decision, pursuant to section 461 of the Sustainable Planning Act 2009. A copy of that section is attached to the decision notice.

For particular material changes of use, an appeal can also be made to a Building and Development Committee. Please refer to the prerequisites in sections 519 and 522 of the Sustainable Planning Act 2009, attached to this decision notice, to determine whether you have appeal rights to a Building and Development Committee.

Submitters who made properly made submissions have a right of appeal to the Planning and Environment Court regarding this decision, pursuant to section 462 of the Sustainable Planning Act 2009. A copy of that section is attached to the decision notice.

D Applicant responsibilities

The applicant is responsible for securing all necessary approvals and tenure, providing statutory notifications and complying with all relevant laws.

Nothing in this decision notice alleviates the need for the applicant to comply with all relevant local, State and Commonwealth laws and to ensure appropriate tenure arrangements have been made where the use of/reliance upon land other than that owned by the applicant is involved. Without limiting this obligation, the applicant is responsible for:

- a Obtaining all other/further necessary approvals, licences, permits, resource entitlements etc by whatever name called required by law before the development the subject of this approval can be lawfully commenced and to carry out the activity for its duration;
- b Providing any notifications required by law (by way of example only, to notify the administering authority pursuant to the Environmental Protection Act 1994 of environmental harm being caused/threatened by the activity, and upon becoming aware the premises is being used for a 'notifiable activity');
- c Securing tenure/permission from the relevant owner to use private or public land not owned by the applicant (including for access required by conditions of approval);
- d Ensuring the correct siting of structures on the land. An identification survey demonstrating correct siting and setbacks of structures may be requested of the applicant to ensure compliance with this decision notice and applicable codes;
- e Providing Council with proof of payment of the Portable Long Service Leave building construction levy (or proof of appropriate exemption) where the value of the Operational Works exceeds \$80,000. Acceptable proof of payment is a Q. Leave – Notification and Payment Form approved by the Authority. Proof of payment must be provided before Council can issue a development permit for the Operational Works. This is a requirement of section 77(1) of the Building and Construction Industry (Portable Long Service Leave) Act 1991; and
- f Making payment of any outstanding Council rates and charges applicable to the development site prior to the lodgement of subdivision plans.

E Indigenous cultural heritage legislation and duty of care requirement

The Aboriginal Cultural Heritage Act 2003 ('AHCA') is administered by the Department of Environment and Resource Management (DERM). The AHCA establishes a duty of care to take all reasonable and practicable measures to ensure any activity does not harm Aboriginal cultural heritage. This duty of care:

- a Is not negated by the issuing of this development approval;
- b Applies on all land and water, including freehold land;
- c Lies with the person or entity conducting an activity; and
- d If breached, is subject to criminal offence penalties.

Those proposing an activity involving surface disturbance beyond that which has already occurred at the proposed site must observe this duty of care.

Details of how to fulfil this duty of care are outlined in the duty of care guidelines gazetted with the AHCA.

The applicant should contact DERM's Cultural Heritage Coordination Unit on (07) 3238 3838 for further information on the responsibilities of developers under the AHCA.

F Greenhouse gas emissions

As part of Council's commitment to reducing greenhouse gas emissions Council is encouraging the expansion of the natural gas reticulation network. In particular, the use of natural gas hot water systems will result in significantly less greenhouse gas emissions than equivalent electric storage hot water systems.

The applicant should contact the local natural gas reticulator (APA Group) to arrange an assessment of the suitability of the proposed development for connection to the existing gas reticulation network. Please contact Ramon O'Keefe on 0438708798 or email: ramon.o'keefe@apa.com.au.

G Infrastructure charges

Infrastructure charges have not been calculated or imposed for this Material Change of Use, as it is a Preliminary Approval under Section 242 of the Sustainable Planning Act 2009. Infrastructure charges will be assessed and charged at the time of subsequent development permit/s for Material Change of Use or Building Work.

PROPERTY NOTIFICATION

A Noise/Acoustic

There are development approval conditions applicable in relation to acoustic issues on this lot/subsequent lots. All property owner(s) must ensure compliance with these conditions. Refer to Council of the City of Gold Coast's Decision Notice MIN/2019/762. A copy of Council's Decision Notice is available for viewing on Council's website www.goldcoastcity.com.au/pdonline

M38 INDUSTRIAL ESTATE PLACE CODE

A PRELIMINARY APPROVAL AFFECTING A LOCAL
PLANNING INSTRUMENT FOR A MATERIAL CHANGE
OF USE FOR INDUSTRIAL USES (S.242 OF THE
SUSTAINABLE PLANNING ACT 2009)

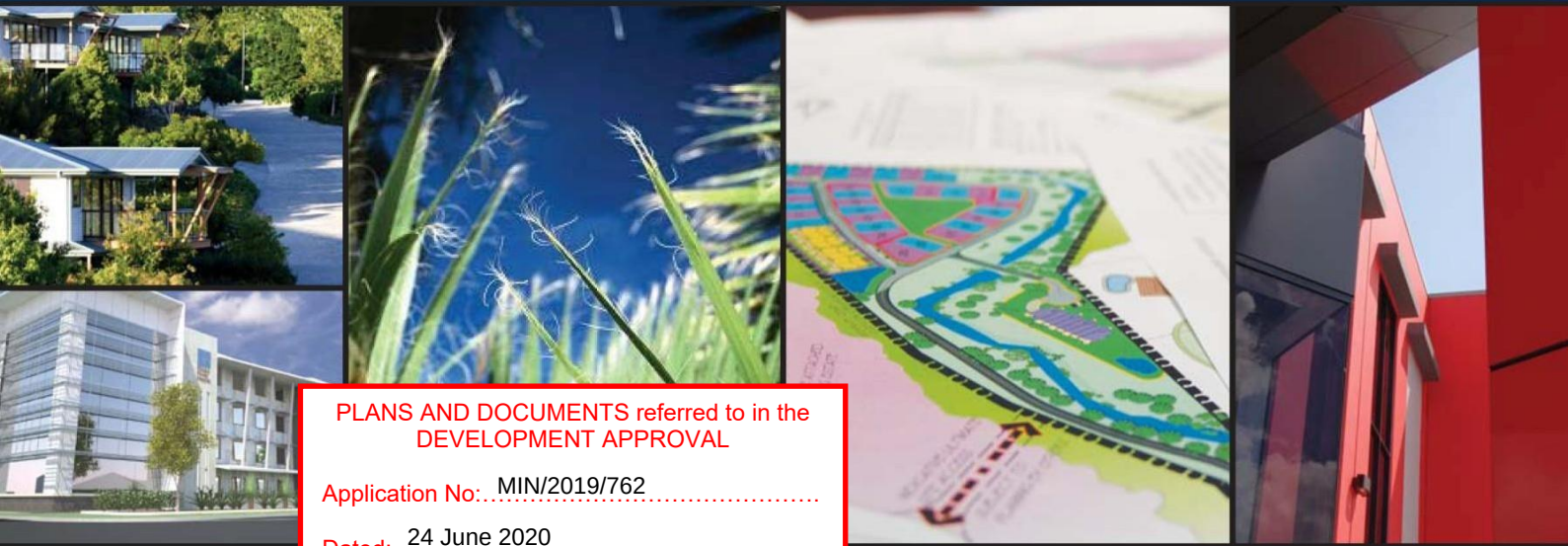
ADDRESS:

60 STAPYLTON-JACOBS WELL ROAD & 82 CHRISTENSEN ROAD,
STAPYLTON QLD 4207 (LOTS 1 ON RP6882 AND 240 ON W31320)

PREPARED FOR:

Frasers Property Pty Ltd

June 2020



PLANS AND DOCUMENTS referred to in the
DEVELOPMENT APPROVAL

Application No: MIN/2019/762

Dated: 24 June 2020

Development shall comply with the
conditions of approval as detailed in the
Decision Notice and Council's Planning
Scheme, Local Laws and Planning Policies



g a s s m a n
**development
perspectives**

project coordination
urban + regional planning
landscape + urban design
environmental management
visualisation + spatial services
surveying services
advisory services

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1.0 M38 INDUSTRIAL ESTATE PLACE CODE INTENT

1.1 PLACE CODE INTENT

The M38 Industrial Estate Place Code shall provide opportunities for industrially-related development at a scale that has regional economic significance and shall offer long-term employment benefits to the northern Gold Coast area. Ideally, the M38 Industrial Estate Place Code area ('the site') shall provide a location for the development of a variety of scales of general impact business and industry uses to complement and support the major industries that have, and will continue to, establish themselves in the ultimate precinct designation of the site which is General Business and Industry – Precinct 1 under the Yatala Enterprise Area Local Area Plan (YEA LAP).

Accordingly, the M38 Industrial Estate Place Code, in conjunction with the **enclosed** land-use classification plan creates the following Precincts:

- *Precinct A (Low Impact and Service Industry):* The land-uses promoted within this precinct are generally low impact industrial style uses responsive to the established nature of residential uses located nearby. Whilst more intensive levels of industry are not generally envisaged, they may be suitable subject to appropriate acoustic attenuation measures, strategies and operational measures being implemented to minimise potential detrimental impacts. The allotment sizes envisaged within this precinct are reflective of those that are promoted within Precinct 1 of the YEA LAP.

Strict building and operational restrictions, including building design, building construction and hours of operation and delivery and collection activities, apply to development within Precinct A. The 10metre wide landscaped buffer to be established along the western property boundary of Precinct A shall be established to minimise the potential detrimental impacts of development within Precinct A on the adjoining residential development.
- *Precinct B (General Impact Business and Industry):* The majority of the land-uses promoted in this precinct, which covers the bulk of the developed site, are consistent with those itemised within the Precinct 1 land use designation of the YEA LAP. Those that are not, are industrially related and befit the future development prospects of the site and the YEA LAP generally. The ultimate intent of this precinct is to promote the land uses and allotment sizes that would ordinarily be located within Precinct 1 land located within the YEA LAP. It is also noted that the proposed subdivision lot-size parameters from Precinct 1 of the YEA LAP have been adopted within this precinct.
- *Precinct C (Limited General Impact Business and Industry):* The land-uses promoted in this precinct are similar to that of Precinct B and Precinct 1 of the YEA LAP. This precinct is however responsive to established nearby heavy industrial uses and mindful of likely odour impacts and therefore food industry and related uses are not envisaged within this precinct.
- *Precinct D (Open Space/Reserve):* This precinct is reflective of the land-uses that would otherwise be promoted within the Precinct 6 – Open Space land-use designation of the YEA LAP. All areas within the site that are highlighted as Precinct D are intended to serve as an area of environmental conservation and natural landscape relief compatible with the retention and rehabilitation of vegetation and habitat landscape and/or buffer values. Open space corridors linking adjacent open space areas will be established. Land may be in public or private ownership.

The site area shall be easily accessible from the existing and proposed arterial road system, being Stapylton-Jacobs Well Road and Christensen Road – both of which link to the Pacific Motorway. The site design accommodates for north-south road linkages consistent with underlying connectivity requirements within the YEA LAP.

Proposals under the M38 Industrial Estate Place Code area shall consider the relative proximity of the site to residential neighbours located to the south and the Stapylton landfill located to the east. Accordingly, a high level of screening is encouraged along the eastern portion of the site and relevant acoustic treatments along part of the southern section of the site. Further, attention is given to improving visual appearance and providing high landscape amenity along the Stapylton-Jacobs Well Road frontage. Buildings shall address the street, incorporate articulated exterior walls and rooflines, a mixture of building materials and exterior finishes, and other architectural details or features to enhance the appearance of any structures associated with a business/industry activity.

1.2 BACKGROUND

- 1.2.1 **Strategic Considerations:** The M38 Industrial Estate Place Code seeks to activate the industrial land-use potential of 'future industry' land that is included within the YEA LAP. The site is strategically located within/near a cluster of developed industrial uses that are situated within both the 'future industry' and 'general business and industry' precincts of the YEA LAP. Accordingly, the preliminary approval effectively brings forward several preferred land-uses of the site, consistent with surrounding development and the ultimate intent of the YEA LAP.
- 1.2.2 **The Site Context:** The site is suitably located within the YEA LAP and shall enable the logical growth of industrial development in the area. This M38 Industrial Estate Place Code recognises the site's strategic position along major roads servicing the Yatala Enterprise Area, namely Stapylton Jacobs-Well Road. The plan provides for appropriate transport connectivity to the north and south, as intended under the YEA LAP. Optimal ecological linkages are also supplied within this Place Code to ensure the ecological priorities of the YEA LAP are also met.
- 1.2.3 **The Land Use Classification and Staging Plan:** Please refer to the attached plan no. **5941 P LU 01 Rev B** (Schedule 1) specifying the part of the site that is affected by the M38 Industrial Estate Place Code. It communicates the area of the site that will be developed after taking into account relevant amenity, ecological, stormwater, connectivity and constraint issues. This approach shall also provide an understanding that the purpose of the development is to enable an extension to the Yatala Enterprise Area rather than a land use area in conflict with the ultimate land uses intended for the local area plan.

2.0 APPLICATION OF THE M38 INDUSTRIAL ESTATE PLACE CODE

2.1 APPLICATION

- 2.1.1** The M38 Industrial Estate Place Code applies to all proposed development located within the Place Code area, as indicated in the **Land Use Classification and Staging Plan, Plan No.5941 P LU 01 Rev B**.
- 2.1.2** The Table of Development indicated in **Clause 4.0** identifies the levels of assessment for development occurring within this development area. These tables override all applicable material change of use overlay provisions as contained within the Gold Coast Planning Scheme 2003, as amended.
- 2.1.3** The codes that may be relevant to the assessment of development in this Place Code area are listed in **Clause 5.0**.
- 2.1.4** It should be noted that self assessable development is deemed to be development that is consistent with the intent of this Place Code, and therefore need only comply with the self assessable acceptable solutions of the **M38 Industrial Estate Place Code** contained in **Clause 6.0** and any other acceptable solutions identified in the relevant codes explicitly referred to in **Subclauses 5.1.1 – 5.1.7**.
- 2.1.5.** The definitions of all relevant terms and land uses contained within this Place Code are to be found within **Part 4, Division 1, Chapters 1-3 of the Gold Coast City Planning Scheme 2003, as amended** except as separately defined within **Clause 3.0** of this document.
- 2.1.6.** The operation of this Place Code is guided, where necessary, by the protocols of **Part 6, Division 1, Chapters 2 of the Gold Coast City Planning Scheme 2003, as amended**.
- 2.1.7.** This M38 Industrial Estate Place Code only applies to the specific forms of development outlined within the Table of Development in **Clause 4.0**. All other forms of development are subject to the relevant planning provisions of the Gold Coast City Council, which is currently the Gold Coast Planning Scheme 2003, as amended.

3.0 DICTIONARY

3.1 APPLICATION OF DEFINITIONS

The definitions outlined in Clause 3.2 have been compiled specifically for the M38 Industrial Estate Place Code only. Where applicable, these specific use or development definitions override those contained within **Part 4 Division 1 Chapter 2 of the Gold Coast Planning Scheme 2003, as amended**. For any proposed use that does not comply with these specific definitions, the current use or development definitions contained within the Gold Coast Planning Scheme 2003, as amended apply.

3.2 USE OR DEVELOPMENT DEFINITIONS

Food industry

Premises used for the manufacturing, producing, processing, storing or distributing of food or food related products for human consumption.

Low impact industry

Premises used for industrial activities that include the manufacturing, producing, processing, repairing, altering, recycling, storing, distributing, transferring, treating of products and have one or more of the following attributes:

- negligible impacts on sensitive land uses due to offsite emissions including aerosol, fume, particle, smoke, odour and noise;
- minimal traffic generation and heavy-vehicle usage;
- demands imposed upon the local infrastructure network consistent with surrounding uses;
- the use generally operates during the day (e.g. 7am to 6pm);
- offsite impacts from storage of dangerous goods are negligible;
- the use is primarily undertaken indoors.

Service industry

Premises used for industrial activities that have no external air, noise or odour emissions from the site and can be suitably located with other non-residential uses.

Industry

As defined in the Gold Coast Planning Scheme 2003 as amended, where not 'low impact industry' or 'service industry' as defined in the M38 Industrial Estate Place Code.

3.3 SPECIFIC USE OR DEVELOPMENT DEFINITIONS EXAMPLES

The following table provides more specific examples of the specific use definitions applicable to the M38 Industrial Estate Place Code.

Column 1 Use	Column 2 Examples include	Column 3 Does not Include the following examples
Low impact industry	- Repairing and servicing motor vehicles, including mechanical components, radiators, electrical components, wheel alignments, exhausts, tyres, suspension or air conditioning, not including spray painting; - Repairing and servicing lawn mowers and outboard engines; - Fitting and turning workshop; - Assembling or fabricating products from sheet metal or welding steel, producing less than 10 tonnes a year and not including spray painting; - Assembling wood products not involving cutting, routing, sanding or spray painting; - Dismantling automotive or mechanical equipment, not including debonding brake or clutch components.	Panel beating, spray painting or surface coating, tyre recycling, drum re-conditioning, wooden and laminated product manufacturing.
Service industry	Audio visual equipment repair, film processing, bicycle repairs, clock and watch repairs, computer repairs, dry cleaning, hand engraving, jewellery making, laundromat, locksmith, picture framing, shoe repairs, tailor.	Small engineer mechanical repair workshop, cabinet making, shop fitting, sign writing, tyre depot

4.0 M38 INDUSTRIAL ESTATE PLACE CODE – TABLE OF DEVELOPMENT

4.1 TABLE OF DEVELOPMENT

Pursuant to s.242 of the *Sustainable Planning Act 2009*, the **Yatala Enterprise Area Local Area Plan Table of Development (as modified)** below, is nominated as the applicable Table of Development. It applies to the area specified within the M38 Industrial Estate Land Use Classification Plan and the specific forms of development outlined. Precincts nominated in this plan and the following tables of development and Place Code are as follows:

- Precinct A (Low Impact and Service Industry)
- Precinct B (General Impact Business and Industry)
- Precinct C (Limited General Impact Business and Industry)
- Precinct D (Open Space/Reserve)

TABLE A – YATALA ENTERPRISE AREA LOCAL AREA PLAN TABLE OF DEVELOPMENT (AS MODIFIED) – MATERIAL CHANGE OF USE

MATERIAL CHANGE OF USE incorporating or not incorporating BUILDING WORK			
Any use not listed in Table A Material Change of Use Table of Development, should be considered undesirable or inappropriate in the Precinct to which the Table of Development applies. Any Material Change of Use not individually listed in the relevant Table of Development will be treated as an Impact Assessable development.			
Exempt	Self Assessable	Code Assessable	Impact Assessable
Precinct A (Low Impact and Service Industry)			
Agriculture Animal Husbandry Conservation (natural area management) Low-Impact Telecommunications Facility Minor Change in the scale or intensity of an existing lawful use Park Public Utility	Café Car Park Convenience Shop Low Impact Industry Milk Depot Service Industry Take-Away Food Premises Temporary Use Warehouse	Bulk Garden Supplies Caretakers Residence Estate Sales Office Food Industry Industry Manufacturer's Shop Outdoor Storage Area Rural Industry Telecommunications	Motor Vehicle Repairs n.e.i. Salvage Yard Service Station Transport Terminal

MATERIAL CHANGE OF USE incorporating or not incorporating BUILDING WORK Any use not listed in Table A Material Change of Use Table of Development, should be considered undesirable or inappropriate in the Precinct to which the Table of Development applies. Any Material Change of Use not individually listed in the relevant Table of Development will be treated as an Impact Assessable development.			
		Facilities n.e.i.	
Precinct B (General Impact Business and Industry)			
Agriculture Animal Husbandry Conservation (natural area management) Low-Impact Telecommunications Facility Minor Change in the scale or intensity of an existing lawful use Park Public Utility	Café Car Park Convenience Shop Industry Low Impact Industry Manufacturer's Shop Milk Depot Outdoor Storage Area Service Industry Take-Away Food Premises Temporary Use Warehouse	Bulk Garden Supplies Caretakers Residence Food Industry Rural Industry Telecommunications Facilities n.e.i. Transport Terminal	Motor Vehicle Repairs n.e.i. Salvage Yard Service Station
Precinct C (Limited General Impact Business and Industry)			
Agriculture Animal Husbandry Conservation (natural area management) Low-Impact Telecommunications Facility Minor Change in the scale or intensity of an existing lawful use Park Public Utility	Car Park Industry Low Impact Industry Manufacturer's Shop Outdoor Storage Area Service Industry Temporary Use Warehouse	Bulk Garden Supplies Rural Industry Telecommunications Facilities n.e.i. Transport Terminal	Motor Vehicle Repairs n.e.i. Salvage Yard
Precinct D (Open Space/Reserve)			
Conservation (natural area management) Low-Impact Telecommunications Facility	Temporary Use	Telecommunications Facility n.e.i.	Agriculture

MATERIAL CHANGE OF USE incorporating or not incorporating BUILDING WORK			
Any use not listed in Table A Material Change of Use Table of Development, should be considered undesirable or inappropriate in the Precinct to which the Table of Development applies. Any Material Change of Use not individually listed in the relevant Table of Development will be treated as an Impact Assessable development.			
Minor Change in the scale or intensity of an existing lawful use			
Park			
Public Utility			

TABLE B – YATALA ENTERPRISE AREA LOCAL AREA PLAN TABLE OF DEVELOPMENT (AS MODIFIED) – OPERATIONAL WORK

OPERATIONAL WORK – CHANGES TO GROUND LEVEL			
Exempt	Self Assessable	Code Assessable	Impact Assessable
Operational Work that involves extraction, excavation or fill that:			
		exceeds a volume of 100 cubic metres of fill or excavation, or is closer than 20 metres from the allotment boundary and is within or adjoins an allotment containing places, sites, or landscapes of indigenous cultural heritage significance listed on the Queensland Heritage Register – Cultural Records (Landscapes Queensland and Queensland Estate) Act 1987; OR is located on land which is the subject of a native title claim; OR is located on land that is known to the owner and/or the developer to be of indigenous cultural heritage value.	

TABLE C – YATALA ENTERPRISE AREA LOCAL AREA PLAN TABLE OF DEVELOPMENT (AS MODIFIED) – OPERATIONAL WORK

OPERATIONAL WORK – ADVERTISING DEVICES			
Exempt	Self Assessable	Code Assessable	Impact Assessable
	Advertising Device that is: a) not illuminated, nor animated, and where the total area of signage per street frontage does not exceed the following for each precinct: Precinct A: 20m ² b) not on land with frontage to an arterial road or any State-controlled road.	Advertising Devices n.e.i.	

TABLE D – YATALA ENTERPRISE AREA LOCAL AREA PLAN TABLE OF DEVELOPMENT (AS MODIFIED) – OPERATIONAL WORK

OPERATIONAL WORK – INFRASTRUCTURE AND LANDSCAPE WORK			
Exempt	Self Assessable	Code Assessable	Impact Assessable
Minor Landscape Work		Landscape Work n.e.i. Works for Infrastructure	

TABLE E – YATALA ENTERPRISE AREA LOCAL AREA PLAN TABLE OF DEVELOPMENT (AS MODIFIED) – OPERATIONAL WORK

OPERATIONAL WORK – VEGETATION CLEARING			
Exempt	Self Assessable	Code Assessable	Impact Assessable
Vegetation Clearing that:			
	results in the removal of, or damage to, vegetation that is equal to, or in excess of, 40 centimetres in girth (circumference) measured at 1.3 metres above average ground level, and complies with the Acceptable Solutions of Specific Development Code 36 – Vegetation Management; OR results in the removal of, or damage to, vegetation that is equal to, or in excess of, four metres in height, and complies with the Acceptable Solutions of Specific Development Code 36 – Vegetation Management	results in the removal of, or damage to, vegetation that is equal to, or in excess of, 40 centimetres in girth (circumference) measured at 1.3 metres above average ground level, and alternate solutions to the Acceptable Solutions of Specific Development Code 36 – Vegetation Management are proposed; OR results in the removal of, or damage to, vegetation that is equal to, or in excess of, four metres in height, and alternate solutions to the Acceptable Solutions of Specific Development Code 36 – Vegetation Management	

TABLE F – YATALA ENTERPRISE AREA LOCAL AREA PLAN TABLE OF DEVELOPMENT (AS MODIFIED) – RECONFIGURING A LOT

RECONFIGURING A LOT			
Exempt	Self Assessable	Code Assessable	Impact Assessable
Precincts A & B (Low Impact and Service Industry, General Impact Business and Industry)			
		Results in no lots with an area less than 2,000m ² ;	

RECONFIGURING A LOT			
Exempt	Self Assessable	Code Assessable	Impact Assessable
Precincts A & B (Low Impact and Service Industry, General Impact Business and Industry)			
		OR Entails only a Community Title Subdivision (including Standard Format Plans and/or Volumetric Lots), or a Volumetric Lot within a building, or a leasehold subdivision of an existing approved development	
Precinct C (Limited General Impact and Business and Industry)			
		Results in no lots with an area less than one (1) hectare; OR Entails only a Community Title Subdivision (including Standard Format Plans and/or Volumetric Lots), or a Volumetric Lot within a building, or a leasehold subdivision of an existing approved development	
Precinct D (Open Space/Reserve)			
		Results in no lots with an area less than 20 hectares; OR Entails only a Community Title Subdivision (including Standard Format Plans and/or Volumetric Lots), or a Volumetric Lot within a building, or a leasehold subdivision of an existing approved development	Results in one or more lots with an area less than 20 hectares

5.0 M38 INDUSTRIAL ESTATE PLACE CODE RELEVANT CODES FOR ASSESSMENT

5.1 RELEVANT CODES

References to Relevant Codes

The Codes relevant for development assessment in this Place Code area are listed and contained within **the Gold Coast Planning Scheme and are as follows:**

5.1.1 All proposed development within the site is subject to the **M38 Industrial Estate Place Code**.

5.1.2 Self Assessable Development: The following codes apply to development that is self assessable under the Tables of Development herein (Section 3).

PLACE CODE	SPECIFIC DEVELOPMENT CODES	CONSTRAINT CODES
M38 Industrial Estate Place Code	2 Advertising Devices 4 Animal Husbandry 10 Caretaker's Residence 24 Office 25 Private Recreation 27 Retail and Related Establishments 34 Temporary Use 36 Vegetation Management	2 Bushfire Management Areas 3 Canals and Waterways 4 Car Parking, Access and Transport Integration 8 Flood Affected Areas 10 Nature Conservation 16 Steep Slopes or Unstable Soils

5.1.3 Material Change of Use: The following codes apply to development that is code or impact assessable under the Tables of Development herein (Section 3).

PLACE CODE	SPECIFIC DEVELOPMENT CODES	CONSTRAINT CODES
M38 Industrial Estate Place Code	4 Animal Husbandry 10 Caretaker's Residence 17 Farm Forestry 20 Kennels 21 Landscape Work 24 Office 25 Private Recreation 27 Retail and Related	2 Bushfire Management Areas 3 Canals and Waterways 4 Car Parking, Access and Transport Integration 5 Cultural Heritage (Historic) 6 Cultural Heritage (Indigenous) 8 Flood Affected Areas 9 Natural Wetland Areas and Natural Waterways

PLACE CODE	SPECIFIC DEVELOPMENT CODES	CONSTRAINT CODES
	Establishments 29 Rural Industry 30 Salvage Yards 31 Service Stations 33 Telecommunications Facilities 39 Works for Infrastructure	10 Nature Conservation 12 Rail Corridor Environs 13 Road Traffic Noise Management 14 Sediment and Erosion Control 15 Service Roads (Pacific Motorway) 16 Steep Slopes or Unstable Soils 17 Unsewered Land

5.1.4 Operational Work – Changes to Ground Level: The following codes apply to development that is self or code assessable Operational Work – Changes to Ground Level under the Tables of Development herein (Section 3).

PLACE CODE	SPECIFIC DEVELOPMENT CODES	CONSTRAINT CODES
M38 Industrial Estate Place Code	11 Changes to Ground Level and Creation of New Water bodies	2 Bushfire Management Areas 3 Canals and Waterways 4 Car Parking, Access and Transport Integration 6 Cultural Heritage (Indigenous) 7 Flood Affected Areas 9 Natural Wetland Areas and Natural Waterways 10 Nature Conservation 14 Sediment and Erosion Control 16 Steep Slopes or Unstable Soils

5.1.5 Operational Work – Advertising Devices, Landscape Work and Infrastructure:

The following codes apply to development that is code assessable Operational Work – Advertising Devices, Landscape Work or Infrastructure under the Tables of Development herein (Section 3).

PLACE CODE	SPECIFIC DEVELOPMENT CODES	CONSTRAINT CODES
M38 Industrial Estate Place Code	2 Advertising Devices 21 Landscape Work 39 Works for Infrastructure	2 Bushfire Management Areas 3 Canals and Waterways 4 Car Parking, Access and Transport Integration 5 Cultural Heritage (Historic) 6 Cultural Heritage (Indigenous) 8 Flood Affected Areas 9 Natural Wetland Areas and Natural Waterways 10 Nature Conservation 14 Sediment and Erosion Control 15 Service Roads (Pacific Motorway) 16 Steep Slopes or Unstable Soils

5.1.6 Operational Work – Vegetation Clearing: The following codes apply to development that is code assessable Operational Work – Vegetation Clearing under the Tables of Development herein (Section 3).

PLACE CODE	SPECIFIC DEVELOPMENT CODES	CONSTRAINT CODES
M38 Industrial Estate Place Code	36 Vegetation Management	2 Bushfire Management Areas 5 Cultural Heritage (Historic) 6 Cultural Heritage (Indigenous) 9 Natural Wetland Areas and Natural Waterways 10 Nature Conservation 14 Sediment and Erosion Control 16 Steep Slopes or Unstable Soils

5.1.7 Reconfiguring a Lot: The following codes apply to development that is code or impact assessable Reconfiguring a Lot under the Tables of Development herein (Section 3).

PLACE CODE	SPECIFIC DEVELOPMENT CODES	CONSTRAINT CODES
M38 Industrial Estate Place Code	11 Changes to Ground Level and Creation of New Water bodies 21 Landscape work 28 Reconfiguring a Lot 36 Vegetation Management 39 Works for infrastructure	2 Bushfire Management Areas 3 Canals and Waterways 4 Car Parking, Access and Transport Integration 5 Cultural Heritage (Historic) 6 Cultural Heritage (Indigenous) 8 Flood Affected Areas 9 Natural Wetland Areas and Natural Waterways 10 Nature Conservation 12 Rail Corridor Environs 13 Road Traffic Noise Management 14 Sediment and Erosion Control 15 Service Roads (Pacific Motorway) 16 Steep Slopes or Unstable Soils 17 Unsewered Land

- Where a development proposal includes one or more types of development, all of the identified codes must be referred to for each of the components of development.
- Where a number is listed prior to the name of a Code, this Code shall be located in Part 7 of the Gold Coast Planning Scheme.
- Where a number is not listed before the name of a Code, this Code shall be located within this Place Code.

5.2 PERFORMANCE CRITERIA AND ACCEPTABLE SOLUTIONS

The relevant Acceptable Solutions must comply with self assessable acceptable solutions in order to retain self assessable development status. Acceptable solutions outlined in the applicable codes that are not identified as being relevant for self assessable development do not form part of this assessment.

It is desirable that code assessable development comply with the Acceptable Solutions to ensure that each Performance Criterion is met. However, code assessable development may comply with an alternative solution, provided that the alternative solution can be demonstrated to meet the relevant Performance Criterion to Council's satisfaction. Where no acceptable solution is provided for a

Performance Criterion in the code, the development must provide its own solution to meet that particular Performance Criterion.

It is desirable that impact assessable development comply with the Acceptable Solutions to ensure that each Performance Criterion is met. However, impact assessable development may comply with an alternative solution, provided that the alternative solution can be demonstrated to meet the relevant Performance Criterion, to Council's satisfaction. Note that impact assessable development must comply with all relevant planning measures of the whole Planning Scheme. Where no alternative solution is provided for a Performance Criterion in the code, the development must provide its own solution to meet that particular Performance Criterion.

5.3 CONFLICT BETWEEN PLACE CODE AND PLANNING SCHEME

In situations where the Performance Criteria and/or Acceptable Solutions contained in Codes within this M38 Industrial Estate Place Code conflict with the Performance Criteria and/or Acceptable Solutions of a Council Code, the Performance Criteria and/or Acceptable Solution of the Code within the relevant M38 Industrial Estate Place Code shall prevail.

In situations where this Code is silent on matters, the development shall be subject to the provisions contained within the 'Our Living City – Gold Coast Planning Scheme' and its associated policies.

6.0 M38 INDUSTRIAL ESTATE PLACE CODE

DEVELOPMENT REQUIREMENTS

6.1 PURPOSE

The M38 Industrial Estate Place Code seeks to ensure that the scale and intensity of development including the impact, design and appearance of industrial development for this land is consistent with the role of the site and the YEA as a regionally significant location for industrial development. These provisions also aim to ensure that the intent of the Place Code is followed and high standards of urban design and architecture are promoted.

6.2 APPLICATION

- This Code applies to all identified forms of development taking place within the Place Code area as nominated within the M38 Industrial Estate Land Use Classification Plan.

6.3 DEVELOPMENT REQUIREMENTS

M38 INDUSTRIAL ESTATE PLACE CODE

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
DEVELOPMENT THAT IS SELF ASSESSABLE, CODE ASSESSABLE OR IMPACT ASSESSABLE	
BUILDING HEIGHT	
PC1 The height of buildings is to be consistent with the role of the site as a predominantly industrial use area. Buildings are to be constructed to a height that complements the surrounding built form and the local landscape character.	AS1 The building has a maximum of 15 metres.
ACCOMMODATION DENSITY	
PC2 Accommodation density must be consistent with the predominant character of the YEA as an industrial location. Accordingly, very low residential densities are envisaged for the LAP area.	AS2 The maximum dwelling density does not exceed one dwelling per lot.
SITE COVERAGE	
PC3 The site coverage of development shall be in accordance with the open space landscape character of the YEA.	AS3 Precinct A, B & C: The maximum site coverage shall not exceed 70%.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
	Precinct D: The maximum site coverage shall not exceed 10%.
BUILDING SETBACK	
PC4 The layout of buildings, structures and activities achieves an attractive and orderly appearance where development is visible from the public domain. A good standard of visual amenity is achieved through generous building setbacks and high quality landscaping.	Precinct A AS4.1 Buildings are set back from frontages: a) 5 metres from the primary frontage; b) (i) 6 metres from the Stapylton Jacobs well Road frontage; (ii) 1.5 metres from the secondary frontage; and c) 10 metres from the western boundary adjoining the existing residential uses. Precincts B, C & D AS4.2 Buildings are set back from frontages: a) 5 metres from the primary frontage; and b) 1.5 metres from the secondary frontage. AS4.3 Where the site adjoins a public open space area the building or structure is setback a minimum of three meters from the common boundary with the public open space, and the setback area includes; a) a landscape buffer strip a minimum width of two metres; and b) fencing of the common boundary between the private lot and public open space. AS4.4 Buildings shall be setback 50 metres from the adjoining property boundary of the 'Stapylton Landfill'. The 50 metres shall be inclusive of the vegetated buffer area adjoining the eastern property boundary.
BOUNDARY FENCING	
PC5 The erection of boundary fencing is undertaken in a manner that promotes an attractive streetscape and is responsive to the intended purpose of the fencing.	AS5.1 The design of front boundary fencing is conducive to the establishment of an attractive streetscape and is generally in accordance with the design measures outlined in Figure to AS5.1 included in this code. Generally speaking, design features or strategies such as transparency or landscape buffering should be utilised to soften the effect of front boundary fencing. Solid fencing exceeding 1.5 metres in height should only be established where required for acoustic attenuation purposes.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
	AS5.2 The height of side and rear boundary fencing, where not required for acoustic attenuation purposes, does not exceed a height of two metres. Due to the general low visibility of this fencing, there is no requirement for this fencing to be transparent or landscaped.
DESIGN OF DEVELOPMENT NEAR MAJOR ROADS	
PC6 Those developments visible from, or facing Stapylton-Jacobs Well Road must exhibit a high standard of architectural presentation.	AS6 Facades visible from, or facing Stapylton-Jacobs Well Road are designed to incorporate: a) materials such as glass, brick and coloured/textured block work (standard concrete block should not be used). If metal cladding is used, it should be pre-coated in an appropriate colour and have some form of relief; b) relatively unobtrusive, earth toned colours, such as subdued greens, blues, browns and greys (bright colours and/or materials which cause glare are avoided); c) horizontal/vertical articulation of walls at least at 15 metre intervals; d) 'humanising' elements, such as entry forecourts, porticos, verandahs, windows, awnings and fenestration; e) other features which contribute to an interesting and attractive appearance These design features are to be applied to the main facade facing the relevant road, as well as along a brief return or the full length of side walls.
VEHICULAR CROSSINGS	
PC7 Vehicular crossings associated with the development must be designed and constructed to ensure: a) A safe footpath environment; b) Safe vehicular access to the property; c) Appropriate hydraulic performance of the stormwater infrastructure; d) No damage to vehicle or road infrastructure; e) Minimal loss of on-street parking spaces; and f) Continued amenity of the neighbourhood.	AS7 Driveways are designed and constructed in accordance with relevant sections of Planning Scheme Policy 11 – Land Development Guidelines.
VEHICULAR PARKING	
PC8 On-site vehicle parking is provided to meet expected demand, having regard to:	AS8.1.1 The number of car parking spaces provided on-site generally meets the standards set out in the Constraint Code 4 - Car Parking, Access and

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
a) The size of the proposed workforce; b) The likely number of visitors to the site; c) The likely size and number of service and transport vehicles to be on the site at any one time; d) On-site parking and loading/unloading activities within sites; e) The availability of conveniently located on-street parking; f) Any possible future expansion, redevelopment or change of use.	Transport Integration in the Gold Coast City Planning Scheme (version 1.1 Amended January 2007); OR AS8.1.2 The number of car parking spaces provided on-site is generally in accordance with Table to Acceptable Solutions AS8.1.2. AS8.2 For multi-unit or multi-use developments, the total car parking provided is an aggregate of the standard parking required for each individual unit and/or component use. AS8.3 A lesser provision may be acceptable where it can be demonstrated, to Council's satisfaction, that the parking needs of a particular development will be adequately met. Where less than the standard amount of parking is provided, the left over space is retained as landscaped open space and placed so as to be suited to ready conversion to additional parking, should the use of the site change and/or the actual car parking demand rise.
ENVIRONMENTAL MANAGEMENT	
PC9 The environmental mitigation methods for the development as detailed within the Environmental Management Plan must take into account and seek to ameliorate any negative aspects of the existing amenity of the local area having regard, but not limited to the impact of noise, hours of operation, visual amenity, odour, emissions and dust.	AS9 For development located within Precinct C an Environmental Management Plan (EMP) has been prepared and approved by Council and the development complies with the requirements of the EMP. The EMP is to prepared in accordance with the Planning Scheme Policy 10 – Guidelines for Preparing Management Plans and Plans of Development.
REFUSE FACILITIES	
PC10 Refuse facilities must be provided on site to service the needs of the development.	AS10.1 A Provision is made for the storage of refuse on site and access for the removal of refuse in accordance with "Solid Waste Management Policy for New Developments"; AS10.2 The refuse storage area is not less than three metres to the frontage of the site and not less than 1.5 metres from any other site boundary;

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
	AS10.3 The refuse storage area is enclosed on three sides, with a screen wall extending 0.2 metres above the height of the refuse receptacles; and AS10.4 The refuse storage area is effectively screened from view with landscaping.
BUILDING DESIGN	
PC11 All buildings within Precinct A must be acoustically treated, to minimise nuisance to the adjoining and surrounding residential development.	AS11 The building design and construction of development with Precinct A shall be in accordance with approved Acoustic Report prepared by TTM Group dated 20 April 2011 (reference: 33418 R03).
HOURS OF OPERATION	
PC12 All activities within Precinct A must be undertaken within appropriate hours, to minimise nuisance to the adjoining and surrounding residential development.	AS12 The hours of operation and the delivery and collection activities for development within Precinct A are restricted to between 7.00am and 8.00pm Monday to Friday, or to the satisfaction of the Chief Executive Officer.
DEVELOPMENT THAT IS CODE ASSESSABLE OR IMPACT ASSESSABLE	
BUILDING HEIGHT	
PC13 The height of buildings is to be consistent with the role of the site as a predominantly industrial use area. Buildings are to be constructed to a height that complements the surrounding built form and the local landscape character.	AS13 The maximum height of buildings does not exceed 15 metres.
SITING	
PC14 All buildings must be sited to complement the industrial character and the predominant built form of the surrounding area and to reduce potential conflicts between uses having regard to a site analysis, prepared in accordance with Planning Scheme Policy 17 - Site Analysis.	AS14 No acceptable solution provided.
PC15 The layout of the site must provide a clear separation between the public access areas and the areas set aside for servicing the building.	AS15 No acceptable solution provided.
PC16 Industrial structures, storage or service areas, which are likely to appear visually dominating or unsightly, are located to the rear or sides of sites or are otherwise designed and screened to enhance their appearance, when viewed from the street.	AS16 No acceptable solution provided.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
BUILDING AND LAYOUT DESIGN, SAFETY AND COMFORT	
PC17 Buildings are sited and designed such that suitable external spaces remain available for future expansion of buildings, and internal spaces are of a size and shape suited to variable internal layout, maximum vertical storage and addition of mezzanine floors.	AS17.1 Building shapes are regular so as to provide opportunities for future expansion in different directions, and for flexibility in internal location of activities and equipment. AS17.2 Internal column spacing and column heights are generous (for example, building spans of 18 metres and over, bay spacing of 12-18 metres, and column heights of at least eight metres).
PC18 Buildings are sited and designed to suit climatic conditions.	AS18.1 Wherever practicable, buildings are oriented to the north east to take advantage of summer breezes and winter sun. Western aspects are avoided, wherever possible. AS18.2 Where not air conditioned, buildings incorporate a maximum of openings (ie. louvring, windows, doorways) on eastern walls. AS18.3 Windows are minimised and trees are planted along west walls for protection from hot afternoon sun. AS18.4 Shading devices (ie: large roof overhangs, window hoods/blinds, awnings and verandahs) are attached to buildings on all sides, particularly eastern and western sides. Where possible, shading devices are retractable on northern sides during winter. AS18.5 Semi-enclosed workstations, where relatively strenuous manual labour takes place, are located in the cooler and more ventilated parts of the building.
PC19 All buildings must be designed and constructed to a high aesthetic standard and to complement or enhance the local character of the YEA.	AS19.1 The massing and proportions of new industrial buildings are consistent with those of adjoining industrial buildings. AS19.2 Building materials, patterns, textures and colours used in new buildings are complementary to those of nearby buildings.
PC20 Building design and appearance must be conducive to the safety and comfort of all building users.	AS20.1 Glass which forms all or part of any external wall of a building does not exceed a maximum degree of reflection of both heat and light of 20%. The glass area does not exceed 60% of the total area of the external wall.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
	AS20.2 Entrances to premises are clearly visible from the street, and are not obscured or dominated by car parking.
DESIGN OF CAR PARK AREAS	
PC21 All ground level parking is to be suitably landscaped to provide an attractive and pleasant outlook and shade for parked vehicles, and to contribute towards the quality presentation of new developments.	AS21.1 Significant trees are preserved and incorporated into car parking areas. AS21.2 Landscaped bays for the planting of shade trees are provided at regular intervals throughout car parking areas, at the rate of one landscaped bay per 40 vehicle parking bays or one large shade tree per ten parking spaces. Landscape bays have the same dimensions as a vehicle parking space. AS21.3 Large car parking areas and all heavy/service vehicle parking are situated to the side or rear of sites. Smaller car parking areas, particularly for short term and disabled parking, may be located to the front of sites. AS21.4 Car parking areas located in frontage setback areas are set back behind a minimum three metre landscaped buffer to the frontages. To reduce their visual impact, front car parking areas may be lowered and mounds incorporated in frontage landscaping.
ADVERTISING DEVICES	
PC22 Advertising signage does not dominate the visual amenity of the area.	AS22 No advertising, freestanding or otherwise, is erected which would be readily visible from the Pacific Motorway of the Gold Coast City Rail Line.
PC23 Signs and other forms of advertising on business/industry premises are kept to a minimum. Any advertising relates directly to the activity/process conducted on the premises, rather than general product advertisements.	AS23.1 There is one sign per premises. Multi-unit developments display a single index sign at the entrance to the development which details each occupant, its activity/process and respective unit number. AS23.2 The design and construction of signs meets the following parameters: a) signs are situated near site entries and are well placed for viewing by pedestrians and drivers; b) free-standing signs have a maximum area of 3m²; c) signs on facades have a maximum area of

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
	5m²; d) signs utilise company logos or symbolic representations for quick and easy identification; e) wording on signs is limited to the name, location, business and products of the establishment; f) signs do not utilise fluorescent paints; g) signs do not rotate, flash or move; h) signs are integrated with the form of development and are not visually dominating. AS23.3 All signs are consistent with the provisions for the Industry 2 Domain set out in Specific Development Code 2 – Advertising Devices.
OPEN SPACE/RESERVE AREA	
PC24 In the areas identified as Precinct D (Open Space/Reserve) within the Staging Plan, development is of a limited scale and intensity, compatible with the retention of and rehabilitation of vegetation and habitat, landscape amenity and/or buffer values.	AS24.1 Areas identified as Precinct D (Open Space/Reserve) on the Staging Plan are reserved for conservation and landscape amenity purposes, through: a) Transfer to Council as public open space b) Dedication of a conservation / landscape amenity buffer; or c) Reservation of an area as open space / reserve. AS24.2 Areas identified as Precinct D (Open Space/Reserve) are to be provided in accordance with the following: a) the areas identified as Precinct D as open space will be subject to the application of a statement of landscape intent and/or open space management statement/plan, designed in accordance with Council's Open Space Management and Land Development Guidelines. b) Eventual commitment of the area identified as Precinct D is provided to Council as public open space, in accordance with the requirements of an approved open space management statement/plan and/or rehabilitation management plan. AS24.3 Areas identified within the Precincts D (Open Space/Reserve) including areas identified for revegetation within an approved open space management plan and/or rehabilitation management plan are to be managed in the following manner:

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
	a) the land remains largely undisturbed by any buildings, clearing and earthworks; b) the land is provided exclusive of unacceptable hazards such as contaminated land under the Contaminated Land Act 1991 or land subject to geotechnical hazard; c) existing vegetation and natural drainage patterns are retained and rehabilitated, and additional trees planted within a 60 metre wide band utilising local native species; d) the area must be of a physical standard and condition that permits use of the land for its intended purpose, compliments existing adjacent and surrounding public open space areas and provides linkages to other open space areas, where practical; e) the area may form part of the landscape open space areas, associated with individual development proposals; f) the area facilitates appropriate measures for stormwater and flood management and the care of environmental features; g) any parallel roads or services are grouped on one side of the area, to minimise disturbance h) any breaks in the vegetation canopy, necessary for roads or services, are minimised by cutting through perpendicular to the link at a point where damage and discontinuity are minimised, such as where the canopy is already broken or sparse.
LANDSCAPE DESIGN	
PC25 Landscape design is used to enhance the landscape character of the YEA.	AS25.1 Frontage setback areas are attractively landscaped, including: a) at least 25% of the frontage having a landscaped buffer of minimum five metres depth and the remainder, excluding access ways, a landscape buffer of minimum three metres depth; b) one metre landscaped area adjacent to building walls facing the street. AS25.2 Planting of shade trees occurs along pathways, throughout car parking areas and within public road reserve, as well as and in any other exposed areas where relief from sun and glare would be beneficial.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
	AS25.3 Dwarf walls prevent vehicles breaching landscaped areas along frontages. AS25.4 Screen planting, utilising an appropriate mix of tall trees and lower level shrubs, is used around outdoor parking, equipment, storage and other unsightly areas, particularly where visible from roads. AS25.5 Landscape Design includes: a) provision of pleasant, shaded areas with appropriate furniture for lunch/relaxation areas for workers and visitors; b) retention of existing mature vegetation, wherever possible; c) retention of existing natural drainage channels and planting to strengthen their resistance to erosion, especially where proposed development is expected to result in increased volume and velocity of stormwater runoff; d) use of garden edges, lines of trees and mass planting to frame pathways and define site and building entries. AS25.6 A minimum ten (10) metre wide north south landscape buffer is provided along the western boundary of the site adjoining the existing residential uses generally as outlined on the Landscape Intent Plan prepared by Gassman Development Perspectives and titled 5941 Landscape Intent Rev C. AS25.7 A minimum of twenty (20) metre wide north south landscape buffer is provided along the eastern boundary of the site (consisting of 10 metre wide 'undisturbed corridor', and 10 metre wide 'works corridor' including earthworks and landscape treatment).

PC26 Potentially obtrusive noise, odour and visual impacts are effectively buffered.	AS26.1.1 Development incorporates landscape buffers, earth mounds and acoustic fencing appropriate to the likely off-site impacts of particular developments. OR AS26.1.2 A landscape buffer to a minimum width of ten metres is provided along the western property boundary where adjoining residential uses to effectively screen development behind.
PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
PC27 The street side environment and other public spaces are developed to enhance their visual appeal and create a physical continuity and legibility throughout the YEA area and its component precincts.	AS27 Individual developments contribute to streetscape enhancement work (including street tree planting, paving, landscaping of traffic islands and provision of street lighting and furniture), in accordance with any adopted Council streetscape strategy.
PC28 Public open spaces are developed to enhance their recreational amenity for workers and visitors to the Yatala area and the wider community.	AS28 Individual developments contribute (through works or financial contribution) towards construction of footpaths and cycle ways, seating, picnic facilities, play areas and/or other facilities in existing public open spaces and additional spaces established as a result of the development.
PC29 Landscape design contributes to the creation of a distinctive, memorable and legible town centre, local centres and surrounding suburban areas for YEA.	AS29.1 Street design and plantings and major pedestrian paths are aligned to take advantage of attractive local and distant views (eg, views to the mountains or other important landscape elements). AS29.2 Footpath paving treatments and street furniture integrate with adjoining development, and setback areas are integrated with public footpaths. AS29.3 Landscape plantings utilise local native species to promote a distinctive site character.
PC30 Open space and pedestrian areas are to be designed to be both functional and safe.	AS30 Development is designed to ensure a high degree of casual surveillance from nearby residents, employees or passing traffic, public and semi-public spaces, pedestrian and cyclist paths, car parking areas and building entrances.

PC31 All ground level car parking, open space and buffer areas must be landscaped and maintained to complement the character of the local area, and any adjoining residential or public open space areas.	AS31 The car park area, open space and buffer areas of the lot are landscaped with landscape design and use of plant species generally consistent with that of adjacent and nearby lots. The landscape design may incorporate extensive paved areas for pedestrian use.
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PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS															
LOT SIZE (FOR SUBDIVISION ONLY)																
PC32 All lots are to be of sufficient size to comfortably accommodate the type of development envisaged in the LAP and the relevant precinct intent. The number of allotments within Precinct C is controlled to minimise the number of premises exposed to any environmental nuisance from nearby landfill and associated heavy industrial uses.	AS32.1 Any new lots created are sized in accordance with the following schedule: <table><tr><th>Precinct</th><th>Min Area</th><th>Ave Area</th></tr><tr><td>A</td><td>2000m²</td><td>1 hectare</td></tr><tr><td>B</td><td>2000m²</td><td>1 hectare</td></tr><tr><td>C</td><td>1 hectare</td><td>1 hectare</td></tr><tr><td>D</td><td>20 hectares</td><td>20 hectares</td></tr></table> AS32.2 The number of allotments and tenancies located within Precinct C is minimised.	Precinct	Min Area	Ave Area	A	2000m ²	1 hectare	B	2000m ²	1 hectare	C	1 hectare	1 hectare	D	20 hectares	20 hectares
Precinct	Min Area	Ave Area														
A	2000m ²	1 hectare														
B	2000m ²	1 hectare														
C	1 hectare	1 hectare														
D	20 hectares	20 hectares														
PC33 Allotments prior to development have suitable topography for industry.	AS33 Industrial allotments generally have a ground slope not greater than 10%, and access ways associated with battle axe allotments generally have a ground slope not greater than 16%.															

PC34 Allotments are of regular shapes suited to the intended uses, and allowing design flexibility, efficient development and access.	AS34.1 Development generally incorporates all of the following features: a) allotments that are rectangular shapes; b) allotments which have frontage to depth ratios between 1:2 and 1:4. OR AS34.2 Alternative allotment shapes are provided where warranted, due to: a) the special site requirements of particular industries; and/or b) exceptional physical constraints. OR AS34.3 The development incorporates a small proportion of battle axe allotments, where particular industries have special requirements for square or long and narrow sites. (Battle-axe allotments are useful for creating allotments of such shapes, as well as reducing road frontage construction costs and providing appropriate sites for visually offensive industries.).
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PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
PC35 Allotments are oriented to suit climatic conditions.	AS35 Allotments are arranged in a manner that maximizes the number of allotments oriented to the north east to take advantage of breezes and enable optimal building orientation for energy efficiency and use of natural lighting.
PC36 Reconfiguration of land incorporates open space provision in a way which takes account of the location and attributes of the site and its surrounds, and the need to set aside certain areas for purposes such as: a) conservation of vegetation/habitat; b) retention of creek corridors and natural drainage patterns; c) provision of pedestrian/cycle linkages and recreational facilities; and/or d) creation of landscaped entrances, focal points and streetscape.	AS36.1 Where reconfiguration takes place, an area of up to 10% of the site is provided as open space. This open space is set aside for public park or conservation purposes, developed with pathways and/or recreational facilities, landscaped and/or rehabilitated to its natural state. AS36.2 Reconfiguration proposals incorporate a plan showing street planting to be undertaken. Planting themes contribute to the overall streetscape character of the estate.
PC37 Reconfiguration may take place in the form of Community Title subdivision, allowing for sharing of space, facilities and services, while at the same time ensuring allotments created are suited to the intended businesses/industries.	AS37 Community Title subdivisions within Precincts A-C (Industrial) are provided, which: a) are consistent with the Acceptable Solutions for PCs 32-36; b) generally maintain a minimum lot size of 100-200m² within a minimum overall site area of 2,000m²;

	c) are not used for heavy manufacturing, metal/food processing, or noxious, offensive or hazardous industries.
ROAD DESIGN	
PC38 Roads are provided so as to form a road hierarchy, with each road serving a particular function according to the intended land use characteristics of the estate, expected traffic volumes and types, and external existing and future road linkages to anticipated development on adjoining lots.	AS38.1 Concept plans submitted with reconfiguration and/or development applications identify all roads proposed to be upgraded and/or newly constructed and their intended function within a road hierarchy. AS38.2 Concept plans submitted with reconfiguration and/or development applications identify road connections with adjacent allotments that will promote connectivity; and AS38.3 Proposed road hierarchies are generally consistent with the conceptual road hierarchy identified on the Land Use Classification and Staging Plan.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
PC39 The width, pavement, curvature, sight distances, intersections, turning radii and design features of roads convey the particular function of each road with the hierarchy mentioned in AS33.3, and reflect the nature of traffic management. In particular, road design ensures the safe movement of heavy articulated vehicles.	AS39.1 Road design and construction is in accordance with Planning Scheme Policy 11 - Land Development Guidelines and the Table to this Acceptable Solution. AS39.2 Distances between intersections are not less than 60 metres. AS39.3 Streets intersect at right angles, or as near as topography or other limiting factors permit. AS39.4 Various vehicle control devices are used to regulate traffic speed and enhance pedestrian safety (such as traffic lights and illuminated pedestrian crossings). AS39.5 Paving surfaces, landscape treatment and signage are used to define entrances to the estate and joint use areas within the estate AS39.6 Road pavements are designed and constructed for long life, hard wearing and suitability to the load capacity of expected vehicles. AS39.7 Median strips, roundabouts and footpaths are to be aesthetically treated and planted and paved accordingly; and AS39.8 The design of road networks avoids the use of

	culs-de-sac.
PC40 The alignment of roads reflects the physical land characteristics, and provides adequate drainage and safety.	AS40.1 Road drainage is designed and situated along natural drainage courses. AS40.2 Road grades are established to avoid excessive grading, indiscriminate removal of ground cover and tree growth, and unnecessary topographical levelling.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
PC41 A network of pedestrian paths and cycleways is provided which considers: a) expected levels of pedestrian and cyclist activity; b) linkages between public transport, major employment activities, and parks; c) recreation opportunities along open space corridors; d) safe integration of users and vehicles, particularly at intersections; e) provision of bicycle end-of-trip facilities.	AS41.1 Footpaths are provided as follows: a) on both sides of all future major industrial roads. b) as specified in any relevant Council adopted strategy. AS41.2 Paths are designed and constructed in accordance with Council standards and AUSTROADS Part B. AS41.3 Features such as signs, road markings, lighting, paving, bollards and street furniture are provided to enhance the safety and amenity of foot/cycle paths. AS41.4 Bicycle end-of-trip facilities are provided in accordance with the requirements outlined in the Table to Acceptable Solution AS41.4.
PC42 The road network is designed to accommodate the extension and integration of the public transport system, with accessible linkages and routes and stops providing for passenger comfort without obstructing traffic flow.	AS42 For major industrial roads, constructed to a Industrial Collector standard, a minimum 3.5m parking lane is to be line marked and maintained to allow for future bus routes/stops.
SITE ACCESS	
PC43 Site access is designed and constructed to provide for the safe ingress/egress of vehicles to the site.	AS43 Vehicular access to the site is designed and constructed in accordance with Council, Department of Main Roads and AUSTROAD standards, and/or the following minimum requirements: a) comprises a single vehicular driveway (entrance/exit), wherever possible; b) is not closer than ten metres to an intersecting street on the same side of the street; c) provides a minimum sight distance of 110 metres;

	d) shares adjoining property access driveways, wherever possible; e) always enters the street at right angles; f) where the site has frontage to two roads, access is taken off the secondary/minor road, if possible; g) where separate entry and exit driveways are used, the first driveway reached from the kerbside land is clearly delineated and sign posted.
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PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
PC44 Treatment of access points to the site maintains appropriate sight distances and visually enhances its identification.	AS44 Access points incorporate decorative paving treatment and landscaping which distinguishes the access point, but which does not obstruct the safe sight distance requirements outlined above.
PC45 Provision is made for safe pedestrian and disabled access.	AS45.1 Pedestrian paths designed for disabled access are provided between building entrances, public footpaths and car parking areas. AS45.2 Pedestrian paths are separated from vehicular driveways.
AMENITY PROTECTION	
PC46 The proposed use must not detract from the amenity of the local area, having regard, but not limited, to the impact of: a) noise; b) hours of operation; c) traffic; d) lighting; e) signage; f) visual amenity; g) privacy; h) odour and emissions.	AS46 No acceptable solution provided.
PC47 The proposed development must take into account and seek to ameliorate any negative aspects of the existing amenity of the local area, having regard, but not limited, to the existing impact of: a) noise; b) hours of operation; c) traffic; d) lighting; e) signage; f) visual amenity; g) privacy;	AS47 No acceptable solution provided.

h) odour and emissions; i) dust; and j) vibration.	
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PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
URBAN/RURAL USE CONFLICTS	
PC48 Conflicts between urban and rural uses are to be avoided by effective development design.	AS48 The development of land adjacent to the agricultural character areas includes a suitable buffer.
EXTRACTIVE INDUSTRY	
PC49 Extractive industry operations are managed to make effective use of the extractive resource, while containing any impacts on the subject site.	AS49 The extractive industry is managed and developed consistent with the Extractive Industry Domain Place Code.
ON-SITE VEHICLE PARKING AND MOVEMENT	
PC50 Internal driveways are provided for safe and easy maneuvering of vehicles.	AS50.1 Internal driveways are designed and constructed to enable all vehicles to enter and exit the site in a forward motion. AS50.2 Minimum driveway widths are as follows: a) eight metres to accommodate non articulated vehicles; b) ten metres to accommodate articulated vehicles; c) 4.5 metres for one-way driveways.
PC51 On-site vehicle parking is located: a) to allow easy access to building entrances; b) to provide visitor spaces for short term/high turnover use clearly visible from the street and signposted accordingly; c) to be adequately screened from the street; d) compatible with surrounding development and, where possible, facilitating shared use with adjacent land users.	AS51.1 In areas where visual amenity is important and/or where relatively large amounts of parking are provided, parking areas are generally situated to the rear or side of the site. In particular, employee parking is situated at the rear of the site, with staff entrances at the rear of the building. AS51.2 Some parking may be located toward the front of the site convenient to the street, provided it is behind landscaping strips and treated aesthetically. AS51.3 Short term/high turnover visitor parking and disabled parking spaces are located close to the main building entrance and clearly signposted. AS51.4 Driveways and parking areas may be constructed to property boundaries and linked to adjoining car parking areas. Similarly, loading areas may be located to facilitate shared turning areas across property boundaries.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
LOADING AND UNLOADING	
PC52 All loading and unloading activities take place onsite.	AS52 Loading docks are located in the side or rear portions of the site, separate from public/visitor parking and access points, and screened by vegetation or walls to avoid public view.
PC53 Adequate provision is made for on-site manoeuvring of service vehicle/s.	AS53.1 On sites over 4,000m² and/or where the uses thereon involve regular servicing by service vehicle/s, on-site service areas are provided. On-site service areas comprise an area of land with an appropriate hard surface to enable a service vehicle/s to turn around within the site (based on standard design turning templates given by AUSTROADS AS 2890.1, 2890.2), and space for additional service vehicle parking and storage requirements. AS53.2 It may be acceptable for two or more developments to share service vehicle/s turning areas.
SITE SERVICING	
PC54 The design and provision of water, stormwater drainage, sewerage, electricity, gas and communications networks meets the needs of industry and business, and provides an orderly and economic progression of service development in the region.	AS54.1 The design and supply of water, stormwater drainage, sewerage, electricity, gas and communication services is in accordance with the requirements of Planning Scheme Policy 11 – Land Development Guidelines and the responsible authority (eg. Telstra, Queensland Electricity Boards, and Queensland Emergency Services). AS54.2 Car park entrances and ramps, loading docks and access ways are minimised, suitably designed and treated to ensure that they do not adversely impact on the streetscape and adjoining development.
PC55 Conflicts between pedestrians and vehicles at entrance points to parking areas are to be minimised.	AS55.1 The number of vehicle entry points to a development site is minimised, particularly in areas which have high volumes of pedestrian traffic and on streets with a significant through road function. AS55.2 Entrance points to parking and loading areas have clear and unobstructed visibility of pedestrian pathway areas, with pedestrian crossing points clearly identified which give priority to pedestrians.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
PC56 Development is to be designed to support the functional operation of the cycle network.	AS56 Development is designed to support the functional operation of the local and regional cycleway system. (Local cycle ways will be determined at time of subdivision of each development.)
PUBLIC CONVENIENCE FACILITIES WITHIN BUILDINGS	
PC57 Commercial developments are to include public convenience facilities, where there is a need for their provision.	AS57 Where provided, public toilet facilities are open and readily accessible to the general public during retail trading hours or other trading hours relevant to the development.

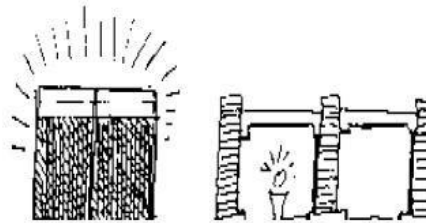
M38 INDUSTRIAL ESTATE

Figure to Acceptable Solution AS5.1

Negative Fences

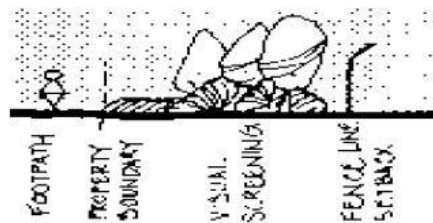


High security fencing on street alignment dominated streetscape.

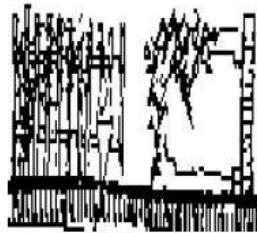


Chain fencing has a prison-like effect and is highly reflective. Height barriers can be visually intrusive.

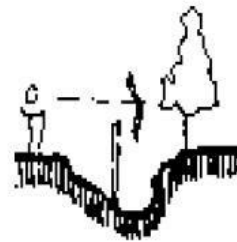
Positive Fences



Unattractive fencing should be placed inside the front alignment and planted out.



Palisade of pickets set close together with horizontal rails that climbers might use. Solid masonry fence supporting vine.



Obtrusive fence placed in a swale to minimise visual impact.

M38 INDUSTRIAL ESTATE

Table to Acceptable Solutions AS8.1.2

COLUMN 1	COLUMN 2
This table sets out the minimum number of car parking spaces required according to the use of the land. For each Material Change of Use, listed in Column 1, the minimum number of car parking spaces to be provided is listed in Column 2. Where the number of car spaces calculated, using Column 2, is not a whole number, the number of car parking spaces required shall be the next higher whole number.	
Warehouse	Two (2) spaces per tenancy or lot, plus one (1) space per 50m ² of GFA up to 500m ² , plus one (1) space per 100m ² of GFA over 500m ² .
All other Uses	Two (2) spaces per tenancy or lot, plus one (1) space per 50m ² of GFA up to 500m ² , plus one (1) space per 100m ² of GFA over 500m ² .

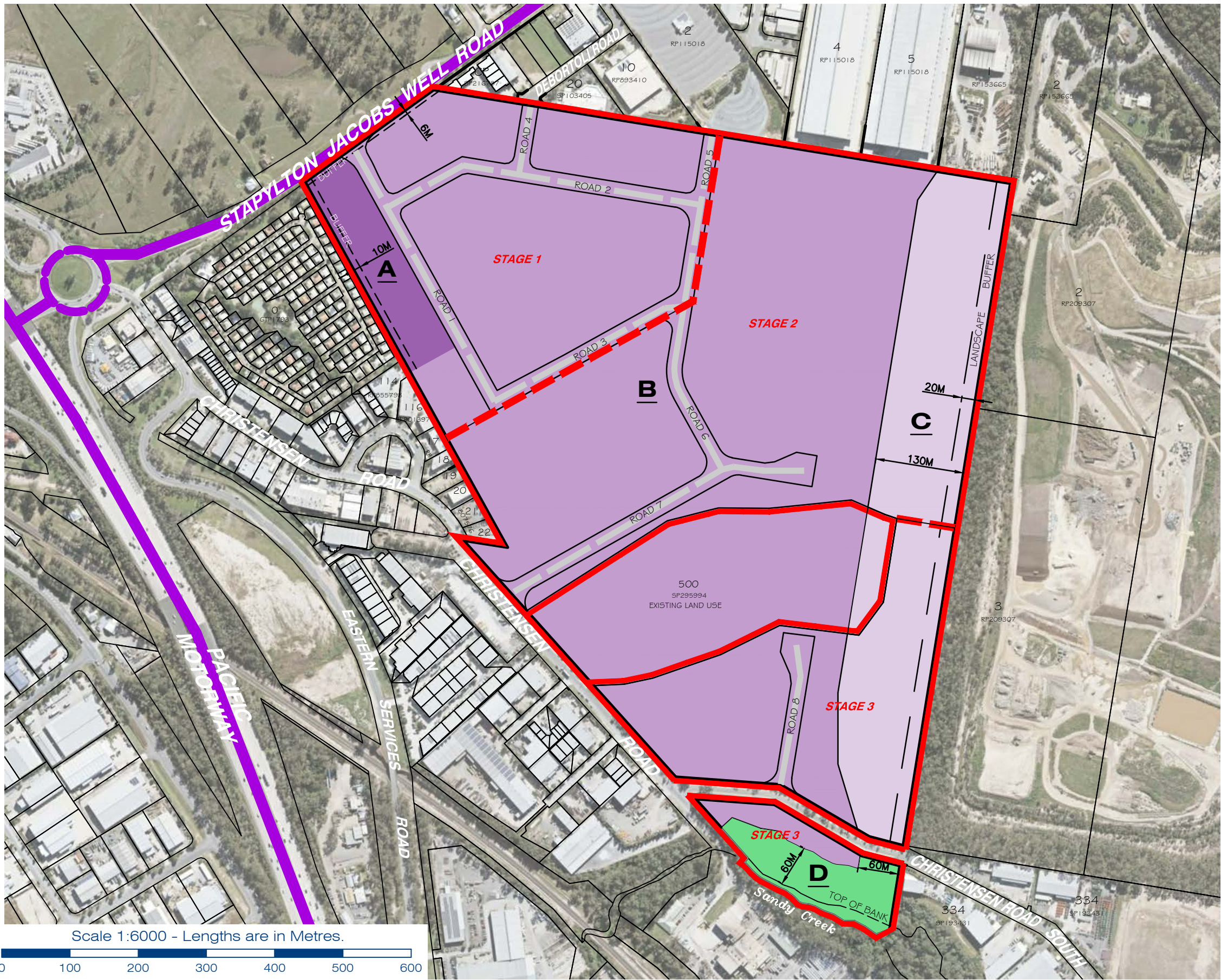
Table to Acceptable Solutions AS41.4

Note:- b) Type/Class as defined in, AS2890.3 Parking facilities – Part 3: Bicycle Parking Facilities			
Land Use	Long and Medium Term Bicycle Parking Spaces (Type/Class 1)	Short Term Bicycle Parking Spaces (Type/Class 3)	Additional End-of-Trip Facilities
Service Industry	1 per 400m ² GFA when within 800m to a light rail station otherwise, 1 per 800m ² GFA	1 per 200m ² GFA	No
Industry	1 per 150m ² GFA	N/A	No
Showroom	1 per 800m ² GFA	1 per 200m ² GFA	No
Warehouse	1 per 800m ² GFA	N/A	No
Any other land use	As determined by Council		

M38 INDUSTRIAL ESTATE

SCHEDULE 1:

M38 INDUSTRIAL ESTATE - LANDUSE CLASSIFICATION AND STAGING PLAN



LEGEND

Site Area: 73.669Ha

- Limit of Application
- Major State controlled Roads
- Possible future industrial collector road

A.	LOW IMPACT AND SERVICE INDUSTRY	2.41Ha
B.	GENERAL IMPACT BUSINESS & INDUSTRY	57.17Ha
C.	LIMITED GENERAL IMPACT BUSINESS & INDUSTRY	12.193Ha
D.	OPEN SPACE / RESERVE	1.31Ha

STAGE	AREA
STAGE 1	19.522Ha
STAGE 2	31.208Ha
STAGE 3	13.072Ha

NOTE:

1. The landscaped buffer areas shall be established and maintained for the life of the development. No building works are to occur within the landscape buffer areas unless otherwise approved by the Chief Executive Officer;

PLANS AND DOCUMENTS referred to in the
DEVELOPMENT APPROVAL

Application No: MIN/2019/762

Dated: 24 June 2020

Development shall comply with the
conditions of approval as detailed in the
Decision Notice and Council's Planning
Scheme, Local Laws and Planning Policies

Scale 1:6000 - Lengths are in Metres.



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Gold Coast & Logan | 76 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

Scale at A3:	1:6000
Date:	18-06-20
Design:	
Drawn:	SJH
Checked:	GS

Issue	Date	Description	DRN	CHK
B	18/06/2020	Minor Amendments	SJH	GS
A	15/10/2019	MERGE STAGE 2&3	SJH	GS
-	16/09/2019	ORIGINAL ISSUE	SJH	GS

Project:

M38 INDUSTRIAL PARK
YATALA

Client:

FRASERS PROPERTY AUSTRALIA

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Drawing Title:

M38 INDUSTRIAL
PARK

Land Use Classification
and Staging Plan

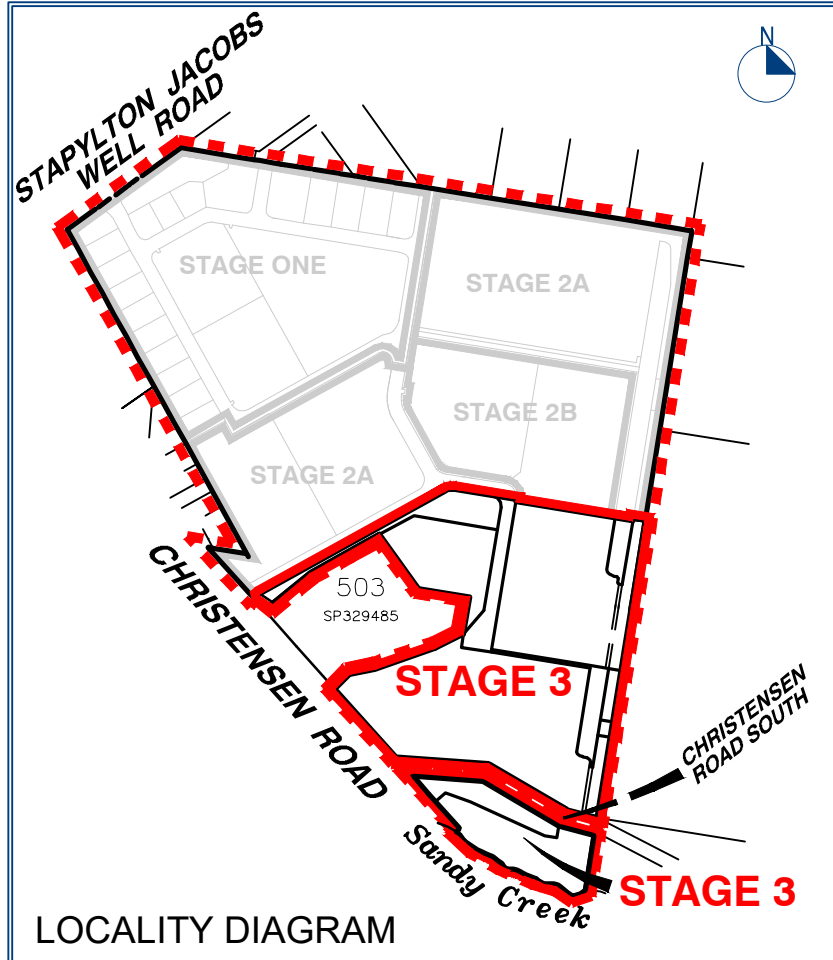
Drawing No:
5941 PLU 01

Revision No:
B

A low-angle photograph of a modern building's exterior. The building features large glass windows reflecting the sky and clouds, and a prominent red vertical panel on the right side. A small tree with green and yellowing leaves is in the foreground. The text 'APPENDIX C' is overlaid in the top right corner.

APPENDIX C

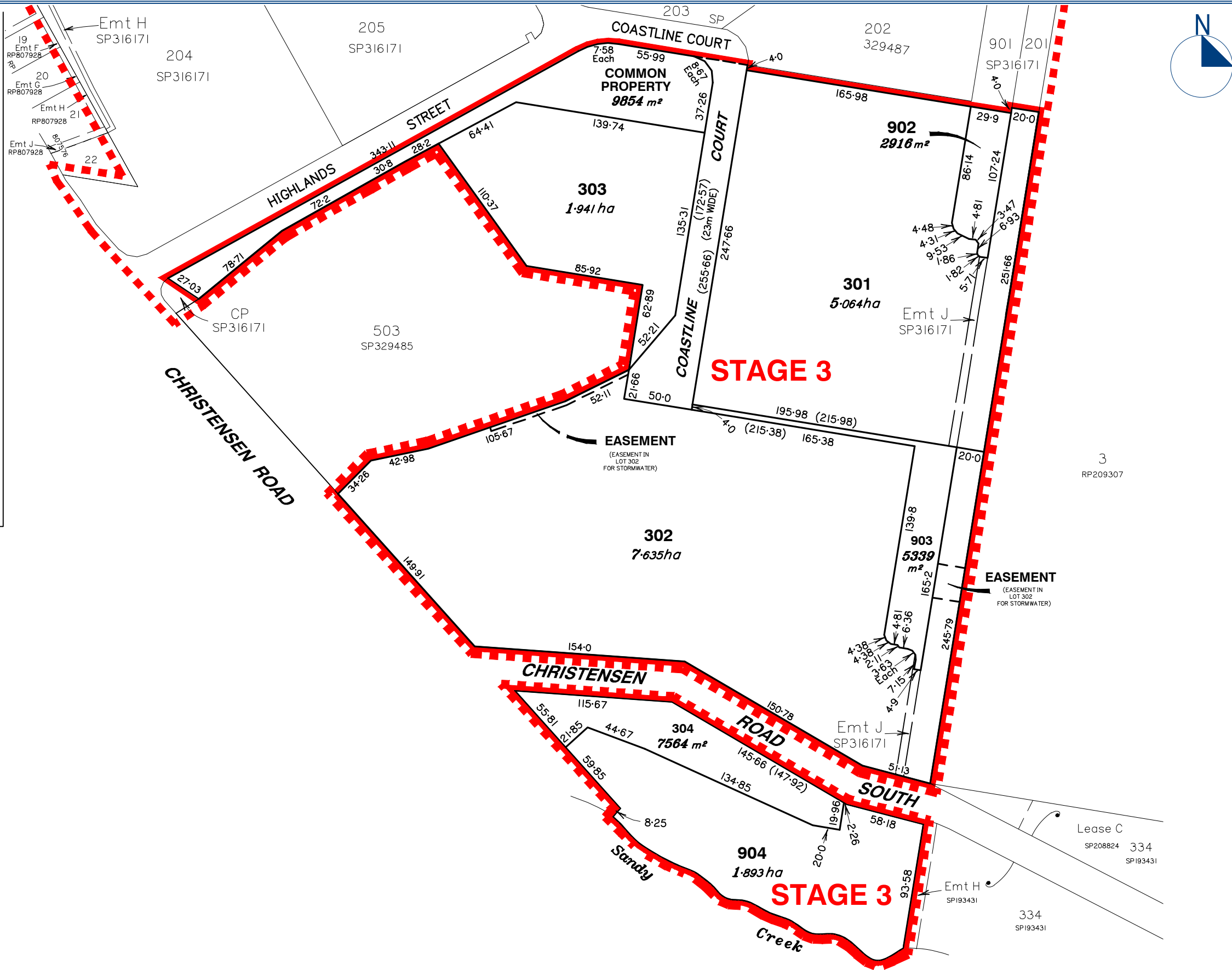
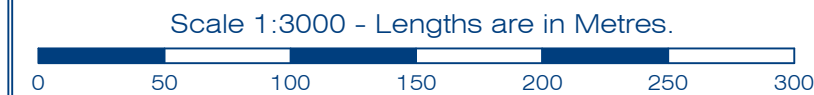
PROPOSED ROL PLAN



- LEGEND**
- LIMIT OF APPLICATION
 - STAGE 3 BOUNDARY

PLEASE NOTE:
ALL NEW ROADS, DRAINAGE AND SERVICES INFRASTRUCTURE TO BE DEDICATED TO COUNCIL OF THE CITY OF GOLD COAST.

DEVELOPMENT SUMMARY				
Total Site Area 69.058Ha				
LOT YIELD	STAGE AREA	APPROX. AREA & LENGTH OF NEW ROAD	DRAINAGE RESERVE LOTS	
STAGE 3	4 Lots	19.81 ha	7139 m ² 256m	2



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Gold Coast | 76 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

Scale at A3: 1:3000

Date: 13-03-23

Design: MG

Drawn: SH

Checked: MG/AWG

A	13/03/2023	Revised Lot 902, 301, 304, 904	SJH	AWG	
-	02/02/2023	ORIGINAL ISSUE	SJH	AWG	
Issue	Date	Description	DRN	CHK	

Project:

VantageYatala

Client:

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All dimensions and area's are approximate only and subject to survey.

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Drawing Title:

Proposed Staged,
Community Title Scheme
Reconfiguration of Land
Lots 301-304, 904, Common Property,
Drainage Reserves (Lots 902 & 903) & New Road

CANCELLING LOT: 505 on SP316171

LOCATION: 60 Stapylton Jacobs Well Road, Stapylton QLD

Drawing No: 5941 P STAGE 3 001 A

Revision No:

APPENDIX D

CODE ASSESSMENT



M38 INDUSTRIAL ESTATE

6.0 M38 INDUSTRIAL ESTATE PLACE CODE DEVELOPMENT REQUIREMENTS

6.1 *PURPOSE*

The M38 Industrial Estate Place Code seeks to ensure that the scale and intensity of development including the impact, design and appearance of industrial development for this land is consistent with the role of the site and the YEA as a regionally significant location for industrial development. These provisions also aim to ensure that the intent of the Place Code is followed and high standards of urban design and architecture are promoted.

6.2 *APPLICATION*

This Code applies to all identified forms of development taking place within the Place Code area as nominated within the M38 Industrial Estate Land Use Classification Plan.

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6.3 DEVELOPMENT REQUIREMENTS

M38 INDUSTRIAL ESTATE PLACE CODE

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	DOES THE PROPOSAL MEET THE ACCEPTABLE SOLUTION? If not justify how the proposal meets the performance criteria
DEVELOPMENT THAT IS SELF ASSESSABLE, CODE ASSESSABLE OR IMPACT ASSESSABLE		
BUILDING HEIGHT		
PC1 The height of buildings is to be consistent with the role of the site as a predominantly industrial use area. Buildings are to be constructed to a height that complements the surrounding built form and the local landscape character.	AS1 The building has a maximum of 15 metres.	AS1 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
ACCOMMODATION DENSITY		
PC2 Accommodation density must be consistent with the predominant character of the YEA as an industrial location. Accordingly, very low residential densities are envisaged for the LAP area.	AS2 The maximum dwelling density does not exceed one dwelling per lot.	AS2 NOT APPLICABLE The proposed development does not contain an aspect proposing a dwelling.
SITE COVERAGE		
PC3 The site coverage of development shall be in accordance with the open space landscape character of the YEA.	AS3 Precinct A, B & C: The maximum site coverageshall not exceed 70%. Precinct D: The maximum site coverage shallnot exceed 10%.	AS3 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
BUILDING SETBACK		
PC4 The layout of buildings, structures and activities achieves an attractive and orderly appearance where development is visible from the public domain. A good standard of visual amenity isachieved through generous building setbacks andhigh quality landscaping.	Precinct A AS4.1 Buildings are set back from frontages: a) 5 metres from the primary frontage; b) (i) 6 metres from the Stapylton Jacobs wellRoad frontage; (ii) 1.5 metres from the secondary frontage; and c) 10 metres from the western boundaryadjoining the existing residential uses. Precincts B, C & D AS4.2 Buildings are set back from frontages: a) 5 metres from the primary frontage; and b) 1.5 metres from the secondary frontage. AS4.3 Where the site adjoins a public open space area the building or structure is setback a minimum of three meters from the common boundary with thepublic open space, and the setback area includes; a) a landscape buffer strip a minimum	AS4.1 - AS4.4 ARE NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.

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	width of two metres; and b) fencing of the common boundary between the private lot and public open space. AS4.4 Buildings shall be setback 50 metres from the adjoining property boundary of the 'Stapylton Landfill'. The 50 metres shall be inclusive of the vegetated buffer area adjoining the eastern property boundary.	
BOUNDARY FENCING		
PC5 The erection of boundary fencing is undertaken in a manner that promotes an attractive streetscape and is responsive to the intended purpose of the fencing.	AS5.1 The design of front boundary fencing is conducive to the establishment of an attractive streetscape and is generally in accordance with the design measures outlined in Figure to AS5.1 included in this code. Generally speaking, design features or strategies such as transparency or landscape buffering should be utilised to soften the effect of front boundary fencing. Solid fencing exceeding 1.5 metres in height should only be established where required for acoustic attenuation purposes. AS5.2 The height of side and rear boundary fencing, where not required for acoustic attenuation purposes, does not exceed a height of two metres. Due to the general low visibility of this fencing, there is no requirement for this fencing to be transparent or landscaped.	AS5.1 – AS5.2 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
DESIGN OF DEVELOPMENT NEAR MAJOR ROADS		
PC6 Those developments visible from, or facing Stapylton-Jacobs Well Road must exhibit a high standard of architectural presentation.	AS6 Facades visible from, or facing Stapylton-Jacobs Well Road are designed to incorporate: - materials such as glass, brick and coloured/textured block work (standard concrete block should not be used). If metal cladding is used, it should be pre-coated in an appropriate colour and have some form of relief; - relatively unobtrusive, earth toned colours, such as subdued greens, blues, browns and greys (bright colours and/or materials which cause glare are avoided); - horizontal/vertical articulation of walls at least at 15 metre intervals; 'humanising' elements, such as entry forecourts, porticos, verandahs, windows, awnings and fenestration; - other features which contribute to an interesting and attractive appearance These design features are to be applied to the main facade facing the relevant road, as well as along a brief return or the full length of side walls.	AS6 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
VEHICULAR CROSSINGS		
PC7 Vehicular crossings associated with the development must be designed and constructed	AS7 Driveways are designed and constructed in accordance with relevant sections of Planning Scheme Policy 11 – Land Development Guidelines.	AS7 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.

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to ensure: a) A safe footpath environment; b) Safe vehicular access to the property; c) Appropriate hydraulic performance of the stormwater infrastructure; d) No damage to vehicle or road infrastructure; e) Minimal loss of on-street parking spaces; - and f) Continued amenity of the neighbourhood.		
VEHICULAR PARKING		
PC8 On-site vehicle parking is provided to meet expected demand, having regard to: a) The size of the proposed workforce; b) The likely number of visitors to the site; c) The likely size and number of service and transport vehicles to be on the site at any one time; d) On-site parking and loading/unloading activities within sites; e) The availability of conveniently located on-street parking; f) Any possible future expansion, redevelopment or change of use.	AS8.1.1 The number of car parking spaces provided on-site generally meets the standards set out in the Constraint Code 4 - Car Parking, Access and Transport Integration in the Gold Coast City Planning Scheme (version 1.1 Amended January 2007); OR AS8.1.2 The number of car parking spaces provided on-site is generally in accordance with Table to Acceptable Solutions AS8.1.2. AS8.2 For multi-unit or multi-use developments, the total car parking provided is an aggregate of the standard parking required for each individual unit and/or component use. AS8.3 A lesser provision may be acceptable where it can be demonstrated, to Council's satisfaction, that the parking needs of a particular development will be adequately met. Where less than the standard amount of parking is provided, the left over space is retained as landscaped open space and placed so as to be suited to ready conversion to additional parking, should the use of the site change and/or the actual car parking demand rise	AS8.1 - AS8.3 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
ENVIRONMENTAL MANAGEMENT		
PC9 The environmental mitigation methods for the development as detailed within the Environmental Management Plan must take into account and seek to ameliorate any negative aspects of the existing amenity of the local area having regard, but not limited to the impact of noise, hours of operation, visual amenity,	AS9 For development located within Precinct C an Environmental Management Plan (EMP) has been prepared and approved by Council and the development complies with the requirements of the EMP. The EMP is to be prepared in accordance with the Planning Scheme Policy 10 – Guidelines for Preparing Management Plans and Plans of Development.	AS9 COMPLIES

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odour, emissions and dust.		
REFUSE FACILITIES		
PC10 Refuse facilities must be provided on site to service the needs of the development.	AS10.1 A Provision is made for the storage of refuse on site and access for the removal of refuse in accordance with "Solid Waste Management Policy for New Developments"; AS10.2 The refuse storage area is not less than three metres to the frontage of the site and not less than 1.5 metres from any other site boundary; AS10.3 The refuse storage area is enclosed on three sides, with a screen wall extending 0.2 metres above the height of the refuse receptacles; and AS10.4 The refuse storage area is effectively screened from view with landscaping	AS10.1 – AS10.4 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
BUILDING DESIGN		
PC11 All buildings within Precinct A must be acoustically treated, to minimise nuisance to the adjoining and surrounding residential development.	AS11 The building design and construction of development with Precinct A shall be in accordance with approved Acoustic Report prepared by TTM Group dated 20 April 2011 (reference: 33418 R03).	AS11 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
HOURS OF OPERATION		
PC12 All activities within Precinct A must be undertaken within appropriate hours, to minimise nuisance to the adjoining and surrounding residential development.	AS12 The hours of operation and the delivery and collection activities for development within Precinct A are restricted to between 7.00am and 8.00pm Monday to Friday, or to the satisfaction of the Chief Executive Officer.	AS12 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
DEVELOPMENT THAT IS CODE ASSESSABLE OR IMPACT ASSESSABLE		
BUILDING HEIGHT		
PC13 The height of buildings is to be consistent with the role of the site as a predominantly industrial use area. Buildings are to be constructed to a height that complements the surrounding built form and the local landscape character.	AS13 The maximum height of buildings does not exceed 15 metres.	AS13 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
SITING		
PC14 All buildings must be sited to complement the industrial character and the predominant built form of the surrounding area and to reduce potential conflicts between uses having regard to a site analysis, prepared in accordance with Planning Scheme Policy 17 - Site Analysis .	AS14 No acceptable solution provided.	AS14 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
PC15	AS15	AS15 NOT APPLICABLE

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The layout of the site must provide a clear separation between the public access areas and the areas set aside for servicing the building.	No acceptable solution provided.	The development relates to a subdivision only – no buildings are proposed.
PC16 Industrial structures, storage or service areas, which are likely to appear visually dominating or unsightly, are located to the rear or sides of sites or are otherwise designed and screened to enhance their appearance, when viewed from the street.	AS16 No acceptable solution provided.	AS16 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
BUILDING AND LAYOUT DESIGN, SAFETY AND COMFORT		
PC17 Buildings are sited and designed such that suitable external spaces remain available for future expansion of buildings, and internal spaces are of a size and shape suited to variable internal layout, maximum vertical storage and addition of mezzanine floors.	AS17.1 Building shapes are regular so as to provide opportunities for future expansion in different directions, and for flexibility in internal location of activities and equipment. AS17.2 Internal column spacing and column heights are generous (for example, building spans of 18 metres and over, bay spacing of 12-18 metres, and column heights of at least eight metres).	AS17.1 – AS17.2 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
PC18 Buildings are sited and designed to suit climatic conditions.	AS18.1 Wherever practicable, buildings are oriented to the north east to take advantage of summer breezes and winter sun. Western aspects are avoided, wherever possible. AS18.2 Where not air conditioned, buildings incorporate a maximum of openings (ie. louvring, windows, doorways) on eastern walls. AS18.3 Windows are minimised and trees are planted along west walls for protection from hot afternoon sun. AS18.4 Shading devices (ie: large roof overhangs, window hoods/blinds, awnings and verandahs) are attached to buildings on all sides, particularly eastern and western sides. Where possible, shading devices are retractable on northern sides during winter. AS18.5 Semi-enclosed workstations, where relatively strenuous manual labour takes place, are located in the cooler and more ventilated parts of the building.	AS18.1 – AS18.5 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
PC19 All buildings must be designed and constructed to a high aesthetic standard and to complement or enhance the local character of the YEA.	AS19.1 The massing and proportions of new industrial buildings are consistent with those of adjoining industrial buildings. AS19.2 Building materials, patterns, textures and colours used in new buildings are complementary to those of nearby buildings.	AS19.1 – AS19.2 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.

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PC20 Building design and appearance must be conducive to the safety and comfort of all building users.	AS20.1 Glass which forms all or part of any external wall of a building does not exceed a maximum degree of reflection of both heat and light of 20%. The glass area does not exceed 60% of the total area of the external wall. AS20.2 Entrances to premises are clearly visible from the street, and are not obscured or dominated by carparking.	AS20.1 – AS20.2 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
DESIGN OF CARPARK AREAS		
PC21 All ground level parking is to be suitably landscaped to provide an attractive and pleasant outlook and shade for parked vehicles, and to contribute towards the quality presentation of new developments.	AS21.1 Significant trees are preserved and incorporated into car parking areas. AS21.2 Landscaped bays for the planting of shade trees are provided at regular intervals throughout car parking areas, at the rate of one landscaped bay per 40 vehicle parking bays or one large shade tree per ten parking spaces. Landscape bays have the same dimensions as a vehicle parking space. AS21.3 Large car parking areas and all heavy/service vehicle parking are situated to the side or rear of sites. Smaller car parking areas, particularly for short term and disabled parking, may be located to the front of sites. AS21.4 Car parking areas located in frontage setback areas are set back behind a minimum three metre landscaped buffer to the frontages. To reduce their visual impact, front car parking areas may be lowered and mounds incorporated in frontage landscaping.	AS21.1 – AS21.4 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
ADVERTISING DEVICES		
PC22 Advertising signage does not dominate the visual amenity of the area.	AS22 No advertising, freestanding or otherwise, is erected which would be readily visible from the Pacific Motorway of the Gold Coast City Rail Line.	AS22 NOT APPLICABLE The development relates to a subdivision only – no buildings or advertising devices are proposed.
PC23 Signs and other forms of advertising on business/industry premises are kept to a minimum. Any advertising relates directly to the activity/process conducted on the premises, rather than general product advertisements.	AS23.1 There is one sign per premises. Multi-unit developments display a single index sign at the entrance to the development which details each occupant, its activity/process and respective unit number. AS23.2 The design and construction of signs meets the following parameters: a) signs are situated near site entries and are well placed for viewing by pedestrians and drivers; b) free-standing signs have a maximum area of 3m²; c) signs on facades have a maximum area of 5m²; d) signs utilise company logos or symbolic representations for quick and easy identification; e) wording on signs is limited to the name, location, business and products of the establishment;	AS23.1 – AS23.3 NOT APPLICABLE No advertising devices are proposed as part of this application.

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	f) signs do not utilise fluorescent paints; g) signs do not rotate, flash or move; h) signs are integrated with the form of development and are not visually dominating. AS23.3 All signs are consistent with the provisions for the Industry 2 Domain set out in Specific Development Code 2 – Advertising Devices	
OPEN SPACE/RESERVE AREA		
PC24 In the areas identified as Precinct D (Open Space/Reserve) within the Staging Plan, development is of a limited scale and intensity, compatible with the retention of and rehabilitation of vegetation and habitat, landscape amenity and/or buffer values.	AS24.1 Areas identified as Precinct D (Open Space/Reserve) on the Staging Plan are reserved for conservation and landscape amenity purposes, through: a) Transfer to Council as public open space b) Dedication of a conservation / landscape amenity buffer; or c) Reservation of an area as open space /reserve. AS24.2 Areas identified as Precinct D (Open Space/Reserve) are to be provided in accordance with the following: a) the areas identified as Precinct D as open space will be subject to the application of a statement of landscape intent and/or open space management statement/plan, designed in accordance with Council's Open Space Management and Land Development Guidelines. b) Eventual commitment of the area identified as Precinct D is provided to Council as public open space, in accordance with the requirements of an approved open space management statement/plan and/or rehabilitation management plan. AS24.3 Areas identified within the Precincts D (Open Space/Reserve) including areas identified for revegetation within an approved open space management plan and/or rehabilitation management plan are to be managed in the following manner: a) the land remains largely undisturbed by any buildings, clearing and earthworks; b) the land is provided exclusive of unacceptable hazards such as contaminated land under the Contaminated Land Act 1991 or land subject to geotechnical hazard; c) existing vegetation and natural drainage patterns are retained and rehabilitated, and additional trees planted within a 60 metre wide band utilising local native species; d) the area must be of a physical standard and condition that permits use of the land for its intended purpose, compliments existing	AS24.1 – AS 24.3 NOT APPLICABLE The proposed development is not located within the mapped Precinct D. The area encompassed by Precinct D is to be dedicated to Council as Public Open Space for conservation purposes.

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	adjacent and surrounding public open space areas and provides linkages to other open space areas, where practical; e) the area may form part of the landscape open space areas, associated with individual development proposals; f) the area facilitates appropriate measures for stormwater and flood management and the care of environmental features; g) any parallel roads or services are grouped on one side of the area, to minimise disturbance h) any breaks in the vegetation canopy, necessary for roads or services, are minimised by cutting through perpendicular to the link at a point where damage and discontinuity are minimised, such as where the canopy is already broken or sparse.	
LANDSCAPE DESIGN		
PC25 Landscape design is used to enhance the landscape character of the YEA.	AS25.1 Frontage setback areas are attractively landscaped, including: a) at least 25% of the frontage having a landscaped buffer of minimum five metres depth and the remainder, excluding access ways, a landscape buffer of minimum three metres depth; b) one metre landscaped area adjacent to building walls facing the street. AS25.2 Planting of shade trees occurs along pathways, throughout car parking areas and within public road reserve, as well as and in any other exposed areas where relief from sun and glare would be beneficial. AS25.3 Dwarf walls prevent vehicles breaching landscaped areas along frontages. AS25.4 Screen planting, utilising an appropriate mix of tall trees and lower level shrubs, is used around outdoor parking, equipment, storage and other unsightly areas, particularly where visible from roads. AS25.5 Landscape Design includes: a) provision of pleasant, shaded areas with appropriate furniture for lunch/relaxation areas for workers and visitors; b) retention of existing mature vegetation, wherever possible; c) retention of existing natural drainage channels and planting to strengthen their resistance to erosion, especially where proposed development is expected to result in increased volume and velocity of stormwater runoff;	AS25.1 – AS25.6 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed. AS25.7 COMPLIES The 20m wide buffer along the western boundary of the site is maintained.

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	d) use of garden edges, lines of trees and mass planting to frame pathways and define site and building entries. AS25.6 A minimum ten (10) metre wide north south landscape buffer is provided along the western boundary of the site adjoining the existing residential uses generally as outlined on the Landscape Intent Plan prepared by Gassman Development Perspectives and titled 5941 Landscape Intent Rev C. AS25.7 A minimum of twenty (20) metre wide north south landscape buffer is provided along the eastern boundary of the site (consisting of 10 metre wide 'undisturbed corridor', and 10 metre wide 'works corridor' including earthworks and landscape treatment).	
PC26 Potentially obtrusive noise, odour and visual impacts are effectively buffered.	AS26.1.1 Development incorporates landscape buffers, earth mounds and acoustic fencing appropriate to the likely off-site impacts of particular developments. OR AS26.1.2 A landscape buffer to a minimum width of ten metres is provided along the western property boundary where adjoining residential uses to effectively screen development behind.	AS26.1 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
PC27 The street side environment and other public spaces are developed to enhance their visual appeal and create a physical continuity and legibility throughout the YEA area and its component precincts.	AS27 Individual developments contribute to streetscape enhancement work (including street tree planting, paving, landscaping of traffic islands and provision of street lighting and furniture), in accordance with any adopted Council streetscape strategy.	AS27 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
PC28 Public open spaces are developed to enhance their recreational amenity for workers and visitors to the Yatala area and the wider community.	AS28 Individual developments contribute (through works or financial contribution) towards construction of footpaths and cycle ways, seating, picnic facilities, play areas and/or other facilities in existing public open spaces and additional spaces established as a result of the development.	COMPLIES The proposed development includes a park and amenities (Health and Wellbeing Precinct) within common property that will service the entire Vantage industrial estate. The "Health and Wellbeing Precinct", the first of its kind implemented within an industrial estate in Queensland, will include embellishments and facilities such as park shelters, gym equipment and a basketball court to service the immediate industrial work force. Provision of such facilities are lacking in many industrial estates across the Yatala Enterprise Area (YEA), which does not allow workers to leave their workplace and disconnect during a break in an outdoor, well landscaped setting. The "Health and Wellbeing Precinct" and all park embellishments are to remain under the ownership and management of the future Body Corporate of the industrial estate, as per the approved Community Management Statement.
PC29 Landscape design	AS29.1 Street design and plantings and major	COMPLIES WITH AS29.1 – AS29.3 The proposed development will incorporate a high-quality landscape design that

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contributes to the creation of a distinctive, memorable and legible town centre, local centres and surrounding suburban areas for YEA.	pedestrian paths are aligned to take advantage of attractive local and distant views (eg, views to the mountains or other important landscape elements). AS29.2 Footpath paving treatments and street furniture integrate with adjoining development, and setback areas are integrated with public footpaths. AS29.3 Landscape plantings utilise local native species to promote a distinctive site character.	enhances the area and aids in the creation of the envisaged high levels of amenity for the estate.															
PC30 Open space and pedestrian areas are to be designed to be both functional and safe.	AS30 Development is designed to ensure a high degree of casual surveillance from nearby residents, employees or passing traffic, public and semi-public spaces, pedestrian and cyclist paths, car parking areas and building entrances.	COMPLIES WITH AS30 There is ample opportunity for casual surveillance of the site. CPTED principles have been implemented to ensure safety of site users and public users alike.															
PC31 All ground level car parking, open space and buffer areas must be landscaped and maintained to complement the character of the local area, and any adjoining residential or public open space areas.	AS31 The car park area, open space and buffer areas of the lot are landscaped with landscape design and use of plant species generally consistent with that of adjacent and nearby lots. The landscape design may incorporate extensive paved areas for pedestrian use.	AS31 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.															
LOT SIZE (FOR SUBDIVISION ONLY)																	
PC32 All lots are to be of sufficient size to comfortably accommodate the type of development envisaged in the LAP and the relevant precinct intent. The number of allotments within Precinct C is controlled to minimise the number of premises exposed to any environmental nuisance from nearby landfill and associated heavy industrial uses.	AS32.1 Any new lots created are sized in accordance with the following schedule: <table border="1"> <thead> <tr> <th>Precinct</th><th>Min Area</th><th>Ave Area</th></tr> </thead> <tbody> <tr> <td>A</td><td>2000m²</td><td>1 hectare</td></tr> <tr> <td>B</td><td>2000m²</td><td>1 hectare</td></tr> <tr> <td>C</td><td>1 hectare</td><td>1 hectare</td></tr> <tr> <td>D</td><td>20 hectares</td><td>20 hectares</td></tr> </tbody> </table> AS32.2 The number of allotments and tenancies located within Precinct C is minimised.	Precinct	Min Area	Ave Area	A	2000m ²	1 hectare	B	2000m ²	1 hectare	C	1 hectare	1 hectare	D	20 hectares	20 hectares	COMPLIES WITH AS32.1 The development is located within Precincts B and C. All proposed lots have a minimum lot size of 1 ha, except for Lot 304. Lot 304 is unable to provide the minimum lot size due to the requirement to dedicate the remainder of this portion of land to Council as Public Open Space for the purposes of conservation. The size and shape of this lot has already been identified as part of the overarching preliminary approval. COMPLIES WITH AS32.2 The number of lots proposed within Precinct C has been minimised to 4.
Precinct	Min Area	Ave Area															
A	2000m ²	1 hectare															
B	2000m ²	1 hectare															
C	1 hectare	1 hectare															
D	20 hectares	20 hectares															
PC33 Allotments prior to development have suitable topography for industry.	AS33 Industrial allotments generally have a ground slope not greater than 10%, and access ways associated with battle axe allotments generally have a ground slope not greater than 16%.	COMPLIES WITH AS33 All lots have a ground slope not exceeding 10%. No battle axe allotments are proposed.															

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PC34 Allotments are of regular shapes suited to the intended uses, and allowing design flexibility, efficient development and access.	AS34.1 Development generally incorporates all of the following features: a) allotments that are rectangular shapes; b) allotments which have frontage to depth ratios between 1:2 and 1:4. OR AS34.2 Alternative allotment shapes are provided where warranted, due to: a) the special site requirements of particular industries; and/or b) exceptional physical constraints. OR AS34.3 The development incorporates a small proportion of battle axe allotments, where particular industries have special requirements for square or long and narrow sites. (Battle-axe allotments are useful for creating allotments of such shapes, as well as reducing road frontage construction costs and providing appropriate sites for visually offensive industries.).	PC34 COMPLIES The proposed subdivision incorporates allotments which have been designed with specific end users in mind. The proposed allotments generally form regular shapes, except where external constraints exist (e.g. existing irregular boundaries with neighbouring lots). Each of the proposed lots is able to function safely and efficiently in accordance with the envisaged end-users' needs and safe and efficient access is provided to each proposed lot.
PC35 Allotments are oriented to suit climatic conditions.	AS35 Allotments are arranged in a manner that maximizes the number of allotments oriented to the north east to take advantage of breezes and enable optimal building orientation for energy efficiency and use of natural lighting.	COMPLIES WITH AS35 Lots have been configured and arranged to enable optimal building orientation for energy efficiency and natural lighting.
PC36 Reconfiguration of land incorporates open space provision in a way which takes account of the location and attributes of the site and its surrounds, and the need to set aside certain areas for purposes such as: a) conservation of vegetation/habitat; b) retention of creek corridors and natural drainage patterns; c) provision of pedestrian/cycle linkages and recreational facilities; and/or d) creation of landscaped entrances, focal points and streetscape.	AS36.1 Where reconfiguration takes place, an area of up to 10% of the site is provided as open space. This open space is set aside for public park or conservation purposes, developed with pathways and/or recreational facilities, landscaped and/or rehabilitated to its natural state. AS36.2 Reconfiguration proposals incorporate a plan showing street planting to be undertaken. Planting themes contribute to the overall streetscape character of the estate.	COMPLIES WITH AS36.1 The development proposes a community title subdivision, with the common property area allocated as an open space and recreation precinct ("Health and Wellbeing Precinct"). This precinct will be appropriately landscaped and will incorporate facilities such as pathways, benches, picnic tables, gym equipment and a basketball court etc. suitable for industrial estate employee use during lunch breaks etc. COMPLIES WITH AS36.2 The submitted Statement of Landscape Intent outlines the proposed street tree planting for Stage 3.
PC37 Reconfiguration may take place in the form of	AS37 Community Title subdivisions within Precincts A-C (Industrial) are provided,	COMPLIES WITH PC37 The development proposes a Community Title subdivision which includes a shared

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Community Title subdivision, allowing for sharing of space, facilities and services, while at the same time ensuring allotments created are suited to the intended businesses/industries.	which: a) are consistent with the Acceptable Solutions for PCs 32-36; b) generally maintain a minimum lot size of 100- 200m² within a minimum overall site area of 2,000m²; c) are not used for heavy manufacturing, metal/food processing, or noxious, offensive or hazardous industries.	open space and recreation area for employee use during breaks. All allotments proposed as part of the subdivision are suited to their intended industrial use.
ROAD DESIGN		
PC38 Roads are provided so as to form a road hierarchy, with each road serving a particular function according to the intended land use characteristics of the estate, expected traffic volumes and types, and external existing and future road linkages to anticipated development on adjoining lots.	AS38.1 Concept plans submitted with reconfiguration and/or development applications identify all roads proposed to be upgraded and/or newly constructed and their intended function within a road hierarchy. AS38.2 Concept plans submitted with reconfiguration and/or development applications identify road connections with adjacent allotments that will promote connectivity; and AS38.3 Proposed road hierarchies are generally consistent with the conceptual road hierarchy identified on the Land Use Classification and Staging Plan.	COMPLIES WITH AS38.1 The development proposes one new road to service Stage 3, being the extension of 'New Road 2 (Coastline Court)' established as part of Stage 2. The proposed ROL plans are submitted within Appendix C. COMPLIES WITH AS38.2 The submitted ROL plans illustrate the extension of 'New Road 2 (Coastline Court)' providing access to Stage 3 linking via Stage 2. COMPLIES WITH AS38.3 The development proposes roads in accordance with the approved Land Use Classification and Staging Plan. As mentioned within the Planning Report, the Land Use Classification and Staging Plan approved the overarching preliminary approval was recently amended to remove 'Road 8' providing access to Stage 3 via Christensen Road, and instead extend 'New Road 2' which now provides access to Stage 3 via Stage 2.
PC39 The width, pavement, curvature, sight distances, intersections, turning radii and design features of roads convey the particular function of each road with the hierarchy mentioned in AS33.3, and reflect the nature of traffic management. In particular, road design ensures the safe movement of heavy articulated vehicles.	AS39.1 Road design and construction is in accordance with Planning Scheme Policy 11 - Land Development Guidelines and the Table to this Acceptable Solution. AS39.2 Distances between intersections are not less than 60 metres. AS39.3 Streets intersect at right angles, or as near as topography or other limiting factors permit. AS39.4 Various vehicle control devices are used to regulate traffic speed and enhance pedestrian safety (such as traffic lights and illuminated pedestrian crossings). AS39.5 Paving surfaces, landscape treatment and signage are used to define entrances to the estate and joint use areas within the estate AS39.6 Road pavements are designed and constructed for long life, hard wearing and suitability to the load capacity of expected vehicles. AS39.7 Median strips, roundabouts and footpaths are to be aesthetically treated and planted and	COMPLIES WITH PC39 The development proposes roads in accordance with Council standards, however does propose one cul-de-sac. The inclusion of this cul-de-sac is considered appropriate given the road only provides access to three lots. All roads have been designed to ensure safe movement of heavy vehicles. Further this road layout has been approved as part of the recent Minor Change to the Land Use Classification and Staging Plan approved as part of the overarching preliminary approval (MIN/2023/64).

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	paved accordingly; and AS39.8 The design of road networks avoids the use of culs-de-sac.	
PC40 The alignment of roads reflects the physical land characteristics, and provides adequate drainage and safety.	AS40.1 Road drainage is designed and situated along natural drainage courses. AS40.2 Road grades are established to avoid excessive grading, indiscriminate removal of ground cover and tree growth, and unnecessary topographical levelling.	COMPLIES WITH AS40.1 – AS40.2 All transport infrastructure will meet Council standards and be dedicated as a public asset.
PC41 A network of pedestrian paths and cycleways is provided which considers: a) expected levels of pedestrian and cyclist activity; b) linkages between public transport, major employment activities, and parks; c) recreation opportunities along open space corridors; d) safe integration of users and vehicles, particularly at intersections; e) provision of bicycle end-of-trip facilities.	AS41.1 Footpaths are provided as follows: a) on both sides of all future major industrial roads. b) as specified in any relevant Council adopted strategy. AS41.2 Paths are designed and constructed in accordance with Council standards and AUSTROADS Part B. AS41.3 Features such as signs, road markings, lighting, paving, bollards and street furniture are provided to enhance the safety and amenity of foot/cycle paths. AS41.4 Bicycle end-of-trip facilities are provided in accordance with the requirements outlined in the Table to Acceptable Solution AS41.4.	COMPLIES WITH AS41.1 – AS41.4 All transport infrastructure will meet Council standards and be dedicated as a public asset.
PC42 The road network is designed to accommodate the extension and integration of the public transport system, with accessible linkages and routes and stops providing for passenger comfort without obstructing traffic flow.	AS42 For major industrial roads, constructed to a Industrial Collector standard, a minimum 3.5m parking lane is to be line marked and maintained to allow for future bus routes/stops.	AS42 - NOT APPLICABLE A major industrial road is not proposed.
SITE ACCESS		
PC43 Site access is designed and constructed to provide for the safe ingress/egress of vehicles to the site.	AS43 Vehicular access to the site is designed and constructed in accordance with Council, Department of Main Roads and AUSTROADS standards, and/or the following minimum requirements: a) comprises a single vehicular driveway (entrance/exit), wherever possible; b) is not closer than ten metres to an intersecting street on the same side of the street; c) provides a minimum sight distance of 110 metres;	AS43 – NOT APPLICABLE The development involves a subdivision only. Any future MCU application over the site will be required to demonstrate compliant vehicular access.

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	d) shares adjoining property access driveways, wherever possible; e) always enters the street at right angles; f) where the site has frontage to two roads, access is taken off the secondary/minor road, if possible; g) where separate entry and exit driveways are used, the first driveway reached from the kerbside land is clearly delineated and signposted.	
PC44 Treatment of access points to the site maintains appropriate sight distances and visually enhances its identification.	AS44 Access points incorporate decorative paving treatment and landscaping which distinguishes the access point, but which does not obstruct the safe sight distance requirements outlined above.	AS44 – NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
PC45 Provision is made for safe pedestrian and disabled access.	AS45.1 Pedestrian paths designed for disabled access are provided between building entrances, public footpaths and car parking areas. AS45.2 Pedestrian paths are separated from vehicular driveways.	AS45.1 – AS45.2 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
AMENITY PROTECTION		
PC46 The proposed use must not detract from the amenity of the local area, having regard, but not limited, to the impact of: a) noise; b) hours of operation; c) traffic; d) lighting; e) signage; f) visual amenity; g) privacy; h) odour and emissions.	AS46 No acceptable solution provided.	PC46 – NOT APPLICABLE The development relates to a subdivision only – no new uses are proposed.
PC47 The proposed development must take into account and seek to ameliorate any negative aspects of the existing amenity of the local area, having regard, but not limited, to the existing impact of: a) noise; b) hours of operation; c) traffic; d) lighting; e) signage; f) visual amenity; g) privacy; h) odour and emissions; i) dust; and j) vibration.	AS47 No acceptable solution provided.	PC47 – NOT APPLICABLE The development relates to a subdivision only – no new uses are proposed.

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URBAN/RURAL USE CONFLICTS		
PC48 Conflicts between urban and rural uses are to be avoided by effective development design.	AS48 The development of land adjacent to the agricultural character areas includes a suitable buffer.	AS48 - NOT APPLICABLE The subject site adjoins other industrial uses and maintains a distance of more than 700m from the nearest rural use or agricultural use.
EXTRACTIVE INDUSTRY		
PC49 Extractive industry operations are managed to make effective use of the extractive resource, while containing any impacts on the subject site.	AS49 The extractive industry is managed and developed consistent with the Extractive Industry Domain Place Code.	AS49 - NOT APPLICABLE There is no aspect of extractive industry proposed.
ON-SITE VEHICLE PARKING AND MOVEMENT		
PC50 Internal driveways are provided for safe and easy maneuvering of vehicles.	AS50.1 Internal driveways are designed and constructed to enable all vehicles to enter and exit the site in a forward motion. AS50.2 Minimum driveway widths are as follows: a) eight metres to accommodate non-articulated vehicles; b) ten metres to accommodate articulated vehicles; c) 4.5 metres for one-way driveways.	AS50.1 – AS50.2 – NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed. Future MCU applications over the site will be required to demonstrate compliant driveways.
PC51 On-site vehicle parking is located: a) to allow easy access to building entrances; b) to provide visitor spaces for short term/high turnover use clearly visible from the street and signposted accordingly; c) to be adequately screened from the street; d) compatible with surrounding development and, where possible, facilitating shared use with adjacent land users.	AS51.1 In areas where visual amenity is important and/or where relatively large amounts of parking are provided, parking areas are generally situated to the rear or side of the site. In particular, employee parking is situated at the rear of the site, with staff entrances at the rear of the building. AS51.2 Some parking may be located toward the front of the site convenient to the street, provided it is behind landscaping strips and treated aesthetically. AS51.3 Short term/high turnover visitor parking and disabled parking spaces are located close to the main building entrance and clearly signposted. AS51.4 Driveways and parking areas may be constructed to property boundaries and linked to adjoining car parking areas. Similarly, loading areas may be located to facilitate shared turning areas across property boundaries.	AS51.1 – AS51.4 – NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed. Future MCU applications over the site will be required to demonstrate compliant parking arrangements.
LOADING AND UNLOADING		
PC52 All loading and unloading activities take place on-site.	AS52 Loading docks are located in the side or rear portions of the site, separate from public/visitor parking and access points, and screened by vegetation or walls to avoid public view.	AS52 – NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
PC53 Adequate provision is made for on-site manoeuvring of service vehicle/s.	AS53.1 On sites over 4,000m ² and/or where the uses thereon involve regular servicing by service vehicle/s, on-site service areas are provided.	AS53.1 – AS53.2 – NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.

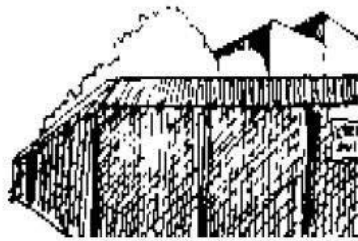
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	On-site service areas comprise an area of land with an appropriate hard surface to enable a service vehicle/s to turn around within the site (based on standard design turning templates given by AUSTROADS AS 2890.1, 2890.2), and space for additional service vehicle parking and storage requirements. AS53.2 It may be acceptable for two or more developments to share service vehicle/s turning areas.	
SITE SERVICING		
PC54 The design and provision of water, stormwater drainage, sewerage, electricity, gas and communications networks meets the needs of industry and business, and provides an orderly and economic progression of servicedevelopment in the region.	AS54.1 The design and supply of water, stormwater drainage, sewerage, electricity, gas and communication services is in accordance with therequirements of Planning Scheme Policy 11 – Land Development Guidelines and the responsible authority (e.g. Telstra, QueenslandElectricity Boards, and Queensland Emergency Services). AS54.2 Car park entrances and ramps, loading docks andaccess ways are minimised, suitably designedand treated to ensure that they do not adversely impact on the streetscape and adjoiningdevelopment.	COMPLIES WITH AS54.1 The subdivision will be connected to all necessary services and service infrastructure in accordance with the submitted engineering plans and drawings. AS54.2 NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
PC55 Conflicts between pedestrians and vehicles atentrance points to parking areas are to be minimised.	AS55.1 The number of vehicle entry points to a development site is minimised, particularly in areas which have high volumes of pedestrian traffic and on streets with a significant through road function. AS55.2 Entrance points to parking and loading areas have clear and unobstructed visibility of pedestrian pathway areas, with pedestrian crossing points clearly identified which give priority to pedestrians.	AS55.1 – AS55.4 – NOT APPLICABLE The development relates to a subdivision only – no buildings are proposed.
PC56 Development is to be designed to support thefunctional operation of the cycle network.	AS56 Development is designed to support the functionaloperation of the local and regional cycleway system. (Local cycle ways will be determined at time of subdivision of each development.)	COMPLIES WITH AS56 The proposed road network caters for cycle ways.
PUBLIC CONVENIENCE FACILITIES WITHIN BUILDINGS		
PC57 Commercial developments are to include public convenience facilities, where there is a need for their provision.	AS57 Where provided, public toilet facilities are open and readily accessible to the general public duringretail trading hours or other trading hours relevantto the development.	AS57 - NOT APPLICABLE No public toilets or amenities are proposed.

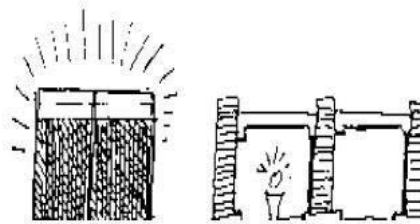
Figure to Acceptable Solution AS5.1

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Negative Fences

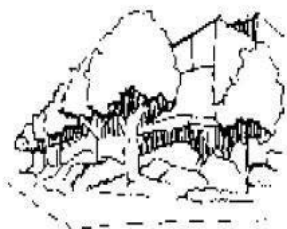
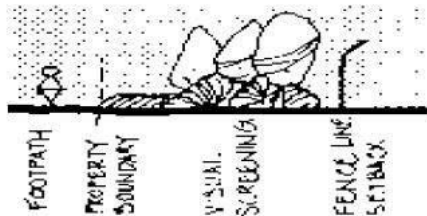


High security fencing on street alignment dominated streetscape.

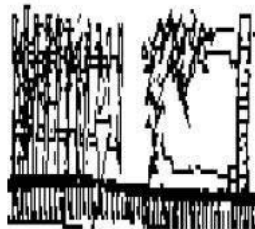


Chain fencing has a prison-like effect and is highly reflective. Height barriers can be visually intrusive.

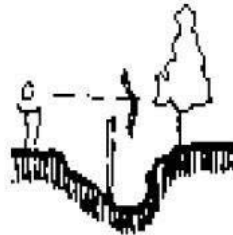
Positive Fences



Unattractive fencing should be placed inside the front alignment and planted out.



Palisade of pickets set close together with horizontal rails that climbers might use. Solid masonry fence supporting vine.



Obtrusive fence placed in a swale to minimise visual impact.

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Table to Acceptable Solutions AS8.1.2

COLUMN 1	COLUMN 2
This table sets out the minimum number of car parking spaces required according to the use of the land. For each Material Change of Use, listed in Column 1, the minimum number of car parking spaces to be provided is listed in Column 2. Where the number of car spaces calculated, using Column 2, is not a whole number, the number of car parking spaces required shall be the next higher whole number.	
Warehouse	Two (2) spaces per tenancy or lot, plus one (1) space per 50m ² of GFA up to 500m ² , plus one (1) space per 100m ² of GFA over 500m ² .
All other Uses	Two (2) spaces per tenancy or lot, plus one (1) space per 50m ² of GFA up to 500m ² , plus one (1) space per 100m ² of GFA over 500m ² .

Table to Acceptable Solutions AS41.4

Note:- b) Type/Class as defined in, AS2890.3 Parking facilities – Part 3: Bicycle Parking Facilities			
Land Use	Long and Medium Term Bicycle Parking Spaces (Type/Class 1)	Short Term Bicycle Parking Spaces (Type/Class 3)	Additional End-of-Trip Facilities
Service Industry	1 per 400m ² GFA when within 800m to a light rail station otherwise, 1 per 800m ² GFA	1 per 200m ² GFA	No
Industry	1 per 150m ² GFA	N/A	No
Showroom	1 per 800m ² GFA	1 per 200m ² GFA	No
Warehouse	1 per 800m ² GFA	N/A	No
Any other land use	As determined by Council		



Part 7 Codes

Division 2 Specific Development Codes

Chapter 28 Reconfiguring a Lot

1.0 Purpose

To provide that any new lots, created by Reconfiguring a Lot, are suitable for their intended purpose and are appropriate to the topography and landscape features of the land. This code seeks to ensure that any reconfiguration of lots results in:

- good urban design outcomes that are consistent with the intended character for a particular area, as expressed through the domain provisions or Local Area Plans (LAPs);
- compatible relationships between land uses;
- an efficient use of land resources and protection of natural resources, such as good quality agricultural land, extractive material, water and ecologically significant areas;
- protection from natural hazards;
- urban areas that are well defined, energy efficient and legible, with a high degree of connectivity;
- provision for convenient and safe movement of people between areas and facilities by walking, cycling and public transport use;
- an effective and efficient road network;
- effective and efficient provision of relevant services;
- promotion of social interaction and community activity;
- a choice of affordable housing types;
- provision of an accessible and useable network of open space for local communities; and
- protection and enhancement of ecologically significant areas and environmental values.

2.0 Application of this Code

- 2.1 This code applies to Reconfiguring a Lot applications indicated as being code or impact assessable in the Table of Development in the domain or Local Area Plan (LAP) within which the development is proposed.
- 2.2 Where a domain or LAP Place Code contains Reconfiguring a Lot requirements that differ from this code, the domain or LAP requirements take precedence. Performance Criteria PC1-PC25 apply to all development subject to this code.



3.0 Development Requirements

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Development that is Code Assessable or Impact Assessable			
Lot Size			
PC1 Lots must have the appropriate area and dimensions to enable: a) density of land uses to be consistent with the intended character of the local area or neighbourhood, as expressed through the relevant domain or LAP; b) siting and construction of buildings to minimise risk of soil erosion, flooding and bushfire; c) siting and construction of buildings to minimise detriment from effluent disposal and d) water quality impacts; e) retention of ecologically significant areas and other remnant vegetation; f) retention of cultural features and views; g) minimisation of earthworks and/or retaining walls associated with building construction on steep sites; h) provision of private outdoor space and on-site landscaping; i) convenient vehicle access and on-site parking.	AS1.1.1 The minimum lot area, minimum lot frontage, minimum width of any access strip or easement, and the maximum ratio of lot depth to average width are consistent with the provisions of the Table to this Acceptable Solution, unless varied by the minimum lot size and density requirements indicated on Overlay Map OM5 – Minimum Lot Size. OR AS1.1.2 Allotments created on steep slopes in the Village, Detached Dwelling, or Residential Choice domains that are intended to be used for residential purposes provide a minimum private outdoor area of 30m², with the following criteria: a) ratio 2:1 (length to width) maximum; b) gradient less than 5%; c) adjoining proposed building envelope; d) flood free for the 1 in 5 ARI. OR AS1.1.3 The site is located in the Park Living Domain and the average lot size is not less than 8000m², excluding areas of public open space dedication. OR AS1.1.4 The lot has a minimum area less than that provided in the Table to Acceptable Solution AS1.1.1 and a Hinterland Subdivision is achieved, consistent with AS3.1 to AS3.9	PC1 – COMPLIES The proposed lots comply with the M38 Industrial Place Code lot requirements, pursuant to the Preliminary Approval.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	inclusive. OR AS1.1.5 The lot has a minimum area less than that provided in the Table to Acceptable Solution AS1.1.1 , and it is for a non-residential purpose and intended to be used for public utilities, eg. road widening.		

Table to Acceptable Solutions AS1.1.1

Domain	Minimum Area # Corner Lot ^ Rear Lot (m ²)	Minimum Frontage/ Minimum Average Width for Irregularly Shaped Allotments (metres)	Minimum Width of Access Strip or Easement (metres)	Maximum Ratio of Average Depth to Width
Rural*	20 ha	200	10	3:1
Park Living	α4,000	50	6 (for rear allotments)	3:1
Village	600 # 600 ^ 600	17 20	4.5 (for rear allotments)	2.5:1
Detached Dwelling	600 # 600 ^ 600	17 20	4.5 (for rear allotments)	2.5:1
Residential Choice	400	√20	4.5	2:1
Tourist and Residential	1,000	25	6.0	2:1
Integrated Business	1,000	18	4.5	4:1
Local Business	1,000	18	4.5	4:1
Fringe Business	1,000	25	8	4:1
Industry 1	2,000 ^3,000	25	8	4:1
Industry 2	1,000 ^2,000	25	8	4:1
Extractive Industry	200,000	200	10	3:1



Domain	Minimum Area # Corner Lot ^ Rear Lot (m ²)	Minimum Frontage/ Minimum Average Width for Irregularly Shaped Allotments (metres)	Minimum Width of Access Strip or Easement (metres)	Maximum Ratio of Average Depth to Width
Marine Industry	1,000 ^2,000	25	8	4:1
Community Purposes	1,000	20	4.5	3:1
Private Open Space	4,000	25	4.5	n/a
Public Open Space	100,000	100	15	n/a
Emerging Communities	As indicated in relevant structure plan or as established in an approved plan of development			

Key:

- * The Rural Domain allows smaller lot sizes in specific circumstances.
- # Corner allotment.
- ^ Rear allotment and does not include area of access strip or easement.
- ▽ The minimum frontage requirement is 15 metres where the lot is created for the use of a detached dwelling or an attached dwelling (containing two units only).
- α In a single subdivision proposal in the Park Living Domain, the average lot size must not be less than 8,000m² (excluding areas of public open space dedication).

Note 1: The relevant domain controls may place further restrictions on minimum lot size. For example, in the Detached Dwelling Domain, the large minimum lot size overlay control may require a larger lot size than that shown in this table.

Note 2: The relevant domain controls may place restrictions on the total yield or density that can be achieved. This would limit the number of lots that can be created at the minimum size.

Note 3: The minimum lot size shown here refers to land only, whether it is fee simple land or community title land. It does not apply to the subdivision of apartment buildings into residential units, the subdivision of commercial buildings into separate tenancies or to the creation of separate building unit titles within a community title development. These last mentioned developments are subject to the density and use controls that apply in the relevant domains or LAPs.

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
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Protection of Good Quality Agricultural Land

PC2 Lots created for residential purposes in the vicinity of and identified on Overlay Map OM2 – Good Quality Agricultural Land must ensure that potential impacts from	AS2 Lot layout is consistent with State Planning Policy 1/92: Development and Conservation of Agricultural Land and its supporting Planning Guidelines –	AS2 – NOT APPLICABLE Proposal is for industrial lots.	
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Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
agricultural activities do not adversely affect community health, safety, amenity and the continuing use of the agricultural land resource.	Separating Agricultural and Residential Land Uses.		
Hinterland Protection			
PC3 Ecologically significant areas located on sites identified on Overlay Map OM1 – Rural Subdivision must be protected. To determine ecologically significant areas, consideration will be given, but not limited, to: a) Part 2, Division 1, Chapter 2 – Ecological Processes; b) Part 3, Division 2, Chapter 1 – Nature Conservation; c) Part 3, Division 3, Chapter 2 – Open Space Nature Conservation and Chapter 3 – Rural/Nature Conservation; d) Part 7, Division 3, Chapter 11 – Nature Conservation Constraint Code; e) Council's organisational objectives for conserving natural assets; f) Planning Scheme Policy 8 – Guidelines for Ecological Assessments.	AS3.1 The most appropriate subdivision layout on the site, indicating ecologically significant areas to be protected or contributed to Council as public open space, complies with the criteria in PC3, and is demonstrated by a site analysis prepared in accordance with Planning Scheme Policy 17 – Site Analysis. AS3.2 Where the ecologically significant area to be dedicated for public open space or otherwise protected exceeds 15% of the total site area which may be developed, but does not exceed 25%, the maximum lot yield of the balance developable area is in accordance with the provisions of Overlay Map OM1 – Rural Subdivision, using the total land area as the basis for calculation. AS3.3 Where the ecologically significant area to be dedicated for public open space or otherwise protected exceeds 25% of the total site area which may be developed, but does not exceed 30%, the maximum lot yield of the balance developable area is in accordance with the provisions of Overlay Map OM1 – Rural Subdivision, increased by no more than 15%, and using the total land area as the basis for calculation. AS3.4 Where the ecologically significant area to be dedicated for public open space or otherwise protected exceeds 30% of the total site area	PC3 – NOT APPLICABLE Subject site not within Rural Subdivision overlay map area.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	which may be developed, but does not exceed 50%, the maximum lot yield of the balance developable area is in accordance with the provisions of Overlay Map OM1 – Rural Subdivision, increased by no more than 25% , and using the total land area as the basis for calculation. AS3.5 Where the ecologically significant area to be dedicated for public open space or otherwise protected exceeds 50% of the total site area which may be developed, the maximum lot yield of the balance developable area is in accordance with the provisions of Overlay Map OM1 - Rural Subdivision, increased by no more than 30%, and using the total land area as the basis for calculation. AS3.6 Where the area of land to be protected for conservation purposes is retained in private ownership (rather than being transferred to Council's ownership as public open space), that land is properly maintained and secured for the future by a suitable mechanism ensuring its long-term protection. Suitable mechanisms may include a Vegetation Protection Order (VPO) under Local Law No 6 – Vegetation Management or a registrable planning covenant. AS3.7 The minimum size of any lot in a hinterland subdivision, established in accordance with the Acceptable Solutions to PC3, is not less than 4,000m². AS3.8 Lot layout is consistent with State Planning Policy 1/92: Development and Conservation of Agricultural Land and its supporting Planning Guidelines – Separating Agricultural and Residential Land Uses.		



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	AS3.9 Lot layout is informed by a site analysis that is prepared consistent with Planning Scheme Policy 17 – Site Analysis .		
Safe Access			
PC4 Safe and efficient access for vehicles and pedestrians must be provided.	AS4.1 All lots and building sites are accessible by legal road access, in compliance Planning Scheme Policy 11 – Land Development Guidelines . AS4.2 Driveways internal to the property are not steeper than 25% (1V:4H) for a distance not greater than 50 metres.	AS4.1 – COMPLIES The proposed subdivision provides legal road access for all proposed lots. AS4.2 – NOT APPLICABLE No driveways are proposed.	
PC5 Reconfiguration of land with frontage to a service road along the Pacific Motorway must minimise the demand for new vehicle accesses to the service road.	AS5.1 Each new lot has the necessary access easements in place to ensure that no additional accesses are created as a result of the reconfiguration. AS5.2 Notwithstanding the requirements set out in AS1.1.1 , lots have a depth-to-frontage ratio less than 1:1. AS5.3 Lot frontage to the service road is at least 40 metres at future nodal fringes and interchange centres, or 80 metres at future links identified on Overlay Map OM15 – Pacific Motorway Service Road Types .	AS5.1 – NOT APPLICABLE Subject site does not have a road frontage with the Pacific Motorway service road. AS5.2 – COMPLIES Proposed lots comply with stipulated depth to frontage ratio as per the overriding preliminary approval. AS5.3 – NOT APPLICABLE Subject site not identified on overlay map OM-15-1.	
Neighbourhood Design and Character			
PC6 Subdivision of land must provide for a neighbourhood with a strong and positive identity, through: a) clearly readable street and open space networks;	AS6.1 The development is guided by a plan of development based on a site analysis consistent Planning Scheme Policy 17 – Site Analysis , with: a) proposed street network;	AS6.1 – COMPLIES The proposal has been guided by the site analysis plan and Preliminary Approval decision notice and conditions.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
b) appropriate response to site characteristics and setting (including landmarks and views); c) integration with the surrounding urban environment; d) location of community, retail and commercial facilities at focal points, within convenient walking distance for residents; e) shared use of public facilities by adjoining communities (where relevant); f) enhancement of personal safety and minimisation of potential for crime, vandalism and fear by maximising opportunities for casual surveillance of public spaces; g) achieving a sense of place.	b) proposed access arrangements; c) proposed uses of individual lots; d) proposed locations of buildings on each lot; e) proposed open space; f) proposed landscape work theme. AS6.2 The design and layout of the subdivision is consistent with any relevant LAP or structure plan under the Emerging Communities Domain. AS6.3 Lots are arranged to front streets and public open space. AS6.4.1 Battle-axe lots are not created. OR AS6.4.2 Battle-axe lots are created that provide an outlook over public open space.	AS6.2 – COMPLIES The proposed subdivision has taken into consideration the Preliminary Approval that was based on the Yatala Enterprise Area LAP. AS6.3 – COMPLIES All lots have suitable road frontage. AS6.4 – COMPLIES No industrial battle axe lots are proposed.	
PC7 The residential subdivision design must promote the variety in residential streetscapes, rather than rows of uniform dwellings and/or garages.	AS7.1 A variety of building setback requirements on adjacent lots is provided. AS7.2 A variety of lot sizes and shapes are provided within the subdivision. AS7.3 A variety of road carriageway width is provided in the subdivision, in accordance with Planning Scheme Policy 11 – Land Development Guidelines. AS7.4 There is a coordinated design of fencing requirements incorporated with the landscape works for the subdivision.	PC7 – NOT APPLICABLE Proposed subdivision is for industrial lots and not residential.	

Circulation and Access Design



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
PC8 An overall street network must be provided which: a) has design features which convey the primary function of each type of street and encourage driver behaviour, speeds and traffic volumes that are appropriate to that function; b) provides a high level of internal accessibility and appropriate external connections for vehicles, pedestrian and cycle movements; c) deters through traffic from residential areas and creates safe conditions for local road users, pedestrians and cyclists; d) incorporates street junctions and accesses to lots that are located and spaced to facilitate safe and convenient vehicle movements; e) provides for street widths and lengths that optimise the cost effectiveness of the network and the provision of public utilities; f) allows for efficient and unimpeded movement of buses, without facilitating high traffic speeds on streets that are identified bus routes.	AS8 Where involving the construction of a new road, the development conforms to Planning Scheme Policy 11 – Land Development Guidelines.	AS8 – COMPLIES The road network has been designed in accordance with Councils standards and requirements pursuant to the Land Development Guidelines.	
PC9 The street network in urban areas caters for the extension of existing or future public transport routes to provide services that are convenient and accessible to the community (not applicable in Rural or Park Living areas and their equivalents in LAPs).	AS9 At least 90% of dwellings are within 400 metres radial distance from an existing or potential bus route (not applicable in Rural or Park Living Domains and their equivalents in LAPs).	AS9 – NOT APPLICABLE Proposal is for an industrial subdivision of land and not residential.	
PC10 The subdivision design must achieve enhanced vehicular permeability and legibility	AS10.1 There are multiple connections and intersections for all roads and streets within	PC10 – COMPLIES The proposed subdivision provides for road connectivity through Stage 2. Stage 3 will	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
in the location and layout of roads and streets.	the subdivision. AS10.2 The length of a <i>cul-de-sac</i> does not exceed 120 metres. AS10.3 Where <i>culs-de-sac</i> are used, their design and location allows for future connectivity to adjoining roads or streets.	include a single cul-de-sac, however, this street only provides access to three lots. As such, the existing connection/link through to Stage 2 is considered appropriate and no further linkages are required. Please note that all roads are provided in accordance with the Land Use Classification and Staging Plan approved under the preliminary approval.	
PC11 The subdivision layout must encourage walking and cycling and a safe environment for pedestrians.	AS11.1 Pedestrian routes are located along or visible from all streets. AS11.2 The subdivision layout provides a safe environment for walking and cycling routes. AS11.3 Street and road design, including road width, is a traffic calming measure to encourage lower traffic speeds. AS11.4 There are increased residential densities in proximity to public transport services and transit mode change points. AS11.5 Pedestrian routes provide clear, comfortable and direct access to commercial areas and transit stops. AS11.6 All primary pedestrian routes are bordered by residential frontages, public parks, plazas or commercial uses. AS11.7 Pedestrian paths provide connections between residential and retail areas, where street connections are not feasible. AS11.8 Pedestrian routes through parking lots or at the rear of residential developments are	PC11 – COMPLIES All internal roads will have 23m wide road reserves that will accommodate footpaths and shared car parking and bicycle paths, and provided suitable connectivity, and safe environment for pedestrians.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	avoided.		
PC12 The subdivision layout must be designed to facilitate integration with adjoining sites and the overall framework for development of the local area.	AS12.1.1 All road, street, cycle way and pedestrian path connections are consistent with any relevant adopted concept plan, outline development plan, master plan, structure plan, or LAP. OR AS12.1.2 Where there is no relevant existing master plan, concept plan, outline development plan, structure plan or LAP, sufficient scope has been provided for possible future road, street, cycleway and pedestrian path connections to adjoining sites.	AS12.1.1 – COMPLIES The proposed road network has provided for connectivity with the surrounding area generally in accordance with the Preliminary Approval and conditions of approval, Plans and Place Code.	
Retail and Community Services			
PC13 All subdivisions with more than 250 lots are to include appropriate sites for the location of convenience shops and/or community facilities.	AS13.1 A site is allocated to accommodate a convenience shop or an alternative community facility in a subdivision catchment of more than 250 lots. AS13.2 Any lots identified as suitable for convenience shops or community facilities are in reasonable walking distance (400 metres or ten minutes) of at least 60% of all lots within the subdivision.	AS13 1 – NOT APPLICABLE Proposal creates less than 250 industrial lots. AS13 2 – NOT APPLICABLE The development is not identified as requiring a convenience shop or community facilities.	
Energy Efficient Design			
PC14 The street and lot orientation must facilitate the construction of energy efficient buildings that respond to the local climate conditions by: a) maximising solar access to the north in winter; b) minimising solar access to the east and	AS14 No acceptable solution provided.	PC14 – COMPLIES The allotment layout has been dictated by the connectivity to the existing road network and local surrounding environment, however, the proposed lots allow for the construction of energy efficient buildings that respond to local climate conditions.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
west in the summer; c) maximising access to any prevailing summer breezes; d) minimising exposure to prevailing winter winds.			
PC15 Lots are to provide favourable solar access and to allow potential dwellings to take advantage of breezes and other positive natural attributes.	AS15.1 The design and shape of lots on the north and south sides of roads is controlled in response to solar access opportunities. AS15.2.1 Building envelopes or house plans are provided, prior to release of lots smaller than 600m². OR AS15.2.2 Zero lot line design is applied to maximise efficient and flexible use of land.	PC15 – COMPLIES Each lot is able to achieve favourable solar access. AS15.2 – NOT APPLICABLE Proposal is for an industrial subdivision only.	

Filling and Drainage of Lots

PC16 All lots created have sufficient area that is flood free to safely and adequately accommodate their intended use and development.	AS16.1 Every lot must be adequately filled and drained, without adverse environmental impact, so that it can be used for its intended purpose. The minimum area available, above the planning flood level for each lot, is in accordance with this Table to Acceptable Solutions. AS16.2 Any filling to be undertaken to provide the minimum area above the planning flood level required by AS16.1 is in accordance with Specific Development Code 11 – Changes to Ground Level and Creation of New Waterbodies and Constraint Code 9 – Flood Affected Areas and Constraint Code 10 – Natural Wetland Areas and Natural Waterways. AS16.3	AS16.1 – COMPLIES All lots have been designed taking into consideration the existing environmental conditions and future topography providing flood free access and lots. AS16.2 – COMPLIES The proposed subdivision has been designed cognisant of Councils guidelines, standards and policies.	
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Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	Residential lots contain a rectangle above the planning flood level measuring nine metres by 15 metres and clear of all statutory boundary setbacks. AS16.4 Residential lots with an area less than 300m² are square or rectilinear in shape. AS16.5 The flood free area provided in accordance with AS16.1 has access to a road frontage that is flood free. AS16.6 Flood modelling, if required, assumes that 100% of the lots are filled to a level above the 1 in 100 year flood line in the Village, Detached Dwelling, Residential Choice, Residential and Tourist, Integrated Business, Local Business and Fringe Business Domains and their LAP precinct equivalents.	AS16.3 – NOT APPLICABLE No residential lots proposed. AS16.4 – NOT APPLICABLE No residential lots proposed. AS16.5 – COMPLIES Flood free road access has been provided. AS16.6 – NOT APPLICABLE Subject site not within domain identified.	

Table to Acceptable Solutions AS16.1

Domain	Minimum Area that is Flood Free
Rural	1,000m ² plus additional area required for effluent disposal
Park Living	1,000m ² plus additional area required for effluent disposal
Village	450m ²
Detached Dwelling	450m ²
Residential Choice	100% of allotment
Residential and Tourist	800m ²
Integrated Business	800m ²
Local Business	800m ²
Fringe Business	800m ²



Domain	Minimum Area that is Flood Free
Industry 1	1,000m ²
Industry 2	800m ²
Extractive Industry	n/a
Marine Industry	800m ²
Community Purposes	450m ²
Conservation	n/a
Private Open Space	n/a
Public Open Space	1,000m ² or 10% of the total site area, whichever is the greater.
Emerging Communities	450m ² , except where an adopted structure plan provides for a greater flood free area to be provided.

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
PC17 The development must not cause an adverse impact from changes in quality and/or quantity of stormwater discharges during the construction or operational phases of the development. Stormwater runoff within land to be subdivided and on adjacent properties must be managed so as not to cause any adverse impact on the built or natural environment, either upstream or downstream of the site.	AS17.1 A Stormwater Management Plan is prepared. AS17.2 A Stormwater Intent Plan is provided for: a) a staged subdivision involving more than five stages, or b) a subdivision resulting in more than 50 lots, or c) a subdivision impacting on three or more sub catchments. AS17.3 Stormwater treatment devices are provided in accordance with Planning Scheme Policy 11 – Land Development Guidelines .	PC17 – COMPLIES The proposed development is supported by a SWMP.	

Recreation and Sporting Parkland Provision

PC18 The development must provide a Recreation Facilities contribution in accordance with the Priority Infrastructure Plan.	AS18 The development provides a Recreation Facilities contribution taking one of the forms of contribution specified in the Priority	PC18 – COMPLIES The proposed subdivision will be subject to council current ICN charges and policy.	
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Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	Infrastructure Plan, Recreation Facilities Infrastructure Charges Schedule.		
PC19 A public open space network must be provided which: a) provides or incorporates a range of recreation settings and can accommodate adequate facilities to meet the needs of the community; b) provides well distributed public open space that contribute to the legibility, accessibility and character of the development; c) creates attractive urban environment settings and focal points; d) establishes a clear relationship between public open space and adjoining land uses; e) facilitates appropriate measures for stormwater and flood management and care of valuable environmental resources; f) enables the retention of significant vegetation, wetlands, waterways, and other habitat areas, their associated buffer and linkages/corridors and natural and cultural features; and g) is cost effective to maintain.	AS19.1.1 Recreation and Sporting Parklands are designed in accordance with the Priority Infrastructure Plan, Recreation Facilities Design Guideline and approved Council Master Plans. OR AS19.1.2 Public open space is provided in accordance with an already approved open space strategy or development plan.	PC19 – COMPLIES Public open space will be provided within common property in accordance with the subdivision plan and Landscape Intent Plan. Public Open Space for conservation purposes is also proposed within the allotment south of Christensen Road South.	
PC20 The design and location of open space (parkland) must result in high quality parkland and open space areas which provide a range of safe and easily accessible, passive recreational opportunities for the community.	AS20.1 A park has direct road frontages of: a) a minimum of 75% of the total allotment boundary of the park to provide physical access and visibility; or b) a minimum of 15% of the total allotment boundary of the park, where the proposed park is required for conservation purposes; or c) a greater amount of the boundary of the park, where the proposed park is an extension of an existing park with limited	PC20 – COMPLIES Public open space will be provided within common property in accordance with the subdivision plan and Landscape Intent Plan.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	road frontage. AS20.2 Recreational components within a dedicated open space are set back a minimum of 30 metres from the top of the bank of a waterway. AS20.3 Land intended for public open space complements existing adjacent and surrounding open space provision, and provides linkages to other open space areas. AS20.4 The design and location of open space areas, access ways and infrastructure provides for a safe recreational opportunity for the community. AS20.5 Open space is provided adjacent to waterways, with roads servicing the linear parkland and lots located on the opposite side of the road to the waterway.		
PC21 Land intended for public open space must be of a physical standard and condition that permits use of the land for its intended purpose.	AS21.1 Areas of public open space are provided, exclusive of any land affected by unacceptable hazards such as contaminated land under the Contaminated Land Act 1991 or land subject to geotechnical hazard. AS21.2 Adequate areas of public open space for recreation purposes are provided, exclusive of: a) land affect by stormwater or overland flow discharge from adjacent allotments; b) drainage reserves and detention basins which cannot be shown to safely and effectively contribute to the network of parks and open space areas; c) land subject to cut and fill, with a batter	PC21 – COMPLIES The public open space is to be located within common property and therefore will be held under body corporate control, who will ensure its maintenance and upkeep.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	slope that exceeds a grade of more than 1 in 6; d) areas of land less than 15 metres wide, such as access and service easements; e) land required to serve primarily as a buffer to any existing development or major transport corridor; and easements. OR AS21.3 At least 10% of the total open space provision is exclusive of flood inundation of below the 1 in 100 ARI level (or Q100) or the highest recorded flood level, whichever is the greatest.		
Open Space Safety and Design			
PC22 Open space areas must be designed and managed to promote user safety.	AS22.1 Areas intended for use during times of darkness are lit in accordance with Council's Land Development Guidelines. AS22.2 Landscaping is designed to minimise interference with sightlines. AS22.3 Casual surveillance is achieved through: The edge of parks and open space being overlooked by housing, commercial or other development as well as passing pedestrian and motor traffic that can provide effective informal surveillance. AS22.4 Interpretive signage is provided to enable clear understanding of points of interest such as the location of public toilets, telephones, environmental or heritage features, routes and park activities where relevant. AS22.5.1	PC22 – COMPLIES The public open space areas will be well lit and managed by the body corporate to ensure a safe environment for users.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	Fencing adjoining a park is to be 50% transparent (i.e. swimming pool style or timber picket fencing) and any landscaping adjacent to the fence is to be designed to maximise the opportunity for casual surveillance from both sides of the fence. OR AS22.5.2 Fencing adjoining a park is to be no more than 1.2m in height.		
Environmental Open Space, Habitat and Landscape Protection			
PC23 An environmental open space network must be protected to: a) ensure the retention of significant vegetation, wetlands, waterways, and other habitat areas, their associated buffer and linkages/corridors and natural and cultural features; and b) facilitate appropriate measures for stormwater and flood management and care of valuable environmental resources; c) be cost effective to maintain.	AS23 No acceptable solution provided.	PC23 – COMPLIES Environmental open space within the allotment to the south of Christensen Road South is proposed to be dedicated to Council to ensure the 60m buffer to Sandy Creek is maintained.	
Infrastructure Connections			
PC24 The design and provision of public utilities, including sewerage, water, electricity, street lighting and communication services, must: a) meet the needs of users; b) ensure the health, safety and convenience of the community; c) be cost effective over their life cycle; d) minimise adverse impacts to the environment (including the amenity of the local area) in the short and long term.	AS24.1 All lots are connected to electricity supply and telecommunications services. A24.2 Electricity supply and telecommunications infrastructure are provided underground, where the development involves the creation of more than five lots. AS24.3 Reticulated water supply and street lighting is provided in accordance with Planning	AS24.1 – COMPLIES All lots will be provided with connection to electricity supply and telecommunications services. AS24.2 – COMPLIES All lots will have electricity supply and telecommunications services underground. AS24.3 – COMPLIES All lots will be connected to reticulated water supply and street lighting provided.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	Scheme Policy 11 – Land Development Guidelines, except in the Extractive Industry, Rural, Conservation or Village Domains. AS24.4 Reticulated sewerage is provided in accordance with Planning Scheme Policy 11 – Land Development Guidelines, except in the Extractive Industry, Rural, Conservation, Village or the Park Living Domains. AS24.5 On-site water supply is provided, in accordance with Planning Scheme Policy 11 – Land Development Guidelines for properties in the Extractive Industry, Rural, Conservation and Village Domains. AS24.6 On-site sewage disposal is provided in accordance with Council's Guidelines for the Installation and Operation of Aerobic Wastewater Treatment Plants for Domestic and Small Scale Commercial Users 1995 and AS1547 for properties in the Extractive Industry, Rural, Conservation, Village and Park Living Domains.	AS24.4 – COMPLIES All lots will be connected to reticulated sewerage. AS24.5 – NOT APPLICABLE Subject site not located within the Domain identified. AS24.6 – NOT APPLICABLE Subject site not located within the Domain identified.	
Volumetric Subdivision			
PC25 Volumetric subdivision (of the space above or below land) facilitates efficient development, in accordance with the objectives and DEOs of this Planning Scheme, its planning strategies and the relevant domain or LAP.	AS25 No acceptable solution provided.	PC25 – NOT APPLICABLE Proposal does not involve a volumetric subdivision.	



Part 7 Codes

Division 3 Constraint Codes

Chapter 4 Car Parking, Access and Transport Integration

1.0 Purpose

To ensure that transport needs, including car parking and service vehicle requirements, associated with the development of land are met by:

- supply of car and bicycle parking facilities;
- provision of loading and service facilities; and
- integration of public transport with private and public development in the City.

Key objectives include:

- a) the availability of car park opportunities that are easy to locate and use, in close proximity to all major developments and uses within the City, with on-site provision available for occupants and on-street provision and/or public car parks available for visitors;
- b) the effective use of all car park infrastructure provided in the City; and
- c) streets that are pedestrian and cyclist friendly.

2.0 Application

- 2.1 This code applies to development indicated as self, code or impact assessable in the Table of Development in the domain or Local Area Plan (LAP) within which the development is proposed.
- 2.2 This code specifically applies to development (whether on private or public land) that requires one or more of the following:
 - private or public car parking;
 - bicycle parking and associated facilities;
 - goods loading and circulation in public or private places; and
 - integration of public transport with private or public development in the City.
- 2.3 This code also applies to any development that is proposed for sites identified on Domain Maps or the Priority Infrastructure Plan Maps as being affected by Future Road Requirements, including areas required for future road corridor development.
- 2.4 Where a domain or LAP Place Code contains car parking requirements that differ from this code, the LAP requirements take precedence.
- 2.5 Performance Criteria PC1-PC24 apply to all code and impact assessable development referred to in this code. For development identified as self assessable, in the relevant domain or LAP, only the acceptable solutions to Performance Criteria PC1-PC16 apply.

3.0 Development Requirements



Performance Criteria	Acceptable Solutions	How does the proposal Comply with the Acceptable Solution or Performance Criteria?	Internal Use
Development that is Self-Assessable, Code Assessable or Impact Assessable			
Protection and Preservation of Areas Required for Road Widening, the Provision of Public Transport Facilities or New Transport Corridors			
PC1 Land affected by any proposed road realignment or widening must not have development constructed over that part of the land required for road realignment or road widening.	AS1 All sites that are affected by Future Road Requirement as shown on the Domain Maps, do not have buildings or structures erected forward of the indicated building setback line. This requirement does not apply to a fence with a height not exceeding 1.8 metres and a width not exceeding 0.5 metres.	COMPLIES WITH AS1 The proposed development is not affected by future road requirement.	
Port Cocheres			
PC2 Where provision is made for a <i>porte cochere</i>, it must be designed to enable vertical clearance, manoeuvring, access and queuing of vehicles. The capacity of the <i>porte cochere</i> and associated access and manoeuvring must accommodate vehicles entirely within the site, including the queuing of vehicles.	AS2 The <i>porte cochere</i> has a minimum vertical clearance of 4.5 metres.	NOT APPLICABLE There is no Porte Cochere proposed.	
Design of Car Parking Areas and Car Park Spaces			
PC3 All car parking spaces must be constructed and linemarked to the correct size and standard.	AS3.1 All car parking spaces are constructed in compliance with AS2890.1 – Parking Facilities Part 1: Off Street Car Parking. AS3.2 Where the development includes a combination of low turnover and high turnover car spaces, the parking spaces and aisles are designed to the high turnover or Class 3 requirements in AS2980.1 – Parking Facilities Part 1: Off Street Car Parking.	AS3.1 - AS3.2 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	



PC4 Car parking areas must be landscaped to reduce visual impact and to provide opportunities for shade.	AS4 In car parking areas exceeding 300m² in site area: a) at least 5% of the area is landscaped; b) a landscaped buffer, with a minimum height of 600mm and width of 1500mm, is provided along any public street frontage and the common boundary to the adjoining property; and c) one landscaped tree bay is to be provided for every 21 car parking spaces.	AS4 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	
Signs and Line Marking			
PC5 Signs and line marking must be provided to indicate the location of the car park and the position of the access points for all car parks used by the public where: a) a car park is located at the rear of the site; b) access to the car park is not located in the main frontage road; c) there are a number of access points serving different parts of the site.	AS5.1 Signs incorporate the standard Service Sign Series 'P' sign, as detailed under Guide Signs in the Manual of Uniform Traffic Control Devices, Queensland. (This does not apply to residential developments with less than 10 units) AS5.2 Signs are used to mark car parking bays which are provided for disabled drivers, motorcycles and special zones, such as bus zones.	AS5.1 – AS5.2 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	
Tandem Car Spaces			
PC6 Tandem car parking must only be used in circumstances where no inconvenience arises from its use.	AS6.1 Tandem car parking spaces (ie. two car parking spaces, nose to tail) are counted as one space, except in the following cases: a) the development is for residential purposes; b) the tandem spaces are to be used by the occupants of the site, in one tenancy; c) the car park area is to be operated as a public car park with on-site management. In this case, a tandem car park may be counted as no more than 1.5 car spaces. AS6.2 The minimum length of the tandem car space is 10.4 metres. AS6.3	AS6.1 – AS6.3 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	



	Tandem garages have a minimum internal length of 11 metres.		
Access to Car Park Areas			
PC7 Car parking areas must not cause vehicle queues into the frontage road system or encourage drivers to reverse into the road system.	AS7.1 For developments in excess of 100 residential units with frontage to major roads, a turn round facility with a minimum diameter of 12.0m is provided between the gate and the road. OR AS7.2 All car parking facilities, except those associated with detached dwellings and duplex dwellings is designed so that all vehicles enter and exit the site in a forward gear. AS7.3 Provision is made for a defined queuing area, free of any parking manoeuvres or internal intersections in accordance with the provisions of the Table to Acceptable Solution AS7.3, for developments comprising of more than two dwelling units and where a security gate is proposed.	AS7.1 – AS7.2 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	
PC8 Car parking areas providing more than 20 car parking spaces must allow for the separation of vehicles and pedestrians.	AS8 Sealed pedestrian footpaths, at a gradient not exceeding 1:12, are provided from the car parking area along the shortest possible route to the point of destination.	AS8 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	
PC9 Access to car parking spaces must be provided for employees and visitors.	AS9.1 Car park areas have no gateways, doors or similar devices which restrict vehicular access by employees or visitors.	AS9.1 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	
Driveways and Crossovers			
PC10 Driveways from car parks or developments into public roads must be minimised to reduce interference with public road traffic and pedestrians.	AS10.1 The maximum number of crossovers for residential developments is one for detached dwelling properties and two for multiple unit dwelling complexes. AS10.2 The maximum number of crossovers for non-residential developments is two crossovers per property. AS10.3 A vehicle crossover is separated from any other vehicle crossover by a minimum distance of three metres.	AS10.1 – AS10.3 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	
PC11	AS11.1	AS11.1 – AS11.7 – NOT APPLICABLE	



All development must make provision for safe access to roads or streets adjacent to the site. Crossovers must be constructed to a standard consistent with the vehicles using the site.	The geometric design of entry and exit driveways conforms with Standard Drawing No 59218 of Planning Scheme Policy 11 – Land Development Guidelines. AS11.2 Access to roads or streets adjacent to the site is consistent with AS2890.1 – Parking Facilities Part 1: Off Street Car Parking and AS2890.2 – Off Street Parking Part 2: Commercial Vehicles. AS11.3 Where separate entry and exit driveways are used, the first driveway reached from the kerbside land is clearly delineated and sign-posted. AS11.4.1 Access to developments on dual carriageway roads is left in/left out. OR AS11.4.2 A new intersection is provided between the access way and the dual carriageway. AS11.5 Developments with traffic signal controlled or roundabout access to the frontage road dedicate land as public road to accommodate all intersection infrastructure, including traffic signal loops. AS11.6 The boundaries of the frontage road are modified to accommodate all intersection infrastructure within the public road. AS11.7 Developments with new traffic signal controlled access, within network traffic systems, provide the necessary infrastructure to integrate the new signals.	The development proposes a subdivision only – no new buildings or uses are proposed.	
Internal Circulation			
PC12 All developments must provide internal circulation to avoid use of the public road system for movement between different car parking and vehicle service areas in the development.	AS12.1 The internal layout of the site is consistent with AS2890.1 – Parking Facilities Part 1: Off Street Car Parking and AS2890.2 – Off Street Parking Part 2: Commercial Vehicles. AS12.2 Parking and circulation aisles have a maximum length of 100 metres. AS12.3 Dead end aisles do not exceed 20 metres in length.	AS12.1 – AS12.7 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	



	AS12.4 Aisle design does not include cross intersections. AS12.5 Car parking space/s is/are not located in areas used for manoeuvring of heavy vehicles. AS12.6 Car parks are designed so that vehicles do not reverse across pedestrian crossings. AS12.7 Speed humps are not provided in entry or exit queuing areas.		
Loading Bay and Set Down Area Requirements			
PC13 Development must make provision for loading bays and set down areas for the: a) collection and set down of passengers; b) parking of trailers; c) service vehicle parking; and d) loading and unloading of goods.	AS13 Loading and set down areas are provided consistent with the AS2890.2 – Off Street Parking Part 2: Commercial Vehicles.	AS13 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	
Design Service Vehicle Requirements			
PC14 Development must provide for the required 'design service vehicle' to service the development.	AS14.1 Provision is made for service vehicles, in accordance with the Table to Acceptable Solution AS14.1. AS14.2 Provision is made for service vehicles, in accordance with the Table to Acceptable Solution AS14.2, for sites less than 4,000m² in area that require access by service vehicles. AS14.3 Provision is made for height clearance of 4.5 metres for service station canopies and access clearance height associated with the appropriate design vehicle in other applicable developments. AS14.4 A driveway which caters for heavy vehicles is designed in accordance with AS2890.2 – Off Street Parking Part 2: Commercial Vehicles and Standard Drawing No 59218 Section 7.4 of Planning Scheme Policy 11 – Land Development Guidelines.	AS14.1 – AS14.4 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	
Provision of Bicycle Parking Spaces			



PC15 Bicycle parking must be provided for all non-residential developments where the required car parking provision exceeds 20 parking spaces.	AS15.1 Where non-residential development requires the provision of more than 20 car parking spaces, bicycle parking is provided in accordance with the AustrroadsGuide to Traffic Engineering Practice: Part 14: Table 10.1. AS15.2 Where bicycle parking is to be provided, additional facilities for bicycle users are designed and constructed in accordance with AS2890.3 – Parking Facilities Part 3: Bicycle Parking Facilities.	AS15.1 – AS15.2 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	
Provision of Car Parking Spaces			
PC16 Sufficient car parking spaces must be provided to meet the car parking needs of the development. The number of car parking spaces provided must be consistent with the practical opportunities available for shared car parking provision and the operation of alternative transport modes to private motor vehicles.	AS16.1 Car parking is provided in accordance with the number of spaces required for the specific use listed in the Table to Acceptable Solution AS16.1. AS16.2 If an additional building is constructed, or an existing building is extended, the car space requirements determined from Table to Acceptable Solution AS16.1 accrue only for the additional building or extension, provided that the use of the land remains the same and any existing area for car parking is not reduced or, if disturbed, any existing car spaces are replaced in the new development.	AS16.1 – AS16.2 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	
PC17 New development must not result in any adverse impact, through the reduction in the car parking capacity of the site and/or the local area.	AS17.1.1 Any car parking spaces lost are replaced elsewhere on the site. OR AS17.1.2 A monetary contribution is provided to Council for those car parking spaces lost, consistent with AS16.2. OR AS17.1.3 The Building Work is associated with a Material Change of Use that requires a lesser number of parking spaces than the existing use.	AS17.1.1 – AS17.1.3 NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	
Driveways and Crossovers			
PC18 Vehicle crossovers must be constructed to minimise	AS18 Access to developments with more than one frontage road is via minor roads. Impacts of driveway traffic are concentrated	AS18 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	



conflict with passing traffic and pedestrians.	on less busy roads, with traffic distributed to major roads via existing intersections.		
Safe Pedestrian Access			
PC19 All development must make provision for safe pedestrian access to the building from the street and from any car parking or set down area to the building's main entrance.	AS19.1 The design of the development ensures that priority is given to pedestrians for direct links to the building's main entrance and to any adjoining local activities or public transport services. AS19.2 Landscaping surrounding the pedestrian walkways and shelters is no higher than 600mm and incorporates trees with branching not lower than 2m (clear stem trees). AS19.3 Solid walls and fences are avoided adjacent to pedestrian walkways to improve actual and perceived safety. AS19.4 Security is to be enhanced by passive surveillance over the car parking area from nearby residences or other activities, where practicable.	AS19.1 – AS19.4 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	
Safe Pedestrian and Cyclist Facilities			
PC20 The design of pedestrian and cyclist facilities must be safe, useable and readily accessible.	AS20 Pedestrian and cyclist facilities are designed to encourage the use of these modes by: a) minimising distances, and providing safe grading paths, separated from motorised traffic; b) using even, non-slippery pavement materials.	AS20 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	
Integration of Development with Public Transport			
PC21 Development that attracts a high proportion of people dependent on public transport must provide facilities to accommodate public transport servicing requirements.	AS21.1 Any development that includes activities listed in the Table to Acceptable Solution AS21.1 provides a bus set down facility on and off-site, in close proximity to the entrance of the development. AS21.2 Where a bus set down area is provided, it is integrated into the development, easily accessible, safe, secure, clearly identified, and attractive to use (in the case of major developments providing a covered walkway to the entry).	AS21.1 – AS21.2 NOT APPLICABLE Public transport facilities are not required.	
PC22 Development that attracts	AS22.1 Any development that includes activities listed in the Table to	AS22.1 – AS22.2 NOT APPLICABLE Public transport facilities are not required.	



a reasonable proportion of people dependent on public transport must assist in supporting facilities for public transport servicing.	Acceptable Solution AS22.1 provides a busstop and/or a bus shelter, if the entry to the development is not within 400 metres of an existing bus stop or within 800 metres of a railway station. AS22.2 The bus shelter is located adjacent to the frontage of the site and is connected to the entry of the development by a sealed footpath.		
Cash In Lieu of Car Park Spaces Required			
PC23 Car parking must be provided to meet the car parking needs of the development. If it cannot be provided on site, alternative arrangements may be proposed.	AS23.1.1 The car parking spaces required by Table to Acceptable Solution AS16.1 are provided on the subject site. OR AS23.1.2 A monetary contribution for all or part of the required car parking may be made towards one or more of the following: a) provision of off-street car parking in the vicinity of the development; b) provision of improved on street car parking and streetscape improvement works, in the vicinity of the development; and/or c) provision of improved public transport facilities and services in the vicinity of the development.	AS23.1.1 – AS23.1.2 – NOT APPLICABLE The development proposes a subdivision only – no new buildings or uses are proposed.	
Traffic Impact			
PC24 Where appropriate, specific measures must be taken in the provision of car parking spaces and access to these, to ensure that the traffic impacts of the car park area's use does not have a negative impact on the local amenity and the operation of the local street network.	AS24 A Traffic Impact Report is prepared and implemented, unless: a) the development has less than 250 high turnover or 500 low turnover parking spaces; or b) it has less than 100 parking spaces with direct access to a major road; or c) the Assessment Manager advises a Traffic Impact Report is not required. This Traffic Impact Report shows how the proposed development is able to comply with the provisions of this code and Section 7.4 of Planning Scheme Policy 11 – Land Development Guidelines.	COMPLIES WITH AS24 A traffic Impact report is provided within Appendix I.	



Table to Acceptable Solution AS7.3

Car Park Capacity (Number of Spaces)	Minimum Queue Length (Vehicles) *
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 250	7
More than 250	7 plus 1% of capacity over 250 spaces

*** Note:** *Each vehicle shall be taken to occupy 6.0 metres in length.*

Table to Acceptable Solution AS14.1

Use or Development	Service Vehicle Provisions
Aged Persons Accommodation	HRV
Animal Husbandry	AV
Aquaculture	HRV
Bulk Garden Supplies	HRV
Cafe	SRV
Cinema	SRV
Commercial Services	SRV
Community Care Centre	SRV
Community Purposes	SRV
Convenience Shop	SRV
Educational Establishment	SRV
Fast Food Premises	HRV
Freight Depot	AV
Fuel Depot	AV
Funeral Parlour	SRV
Hospital	HRV
Industry	AV
Indoor Recreation including: a) squash court or any other court game; b) meeting place, public hall, pinball parlour, amusement arcade; c) theatre, cinema; d) licensed club; e) skating rink, swimming pool; f) gymnasium; and g) public library, public lecture hall, art gallery, museum, any other indoor recreation.	SRV



Use or Development	Service Vehicle Provisions
Kennel	SRV
Manufacturers Shop	HRV
Marina	AV
Marina Shop	SRV
Market	SRV
Medical Centre	SRV
Milk Depot	AV
Mini-Storage Warehousing	HRV
Minor Tourist Facility	SRV
Motel	SRV
Motor Vehicle Repairs	HRV
Night Club	SRV
Outdoor Sport and Recreation: a) tennis court or other court game (where not ancillary to other development); b) lawn bowls; c) skating rinks, swimming pools; d) golf course.	SRV
Office	SRV
Place of Worship	SRV
Reception Room	SRV
Resort Hotel	HRV
Restaurant	SRV
Restricted Club	HRV
Retail Plant Nursery	HRV
Rural Industry	AV
Salvage Yard	HRV
Service Industry	SRV
Service Station	AV
Shop	SRV
Shop with GFA of less than 400m ²	SRV
Shop with GFA 400m ² – 1500m ²	HRV
Shop with GFA larger than 1500m ²	AV
Shopping Centre Development	AV
Showroom	HRV
Storage	SRV
Take-Away Food Premises	SRV
Tavern	HRV
Temporary Use	AV
Theatre	SRV
Tourist Shop	SRV
Transit Centre	HRV
Transport Terminal	AV
Vehicle Hire Premises	AV
Vehicle Sales Premises	AV
Warehouse	AV
Waterfront Industry	HRV

Note: **SRV: Small Rigid Vehicle as defined in AS2890.2 – Off Street Parking Part 2: Commercial Vehicles.**

HRV: Heavy Rigid Vehicle as defined in AS2890.2 – Off Street Parking Part 2: Commercial Vehicles.

AV: Articulated Vehicle as defined in AS2890.2 – Off Street Parking Part 2: Commercial Vehicles.



Table to Acceptable Solution AS14.2

HRV and AV Requirements	
Site Area (m ²)	Requirement
Less than 1000m ²	Demonstrate that the development can accommodate the particular design vehicle but a separate service bay and associated manoeuvring are not required. Where it can be demonstrated that loading and unloading can take place within the road reserve, without impacting on the safe and efficient operation of traffic and with no detrimental impact on amenity, Council or its delegate may determine that HRV and AV access is not required.
1000m ² – 2000m ²	a) service bay for HRV is required. b) restricted manoeuvring on site for HRV or AV (as required). c) full on-site manoeuvring for other classes of service vehicle is required.
2000m ² – 4000m ²	a) service bay to be provided for HRV or AV (as required). b) restricted manoeuvring on site for AV (as required). c) full on-site manoeuvring for HRV and other classes of service vehicle is required.

Table to Acceptable Solution AS16.1

This table sets out the minimum number of car parking spaces required according to the use of the land. Where the calculated number of car spaces is not a whole number, the number of car parking spaces required must be the next higher whole number.

Material Change of Use	Minimum Number of Car Parking Spaces to be Provided
Aged Persons Accommodation	a) one (1) space per self-contained dwelling, plus one (1) visitor space per 10 self-contained dwellings; b) one (1) space per two hostel units; c) one (1) space per four nursing home beds; d) 50% of the total number of car parking spaces required should be provided for visitor parking in a central location.
Amusement Parlour	5 spaces per 100m ² of GFA – one (1) space per 20m ² .



Apartments	a) for developments with up to 20 apartments, one (1) space per one (1) bedroom apartment, and 2 spaces per 2 bedroom and larger apartments, plus one (1) space per four apartments for visitor parking. b) for developments with more than 20 apartments, requirements for first 20 apartments as in a) plus, one (1) space per apartment and one (1) space per 10 apartments for visitor parking for subsequent units. c) for developments in excess of 20 apartments, the units with 2, 3 or 4 bedrooms shall be considered first in the determination of total parking spaces. d) for mixed-use development with a single apartment, visitor parking for the apartment is not required. e) where development: ■ is on a site that only has frontage to a road listed below; or ■ the access to the proposed development is to a road listed below; and ■ where the frontage is included in that part of the road listed below; additional visitor car parking shall be provided at a rate of one (1) car parking space for every two (2) visitor car parking spaces required.																																																		
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Attached Dwelling	a) 2 spaces per dwelling, of which one (1) is to be covered, plus one (1) space per two dwellings for visitor parking. b) where development: ■ is on a site that only has frontage to a road listed below; or ■ the access to the proposed development is to a road listed below; and ■ where the frontage is included in that part of the road listed below; additional visitor car parking shall be provided at a rate of one (1) car parking space for every two (2) visitor car parking spaces required. <table> <thead> <tr> <th>Road</th><th>Part of Road</th></tr> </thead> <tbody> <tr> <td>Aloha Lane</td><td>The whole</td></tr> <tr> <td>Coinda Avenue</td><td>Northern alignment</td></tr> <tr> <td>Beulah Lane</td><td>The whole</td></tr> <tr> <td>Cronin Avenue</td><td>The whole</td></tr> <tr> <td>Darwalla Avenue</td><td>The whole</td></tr> <tr> <td>Eden Avenue</td><td>Both alignments from Hill Street to Ward Street and from Ward Street to and including BUP 5455 (Lot RP 1881138), and to and including Lot 6 RP154810</td></tr> <tr> <td>Fenton Place</td><td>The whole</td></tr> <tr> <td>Garfield Terrace</td><td>The whole</td></tr> <tr> <td>Hedges Avenue</td><td>The whole</td></tr> <tr> <td>Jefferson Lane</td><td>North of Third Avenue</td></tr> <tr> <td>Lennie Avenue</td><td>The whole</td></tr> <tr> <td>Little Norman Street</td><td>The whole</td></tr> <tr> <td>Montgomery Avenue</td><td>The whole</td></tr> <tr> <td>Mountbatten Avenue</td><td>The whole</td></tr> <tr> <td>Northcliffe Terrace</td><td>The whole</td></tr> <tr> <td>Nagel Avenue</td><td>Western alignment from including Lot 12 RP 46948 to and including Lot 1 RP 46948</td></tr> <tr> <td>O'Connor Street</td><td>Western alignment from Wybera Street to and including Lot 26 RP 49999</td></tr> <tr> <td>Owens Lane</td><td>The whole</td></tr> <tr> <td>Pacific Parade</td><td>The whole</td></tr> <tr> <td>Park Lane</td><td>The whole</td></tr> <tr> <td>Peak Avenue</td><td>The whole</td></tr> <tr> <td>Schuster Avenue</td><td>The whole</td></tr> <tr> <td>Sunshine Court</td><td>The whole</td></tr> <tr> <td>Swan Lane</td><td>The whole</td></tr> </tbody> </table> Note: <i>The visitor parking space may be provided on street in the case of a duplex development.</i>	Road	Part of Road	Aloha Lane	The whole	Coinda Avenue	Northern alignment	Beulah Lane	The whole	Cronin Avenue	The whole	Darwalla Avenue	The whole	Eden Avenue	Both alignments from Hill Street to Ward Street and from Ward Street to and including BUP 5455 (Lot RP 1881138), and to and including Lot 6 RP154810	Fenton Place	The whole	Garfield Terrace	The whole	Hedges Avenue	The whole	Jefferson Lane	North of Third Avenue	Lennie Avenue	The whole	Little Norman Street	The whole	Montgomery Avenue	The whole	Mountbatten Avenue	The whole	Northcliffe Terrace	The whole	Nagel Avenue	Western alignment from including Lot 12 RP 46948 to and including Lot 1 RP 46948	O'Connor Street	Western alignment from Wybera Street to and including Lot 26 RP 49999	Owens Lane	The whole	Pacific Parade	The whole	Park Lane	The whole	Peak Avenue	The whole	Schuster Avenue	The whole	Sunshine Court	The whole	Swan Lane	The whole
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Bed and Breakfast	one (1) space per guest room (in addition to the requirement of 2 spaces per dwelling, of which one (1) is to be covered).																																																		
Bulk Garden Supplies	2 spaces per 100m ² of Total Use Area (one (1) space per 50m ² of Total Use Area).																																																		
Cafe	6.7 spaces per 100m ² of GFA (including any outdoor dining areas) (one (1) space per 15m ² of GFA).																																																		
Caravan Park	one (1) space per site, plus visitor parking of one (1) space per ten sites.																																																		
Caretaker's Residence	2 spaces, of which one (1) is to be covered.																																																		
Child Care Centre	one (1) space per employee, plus on-site passenger set down area of one (1) space for every five children enrolled.																																																		
Cinema	as determined by Council, requiring a Traffic Impact Report.																																																		
Commercial Services	4 spaces per 100m ² of GFA (one (1) space per 25m ² of GFA).																																																		
Community Care Centre	one (1) space per employee, based on the maximum number of employees on the premises at any one time, plus one (1) space per ten residents or other occupants of the premises.																																																		



Material Change of Use	Minimum Number of Car Parking Spaces to be Provided																
Community Purposes	as determined by Council.																
Convenience Shop	6.7 spaces per 100m ² of GFA (one (1) space per 15m ² of GFA).																
Detached Dwelling	2 spaces per dwelling, of which one (1) is to be covered.																
Display Home	as determined by Council.																
Ecotourism Facility	as determined by Council, requiring Traffic Impact Report.																
Educational Establishment: a) primary school b) secondary school c) tertiary and further education d) other	a) one (1) space per staff member; b) one (1) space per staff member, plus one (1) space per each ten Year 12 students enrolled; c) as determined by Council, requiring Traffic Impact Report; and d) as determined by Council, requiring Traffic Impact Report.																
Estate Sales Office	5 spaces.																
Family Accommodation	one (1) space, in addition to the spaces required for the main dwelling.																
Family Day Care Home	no on-site spaces required.																
Farm Stay	one (1) space for each guest bedroom (in addition to the requirement of 2 spaces per dwelling, of which one (1) is to be covered).																
Fast Food Premises	a) 0.4 spaces per seat, plus one (1) space per 100m ² of GFA; OR b) 10 spaces per 100m ² of GFA, plus 20 spaces per 100m ² of GFA outdoor seating areas, whichever is the greater, plus queuing area for 10 vehicles associated with any drive through sales facility.																
Freight Depot	one (1) space per employee, plus one (1) visitor parking space.																
Fuel Depot	one (1) space per employee, plus one (1) visitor parking space.																
Funeral Parlour	10 spaces per 100m ² of GFA (one (1) space per 10m ² of GFA).																
Home Occupation	2 spaces for the purposes of the Home Occupation, in addition to the spaces required for the dwelling.																
Home Office	one (1) space for the purpose of the Home Office, in addition to the spaces required for the dwelling.																
Hospital	as determined by Council, requiring a Traffic Impact Report.																
Hostel Accommodation	a) one (1) car space per 15m ² of the total sleeping accommodation area, plus one (1) car space for any manager's or caretakers unit. b) where development: ■ is on a site that only has frontage to a road listed below; or ■ the access to the proposed development is to a road listed below; and ■ where the frontage is included in that part of the road listed below. additional visitor car parking shall be provided at a rate of one (1) car parking space for every two (2) visitor car parking spaces required. <table> <thead> <tr> <th>Road</th><th>Part of Road</th></tr> </thead> <tbody> <tr> <td>Aloha Lane</td><td>The whole</td></tr> <tr> <td>Cooinda Avenue</td><td>Northern alignment</td></tr> <tr> <td>Beulah Lane</td><td>The whole</td></tr> <tr> <td>Cronin Avenue</td><td>The whole</td></tr> <tr> <td>Darwalla Avenue</td><td>The whole</td></tr> <tr> <td>Eden Avenue</td><td>Both alignments from Hill Street to Ward Street and from Ward Street to and including BUP 5455 (Lot RP 1881138), and to and including Lot 6 RP154810</td></tr> <tr> <td>Fenton Place</td><td>The whole</td></tr> </tbody> </table>	Road	Part of Road	Aloha Lane	The whole	Cooinda Avenue	Northern alignment	Beulah Lane	The whole	Cronin Avenue	The whole	Darwalla Avenue	The whole	Eden Avenue	Both alignments from Hill Street to Ward Street and from Ward Street to and including BUP 5455 (Lot RP 1881138), and to and including Lot 6 RP154810	Fenton Place	The whole
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Material Change of Use	Minimum Number of Car Parking Spaces to be Provided
Hostel Accommodation (cont.)	Garfield Terrace The whole Hedges Avenue The whole Jefferson Lane North of Third Avenue Lennie Avenue The whole Little Norman Street The whole Montgomery Avenue The whole Mountbatten Avenue The whole Northcliffe Terrace The whole Nagel Avenue Western alignment from including Lot 12 RP 46948 to and including Lot 1 RP 46948 O'Connor Street Western alignment from Wybera Street to and including Lot 26 RP 49999 Owens Lane The whole Pacific Parade The whole Park Lane The whole Peak Avenue The whole Schuster Avenue The whole Sunshine Court The whole Swan Lane The whole
Indoor Recreation Facility: a) squash court or any other court game b) meeting place, public hall c) pinball parlour, amusement arcade d) theatre, cinema e) licensed club f) skating rink or swimming pool g) gymnasium h) public library, public lecture hall, art gallery, museum, any other indoor recreation	a) 4 spaces per court; b) 10 spaces per 100m ² of GFA (one (1) space per 10m ² of GFA); c) 5 spaces per 100m ² of GFA (one (1) space per 20m ² of GFA); d) as determined by Council, requiring Traffic Impact Report; e) 6 spaces per 100m ² of GFA (one (1) space per 17m ² of GFA), additional parking for gaming machines at the rate of one (1) space per 3 gaming machines; f) 15 spaces, plus one (1) space per 100m ² of GFA; g) 10 spaces per 100m ² of GFA; h) as determined by Council or its delegate.
Industry	2.5 spaces per 100m ² of GFA (one (1) space per 40 m ² of GFA)
Integrated Housing	2 spaces per dwelling, of which one (1) must be covered, plus 0.5 spaces per dwelling visitor parking, distributed throughout the site in accessible locations.
Kennel	one (1) space per employee, with a minimum of two spaces plus one (1) visitor parking space.
Laundromat	5 spaces per 100m ² of GFA (one (1) space per 20m ² of GFA).
Manufacturers Shop	a) 6.7 spaces per 100m ² of area used for retail (one (1) space per 15m ² of area used for retail); b) 2.5 spaces per 100m ² of area used for manufacturing (one (1) space per 40m ² of area used for industry).
Marina	a) 0.6 spaces for each wet berth designed for boats ten metres and under; b) 0.8 spaces for each wet berth designed for boats between ten metres and 15 metres; c) one (1) space for each wet berth designed for boats greater than 15 metres; d) 0.2 spaces for each dry berth or swing mooring; plus e) 0.5 spaces for each employee; f) one (1) space per 50m ² of GFA of ancillary activities associated with the marina; g) one (1) space for each wet berth designed for boats greater than 15 metres.



Material Change of Use	Minimum Number of Car Parking Spaces to be Provided																																																		
Marina Shop	6.7 spaces per 100m ² of GFA (one (1) space per 15m ² of GFA).																																																		
Market	as determined by Council, requiring Traffic Impact Report.																																																		
Medical Centre	5 spaces per 100m ² of GFA (one (1) space per 20m ² of GFA).																																																		
Mini-Storage Warehousing	a) one (1) space per ten (10) storage sheds; plus b) one (1) space per 30m ² GFA administration office area; plus c) a minimum traffic circulation aisle width of 6.5 metres.																																																		
Minor Tourist Facility	as determined by Council, requiring Traffic Impact Report.																																																		
Motel	a) one (1) space per room, plus one (1) space for the manager's residence. b) where a restaurant is included, 0.15 spaces per seat or 3.5 spaces per 100m ² of the restaurant GFA, whichever is the greater. c) where development: ■ is on a site that only has frontage to a road listed below; or ■ the access to the proposed development is to a road listed below; and ■ where the frontage is included in that part of the road listed below. additional visitor car parking shall be provided at a rate of one (1) car parking space for every two (2) visitor car parking spaces required. <table border="1"> <thead> <tr> <th>Road</th><th>Part of Road</th></tr> </thead> <tbody> <tr><td>Aloha Lane</td><td>The whole</td></tr> <tr><td>Cooinda Avenue</td><td>Northern alignment</td></tr> <tr><td>Beulah Lane</td><td>The whole</td></tr> <tr><td>Cronin Avenue</td><td>The whole</td></tr> <tr><td>Darwalla Avenue</td><td>The whole</td></tr> <tr><td>Eden Avenue</td><td>Both alignments from Hill Street to Ward Street and from Ward Street to and including BUP 5455 (Lot RP 1881138), and to and including Lot 6 RP154810</td></tr> <tr><td>Fenton Place</td><td>The whole</td></tr> <tr><td>Garfield Terrace</td><td>The whole</td></tr> <tr><td>Hedges Avenue</td><td>The whole</td></tr> <tr><td>Jefferson Lane</td><td>North of Third Avenue</td></tr> <tr><td>Lennie Avenue</td><td>The whole</td></tr> <tr><td>Little Norman Street</td><td>The whole</td></tr> <tr><td>Montgomery Avenue</td><td>The whole</td></tr> <tr><td>Mountbatten Avenue</td><td>The whole</td></tr> <tr><td>Northcliffe Terrace</td><td>The whole</td></tr> <tr><td>Nagel Avenue</td><td>Western alignment from including Lot 12 RP 46948 to and including Lot 1 RP 46948</td></tr> <tr><td>O'Connor Street</td><td>Western alignment from Wybera Street to and including Lot 26 RP 49999</td></tr> <tr><td>Owens Lane</td><td>The whole</td></tr> <tr><td>Pacific Parade</td><td>The whole</td></tr> <tr><td>Park Lane</td><td>The whole</td></tr> <tr><td>Peak Avenue</td><td>The whole</td></tr> <tr><td>Schuster Avenue</td><td>The whole</td></tr> <tr><td>Sunshine Court</td><td>The whole</td></tr> <tr><td>Swan Lane</td><td>The whole</td></tr> </tbody> </table>	Road	Part of Road	Aloha Lane	The whole	Cooinda Avenue	Northern alignment	Beulah Lane	The whole	Cronin Avenue	The whole	Darwalla Avenue	The whole	Eden Avenue	Both alignments from Hill Street to Ward Street and from Ward Street to and including BUP 5455 (Lot RP 1881138), and to and including Lot 6 RP154810	Fenton Place	The whole	Garfield Terrace	The whole	Hedges Avenue	The whole	Jefferson Lane	North of Third Avenue	Lennie Avenue	The whole	Little Norman Street	The whole	Montgomery Avenue	The whole	Mountbatten Avenue	The whole	Northcliffe Terrace	The whole	Nagel Avenue	Western alignment from including Lot 12 RP 46948 to and including Lot 1 RP 46948	O'Connor Street	Western alignment from Wybera Street to and including Lot 26 RP 49999	Owens Lane	The whole	Pacific Parade	The whole	Park Lane	The whole	Peak Avenue	The whole	Schuster Avenue	The whole	Sunshine Court	The whole	Swan Lane	The whole
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Motor Vehicle Workshop	6.7 spaces per 100m ² of GFA (one(1) space per 15m ² of GFA).																																																		
Night Club	6 spaces per 100m ² of GFA (one (1)space per 17m ² of GFA).																																																		
Office	3 spaces per 100m ² of GFA (one (1) space per 33m ² of GFA).																																																		

Material Change of Use	Minimum Number of Car Parking Spaces to be Provided																																																		
Outdoor Sport and Recreation: a) tennis court or other court game (where not ancillary to other development) b) lawn bowls c) skating rinks, swimming pools d) golf course e) racecourse f) sporting arena g) clubhouse	a) 4 spaces per court; b) 20 spaces per green; c) 15 spaces, plus one (1) space per 100m ² of Total Use Area; d) the greater of: ■ 4 spaces per hole, plus 3 spaces per 100m ² of GFA of club house area; or ■ 6 spaces per 100m ² of GFA of club house area; e) as determined by Council, requiring Traffic Impact Report; f) as determined by Council, requiring Traffic Impact Report; g) 6 spaces per 100m ² of GFA (one (1) space per 17m ² of GFA).																																																		
Place of Worship	10 spaces per 100m ² of GFA (one (1) space per 10m ² of GFA).																																																		
Reception Room	6 spaces per 100m ² of GFA (one (1) space per 17m ² of GFA).																																																		
Relocatable Home Park	one (1) space per Relocatable Home plus visitor parking of one (1) space per 5 dwellings.																																																		
Residential Hotel	a) one (1) space per residential unit plus 10 spaces per 100m ² of GFA lounge, bar and beer garden area; plus b) 10 spaces per 100m ² of GFA retail floor area for liquor barns or bulk liquor sales; plus c) a reservoir space for 12 cars for a drive-in bottle shop.																																																		
Resort Hotel	a) one (1) space for each guest room or suite, for the first 75 guest rooms or suites, plus 0.1 space for each additional guest room or suite. b) where the development includes commercial facilities that are available for use by the general public, car parking for such facilities shall be provided at 75% of the standard requirements of this table. c) where development: ■ is on a site that only has frontage to a road listed below; or ■ the access to the proposed development is to a road listed below; and ■ where the frontage is included in that part of the road listed below; additional visitor car parking shall be provided at a rate of one (1) car parking space for every two (2) visitor car parking spaces required. <table> <thead> <tr> <th>Road</th><th>Part of Road</th></tr> </thead> <tbody> <tr><td>Aloha Lane</td><td>The whole</td></tr> <tr><td>Cooinda Avenue</td><td>Northern alignment</td></tr> <tr><td>Beulah Lane</td><td>The whole</td></tr> <tr><td>Cronin Avenue</td><td>The whole</td></tr> <tr><td>Darwalla Avenue</td><td>The whole</td></tr> <tr><td>Eden Avenue</td><td>Both alignments from Hill Street to Ward Street and from Ward Street to and including BUP 5455 (Lot RP 1881138), and to and including Lot 6 RP154810</td></tr> <tr><td>Fenton Place</td><td>The whole</td></tr> <tr><td>Garfield Terrace</td><td>The whole</td></tr> <tr><td>Hedges Avenue</td><td>The whole</td></tr> <tr><td>Jefferson Lane</td><td>North of Third Avenue</td></tr> <tr><td>Lennie Avenue</td><td>The whole</td></tr> <tr><td>Little Norman Street</td><td>The whole</td></tr> <tr><td>Montgomery Avenue</td><td>The whole</td></tr> <tr><td>Mountbatten Avenue</td><td>The whole</td></tr> <tr><td>Northcliffe Terrace</td><td>The whole</td></tr> <tr><td>Nagel Avenue</td><td>Western alignment from including Lot 12 RP 46948 to and including Lot 1 RP 46948</td></tr> <tr><td>O'Connor Street</td><td>Western alignment from Wybera Street to and including Lot 26 RP 49999</td></tr> <tr><td>Owens Lane</td><td>The whole</td></tr> <tr><td>Pacific Parade</td><td>The whole</td></tr> <tr><td>Park Lane</td><td>The whole</td></tr> <tr><td>Peak Avenue</td><td>The whole</td></tr> <tr><td>Schuster Avenue</td><td>The whole</td></tr> <tr><td>Sunshine Court</td><td>The whole</td></tr> <tr><td>Swan Lane</td><td>The whole</td></tr> </tbody> </table>	Road	Part of Road	Aloha Lane	The whole	Cooinda Avenue	Northern alignment	Beulah Lane	The whole	Cronin Avenue	The whole	Darwalla Avenue	The whole	Eden Avenue	Both alignments from Hill Street to Ward Street and from Ward Street to and including BUP 5455 (Lot RP 1881138), and to and including Lot 6 RP154810	Fenton Place	The whole	Garfield Terrace	The whole	Hedges Avenue	The whole	Jefferson Lane	North of Third Avenue	Lennie Avenue	The whole	Little Norman Street	The whole	Montgomery Avenue	The whole	Mountbatten Avenue	The whole	Northcliffe Terrace	The whole	Nagel Avenue	Western alignment from including Lot 12 RP 46948 to and including Lot 1 RP 46948	O'Connor Street	Western alignment from Wybera Street to and including Lot 26 RP 49999	Owens Lane	The whole	Pacific Parade	The whole	Park Lane	The whole	Peak Avenue	The whole	Schuster Avenue	The whole	Sunshine Court	The whole	Swan Lane	The whole
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Material Change of Use	Minimum Number of Car Parking Spaces to be Provided
Restricted Club	6 spaces per 100m ² of GFA (one (1) space per 17m ² of GFA).
Restaurant	6.7 spaces per 100m ² of GFA (including any outdoor dining areas) (one (1) space per 15 m ² of GFA).
Retail Plant Nursery	10 spaces, plus one (1) space per 100m ² of Total Use Area in excess of 3,000 metres.
Rural Industry	one (1) space for each employee who does not reside on-site, plus one (1) visitor parking space.
Salvage Yard	0.7 space per 100m ² of Total Use Area, with a minimum of five spaces.
Serviced Apartment	a) one (1) space per apartment, plus 0.25 per apartment for visitor parking, where parking is contained in a single parking garage and spaces are not dedicated to particular units; OR b) one (1) space per one (1) bedroom apartment and 2 spaces per 2 bedroom and larger apartments, where spaces are dedicated to each apartment, plus 0.25 visitor spaces per apartment.
Service Industry	2.5 spaces per 100m ² of GFA (one (1) space per 40m ² of GFA).
Service Station	a) 2 spaces, plus 5 spaces per service bay; plus b) 4 spaces per 100m² of GFA of shop sales area of less than 150m²; plus c) 5 spaces per 100m² of GFA of shop sales area exceeding 150m²; plus d) 10 spaces per 100m² of GFA of restaurant or café, or 0.4 spaces per seat, whichever is the greater.
Shop	6.7 spaces per 100m ² of GFA (one (1) space per 15m ² of GFA).
Shopping Centre Development: a) 0 – 10,000m ² of EGFA b) 10,000 – 20,000m ² of EGFA c) 20,000 – 30,000m ² of EGFA d) > 30,000m ² of EGFA	a) 7 spaces per 100m² of EGFA (one (1) space per 15m² of EGFA); b) 6.5 spaces per 100m² of EGFA (one (1) space per 16m² of EGFA); c) 5 spaces per 100m² of EGFA (one (1) space per 20m² of EGFA); d) 4.5 spaces per 100m² of EGFA (one (1) space per 23m² of EGFA).
Showroom	2 spaces per 100m ² of GFA (one (1) space per 50m ² of GFA).
Special Accommodation	2 spaces.
Stall	4 spaces.
Storage	a) one (1) space per ten (10) storage sheds; plus b) one (1) space per 30m² GFA administration office area; plus c) a minimum traffic circulation aisle width of 6.5 metres.
Take-Away Food Premises	6.7 spaces per 100m ² of GFA (one (1) space per 15m ² of GFA).
Tavern	a) 10 spaces per 100m² of GFA lounge, bar and beer garden area,(excluding 'staff only' areas); plus b) 10 spaces per 100m² of GFA retail floor area for liquor barns or bulk liquor sales; plus c) a reservoir space for 12 cars for a drive in bottle shop; d) additional parking for gaming machines, at the rate of one (1) space per 3 gaming machines.
Theme Park	at the rate of (number of 'design day' visitors x 0.2347) + 87, where the design day corresponds to the existing 85 percentile day, subject to confirmation of this approach from Council's Manager of Transport Planning.
Tourist Cabins	as determined by Council, requiring Traffic Impact Report.



Material Change of Use	Minimum Number of Car Parking Spaces to be Provided
Tourist Facility	as determined by Council, requiring Traffic Impact Report.
Tourist Shop	5 spaces per 100m ² of GFA (one (1) space per 20m ² of GFA).
Transit Centre	as determined by Council, requiring Traffic Impact Report.
Transport Terminal	as determined by Council, requiring Traffic Impact Report.
Vehicle Hire Office	one (1) car space per employee, or one (1) car space per 30m ² , whichever is the greater.
Vehicle Hire Premises	one (1) car space per employee, or one (1) car space per 30m ² , whichever is the greater, plus a minimum of one (1) on-site wash bay, plus a minimum of one(1) car space per every 1.5 vehicles (or part thereof) in the hire vehicle fleet, provided that such spaces may be located in tandem.
Vehicle Sales Premises	3.3 spaces per 100m ² of GFA plus 0.5 spaces per 100m ² of display area.
Veterinary Clinic or Veterinary Hospital	3 spaces per practitioner.
Warehouse	2 spaces per tenancy or lot plus one (1) space per 50m ² of GFA up to 500m ² plus one (1) space per 100m ² of GFA over 500m ² .
Waterfront (or Marine) Industry	2 spaces per 100m ² of GFA (one (1) space per 50m ² of GFA).
Any Other Use	as determined by Council, requiring a Car Parking Assessment Report.

Table to Acceptable Solution AS21.1

-
- a) Educational Establishment
 - b) International Hotel
 - c) Resort Hotel
 - d) Transit Centre
 - e) Shopping Centre Development (more than 4,000m² of EGFA retail floor space)
 - f) Public Events
 - g) Spectator Sports
 - h) Convention Centre
-

Table to Acceptable Solution AS22.1

-
- a) Apartment Buildings with more than 60 units
 - b) Townhouse Complexes with more than 60 units
 - c) Active Recreation Facility
 - d) Bulky Goods Retailers (more than 2,000m² of GFA retail floor space)
 - e) Hospitals
 - f) Community Centres
 - g) Entertainment Venues
 - h) Aged Persons Accommodation
-



4.0 Car Parking Assessment Report

Where this Planning Scheme gives no specific car parking provision for a particular use or development, Council may require the submission of a Car Parking Assessment Report to support an application for development assessment. The following details must be included in such a report:

- a) the specific nature of the development to be undertaken and the method of operation and all facilities proposed to be provided;
- b) the maximum number of employees likely to be engaged on the premises;
- c) the maximum number of persons, other than employees, anticipated to attend the premises at any time;
- d) the hours of operation of the development;
- e) the location of the site and the nature of existing and likely development in the vicinity of the site;
- f) the existing on-road parking situation and operating conditions of the road in the vicinity of the site;
- g) the anticipated demand for on-site loading by trucks and other delivery vehicles;
- h) the anticipated demand for bus, coach and taxi set down and parking;
- i) the likely use of other modes of transport or pedestrian access, and the frequency and proximity of existing public transport services;
- j) the assignment of development generated traffic to the road network, and prediction of operating conditions within and without the proposed development for the appropriate design years; and
- k) any other relevant information requested by Council or its delegate.

Council will form a view on the appropriate minimum number of car parking spaces and other facilities to be provided for the new development, based on the above information and any other relevant matter.

5.0 Reduction of the Minimum Number of Car Parking Spaces to be Provided

The minimum number of car spaces to be provided may be reduced where the applicant can satisfy Council, or its delegate, that less provision is justified, having regard to any one or more of the following:

- a) the extent to which the development is serviced by public transport;
- b) the proposed development is located within a Public Transport Precinct, as shown on **Planning Strategy Map PS8 – Public Transport System**;
- c) the car spaces that are available on nearby land and suitable roads;
- d) any new car spaces that can be provided by the applicant on nearby land;
- e) the existing development on the site;
- f) the overall pedestrian accessibility of the site;
- g) the intensity of the use of the land;
- h) the proposed hours of operation of the development or use;
- i) any Council traffic management or parking scheme for the area;
- j) the effect of any additional traffic generated by the lack of parking spaces;
- k) the mix of land uses on the site or nearby (for example, whether the site is included within an identified Activity Centre);
- l) the car parking area is directly connected to the parking area of an adjoining development;
- m) the parking spaces are to be individually allocated to tenancies or consolidated into a common area available to all tenants and to visitors; and
- n) the provision of cyclist facilities, including showers and lockers and additional secure bicycle parking.



6.0 Traffic Impact Report

The Traffic Impact Report shall contain the following information:

- a) the maximum number of employees to be engaged on the premises;
- b) the maximum number of persons, other than employees, anticipated to attend the premises at any time;
- c) the hours of operation of the development;
- d) the location of the site and the nature of existing and proposed buildings;
- e) likely development in the vicinity of the site;
- f) the existing on-road parking situation in the vicinity of the site;
- g) the existing operating conditions of the roads in the vicinity of the site;
- h) the position and nature of vehicular access to the site and the need for any changes to existing roads infrastructure;
- i) the expected demand for site access loading by trucks and other delivery vehicles;
- j) the anticipated demand for bus, coach and taxi set down and parking;
- k) the likely use of other modes of transport;
- l) the frequency and proximity of existing or proposed public transport services;
- m) assignment of development generated traffic to the road network, and prediction of operating conditions within and without the proposed development for the appropriate design years (generally a ten year horizon from the time of opening of the proposed development); and
- n) any other relevant information requested by Council, or its delegate.

Council may request electronic outputs for perusal, where traffic analysis computer packages have been used in the determination of impacts.

7.0 Future Road Requirement Information

With reference to Future Road Requirement information on Domain Maps:

- Future Road Requirement lines indicate, a line which shall be deemed to be the frontage of a site solely for the purposes of determining building setbacks and the distribution and development of landscaping open space.
- Where sites are influenced by more than one Future Road Requirement line, for example a site has more than one road frontage, reference should be made to all Future Road Requirement line maps which effect the site.
- Where sites are influenced by a Future Road Requirement line or more than one Future Road Requirement line, the road has been identified as being either a road under the Main Roads jurisdiction or a road under the Gold Coast City Council jurisdiction. This is indicated by the reference term in the brackets.
- Future Road Requirement lines shown on these maps that relate to State-controlled roads are indicative only and are subject to survey and detailed design.



Part 7 Codes

Division 2 Specific Development Codes

Chapter 11 Changes to Ground Level and Creation of New Waterbodies

1.0 Purpose

This code seeks to ensure that changes to existing ground levels, including the creation of new waterbodies, do not adversely affect other properties or the general amenity of the locality in which the works are occurring. Ground level changes must be geotechnically and ecologically sound and, where a flood affected site is proposed to be developed, adequate measures will be taken to ensure that the development achieves no increase in risk of flood damage to life or to property for existing and proposed residential dwellings. The code also seeks to prevent any increase in runoff that might occur from development that would increase the rate of runoff or the magnitude of the flood volume that would run off during a flood emergency.

Best land management development practices, consistent with the principles of ecologically sustainable development, shall be employed.

This code also seeks to regulate development of land containing potential and actual acid sulfate soils so as to minimise the potential for environmental harm that may arise as a result of disturbances to these soils. In turn, this will minimise short and long term damage to corrodible infrastructure and natural ecosystems.

2.0 Application

- 2.1 This code applies to development indicated as code or impact assessable in the Table of Development in the domain or Local Area Plan (LAP) within which the development is proposed.
- 2.2 The provisions of this code apply to the life of any development, as well as to the construction period of the development. All information required to support an application, including engineering analyses, calculations, reports and drawings, shall be in accordance with **Planning Scheme Policy 11 – Land Development Guidelines**.
- 2.3 Performance Criteria PC1-PC20 apply to all code and impact assessable development subject to this code.

3.0 Development Provisions

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Development that is Code Assessable or Impact Assessable			
Acid Sulfate Soils			
PC1 Development on land containing acid sulfate soils must not result in environmental harm or damage.	AS1.1.1 The land is at or below AHD 5 and is assessed for acid sulfate soil, in accordance with Planning Scheme Policy 14 – Management of Activities Located Within Areas of Acid Sulfate Soils .	AS1.1.1 – COMPLIES The proposed development is subject to Condition 12 of the Preliminary Approval that has approved an Acid Sulfate Management Plan.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	AS1.1.2 The land is at or below AHD 20 and excavation is proposed to levels below AHD 5 and the development is assessed for acid sulfate soil, in accordance with Planning Scheme Policy 14 – Management of Activities Located Within Areas of Acid Sulfate Soils.	AS1.1.2 – COMPLIES The proposed development is subject to Condition 12 of the Preliminary Approval that has approved an Acid Sulfate Management Plan.	
Stormwater Drainage Considerations			
PC2 Development must not cause adverse stormwater drainage impacts on areas external and internal to the site.	AS2.1 The change to ground level maintains flood storage volume over the site for the 20 year ARI storm event. AS2.2 The change in ground level does not involve filling below Q100. AS2.3 The change in ground level does not impound or divert rainfall runoff.	NOT APPLICABLE Flood overlay mapping does not impact the subject site.	
Geotechnical Site Requirements			
PC3 All earthworks must be carried out in a location which is not at risk from: a) geotechnical instability at a nearby location; or b) geotechnical instability on the subject site.	AS3.1 The site is: a) located in areas free of compressible soils; b) designated as having very low to low slope instability. AS3.2 The site is not identified on Overlay Map OM16 – Areas of Unstable Soils and Areas of Potential Land Slip Hazard as an area with moderate, high and very high risk of instability.	AS3.1 – COMPLIES No earthworks are to be carried out on areas of geotechnical instability land. AS3.2 – NOT APPLICABLE Subject land is not identified on overlay map OM16.	
PC4 All earthworks must be geotechnically stable, and must not decrease the geotechnical	AS4 The earthworks are undertaken in a manner which:	PC4 – COMPLIES All earthworks are subject to detail civil design and geotechnical stability engineering.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
stability of the subject or adjacent sites.	a) involves a maximum cut and/or fill of less than 1 metre in height; b) involves batters no steeper than one in two.		
Local Amenity, Noise and Emissions			
PC5 All activities carried out for or associated with changes to ground level must be conducted in a manner which ensures minimal disturbance to the amenity of the built environment.	AS5.1 The development involves work which has the potential to generate dust, and the following control measures are implemented: a) daily water spraying of exposed areas; b) provision of sealed roads; c) protective covering of exposed areas; d) the installation of wind barriers. AS5.2 All earthworks on the property are undertaken only during the hours of 6am to 6pm, Monday to Friday, and 7am to 6pm on Saturday. No work is undertaken on Sunday.	AS5.1 – WILL COMPLY The proposed development will ensure that the proposed change to ground level works will be conducted so as not to impact or effect the amenity of the surrounding area. AS5.2 – WILL COMPLY All works will be conducted between the hours of 6am to 6pm, Monday to Friday, and 7am to 6pm on Saturday. No work is undertaken on Sunday.	
PC6 All work associated with any development must not create a negative impact upon the amenity of surrounding properties.	AS6.1 The cut and/or fill is retained, and the retaining wall is set back from any boundary at least one quarter of its height, with a minimum distance of 300mm, and: a) the site is located within a residential domain or adjacent to a site in a residential domain, and the retaining wall is stepped 1.5 metres for every 1.5 metres in height, and the terraces are landscaped; or b) the site is located within a non-residential domain, and the retaining wall is stepped 1.5 metres for every three metres in height, and the terraces are landscaped. AS6.2 The cut and/or fill is not retained, and the toe of any batter is no closer than 300mm from a boundary, and:	AS6.1 – COMPLIES Proposed earthworks will be in accordance with the Bulk Earthworks plans and Statement of Landscape Intent Plans. AS6.2 – COMPLIES Proposed earthworks will be in accordance with the Bulk Earthworks plans and Statement of Landscape Intent Plans.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	a) the site is located within a residential domain or adjacent to a site in a residential domain, and batters along boundaries are no steeper than one in four and landscaped; or b) the site is located within a non-residential domain, and batters along boundaries are no steeper than 1 in 2 and landscaped.		
Managing Contamination Risk			
PC7 Any filling or excavation must not result in the contamination of land.	AS7 The fill material is solid clean earth or clean inert material, free of organic, putrescible or refuse matter.	AS7 – WILL COMPLY All filling will be solid clean earth material.	
Geotechnical Fill Considerations			
PC8 Any materials used as fill must be able to adequately support future development of the land.	AS8 The proposed type, composition and source of fill material is geotechnically suitable, and is adequately compacted to support future development, in accordance with the requirements of Planning Scheme Policy 11 – Land Development Guidelines.	AS89 – WILL COMPLY All proposed fill material will be geotechnically suitable, and adequately compacted (98% based on industrial land designation) to support future development, in accordance with the requirements of the Land Development Guidelines.	
Hydraulic Considerations			
PC9 Any change to the level of the land must not have an adverse flooding impact on the flooding and drainage characteristics of external sites and/or premises.	AS9 As demonstrated by a hydraulic report prepared in accordance with Council's Hydraulic Report Requirements, the filling or excavation does not: a) cause ponding on the site or nearby land; b) increase flooding which adversely affects the safety or use of any land upstream and downstream; c) adversely affect the flow of water in any overland flow path; or otherwise d) contravene the intent of Constraint Code 8 - Flood Affected Areas.	AS9 – COMPLIES A Stormwater Management Plan has been prepared so there is no worsening effect to adjoining or surrounding lands.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
PC10 Development upstream of areas with over floor flooding shall not increase the contribution of floodwater from the catchment. Over floor flooding occurs adjacent to: a) Currumbin Creek, downstream of weir near Stackpole Street; b) Tallebudgera Creek, downstream of Benardon Court; c) Mudgeeraba Creek, downstream of Berrigans Road; d) Nerang River, east of the Pacific Motorway; e) Coomera River, east of the Oxenford - Tamborine Road; f) Coombabah Creek, downstream of the Pacific Highway; g) Saltwater Creek, downstream of its crossing by Kopps Road.	AS10.1 Flood storage detention facilities are provided, where possible, on public land, of sufficient capacity to retain runoff such that the total peak runoff rate and volume released during the flood is not greater than would have been the case prior to development. AS10.2 A certified hydraulic study (and, if necessary, a hydrologic study) is prepared by a suitably qualified and experienced engineer to investigate the characteristics of both the undeveloped and developed site, and determines to the satisfaction of the Assessment Manager that a detention storage is not required, and a contribution is made by the developer to a Council sponsored community flood detention facility.	AS10.1 – COMPLIES Please refer to the submitted SWMP and change to ground level plans for details AS10.2 – NOT REQUIRED	
PC11 All development must ensure that there is no impact to local drainage regimes, such that no real damage is caused to any properties upstream or downstream of the site.	AS11 Stormwater drainage is provided in accordance with Planning Scheme Policy 11 – Land Development Guidelines.	AS11 – COMPLIES A SWMP has been prepared so there is no worsening effect to adjoining or surrounding land.	
Haulage Activity and Amenity			
PC12 All activities carried out for or associated with changes to ground level, including haulage activity, must be conducted in a manner which ensures minimal disturbance to the amenity of the built environment.	AS12.1 The development involves the transportation of fill material to and/or from the site, and the following measures are taken: a) loads are covered; b) spilled or wheel tracked material is immediately cleaned up from external roads; and c) heavy vehicle traffic is controlled. AS12.2 All waste material, including vegetation, is transported from the site and disposed of in an approved location.	AS12.1 – WILL COMPLY The proposed development will undertake measures to ensure the transportation of fill material to and/or from the site does not impact on the surrounding environment. AS12.2 – WILL COMPLY All waste will be transported to an appropriate landfill site. AS12.3 – WILL COMPLY	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	AS12.3 All haulage routes are approved by the Department of Transport for declared main roads, and by Council for all other roads. AS12.4 All haulage to and from the site is to be undertaken only during the hours of 6am to 6pm Monday to Friday and 7am to 6pm on Saturdays.	Transportation activities associated with the change to ground level will comply with the state and Local Government requirements. AS12.4 – WILL COMPLY All haulage to and from the site will be carried out during the hours of 6am to 6pm Monday to Friday and 7am to 6pm on Saturdays.	
Treatment of Fill and Retaining Walls			
PC13 All work associated with any development must not create a negative impact upon the amenity of surrounding properties.	AS13.1 Filling material is placed on the development site and is maintained within the subject property, unless alternative arrangements are agreed by the affected neighbouring property owner. AS13.2 Any retaining walls which present to the street or adjoining land, have a finish that is compatible with surrounding development.	AS13.1 – WILL COMPLY All materials to be maintained on the subject site. AS13.2 – NOT APPLICABLE No retaining walls are proposed.	
Water Quality			
PC14 Development must not have an adverse impact upon the City's ground water, waterways and wetlands.	AS14 Sediment and erosion control measures are implemented with the filling/excavation work.	AS14 – COMPLIES A sediment and erosion control plan forms part of the bulk earthworks plans.	
PC15 The natural hydrological regimes of the site, including natural water quality, quantity and groundwater conditions, must be maintained and enhanced.	AS15.1 Sediment and erosion control measures are implemented with the filling/excavation work, in accordance with an approved Erosion and Sedimentation Control Program. AS15.2 The methods of stormwater run-off control and the design of the stormwater system does not create a point source discharge to	AS15.1 – COMPLIES A sediment and erosion control plan forms part of the bulk earthworks plans. AS15.2 – COMPLIES A SWMP has been prepared. AS15.3- COMPLIES	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	waterbodies. AS15.3 A Stormwater Management Intent is prepared for the site which demonstrates that: a) stormwater is treated prior to discharge into any waterways; b) the velocity and quality of stormwater to be discharged into the waterways does not degrade the environmental values of the adjoining site.	A SWMP has been prepared.	

Finished Surface Levels

PC16 All development must have a finished surface level which is free draining and free from flooding.	AS16.1.1 The development is free draining and the surface gradient of the fill and/or excavated area is within the range 0.5% to 1.5%. OR AS16.1.2 The development includes steep surface gradients, which achieve integration with the surrounding topography, and the finished profile does not interrupt or materially change the surface water drainage, from or onto adjoining land.	AS161.1- COMPLIES Earthworks are designed as free draining towards the proposed new roads at a minimum 1:150 grade. AS16.2 – COMPLIES Please refer to the submitted change to ground level drawings which demonstrate compliance	
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Construction of New Waterbodies

PC17 The new waterbodies must be suitable for their intended uses, and must maintain and enhance the water quality of existing waterbodies connecting to them.	AS17.1 A Water Quality Management Plan, which is prepared by a competent person, demonstrates that: a) the water quality of the new waterbodies is of the same or higher standard as the existing water quality; b) long term maintenance of the desired water quality is achieved; c) breeding potential of biting insects is minimised. AS17.2 The water body does not have deep, isolated	AS17.1 to AS17.4 – NOT APPLICABLE No waterbodies are proposed as part of this application.	
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Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	holes that stratify and increase the possibility of algal blooms occurring, if that stratification breaks down. AS17.3 Pumping for the purposes of maintaining water quality is avoided. AS17.4 The water body is designed with a suitable outlet to ensure that flushing, if required, is possible.		
PC18 Operational work must not cause geotechnical bank instability, erosion, bed scour or revetment wall collapse to adjacent waterbodies or to newly constructed waterbodies.	AS18 Edge treatment to the embankments of the waterbodies is in place during and after construction, in a manner certified by a competent person.	AS18– NOT APPLICABLE No waterbodies are proposed as part of this application.	
PC19 New waterbodies to be transferred to public ownership must have regard to public safety.	AS19 The water body includes: a) warning signs; b) fencing of areas where access is restricted, such as steep sided embankments or large drops.	AS19– NOT APPLICABLE No waterbodies are proposed as part of this application.	
Access to New Waterbodies			
PC20 Development incorporating new waterbodies must be designed to provide suitable access for maintenance of revetment walls and cleaning of the water body, including the removal of rubbish, reeds and surplus aquatic flora.	AS20 Access is provided to the owner/s of the waterbodies, by: a) dedication of land to the Crown, for this purpose; or b) existing access arrangements.	AS20– NOT APPLICABLE No waterbodies are proposed as part of this application.	



Part 7 Codes

Division 3 Constraint Codes

Chapter 14 Sediment and Erosion Control

1.0 Purpose

This code seeks to minimise environmental harm caused by the effects of erosion and sedimentation, associated with the development of land. This code also seeks to ensure that ecologically sustainable management practices are undertaken during and following the development of land by:

- requiring the conservation of existing vegetation, including ground cover, on the land or, if cleaning is essential, replanting of vegetation and grass;
- ensuring that soil and other debris (whether transported by water or wind) do not leave the development site;
- minimising water flow paths and water volumes which traverse development sites, and avoiding where possible sediments leaving the site;
- ensuring the prompt and effective stabilisation and restoration of disturbed lands;
- requiring, when appropriate, an Erosion and Sedimentation Control Program;
- minimising the area and exposure time of disturbed land;
- minimising stormwater runoff events from disturbed areas;
- requiring the monitoring of impacts on receiving water bodies, as a measure of the effectiveness of the control devices.

2.0 Application

- 2.1 This code applies to development that is indicated as code or impact assessable by the Table of Development of the domain or Local Area Plan (LAP) within which the development is proposed.
- 2.2 Performance Criteria PC1-PC3 apply to all development referred to in this code.

3.0 Development Requirements

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Development that is Code Assessable or Impact Assessable			
Erosion Risk			
PC1 All development must not cause erosion or allow sediments to leave the site.	AS1 An Erosion and Sedimentation Hazard Assessment has been undertaken in accordance with the criteria listed in Table 14-1 – Erosion Hazard Assessment Form , and the total score does not exceed 11 points.	AS1 – COMPLIES A sediment and erosion control plan has been provided as part of bulk earthworks drawings.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Erosion Control			
PC2 All development must not cause erosion or allow sediments to leave the site.	AS2 An Erosion and Sedimentation Control Program has been prepared by a competent person, in accordance with Soil Erosion and Sediment Control Engineering Guidelines for Queensland Construction Sites, and demonstrates that: a) the environmental effects of sedimentation and erosion are controlled by best practice management measures; b) sediments resulting from the development are contained within the site; and c) development adjacent to the bank or the bed of a stream or watercourse, addresses environmental impact on waterbodies.	AS2 – COMPLIES A sediment and erosion control plan has been provided as part of bulk earthworks drawings.	
Upslope Runoff			
PC3 All up-slope runoff must be diverted around areas to be disturbed.	AS3.1.1 Catch drains are utilised to divert the upstream runoff to a legal point of discharge. OR AS3.1.2 Alternative methods are used to divert upstream water from exposed or disturbed land.		

Table 14-1 – Erosion Hazard Assessment Form

Controlling Factors	Points	Score	Checking
Average slope of the whole site, prior to building works:			
▪ Slope < 3%	0		
▪ 3% Slope < 5%	1		
▪ 5% Slope < 10%	2		
▪ 10% Slope < 15%	4		



Controlling Factors	Points	Score	Checking
Slope is greater than 15%	5		
Soil type¹: - Sandy soil/gravel - Sandy loam - Clay loam - Clay soil	0 1 2 2		
Anticipated duration of site disturbance^{2 3}: - Duration < 2 weeks 2 weeks Duration < 3 months 3 months Duration < 6 months - Duration > 6 months	0 2 4 5		
Month that works are undertaken: - August, September - April, May, June, July, November, October - March, December - January, February	0 1 2 3		
Offsite sediment control (ie. down slope of the soil disturbance): Score 1 point if there is no purpose built, operational and well maintained sediment trap (eg. sediment basin, gross pollutant trap or purpose built wetland) to catch sediment before it enters a waterbody with environmental values (eg. creek, natural wetland, river or bay)⁴.	1		
Runoff entering the site: Score 1 point if stormwater runoff entering the site is not diverted away from the soil disturbance.	1		
Extent of site disturbance: - Score 2 points if building work requires reshaping of the ground surface (eg. 'cut and fill' works)⁵; - Score 5 points if the area to be disturbed is greater than 600m²;	2 5		
Works within environmentally sensitive areas: - Score 11 points if the disturbance is within the banks of a watercourse⁸; - Score 5 points if the disturbance is within 50 metres of the top of bank of a watercourse; - Score 2 points if the disturbance is between 50 and 100 metres of the top of bank of a watercourse.	11 5 2		
Total Score^{6 7}			

Notes:



1. *Where there is more than one type of soil on the site, select the category with the highest point value;*
2. *The time from when the building site will first become vulnerable to erosion to the time the soil will be fully stabilised (eg. grassing);*
3. *If this time span covers more than one category, select the category with the highest point value. Note that if there is no grass/vegetation cover on the site before building work has started, the time span starts from the time this form is completed;*
4. *If you are not sure, score 1 point;*
5. *For the purpose of this form, 'cut and fill' works are those that will result in a steep batter or retaining wall above and/or below the building slab, greater than 1 metre in height. If the building slab has already been fully cut and stabilised (eg. grassed) during the subdivision stage, score 0 points;*
6. *For a high risk site, the total score is $\geq$ critical score;*
7. *For a low risk site, the total score is $<$ critical score;*
8. *Watercourse means any clearly identifiable creek, stream or river, whether flowing permanently or intermittently.*



Part 7 Codes

Division 2 Specific Development Codes

Chapter 39 Works for Infrastructure

1.0 Purpose

This code seeks to ensure that all works for infrastructure, including roads, stormwater drainage and the provision of public utilities and services including sewerage reticulation, water supply reticulation, electricity and street lighting, reticulated gas and ancillary works are provided with best management land development practices in accordance with **Planning Scheme Policy 11 – Land Development Guidelines**.

This code also seeks to promote development that is more sustainable. This is to be facilitated through the design and provision of water and sewerage infrastructure to and within allotments that:

- reduces consumption of potable water by implementing measures that enable the sustainable use of recyclable water for non-potable uses;
- is cost effective over its life cycle; and
- minimises the potential for stormwater and ground water to enter the City's wastewater system.

2.0 Application

- 2.1 This code applies to development indicated as code assessable by the Table of Development in the domain or Local Area Plan (LAP), within which the development is proposed.
- 2.2 The provisions of this code apply to the life of any development, as well as to the construction period of the development. All information required to support an application, including engineering analyses, calculations, reports and drawings, shall be in accordance with **Planning Scheme Policy 11 – Land Development Guidelines**.
- 2.3 Performance Criteria PC1-PC11 apply to all code and impact assessable development subject to this code.

3.0 Development Requirements

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Development that is Code Assessable or Impact Assessable			
Road Design and Construction			
PC1 All roads must be designed and constructed to address connectivity, functionality, safety and serviceability of the road network and to ensure a functional road hierarchy.	AS1 The road is designed and constructed in accordance with relevant sections of Planning Scheme Policy 11 – Land Development Guidelines .	AS1.1 – COMPLIES The road network has been designed and will be constructed in accordance with the Land Development Guidelines.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Stormwater Drainage Design and Management			
PC2 Stormwater drainage design and construction must: a) integrate hydrologic and hydraulic elements; b) demonstrate a feasible and functional drainage system; and c) not cause adverse stormwater drainage impacts on areas external and internal to the site.	AS2.1 Stormwater drainage system is designed and constructed in accordance with relevant sections of Planning Scheme Policy 11 – Land Development Guidelines. AS2.2 The stormwater drainage system connects to a legal point of discharge.	AS2.1 – COMPLIES Stormwater management has been designed in accordance with the Land Development Guidelines. AS2.2 – COMPLIES Stormwater will be connected to a lawful point of discharge.	
Street Lighting			
PC3 Street lighting must be provided to enhance safety and amenity of pedestrians and to improve traffic operations at intersections and hazardous locations.	AS3 Street lighting is designed and located in accordance with relevant sections of Planning Scheme Policy 11 – Land Development Guidelines.	AS3 – COMPLIES Street lighting will be designed and located in accordance with the Land Development Guidelines.	
Water Supply Reticulation Design			
PC4 Water supply reticulation must be provided to convey potable water to all properties with adequate quality, pressure and volume of flow for household and fire fighting purposes. (Except properties in the Rural and Conservation Domain).	AS4 Water supply reticulation is designed and constructed in accordance with relevant sections of Planning Scheme Policy 11 – Land Development Guidelines.	AS4 – COMPLIES Water reticulation will be designed and constructed in accordance with Councils Land Development Guidelines.	
Sewerage Reticulation Design			
PC5 Sewerage reticulation must be provided to ensure adequate quality, having regard to health and environmental issues relating to the provision of sewer infrastructure.	AS5 Sewerage reticulation is designed and constructed in accordance with relevant sections of Planning Scheme Policy 11 – Land Development Guidelines.	AS5 – COMPLIES Sewerage reticulation will be designed and constructed in accordance with Councils Land Development Guidelines.	
Open Space Design			
PC6 Open space areas must be designed to an	AS6 Open space areas are designed and	AS6 – NOT APPLICABLE Open space areas are designed to a	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
appropriate standard, having regard to their intended recreational and environmental values	embellished in accordance with relevant sections of Planning Scheme Policy 11 – Land Development Guidelines .	higher standard than Council requirements and will be managed by the future body corporate.	
Off Street Vehicle Parking			
PC7 Car parking areas must be located and designed to encourage their use in preference to on street parking, having regard to relative walking distances and visibility from the road.	AS7 Car parking areas area located and designed in accordance with relevant sections of Planning Scheme Policy 11 – Land Development Guidelines .	AS7 – COMPLIES The road reserves will accommodate on-street car parking with dedicated lanes.	
Driveways			
PC8 Driveways must be designed to ensure convenient access of vehicle to road, including manoeuvring of heavy vehicles and service vehicles.	AS8 Driveways are designed and constructed in accordance with relevant sections of Planning Scheme Policy 11 – Land Development Guidelines .	AS8 – NOT APPLICABLE No driveways are proposed within this subdivision and will be subject to later Council approvals upon final building designs.	
Developer Infrastructure Contributions			
PC9 Infrastructure developer contributions must be provided in accordance with the Priority Infrastructure Plan.	AS9 No Acceptable Solution provided.	AS9 – WILL COMPLY ICN charges will be paid at the appropriate time of development as required.	
PC10 For premises identified on Overlay Map OM25 – Future Water Innovations as being within the Pimpama-Coomera Water Future Master Plan Area, a dual water reticulation system must be provided to enable future conveyance to the development of recycled water for non-potable uses in addition to the conveyance of potable water.	AS10.1 A dual water reticulation system is designed and constructed in accordance with relevant sections of Planning Scheme Policy 11 – Land Development Guidelines . AS10.2 The development is connected to Council's potable water and recycled water supply reticulation systems at any points nominated by Council.	AS10.1 – NOT APPLICABLE No longer a mandatory requirement of Council. AS10.2 – NOT APPLICABLE No longer a mandatory requirement of Council.	
PC11 For premises identified on Overlay Map	AS11 Reduced infiltration gravity sewers are	AS11 – NOT APPLICABLE Subject site not identified on Overlay Map	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
OM25 – Future Water Innovations as being within the Pimpama-Coomera Water Future Master Plan Area, sewerage infrastructure must be designed to minimise inflow and infiltration.	designed and constructed in accordance with the relevant sections of Planning Scheme Policy 11 – Land Development Guidelines .	OM25.	



Part 7 Codes

Division 2 Specific Development Codes

Chapter 21 Landscape Work

1.0 Purpose

To ensure that the planning, design, construction and management of Landscape Work results in high quality landscape outcomes consistent with local character and City image objectives. To ensure that layout and design of soft and hardscape elements, plant selection and construction is based on clear function and character objectives, consistent with Council's technical requirements.

The key objectives of this code are the:

- achievement of Landscape Work that complements and enhances the uses and developments with which it is associated;
- achievement of Landscape Work that is consistent with the identified landscape character of the locality;
- achievement of Landscape Work that contributes to and enhances the overall City image and townscape of the City of Gold Coast;
- retention of vegetation of ecological, aesthetic and/or cultural significance;
- retention of significant cultural landscapes, associated vegetation, gardens and landscape forms;
- facilitation of complementary design between Landscape Work in the public and private realms;
- promotion of landscape that is functional, and complementary to the climate and land form of the City of Gold Coast;
- achievement of sustainable landscape form for public open space areas and other public areas;
- facilitation of a landscape that can be maintained efficiently to promote the conservation of energy and water; and
- achievement of design and construction of Landscape Work that is consistent with all relevant Australian Standards.

2.0 Application

- 2.1 This code applies to development for the purposes of Landscape Work indicated as code assessable or impact assessable in the Table of Development of the domain or Local Area Plan (LAP) within which the development is proposed.
- 2.2 This section is intended to implement the Desired Environmental Outcomes (DEOs) and the objectives of the Planning Strategies relating, in particular, to the Urban Heritage and Character and the City Image and Townscape Strategies. It is supported by Council's overall Landscape Strategy, which has three parts:
 - Part 1 – Landscape Character: Guiding the Image of the City
 - Part 2 – Landscape Work Documentation Manual
 - Part 3 – Landscape Information Sheets
- 2.3 Performance Criteria PC1-PC4 apply to all development subject to this code.



3.0 Development Requirements

Performance Criteria	Acceptable Solutions	How does the proposal Comply with the acceptable solution or performance criteria	Internal Use
Development is Code Assessable or Impact Assessable			
Local Landscape Character			
PC1 Landscape Work must minimise impact on the environmental values and contribute to the visual amenity and character of the site and local neighbourhood.	AS1 New plantings on the site do not include plant species identified as prohibited or restricted for use in Planning Scheme Policy 13 – Landscape Strategy Part 2 - Landscape Works Documentation Manual, Section D – Guidelines for Undesirable Plants.	COMPLIES WITH AS1 – No prohibited or restricted plants are proposed.	
Landscape Character			
PC2 Landscape Work must contribute to the achievement of a high quality landscape character, City image and townscape for the Gold Coast.	AS2.1 The development is on a site identified in the BeachStrip Character Area on Planning Strategy Map PS10 – Gold Coast Character Map and: is consistent with landscape character elements identified in Planning Scheme Policy 12 – Landscape Strategy Part 1 – Landscape Character: Guiding the Image of the City; a) where such a site is located directly adjacent to a dunal area, planting within the area of the site that is seaward of any built structures incorporates a primary planting framework of local native dunal species to reinforce and enhance the natural dunal edge. Plant species used are to be in accordance with those identified for the different zones of the dunal area in Planning Scheme Policy 15 - Management of Coastal Dune Areas;	COMPLIES WITH PC2 – The proposed landscaping intends to maintain a high quality, enhanced amenity, remaining consistent with the envisaged industrial estate's quality.	



	b) the design of the Landscape Work incorporates the retention, enhancement or promotion of any existing significant cultural plantings and native plantings associated with the local character of the beach strip, such as Norfolk Island Pines, <i>Pandanus</i> sp, <i>Banksia</i> sp and <i>Cupaniopsis</i> sp; and c) where such is a residential choice, commercial or tourist development in centres between Palm Beach and Main Beach (particularly Surfers Paradise, Broadbeach and Main Beach), the Landscape Work associated with the site development includes the appropriate use of resort style landscape treatments, in conjunction with the use of local native coastal species; or where such is a residential choice, commercial or tourist development in centres between Currumbin Creek and Coolangatta, the Landscape Work associated with the site development promotes the coastal village character through a primary planting framework of local native coastal species. AS2.2 The development is on a site identified in the Bay Islands Character Area on Planning Strategy Map PS10 – Gold Coast Character Map and: a) is consistent with landscape character elements identified in Planning Scheme Policy 12 – Part 1 – Landscape Character: Guiding the Image of the City; and b) local native vegetation is utilised as the primary planting framework in the Landscape Work.		
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	AS2.3 The development is on a site identified in the Hope Island Estates Character Area on Planning Strategy Map PS10 – Gold Coast Character Map and: a) is consistent with landscape character elements identified in Planning Scheme Policy 12 – Part 1 – Landscape Character: Guiding the Image of the City; b) where such is a residential choice, commercial or tourist development, the Landscape Work includes the appropriate use of resort style landscape treatments, in conjunction with the use of local native species; c) where such a site includes large areas of open space and/or drainage corridors and buffer areas, local native species are utilised in the landscape as the primary planting framework; d) where such a site is located adjacent to a major road corridor, a strong boulevard character is reinforced in the streetscape work by the use of dominant and consistent plant forms in a simple but formal configuration, using appropriate exotic		
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	or local native species; and e) where such a site is located adjacent to a major road corridor, front fencing is primarily transparent, visually unobtrusive and articulated with the use of appropriate vegetation, materials and colours. AS2.4 The development is on a site identified in the Broadwater Character Area on Planning Strategy Map PS10 – Gold Coast Character Map and: a) is consistent with landscape character elements identified in Planning Scheme Policy 12 – Part 1 – Landscape Character: Guiding the Image of the City; b) any existing significant cultural and/or remnant vegetation on the site is retained and/or is reinforced in the Landscape Work with new planting that reflects the forms and growth habits of the traditional or remnant planting forms; and c) where such a site is immediately adjacent to the Broadwater, planting within the area of the site that is directly adjacent to any water body utilises a primary planting framework of local native		
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	species as part of the Landscape Work; or where such a site is adjacent to open space areas linked to the Broadwater, planting within the area directly adjacent to the open space area utilises a primary planting framework of local native species as part of the Landscape Work. AS2.5 The development is on a site identified in the Southport Character Area on Planning Strategy Map PS10 – Gold Coast Character Map and: a) is consistent with landscape character elements identified in Planning Scheme Policy 12 – Part 1 – Landscape Character: Guiding the Image of the City; b) any existing significant cultural and/or remnant vegetation on the site is retained and/or is reinforced in the Landscape Work with new plantings that reflect the forms and growth habits of the existing cultural and/or remnant plantings; and c) where such a site is located along Scarborough or Nerang Streets, streetscape framework planting creates a strong boulevard character, and provides shade, amenity and vertical enclosure		
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	through the use of single trunked canopy shade species. Dominant vertical forms, such as palms and resort style landscape treatments, are not utilised as part of the Landscape Work within or directly adjacent to the streetscape; or where such a site is located along Short Street, streetscape framework planting reinforces the existing informal leafy streetscape utilising single trunked canopy shade species as part of the Landscape Work. Dominant vertical forms, such as palms and resort style landscape treatments, are not utilised in the Landscape Work within or directly adjacent to the streetscape. AS2.6 The development is on a site identified in the River Valleys Character Area on Planning Strategy Map PS10 – Gold Coast Character Map and: a) is consistent with landscape character elements identified in Planning Scheme Policy 12 – Part 1 – Landscape Character: Guiding the Image of the City; b) incorporates a primary planting framework of local native plant species in the Landscape Work; c) any existing significant cultural and/or remnant plantings are retained and/or reinforced in the Landscape Work, with new plantings that reflect the forms and growth habits of the existing cultural and/or remnant plantings; d) Landscape Work includes minimal cut and fill of the original landform, utilises open style and transparent fencing, and		
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	reduces the impact of any bulk massing in building form on the site; e) where such a site is located along a major road corridor, Landscape Work on the site promotes and enhances varying road experiences through open, filtered and enclosed views of any rural areas, creeks and riverine vegetation; f) where such a site is located on a ridgetop, crest or upper slope of a foothill, the character of any undeveloped ridgelines is reinforced and enhanced as part of the Landscape Work on the site; and g) where such a site includes and/or is adjacent to a creek and/or river system, Landscape Work utilises local native riverine species in the design that contribute to the rehabilitation and expansion of the riparian zone. AS2.7 The development is on a site identified in the Albert Corridor Character Area on Planning Strategy Map PS10 – Gold Coast Character Map and: a) is consistent with landscape character elements identified in Planning Scheme Policy 12 – Part 1 – Landscape Character: Guiding the Image of the City; incorporates a primary planting framework of local native plant species in the Landscape Work; c) any existing significant cultural and/or remnant plantings are retained and/or reinforced in the Landscape Work, with new plantings that reflect the forms and growth habits of the existing cultural and/or remnant plantings;		
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	d) where such a site is located along a major road corridor, Landscape Work on the site promotes and enhances varying road experiences through open, filtered and enclosed views of any rural areas, riverine vegetation and surrounding ridgeline; e) where such a site is located on a ridgetop, crest or upper slope of a foothill, the character of any undeveloped ridgelines is reinforced and enhanced as part of the Landscape Work on the site; f) where such a site includes and/or is adjacent to a creek and/or river system, Landscape Work utilises local native riverine species in the design that contribute to the rehabilitation and expansion of the riparian zone; g) where such a site is located within a significant rural landscape or floodplain area, the Landscape Work on the site reinforces and promotes the open character of the floodplain environment and/or rural landscape; and h) where such a site is in an industrial area fronting a major road corridor, the Landscape Work presents a dense and green outlook to the road corridor frontage. AS2.8 The development is on a site identified in the Beenleigh and Sugar Cane Character Area on Planning Strategy Map PS10 – Gold Coast Character Map and: a) is consistent with landscape character elements identified in Planning Scheme Policy 12 – Part 1 – Landscape Character: Guiding the Image of the City; b) any existing significant cultural and/or		
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	remnant planting, particularly that associated with rural landholdings, are retained and/or reinforced in the Landscape Work, with new plantings that reflect the forms and growth habits of the existing cultural and/or remnant plantings; c) where such a site is located adjacent to the bay edge, Landscape Work utilises a primary planting framework of local native species in an informal landscape setting that enhances the low scale and natural character of the area; d) where such a site includes industrial or commercial development, the Landscape Work incorporates a dense landscaped buffer area, with a primary planting framework of local native species to screen the development from any residential and rural uses; and where such a site includes industrial development along major traffic routes, Landscape Work incorporates a landscaped buffer strip of local native species along the street frontage to present a dense and green outlook to the street. AS2.9 The development is on a site identified in the Suburban Estates Character Area on Planning Strategy Map PS10 – Gold Coast Character Map and: a) is consistent with landscape character elements identified in Planning Scheme Policy 12 – Part 1 – Landscape Character: Guiding the Image of the City; b) where such a site includes open space areas, Landscape Work incorporates:		
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	■ a primary planting framework of local nativespecies; ■ the retention of existing significant remnantvegetation in the design; and ■ enhancement of visual and physical linkages toopen space areas surrounding the site; c) where such a site includes drainage reserves in open space areas, Landscape Work incorporates the principles of dual use drainage systems, such as wetlands, informal open space and detention basins, where such are consistent with hydraulic/stormwater drainage management practices; d) where such a site requires a landscaped buffer to screen incompatible uses from residential areas, the Landscape Work incorporates: ■ an adequate buffer area to facilitate the specific function required of the screen, eg. where adjacent to busy roads, landscaped buffer strips are of an appropriate width (preferably a minimum of ten (10) metres) that incorporates sufficient area of plant material to provide an effective screen; and ■ a planting structure within the buffer of trees and screening shrubs utilising local native species as the primary planting framework; and e) where such a site includes streetscape work that ispart of the site development, the landscape work provides shade and amenity. This incorporates the use of single trunked canopy shade species, utilising low maintenance local native species as the planting framework, with		
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	exotic species as feature planting, where appropriate. AS2.10 The development is on a site identified in the Canal Estates Character Area on Planning Strategy MapPS10 – Gold Coast Character Map and: a) is consistent with landscape character elements identified in Planning Scheme Policy 12 – Part 1 – Landscape Character: Guiding the Image of the City; b) where such a site includes streetscape work as part of the site development, Landscape Work provides: ■ shade and amenity that incorporates the use of single trunked canopy shade species utilising low maintenance, local native species as the planting framework, with exotic species as feature planting, where appropriate; and front fencing that is designed to be primarily transparent and not visually dominant, avoiding the creation of blank walls or barriers at the street interface; c) where such a site incorporates public open space areas, local native species are utilised as the primary planting framework; and d) Where such a site is directly adjacent to a canal or waterway, Landscape Work incorporates natural looking materials to any revetment treatment, and utilises local native species as the primary planting framework in the areas between the property boundary and the canal or waterway edge.		
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Landscape Design

PC3 The Landscape Work, including that within streetscapes, public open space and private property, must complement new and existing development through the provisions of Landscape Work that: a) responds to opportunities and constraints of the - existing site characteristics; - reinforces and enhances identified local character; b) is best suited to the use and function of the site - and environmental/climatic conditions; and c) has regard for ongoing maintenance.	AS3.1 Landscape Work for the site reinforces and enhances existing significant topographical features, including local native vegetation, waterways, overland flow paths and landform as identified on a Site Survey and Analysis for the site. AS3.2 Landscape Work for the site reinforces local landscape character, as identified in PC2 and AS2.1 to AS2.10 for Landscape Character above. AS3.3 Landscape Work in public areas, such as road reserves, parks and other open space, provides shaded environments and passive recreation spaces for users and visitors to the site. AS3.4 Where a site incorporates high use facilities, Landscape Work is located and maintained in a way that does not create unsafe environments by blocking surveillance, creating concealment spots and reducing sightlines. AS3.5 Landscape Work promotes the effective use of water. Selection of plant species and layout of the landscaped area minimises the demand for use of potable water from the City's water reticulation system. AS3.6 Plant species utilised in Landscape	COMPLIES WITH AS3.1 – 3.9 – The proposed landscaping work seeks to reinforce the high quality, envisaged outcome for the industrial estate as a whole through provisions of appropriate landscaping, that varies in size, shape and colour. The landscaping will also provide visual buffering, reducing any adverse visual impacts resulting from the development. The proposed landscaping is consistent with the surrounding sites and will seek to enhance the local character of the estate. Public areas along the frontages to the site will benefit as the landscaping will provide visual upgrades and provide screening as well as shade in some capacities. The landscaping provides ample opportunity for casual surveillance through the consideration of CPTED principles. Any plant species used will not be prohibited.	
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	Work in streetscapes and public open space areas minimize the need for high intensity landscape maintenance. AS3.7 Landscape Work contributes to the stability of local soils and minimises sediment and erosion activity. AS3.8 Landscape Work complies with a Statement of Landscape Intent (in some cases approved for Preliminary Operational Work – Landscape), where such a site includes one or more of the following: a) rare and threatened flora or habitat for rare and threatened fauna under the Nature Conservation Act 1992, or is identified by the Planning Scheme as being of ecological significance, or is protected vegetation under Specific Development Code 36 – Vegetation Management; b) the site is to contain large areas of replanting and/or rehabilitation; c) the site is to consist of large areas of open space (including private and public); d) the site has significant overland drainage and/or drainage corridors; e) the site incorporates important views as identified by the Site Analysis; f) the site is located in an area of identified. g) particular local or neighbourhood character; h) it is proposed to alter the landform significantly; i) the development requires additional streetscapework; j) the development incorporates built form which is located in areas of high visual prominence.		
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	AS3.9 The Landscape Work is in accordance with a Detailed Landscape Plan, approved for the Operational Work – Landscape Development Permit, prepared in accordance with Planning Scheme Policy 13 – Part 2 – Landscape Works Documentation Manual. AS3.10 The solid wall for podium landscape planting, erected on top of a basement, is not to exceed 0.5 metres in height and is to be located not within 1.0 metre of the basement's outer perimeter		
PC4 Landscape Work in public open space (or that open space to be dedicated as part of an open space contribution) must provide for effective management of the landscape of the site during construction, at 'on' and 'off' maintenance and for future ongoing maintenance regimes.	AS4.1 Landscape Work complies with an Open Space Management Statement (in some cases approved as part of the Preliminary Approval for Operational Work – Landscape) where such a site includes one or more of the following: a) the retention and/or removal of flora or habitat for rare and threatened fauna under the Nature Conservation Act 1992, or is identified by the Planning Scheme as being of ecological significance, or is protected vegetation under Specific Development Code 36 – Vegetation Management; b) extensive areas of natural wetlands or other complex drainage systems; c) large areas of open space, including identification of key linkages to a wider open space system; d) areas that may be subject to significant erosion and/or sediment deposition. AS4.2 The Landscape Work for the site is in accordance with an Open Space Management Plan approved for the Operational Work – Landscape Development Permit, prepared in	NOT APPLICABLE – No landscape work is proposed within public open space.	



	accordance with Planning Scheme Policy 13 – Part 2 – Landscape Works Documentation Manual, where such an area has one or more of the following: a) includes removal of areas of rare and threatened flora or habitat for rare and threatened fauna under the Nature Conservation Act 1992, or is identified by the Planning Scheme as being of ecological significance, or is protected vegetation under the Specific Development Code 36 – Vegetation Management; b) includes retention of areas of significant natural vegetation; c) includes extensive areas of replanting and large rehabilitation areas; d) includes wetlands and other drainage corridors; e) will require storage of materials on-site during construction; f) forms part of a wider open spaces system; g) may be subject to erosion or sediment deposition; includes fauna habitats that require protection and/or expansion; h) includes areas of bushfire hazard; and i) incorporates significant public facilities such as picnic or playground areas.		
PC5 Landscape Work must be designed and constructed to achieve a reasonable and practicable response to all public risk duty of care issues.	AS5 The design and construction of Landscape Work in public open space areas is consistent with all relevant Australian Standards.	NOT APPLICABLE – The proposed development does not include landscaping within public open space areas.	

4.0 Compliance

All Landscape Work must be completed in accordance with the approved Detailed Landscape Plan, prior to the proposed use commencing. All Landscape Work must be maintained and managed in accordance with the Detailed Landscape Plan at all times and to the satisfaction of Council.



5.0 Maintenance Security

5.1 Explanation

For successful establishment of Landscape Work, particularly planting, maintenance is a key component in achieving high quality landscape in the long term. Maintenance is often required for a prolonged period of time after final landscape approval is granted. Security is sometimes required to ensure that the Landscape Work is undertaken in accordance with the approved landscape plan and that follow on maintenance and responsibilities are met.

5.2 Provisions

Maintenance Security may be required, at the discretion of the Council or its delegate, where it is considered necessary to ensure that Landscape Work and associated maintenance requirements are completed to an acceptable standard. The maintenance security will be submitted prior to the issue of the Certificate of Compliance.

6.0 Other Relevant Matters Requirements

The information in **Clause 6.0** is provided in good faith and to the best of Council's knowledge. Applicants should satisfy themselves as to the applicability of other relevant matters.

6.1 Preparation of Landscape Plans

Submission of a Landscape Plan is required where indicated by this Planning Scheme or as a condition of a development approval.

A standard process for submission of Landscape Plans, in association with development applications, is promoted by Council. This process applies to all development applications that have a Landscape Work component. It is acknowledged that the amount of information to be included in the submitted landscape plans may vary, according to the particular circumstance of the proposed development.

There are four types of Landscape Plans that may be required as part of a development application. These are:

- a) Statement of Landscape Intent;
- b) Detailed Landscape Plan;
- c) Open Space Management Statement; and
- d) Open Space Management Plan.

6.1.1 Statement of Landscape Intent Explanation

A Statement of Landscape Intent indicates the broad scale resolution of landscape design issues, and assists in designing and assessing future Landscape Work associated with development. It is required where a proposed development may impact on the character, function, environment and amenity of a site and/or its surrounds.

When is it Required?

The Statement of Landscape Intent is required to accompany any application for a development permit for a Material Change of Use or Reconfiguring a Lot application (to accompany Plan of Development or Concept Plan) where required by the Planning Scheme or by a request for information. The Statement of Landscape Intent may be in some cases approved, if acceptable, as a Preliminary Approval for Operational Work – Landscape. Conditions of this approval will show the requirements for the Detailed Landscape Plan required for Operational Work – Landscape development permit.



Contents of Statement of Landscape Intent

A typical Statement of Landscape Intent identifies (but is not limited to) the following:

- a) existing features on the site to be retained or removed, eg. vegetation and built form;
- b) notations of design intent for any Landscape Work, including desired character themes and proposed function;
- c) proposed location and function of public and private open space areas;
- d) approximate location of softscape areas, including buffers, screens, major garden bed areas and delineation of hardscape areas;
- e) notation of species types for all areas to be replanted (eg. native, exotic, feature planting, form and colour);
- f) approximate location of any building/structure/site furniture, and an indication of their form, materials and colours (including entry statements);
- g) any significant overland drainage paths;
- h) open space design concepts, visual and pedestrian links; and
- i) Open Space Management Statement, if required in the following clause of this code (refer 6.3, below).

6.1.2 Detailed Landscape Plan

Explanation

A Detailed Landscape Plan provides detailed design drawings for all Landscape Work related to an Operational Work- Landscape application associated with a development proposal. This requirement only applies to Landscape Work where a development permit is required under the provisions of this Planning Scheme, or as required by a condition of another development permit.

When is it Required?

A Detailed Landscape Plan is to be submitted and approved for Operational Work - Landscape prior to the issue of an approval for building work or, where building work approval is not required, prior to the commencement of the development/use. Detailed Landscape Plans must comply with any preliminary Operational Work – Landscape approval documentation, such as the Statement of Landscape Intent.

Contents of Detailed Landscape Plan

The contents of a Detailed Landscape Plan must contain sufficient information to enable construction work and assessment by Council (Refer to **Planning Scheme Policy 13 – Part 2 – Landscape Works Documentation Manual** for further detailed information). A typical Detailed Landscape Plan is to include (but is not limited to) the following:

External Work Details:

- a) construction set out and dimensions, relative levels and contours;
- b) surface treatment, including planting areas, turf, hardscape, edge treatments and mounding; and
- c) building footprints, location and details of any fencing, footpaths, retaining walls, architectural screens/walls, gates, entry statements, seats, bollards, bins, lights, water features, pools, signage and irrigation.

Planting Plans:

- a) building footprints showing window and door locations, roof lines and awning lines;
- b) location of proposed species, notation and numbers of all species proposed, plant schedule;
- c) planting bed preparation details, including topsoil depths, mulch, subgrade preparation, details of planter boxes and podiums, fertilisers and irrigation; and
- d) maintenance period for Landscape Work.

Management of Public Open Space

Public open space areas are areas of land that will be transferred to Council as part of an open space contribution associated with a Material Change of Use or a Reconfiguring a Lot development permit. Management of public open space areas is critical during the construction phase, at the 'on' and 'off' maintenance phase and for their future ongoing sustainability.



6.1.3 Open Space Management Statement

Explanation

When planning and designing proposed public open space areas as part of the design development of the whole of the site, it may become apparent during the Site Survey and Analysis phase that there are particular elements (built or natural) associated with open space development that require consideration from a management perspective early in the design process. In these cases an Open Space Management Statement may be required to accompany a Statement of Landscape Intent. An Open Space Management Statement is a broad outline of the proposed methods and strategies for managing areas of open space during the construction phase, 'on' and 'off' maintenance, and future management requirements, and address elements such as:

- a) vegetation proposed to be retained, relocated or removed;
- b) water quality management including lake management;
- c) erosion control;
- d) sediment control;
- e) bushfire hazard management;
- f) proposed maintenance periods and levels of maintenance; and
- g) other issues, such as access and linkages to other areas of open space, as may have been identified during the design stage or in the Site Analysis.

When is it Required?

An Open Space Management Statement is submitted where required by the Planning Scheme, or in response to a request for information. If an Open Space Management Statement is required, it is to be submitted in most cases in conjunction with the Statement of Landscape Intent and, if acceptable, may be approved with the Statement of Landscape Intent as part of a Preliminary Operational Work – Landscape Approval associated with the Material Change of Use or Reconfiguring a Lot development permit.

Contents of Open Space Management Statement

A typical Open Space Management Statement is a written or graphically presented broad outline for managing open space areas during the construction phase, at the 'on' and 'off' maintenance phase, and for future management of elements such as:

- a) proposed area to be dedicated open space, contours and other topographical information pertaining to the site;
- b) sensitive vegetation and fauna, including habitats and corridors;
- c) water quality management, including lake management;
- d) erosion and sediment control management;
- e) bushfire hazard management;
- f) proposed level and length of maintenance periods; and
- g) other issues, such as access and linkages that may have been identified during the design stage or in the site analysis.

6.1.4 Open Space Management Plan

Explanation

The detailed design of any existing and/or proposed public open space areas may require an Open Space Management Plan to be prepared and submitted to Council. The Open Space Management Plan may be required where Council, or its delegate, considers that the nature of the open space requires detailed management issues to be clearly identified.

An Open Space Management Plan is the detailed identification of the management issues related to the open space areas, including:

- a) during the construction phase;
- b) the quality of the open space area when it comes 'on' and 'off' maintenance; and
- c) the future ongoing maintenance and management requirements of the open space.

When is it Required?

An Open Space Management Plan is required by the Planning Scheme as a condition of approval of a Material Change of Use, Reconfiguring a Lot development permit or a preliminary Operational Work – Landscape approval, or where Council, or its delegate, considers the nature of the open space requires detailed management.



Content of an Open Space Management Plan

A typical Open Space Management Plan is to include (but is not limited to):

- a) Management of Open Space Areas during the Construction Phase:
 - a) delineation of proposed public open space areas;
 - b) protection measures for vegetation to be retained or relocated;
 - c) location and details of all proposed on-site sediment and erosion control methods;
 - d) methods and details of disposal of vegetation approved for removal;
 - e) details of protection or translocation of any fauna on-site (where appropriate);
 - f) temporary fire hazard mitigation measures, eg. fire trails, water storage facilities (only where appropriate – information can be drawn from any Bushfire Management Plan undertaken for the whole site);
 - g) details of methods for maintaining appropriate water quality (if appropriate);
 - h) location and details of storage of materials and storage compound for machinery on-site;
 - i) location and details of temporary access for vehicles and site construction personnel;
 - j) access/protection to any infrastructure services by others;
 - k) location and details of any enclosures, including boundaries;
 - l) methods of control of declared plants and recognised environmental weeds;
 - m) maintenance periods; and
 - n) other issues as previously identified in the site analysis and design process.
- b) Quality of Open Space Areas at 'On' and 'Off' Maintenance

Council requires that all open space areas at 'on' and 'off' maintenance are of a standard that can be easily maintained and will not require additional work to be undertaken to bring these areas up to an acceptable standard by Council at 'off' maintenance. Elements that need to be addressed are the:

 - a) standard and quality of grassed areas;
 - b) cleaning of any silt deposition;
 - c) standard of any planting areas, including retained vegetation areas, rehabilitation areas and garden areas;
 - d) condition of any permanent infrastructure, such as irrigation, on-site sediment and erosion control devices, hard surfacing;
 - e) condition of any park facilities or play equipment;
 - f) rubbish and site debris removal;
 - g) standard to be achieved with regard to declared plants and recognised environmental weeds; and
 - h) standard of fire hazard mitigation measures (fire trails and water storage facilities).
- c) Ongoing Management/Maintenance Regimes for Open Space Areas

The purpose of including ongoing maintenance and management regimes is to provide Council with a clear indication of possible future management issues that will need to be addressed in order to provide appropriate resources to maintain the areas to the required standard. This part of the Open Space Management Plan should be developed as a stand-alone document, or summary of undertakings, to assist Council in determining maintenance programs and costs. This is required to cover the following matters:

 - a) identification of the purpose of the open space area, including objectives for future use;
 - b) details of actions for each proposed open space area;
 - c) future management and maintenance regimes for protection of significant vegetation areas, ecological systems, waterways and fauna;
 - d) future management of bush fire hazard (only where appropriate);
 - e) management of domestic farm/feral animals (if appropriate);
 - f) tree management procedures;
 - g) future management and maintenance regimes for sediment and erosion control devices, and irrigation;
 - h) proposed future need for infrastructure, including public facilities;
 - i) maintenance of built form and hard surfacing;
 - j) management and control of declared plants and recognised environmental weeds; and
 - k) management of rubbish.

APPENDIX E

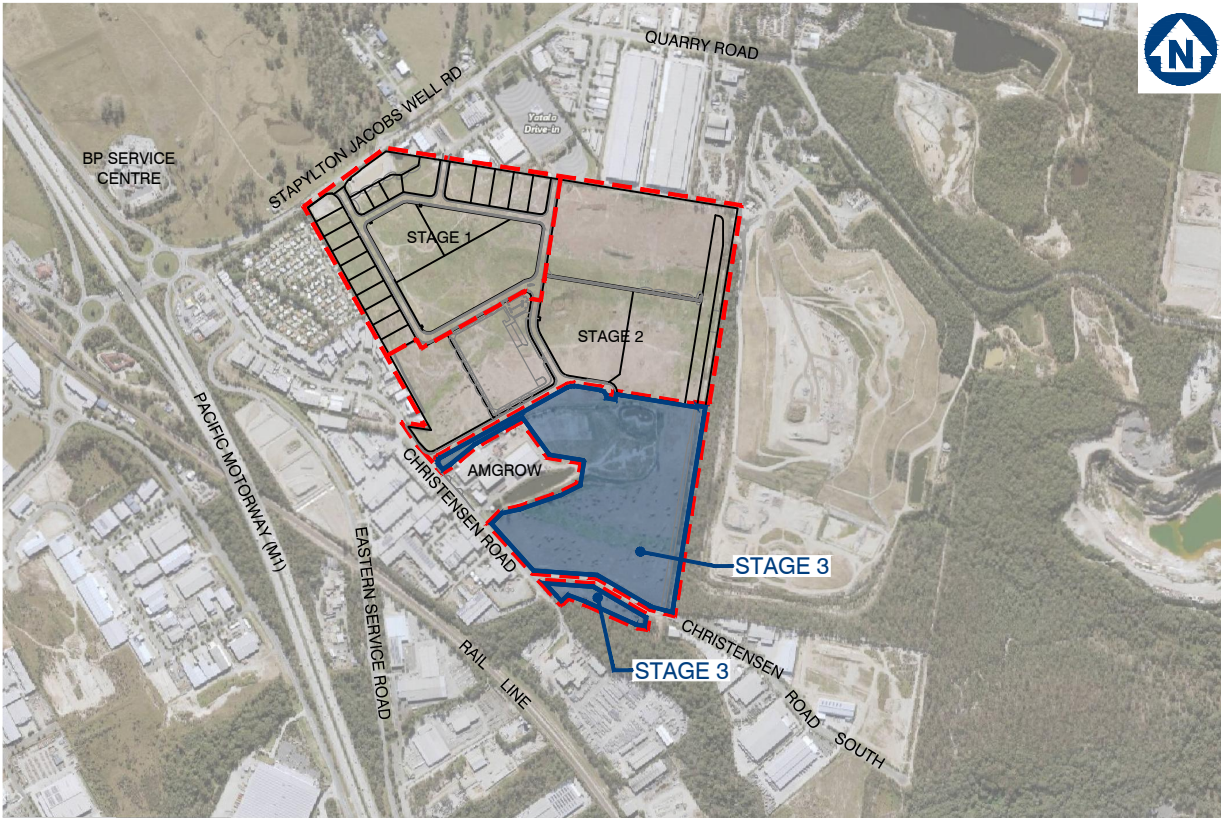
CHANGE TO GROUND LEVEL DRAWINGS



OPERATIONAL WORKS APPLICATION FOR CHANGE TO GROUND LEVEL

DRAWING INDEX

DRAWING No.	REV	DRAWING TITLE
5941 ENG BE3 001	A	DRAWING SCHEDULE AND LOCALITY PLAN
5941 ENG BE3 002	A	GENERAL NOTES SHEET 1 OF 2
5941 ENG BE3 003	A	GENERAL NOTES SHEET 2 OF 2
5941 ENG BE3 004	A	DRAWING LEGENDS
5941 ENG BE3 005	A	KEY PLAN
5941 ENG BE3 010	A	EXISTING SURFACE AND FEATURE LAYOUT PLAN
5941 ENG BE3 020	A	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
5941 ENG BE3 021	A	SEDIMENT AND EROSION CONTROL LAYOUT PLAN SHEET 1 OF 5
5941 ENG BE3 022	A	SEDIMENT AND EROSION CONTROL LAYOUT PLAN SHEET 2 OF 5
5941 ENG BE3 023	A	SEDIMENT AND EROSION CONTROL LAYOUT PLAN SHEET 3 OF 5
5941 ENG BE3 024	A	SEDIMENT AND EROSION CONTROL LAYOUT PLAN SHEET 4 OF 5
5941 ENG BE3 025	A	SEDIMENT AND EROSION CONTROL LAYOUT PLAN SHEET 5 OF 5
5941 ENG BE3 030	A	CONSTRUCTION PHASE BIO RETENTION BASIN 1 LAYOUT PLAN
5941 ENG BE3 031	A	CONSTRUCTION PHASE BIO RETENTION BASIN 2 LAYOUT PLAN
5941 ENG BE3 032	A	CONSTRUCTION PHASE BIO RETENTION BASIN 3 LAYOUT PLAN
5941 ENG BE3 033	A	CONSTRUCTION PHASE BIO RETENTION TYPICAL DETAILS
5941 ENG BE3 050	A	BULK EARTHWORKS LAYOUT PLAN SHEET 1 OF 5
5941 ENG BE3 051	A	BULK EARTHWORKS LAYOUT PLAN SHEET 2 OF 5
5941 ENG BE3 052	A	BULK EARTHWORKS LAYOUT PLAN SHEET 3 OF 5
5941 ENG BE3 053	A	BULK EARTHWORKS LAYOUT PLAN SHEET 4 OF 5
5941 ENG BE3 054	A	BULK EARTHWORKS LAYOUT PLAN SHEET 5 OF 5
5941 ENG BE3 100	A	FINISHED SURFACE LAYOUT PLAN SHEET 1 OF 5
5941 ENG BE3 101	A	FINISHED SURFACE LAYOUT PLAN SHEET 2 OF 5
5941 ENG BE3 102	A	FINISHED SURFACE LAYOUT PLAN SHEET 3 OF 5
5941 ENG BE3 103	A	FINISHED SURFACE LAYOUT PLAN SHEET 4 OF 5
5941 ENG BE3 104	A	FINISHED SURFACE LAYOUT PLAN SHEET 5 OF 5
5941 ENG BE3 150	A	FINISHED SURFACE CROSS SECTIONS SHEET 1 OF 4
5941 ENG BE3 151	A	FINISHED SURFACE CROSS SECTIONS SHEET 2 OF 4
5941 ENG BE3 152	A	FINISHED SURFACE CROSS SECTIONS SHEET 3 OF 4
5941 ENG BE3 153	A	FINISHED SURFACE CROSS SECTIONS SHEET 4 OF 4
5941 ENG BE3 570	A	OPERATINAL PHASE BIO RETENTION BASIN 1 LAYOUT PLAN
5941 ENG BE3 571	A	OPERATINAL PHASE BIO RETENTION BASIN 2 LAYOUT PLAN
5941 ENG BE3 572	A	OPERATINAL PHASE BIO RETENTION BASIN 3 LAYOUT PLAN
5941 ENG BE3 573	A	BIO RETENTION BASIN SECTIONS SHEET 1 OF 2
5941 ENG BE3 574	A	BIO RETENTION BASIN SECTIONS SHEET 2 OF 2



LOCALITY PLAN

NOT TO SCALE

CLIENT
FPI QUEENSLAND
PTY LTD

SITE ADDRESS
LOT 501 ON SP295994
60 STAPYLTON JACOBS WELL ROAD,
STAPYLTON, QLD 4207

ISSUED FOR APPROVAL
NOT FOR CONSTRUCTION

DWG NO.5941 ENG BE3 001 - A

FEBRUARY 2023

GENERAL NOTES

1. **CONTRACT DOCUMENTATION**
ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONTRACT SPECIFICATION AND CoGC STANDARD DRAWINGS AND SPECIFICATIONS.
2. **DATUM**
LEVELS SHOWN ON THE PLANS ARE A.H.D.
3. **SURVEY SETOUT**
THE SURVEY SET OUT INFORMATION TO ALLOW THE CONTRACTOR TO ACCURATELY SET OUT THE WORKS HAS BEEN ESTABLISHED ON SITE BY THE PRINCIPAL'S SURVEYOR. THE CONTRACTOR IS NOT TO SCALE FROM THESE PLANS AS A MEANS OF OBTAINING SETOUT INFORMATION.
4. **EXISTING SURVEY CONTROL STATIONS**
IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT EXISTING SURVEY CONTROL STATIONS ARE NOT DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES. SHOULD THE CONTRACTOR IDENTIFY ANY CONFLICT BETWEEN EXISTING SURVEY CONTROL AND THE REQUIRED CONTRUCTION ACTIVITIES THE SUPERINTENDENT IS TO BE NOTIFIED IMMEDIATELY.
5. **EXISTING SERVICES**
THE LOCATION OF EXISTING SERVICES WHERE SHOWN ON THE PLANS ARE INDICATIVE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT SERVICE AUTHORITIES TO ASCERTAIN THE EXACT LOCATION OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORKS AND TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO THE EXISTING SERVICES.
6. **SITE ACCESS**
THE CONTRACTOR SHALL ONLY GAIN ACCESS TO THE SITE VIA ACCESS LOCATIONS APPROVED BY THE SUPERINTENDENT. FREEDOM OF ACCESS TO OTHER WORK AREAS ON THE SITE SHALL BE MAINTAINED AT ALL TIMES.
7. **PROVISION FOR TRAFFIC**
PROVISION FOR TRAFFIC ON LOCAL ROADS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND CoGC COUNCIL REQUIREMENTS.
8. **WORK EXTENT**
THE CONTRACTOR IS TO RESTRICT ACTIVITIES TO THOSE AREAS DESIGNATED AS WORKS AREAS UNDER THE CONTRACT. AT NO TIME IS THE CONTRACTOR TO ENTER ADJOINING PROPERTIES OR CONTRACT AREAS WITHOUT THE WRITTEN AUTHORISATION OF THE SUPERINTENDENT.
9. **TESTING**
ALL TESTING IS TO BE CARRIED OUT BY AN APPROVED N.A.T.A TESTING AUTHORITY IN ACCORDANCE WITH THE PROJECT SPECIFICATION AND REQUIREMENTS OF CoGC COUNCIL.
10. **"AS CONSTRUCTED" SURVEY**
"AS CONSTRUCTED" SURVEY SHALL BE CARRIED OUT BY THE PRINCIPAL'S SURVEYOR AS WORK PROCEEDS. THE CONTRACTOR IS TO PROVIDE ADEQUATE NOTICE TO THE PRINCIPAL'S SURVEYOR ON WHEN THIS IS REQUIRED TO ENSURE COMPLIANCE WITH THE REQUIREMENTS OF CoGC COUNCIL.
11. **MAINTENANCE OF SITE CONDITION**
AT THE COMPLETION OF WORKS THE SITE IS TO BE LEFT IN A CLEAN AND TIDY CONDITON TO THE SATISFACTION OF THE SUPERINTENDENT AND CoGC.

EARTHWORKS

1. **PRECEDENCE**
EARTHWORKS SPECIFICATION PREPARED BY PROJECT GEOTECHNICAL ENGINEER TO TAKE PRECEDENCE OVER STANDARD COUNCIL EARTHWORKS NOTES.
2. **TOPSOIL STRIPPING**
TOPSOIL SHALL BE STRIPPED ACROSS THE ENTIRE LIMIT OF THE EARTHWORKS CUT AND FILL AREAS AND SHALL BE STOCKPILED IN A LOCATION APPROVED BY THE SUPERINTENDENT. THE EXISTING STRATA IS TO BE TREATED IN ACCORDANCE WITH THE SPECIFICATION PRIOR TO PLACING ANY FILL.
3. **EARTHWORKS LEVELS**
EARTHWORKS LEVELS SHOWN ON THE DRAWING ARE TO FINISHED SURFACE LEVELS AND INCLUDE 100mm OF TOPSOIL. THE CONTRACTOR SHALL VERIFY BENCH MARK LEVELS AND ADVISE THE SUPERINTENDENT OF ANY DISCREPANCY BEFORE COMMENCEMENT OF CONSTRUCTION.
4. **UNDESIRABLE MATERIAL**
THE ENTIRE SITE/WORK AREAS SHALL BE CLEARED OF ALL UNDESIRABLE MATTER. THIS SHALL INCLUDE DEAD TIMBER, GRASS, OLD FOUNDATIONS, CONCRETE, MASONRY REMAINS, GARBAGE, DEBRIS AND ALL OTHER OBSTRUCTIONS TO THE WORKS UNLESS NOTED OTHERWISE. HOLES LEFT BY THE REMOVAL OF ANY OF THE ABOVE SHALL BE FILLED WITH APPROVED COMPACTED MATERIAL WITH PROPERTIES AT LEAST SIMILAR TO INSITU SOILS.
5. **COMPACTION STANDARD**
FILL MATERIAL SHALL BE COMPACTED TO THE FOLLOWING STANDARD, WHERE DRY DENSITY RATIO IS DETERMINED IN ACCORDANCE WITH AS 1289 USING STANDARD COMPACTION METHODS.

a. 100% DRY DENSITY RATIO IN COHESIVE MATERIAL OR 80% IN COHESIONLESS MATERIAL FOR ROAD SUBGRADE.

b. 98% DRY DENSITY RATIO IN COHESIVE MATERIAL OR 65% IN COHESIONLESS MATERIAL FOR ALL AREAS OTHER THAN THE ROADWAY AND BUILDING PADS.

c. 98% DRY DENSITY RATIO IN COHESIVE MATERIAL OR 70% IN COHESIONLESS MATERIAL FOR BUILDING PADS.
5. **PAVEMENT DEPTHS**
EARTHWORKS VOLUMES DO NOT INCLUDE DESIGN PAVEMENT DEPTHS AS INDICATED ON THE TYPICAL BULK EARTHWORKS ROAD SECTION.
6. **TESTING**
ALL EARTHWORKS TO BE CARRIED OUT UNDER LEVEL 1 SUPERVISION IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3798 UNLESS DIRECTED OTHERWISE BY THE SUPERINTENDENT. ALL COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED N.A.T.A TESTING AUTHORITY.
7. **ROCK**
THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR EARTHWORKS RATES UNLESS SCHEDULED OTHERWISE WITHIN THE CONTRACT DOCUMENT.

8. **DAMS AND PONDS**
WHERE POSSIBLE, WATER FROM DAMS AND PONDS SHALL BE MAINTAINED AND UTILISED FOR CONSTRUCTION PURPOSES AND DUST SUPPRESSION. DAMS AND PONDS NOT TO BE RETAINED SHALL BE DEWATERED, CLEARED OF ANY FOREIGN MATTER AND ORGANIC MATERIAL WITH THIS MATERIAL TO BE REMOVED OFF SITE.
9. **RETAINING STRUCTURES**
THE DESIGN AND STRUCTURAL CERTIFICATION OF RETAINING STRUCTURES SHALL BE UNDERTAKEN BY THE CONTRACTOR'S STRUCTURAL ENGINEER (RPEQ) IN CONSULTATION WITH THE PROJECT'S CIVIL ENGINEER AND LANDSCAPE CONSULTANT. THE CONTRACTOR IS RESPONSIBLE FOR THE SUBMISSION AND APPROVAL COORDINATION OF THE ASSOCIATED DRAWINGS AND CERTIFICATION TO GCCC. A COPY OF THIS SUBMISSION IS TO BE PROVIDED TO THE SUPERINTENDENT.
10. **TOPSOIL REPLACEMENT**
ALL BATTERS AND ALLOTMENT CUT & FILL AREAS SHALL BE TOP SOILED FROM ONSITE STOCKPILES. IF DIRECTED BY THE SUPERINTENDENT THE TOPSOIL SHALL BE SCREENED PRIOR TO PLACING. THE CONTRACTOR SHALL ALLOW IN THEIR RATE FOR SCREENING AND THE DISPOSAL OF REJECT MATERIAL TO TIP OFFSITE INCLUDING ALL FEES. THE CONTRACTOR MUST ENSURE THAT THE STRIPPING SHALL BE UNDERTAKEN IN SUCH A MANNER AS TO AVOID CONTAMINATION BY OVER CUTTING. IF TOPSOIL IS CONTAMINATED BY OVER CUTTING AND DETERMINED NOT SUITABLE FOR REUSE BY THE SUPERINTENDENT, THE CONTRACTOR SHALL BEAR THE COST OF REMOVAL FROM SITE OF ALL CONTAMINATED TOPSOIL AND THE COST TO SUPPLY AND IMPORT SUITABLE TOPSOIL FOR RE-SPREADING.
11. **GRASSING / SEEDING**
ALL CUT & FILL AREAS AND DISTURBED AREAS SHALL BE GRASSED OR SEEDDED TO THE SATISFACTION OF THE SUPERINTENDENT.
12. **STOCKPILES**
ALL MATERIAL/SPOIL ARISING FROM WORKS ON SITE SHALL BE COMPACTED TO AN APPROPRIATE STANDARD WITHIN THE FILL AREAS OF FUTURE STAGES AS NOMINATED BY THE SUPERINTENDENT. THE CONTRACTOR IS NOT TO CREATE STOCKPILES OF SURPLUS MATERIALS UNLESS WRITTEN AUTHORIZATION IS RECEIVED FROM THE SUPERINTENDENT.

SEDIMENT AND EROSION

1. THE OBJECTIVES OF THE EROSION AND SEDIMENT CONTROL PROGRAM ARE:

a. ALLOW STORMWATER TO PASS THROUGH THE SITE IN A CONTROLLED MANNER AT NON-EROSIVE FLOW VELOCITIES.

b. MINIMISE SOIL EROSION FROM WATER AND WIND

c. MINIMISE ADVERSE EFFECTS OF SEDIMENT RUNOFF.

d. MINIMISE OR PREVENT ENVIRONMENTAL HARM ASSOCIATED WITH DISCHARGE FROM THE CONSTRUCTED SITE.

e. ENSURE THAT THE VALUE AND USE OF RESIDENTIAL AND INDUSTRIAL PROPERTIES ADJACENT TO THE DEVELOPMENT ARE NOT DIMINISHED AS A RESULT OF THE MIGRATION OF SEDIMENT FROM THE DEVELOPMENT.
2. THE EROSION AND SEDIMENT CONTROL PROGRAM SHALL COMPLY WITH THE ENVIRONMENTAL BEST ENGINEERING GUIDELINES FOR QUEENSLAND CONSTRUCTION SITES. THE CURRENT INSTITUTION OF ENGINEERS AUSTRALIA AND LOCAL AUTHORITY GUIDELINES. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTIONS INCLUDING THE MAINTENANCE PERIOD. NOTWITHSTANDING THE FINISHED EARTHWORK DESIGN SHOWN ON THE DRAWINGS THE CONTRACTOR IS RESPONSIBLE TO IMPLEMENT ADDITIONAL SEDIMENT CONTROL MEASURES AND DEVICES USING BEST PRACTICES AS NECESSARY TO MINIMISE THE QUANTITY LEAVING THE SITE DURING CONSTRUCTION AND UPON COMPLETION OF EARTHWORKS.
3. THE CONTRACTOR IS TO FOLLOW CONSTRUCTION PHASE AS OUTLINED IN THE CONSTRUCTION SEQUENCE/SILT MANAGEMENT PROGRAM. ALL SEDIMENT CONTROL DEVICES SHALL BE MONITORED, CLEANED AND/OR REPLACED WHENEVER THE ACCUMULATED SEDIMENT REDUCES THE CAPACITY BY 50%. ALL PERIMETER BANK/SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET. AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS AND PROTECT ANY DOWNSTREAM CONSTRUCTION AND GULLY INLETS. INLETS TO HAVE SILT PROTECTION IN ACCORDANCE WITH KERB INLET PROTECTION DETAIL AT LOCATIONS SHOWN OR AS INDICATED BY THE ENGINEER.
4. PRIOR TO THE COMMENCEMENT OF EARTHWORKS, THE CONTRACTOR IS TO CARRY OUT SOIL TESTING (IF REQUIRED BY SUPERINTENDENT) TO DETERMINE THE DISPERSIVE CHARACTERISTICS OF THE SOIL AND RESULTS TO BE GIVEN TO THE ENGINEERS SO THE FINALIZATION OF THE EROSION AND SEDIMENT CONTROL PLAN CAN BE COMPLETE.
5. TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN LOCATIONS AGREED WITH THE SUPERINTENDENT. CLEARING OF SITE AND STOCKPILE AREAS TO BE AS DIRECTED BY THE SUPERVISING ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING DUST AT ALL TIMES INCLUDING WEEKENDS AND PUBLIC HOLIDAYS.
6. SUITABLE ACCESS SHALL BE PROVIDED TO ALLOW MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES (IT IS TO BE NOTED THAT CLEARING SHALL ONLY OCCUR IN AREAS WHERE THERE IS NO OTHER ALTERNATIVE TO GAIN ACCESS TO THE LOCATION OF THE SEDIMENT CONTROL DEVICES). APPROVAL FOR REMOVAL OF PROTECTED SITE VEGETATION MUST BE OBTAINED PRIOR TO CLEARING.
7. ROCK BUNDS TO BE PLACED AROUND ALL HEADWALLS DURING CONSTRUCTION.
8. 0.8m TURF IS TO BE PLACED BEHIND ON ALL BATTERS WITHIN PRIVATE OPEN SPACE STEEPER THAN 1:4 UNLESS OTHERWISE NOTED. THE EXTENT OF GRASSING SHALL BE DETERMINED BY THE ENGINEER AND SHALL BE SEEDDED, AS SPECIFIED, WITHIN 7 DAYS OF FINAL TRIMMING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT GRASS STRIKE RATES ARE ACHIEVED AT ON AND OFF MAINTENANCE INSPECTION IN ACCORDANCE WITH COUNCIL REQUIREMENTS.
9. TURF IS TO BE PLACED FROM BACK OF KERB TO ROAD RESERVE BOUNDARY ON ALL ROADS AFTER EARTHWORKS ARE COMPLETE.
10. GEO-FABRIC LINING OF CHANNELS AND CHECK DAMS MAY BE REQUIRED SUBJECT TO THE SITE CONDITIONS.
11. FILLING AND OR MAINTENANCE OF EXISTING AND OR SEDIMENT BASINS MAY REQUIRE FLOCCULATION.
12. BATTERS WITHIN PUBLIC OPEN SPACE TO BE VEGETATED IN ACCORDANCE WITH THE APPROVED OPEN SPACE MANAGEMENT PLAN (OSMP).
13. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN OUT GPT'S, SEDIMENT FOREBAYS AND ALL OTHER SEDIMENT CONTROL DEVICES DURING CONSTRUCTION AND PRIOR BOTH ON AND OFF MAINTENANCE INSPECTIONS WITH CoGC. THE CONTRACTOR SHALL ALLOW FOR THE COST OF THESE WORKS WITHIN THEIR SUBMITTED TENDER PRICE.

CONSTRUCTION SEQUENCE/SILT MANAGEMENT PROGRAM

1. **PRE START**

a. ERECT SITE SIGNAGE. CONSTRUCT ENTRY AND EXIT POINT AS INDICATED CONSTRUCT VEHICLE WASH-DOWN AREA AND ASSOCIATED SILT MANAGEMENT DEVICES.

b. CONSTRUCT SITE OFFICE AND STORAGE COMPOUND AREA

c. ERECT SILT FENCE AT LOW POINTS OF THE SITE AS DEMONSTRATED

d. ERECT TEMPORARY TREE PROTECTION FENCING FOR VEGETATION TO BE RETAINED IN ACCORDANCE WITH AN OPW (TREE CLEARING) APPROVAL OR IN ACCORDANCE WITH AS4970 PROTECTION OF TREES ON DEVELOPMENT SITE.

e. CONSTRUCT ROCK CHECK DAMS AND SILT FENCE DOWN STREAM OF BASIN.

f. CONSTRUCT BASIN TO FULL DEPTH.

g. CONSTRUCT BALANCE OF BASIN IN CONJUNCTION WITH CLEARING AND BULK EARTHWORKS OPERATIONS.

h. BASIN TO BE UTILISED AS A TEMPORARY SEDIMENT BASIN. DO NOT FILL IN FILTRATION MATERIAL UNTIL CONSTRUCTION OF DEVELOPMENT IS COMPLETE.
2. **CLEARING AND BULK EARTHWORKS**
THERE SHALL BE NO CLEARING OF PROTECTED SITE VEGETATION WITHOUT AN APPROVED TREE CLEARING PLAN WHICH SHALL BE IN ACCORDANCE WITH AS4970. SILT FENCE, SAND BAGS AND EARTH RILLS WITHIN ROADS TO BE ERECTED AS INDICATED OR REQUIRED DURING CLEARING & EARTHWORKS. SUPERINTENDENT TO CONFIRM THE EXTENT OF CLEARING PRIOR TO COMMENCEMENT OF WORKS.
3. **CONSTRUCTION OF SEWER/ROOFWATER/ STORMWATER/SERVICES**
EXCAVATED MATERIAL TO BE PLACED ON HIGH SIDE OF TRENCH AND TO PROTECT PIPE WORK AND DIRECT SURFACE MATERIAL AWAY FROM EXCAVATIONS. TOPSOIL AND GRASS SEED AREAS IN ALLOTMENTS IMMEDIATELY AFTER COMPLETING THE SEWER AND ROOFWATER DRAINAGE CONSTRUCTION. DEPRESS GROUND AROUND TEMPORARY FIELD INLETS TO CREATE SILT POND.
4. **CONSTRUCTION – SEDIMENT BASINS**
SEDIMENT BASIN TO BE CONSTRUCTED TO THE EARTHWORK PROFILES SHOWN. STORMWATER OUTLET PIPES TO BE TEMPORARY BLOCKED OFF UNTIL DECOMMISSIONING OF SEDIMENT BASIN (SUBSEQUENT TO CONSTRUCTION OF ALL STAGES). PLACE SPOIL FROM SEDIMENT BASIN INTO ALLOCATED AREAS AS ENGINEERED FILL IN ACCORDANCE WITH THE STAGING ORDER. SEDIMENT BASIN SHALL ONLY BE REMOVED AFTER APPROVAL BY SUPERINTENDENT AND COUNCIL.
5. **CONSTRUCTION – STOCKPILING**
TEMPORARY SILT FENCE TO BE ERECTED 5m FROM TOE OF BATTER ON LOW SIDE OF STOCKPILING. STOCKPILE SITE TO BE CLEARED OF ADJACENT PROPERTY BOUNDARIES SO AS NOT TO CAUSE NUISANCE TO ADJOINING PROPERTIES. NO STOCKPILES ARE TO BE LOCATED WITHIN THE DRIP ZONE OR STRUCTURAL ROOT ZONE OF ANY RETAINED VEGETATION.
6. **CONSTRUCTION – ROADWORKS**
SILT FENCES TO ALLOTMENTS TO BE ERECTED. KERB INLET PROTECTION TO BE PROVIDED TO ALL GULLIES.
7. **CONSTRUCTION – ALLOTMENTS**
TOPSOIL AND SEED ALLOTMENTS. SILT FENCES TO ALLOTMENTS TO BE RE-ERECTED. COVERS TO GULLY GRATES TO BE REMOVED IF THE SUPERINTENDENT INDICATE THE GRASS STRIKE IS SUFFICIENT (80% WITHIN 30 CALENDAR DAYS OF FINAL ALLOTMENT RIMMING).
8. **POST CONSTRUCTION – ALLOTMENTS**
TOPSOIL AND GRASS SEED ALL ALLOTMENTS. COVERS TO GULLY GRATES TO BE REMOVED IF THE SUPERINTENDENT INDICATES THE GRASS STRIKE IS SUFFICIENT (80% WITHIN 30 CALENDAR DAYS OF FINAL ALLOTMENT TRIMMING).
9. **POST CONSTRUCTION – BASIN**
BASIN TO CONTINUE ACTING AS SEDIMENT BASIN UNTIL COMPLETION OF ALL STAGES.
10. **POST CONSTRUCTION – ROAD RESERVES**
TOPSOIL AND TURFING IS TO BE PROVIDED BEHIND KERB.
11. **MAINTENANCE (PRE TO POST CONSTRUCTION)**
THE SILT FENCES ARE TO BE INSPECTED WEEKLY. ANY REPAIRS REQUIRED ARE TO BE EFFECTED IMMEDIATELY. SILT AFTER RAIN IS TO BE CLEANED FROM STREETS AND ALLOTMENTS IMMEDIATELY AND CORRECTIVE ACTION TAKEN TO AVOID A RE-OCCURRENCE OF THE FAILURE.
12. **BASIN CONSTRUCTION**
PRIOR TO COMMENCING CONSTRUCTION OF THE DETENTION BASIN THE DIVERSION OF SURFACE WATER FROM THE PROPOSED WORK AREAS, USING MEASURES SUCH AS OPEN DRAINS/SUMPS, ARE REQUIRED TO AID IN SITE DE-WATERING. BASIN TO CONTINUE ACTING AS SEDIMENT BASIN UNTIL 85% OF CATCHMENT CONSTRUCTION IS COMPLETE. THE CLAY FILLING FOR THE BASIN WALLS SHALL BE PLACED IN HORIZONTAL LAYERS OF 200mm THICKNESS AND COMPACTED TO DENSITY RATIO WITHIN THE RANGE 98%-102% STANDARD COMPACTION (AS 1289.5.1.1). PLACEMENT MOISTURE CONTENT SHOULD BE WITHIN THE RANGE OMC -1% TO OMC -2% (WHERE OMC = OPTIMUM MOISTURE CONTENT FOR STANDARD COMPACTION). CONTRACTOR TO PROVIDE SAFETY FENCING TO BASIN DURING CONSTRUCTION AND APPROPRIATE SIGNAGE (PERMANENT OR TEMPORARY).



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FRASERS PROPERTY

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RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST

Level Datum: AHD
Meridian:
PSM:
RL:

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THIS DRAWING IS INTENDED TO BE PRINTED IN COLOUR. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES.

Drawing Title:

GENERAL NOTES
SHEET 1 OF 2

A	03/02/2023	ORIGINAL ISSUE	JH	MG
Rev	Date	Description	DRN	CHK
DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE			A1 UNREDUCED	
CULVERT AND PIPE SIZES IN MILLIMETRES			A3 REDUCED	

Scale:

NOT APPLICABLE

PROJECT NORTH POINT

Project No: 5941	
Designed: JH	Drafted: JH
Approved:	MG
RPEQ	16939
Signed:	
Date:	03/02/2023
Drawing No: 5941 ENG BE3 002	Revision: A

HES BASIN GENERAL NOTES

AUTO DOSER

1.

PROVIDED AS EITHER 'FLOC BOX' OR 'F00D-RAIN' DOSING UNIT OR APPROVED EQUIVALENT TO MANUFACTURERS SPECIFICATION.
2.

DOSER AND SUPPLY OF FLOCCULANT TO BE PROVIDED ON LEVEL PAD 4mX4m WITHIN 10m OF DOSING POINT.
3.

ALL-WEATHER ACCESS TRACK TO BE PROVIDED TO DOSER.
4.

FLOCCULANT PROVIDED AS TURBICLEAR (ACH) OR APPROVED EQUIVALENT. IF ALTERNATIVE FLOCCULANT USED THEN THE BASIN SIZE IS TO BE INCREASED ACCORDING TO JAR SETTLEMENT TEST (REFER TO TABLE BELOW).

JAR SETTLEMENT AFTER 15 MINS	MULTIPLICATION FACTOR TO SETTLING ZONE
(mm)	VOLUME
50	x3.0
75	x2.0
100	x1.5
150	x1.0

BASIN CONSTRUCTION

MATERIALS

5.

EARTH FILL: CLEAN SOIL WITH EMERSON CLASS 2(I), 3, 4 OR 5 AND FREE OF ROOTS, WOODY VEGETATION, ROCKS AND OTHER UNSUITABLE MATERIAL. SOIL WITH EMERSON CLASS 4 AND 5 MAY NOT BE SUITABLE DEPENDING ON PARTICLE SIZE DISTRIBUTION AND DEGREE OF DISPERSION. CLASS 2 (I) SHOULD ONLY BE USED UPON RECOMMENDATION FROM GEOTECHNICAL SPECIALIST.
6.

SPILLWAY ROCK: HARD, ANGULAR, DURABLE, WEATHER RESISTANT AND EVENLY GRADED ROCK WITH 50% BY WEIGHT LARGER THAN THE SPECIFIED NOMINAL (D50) ROCK SIZE. LARGE ROCK SHOULD DOMINATE, WITH SUFFICIENT SMALL ROCK TO FILL THE VOIDS BETWEEN LARGER ROCK. THE DIAMETER OF THE LARGEST ROCK SHOULD BE NO LARGER THAN 1.5 TIMES THE NOMINAL ROCK SIZE. THE SPECIFIC GRAVITY SHOULD BE AT LEAST 2.5.
7.

GEOTEXTILE FABRIC: HEAVY DUTY, NEEDLE-PUNCHED, NON-WOVEN CLOTH, MINIMUM 'BIDIM' A24 OR EQUIVALENT.

CONSTRUCTION

8.

NOTWITHSTANDING ANY DESCRIPTION CONTAINED WITH APPROVED PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SATISFYING THEMSELVES AS TO THE NATURE AND EXTENT OF THE SPECIFIED WORKS AND THE PHYSICAL AND LEGAL CONDITIONS UNDER WHICH THE WORKS WILL BE CARRIED OUT. THIS SHALL INCLUDE MEANS OF ACCESS, EXTENT OF CLEARING, NATURE OF THE MATERIALS TO BE EXCAVATED, TYPE AND SIZE OF MECHANICAL PLANT REQUIRED, LOCATION AND SUITABILITY OF WATER SUPPLY FOR CONSTRUCTION AND TESTING PURPOSES, AND ANY OTHER LIKELY MATTERS AFFECTING THE CONSTRUCTION OF THE WORKS.
9.

REFER TO APPROVED PLANS FOR LOCATION, DIMENSIONS, AND CONSTRUCTION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, DIMENSIONS, OR METHOD OF INSTALLATION, CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.
10.

BEFORE STARTING ANY CLEARING OR CONSTRUCTION, ENSURE ALL THE NECESSARY MATERIALS AND COMPONENTS ARE ON THE SITE TO AVOID DELAYS IN COMPLETING THE SEDIMENT BASIN ONCE WORKS BEGIN.
11.

INSTALL REQUIRED SHORT TERM SEDIMENT CONTROL MEASURES DOWNSTREAM OF THE PROPOSED EARTHWORKS TO CONTROL SEDIMENT RUNOFF DURING CONSTRUCTION OF THE BASIN.
12.

THE AREA TO BE COVERED BY THE EMBANKMENT, BORROW PITS AND INCIDENTAL WORKS, TOGETHER WITH AN AREA EXTENDING BEYOND THE LIMITS OF EACH FOR A DISTANCE NOT EXCEEDING FIVE (5) METRES ALL AROUND MUST BE CLEARED OF ALL TREES, SCRUB, STUMPS, ROOTS, DEAD TIMBER AND RUBBISH AND DISPOSED OF IN A SUITABLE MANNER. DELAY CLEARING THE MAIN BASIN AREA UNTIL THE EMBANKMENT IS COMPLETE.
13.

ENSURE ALL HOLES MADE BY GRUBBING WITHIN THE EMBANKMENT FOOTPRINT ARE FILLED WITH SOUND MATERIAL, ADEQUATELY COMPACTED, AND FINISHED FLUSH WITH THE NATURAL SURFACE.
14.

BEFORE CONSTRUCTION OF THE CUT-OFF TRENCH OR ANY ANCILLARY WORKS WITHIN THE EMBANKMENT FOOTPRINT, ALL GRASS GROWTH AND TOPSOIL MUST BE REMOVED FROM THE AREA TO BE OCCUPIED BY THE EMBANKMENT AND MUST BE DEPOSITED CLEAR OF THIS AREA AND RESERVED FOR TOPDRESSING THE COMPLETED EMBANKMENT.

CUT-OFF TRENCH

15.

EXCAVATE A CUT-OFF TRENCH ALONG THE CENTRE LINE OF THE EARTH FILL EMBANKMENT. CUT THE TRENCH TO STABLE SOIL MATERIAL, BUT IN NO CASE MAKE IT LESS THAN 600mm DEEP. THE CUT-OFF TRENCH MUST EXTEND INTO BOTH ABUTMENTS TO AT LEAST THE ELEVATION OF THE OUTLET SPILLWAY CREST. MAKE THE MINIMUM BOTTOM WIDTH WIDE ENOUGH TO PERMIT OPERATION OF THE EXCAVATION AND COMPACTION EQUIPMENT, BUT IN NO CASE LESS THAN 600mm. MAKE THE SIDE SLOPES OF THE TRENCH NO STEEPER THAN 1:2 (H: V).
16.

ENSURE ALL WATER, LOOSE SOIL, AND ROCK ARE REMOVED FROM THE TRENCH BEFORE BACKFILLING COMMENCES. THE CUT-OFF TRENCH MUST BE BACKFILLED WITH SELECT EARTH-FILL OF THE TYPE SPECIFIED FOR THE EMBANKMENT, AND THIS SOIL MUST HAVE A MOISTURE CONTENT AND DEGREE OF COMPACTION THE SAME AS SPECIFIED FOR THE CORE ZONE.
17.

MATERIAL EXCAVATED FROM THE CUT-OFF TRENCH MAY BE USED IN THE CONSTRUCTION OF THE EMBANKMENT PROVIDED IT IS SUITABLE AND IT IS PLACED IN THE CORRECT ZONE ACCORDING TO ITS CLASSIFICATION.

EMBANKMENT

18.

SCARIFY AREAS ON WHICH FILL IS TO BE PLACED BEFORE PLACING THE FILL.
19.

ENSURE ALL FILL MATERIAL USED TO FORM THE EMBANKMENT MEETS THE SPECIFICATIONS CERTIFIED BY A SOIL SCIENTIST OF GEOTECHNICAL SPECIALIST.
20.

THE FILL MATERIAL MUST CONTAIN SUFFICIENT MOISTURE SO IT CAN BE FORMED BY HAND INTO A BALL WITHOUT CRUMBLING. IF WATER CAN BE SQUEEZED OUT OF THE BALL, IT IS TOO WET FOR PROPER COMPACTION. PLACE FILL MATERIAL IN 150 TO 200mm CONTINUOUS LAYERS OVER THE ENTIRE LENGTH OF THE FILL AREA AND THEN COMPACT BEFORE PLACEMENT OF FURTHER FILL.
21.

UNLESS SPECIFIED ON THE APPROVED PLANS, COMPACT THE SOIL AT ABOUT 1% TO 2% WET OPTIMUM AND TO 95% MODIFIED OR 100% STANDARD COMPACTION.
22.

WHERE BOTH DISPERSIVE AND NON-DISPERSIVE CLASSIFIED EARTH-FILL MATERIALS ARE AVAILABLE, NON-DISPERSIVE EARTH-FILL MUST BE USED IN THE CORE ZONE. THE REMAINING CLASSIFIED EARTH-FILL MATERIALS MUST ONLY BE USED AS DIRECTED BY THE SITE SUPERINTENDENT.
23.

WHERE SPECIFIED, CONSTRUCT THE EMBANKMENT TO AN ELEVATION 10% HIGHER THAN THE DESIGN HEIGHT TO ALLOW FOR SETTLING; OTHERWISE FINISHED DIMENSIONS OF THE EMBANKMENT AFTER SPREADING OF TOPSOIL MUST CONFORM TO THE DRAWING WITH A TOLERANCE OF 75mm FROM SPECIFIED DIMENSIONS.
24.

ENSURE DEBRIS AND OTHER UNSUITABLE BUILDING WASTE IS NOT PLACED WITHIN THE EARTH EMBANKMENT.
25.

AFTER COMPLETION OF THE EMBANKMENT ALL LOOSE UNCOMPACTED EARTH-FILL MATERIAL ON THE UPSTREAM AND DOWNSTREAM BATTER MUST BE REMOVED PRIOR TO SPREADING TOPSOIL.
26.

TOPSOIL AND RE-VEGETATE/STABILISE ALL EXPOSED EARTH AS DIRECTED WITHIN THE APPROVED PLANS.
27.

THE AREA TO BE COVERED BY THE STORED WATER OUTSIDE OF THE LIMITS OF THE BORROW PITS MUST BE CLEARED OF RUBBISH. TREES MUST BE CUT DOWN STUMP HIGH AND REMOVED FROM THE IMMEDIATE VICINITY OF THE WORK.
28.

ESTABLISH ALL REQUIRED INFLOW CHUTES AND INLET BAFFLES IF SPECIFIED TO ENABLE WATER TO DISCHARGE INTO THE BASIN IN A MANNER THAT WILL NOT CAUSE SOIL EROSION OR THE RE-SUSPENSION OF SETTLED SEDIMENT.
29.

INSTALL A SEDIMENT STORAGE LEVEL MARKER POST WITH A CROSS MEMBER SET JUST BELOW THE TOP OF THE SEDIMENT STORAGE ZONE (AS SPECIFIED ON THE APPROVED PLANS). USE AT LEAST A 75mm WIDE POST FIRMLY SET INTO THE BASIN FLOOR.
30.

IF SPECIFIED, INSTALL INTERNAL SETTLING POND BAFFLES. ENSURE THE CREST OF THESE BAFFLES IS SET LEVEL WITH, OR JUST BELOW, THE ELEVATION OF THE EMERGENCY SPILLWAY.
31.

INSTALL ALL APPROPRIATE MEASURES TO MINIMISE SAFETY RISK TO ON-SITE PERSONNEL AND THE PUBLIC CAUSED BY THE PRESENCE OF THE SETTLING POND. AVOID STEEP, SMOOTH INTERNAL SLOPES. APPROPRIATELY FENCE THE SETTLING POND AND POST WARNING SIGNS IF UNSUPERVISED PUBLIC ACCESS IS LIKELY OR THERE IS CONSIDERED TO BE AN UNACCEPTABLE RISK TO THE PUBLIC.

SPILLWAY CONSTRUCTION

32.

THE SPILLWAY MUST BE EXCAVATED AS SHOWN ON THE PLANS, AND THE EXCAVATED MATERIAL IF CLASSIFIED AS SUITABLE, MUST BE USED IN THE EMBANKMENT, AND IF NOT SUITABLE IT MUST BE DISPOSED OF INTO SPOIL HEAPS.
33.

ENSURE EXCAVATED DIMENSIONS ALLOW ADEQUATE BOXING-OUT SUCH THAT THE SPECIFIED ELEVATIONS, GRADES, CHUTE WIDTH, AND ENTRANCE AND EXIT SLOPES FOR THE EMERGENCY SPILLWAY WILL BE ACHIEVED AFTER PLACEMENT OF THE ROCK OR OTHER SCOUR PROTECTION MEASURES AS SPECIFIED IN THE PLANS.
34.

PLACE SPECIFIED SCOUR PROTECTION MEASURES ON THE EMERGENCY SPILLWAY. ENSURE THE FINISHED GRADE BLENDS WITH THE SURROUNDING AREA TO ALLOW A SMOOTH FLOW TRANSITION FROM SPILLWAY TO DOWNSTREAM CHANNEL.
35.

IF A SYNTHETIC FILTER FABRIC UNDERLAY IS SPECIFIED, PLACE THE FABRIC DIRECTLY ON THE PREPARED FOUNDATION. IF MORE THAN 1 SHEET OF FILTER FABRIC IS REQUIRED, OVERLAP THE EDGES BY AT LEAST 300mm AND PLACE ANCHOR PINS AT MINIMUM 1m SPACING ALONG THE OVERLAP. BURY THE UPSTREAM END OF THE FILTER FABRIC A MINIMUM 300mm BELOW GROUND AND WHERE NECESSARY, BURY THE LOWER END OF THE FABRIC OR OVERLAP A MINIMUM 300mm OVER THE NEXT DOWNSTREAM SECTION AS REQUIRED. ENSURE THE FILTER FABRIC EXTENDS AT LEAST 1000mm UPSTREAM OF THE SPILLWAY CREST.
36.

TAKE CARE NOT TO DAMAGE THE FABRIC DURING OR AFTER PLACEMENT. IF DAMAGE OCCURS, REMOVE THE ROCK AND REPAIR THE SHEET BY ADDING ANOTHER LAYER OF FABRIC WITH A MINIMUM OVERLAP OF 300mm AROUND THE DAMAGED AREA. IF EXTENSIVE DAMAGE IS SUSPECTED, REMOVE AND REPLACE THE ENTIRE SHEET.
37.

WHERE LARGE ROCK IS USED, OR MACHINE PLACEMENT IS DIFFICULT, A MINIMUM 100mm LAYER OF FINE GRAVEL, AGGREGATE, OR SAND MAY BE NEEDED TO PROTECT THE FABRIC.
38.

PLACEMENT OF ROCK SHOULD FOLLOW IMMEDIATELY AFTER PLACEMENT OF THE FILTER FABRIC. PLACE ROCK SO THAT IT FORMS A DENSE, WELL GRADED MASS OF ROCK WITH A MINIMUM OF VOIDS. THE DESIRED DISTRIBUTION OF ROCK THROUGHOUT THE MASS MAY BE OBTAINED BY SELECTIVE LOADING AT THE QUARRY AND CONTROLLED DUMPING DURING FINAL PLACEMENT.
39.

THE FINISHED SLOPE SHOULD BE FREE OF POCKETS OF SMALL ROCK OR CLUSTERS OF LARGE ROCKS. HAND PLACING MAY BE NECESSARY TO ACHIEVE THE PROPER DISTRIBUTION OF ROCK SIZES TO PRODUCE A RELATIVELY SMOOTH, UNIFORM SURFACE. THE FINISHED GRADE OF THE ROCK SHOULD BLEND WITH THE SURROUNDING AREA. NO OVER FALL OR PROTRUSION OF ROCK SHOULD BE APPARENT.
40.

ENSURE THAT THE FINAL ARRANGEMENT OF THE SPILLWAY CREST WILL NOT PROMOTE EXCESSIVE FLOW THROUGH THE ROCK SUCH THAT THE WATER CAN BE RETAINED WITHIN THE SETTLING BASIN AT THE ELEVATION NO LESS THAN 50mm ABOVE OF BELOW THE NOMINATED SPILLWAY CREST ELEVATION.

Client:



FRASERS PROPERTY

Project:

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STAGE 3

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RPD:

Lot:

Plan:

Local Authority:

501

SP295994

CITY OF GOLD COAST

Level Datum:

Meridian:

PSM:

RL:

AHD

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Drawing Title:

GENERAL NOTES
SHEET 2 OF 2

A	03/02/2023	ORIGINAL ISSUE	JH	MG
Rev	Date	Description	DRN	CHK

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE	A1 UNREDUCED
CULVERT AND PIPE SIZES IN MILLIMETRES	A3 REDUCED

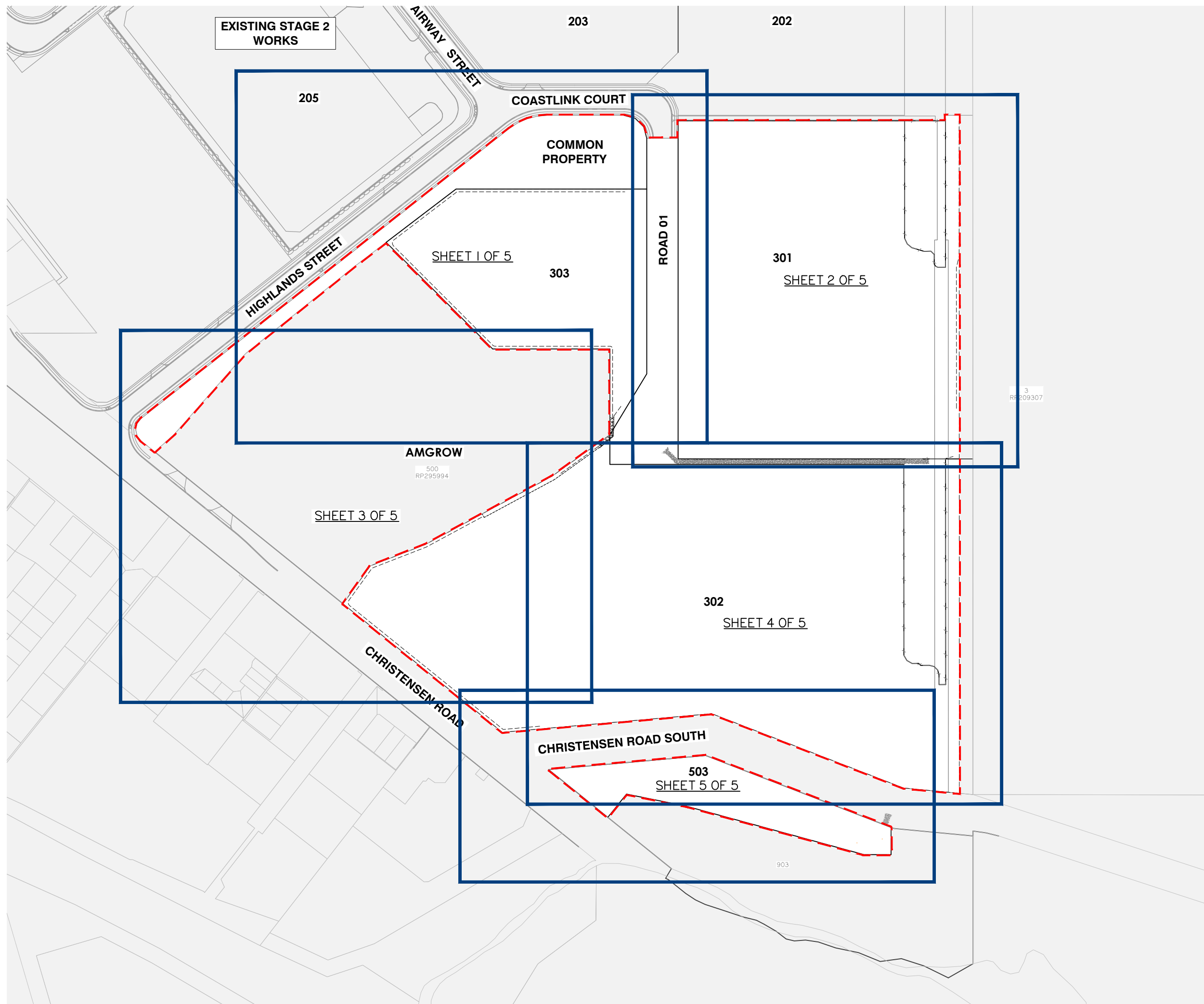
Scale:

NOT APPLICABLE

PROJECT NORTH POINT

Project No.	5941
Designed: JH	Drafted: JH
Approved: MG	
RPEQ	16939
Signed:	
Date:	03/02/2023

Drawing No:	Revision
5941 ENG BE3 003	A



Client:



FRASERS PROPERTY

Project:

VANTAGE YATALA STAGE 3

Site Address:

60 STAPYLTON JACOBS
WELL ROAD, STAYPLTON
QLD, 4207

RPD:

Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST

Level Datum: AHD
Meridian:
PSM:
RL:

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Drawing Title:

KEY PLAN LAYOUT

A lev	03/02/23 Date	ORIGINAL ISSUE Description	JH DRN	MG CHK	
DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE.			A1 UNREDUCED		
CULVERT AND PIPE SIZES IN MILLIMETRES			A3 REDUCED		

Scale:



0 12.5 25 37.5 50 62.5m 1:1250 (A1) 1:2500 (A3)

PROJECT NORTH POINT



Project No. 5941

Designed: JH

Drafted: JH

Approved:

MG

RPEQ

16939

Signed:

[Signature]

Date:

3/02/2023

Drawing No:	Revision
5941 ENG BE3 005	A



Client:



FRASERS PROPERTY

FRASERS PROPERTY

Project:

VANTAGE YATALA
STAGE 3

Site Address:

60 STAPYLTON JACOBS
WELL ROAD, STAPYLTON
QLD, 4207

RPD:

Lot:

Plan:

Local Authority:

501
SP295994
CITY OF GOLD COAST

Level Datum:

Meridian:

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Drawing Title:

EXISTING LAYOUT PLAN

A.	03/02/23	ORIGINAL ISSUE	JH	MG
Rev	Date	Description	DRN	CHK

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE
CULVERT AND PIPE SIZES IN MILLIMETRES

A1 UNREDUCED
A3 REDUCED

Scale:

0

12.5

25

37.5

50

62.5m

1:1250 (A1) 1:2500 (A3)

PROJECT NORTH POINT



Project No. 5941

Designed: JH

Approved:

RPEQ

Signed:

Date:

Drafted: JH

MG

16939



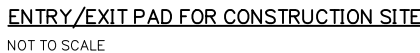
03/02/2023

Drawing No:

5941 ENG BE3 010

Revision

A



1. CHAIN WIRE MESH PANELS WITH SHADE CLOTH (IF REQUIRED) ATTACHED, HELD IN PLACE WITH CONCRETE FEET.
2. ALTERNATIVE PLYWOOD OR WOODEN PALING FENCE PANELS. THIS FENCING MATERIAL ALSO PREVENTS BUILDING MATERIALS OR SOIL ENTERING THE TPZ.
3. MULCH INSTALLATION ACROSS SURFACE OF TPZ (AT THE DISCRETION OF THE PROJECT ARBORIST.) NO EXCAVATION, CONSTRUCTION ACTIVITY, GRADE CHANGES, SURFACE TREATMENT OR STORAGE OF MATERIALS OF ANY KIND IS PERMITTED WITHIN THE TPZ.
4. BRACING IS PERMITTED WITHIN THE TPZ. INSTALLATION OF SUPPORTS SHOULD AVOID DAMAGING ROOTS.
5. THE INSTALLATION CONTRACTOR IS NOT TO UNDERTAKE ANY PRUNING OF TREES. TREE MANAGEMENT IS TO BE UNDERTAKEN BY A SUITABLY QUALIFIED ARBORIST.
6. NO STOCKPILE/S ARE PERMITTED WITHIN THE ZONE OF ANY RETAINED VEGETATION WITHOUT SUPERVISION AND AUTHORIZATION OF THE SUPERVISING ARBORIST.
7. NO CLEARING OF PROTECTED SIZE VEGETATION IS TO OCCUR WITHOUT APPROVAL FROM LOGAN CITY COUNCIL.

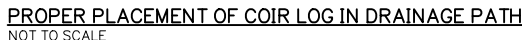
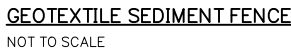
DETERMINING THE TPZ

THE RADIUS OF THE TPZ IS CALCULATED FOR EACH TREE BY MULTIPLYING ITS DBH X 12 = TRUNK DIAMETER MEASURED AT 1.4M ABOVE GROUND. RADIUS IS MEASURED FROM THE CENTRE OF THE STEM AT GROUND LEVEL.

A TPZ SHOULD NOT BE LESS THAN 2M NOR GREATER THAN 15M (EXCEPT WHERE CROWN PROTECTION IS REQUIRED).
THE TPZ OF PALMS, OTHER MONOCOTS, CYCADS AND TREE FERNS SHOULD NOT BE LESS THAN 1M OUTSIDE THE CROWN PROJECTION.

PROTECTIVE FENCING

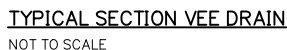
NOT TO SCALE



NOT TO SCALE



NOT TO SCALE



FRASERS PROPERTY

Project:

VANTAGE YATALA STAGE 3

Site Address:

60 STAPYLTON JACOBS
WELL ROAD, STAYPLTON
QLD, 4207

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST

Level Datum: AHD
Meridian:
PSM:
RL:

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Drawing Title

SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

[illegible]

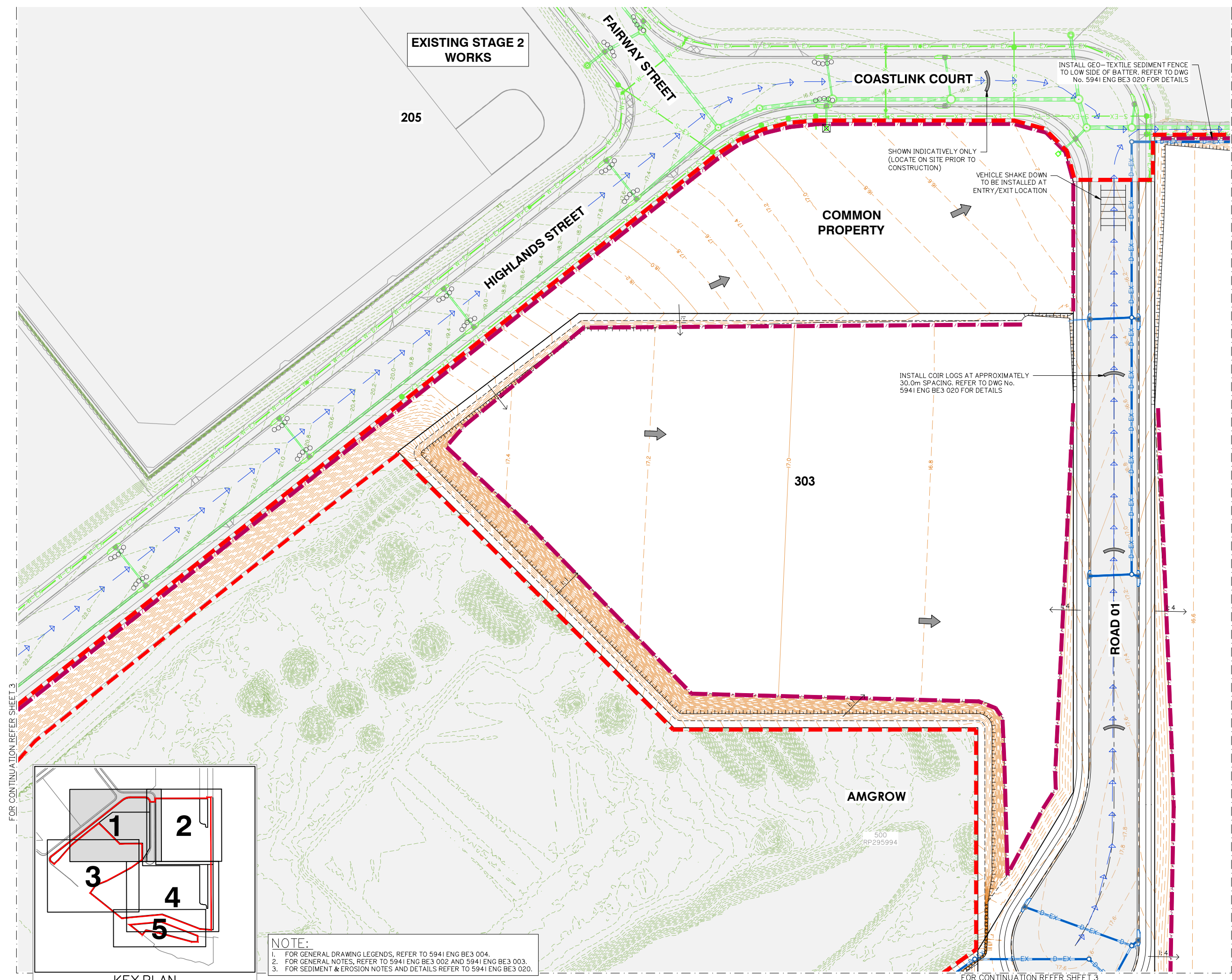
A	03/02/23	ORIGINAL ISSUE	JH	MG
Rev	Date	Description	DRN	CHK
DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE.			A1 UNREDUCED	
CULVERT AND PIPE SIZES IN MILLIMETRES			A3 REDUCED	

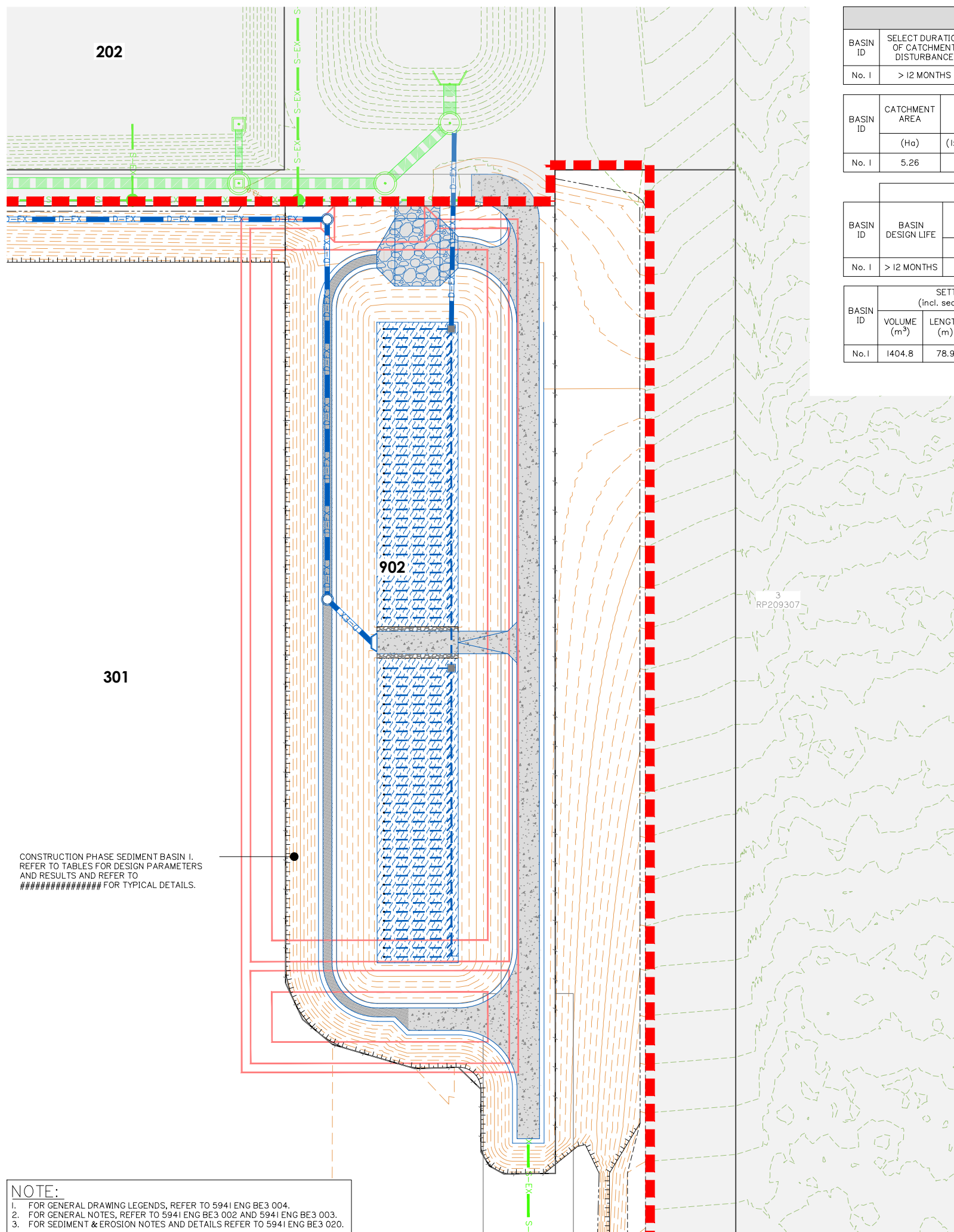
Scale:

NOT APPLICABLE

PROJECT NORTH POINT

Project No. 5941	
Designed: JH	Drafted: JH
Approved:	MG
RPEQ	16939
Signed:	
Date:	03/02/2023
Drawing No: 5941 ENG BE3 020	
	Revision: A





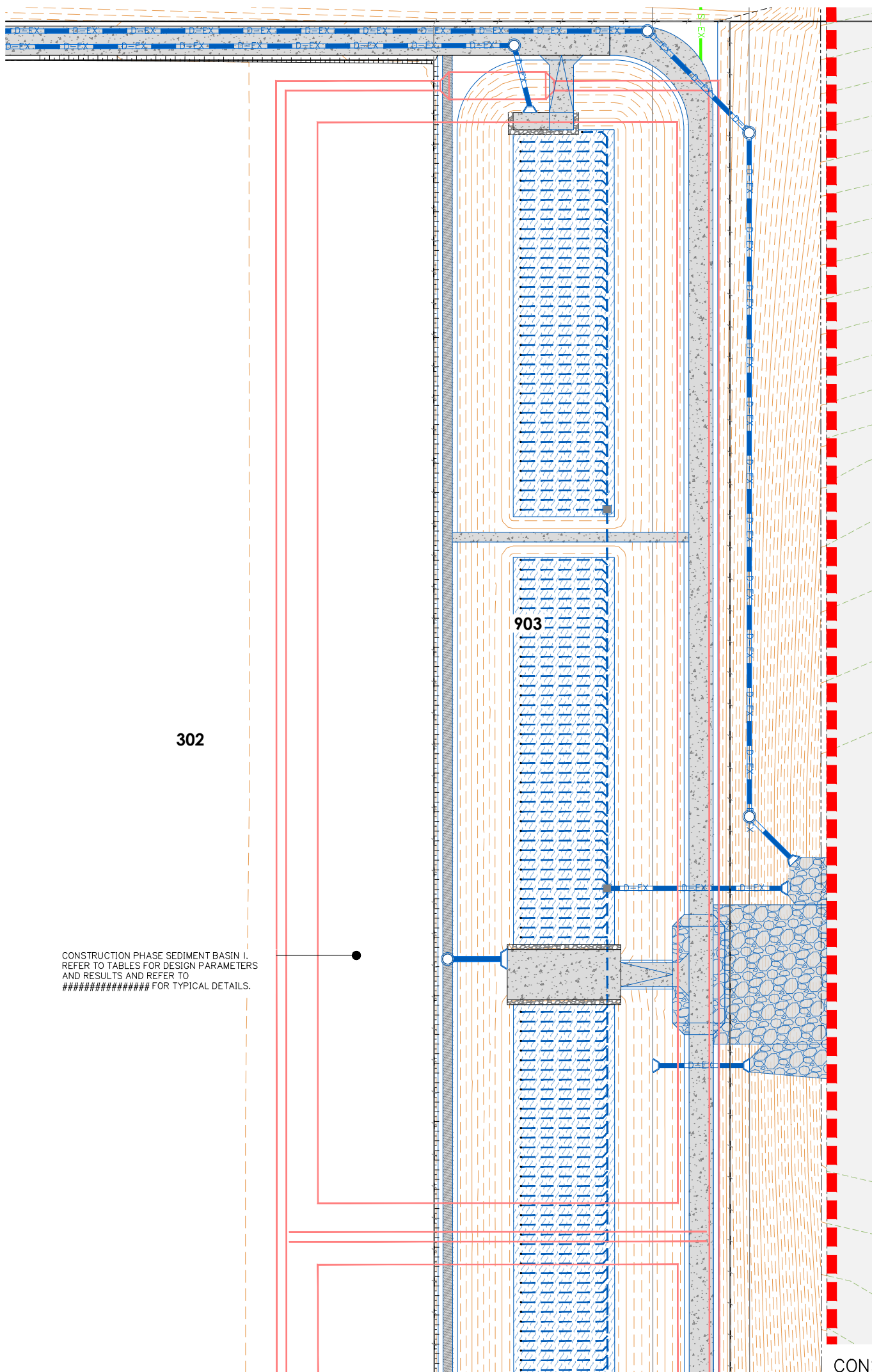
SEDIMENT BASIN I DESIGN							
BASIN ID	SELECT DURATION OF CATCHMENT DISTURBANCE	IS DEWATERING OF TRENCHES REQUIRED?	EQUIPMENT LEASE OR PURCHASE?	SELECT CATCHMENT SCALE	DO ALL FLOWS ENTER BASIN AT SINGLE POINT?	BASIN TYPE	DOSING EQUIPMENT
No. I	> 12 MONTHS	NO	LEASE	> 5Ha	NO	TYPE B	IFOD–RAIN

BASIN ID	CATCHMENT AREA	DESIGN EVENT	I_x yr, 24 hr	WATER TEMPERATURE	K_s	SETTLING ZONE DEPTH (D_s)	W: L	OPTIMUM LOW–FLOW DECAN T RATE	SELECTED LOW–FLOW DECAN T RATE (Q_d)	MIN SETT LING ZONE VOLUME (Min V_s)	MIN SETT LING ZONE SURFACE AREA (Min A_s)	LIMITING CRITERIA
	(Ha)	(I: X YEARS)	(mm/hr)	(°C)	(s/m)	(m)	(I: X)	(L/s/Ha)	(L/s/Ha)	(m ³)	(m ²)	
No. I	5.26	I	64.2	20	–	0.8	3	–	–	1081.0	–	VOLUME

SPILLWAY											
BASIN ID	BASIN DESIGN LIFE	DESIGN ARI	C_{10}	C	t_c	I	Q	HEAD OVER SPILLWAY	SPILLWAY CREST LENGTH	SPILLWAY CREST RL	MIN EMBANKMENT RL
		yr				(mm/hr)	(m ³ /s)		(m)	(m)	(m)
No. I	> 12 MONTHS	I: 20	0.80	0.84	20.00	34.40	0.46	0.50	0.80	13.50	14.45

BASIN ID	SETTLING ZONE (incl. sediment storage)				FOREBAY				HYDRAULIC CONTROLS			
	VOLUME (m ³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	VOLUME (m ³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	SPILLWAY CREST LENGTH (m)	SPILLWAY CREST (RL)	EMBANKMENT (RL)	LEVEL SPREADER CREST (RL)
No. I	1404.8	78.9	26.3	0.8	163.9	10.8	26.3	0.8	1.7	13.50	14.45	13.70

CONSTRUCTION PHASE BIO-RETENTION BASIN I LAYOUT PLAN



SEDIMENT BASIN 2 DESIGN							
BASIN ID	SELECT DURATION OF CATCHMENT DISTURBANCE	IS DEWATERING OF TRENCHES REQUIRED?	EQUIPMENT LEASE OR PURCHASE?	SELECT CATCHMENT SCALE	DO ALL FLOWS ENTER BASIN AT SINGLE POINT?	BASIN TYPE	DOSING EQUIPMENT
No. 2	> 12 MONTHS	NO	LEASE	> 5Ha	NO	TYPE B	IFOD—RAIN

BASIN ID	CATCHMENT AREA	DESIGN EVENT	$I_{x,yr, 24\text{ hr}}$	WATER TEMPERATURE	K_s	SETTLING ZONE DEPTH (D_s)	W: L	OPTIMUM LOW-FLOW DECAT RATE	SELECTED LOW-FLOW DECAT RATE (Q_d)	MIN SETTLING ZONE VOLUME (Min V_s)	MIN SETTLING ZONE SURFACE AREA (Min A_s)	LIMITING CRITERIA
	(Ha)	(I: X YEARS)	(mm/hr)	(°C)	(s/m)	(m)	(I: X)	(L/s/Ha)	(L/s/Ha)	(m ³)	(m ²)	
No. 2	II.01	I	64.2	20	—	0.8	3	—	—	2904.5	—	VOLUME

BASIN ID	BASIN DESIGN LIFE	DESIGN ARI	C ₁₀	C	tc	I	Q	HEAD OVER SPILLWAY	SPILLWAY CREST LENGTH	SPILLWAY CREST RL	MIN EMBANKMENT RL
		yr				(mm/hr)	(m ³ /s)	(m)	(m)	(m)	(m)
No. 2	> 12 MONTHS	1: 20	0.80	0.84	20.00	34.40	0.46	0.50	0.80	13.50	14.45

BASIN ID	SETTLING ZONE (incl. sediment storage)				FOREBAY				HYDRAULIC CONTROLS			
	VOLUME (m³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	VOLUME (m³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	SPILLWAY CREST LENGTH (m)	SPILLWAY CREST (RL)	EMBANKMENT (RL)	LEVEL SPREADER CREST (RL)
No.2	2940.5	111.7	37.2	0.79	327.4	11.2	37.2	0.79	3.5	16.20	16.95	16.40

CONSTRUCTION PHASE BIO-RETENTION BASIN 2 LAYOUT PLAN

NOTE:

1. FOR GENERAL DRAWING LEGENDS, REFER TO 5941 ENG BE3 004.
2. FOR GENERAL NOTES, REFER TO 5941 ENG BE3 002 AND 5941 ENG BE3 003.
3. FOR SEDIMENT & EROSION NOTES AND DETAILS REFER TO 5941 ENG BE3 020.



Client:



FRASERS PROPERTY

Project:

VANTAGE YATALA STAGE 3

Site Address:

60 STAPYLTON JACOBS
WELL ROAD, STAYPLTON
QLD, 4207

RPD:

Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST

Level Datum: AHD
Meridian:
PSM:
RL:

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Drawing Title:

CONSTRUCTION PHASE BIO-RETENTION BASIN 2 LAYOUT PLAN

A	03/02/23	ORIGINAL ISSUE	JH	MG	
Rev	Date	Description	DRN	CHK	
DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE			A1 UNREDUCED		
CULVERT AND PIPE SIZES IN MILLIMETRES			A3 REDUCED		

Scale:



PROJECT NORTH POINT



Project No. 5941

Designed: JH

Drafted: JH

Approved:

MG

RPEQ

16939

Signed:

Date:

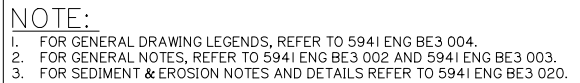
03/02/2023

Drawing No:

Revision

5941 ENG BE3 031

A



BASIN ID	SETTLING ZONE (incl. sediment storage)				FOREBAY				HYDRAULIC CONTROLS			
	VOLUME (m³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	VOLUME (m³)	LENGTH (m)	WIDTH (m)	DEPTH (m)	SPILLWAY CREST LENGTH (m)	SPILLWAY CREST (RL)	EMBANKMENT (RL)	LEVEL SPREADER CREST (RL)
No.3	209.4	33.8	11.3	0.81	30.77	3.4	11.3	0.81	3.0	12.70	13.0	12.72

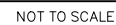
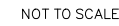
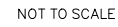
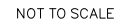
503

CONSTRUCTION PHASE SEDIMENT BASIN I.
REFER TO TABLES FOR DESIGN PARAMETERS
AND RESULTS AND REFER TO
FOR TYPICAL DETAILS.

Drawing Title:

CONSTRUCTION PHASE
TYPICAL DETAILS

PROJECT NORTH POINT	
	
Project No. 5941	
Designed: JH	Drafted: JH
Approved:	MG
RPEQ	16939
Signed:	
Date:	03/02/2023
Drawing No. 5941 ENG BE3 032	
Revision A	





Project:

VANTAGE YATALA
STAGE 3

Site Address:

60 STAPYLTON JACOBS
WELL ROAD, STAYPLTON
QLD, 4207

RPD:

Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST
Level Datum:	AHD
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Drawing Title:

BULK EARTHWORKS
LAYOUT PLAN
SHEET 5 OF 5

[illegible]

A Rev	03/02/23 Date	ORIGINAL ISSUE Description	JH DRN	M Ch
DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE.			A1 UNREDUCED	
CULVERT AND PIPE SIZES IN MILLIMETRES			A3 REDUCED	

Scale:

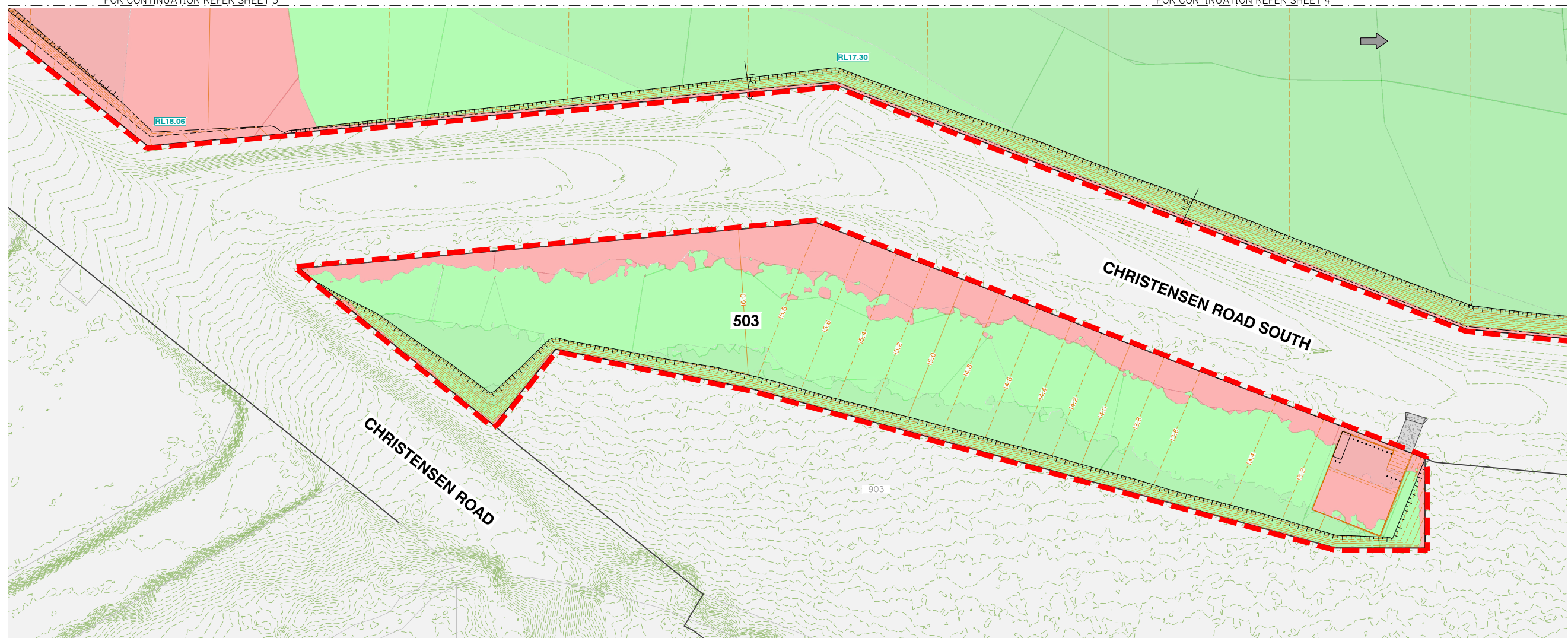


0 5 10 15 20 25m 1:500 (A1) 1:1000 (A3)

PROJECT NORTH POINT

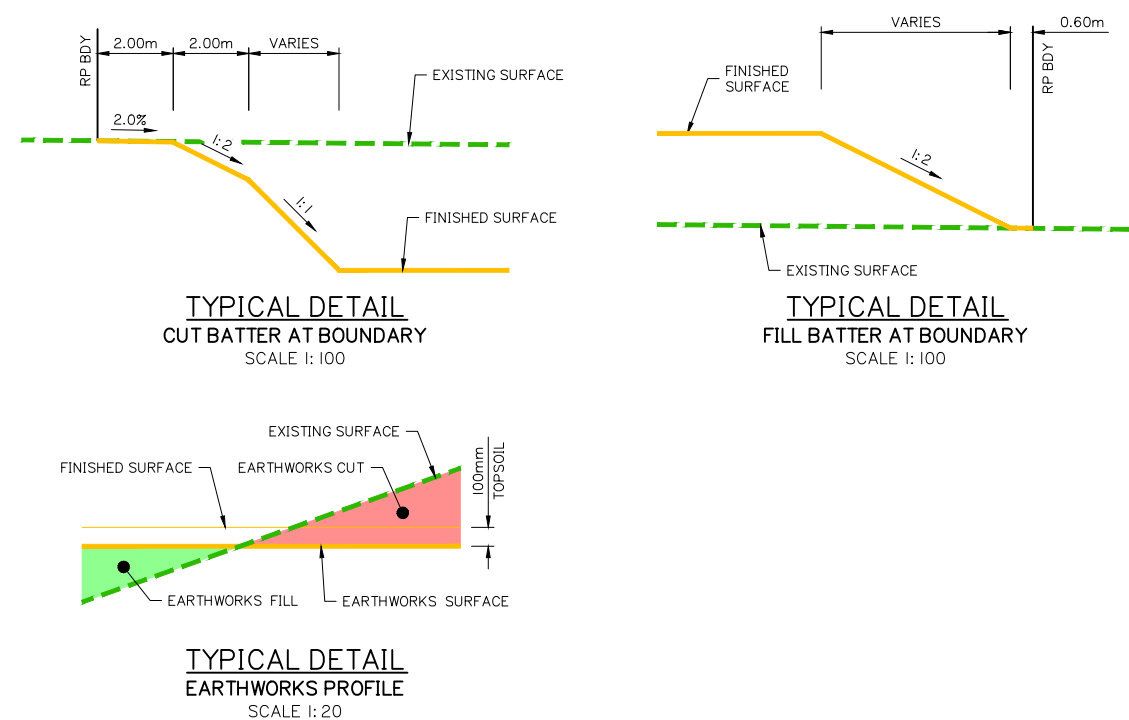
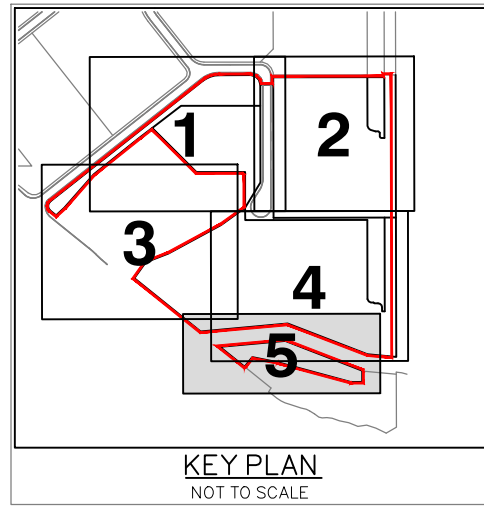


Project No. 5941	
Designed: JH	Drafted: JH
Approved:	MG
RPEQ	16939
Signed:	
Date:	03/02/2023
Drawing No: 5941 ENG BE3 054	
	Revision A



1. BULK EARTHWORKS VOLUMES ARE CALCULATED TO AN ASSUMED PAVEMENT SUBGRADE LEVEL OF -0.290m BELOW FSL OF PAVEMENT (WHERE IN FILL), AND -0.440m BELOW FSL OF PAVEMENT (WHERE IN CUT). FINAL PAVEMENT DESIGN DEPTHS ARE TO BE CONFIRMED IN THE DETAILED CIVIL DESIGN PHASE.
2. THE DESIGN ROAD VERGE PROFILES ARE DESIGNED TO SUBGRADE LEVEL AT AN ASSUMED -0.10m BELOW FSL OF VERGE. THE EARTHWORKS VOLUMES REFLECT THIS.
3. BULK EARTHWORKS VOLUMES ARE CALCULATED TO THE UNDERSIDE OF THE TREATMENT ZONE FILTER MEDIA AND DRAINAGE LAYERS, UTILISING -1.0m BELOW FINISHED BASIN FLOOR LEVEL.
4. IT IS ASSUMED THAT 100mm OF TOPSOIL IS STRIPPED PRIOR TO EARTHWORKS ACTIVITIES COMMENCING. THEREFORE THE VOLUMES STATED ARE 'POST-STRIP' VOLUMES.
5. BULK EARTHWORKS VOLUMES ARE CALCULATED TO THE PROPOSED LOT BOUNDARY EXTENT. NO EXTERNAL EARTHWORKS HAS BEEN POSSED IN THE EXTENT OF THE WORK.
6. SPOIL VOLUMES GENERATED FROM SERVICE TRENCHES & BUILDING WORKS ARE NOT REFLECTED IN THE CALCULATIONS. SIMILARLY, EARTHWORKS REQUIRED FOR LOT ACCESS RAMPS IS NOT REFLECTED IN THE CALCULATIONS.

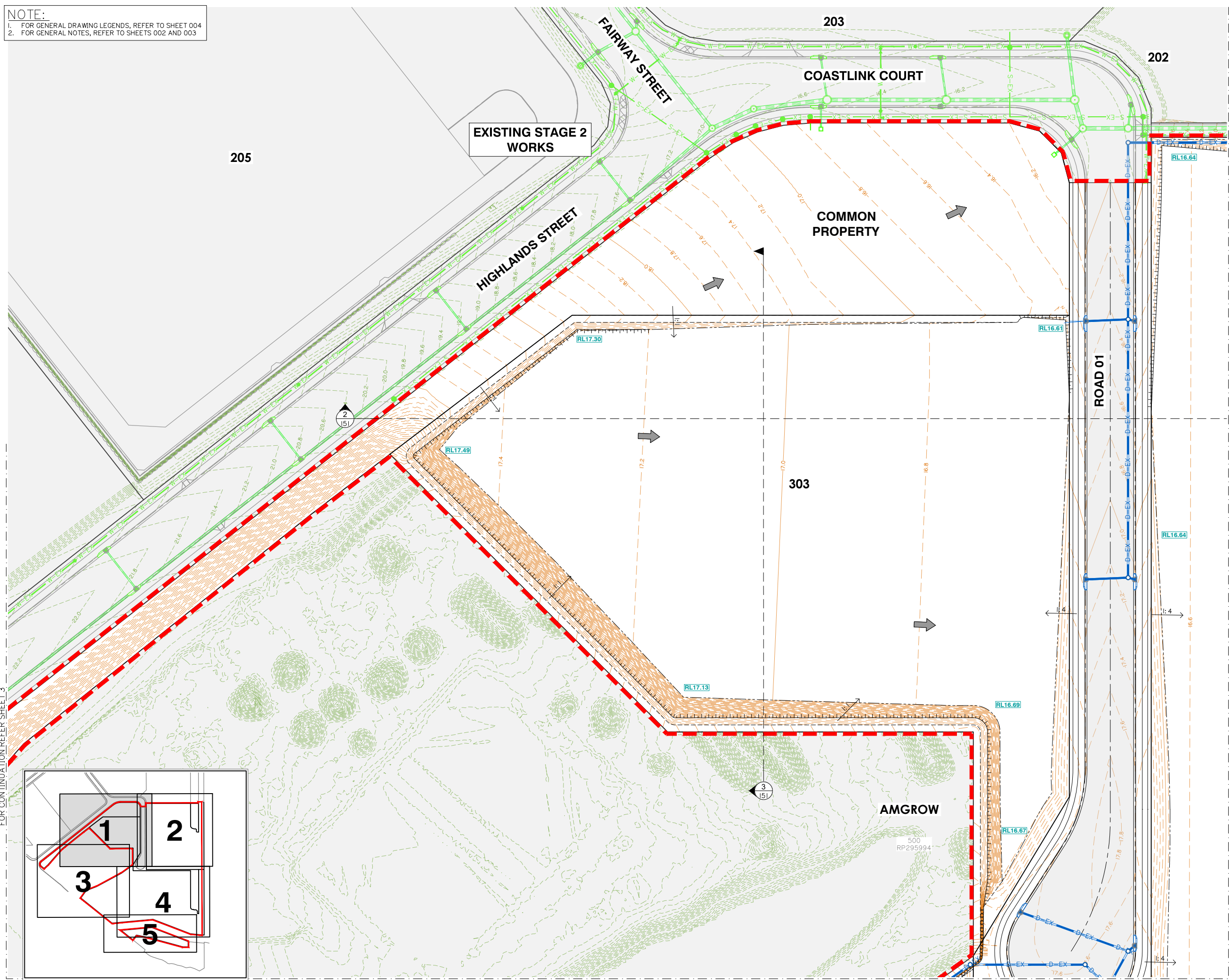
EARTHWORKS VOLUME SUMMARY	
CUT	265,465 m ³
FILL	235,042 m ³
CUT TO SPOIL	30,423 m ³



BULK EARTHWORKS DEPTH RANGE LEGEND			
-10	to	-9 m	
-9	to	-8 m	
-8	to	-7 m	
-7	to	-6 m	
-6	to	-5 m	
-5	to	-4 m	
-4	to	-3 m	
-3	to	-2 m	
-2	to	-1 m	
-1	to	0 m	
0	to	1 m	
1	to	2 m	
2	to	3 m	
3	to	4 m	
4	to	5 m	
5	to	6 m	
6	to	7 m	
7	to	8 m	
8	to	9 m	

NOTE:

1. FOR GENERAL DRAWING LEGENDS, REFER TO SHEET 004
2. FOR GENERAL NOTES, REFER TO SHEETS 002 AND 003



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est 1985

planning | environment | landscape | engineering | survey

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Gold Coast | 76 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

Client:

 **FRASERS
PROPERTY**

FRASERS PROPERTY

Project:

VANTAGE YATALA
STAGE 3

Site Address:

60 STAPYLTON JACOBS
WELL ROAD, STAYPLTON
QLD, 4207

RPD:	
Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST
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Drawing Title:

FINISHED SURFACE
LAYOUT PLAN
SHEET 1 OF 5

[illegible]

A Rev	03/02/23 Date	ORIGINAL ISSUE Description	JH DRN	MG CHK
DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE.			A1 UNREDUCED	
CULVERT AND PIPE SIZES IN MILLIMETERS			A3 REDUCED	

Scale:



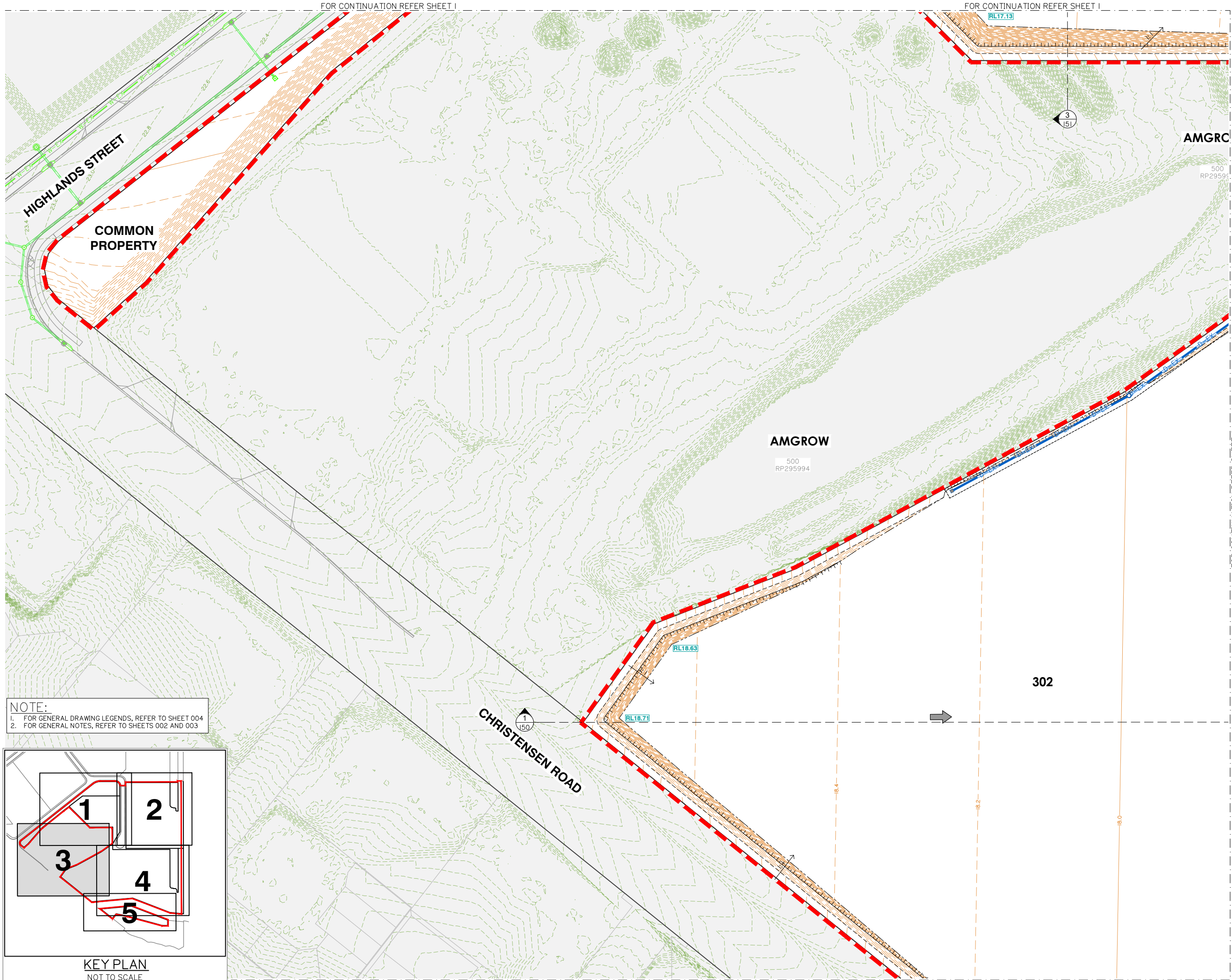
0 5 10 15 20 25m

1:500 (A1) 1:1000 (A3)

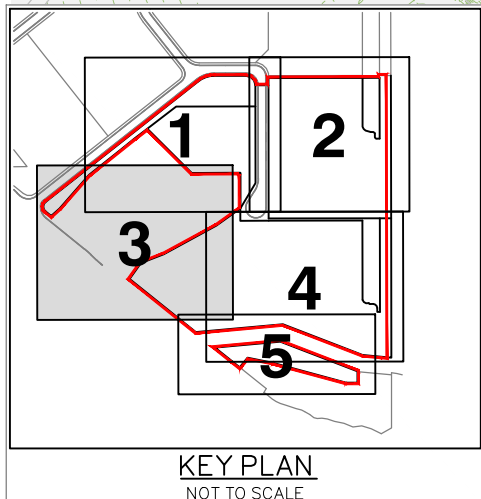
PROJECT NORTH POINT



Project No. 5941	
Designed: JH	Drafted: JH
Approved:	MG
RPEQ	16939
Signed:	
Date:	03/02/2023
Drawing No: 5941 ENG BE3 100	
Revision: A	



NOTE:
1. FOR GENERAL DRAWING LEGENDS, REFER TO SHEET 004
2. FOR GENERAL NOTES, REFER TO SHEETS 002 AND 003





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Gold Coast | 76 Business Street, Yatala QLD | PO Box 392, Beerleigh 4207

Client:



FRASERS PROPERTY

Project:

VANTAGE YATALA
STAGE 3

Site Address:

60 STAPYLTON JACOBS
WELL ROAD, STAPYLTON
QLD, 4207

RPD:

Lot: 501
Plan: SP295994
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Drawing Title:

FINISHED SURFACE
LAYOUT PLAN
SHEET 3 OF 5

Rev	Date	Description	DRN	CHK
A	03/02/23	ORIGINAL ISSUE	JH	MG

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE
CULVERT AND PIPE SIZES IN MILLIMETRES

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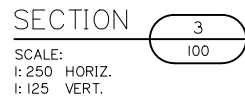
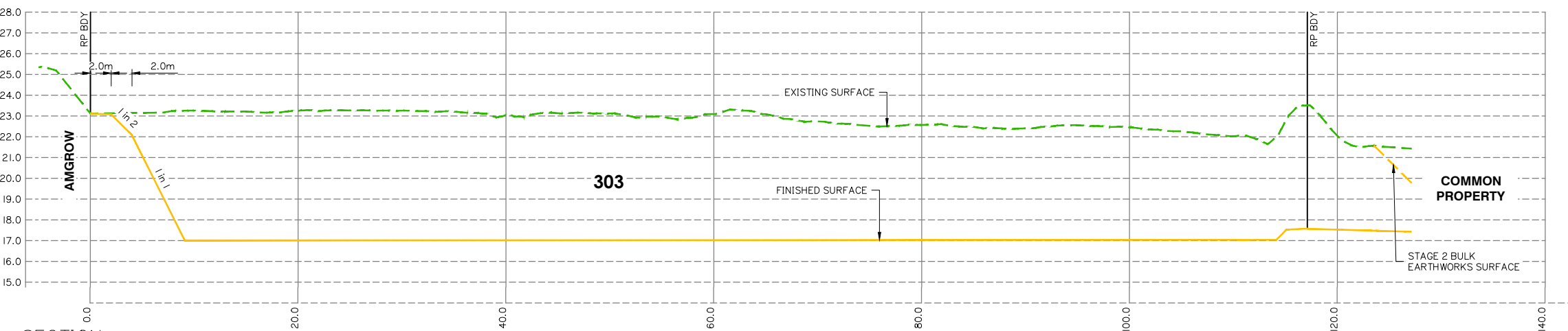
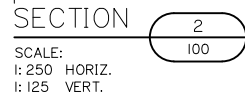
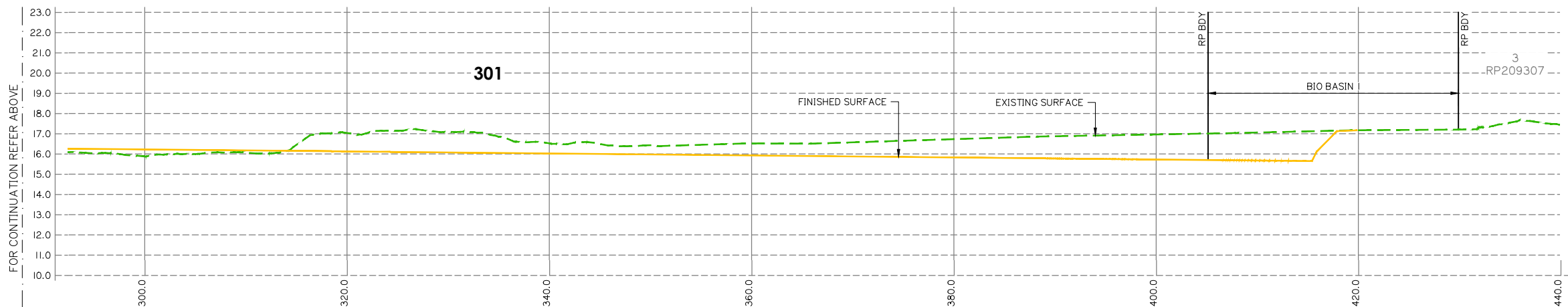
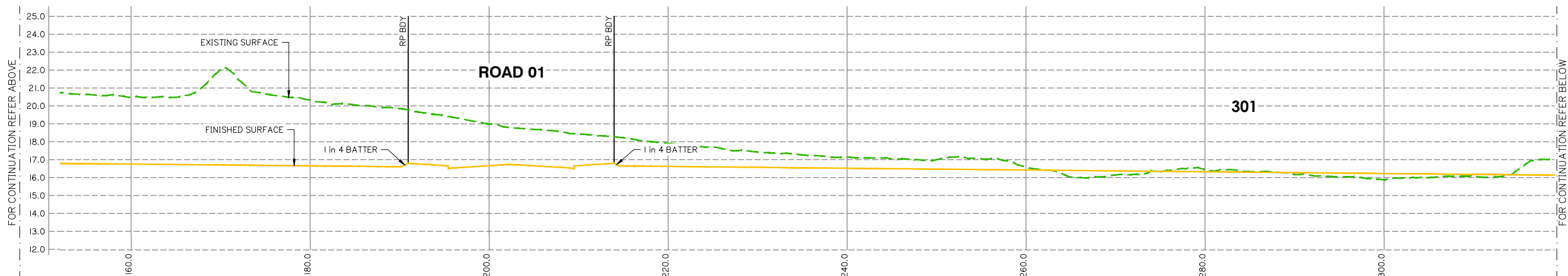
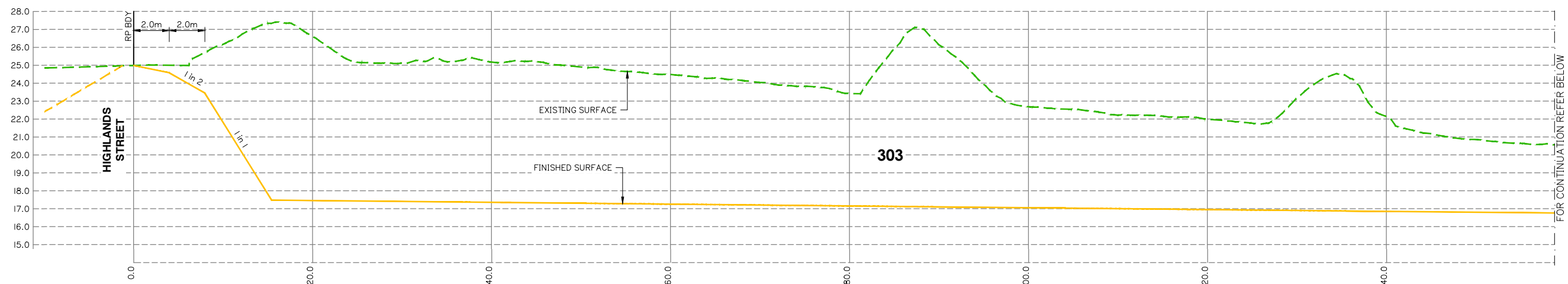
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Client:



FRASERS PROPERTY

Project:

VANTAGE YATALA STAGE 3

Site Address:

60 STAPYLTON JACOBS
WELL ROAD, STAYPLTON
QLD, 4207

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST

Level Datum: AHD
Meridian:
PSM:
RL:

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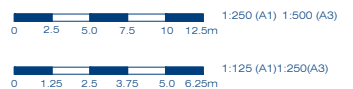
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Signed:

W. H. H. H. H.

Date:

03/02/2023

Drawing No:
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Client:



FPI QUEENSLAND PTY LTD

Project:

VANTAGE YATALA
STAGE 3

Site Address:

LOT 504 HOMESTEAD
DRIVE, STAYPLTON
QLD, 4207

RPD:

Lot: 504
Plan: SP329845
Local Authority: CITY OF GOLD COAST
Level Datum: AHD
Meridian:
PSM:
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OPERATIONAL PHASE
BIORETENTION BASIN 1
LAYOUT PLAN

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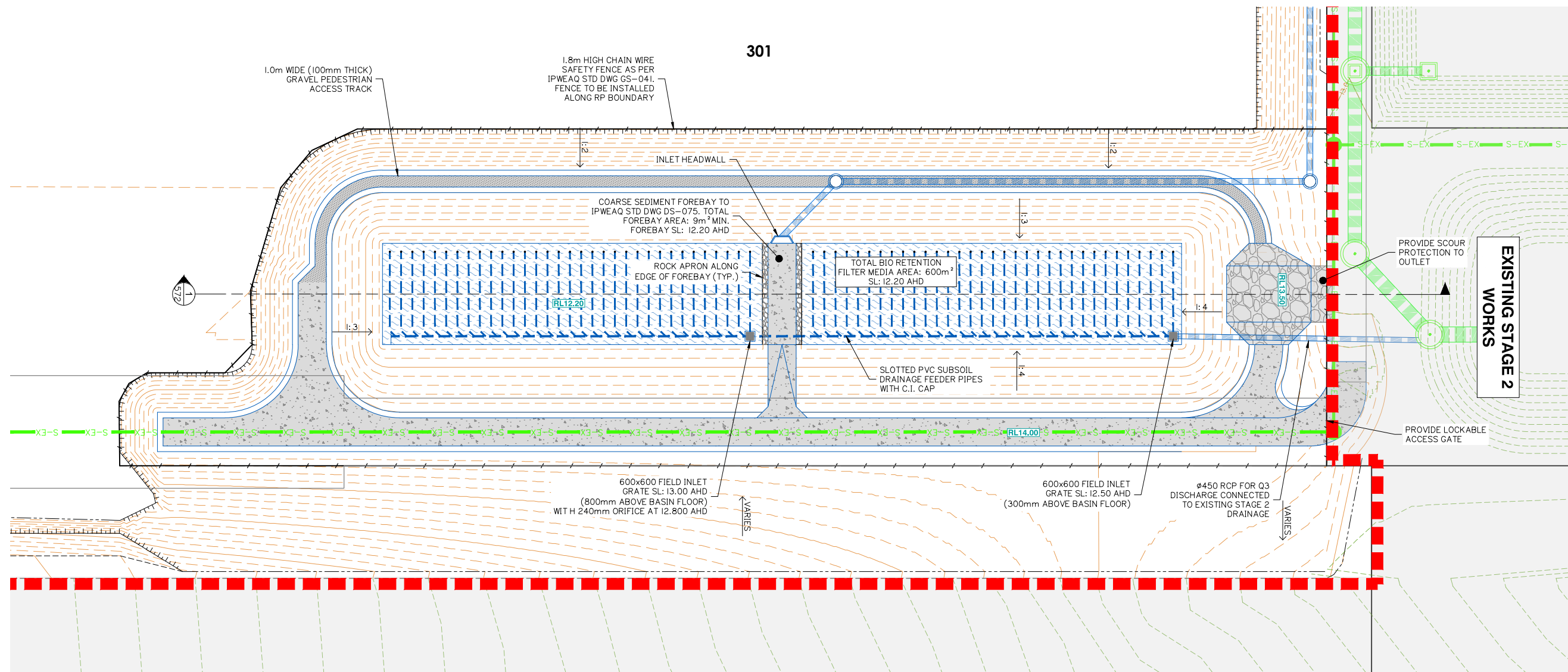
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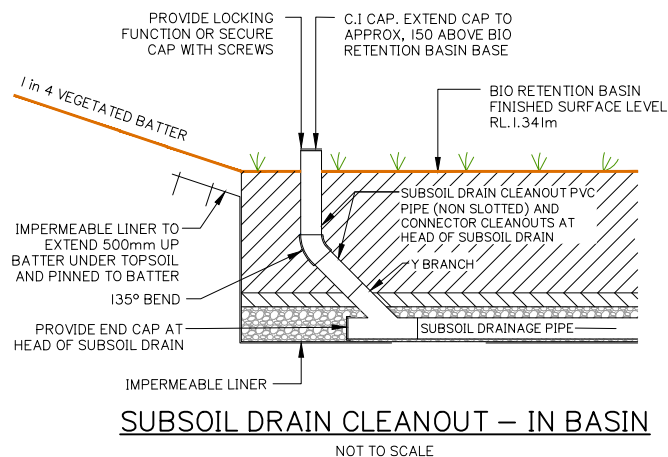


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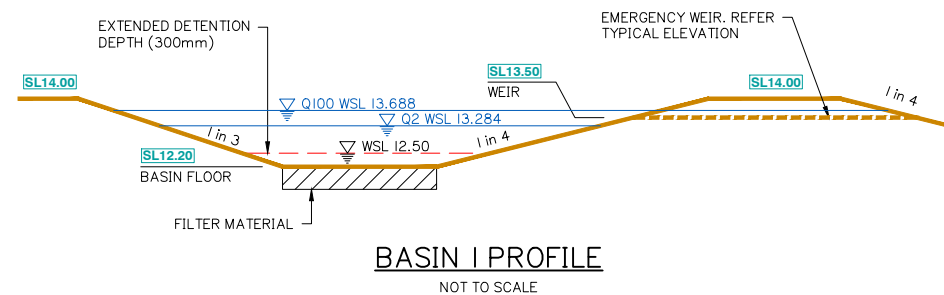
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Q2	13.284
Q5	13.399
Q10	13.448
Q20	13.560
Q50	13.641
Q100	13.688



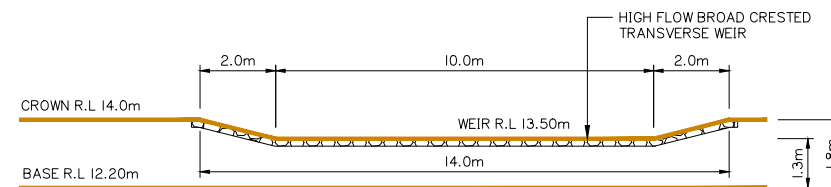
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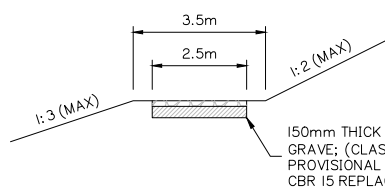
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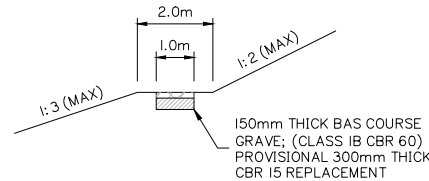
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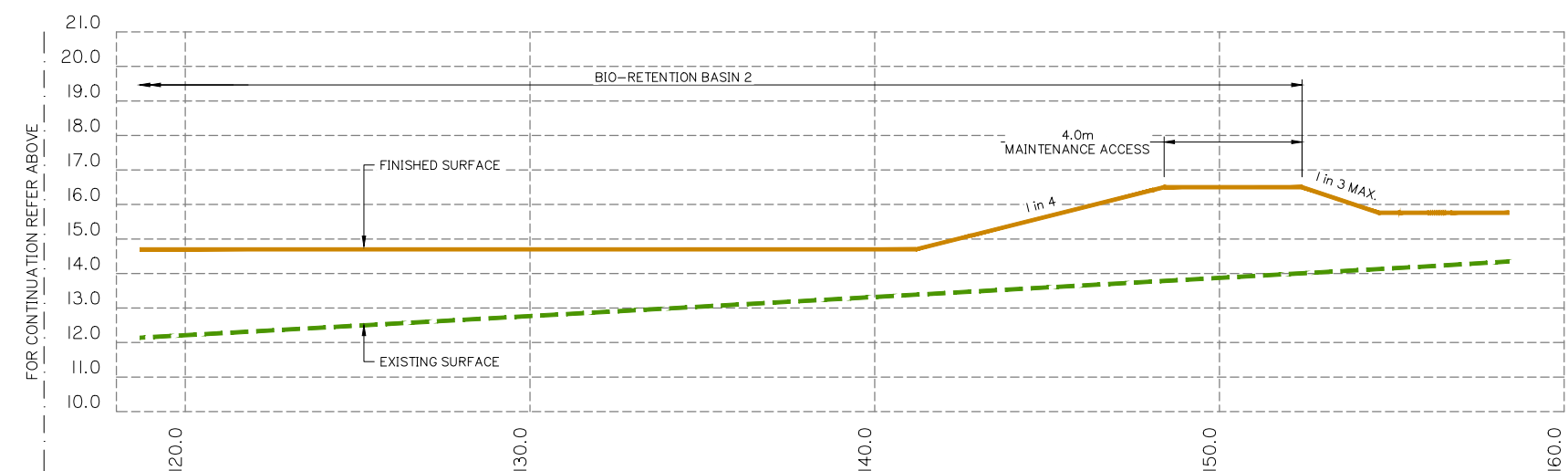
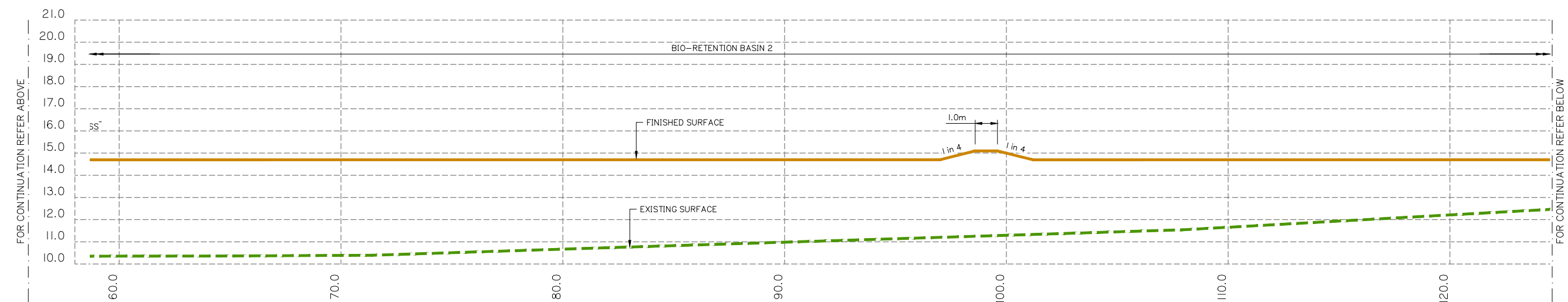
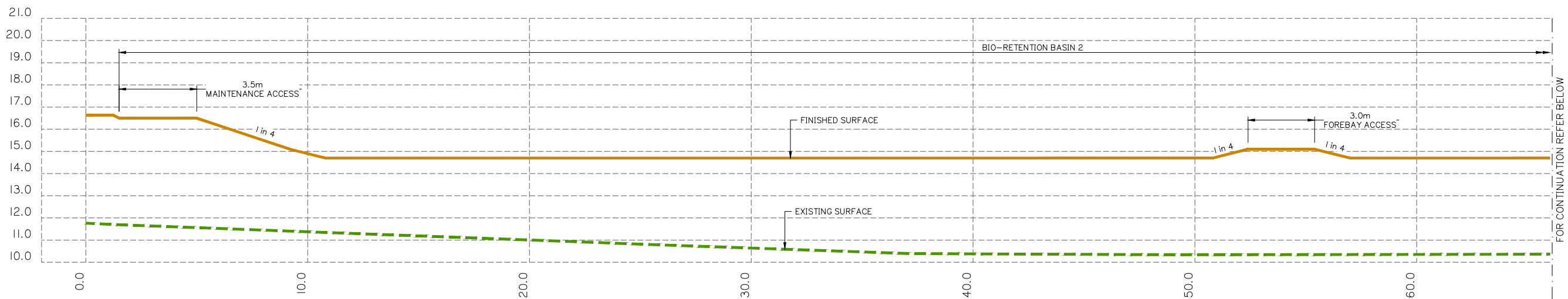
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OPERATIONAL PHASE BIORETENTION BASIN I LAYOUT PLAN

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1. FOR GENERAL DRAWING LEGENDS, REFER TO SHEET 004
2. FOR GENERAL NOTES, REFER TO SHEETS 002 AND 003



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Gold Coast 76 Business Street, Yatala QLD PO Box 392, Beenleigh 4207

Client:



FPI QUEENSLAND PTY LTD

Project:

VANTAGE YATALA STAGE 3

Site Address:

LOT 504 HOMESTEAD
DRIVE, STAYPLTON
QLD, 4207

RPD:

Lot:	504
Plan:	SP329845
Local Authority:	CITY OF GOLD COAST

Level Datum: AHD
Meridian:
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OPERATIONAL PHASE BIORETENTION BASIN SECTIONS SHEET 2 OF 2

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A low-angle photograph of a modern building's exterior. The building features large glass windows reflecting the sky and clouds, and a prominent red vertical panel on the right side. A small tree with green and yellowing leaves is in the foreground. The text 'APPENDIX F' is overlaid in the top right corner.

APPENDIX F

STORMWATER MANAGEMENT PLAN

SITE BASED STORMWATER MANAGEMENT PLAN

VANTAGE YATALA – STAGE 3 DEVELOPMENT APPLICATION FOR RECONFIGURING A LOT

ADDRESS

Lot 504 Homestead Drive, Stapylton

REAL PROPERTY DESCRIPTION

Lot 504 on SP329485

PREPARED FOR

FPI Queensland Pty Ltd

April 2023 (Rev. 1)



gassman
development
perspectives

project coordination
urban + regional planning
landscape + urban design
engineering services
environmental management
visualisation + spatial services
surveying services
advisory services

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In preparing this report we have made certain assumptions. We have assumed that all information and documents provided to us by the Client or as a result of a specific request or enquiry were complete, accurate and up-to-date. Where we have obtained information from a government register or database, we have assumed that the information is accurate. Where an assumption has been made, we have not made any independent investigations with respect to the matters the subject of that assumption. We are not aware of any reason why any of the assumptions are incorrect.

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No.	Author	Reviewer	Date
INTERNAL DRAFT	James Hunt	Mitchell Gassman	December 2022
1.	James Hunt	Mitchell Gassman	April 2023

Approval for Issue

Rev. No.	Name	Position	Signature	Date
1.	Mitchell Gassman	Civil Project Engineer RPEQ 16939		14 April 2023

Final Distribution

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City of Gold Coast Council (Assessment Manager)	1 electronic copy
GDP File	1 electronic copy

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1.0 INTRODUCTION

Gassman Development Perspectives (GDP) has been engaged by FPI Queensland Pty Ltd (Client) to prepare a Site Based Stormwater Management Plan over land situated at Lot 504 Homestead Drive, Stapylton (Lot 504 on SP329485) being the 'subject site'.

This report has been prepared for submission to City of Gold Coast Council (Council) as part of a Development Application for Reconfiguring a Lot to facilitate Stage 3 of the *Vantage Yatala* industrial development with the intent of investigating and addressing the stormwater quantity and stormwater quality requirements for the proposed development in accordance with the applicable State and Local Government standards.

Stormwater quantity is addressed through pre and post development scenarios modelled in XPSTORM software utilising temporal pattern inputs from the Australian Rainfall & Runoff (AR&R) Data Hub and the AR&R Storm Generator.

A strategy for managing post development peak flows discharging from the site and the required attenuation measures are provided to demonstrate that any increase in peak flows can be managed within the subject site as not to measurably impact neighbouring properties.

Stormwater quality analysis is also undertaken through the use of MUSIC software to confirm the adequacy of proposed Stormwater Quality Improvement Devices (SQIDs) required to meet the State Planning Policy's (SPP 2017) Water Quality Objectives (WQOs) and the pollutant removal targets set by City of Gold Coast Council.

2.0 SITE CHARACTERISTICS

2.1 LOCATION

The subject site is located within the City of Gold Coast Council local government boundaries.

The subject site is bounded by existing Stage 2 Vantage Yatala industrial development to the north, Christensen Road and existing industrial uses to the west and south and City of Gold Coast Council's land fill facility to the east.

The site has been cleared of all vegetation under existing Operational Works approval obtained from Council.



Figure 2.1.1: Site Locality Plan, Source: Google Earth



Figure 2.1.2: Vantage Yatala Staging Plan, Source: Google Earth

2.2 SITE AREA

The current total area of the site is 66.387Ha of which Stage 3 makes up 17.405Ha (refer Figure 2.1.2 above). Included in the Stage 3 area is 4.819Ha of land acquired from the existing Amgrow site. Refer to **Appendix J** for the proposed Reconfiguration of a Lot (ROL) plan.

2.3 EXISTING TOPOGRAPHY AND SITE DRAINAGE

Along the southern end of the eastern boundary of the subject site is the existing low point of 10.07m AHD. This existing topography defines the existing catchments of the site and current stormwater discharge locations along the eastern boundary. This low point is visible within **Appendix A – Site Survey Plan** of the report with the pre development catchments defined within **Appendix B – Pre and Post Development Catchment Plans**.

2.4 EXISTING LAND USAGE

The subject land is vacant following the clearing of all vegetation in 2019.

2.5 PLANNING PROVISIONS AND PROPOSED DEVELOPMENT

The subject site is zoned “Low Impact Industry, Future Precinct” and “Medium Impact Industry, Future Precinct” under Council’s current City Plan for which Stage 3 sits wholly within the “Medium Impact Industry, Future Precinct”. The current proposal involves creating further industrial lots behind approved Stage 2 within the subject site which will require large scale bulk earthworks necessary to facilitate clear and flat earthwork pads suitable for this land use.

2.6 FLOODING

The subject site is located within the extent of the Flood Overlay as defined in Council’s City Plan Interactive Mapping – Version 5, 6 and 7 (refer **Figure 2.6** below).

As part of Stage 1 of the development compensatory earthworks within private property located off Yellowwood Road to the north was undertaken in 2019 to balance flood storage where fill within the subject site is proposed below the Designated Flood Level of RL8.60m AHD (Q₁₀₀) utilising CoGC City Plan v5 which was current at the time of the existing approval.

As shown within **Figure 2.6** below, the extent of Stage 3 development proposed as part of this application is not subject to any mapped flooding and as such no compensatory works are proposed or required to facilitate the development.



Figure 2.6 Council Flood Mapping of Subject Site, Source: CoGC Interactive Mapping & Google Earth

3.0 CONVEYANCE MANAGEMENT AND PRE AND POST DEVELOPMENT CATCHMENTS

3.1 LAWFUL POINT OF DISCHARGE

The *Queensland Urban Drainage Manual* (QUDM) 1992 edition *formerly* set criteria that defined a lawful point of discharge for a proposed development. The term described a two-point test. This criterion is obsolete.

The meaning defined in QUDM 2017 is different from the more general term 'lawful discharge of stormwater' because it *"requires the stormwater to be released at a location that is under the lawful control of the local government or other statutory authority from whom permission to discharge has been received."*

The revised criteria for determining a lawful point of discharge are: (taken from QUDM 2017)

- i) Will the proposed development alter the sites stormwater discharge characteristics in a manner that may substantially damage a third party property?
- ii) Is the location of the discharge from the development site under the lawful control of the local government or other statutory authority from whom permission to discharge has been received?
- iii) An authority to discharge over affected properties will be necessary. In descending order of certainty, an authority may be in the form of: a) dedication of a drainage reserve or park, b) a registered easement for stormwater discharge / works or written discharge approval.

The subject development proposal for Stage 3 will utilise Two (2) lawful points of discharge being the existing low point along the site's south-eastern common boundary shared with Council's land fill facility where the existing gully line conveying both internal and upstream external catchments through the subject site lawfully discharges (LPoD 2) and the low point on the southern side of Christensen Road South (LPoD 3).

3.2 PRE DEVELOPMENT CATCHMENTS

The existing natural slope currently dictates the overland flow and drainage pattern of the subject site as illustrated in the pre development stormwater catchment plan within **Appendix B**. The flow patterns generally follow the ridgeline falling towards the existing low points of the site.

3.3 POST DEVELOPMENT CATCHMENTS

The intent of the proposed bulk earthworks outlined within this Stormwater Management Plan is to generally follow the pre development conditions to ensure no worsening of stormwater impacts downstream both during and post the construction period.

Whilst the proposed bulk earthworks over the site generally flatten the existing steep grades of the land as part of creating the earthworked pads, the increase in impervious areas associated with the proposed land use mean that a hydrologic review is required to determine the changes in discharge characteristics (i.e. peak flow, water quality) from the site and to identify suitable attenuation measures that need to be implemented to mitigate any potential downstream impacts.

The post development catchments are illustrated within the post development catchment plan included within **Appendix B**. As demonstrated within these plans, the LPoD for Stage 3 remains consistent in both the pre and post development scenarios.

Under reporting associated with previous stages of the Vantage development, Stage 6A was an external catchment which triggered conveyance requirements through the development to LPoD 1. Ahead of stage 3 the applicant acquired the land associated with catchment 6A and via a boundary realignment approval with council and associate plan sealing and registration, the land associated with this catchment now forms part of the stage 3 development and as such the reporting address the requirements of quantity and quality measures as part of Stage 3 CAT-DEV-1 already assigned to LPoD-1.

3.4 EXTERNAL CATCHMENT CONVEYANCE

An assessment of the surrounding boundary conditions for Stage 2 via Lidar survey have identified a number of external catchments that run through the site that will need to managed and conveyed through the proposed development in the post-development scenario. These have been identified within the catchment mapping contained within **Appendix B** of the report and are summarised as follows:

- **CAT-7A** – is the catchment for the basin located within the Amgrow site (503 on SP329485). Allowance has been made for excess flows from this site to LPoD 2 via a swale and pit and pipe system. No calculations have been made for this catchment in relation to quality and quantity.

A strategy for managing the conveyance of the external catchments through the subject site in a manner that still facilitates the intended Stage 3 development layout is shown within **Appendix N**.

4.0 HYDROLOGICAL ASSESSMENT

4.1 TEMPORAL PATTERNS AND RAINFALL DATA

Rainfall data for use in XPSTORM software has been sourced from the Australian Rainfall & Runoff 2016 Storm Generator and the AR&R Data Hub. This application generates rainfall data for the various design storm hydrographs which have been utilised in the below modelling of stormwater runoff from the subject site.

Appendix H contains a copy of the Intensity-Frequency-Duration (IFD) data sourced from the Bureau of Meteorology (BoM) utilised for the hydraulic analysis and sediment basin sizing.

Appendix I contains a copy of the AR&R Data Hub rainfall data utilised for the XPSTORM hydrological analysis. It is noted that the predicted climate change factors, and pre-burst losses are incorporated into the data for analysis.

4.2 CATCHMENTS

As discussed within Section 3 of this report the pre and post development stormwater catchments (refer **Appendix B**) have been determined using a combination of the site based Contour and Detail survey undertaken by Gassman Development Perspectives (refer **Appendix A**) along with LiDAR survey of the surrounding area to identify any potential external catchments.

A summary of the parameters assigned to these sub-catchments used to assess the pre and post development flows is contained within *Tables 4.2A, 4.2B and 4.2C* below which aligns with the two scenarios assessed within this reporting.

Parameter	Sub-Catchments (Pre Development – Contributing to LPoD-1 / Stage 3)		
Name	CAT-6A		
Area (Ha)	4.767		
Vectored Slope (%)	3.50		
Impervious Area (%)	90.00		
Pervious Area (%)	10.00		
Roughness (n)	0.020		

Parameter	Sub-Catchments (Pre Development – Contributing to LPoD-2 / Stage 3)		
Name	CAT-7	CAT-7A	
Area (Ha)	9.981	3.410	
Vectored Slope (%)	3.51	2.50	
Impervious Area (%)	90.00	90.00	
Pervious Area (%)	10.00	10.00	
Roughness (n)	0.020	0.020	

Parameter	Sub-Catchments (Pre Development – Contributing to LPoD-3 / Stage 3)		
Name	CAT-8		
Area (Ha)	2.481		
Vectored Slope (%)	3.00		
Impervious Area (%)	1.00		
Pervious Area (%)	99.00		
Roughness (n)	0.050		

Table 4.2A: Pre Development Catchment Parameters

Parameter	Contributing Catchments
Reporting Location	LPoD-2
Contributing Sub Catchments	CAT-7
Area (Ha)	11.013
Initial Loss (mm)	14.20
Continuing Loss (mm/hr)	1.70

Parameter	Contributing Catchments
Reporting Location	LPoD-3
Contributing Sub Catchments	CAT-8
Area (Ha)	2.481
Initial Loss (mm)	14.20
Continuing Loss (mm/hr)	1.70

Table 4.2B: Contributing Catchment Parameters to Reporting Location LPoD-2 and 3

Parameter	Catchments (Post Development for Stage 3)	
Name	LPoD-2 <i>Impervious Catchment</i>	LPoD-2 <i>Pervious Catchment</i>
Total Area (Ha)	11.013 (85% Impervious, 15% Pervious)	
Area Split (Ha)	9.141	1.872
Vectored Slope (%)	1.00	1.00
Impervious Area (%)	100.00	0.00
Roughness (n) for Impervious Area	0.015	N/A
Pervious Area (%)	0.00	100.00
Roughness (n) for Pervious Area	N/A	0.045
Initial Loss (mm)	0.00	17.20
Continuing Loss (mm/hr)	1.60	1.60

Parameter	Catchments (Post Development for Stage 3)	
Name	LPoD-3 <i>Impervious Catchment</i>	LPoD-3 <i>Pervious Catchment</i>
Total Area (Ha)	0.749 (85% Impervious, 15% Pervious)	
Area Split (Ha)	0.622	0.127
Vectored Slope (%)	1.00	1.00
Impervious Area (%)	100.00	0.00
Roughness (n) for Impervious Area	0.015	N/A
Pervious Area (%)	0.00	100.00
Roughness (n) for Pervious Area	N/A	0.045
Initial Loss (mm)	0.00	17.20
Continuing Loss (mm/hr)	1.60	1.60

Table 4.2C: Post Development Catchment Parameters LPoD-2 and 3

4.3 LAND USE

Land uses were mapped within the pre and post development catchments with the varying hydraulic roughness and hydrological losses input into the XPSTORM model summarised in *Table 4.3 below*.

Land Use Type LPoD-2 (Stage 3)	Initial Loss (mm)	Continuing Loss (mm/hr)
Pre Developed		
Pervious	27.0	1.70
Impervious	0.00	1.70

Land Use Type LPoD-2 (Stage 3)	Initial Loss (mm)	Continuing Loss (mm/hr)
Post Developed		
Pervious	14.20	1.70
Impervious	0.00	1.70

Land Use Type LPoD-3 (Stage 3)	Initial Loss (mm)	Continuing Loss (mm/hr)
Pre Developed		
Pervious	27.0	1.70
Impervious	0.00	1.70

Land Use Type LPoD-3 (Stage 3)	Initial Loss (mm)	Continuing Loss (mm/hr)
Post Developed		
Pervious	14.20	1.70
Impervious	0.00	1.70

Table 4.3: Summary of Adopted Initial & Continuing Losses (AR&R Data-HUB 2016)

4.4 PRE AND POST DEVELOPMENT FLOW CALCULATIONS

XPSTORM modelling software was utilised to determine the pre and post development discharge flow rate for the contributing catchments based on the parameters listed above.

The computations were undertaken for the standard Average Exceedance Probabilities (AEP) 63.2%, 0.5EY, 20%, 10%, 5%, 2% and 1%.

The *normal range of mean peak* catchment runoff volumes to the respective existing Lawful Points of Discharge (reporting locations) are summarised in *Table 4.5*

Catchment	MEAN PEAK Flow Rates for Average Exceedance Probability (m ³ /s)						
Pre Developed Condition	63.2%	0.5EY	20%	10%	5%	2%	1%
LPoD-1	0.5609	0.8344	1.1958	1.5508	1.8882	2.3856	2.7043

Catchment	MEAN PEAK Flow Rates for Average Exceedance Probability (m ³ /s)						
Post Developed Condition	63.2%	0.5EY	20%	10%	5%	2%	1%
LPoD-1	1.0635	1.4704	1.9597	2.4040	2.8427	3.3529	3.7613

Catchment	MEAN PEAK Flow Rates for Average Exceedance Probability (m ³ /s)						
Pre Developed Condition	63.2%	0.5EY	20%	10%	5%	2%	1%
LPoD-2	0.9671	1.4280	2.0961	2.6779	3.3168	3.9989	4.6244

Catchment	MEAN PEAK Flow Rates for Average Exceedance Probability (m ³ /s)						
Post Developed Condition	63.2%	0.5EY	20%	10%	5%	2%	1%
LPoD-2	2.1878	2.9122	4.0684	4.9389	5.8376	6.9213	7.7786

Catchment	MEAN PEAK Flow Rates for Average Exceedance Probability (m ³ /s)						
Pre Developed Condition	63.2%	0.5EY	20%	10%	5%	2%	1%
LPoD-3	0.0592	0.0886	0.1270	0.1643	0.2001	0.2486	0.2845

Catchment	MEAN PEAK Flow Rates for Average Exceedance Probability (m ³ /s)						
Post Developed Condition	63.2%	0.5EY	20%	10%	5%	2%	1%
LPoD-3	0.1581	0.2286	0.2927	0.3601	0.4259	0.5109	0.5672

Table 4.5: Normal Range MEAN PEAK Flow Rates Calculated for Stage 3

Figures 4.12 and 4.13 below contains the *pre* developed MAXIMUM peak flow rate hydrograph at the lawful point of discharge (LPoD-1). Refer also **Appendix K**.

Catchment	MAXIMUM PEAK Flow Rates for Average Exceedance Probability (m ³ /s)						
Pre Developed Condition	63.2%	0.5EY	20%	10%	5%	2%	1%
LPoD-1	0.8127	1.1651	1.5849	1.8323	2.1814	2.8892	3.3005

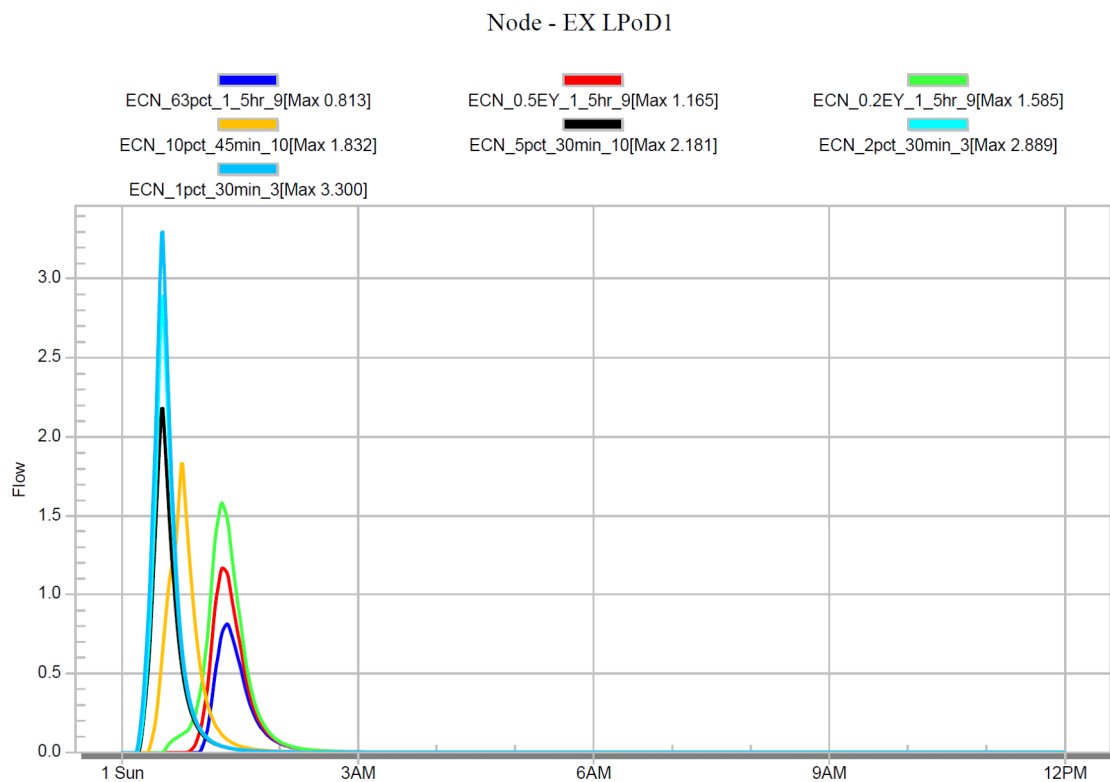


Figure 4.12: Pre Developed MAXIMUM Peak Flow Rate Hydrograph (LPoD-1) 12-Hr Duration

Node - EX LPoD1

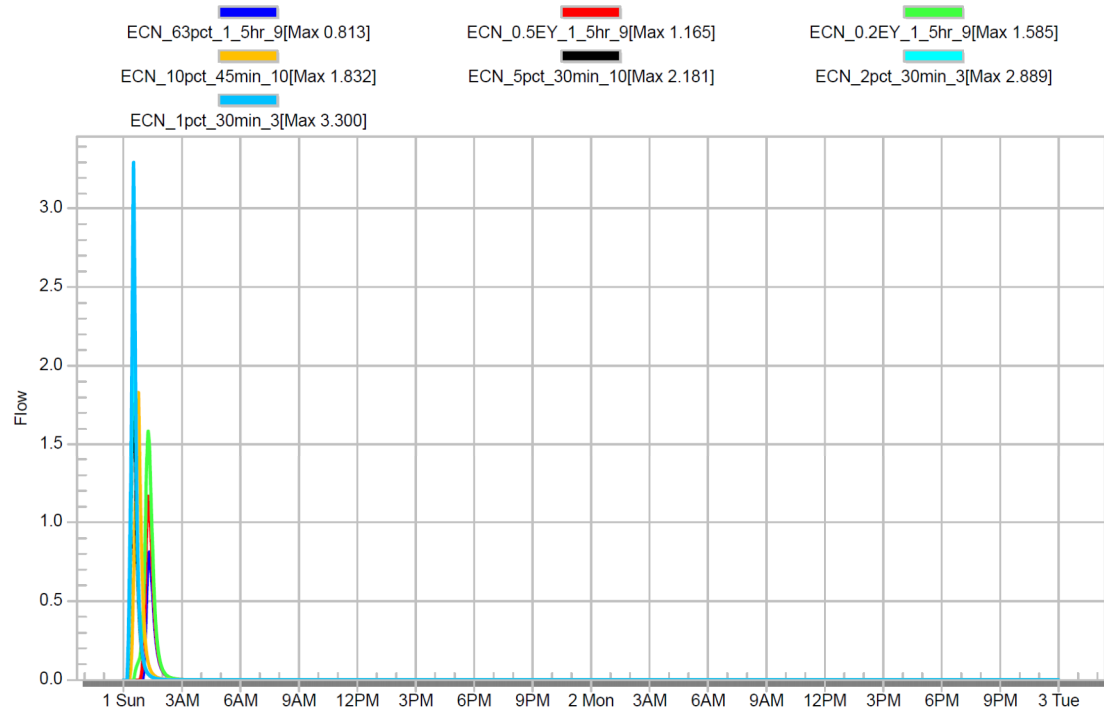


Figure 4.13: Pre Developed MAXIMUM Peak Flow Rate Hydrograph (LPoD-1) 72-Hr Duration

Figures 4.14 and 4.15 below contains the *post* developed MAXIMUM peak flow rate hydrograph at the lawful point of discharge (LPoD-1). Refer also **Appendix K**.

Catchment	MAXIMUM PEAK Flow Rates for Average Exceedance Probability (m ³ /s)						
Post Developed Condition	63.2%	0.5EY	20%	10%	5%	2%	1%
LPoD-1	1.559	1.999	2.579	2.890	3.260	4.052	4.514

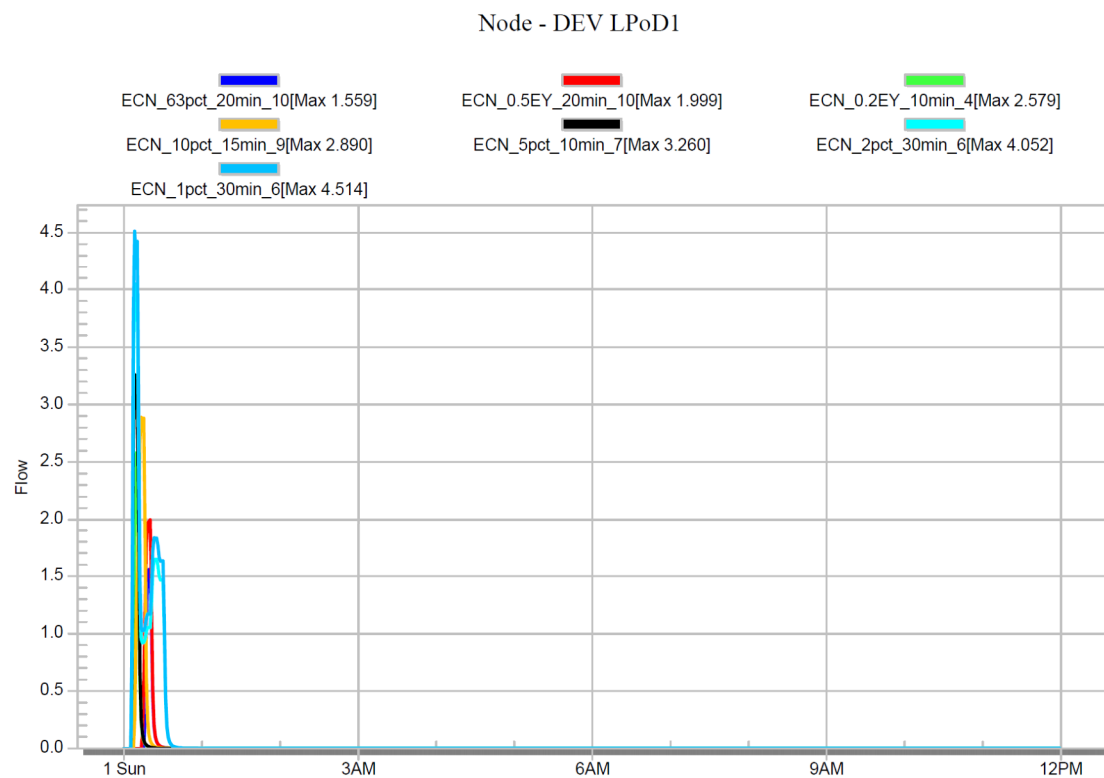


Figure 4.14: Post Developed MAXIMUM Peak Flow Rate Hydrograph (LPoD-1) 12-Hr Duration

Node - DEV LPoD1

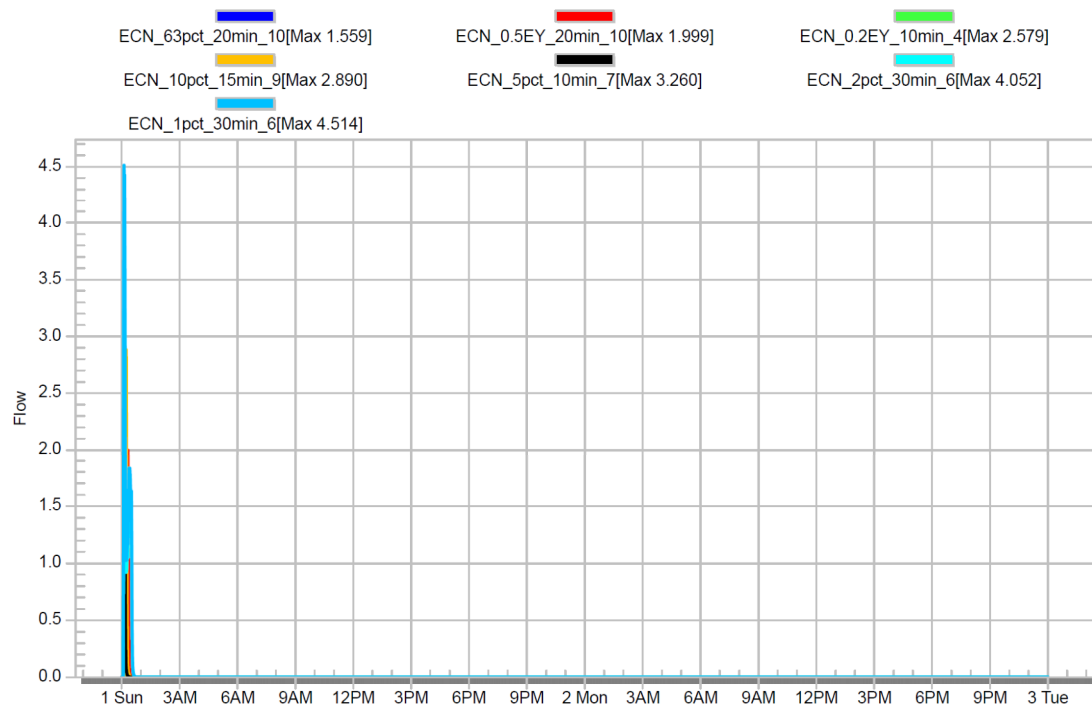


Figure 4.15: Post Developed MAXIMUM Peak Flow Rate Hydrograph (LPoD-1) 72-Hr Duration

Figures 4.16 and 4.17 below contains the *pre* developed MAXIMUM peak flow rate hydrograph at the lawful point of discharge (LPoD-2). Refer also **Appendix K**.

Catchment	MAXIMUM PEAK Flow Rates for Average Exceedance Probability (m ³ /s)						
Pre Developed Condition	63.2%	0.5EY	20%	10%	5%	2%	1%
LPoD-2	1.3051	1.9708	2.8356	3.3438	4.0419	4.6739	5.4411

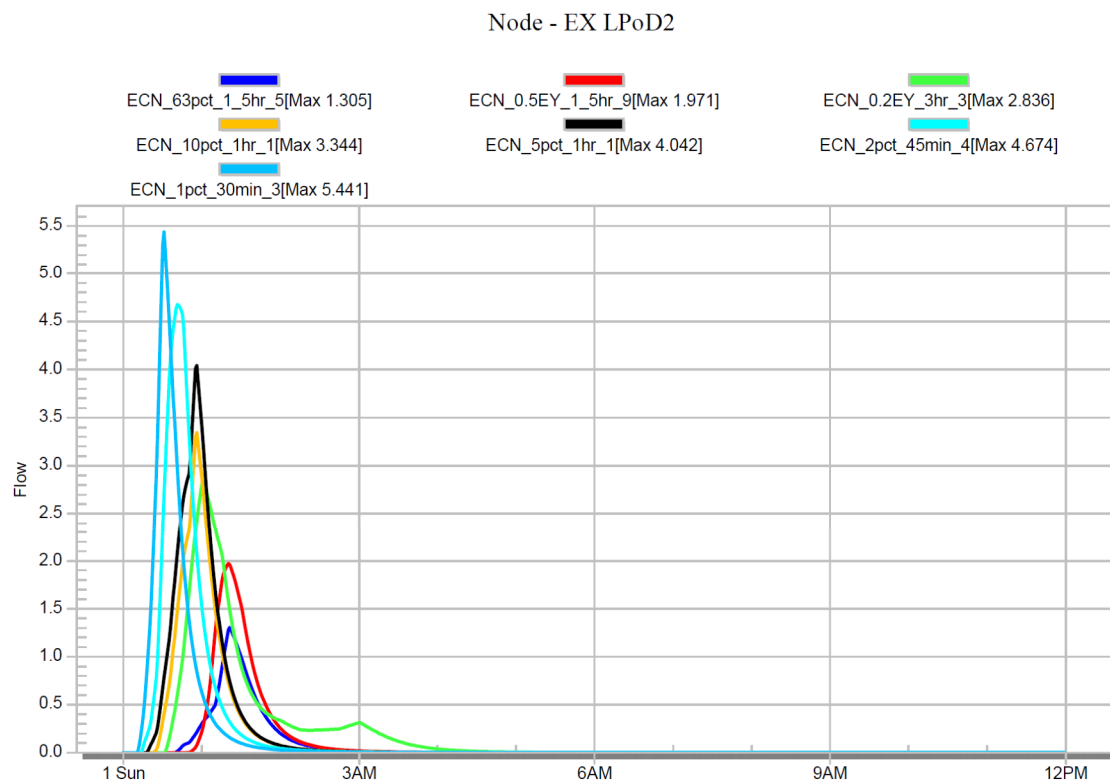


Figure 4.16: Pre Developed MAXIMUM Peak Flow Rate Hydrograph (LPoD-2) 12-Hr Duration

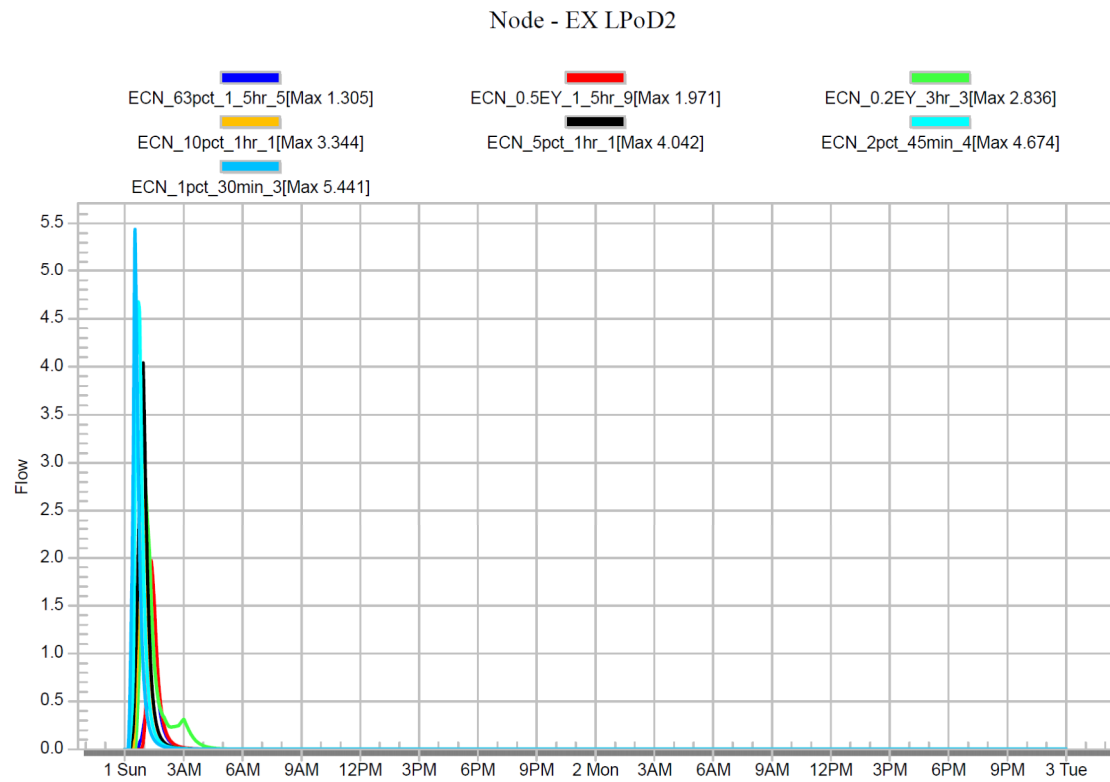


Figure 4.17: Pre Developed MAXIMUM Peak Flow Rate Hydrograph (LPoD-2) 72-Hr Duration

Figures 4.18 and 4.19 below contains the *post* developed MAXIMUM peak flow rate hydrograph at the lawful point of discharge (LPoD-2). Refer also **Appendix K**.

Catchment	MAXIMUM PEAK Flow Rates for Average Exceedance Probability (m ³ /s)						
Post Developed Condition	63.2%	0.5EY	20%	10%	5%	2%	1%
LPoD-2	3.1312	4.1310	5.2951	5.9760	6.6447	8.3129	9.2892

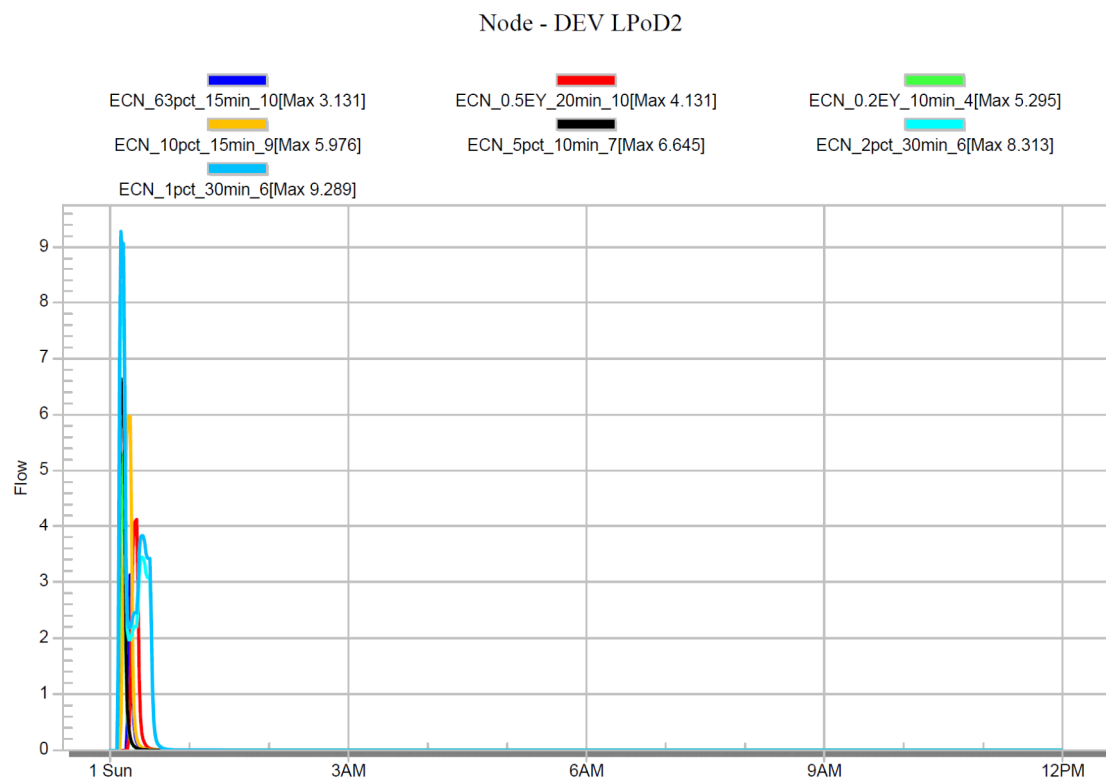


Figure 4.18: Post Developed MAXIMUM Peak Flow Rate Hydrograph (LPoD-2) 12-Hr Duration

Node - DEV LPoD2

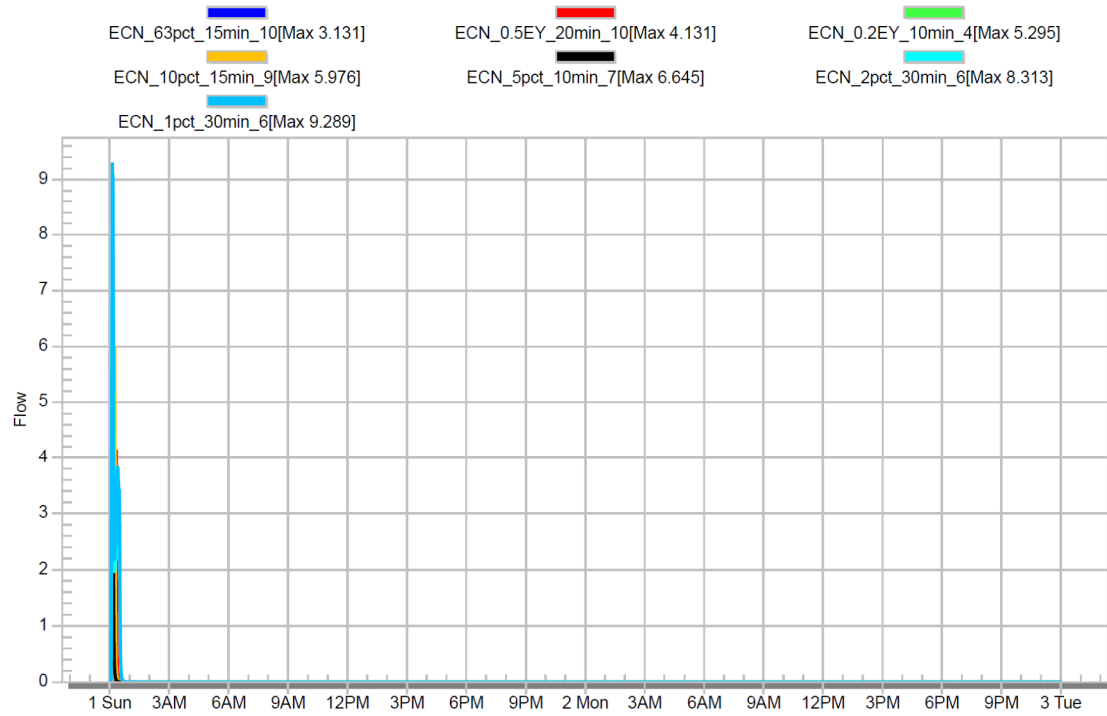


Figure 4.19: Post Developed MAXIMUM Peak Flow Rate Hydrograph (LPoD-2) 72-Hr Duration

Figures 4.20 and 4.21 below contains the *pre* developed MAXIMUM peak flow rate hydrograph at the lawful point of discharge (LPoD-3). Refer also **Appendix K**.

Catchment	MAXIMUM PEAK Flow Rates for Average Exceedance Probability (m ³ /s)						
Pre Developed Condition	63.2%	0.5EY	20%	10%	5%	2%	1%
LPoD-3	0.0826	0.1230	0.1714	0.1995	0.2371	0.2947	0.3426

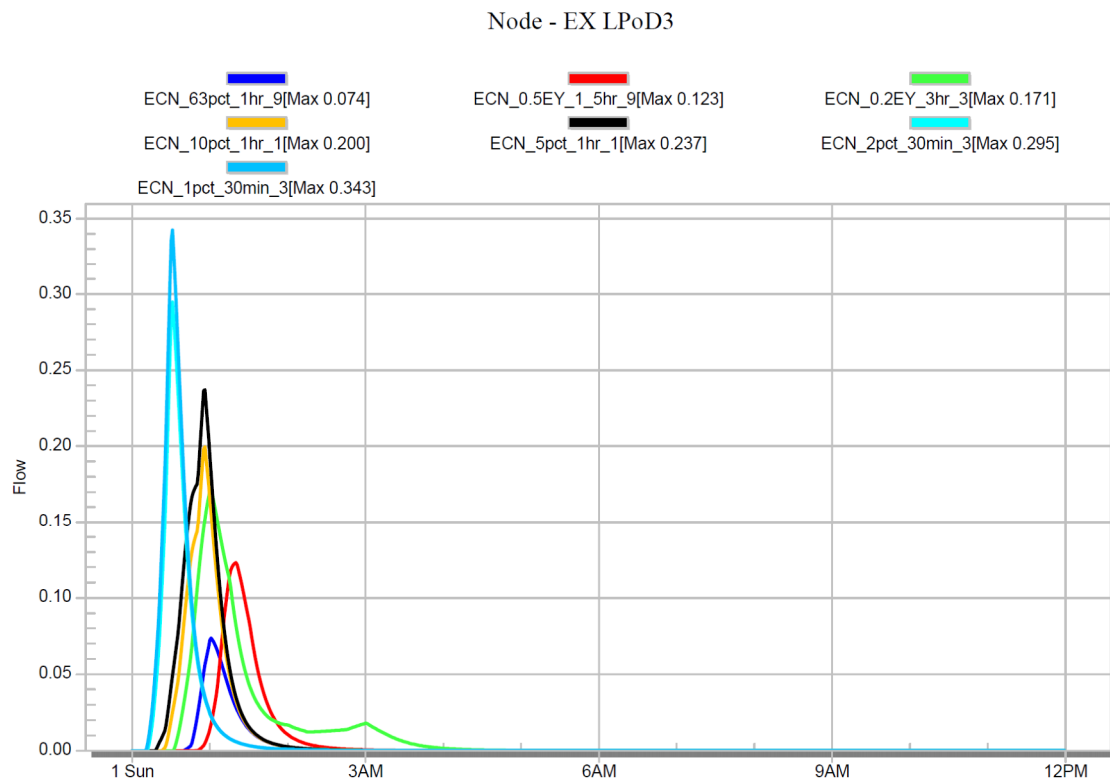


Figure 4.20: Pre Developed MAXIMUM Peak Flow Rate Hydrograph (LPoD-3) 12-Hr Duration

Node - EX LPoD3

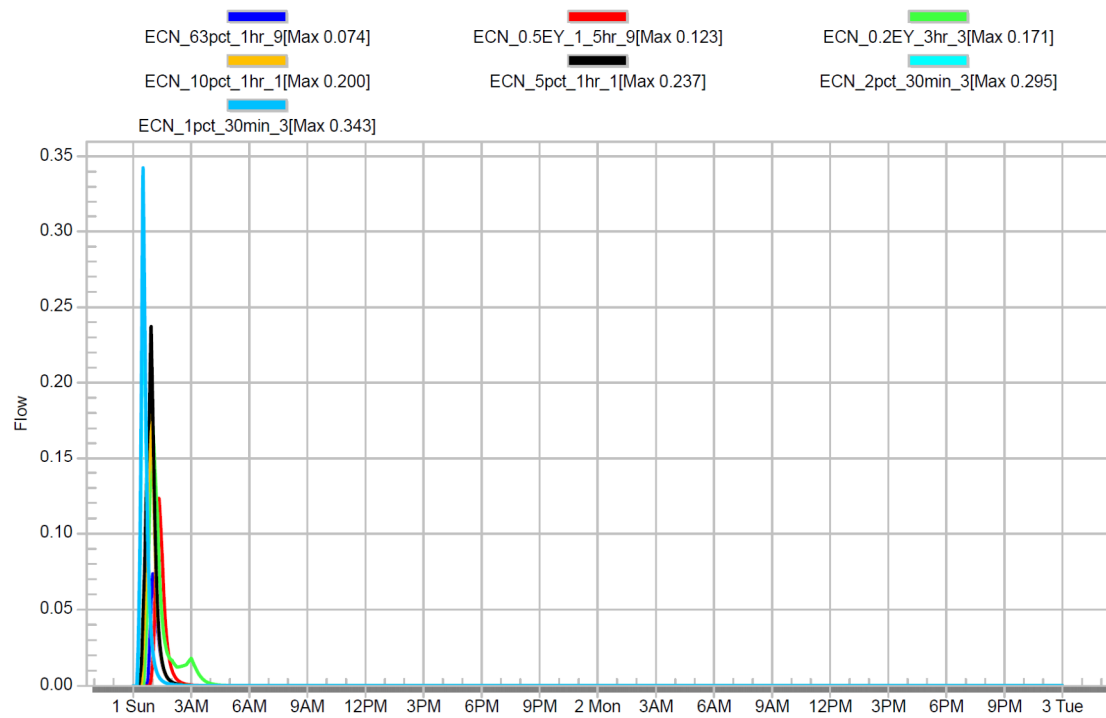


Figure 4.21: Pre Developed MAXIMUM Peak Flow Rate Hydrograph (LPoD-3) 72-Hr Duration

Figures 4.22 and 4.23 below contains the *post* developed MAXIMUM peak flow rate hydrograph at the lawful point of discharge (LPoD-1). Refer also **Appendix K**.

Catchment	MAXIMUM PEAK Flow Rates for Average Exceedance Probability (m ³ /s)						
Post Developed Condition	63.2%	0.5EY	20%	10%	5%	2%	1%
LPoD-3	0.2320	0.2893	0.3741	0.4194	0.5151	0.6025	0.6703

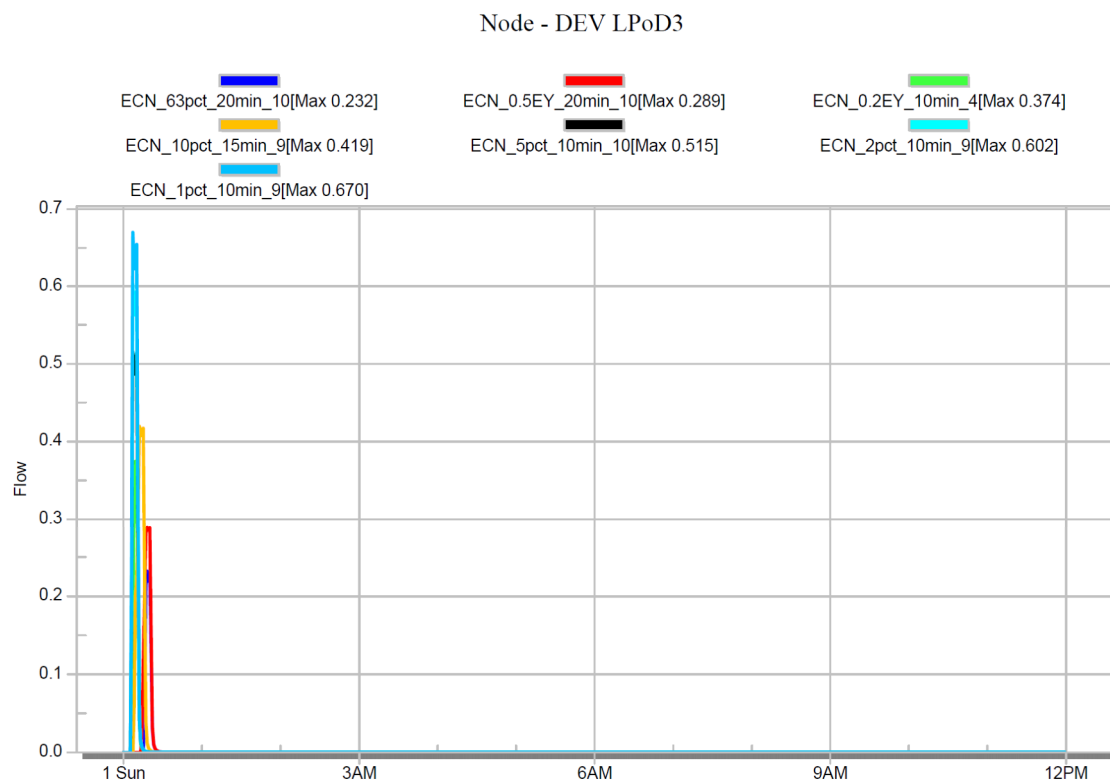


Figure 4.22: Post Developed MAXIMUM Peak Flow Rate Hydrograph (LPoD-3) 12-Hr Duration

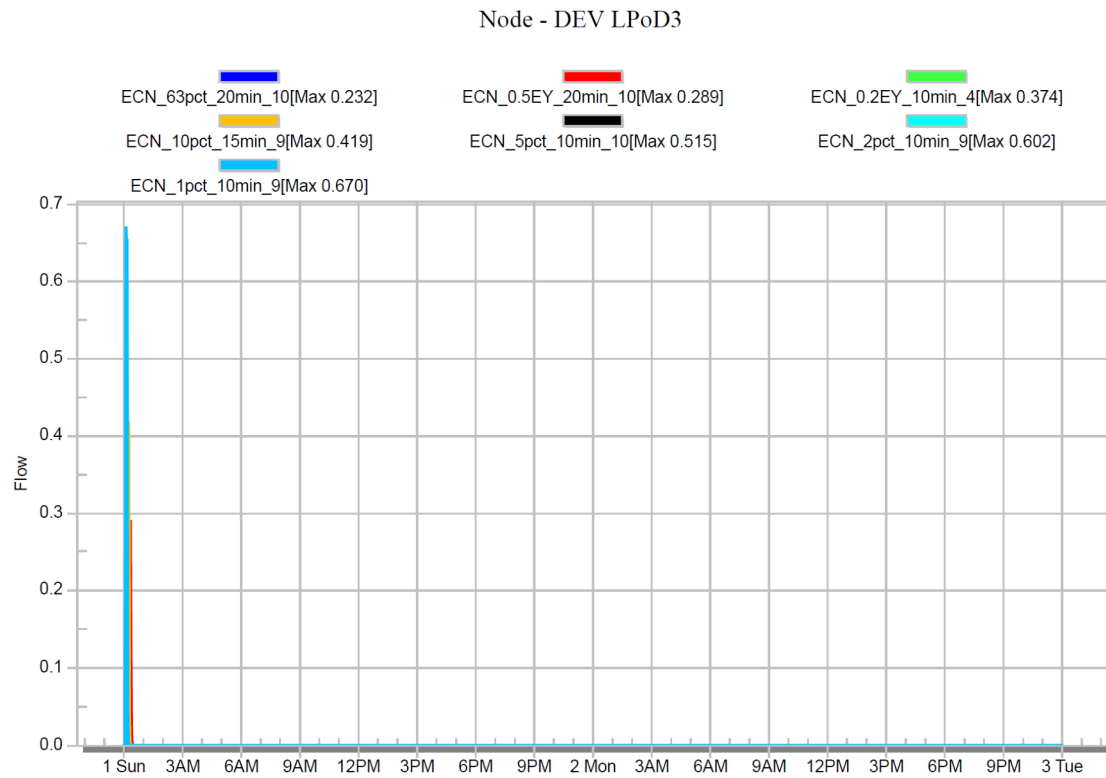


Figure 4.23: Post Developed MAXIMUM Peak Flow Rate Hydrograph (LPoD-3) 72-Hr Duration

5.0 STORMWATER QUANTITY, DETENTION & HYDRAULIC DESIGN

5.1 ATTENUATION OF DEVELOPED FLOWS

To ensure that the increased flow rates from the developed site have minimal impact on downstream property, the following hydrological objective has been set for stormwater exiting the subject site;

- *No increase in peak discharge flow rates from the developed site to downstream infrastructure.*

To achieve this objective, stormwater discharge from the development site must be detained to pre-development flow rates for all storms events up to and including the 1% AEP (equiv. to Q_{100}). The following sections provide a summary of the procedure used to design the onsite detention system at subject site.

5.2 METHODOLOGY

For the site catchment identified as having increase in peak flow rates when developed, a hydrologic model was created using XPSTORM. The model was then used to route post-development runoff through various proposed detention structures to determine the most efficient on-site detention system.

5.2.1 MODEL CONDITIONS

In XPSTORM three (3) hydraulic conditions were modelled in order to demonstrate the stormwater quantity, detention and hydraulic objective;

1. Existing Condition - Current condition of site with all the external catchments to assess the natural hydrology.
2. Developed Condition - Future condition of site when developed with all the external catchments. The main changes in hydrology as part of development include; increase in impervious area of the subject site due to the construction of the hardstand and other impervious areas and reduction in Manning's roughness coefficient for sections of the site to be developed.
3. Mitigated Condition - Future condition of site when developed with proposed detention structures in place with all the external catchments *where applicable*.

5.2.2 CRITICAL STORM EVENT AND DURATIONS

An analysis of storm events ranging from 63.2% AEP to 1% AEP was undertaken to determine the critical storm event and the critical storm duration per contributing catchment. The determined critical storm events for the pre developed and post developed condition are indicated in *Table 5.2.2* below.

MODEL CONDITION	CRITICAL STORM EVENT	PEAK DURATION	'MAXIMUM' PEAK FLOW
Pre Developed	AEP	(mins)	(m ³ /s)
LPoD-1	1%	30	3.3005

MODEL CONDITION	CRITICAL STORM EVENT	PEAK DURATION	'MEAN' PEAK FLOW
Pre Developed	AEP	(mins)	(m ³ /s)
LPoD-1	1%	25	2.7043

MODEL CONDITION	CRITICAL STORM EVENT	PEAK DURATION	'MAXIMUM' PEAK FLOW
Post Developed	AEP	(mins)	(m ³ /s)
LPoD-1	1%	30	4.5144

MODEL CONDITION	CRITICAL STORM EVENT	PEAK DURATION	'MEAN' PEAK FLOW
Post Developed	AEP	(mins)	(m ³ /s)
LPoD-1	1%	10	3.7613

MODEL CONDITION	CRITICAL STORM EVENT	PEAK DURATION	'MAXIMUM' PEAK FLOW
Pre Developed	AEP	(mins)	(m ³ /s)
LPoD-2	1%	30	5.4411

MODEL CONDITION	CRITICAL STORM EVENT	PEAK DURATION	'MEAN' PEAK FLOW
Pre Developed	AEP	(mins)	(m ³ /s)
LPoD-2	1%	30	4.6244

MODEL CONDITION	CRITICAL STORM EVENT	PEAK DURATION	'MAXIMUM' PEAK FLOW
Post Developed	AEP	(mins)	(m ³ /s)
LPoD-2	1%	30	9.2892

MODEL CONDITION	CRITICAL STORM EVENT	PEAK DURATION	'MEAN' PEAK FLOW
Post Developed	AEP	(mins)	(m ³ /s)
LPoD-2	1%	10	7.7786

MODEL CONDITION	CRITICAL STORM EVENT	PEAK DURATION	'MAXIMUM' PEAK FLOW
Pre Developed	AEP	(mins)	(m ³ /s)
LPoD-3	1%	30	0.3426

MODEL CONDITION	CRITICAL STORM EVENT	PEAK DURATION	'MEAN' PEAK FLOW
Pre Developed	AEP	(mins)	(m ³ /s)
LPoD-3	1%	25	0.2845

MODEL CONDITION	CRITICAL STORM EVENT	PEAK DURATION	'MAXIMUM' PEAK FLOW
Post Developed	AEP	(mins)	(m ³ /s)
LPoD-3	1%	10	0.6703

MODEL CONDITION	CRITICAL STORM EVENT	PEAK DURATION	'MEAN' PEAK FLOW
Post Developed	AEP	(mins)	(m ³ /s)
LPoD-3	1%	10	0.5672

Table 5.2.2: MEAN AND MAXIMUM Critical Storm Event and Duration Summary Table

Refer to **Appendix L** of this report which presents the detailed XPSTORM Box & Whisker plots for the above hydrological assessments.

5.2.3 DETENTION SYSTEM DESIGN

Detention devices capture and temporarily store stormwater runoff during major / critical storm events and release to the Lawful Point of Discharge (LPoD) at a controlled rate. Hence, detention devices act to mitigate potential downstream flooding impacts and also provide minor water quality treatment.

Therefore, to achieve the objective of zero post development mean peak flow rate increase to pre-developed 63.2% AEP (equiv. Q_1) to the 1% AEP (equiv. Q_{100}) flow rates at the downstream reporting location (outfall), on-site detention basins are introduced with low and high flow outlet configurations.

Table 5.2.3 includes the design details for the proposed on-site detention systems for Stage 3.

Parameter	Value
Catchment	LPoD-1
Type	Detention basin (in ground)
Internal Batter Slope on Basin Sides	1 in 3
Basin Floor RL	12.500m AHD <i>graded flat</i>
Basin Embankment / Crown R.L	14.000m AHD
Basin Transverse Weir Crest RL	13.500m AHD
Freeboard to Crown (1% AEP WSL)	0.312m
Detention Volume Depth	1.188m to 1% AEP WSL (<i>measured from floor / IL of basin</i>)
Detention Volume to <i>lowest</i> Crown	1,620m ³ to RL 14.000m (<i>not including 0.30m extended detention volume of 208.3m³</i>)
Detention Volume to 1% AEP WSL	1,164m ³ to RL 13.688m (<i>not including 0.30m extended detention volume of 208.3m³</i>)
Detention Volume to Weir Crest	921m ³ to RL 13.500m (<i>not including 0.30m extended detention volume of 208.3m³</i>)
Low Flow Outlets	1 / 600mm x 600mm grated field inlet pit connected to a low flow outlet pipe (450mm diameter at 1.0%) <i>Top of grate levels set at 0.300m above basin floor at RL12.800m AHD (typical and unless noted otherwise)</i> 1 / 600mm x 600mm grated field inlet pit connected to a low flow outlet pipe (450mm diameter at 1.0%) <i>Top of grate levels set at 0.800m above basin floor at RL13.300AHD (typical and unless noted otherwise)</i> <i>With 240mm orifice at RL12.800m AHD</i>
High Flow Outlets	10-metre-wide broad crested transverse weir <i>1.00m above basin floor at RL13.500m AHD</i> <i>1.70 discharge coefficient for transverse weir</i> 1 / 450mm RCP laid at max. grade of 1.0%

Parameter	Value
Catchment	LPoD-2
Type	Detention basin (in ground)
Internal Batter Slope on Basin Sides	1 in 3
Basin Floor RL	14.700m AHD <i>graded flat</i>
Basin Embankment / Crown R.L	16.500m AHD
Basin Transverse Weir Crest RL	16.200m AHD
Freeboard to Crown (1% AEP WSL)	0.311m
Detention Volume Depth	1.489m to 1% AEP WSL (<i>measured from floor / IL of basin</i>)
Detention Volume to <i>lowest</i> Crown	4,190m ³ to RL 16.500m (<i>not including 0.30m extended detention volume of 432m³</i>)
Detention Volume to 1% AEP WSL	3,211m ³ to RL 16.189m (<i>not including 0.30m extended detention volume of 432m³</i>)
Detention Volume to Weir Crest	3,243m ³ to RL 16.200m (<i>not including 0.30m extended detention volume of 432m³</i>)
Low Flow Outlets	1 / 900mm x 900mm grated field inlet pit connected to a low flow outlet pipe (450mm diameter at 1.0%) <i>Top of grate levels set at 0.300m above basin floor at RL15.000m AHD (typical and unless noted otherwise)</i> 1 / 900mm x 900mm grated field inlet pit connected to a low flow outlet pipe (450mm diameter at 1.0%) <i>Top of grate levels set at 0.700m above basin floor at RL15.400AHD (typical and unless noted otherwise)</i> <i>With 230mm orifice at RL15.000m AHD</i>
High Flow Outlets	10-metre-wide broad crested transverse weir <i>1.00m above basin floor at RL 13.500m AHD</i> <i>1.70 discharge coefficient for transverse weir</i> 2 / 450mm RCP laid at max. grade of 1.0%

Parameter	Value
Catchment	LPoD-3
Type	Detention basin (in ground)
Internal Batter Slope on Basin Sides	1 in 3
Basin Floor RL	11.500m AHD <i>graded flat</i>
Basin Embankment / Crown R.L	13.000m AHD
Basin Transverse Weir Crest RL	12.700m AHD
Freeboard to Crown (1% AEP WSL)	0.292m
Detention Volume Depth	1.208m to 1% AEP WSL (<i>measured from floor / IL of basin</i>)
Detention Volume to <i>lowest</i> Crown	378m ³ to RL 13.000m (<i>not including 0.30m extended detention volume of 37m³</i>)
Detention Volume to 1% AEP WSL	289m ³ to RL 12.708m (<i>not including 0.30m extended detention volume of 37m³</i>)
Detention Volume to Weir Crest	287m ³ to RL 12.700m (<i>not including 0.30m extended detention volume of 37m³</i>)
Low Flow Outlets	1 / 1050 Manhole connected to a low flow outlet pipe (375mm diameter at 1.0%) <i>Top of Lid levels set at 1.20m above basin floor at RL12.700m AHD (typical and unless noted otherwise)</i> <i>With 140mm orifice at RL11.800m AHD and, 120mm orifice at RL12.200m AHD and, 100mm orifice at RL12.500m AHD</i>
High Flow Outlets	10-metre-wide broad crested transverse weir <i>1.00m above basin floor at RL13.500m AHD</i> <i>1.70 discharge coefficient for transverse weir</i>

Table 5.2.3: Summary of Design Parameters of Proposed Detention Systems (Stage 3)

5.2.4 MODEL RESULTS

Table 5.2.4.1 presents the results obtained from XPSTORM modelling as a result of implementing the above detention system for flow mitigation.

PRE-DEVELOPED MEAN PEAK FLOWS FOR LPoD-1							
AEP	63.2%	0.5EY	20%	10%	5%	2%	1%
Peak Flow (m3/sec)	0.5609	0.8344	1.1958	1.5508	1.8882	2.3856	2.7043

POST-DEVELOPED MEAN PEAK FLOWS (MITIGATED) FOR LPoD-1							
AEP	63.2%	0.5EY	20%	10%	5%	2%	1%
Mitigated Flow (m3/sec)	0.5551	0.8339	1.1686	1.4215	1.7018	2.1316	2.4478
Max Water Elevation RL	13.170	13.2835	13.3994	13.4802	13.5596	13.6413	13.6879
Peak Duration	10min	10min	10min	10min	10min	15min	15min
Depth to WSL (m)	0.6710	0.7835	0.8994	0.9802	1.0596	1.1413	1.1879

PRE-DEVELOPED MEAN PEAK FLOWS FOR LPoD-2							
AEP	63.2%	0.5EY	20%	10%	5%	2%	1%
Peak Flow (m3/sec)	0.9671	1.4280	2.0961	2.6779	3.3168	3.9989	4.6244

POST-DEVELOPED MEAN PEAK FLOWS (MITIGATED) FOR LPoD-2							
AEP	63.2%	0.5EY	20%	10%	5%	2%	1%
Mitigated Flow (m3/sec)	0.9574	1.3743	2.0339	2.5357	3.0155	3.7250	4.1298
Max Water Elevation RL	15.432	15.5785	15.7249	15.8327	15.9396	16.080	16.1886
Peak Duration	10min	10min	10min	10min	10min	15min	15min
Depth to WSL (m)	0.7320	0.8787	1.0249	1.1327	1.2396	1.380	1.4886

PRE-DEVELOPED MEAN PEAK FLOWS FOR LPoD-3							
AEP	63.2%	0.5EY	20%	10%	5%	2%	1%
Peak Flow (m3/sec)	0.0592	0.0886	0.1270	0.1643	0.2001	0.2486	0.2845

POST-DEVELOPED MEAN PEAK FLOWS (MITIGATED) FOR LPoD-3							
AEP	63.2%	0.5EY	20%	10%	5%	2%	1%
Mitigated Flow (m3/sec)	0.0557	0.0730	0.1005	0.1264	0.1501	0.2125	0.2409
Max Water Elevation RL	12.0956	12.1943	12.3205	12.4252	12.5314	12.6366	12.7077
Peak Duration	10min	10min	10min	10min	10min	15min	15min
Depth to WSL (m)	0.5956	0.6943	0.8205	0.9252	1.0314	1.1366	1.2077

Table 5.2.4.1: Summary of XPSTORM MEAN Hydrologic / Hydraulic Results Stage 3

Table 5.2.4.2 sums the mean peak mitigated discharges and compares directly against the mean peak pre developed hydrology condition across the range of standard storm events.

MEAN MITIGATED DISCHARGE SUMMARY FOR PROPOSED DETENTION BASIN (LPoD-1)							
AEP	63.2%	0.5EY	20%	10%	5%	2%	1%
600 x 600mm F.I. (1) (m ³ /s)	0.2921	0.3331	0.3717	0.3961	0.4186	0.4409	0.4530
600 x 600mm F.I. (2) (m ³ /s)	0.000	0.0076	0.0737	0.1551	0.2330	0.2802	0.2986
240Dia Orifice (m ³ /s)	0.1846	0.2486	0.3020	0.3343	0.3633	0.3913	0.4063
450 Dia Outlet (m ³ /s)	0.0784	0.2446	0.4168	0.4864	0.5178	0.5569	0.5852
10m High Flow Weir (m ³ /s)	0.000	0.000	0.0045	0.0496	0.1691	0.4624	0.7074
TOTAL (m³/s)	0.5551	0.8339	1.1686	1.4215	1.7018	2.1316	2.4478

Flow Mitigation from Existing Condition (m ³ /s)	0.5609	0.8344	1.1686	1.4215	1.7018	2.1316	2.4478
Attenuation Achieved (Y/N)	Y	Y	Y	Y	Y	Y	Y
Flow Mitigation Achieved	1.0%	0.0%	2.3%	8.3%	9.3%	10.6%	9.5%

MEAN MITIGATED DISCHARGE SUMMARY FOR PROPOSED DETENTION BASIN (LPoD-2)							
AEP	63.2%	0.5EY	20%	10%	5%	2%	1%
900 x 900mm F.I. (1) (m ³ /s)	0.7092	0.8221	0.9200	0.9861	1.0478	1.1234	1.1787
900 x 900mm F.I. (2) (m ³ /s)	0.0460	0.2774	0.6133	0.7094	0.7930	0.8913	0.9598
230Dia Orifice (m ³ /s)	0.2023	0.2659	0.3165	0.3496	0.3798	0.4165	0.4430
450Dia Outlet (1) (m ³ /s)	0.000	0.0044	0.0921	0.2463	0.3974	0.5049	0.5577
450Dia Outlet (2) (m ³ /s)	0.000	0.0044	0.0921	0.2463	0.3974	0.5049	0.5577
10m High Flow Weir (m ³ /s)	0.000	0.000	0.000	0.000	0.000	0.2840	0.4330
TOTAL (m³/s)	0.9574	1.3743	2.0339	2.5357	3.0155	3.7250	4.1298

Flow Mitigation from Existing Condition (m ³ /s)	0.9671	1.4280	2.0961	2.6779	3.3168	3.9989	4.6244
Attenuation Achieved (Y/N)	Y	Y	Y	Y	Y	Y	Y
Flow Mitigation Achieved	1.0%	3.8%	3.0%	5.3%	9.1%	6.9%	10.7%

MEAN MITIGATED DISCHARGE SUMMARY FOR PROPOSED DETENTION BASIN (LPoD-3)							
AEP	63.2%	0.5EY	20%	10%	5%	2%	1%
140Dia Orifice (1) (m³/s)	0.0557	0.0716	0.0880	0.0998	0.1106	0.1204	0.1267
120Dia Orifice (2) (m³/s)	0.000	0.0014	0.0125	0.0261	0.0368	0.0450	0.0499
100Dia Orifice (3) (m³/s)	0.000	0.000	0.000	0.0005	0.0028	0.0105	0.0164
10m High Flow Weir (m³/s)	0.000	0.000	0.000	0.000	0.000	0.0367	0.0479
TOTAL (m³/s)	0.0557	0.0730	0.1005	0.1264	0.1501	0.2125	0.2409
Flow Mitigation from Existing Condition (m³/s)	0.0592	0.0886	0.1270	0.1643	0.2001	0.2486	0.2845
Attenuation Achieved (Y/N)	Y	Y	Y	Y	Y	Y	Y
Flow Mitigation Achieved	6.0%	17.7%	20.8%	23.1%	25.0%	14.5%	15.3%

Table 5.2.4.2: Summary of MEAN Mitigated Discharges from XPSTORM Hydraulic Simulation

5.2.5 DISCUSSION ON MODELLING OUTCOMES

The above hydraulic modelling has confirmed that there is no increase in mean peak discharge flow rates from the development site to existing infrastructure or downstream / neighbouring properties by implementing the proposed designed detention measures.

All AEP's for the mean peak runoffs ranging from 63.2% (equiv. Q₁) to 1% (equiv. Q₁₀₀) achieve mitigation.

Important Note:

Due to the predicted water surface elevations and depths – it is proposed that the bio-retention basin be fenced at its perimeter to restrict public access for safety. Fencing is proposed as the City of Gold Coast Council's standard chain wire type fencing (or approved equivalent) at a height of 1.80 metres above finished ground level.

Details of the fence type, embellishments and colour will be confirmed at the detailed design phase. Provision shall be made for a master-keyed gate location to enable access for Council staff to the maintenance track/s.

6.0 STORMWATER QUALITY

Stormwater quality analysis has been undertaken through the use of MUSIC software to confirm the adequacy of proposed Stormwater Quality Improvement Devices (SQIDs) required to meet the State Planning Policy's (SPP) Water Quality Objectives (WQOs) and the pollutant removal targets set by the City of Gold Coast Council. A suitable treatment strategy addressing the typical pollutant types generated during construction and operation of an industrial development are outlined within this section of reporting.

6.1 POLLUTANTS OF CONCERN

There are a number of pollutants typically generated during the operational phase (following construction) of an industrial development. These include:

- **Litter / gross pollutants**
- **Sediment**
- Toxic materials
- Heavy metals
- Hydrocarbons
- **Nutrients (i.e. nitrogen & phosphorous)**
- Pathogens / faecal coliforms
- Oxygen demanding substance
- Surfactants
- Acid or alkaline substances
- Organochlorines & organophosphates
- Thermal pollution

The key pollutants highlighted in **bold** above represent those that will be further addressed within this report. This will be done through the use of MUSIC modelling software which will assist in estimating the generation of the pollutants in the developed condition and the associated treatment measures requiring implementation in order to meet the stormwater quality objectives as defined within Section 6.2 of this report.

6.2 STORMWATER QUALITY OBJECTIVES (OPERATIONAL PHASE)

City of Gold Coast Council have set stormwater quality objectives with the intent of "protecting receiving water quality by limiting the quantity (loads) of stormwater pollutants discharged into receiving waters from development" such as that proposed over the subject site.

These are summarised in *Table 4.10 of SC6.11.4 Stormwater Drainage and Water Sensitive Urban Design standards* of Council's City Plan Version 7, and outlined below:

Pollutant Type	Load Reduction Objective (in mean annual load)
Gross Pollutants (>5mm)	90.0%
Total Suspended Solids (TSS)	80.0%
Total Phosphorous (TP)	60.0%
Total Nitrogen (TN)	45.0%

Table 6.2: CoGC's Stormwater Quality Objectives (Source: City Plan v7, Schedule SC6.11.4)

6.3 PROPOSED STORMWATER QUALITY MANAGEMENT STRATEGY

Development over the subject site has the potential to introduce increased pollutant loads and concentrated stormwater runoff into existing downstream waterways. To mitigate any potential increase in the export of pollutants from the subject site, suitable stormwater treatment devices will be utilised throughout the developed area as part of the integrated design of the road and stormwater drainage networks.

The implementation of a site-specific stormwater treatment train prior to the discharge of stormwater from the site will ensure the quality objectives outlined in Section 6.2 of this report are achieved.

6.3.1 BIO RETENTION BASINS

Due to the spatial allowances over the subject site and the proposed development type being an industrial estate, bio retention basins have been identified as a suitable Stormwater Quality Improvement Device (SQID) to reduce the off-site discharge of pollutants in line with the operational phase stormwater quality objectives identified within this report.

Bio retention basins are designed to treat conveyed stormwater by filtering contaminated runoff through various layers of vegetation, biologically active sands and loam filter media which capture the pollutants as the water percolates down through the system.

The treated water is then conveyed through a series of perforated pipes to downstream drainage systems. A typical configuration of a bio retention system is outlined in Figure 6.3.1 below.

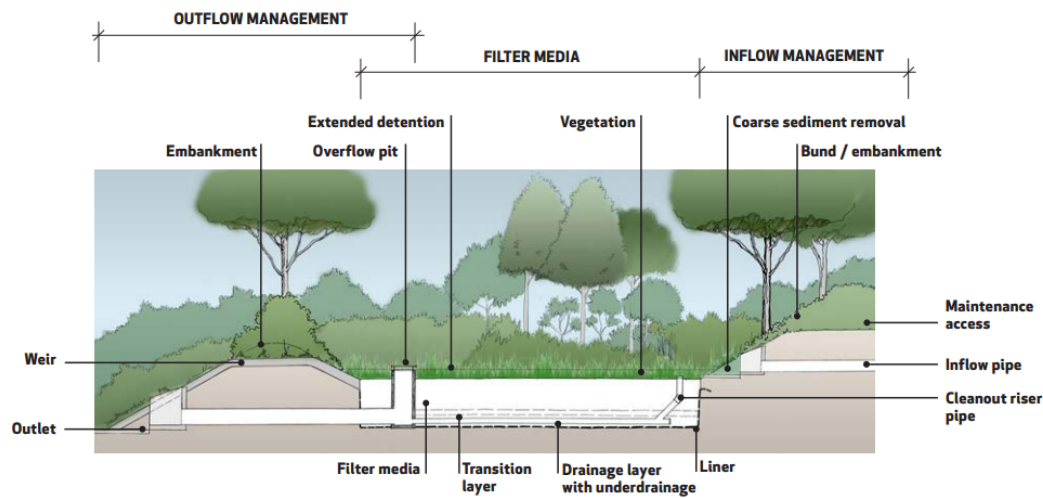


Figure 6.3.1: Components of a Typical Bio Retention System (Source: Water by Design, Bio Retention Technical Design Guidelines Version 1.1 Oct 2014)

The bio retention basin for the subject site has been designed in accordance with *Bio Retention Technical Design Guidelines (2014)* with the properties as outlined in *Table 6.3.1* below.

Outlet structures within the basin are designed to ensure an extended detention depth of 300mm is maintained over the filter media. The required surface area and filter media profile required to adequately treat the contributing developed catchment is discussed within Section 6.4 of this report.

Parameter	Value
Geofabric Lining to Base	Yes
Hydraulic Conductivity (normal analysis)	200 mm/hr
Orthophosphate Content	30 mg/kg
Filter Media's TN Content	400 mg/kg
Vegetation Properties	Basin to be vegetated with effective nutrient removal plants

Table 6.3.1: Summary of Adopted Bio Retention Parameters

6.4 MUSIC MODELLING METHODOLOGY FOR THE DEVELOPMENT SITE

MUSIC Version 6.3.0 was utilised for the water quality modelling of the proposed development in accordance with *Water by Design's MUSIC Modelling Guidelines 3.0 (2018)*.

Modelling of the developed scenario with the nominated SQIDs in place was undertaken to replicate the transfer of pollutants through a stormwater drainage system and to assist in determining the effectiveness of the proposed stormwater treatment train in meeting City of Gold Coast's Stormwater Quality Objectives.

6.4.1 METEOROLOGICAL DATA

The meteorological data required for input into MUSIC software was obtained through CoGC's pre-determined MUSIC-link v6.32 software application for Beenleigh Bowls Club (Weather Station No. 040406). The data utilised is in the form of 6-minute pluviographic data for a 10-year period from 01st January 1990 to 31st December 1999. The mean average rainfall for this period was 1,105mm.

Daily potential evapo-transpiration (PET) data (01/01/1990 to 31/12/1999) from the above-mentioned station has been used.

A summary of the information is indicated below:

Catchment Name: 5941 CoGC Industrial Development, Yatala MUSIC Model Stg 2
Rainfall Station: 40406 BEENLEIGH
ET Station: User-defined monthly PET
Start Date: 1/01/1990 12:00 AM
End Date: 31/12/1999 11:54 PM
Modelling Time Step: 6 Minutes

	Rainfall/6 Minutes	Evapo-Transpiration
mean	0.013	4.086
median	0.000	3.600
maximum	22.100	6.290
minimum	0.000	2.000
10 percentile	0.000	2.033
90 percentile	0.001	6.194
mean annual	1105	1492

6.4.2 SOURCE NODES

MUSIC modelling has utilised the *City of Gold Coast (North) MUSIC-Link data (Version 6.32)* to define the parameters assigned to the pollutant source node inputs for the MUSIC model. Refer images on the following page. No calibration was undertaken to CoGC source nodes.

Refer **Appendix E** for the MUSIC Catchment Plan relevant to the modelling.

CITY OF GOLD COAST™	
City of Gold Coast (Central)	
City of Gold Coast Central.mlb	
City of Gold Coast (North)	
City of Gold Coast North.mlb	
City of Gold Coast (South)	
City of Gold Coast South.mlb	

Current Project Version	
Music Version	6.3.0
MUSIC-link Data Version	6.32
Authority	City of Gold Coast
Area	City of Gold Coast (North)
Scenario	City of Gold Coast (North)

The intended industrial land use allows the developed catchment parameters to be conservatively assumed with the catchments broken down into a number of major surface types being ground level, roads (includes entire road reserve) and roofs.

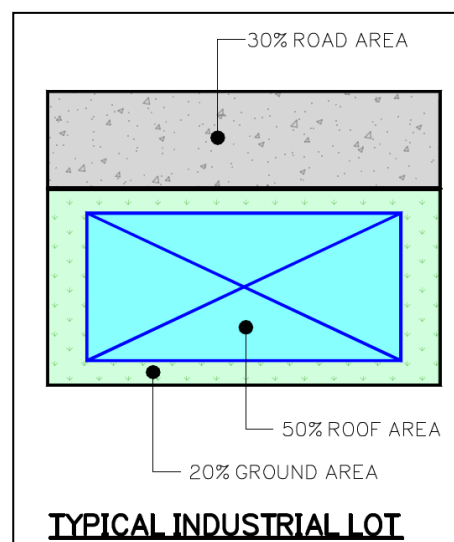
These surface types were allocated an impervious area (%) and further refined through the MUSIC modelling process via the “split” catchment approach in accordance with the *Healthy Waterways MUSIC Modelling Guidelines Version 3.0 – 2018 Table 3.4 and 3.6*.

The below table and figures summarise the imperviousness of the allocated source nodes within the MUSIC model for Stage 1. Where a proposed architectural design was available for the site, the MUSIC modelling has assumed these areas to be exact. However, in the absence of an architectural layout; the modelling has been guided by *Table 3.4 Typical Surface-Type Splits* for Industrial Development type – where the surface splits are defined below:

Road – 30%
 Roof – 50%
 Ground – 20%

(extract from *Healthy Waters V3.0*)

External catchments that are conveyed through the site are assumed to be treated on site by the relevant upstream lot owner prior to entering the subject site.



MUSIC Source Node	Modelling Approach	Area (Ha)	Impervious %
Stage 3 (DEV-1) Total Catchment = 5.263Ha			
Road	SPLIT	0.5303	75
Hardstand	SPLIT	1.8930	90
Roof	SPLIT	2.3662	100
Ground	SPLIT	0.4735	60
Total		5.263	

Table 6.4.2.1: MUSIC Modelling Summary of Source Node Impervious Allocations

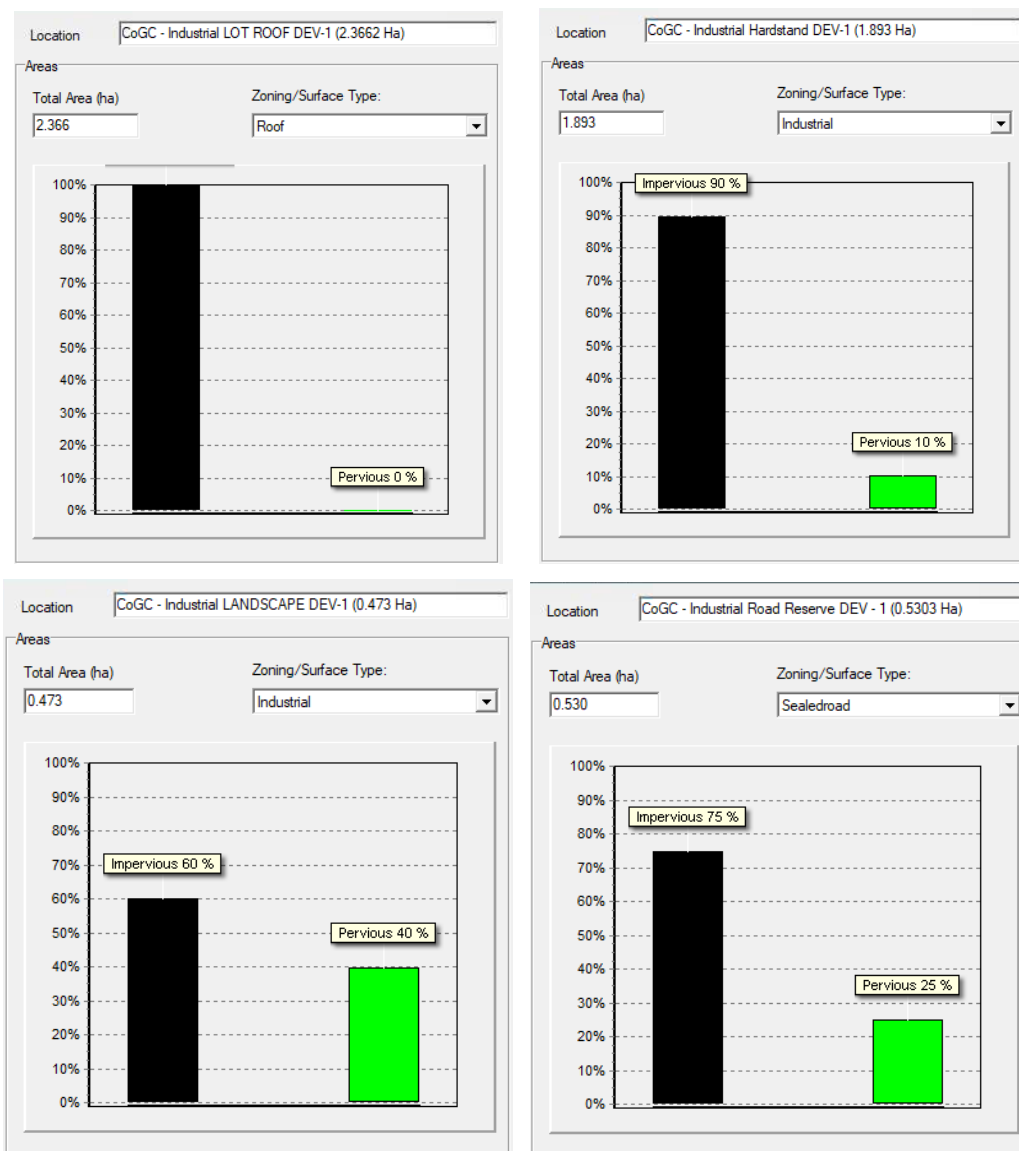


Figure 6.4.2.1: MUSIC Modelling Source Node Impervious Allocations - LPoD-1

MUSIC Source Node	Modelling Approach	Area (Ha)	Impervious %
Stage 3 (DEV-2) Total Catchment = 11.013Ha			
Road	SPLIT	0.1702	75
Hardstand	SPLIT	4.3371	90
Roof	SPLIT	5.4214	100
Ground	SPLIT	1.0843	60
Total		11.013	

Table 6.4.2.2: MUSIC Modelling Summary of Source Node Impervious Allocations

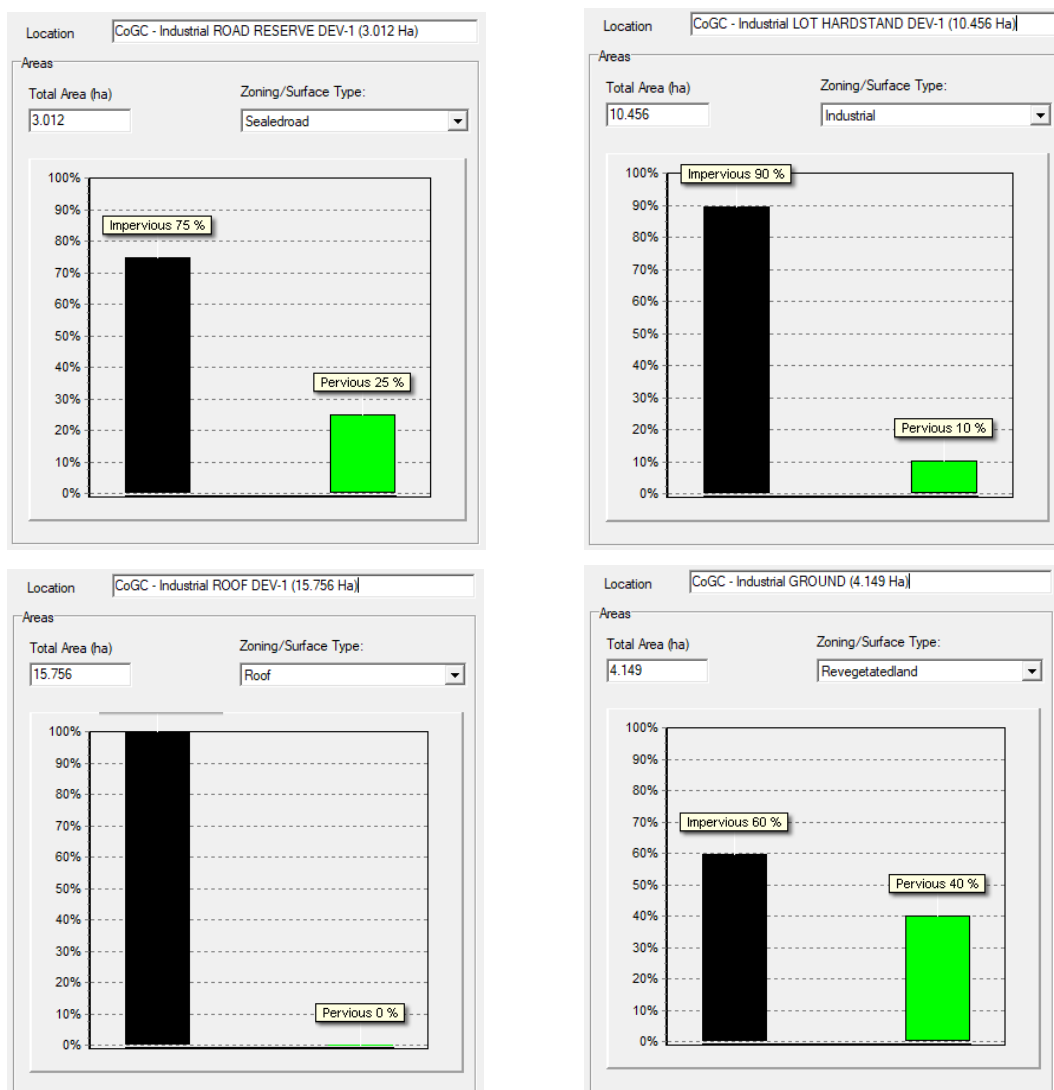


Figure 6.4.2.2: MUSIC Modelling Source Node Impervious Allocations – LPoD-2

MUSIC Source Node	Modelling Approach	Area (Ha)	Impervious %
Stage 3 (DEV-3) Total Catchment = 0.7491Ha			
Road	SPLIT	0.000	75
Hardstand	SPLIT	0.2996	90
Roof	SPLIT	0.3746	100
Ground	SPLIT	0.0749	60
Total		0.7491	

Table 6.4.2.3: MUSIC Modelling Summary of Source Node Impervious Allocations

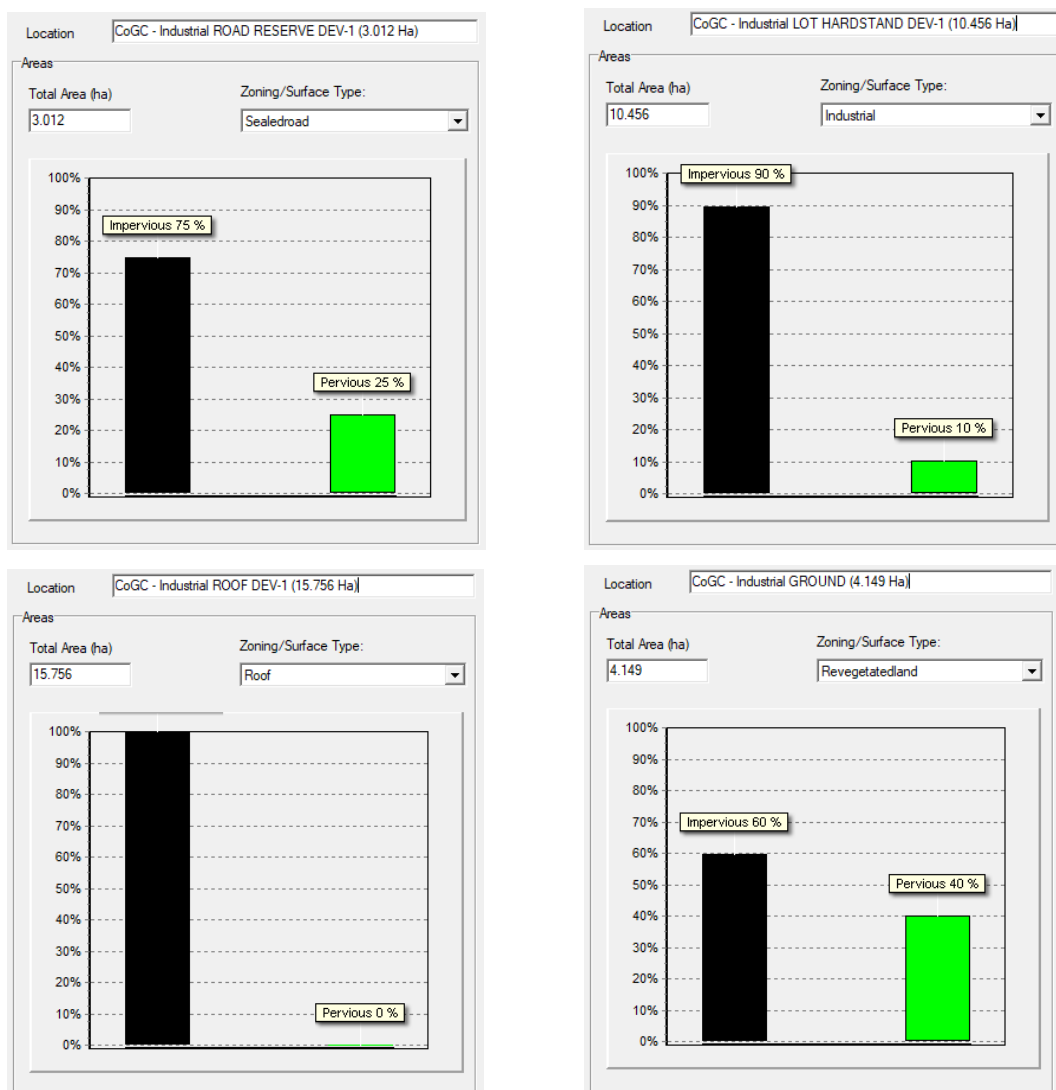


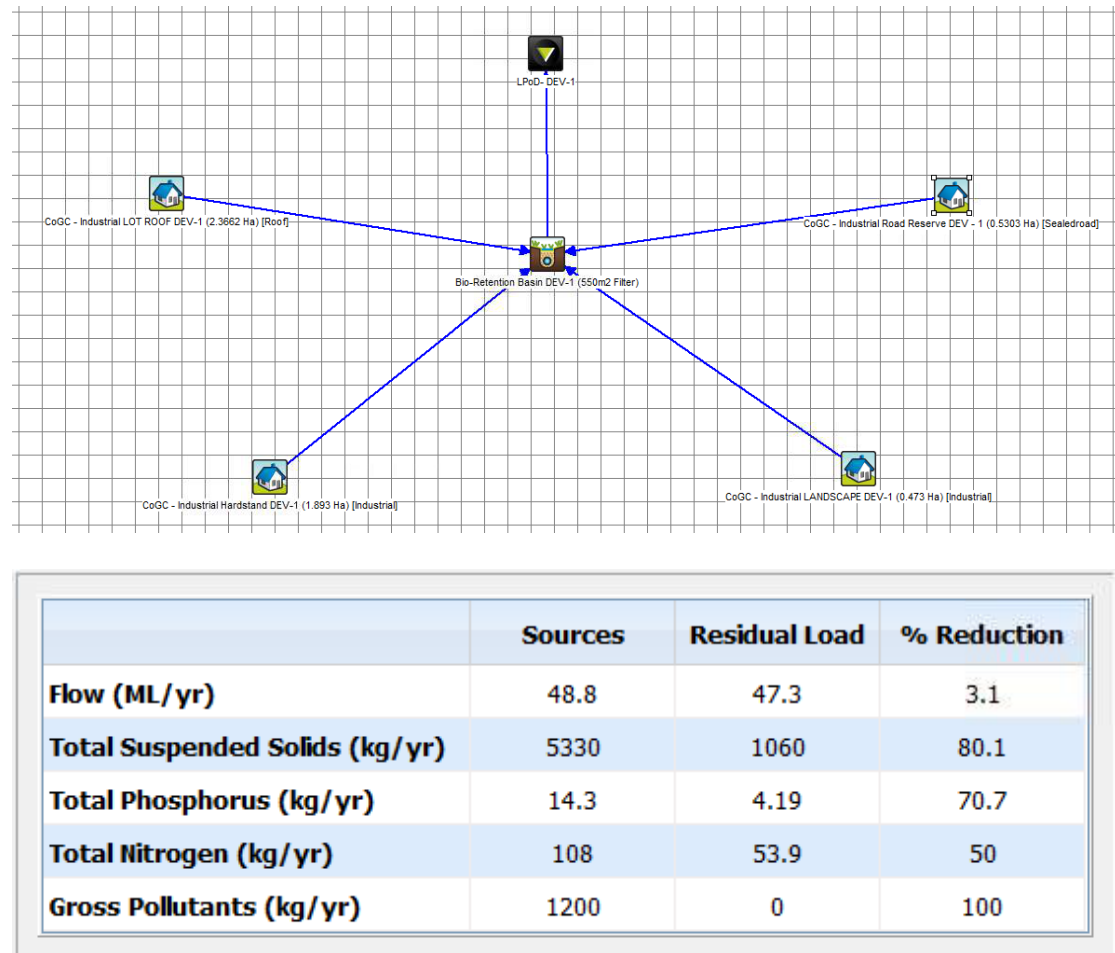
Figure 6.4.2.3: MUSIC Modelling Source Node Impervious Allocations – LPoD-3

6.4.3 DRAINAGE LINKS

No routing has been adopted for the drainage links within the modelling that has been undertaken. This approach is believed to provide more conservative results.

6.4.4 MUSIC MODEL LAYOUT AND RESULTS DEV-1

The diagrammatic representation of the source nodes, modelling configuration and results of pollutant reduction are outlined in Figure 6.4.4-1 below for the post developed catchment.



NORMAL ANALYSIS @ 200mm/hr SATURATED HYDRAULIC CONDUCTIVITY (SHC).

Figure 6.4.4-1: Catchment LPOD-1 MUSIC Layout and Results

The normal analysis returns a satisfactory result for meeting the SPP Water Quality Objectives. Refer above image for modelling outcomes.

The reduction in target pollutants to meet City of Gold Coast Council's requirements are achieved based on the below bio retention measures being implemented for the catchment.

Parameter	Value
	LPoD-1
Filter Media Area (m2)	550
Filter Media Depth (m) to support tree planting	0.60
Extended Detention Depth (m)	0.30
Weir Crest Width (m)	10.00

Refer also **Appendix F** for the CoGC MUSIC-Link summary report card to support the modelling outcomes described in this section.

Location: Bio-Retention Basin DEV-1 (550m2 Filter)	
Inlet Properties	
Low Flow By-pass (cubic metres per sec)	0.000
High Flow By-pass (cubic metres per sec)	20.000
Storage Properties	
Extended Detention Depth (metres)	0.30
Surface Area (square metres)	550.00
Filter and Media Properties	
Filter Area (square metres)	550.00
Unlined Filter Media Perimeter (metres)	0.01
Saturated Hydraulic Conductivity (mm/hour)	200.00
Filter Depth (metres)	0.60
TN Content of Filter Media (mg/kg)	400
Orthophosphate Content of Filter Media (mg/kg)	30.0
Infiltration Properties	
Exfiltration Rate (mm/hr)	0.00
Lining Properties	
Is Base Lined?	☒ Yes ☐ No
Vegetation Properties	
☒ Vegetated with Effective Nutrient Removal Plants	
☐ Vegetated with Ineffective Nutrient Removal Plants	
☐ Unvegetated	
Outlet Properties	
Overflow Weir Width (metres)	12.00
Underdrain Present?	☒ Yes ☐ No
Submerged Zone With Carbon Present?	☐ Yes ☒ No
Depth (metres)	0.45

NORMAL ANALYSIS @ 200mm/hr SHC

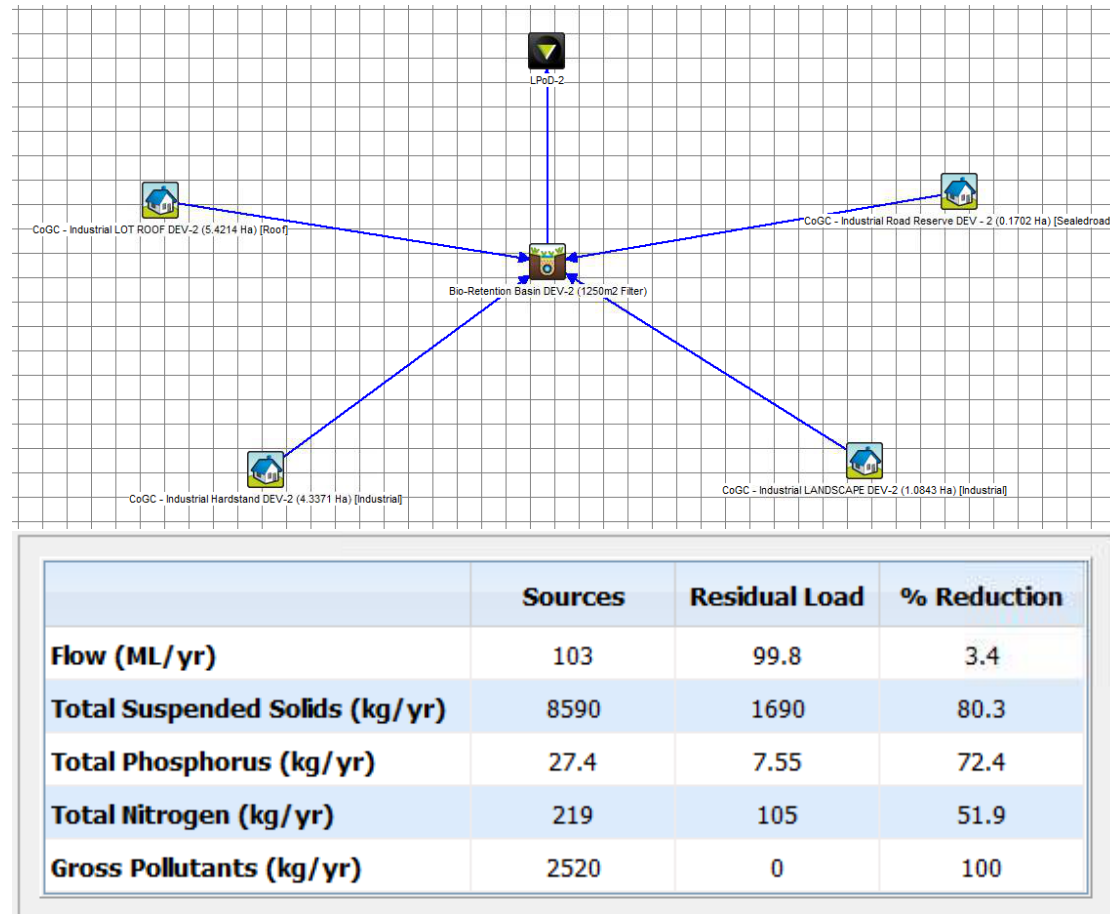
Table 6.4.4: Summary of Proposed Bio Retention Measures

The MUSIC modelling outcome achieves the following results for the subject catchment in direct comparison to the *Load Reduction Objectives* required by Council:

Pollutant Type	Load Reduction Objective (in mean annual load)	Load Reduction Achieved
Gross Pollutants (>5mm)	90.0%	100.0% complies
Total Suspended Solids (TSS)	80.0%	80.1% complies
Total Phosphorous (TP)	60.0%	70.7% complies
Total Nitrogen (TN)	45.0%	50.0% complies

6.4.5 MUSIC MODEL LAYOUT AND RESULTS DEV-2

The diagrammatic representation of the source nodes, modelling configuration and results of pollutant reduction are outlined in Figure 6.4.4-1 below for the post developed catchment.



NORMAL ANALYSIS @ 200mm/hr SATURATED HYDRAULIC CONDUCTIVITY (SHC).

Figure 6.4.5-1: Catchment LPoD-2 MUSIC Layout and Results

The normal analysis returns a satisfactory result for meeting the SPP Water Quality Objectives. Refer above image for modelling outcomes.

The reduction in target pollutants to meet City of Gold Coast Council's requirements are achieved based on the below bio retention measures being implemented for the catchment.

Parameter	Value
	LPoD-1
Filter Media Area (m2)	1,250
Filter Media Depth (m) to support tree planting	0.60
Extended Detention Depth (m)	0.30
Weir Crest Width (m)	10.00

Refer also **Appendix F** for the CoGC MUSIC-Link summary report card to support the modelling outcomes described in this section.

Location: Bio-Retention Basin DEV-2 (1250m2 Filter)	
Inlet Properties	
Low Flow By-pass (cubic metres per sec)	0.000
High Flow By-pass (cubic metres per sec)	20.000
Storage Properties	
Extended Detention Depth (metres)	0.30
Surface Area (square metres)	1250.00
Filter and Media Properties	
Filter Area (square metres)	1250.00
Unlined Filter Media Perimeter (metres)	0.01
Saturated Hydraulic Conductivity (mm/hour)	200.00
Filter Depth (metres)	0.60
TN Content of Filter Media (mg/kg)	400
Orthophosphate Content of Filter Media (mg/kg)	30.0
Infiltration Properties	
Exfiltration Rate (mm/hr)	0.00
Lining Properties	
Is Base Lined?	☒ Yes ☐ No
Vegetation Properties	
☒ Vegetated with Effective Nutrient Removal Plants	
☐ Vegetated with Ineffective Nutrient Removal Plants	
☐ Unvegetated	
Outlet Properties	
Overflow Weir Width (metres)	12.00
Underdrain Present?	☒ Yes ☐ No
Submerged Zone With Carbon Present?	☐ Yes ☒ No
Depth (metres)	0.45

NORMAL ANALYSIS @ 200mm/hr SHC

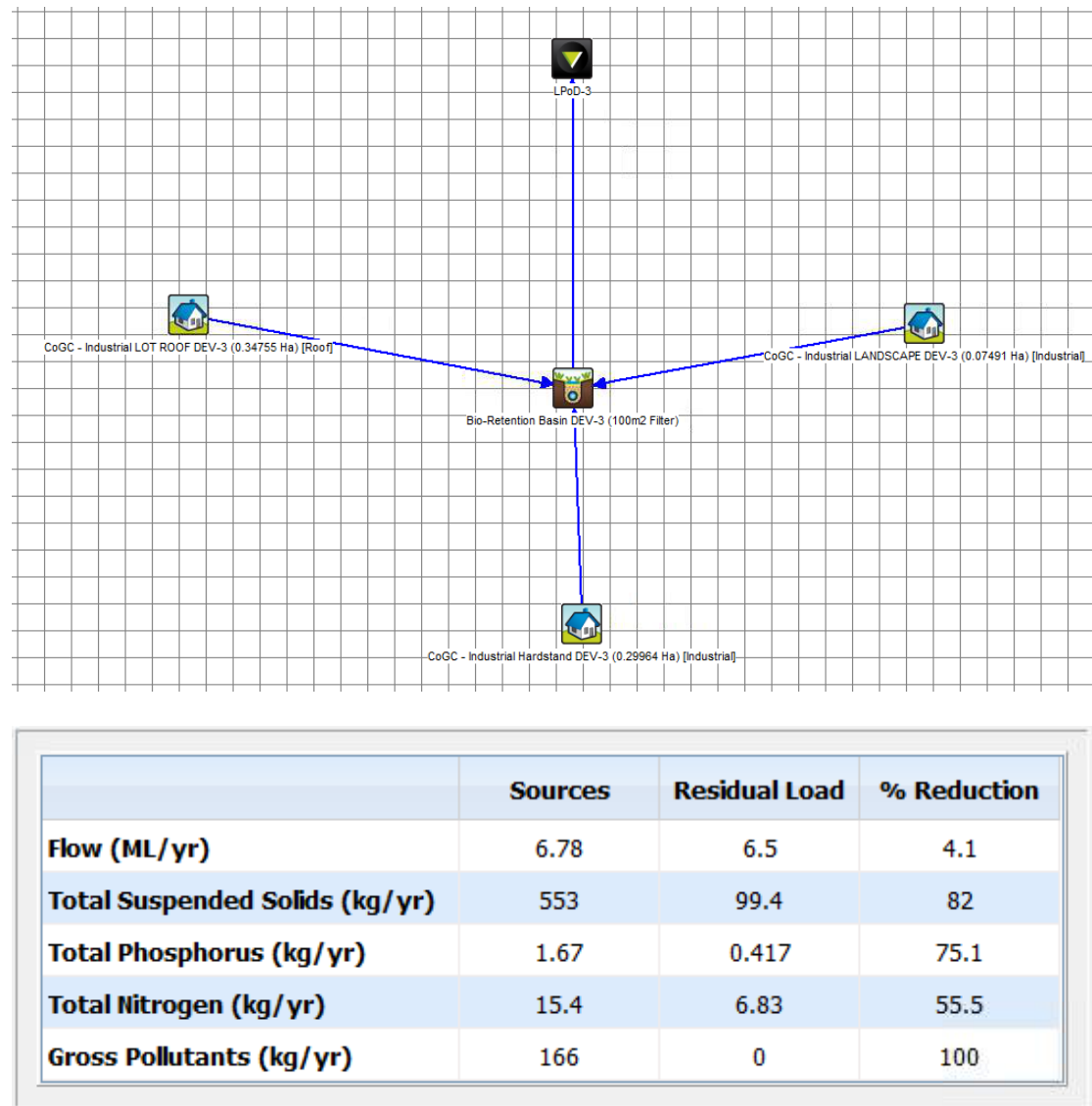
Table 6.4.5: Summary of Proposed Bio Retention Measures

The MUSIC modelling outcome achieves the following results for the subject catchment in direct comparison to the *Load Reduction Objectives* required by Council:

Pollutant Type	Load Reduction Objective (in mean annual load)	Load Reduction Achieved
Gross Pollutants (>5mm)	90.0%	100.0% complies
Total Suspended Solids (TSS)	80.0%	80.3% complies
Total Phosphorous (TP)	60.0%	72.4% complies
Total Nitrogen (TN)	45.0%	51.9% complies

6.4.6 MUSIC MODEL LAYOUT AND RESULTS DEV-3

The diagrammatic representation of the source nodes, modelling configuration and results of pollutant reduction are outlined in Figure 6.4.4-1 below for the post developed catchment.



NORMAL ANALYSIS @ 200mm/hr SATURATED HYDRAULIC CONDUCTIVITY (SHC).

Figure 6.4.6-1: Catchment LPoD-3 MUSIC Layout and Results

The normal analysis returns a satisfactory result for meeting the SPP Water Quality Objectives. Refer above image for modelling outcomes.

The reduction in target pollutants to meet City of Gold Coast Council's requirements are achieved based on the below bio retention measures being implemented for the catchment.

Parameter	Value
	LPoD-1
Filter Media Area (m2)	100
Filter Media Depth (m) to support tree planting	0.60
Extended Detention Depth (m)	0.30
Weir Crest Width (m)	10.00

Refer also **Appendix F** for the CoGC MUSIC-Link summary report card to support the modelling outcomes described in this section.

Location: Bio-Retention Basin DEV-3 (100m2 Filter)

Inlet Properties
Low Flow By-pass (cubic metres per sec): 0.000
High Flow By-pass (cubic metres per sec): 20.000

Storage Properties
Extended Detention Depth (metres): 0.30
Surface Area (square metres): 100.00

Filter and Media Properties
Filter Area (square metres): 100.00
Unlined Filter Media Perimeter (metres): 0.01
Saturated Hydraulic Conductivity (mm/hour): 200.00
Filter Depth (metres): 0.60
TN Content of Filter Media (mg/kg): 400
Orthophosphate Content of Filter Media (mg/kg): 30.0

Infiltration Properties
Exfiltration Rate (mm/hr): 0.00

Lining Properties
Is Base Lined? ☒ Yes ☐ No

Vegetation Properties
☒ Vegetated with Effective Nutrient Removal Plants
☐ Vegetated with Ineffective Nutrient Removal Plants
☐ Unvegetated

Outlet Properties
Overflow Weir Width (metres): 12.00
Underdrain Present? ☒ Yes ☐ No
Submerged Zone With Carbon Present? ☐ Yes ☒ No
Depth (metres): 0.45

NORMAL ANALYSIS @ 200mm/hr SHC

Table 6.4.6: Summary of Proposed Bio Retention Measures

The MUSIC modelling outcome achieves the following results for the subject catchment in direct comparison to the *Load Reduction Objectives* required by Council:

Pollutant Type	Load Reduction Objective (in mean annual load)	Load Reduction Achieved
Gross Pollutants (>5mm)	90.0%	100.0% complies
Total Suspended Solids (TSS)	80.0%	82.0% complies
Total Phosphorous (TP)	60.0%	75.1% complies
Total Nitrogen (TN)	45.0%	55.5% complies

7.0 CONSTRUCTION, OPERATIONAL MANAGEMENT & MAINTENANCE

7.1 CONSTRUCTION PHASE SEDIMENT AND EROSION CONTROL

The operational phase detention basin within Stage 2 is proposed to be utilised as a HES (High Efficiency Sediment basin) during the construction phase of the development. The sizing of the basin has been determined using the ICEA Best Practice Erosion & Sediment Control Guidelines as well as calculation spreadsheets prepared by an industry provider.

Refer to **Appendix D** which contains copies of the Sediment Basin design calculations, and the Sediment & Erosion Control plans.

Where ultimate detention basin sizing does not align with the volumetric requirements of International Erosion Control Association's (IECA) Best Practice Guidelines, temporary construction phase sediment basins will be implemented.

Monitoring and maintenance of both the construction phase sediment basins and associated sediment and erosion control measures implemented over the site will be in accordance with IECA's Best Practice Guidelines and City of Gold Coast Council's standards.

7.2 ASSET OWNERSHIP AND HANDOVER

The SQIDs have been designed in accordance with QUDM standards and City of Gold Coast Council's Land Development Guidelines and in doing so aim to provide suitable and safe vehicular access for future maintenance.

The current development proposal involves dedication of proposed Lot 901 containing the SQIDs to Council through a formal 'On Maintenance' handover in accordance with Council's Land Development Guidelines to ensure the SQIDs have been built in accordance with the requirements.

7.3 MAINTENANCE OF BIO RETENTION BASINS DURING OPERATIONAL PHASE

Inspections and maintenance are to be carried out on a yearly basis to determine if the SQIDs are functioning as intended.

The WSUD Technical Design Guideline for South East Queensland incorporates Maintenance Checklists (*Refer Appendix G*) covering the items to be inspected and should be utilised and kept on record to ensure that a mechanism is in place to log the continued effectiveness of the SQIDs.

Inspections and any required maintenance will be the responsibility of the asset owner.

Refer to **Appendix C** which contains copies of the Operational Phase Bio Retention basin plans.

8.0 CONCLUSION

Gassman Development Perspectives have prepared this Site Based Stormwater Management Plan to support an application for *Reconfiguration of Lot* over Lot 504 on SP329485 (Lot 504 Homestead Drive, Stapylton).

The purpose of which is to address and manage stormwater quantity and quality requirements of the proposed development of Stage 3 over the subject site in accordance with the relevant State and Local Authority's legislation and regulatory guidelines.

The key outcomes achieved through the analysis and modelling undertaken within this report are demonstrated in the stormwater bio-retention and sediment basin designs within **Appendix C and Appendix D**, and are as described below:

Stormwater Quantity

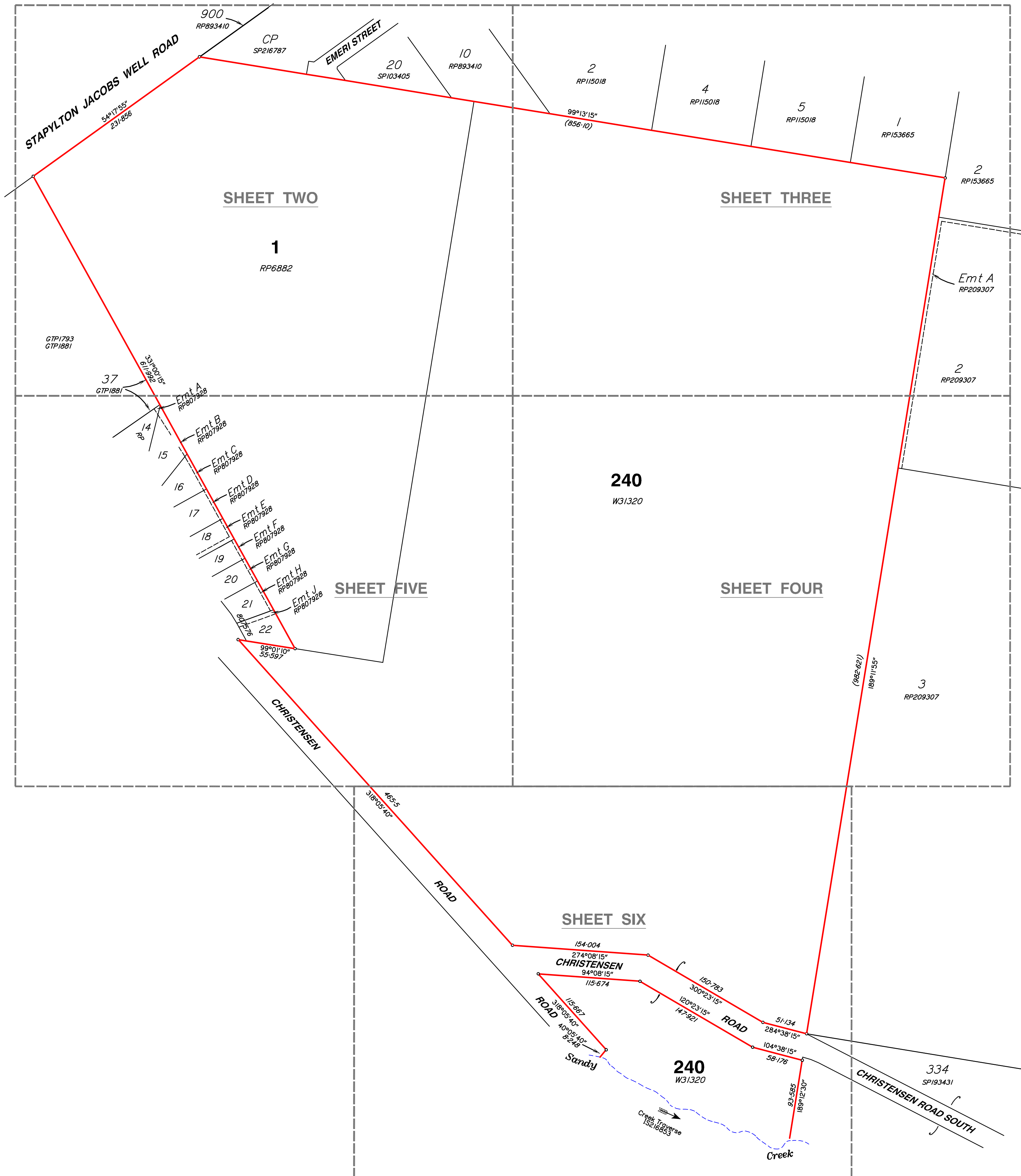
Suitable attenuation measures are able to be incorporated into the proposed development to ensure there is no adverse impacts to downstream properties, waterways or infrastructure as a result of an increase in peak stormwater flow rates discharging from the subject site upon development.

This is achieved through the design of an appropriately sized detention basin that complies with City of Gold Coast Council's Land Development Guidelines and the Queensland Urban Drainage Manual (QUDM).

Stormwater Quality

Stormwater quality objectives for the subject site are achieved through the design of a suitable stormwater treatment train that implements all necessary steps to ensure that the quality of stormwater discharging from the subject site meets the necessary standards to comply with City of Gold Coast Council's Water Sensitive Urban Design (WSUD) requirements, Queensland Urban Drainage Manual (QUDM) and the performance objectives of the Queensland State Planning Policy (SPP).

Appendix A – Site Survey Plan



Notes

This plan has been prepared for the exclusive use and purposes of the client as stated on this plan and should not be used by any other person or corporation and for any other purpose.

Property boundaries have not been defined by this survey and have been compiled from IS216853.

Only those underground features and services as shown on this plan have been located by this survey. Prior to any construction, demolition or excavation on the site, the relevant authority should be contacted for the location of any further underground services and detailed location of all services.

This plan may not be photocopied unless these notes are included.

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Client

HESTER

Project

CONTOUR AND DETAIL PLAN

Over Lot 1 on RP6882 and Lot 240 on WD31320

Parish of **ALBERT**

County of **Ward**

Local Govt **GOLD COAST CITY COUNCIL**

Level Datum	A.H.D.	Date Surveyed	Jan 2011
Meridian	IS216853	Surveyor	A. Macdonald
Contour Interval	0.2	Drawn	S. Holt
F.B.	No	Date Drafted	02-02-2011
Origin	PSM 133471	Checked	
	RL 22.169		

Scale (on A1 original)	Designed
1:2500	Drawn
	Date Designed

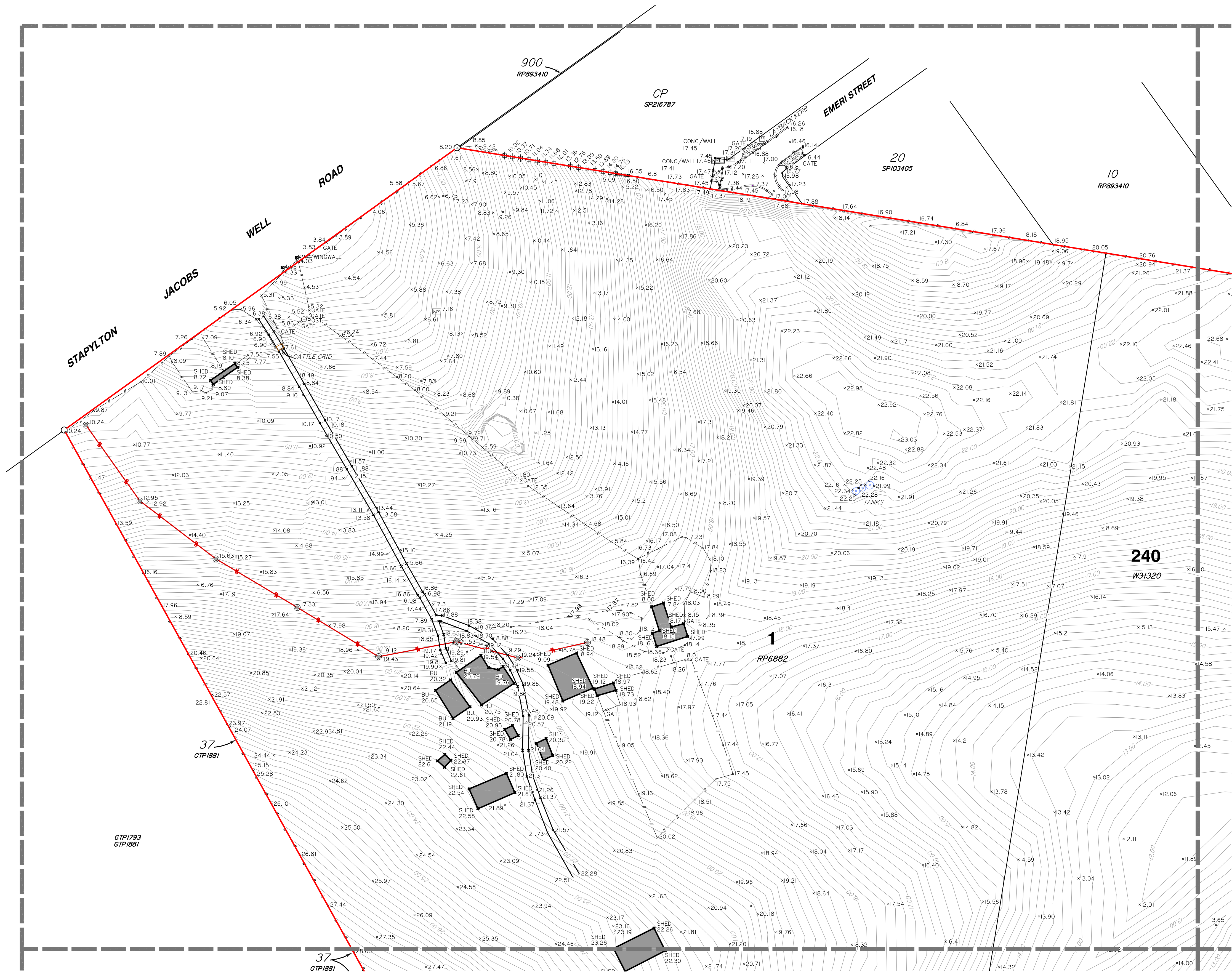
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Gold Coast and Logan Office
Access Business Park
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f: (07) 32975461
e: mail@gassman.com.au
w: www.gassman.com.au

REFERENCE No. **5093-10**

PLAN No. **5093 S CD 01**



LEGEND

- PERMANENT MARK
- SEWER MANHOLE
- SEWER INSPECTION OUTLET
- ELECTRICITY PILLAR
- ELECTRICITY POLE
- ELECTRICITY POLE WITH LIGHT
- TELSTRA PIT
- MANHOLE
- STORMWATER MANHOLE
- GULLY TRAP
- WATER METER
- FIRE HYDRANT
- VALVE
- GATE
- BOLLARD
- CONCRETE
- EDGE OF BITUMEN
- FENCE
- OVERHEAD ELECTRICITY
- OPEN DRAIN
- RETAINING WALL
- EDGE OF GARDEN
- CONTOUR LEVEL

Notes

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Client

HESTER

Project

CONTOUR AND DETAIL PLAN

Over Lot 1 on RP6882 and Lot 240 on WD31320

Parish of **ALBERT**

County of **Ward**

Local Govt **GOLD COAST CITY COUNCIL**

Level Datum	A.H.D.	Date Surveyed	Jan 2011
Meridian	IS133471	Surveyor	A. Macdonald
Contour Interval	0.2	Drawn	S. Holt
F.B.	No	Date Drafted	02-02-2011
Origin	PSM 133471	Checked	
	RL 22.169		

Scale (on A1 original)

1:1000



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REFERENCE No. **5093-10**

PLAN No. **5093 S CD 01**



LEGEND

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Client

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CONTOUR AND DETAIL PLAN

Over Lot 1 on RP6882 and Lot 240 on WD31320

Parish of **ALBERT**

County of **Ward**

Local Govt **GOLD COAST CITY COUNCIL**

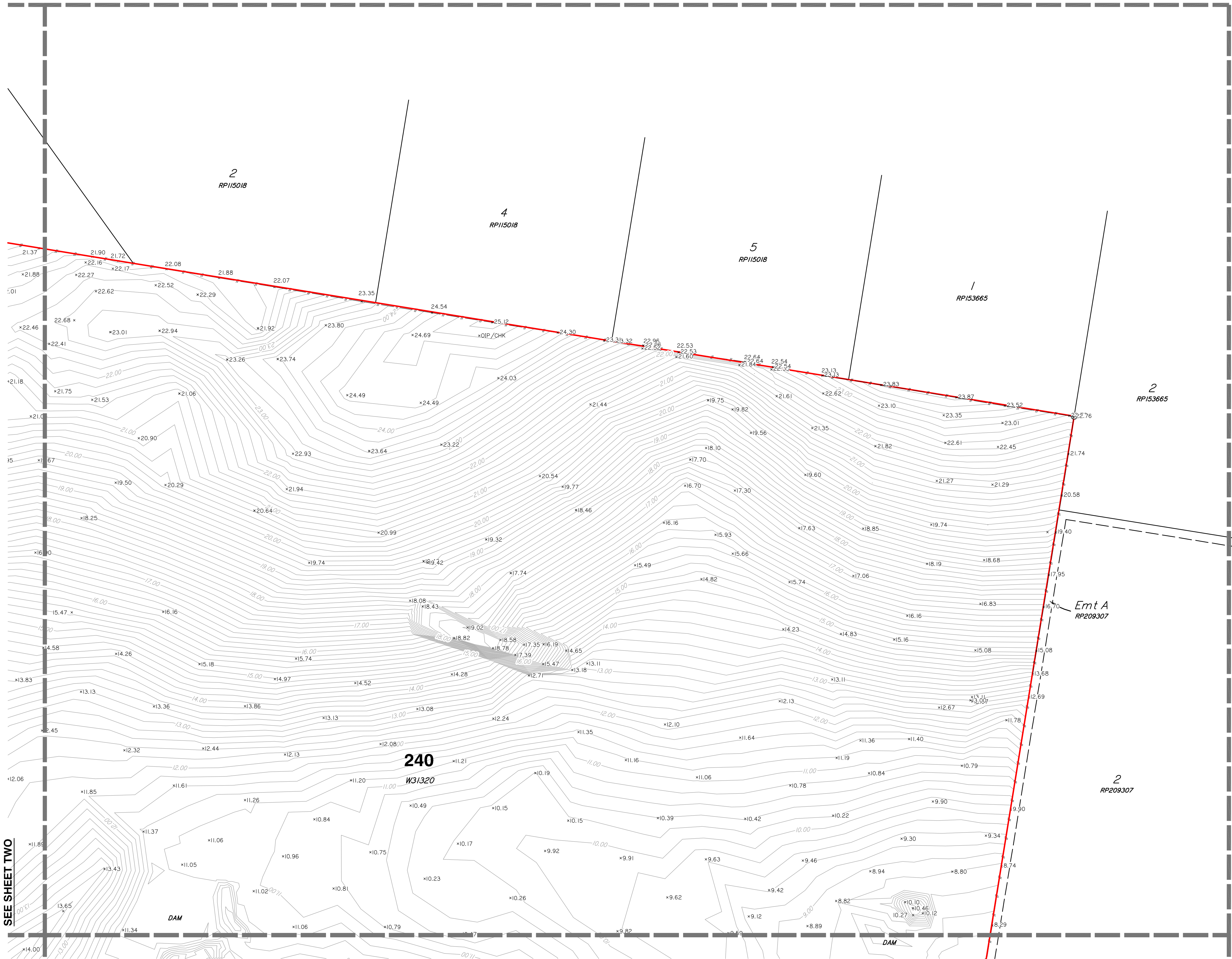
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Contour Interval	0.2	Drawn	S. Holt
F.B.	No	Date Drafted	02-02-2011
Origin	PSM 133471	Checked	RL 22.169
Scale (on A1 original)	Designed		
	Drawn		
	Date Designed		

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REFERENCE No. **5093-10**

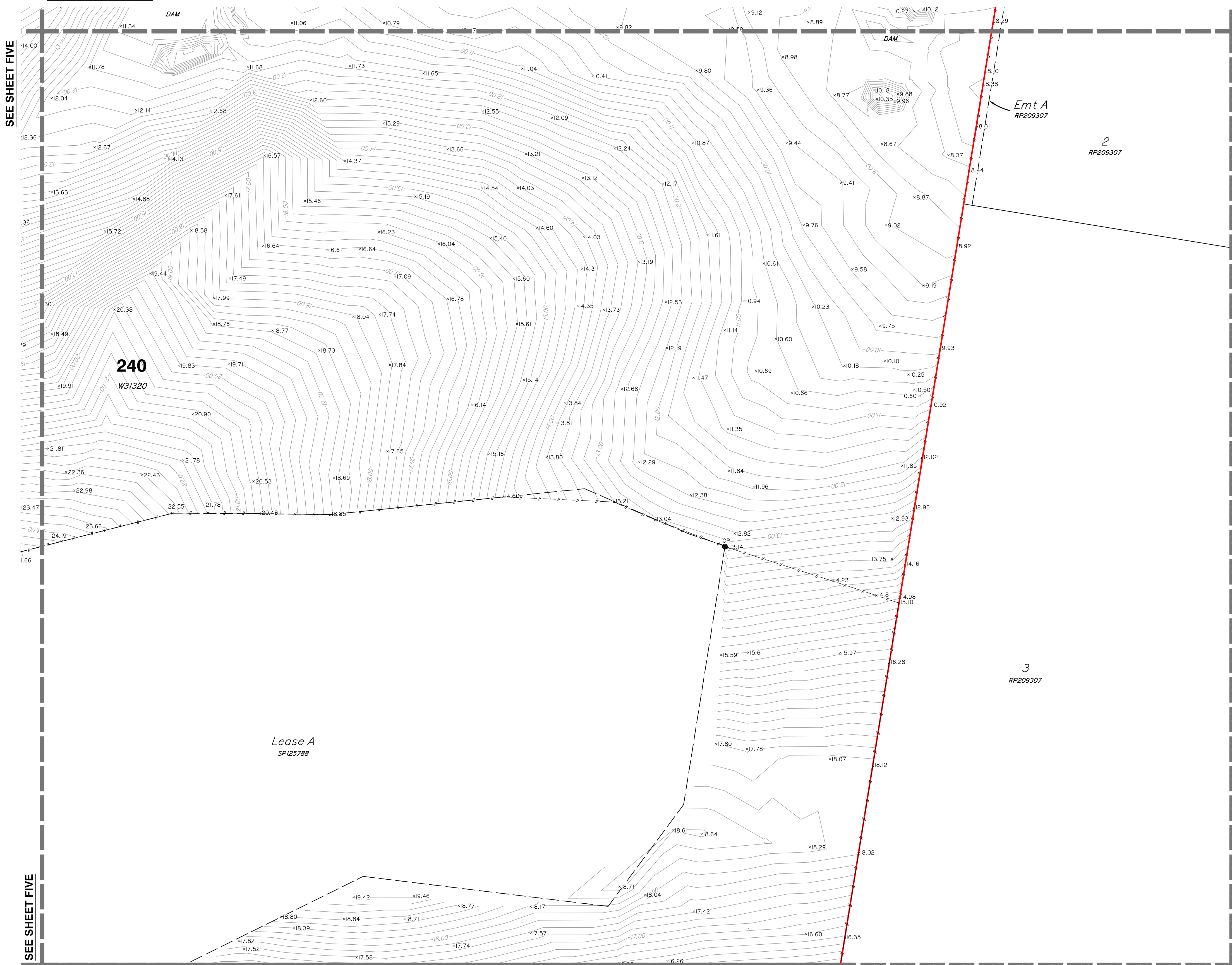
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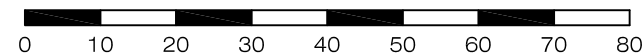


SEE SHEET THREE



SEE SHEET SIX

Scale 1:1000 - Lengths are in Metres.



LEGEND

- PERMANENT MARK
- SEWER MANHOLE
- SEWER INSPECTION OUTLET
- ELECTRICITY PILLAR
- ELECTRICITY POLE
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Client

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CONTOUR AND DETAIL PLAN

Over Lot 1 on RP6882 and Lot 240 on WD31320

Parish of **ALBERT**

County of **Ward**

Local Govt **GOLD COAST CITY COUNCIL**

Level Datum	A.H.D.	Date Surveyed	Jan 2011
Meridian	IS216853	Surveyor	A. Macdonald
Contour Interval	0.2	Drawn	S. Holt
F.B.	No	Date Drafted	02-02-2011
Origin	PSM 133471	Checked	
	RL 22.169		

Scale (on A1 original)	Designed
1:1000	Drawn
	Date Designed



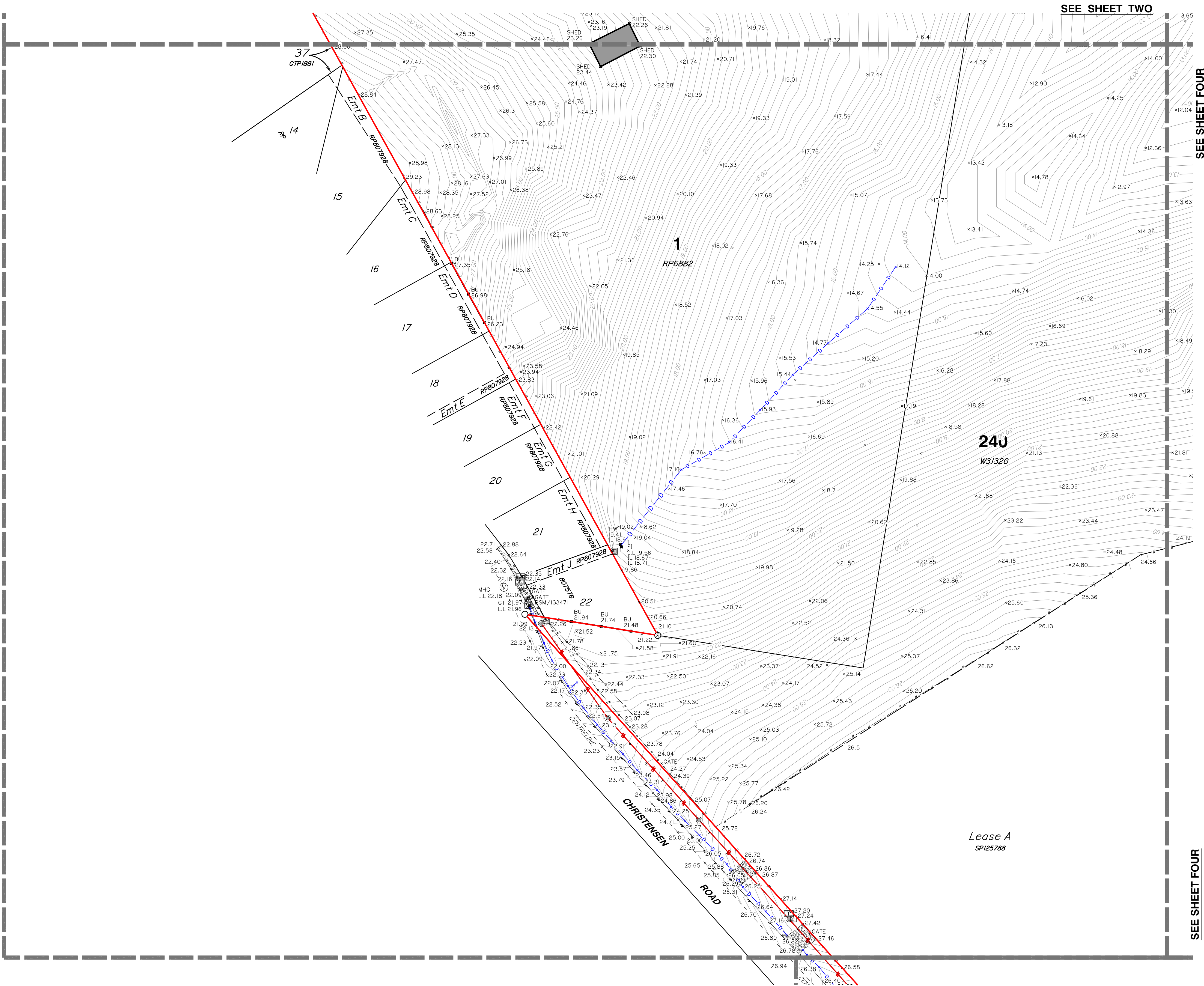
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REFERENCE No. **5093-10**

PLAN No. **5093 S CD 01**



Scale 1:1000 - Lengths are in Metres.

LEGEND

- PERMANENT MARK
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- SEWER INSPECTION OUTLET
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- ELECTRICITY POLE
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CONTOUR AND DETAIL PLAN

Over Lot 1 on RP6882 and Lot 240 on WD31320

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F.B.	No	Date Drafted	02-02-2011
Origin	PSM 133471	Checked	RL 22.169

Scale (on A1 original)	Designed
1:1000	Date Designed



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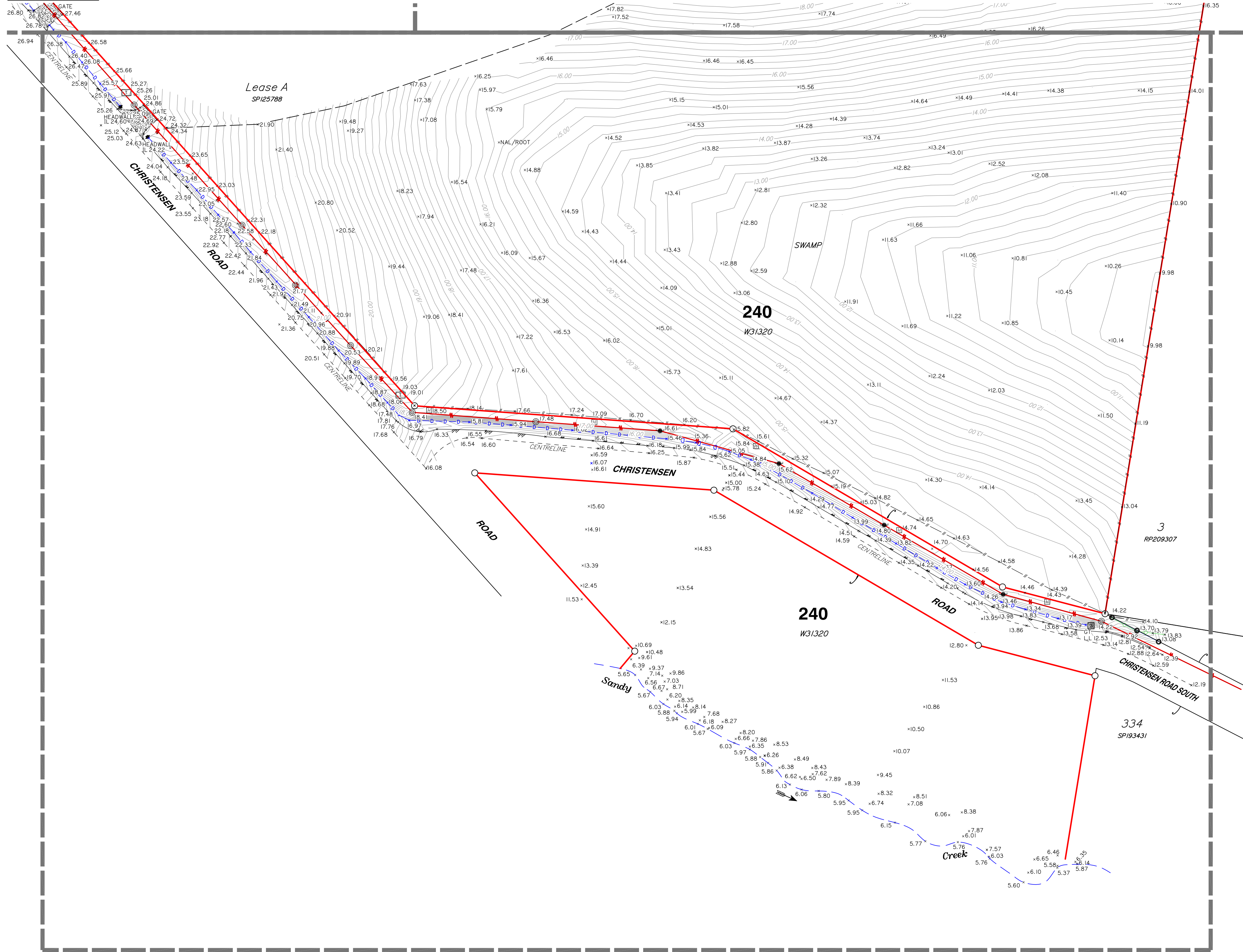
REFERENCE No. **5093-10**

PLAN No. **5093 S CD 01**



SEE SHEET FIVE

SEE SHEET FOUR



LEGEND

- PERMANENT MARK
- SEWER MANHOLE
- SEWER INSPECTION OUTLET
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- ELECTRICITY POLE
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Contour Interval	0.2	Drawn	S. Holt
F.B.	No	Date Drafted	02-02-2011
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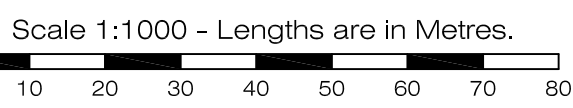
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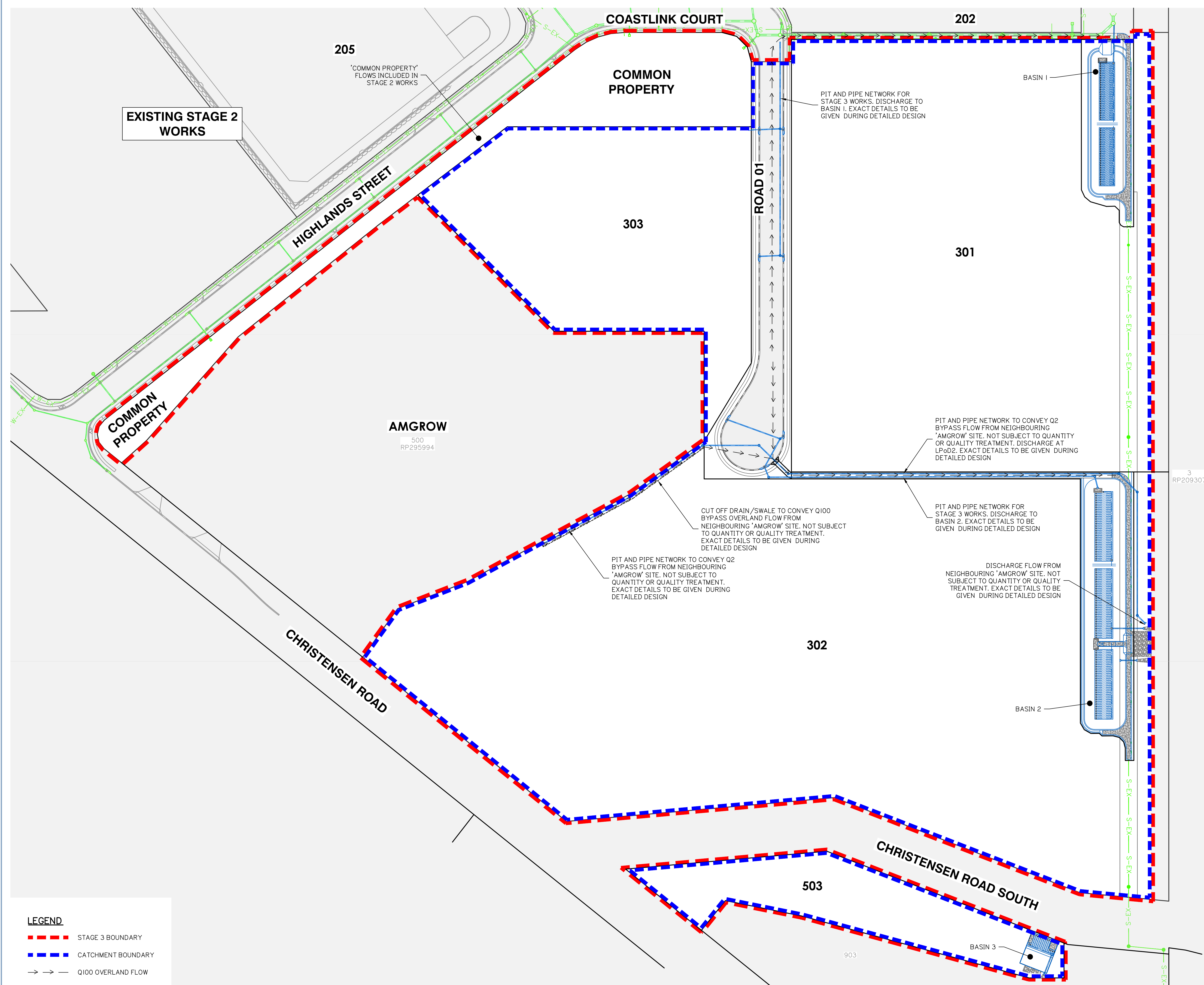
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REFERENCE No. **5093-10**

PLAN No. **5093 S CD 01**



Appendix B – Pre and Post Development Catchment Plans



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Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VantageYatala

STAGE 3

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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RPD:

Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST COUNCIL
Level Datum:	AHD
Meridian:	-
Contour Interval:	-
PSM:	-
RI:	-

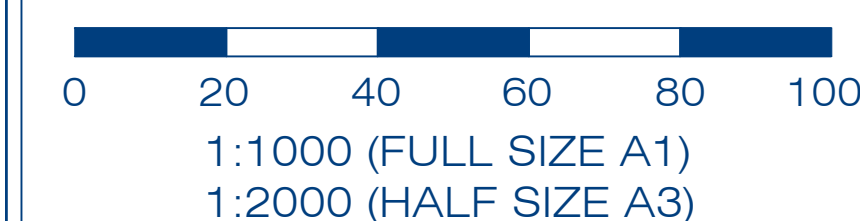
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DRAWING TITLE

STORMWATER CONVEYANCE LAYOUT PLAN



Scale at A1:	1:1000
--------------	--------

Designed:	JH
Drafted:	MG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/04/2023

Drawing No:	Rev. No:
5941 ENG SMP3 005	A

Appendix C – Design of Stormwater Quantity and Quality Basin

Client:



FPI QUEENSLAND PTY LTD

Project:

VANTAGE YATALA
STAGE 3

Site Address:

LOT 504 HOMESTEAD
DRIVE, STAYPLTON
QLD, 4207

RPD:

Lot: 504
Plan: SP329845
Local Authority: CITY OF GOLD COAST
Level Datum: AHD
Meridian:
PSM:
RL:

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Drawing Title:

OPERATIONAL PHASE
BIORETENTION BASIN 1
LAYOUT PLAN

A	03/02/23	ORIGINAL ISSUE	JH	MG
Rev	Date	Description	DRN	CHK

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE
CULVERT AND PIPE SIZES IN MILLIMETRES
A1 UNREDUCED
A3 REDUCED

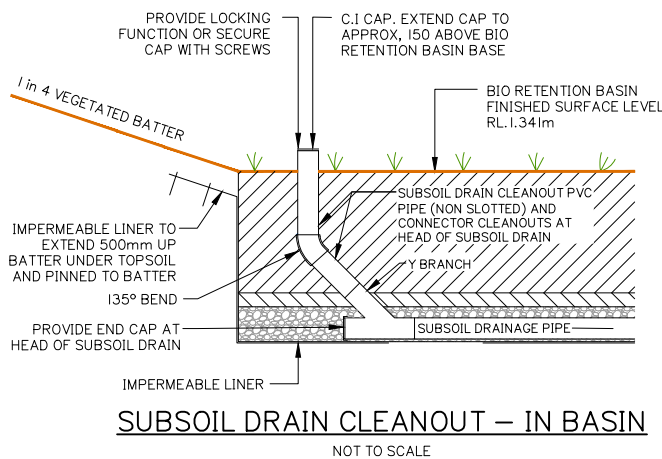
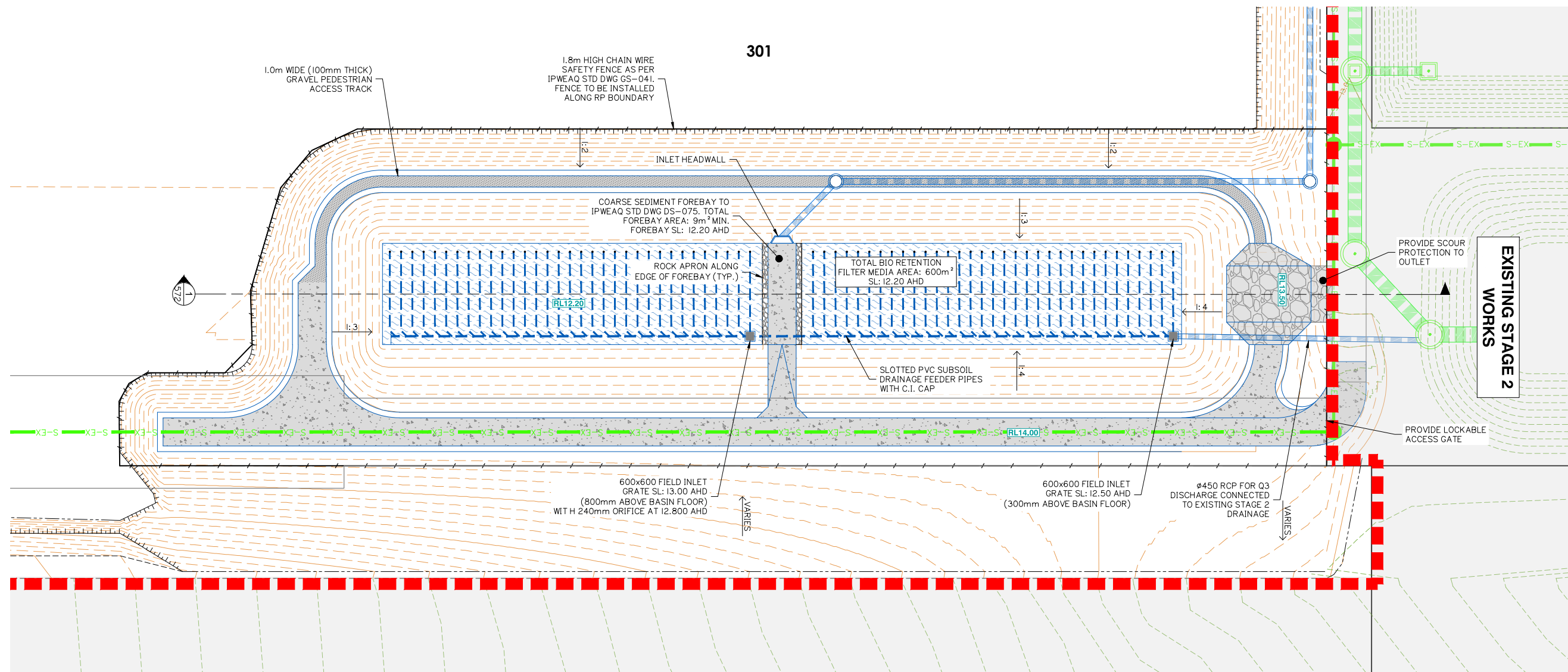
Scale:



PROJECT NORTH POINT

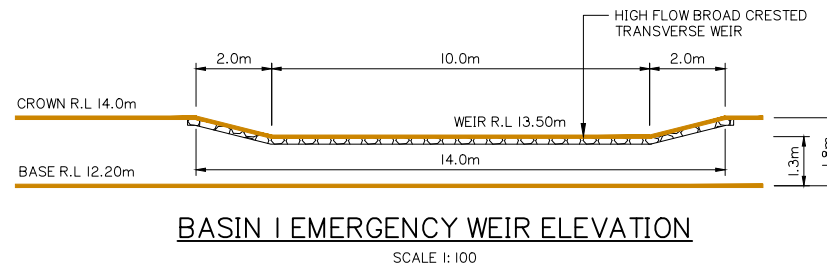
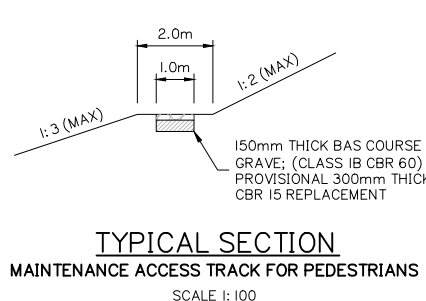
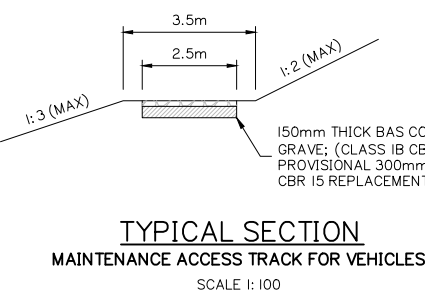
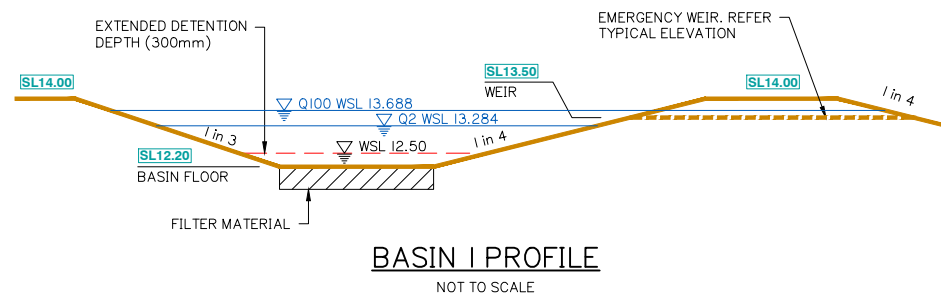


Project No:	5941	Revision	
Designed:	JH	Drafted:	JH
Approved:			MG
RPEQ			16939
Signed:			
Date:			03/02/2023
Drawing No:	5941 ENG BE3 570		



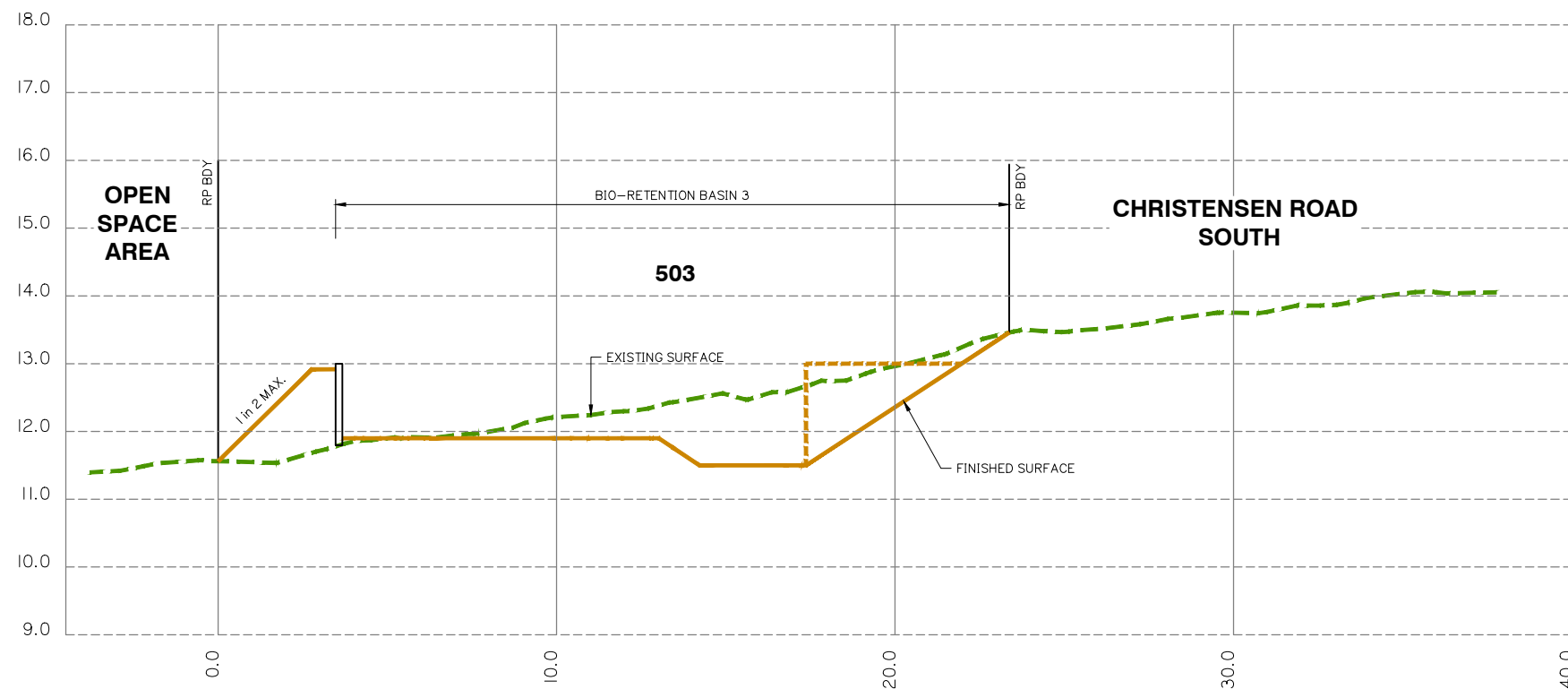
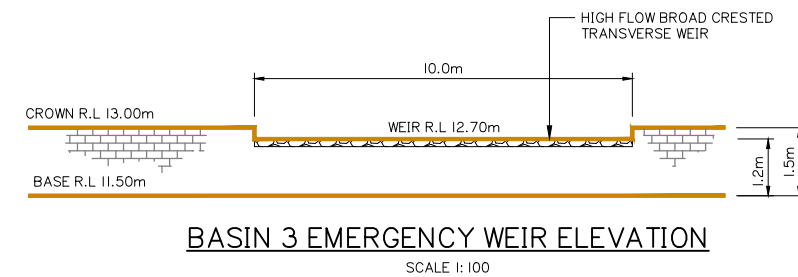
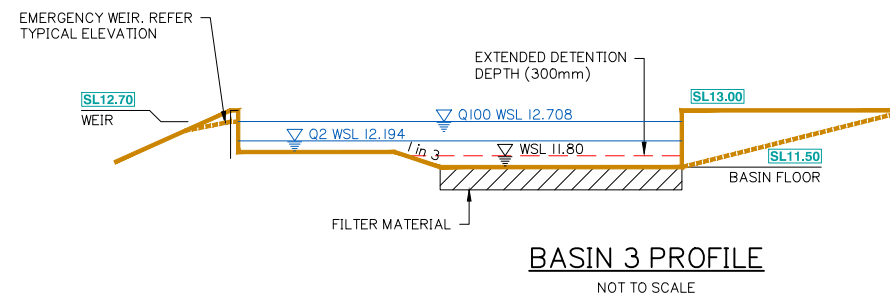
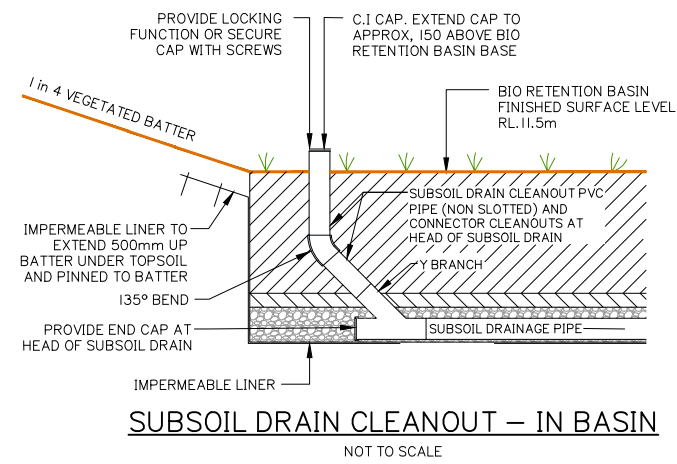
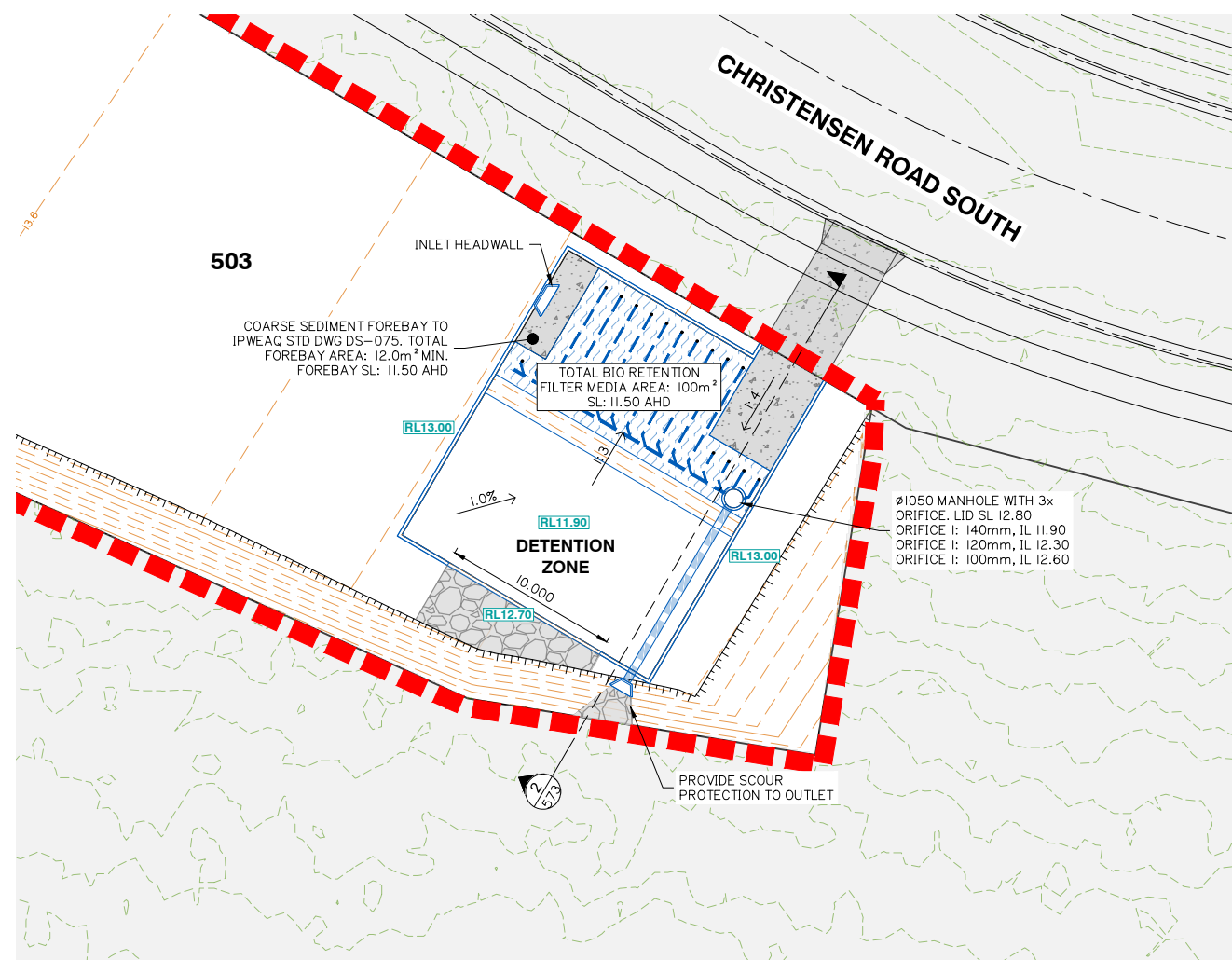
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EVENT (ARI)	LEVEL (AHD)
Q1	13.171
Q2	13.284
Q5	13.399
Q10	13.448
Q20	13.560
Q50	13.641
Q100	13.688



NOTE:
1. FOR GENERAL DRAWING LEGENDS, REFER TO SHEET 004
2. FOR GENERAL NOTES, REFER TO SHEETS 002 AND 003

OPERATIONAL PHASE BIORETENTION BASIN I LAYOUT PLAN

WATER SURFACE LEVEL TABLE

Client:



FPI QUEENSLAND PTY LTD

Project:

VANTAGE YATALA STAGE 3

Site Address:

LOT 504 HOMESTEAD
DRIVE, STAYPLTON
QLD, 4207

RPD:

Lot:	504
Plan:	SP329845
Local Authority:	CITY OF GOLD COAST

Level Datum: AHD
Meridian:
PSM:
RL:

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Drawing Title:

OPERATIONAL PHASE BIORETENTION BASIN 3 LAYOUT PLAN

[illegible]

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE.	A1 UNREDUCED
CULVERT AND PIPE SIZES IN MILLIMETRES	A3 REDUCED

Scale:



PROJECT NORTH POINT



Project No. 5941

Designed: JH

Drafted: JH

Approved:

MG

RPEQ

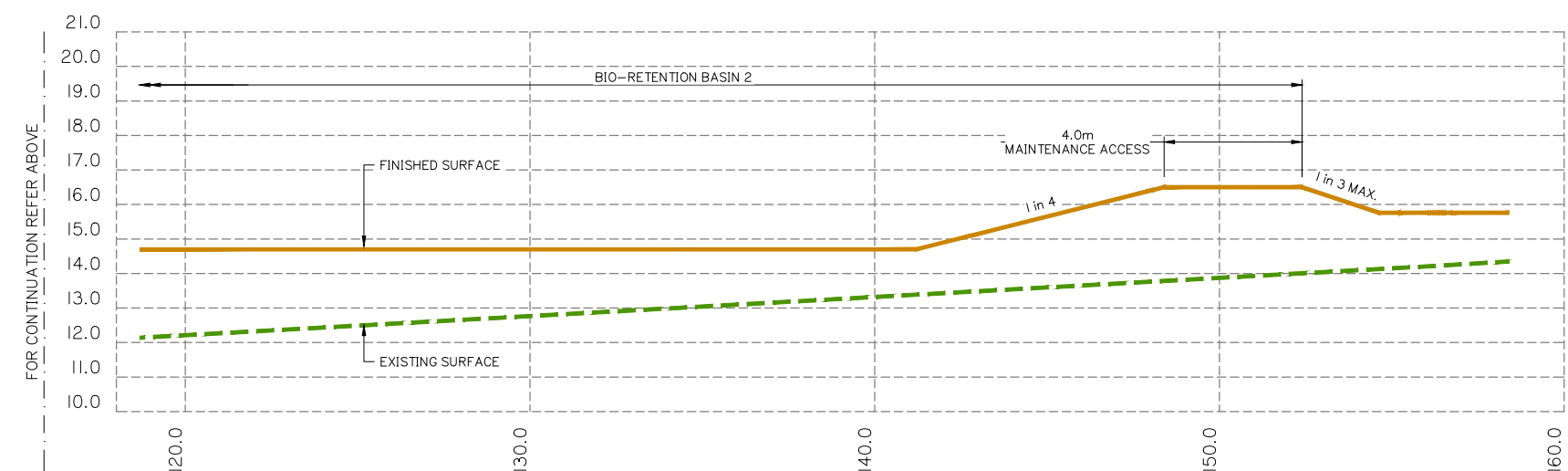
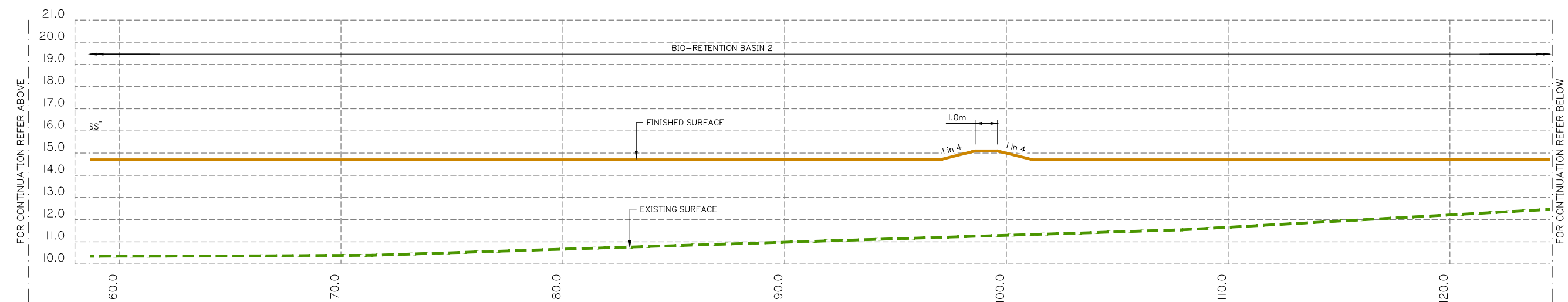
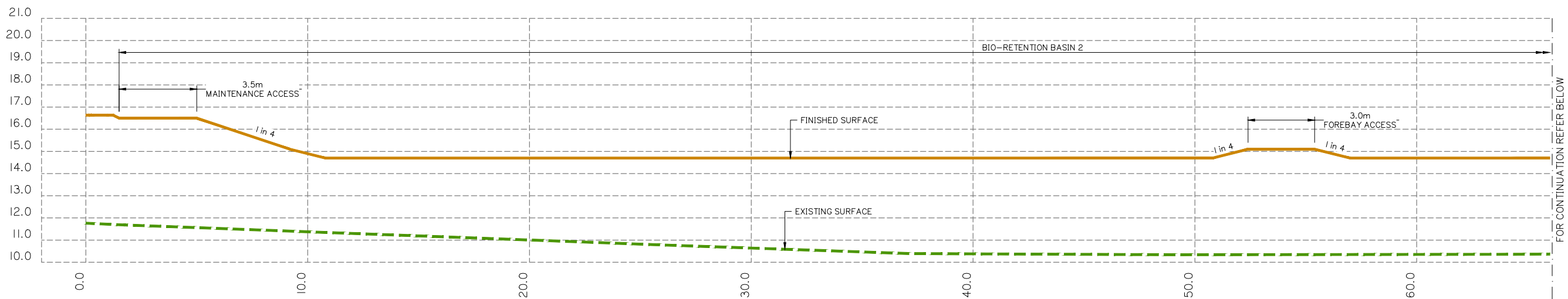
16939

Signed:

[Signature]

Drawing No:
5941 ENG BE3 572

Revision
A



SECTION _____

SCALE: _____

I: 100 HORIZ. _____

I: 100 VERT. _____



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Client:



FPI QUEENSLAND PTY LTD

Project:

VANTAGE YATALA STAGE 3

Site Address:

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QLD, 4207

RPD:

Lot:	504
Plan:	SP329845
Local Authority:	CITY OF GOLD COAST

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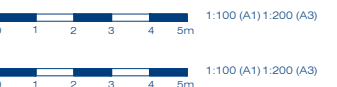
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OPERATIONAL PHASE
BIORETENTION BASIN
SECTIONS SHEET 2 OF 2

A	03/02/23	ORIGINAL ISSUE	JH	MG	
Rev	Date	Description	DRN	G/K	
DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE			A1 UNREDUCED		
CULVERT AND PIPE SIZES IN MILLIMETRES			A3 REDUCED		

Scale:



PROJECT NORTH POINT

Project No. 5941

Designed: JH

Drafted: JH

Approved:

MG

RPEQ

16939

Signed:

[Signature]

Date:

03/02/2023

Drawing No:

Revision

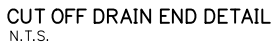
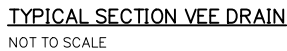
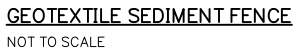
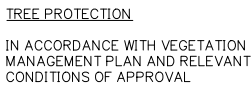
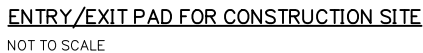
5941 ENG BE3 574

A ||

OPERATIONAL PHASE BIORETENTION BASIN SECTIONS SHEET 2 OF 2

G:\Projects\5941\ENGINEERING\Acad\BE3 OGL\CURRENT\5941 ENG BE3 570.dwg

Appendix D – Sediment & Erosion Control Plans



1. CHAIN WIRE MESH PANELS WITH SHADE CLOTH (IF REQUIRED) ATTACHED, HELD IN PLACE WITH CONCRETE FEET.
2. ALTERNATIVE PLYWOOD OR WOODEN PALING FENCE PANELS. THIS FENCING MATERIAL ALSO PREVENTS BUILDING MATERIALS OR SOIL ENTERING THE TPZ.
3. MULCH INSTALLATION ACROSS SURFACE OF TPZ (AT THE DISCRETION OF THE PROJECT ARBORIST.) NO EXCAVATION, CONSTRUCTION ACTIVITY, GRADE CHANGES, SURFACE TREATMENT OR STORAGE OF MATERIALS OF ANY KIND IS PERMITTED WITHIN THE TPZ.
4. BRACING IS PERMITTED WITHIN THE TPZ. INSTALLATION OF SUPPORTS SHOULD AVOID DAMAGING ROOTS.
5. ANY CONSTRUCTION CONTRACTOR IS NOT TO UNDERTAKE ANY PRUNING OF TREES. TREE MANAGEMENT IS TO BE UNDERTAKEN BY A SUITABLY QUALIFIED ARBORIST.
6. NO STOCKPILE/S ARE PERMITTED WITHIN THE ZONE OF ANY RETAINED VEGETATION WITHOUT SUPERVISION AND AUTHORIZATION OF THE SUPERVISING ARBORIST.
7. NO CLEARING OF PROTECTED SIZE VEGETATION IS TO OCCUR WITHOUT APPROVAL FROM LOGAN CITY COUNCIL.

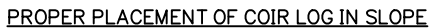
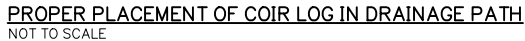
DETERMINING THE TPZ

THE RADIUS OF THE TPZ IS CALCULATED FOR EACH TREE BY MULTIPLYING ITS DBH X 12 = TRUNK DIAMETER MEASURED AT 1.4M ABOVE GROUND. RADIUS IS MEASURED FROM THE CENTRE OF THE STEM AT GROUND LEVEL.

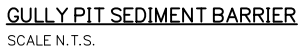
A TPZ SHOULD NOT BE LESS THAN 2M NOR GREATER THAN 15M (EXCEPT WHERE CROWN PROTECTION IS REQUIRED).
THE TPZ OF PALMS, OTHER MONOCOTS, CYCADS AND TREE FERNS SHOULD NOT BE LESS THAN 1M OUTSIDE THE CROWN PROJECTION.

PROTECTIVE FENCING

NOT TO SCALE



NOT TO SCALE



FRASERS PROPERTY

Project:

VANTAGE YATALA STAGE 3

Site Address:

60 STAPYLTON JACOBS
WELL ROAD, STAYPLTON
QLD, 4207

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST

Level Datum: AHD
Meridian:
PSM:
RL:

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Drawing Title:

SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

[illegible]

A lev	03/02/23 Date	ORIGINAL ISSUE Description	JH DRN	MG CHK
DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE.			A1 UNREDUCED	
CULVERT AND PIPE SIZES IN MILLIMETRES			A3 REDUCED	

Scale:

NOT APPLICABLE

PROJECT NORTH POINT

Project No. 5941	
Designed: JH	Drafted: JH
Approved:	MG
RPEQ	16939
Signed:	
Date:	03/02/2023
Drawing No: Revision	
5941 ENG BE3 020 A	

Client:



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Project:

VANTAGE YATALA
STAGE 3

Site Address:

60 STAPYLTON JACOBS
WELL ROAD, STAPYLTON
QLD, 4207

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
Level Datum: AHD
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Drawing Title:

SEDIMENT AND EROSION
CONTROL LAYOUT PLAN
SHEET 1 OF 5

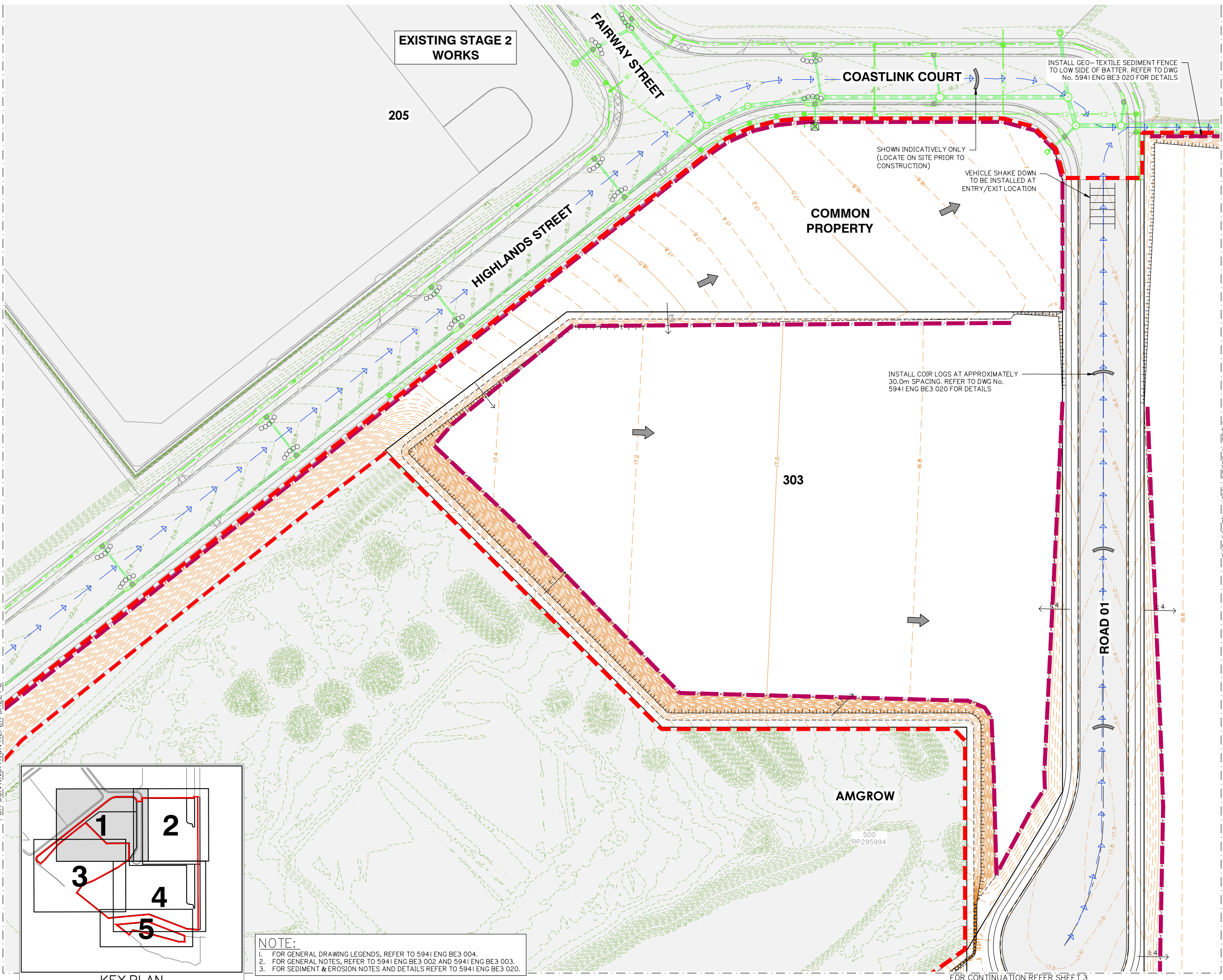
A	03/02/23	ORIGINAL ISSUE	JH	MG
Rev	Date	Description	DRN	CHK

DIMENSIONS IN METRES EXCEPT WHERE
SHOWN OTHERWISE
CULVERT AND PIPE SIZES IN MILLIMETRES
Scale:
0 5 10 15 20 25m 1:500 (A1) 1:1000 (A3)

PROJECT NORTH POINT

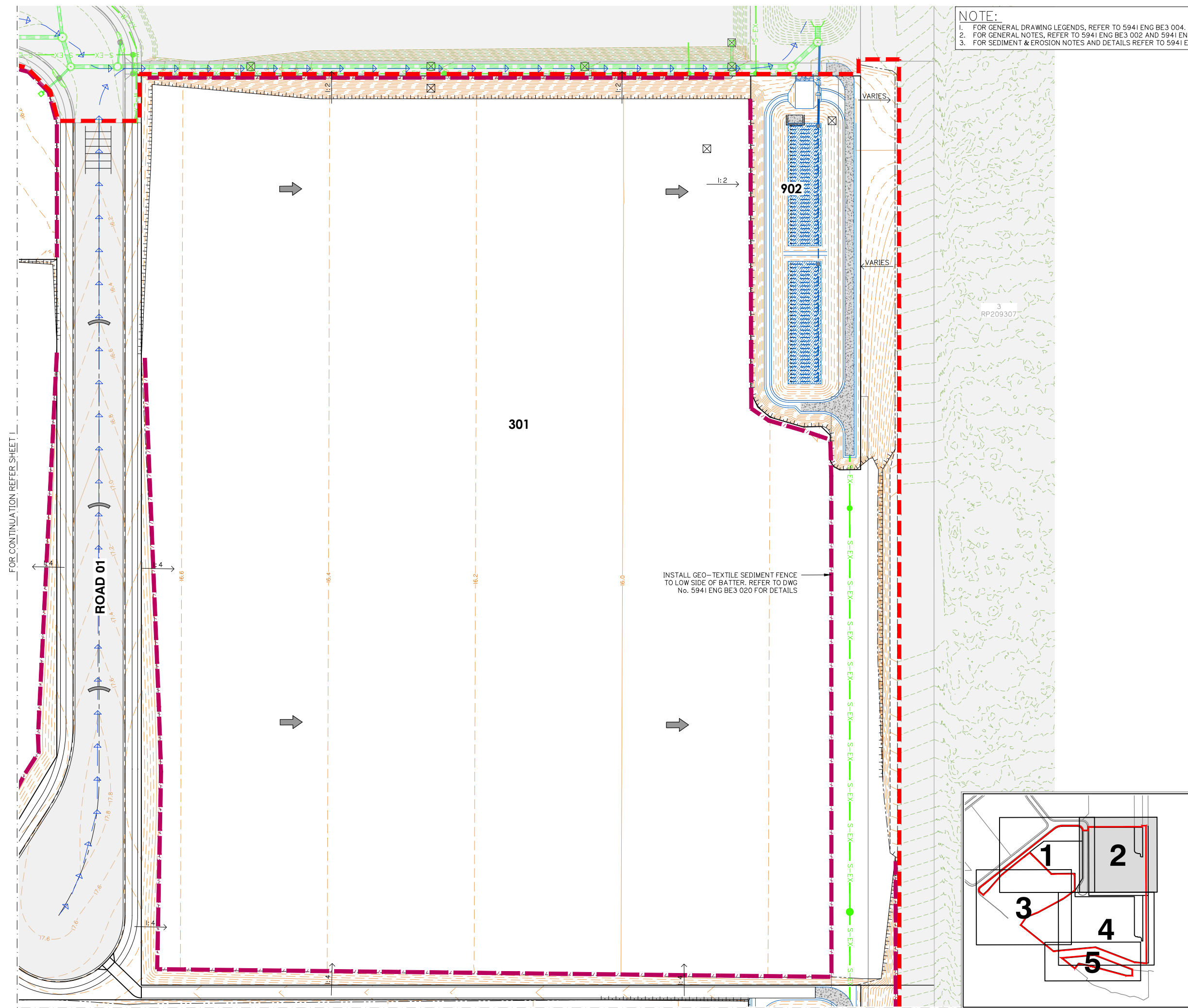


Project No:	5941	
Designed:	JH	Drafted: JH
Approved:		MG
RPEQ		16939
Signed:		
Date:		03/02/2023
Drawing No:	5941 ENG BE3 021	Revision A



NOTE:
1. FOR GENERAL DRAWING LEGENDS, REFER TO 5941 ENG BE3 004.
2. FOR GENERAL NOTES, REFER TO 5941 ENG BE3 002 AND 5941 ENG BE3 003.
3. FOR SEDIMENT & EROSION NOTES AND DETAILS REFER TO 5941 ENG BE3 020.

KEY PLAN
NOT TO SCALE



FOR CONTINUATION REFER SHEET 4

SEDIMENT AND EROSION CONTROL LAYOUT PLAN SHEET 2 OF 5

NOTE:

- NOTE:
1. FOR GENERAL DRAWING LEGENDS, REFER TO 5941 ENG BE3 004.
 2. FOR GENERAL NOTES, REFER TO 5941 ENG BE3 002 AND 5941 ENG BE3 003.
 3. FOR SEDIMENT & EROSION NOTES AND DETAILS REFER TO 5941 ENG BE3 020.



Client:



FRASERS PROPERTY

Project:

VANTAGE YATALA STAGE 3

Site Address:

60 STAPYLTON JACOBS
WELL ROAD, STAYPLTON
QLD, 4207

RPD:

Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST

Level Datum: AHD
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PSM:
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Drawing Title:

SEDIMENT AND EROSION
CONTROL LAYOUT PLAN
SHEET 2 OF 5

A	03/02/23	ORIGINAL ISSUE	JH	MG	
Rev	Date	Description	DRN	CHK	
DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE CULVERT AND PIPE SIZES IN MILLIMETRES			A1 UNREDUCED A3 REDUCED		

Scale:



0 5 10 15 20 25m

1:500 (A1) 1:1000 (A3)

PROJECT NORTH POINT



Project No. 5941

Designed: JH

Drafted: JH

Approved:

MG

RPEQ

16939

Signed:

[Signature]

Date:

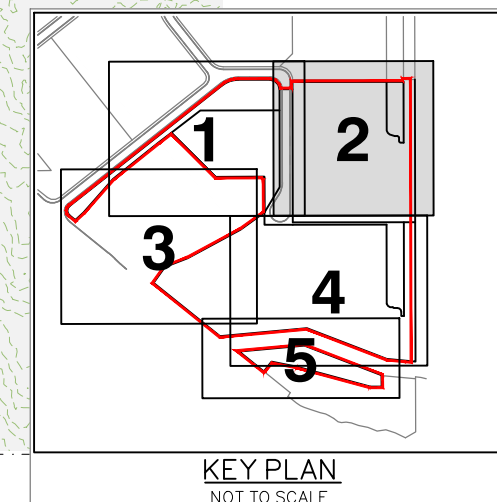
03/02/2023

Drawing No:

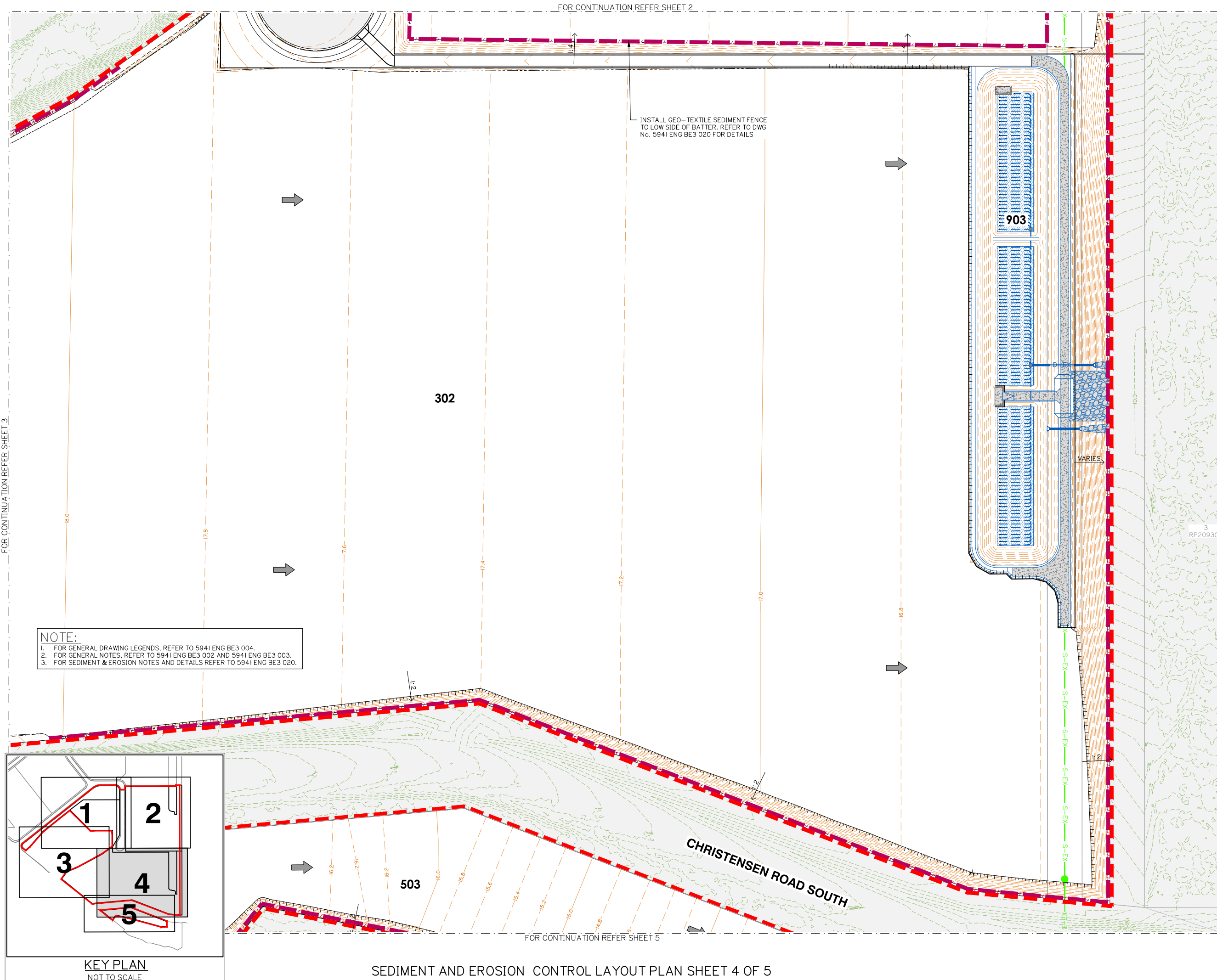
Revision

5941 ENG BE3 022

A



KEY PLAN
NOT TO SCALE



Client:



FRASERS PROPERTY

Project:

VANTAGE YATALA STAGE 3

Site Address:

60 STAPYLTON JACOBS
WELL ROAD, STAYPLTON
QLD, 4207

RPD:

Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST

Level Datum: AHD
Meridian:
PSM:
RL:

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Drawing Title:

SEDIMENT AND EROSION
CONTROL LAYOUT PLAN
SHEET 4 OF 5

[illegible]

A Rev	03/02/23 Date	ORIGINAL ISSUE Description	JH DRN	MG CHK
DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE.			A1 UNREDUCED	
CULVERT AND PIPE SIZES IN MILLIMETRES			A3 REDUCED	

Scale:



0 5 10 15 20 25m

1:500 (A1) 1:1000 (A3)

PROJECT NORTH POINT



Project No. 5941

Designed: JH

Drafted: JH

Approved:

MG

RPEQ

16939

Signed:

[Signature]

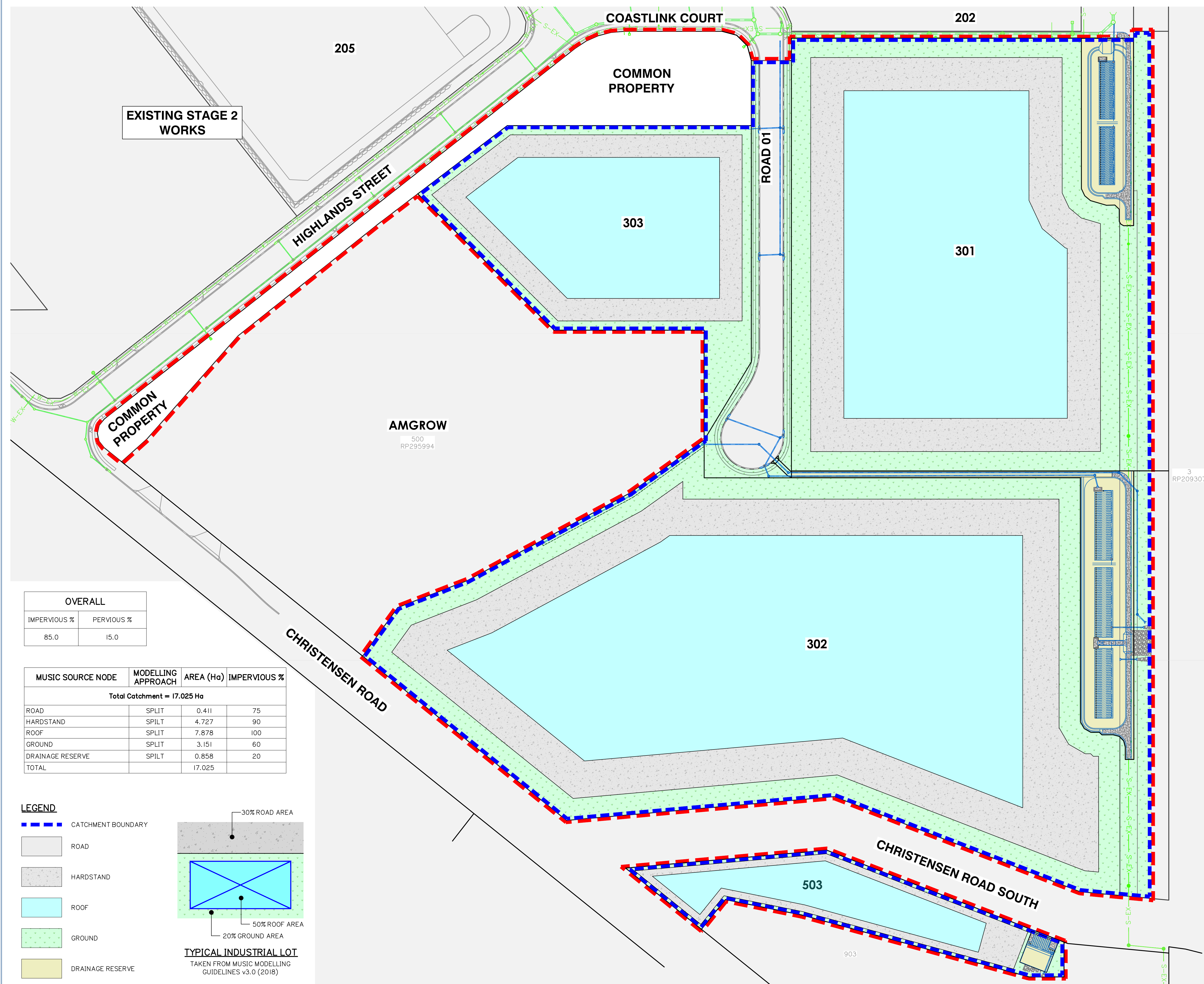
Date:

3/02/2023

Drawing No:
5941 ENG BE3 024

A

Appendix E – MUSIC Catchment Plan



planning | environment | landscape | engineering | survey
T: 3807 3333 | F: 3287 5461 | www.gassman.com.au
Gold Coast & Logan | 76 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VantageYatala

STAGE 3

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST COUNCIL
Level Datum:	AHD
Meridian:	-
Contour Interval:	-
PSM:	-
RI:	-

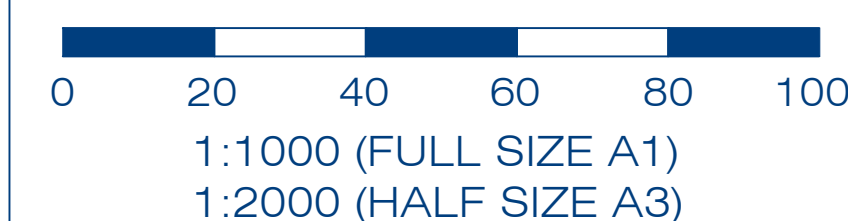
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DRAWING TITLE

MUSIC CATCHMENT ALLOCATION LAYOUT PLAN



Scale at A1:	1:1000
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Designed:	JH
Drafted:	MG
Approved:	MG
RPEQ:	16939
Signed:	
Date:	20/04/2023

Drawing No:	Rev. No:
5941 ENG SMP3 004	A

Appendix F – MUSIC Link Report

MUSIC-link Report

Project Details		Company Details	
Project:	5941 Vantage Industrial Development Yatala - Stage 3 Basin 1	Company:	Gassman Development Perspectives
Report Export Date:	19/12/2022	Contact:	Mitchell Gassman
Catchment Name:	5941 Stage 3 Music Model	Address:	76 Business Street, Yatala, QLD 4207
Catchment Area:	5.262ha	Phone:	(07) 3807 3333
Impervious Area*:	90.13%	Email:	mitchell@gassman.com.au
Rainfall Station:	40406 BEENLEIGH		
Modelling Time-step:	6 Minutes		
Modelling Period:	1/01/1990 - 31/12/1999 11:54:00 PM		
Mean Annual Rainfall:	1105mm		
Evapotranspiration:	1492mm		
MUSIC Version:	6.3.0		
MUSIC-link data Version:	6.34		
Study Area:	City of Gold Coast (North)		
Scenario:	City of Gold Coast (North)		

* takes into account area from all source nodes that link to the chosen reporting node, excluding Import Data Nodes

Treatment Train Effectiveness		Treatment Nodes		Source Nodes	
Node: LPoD- DEV-1	Reduction	Node Type	Number	Node Type	Number
Flow	3.13%	Bio Retention Node	1	Urban Source Node	4
TSS	80.1%				
TP	71%				
TN	51%				
GP	100%				

Comments

Passing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
Bio	Bio-Retention Basin DEV-1 (550m2 Filter)	Exfiltration Rate (mm/hr)	None	None	0
Bio	Bio-Retention Basin DEV-1 (550m2 Filter)	Extended detention depth (m)	None	1	0.3
Bio	Bio-Retention Basin DEV-1 (550m2 Filter)	Filter depth (m)	0.4	1	0.6
Bio	Bio-Retention Basin DEV-1 (550m2 Filter)	Hi-flow bypass rate (cum/sec)	None	None	20
Bio	Bio-Retention Basin DEV-1 (550m2 Filter)	Orthophosphate Content in Filter (mg/kg)	None	None	30
Bio	Bio-Retention Basin DEV-1 (550m2 Filter)	PET Scaling Factor	2.1	2.1	2.1
Bio	Bio-Retention Basin DEV-1 (550m2 Filter)	Saturated Hydraulic Conductivity (mm/hr)	50	200	200
Bio	Bio-Retention Basin DEV-1 (550m2 Filter)	Total Nitrogen Content in Filter (mg/kg)	None	None	400
Receiving	LPoD- DEV-1	% Load Reduction	None	None	3.13
Receiving	LPoD- DEV-1	GP % Load Reduction	90	None	100
Receiving	LPoD- DEV-1	TN % Load Reduction	45	None	51
Receiving	LPoD- DEV-1	TP % Load Reduction	60	None	71
Receiving	LPoD- DEV-1	TSS % Load Reduction	80	None	80.1
Urban	CoGC - Industrial Hardstand DEV-1 (1.893 Ha)	Area Impervious (ha)	None	None	1.695
Urban	CoGC - Industrial Hardstand DEV-1 (1.893 Ha)	Area Pervious (ha)	None	None	0.197
Urban	CoGC - Industrial Hardstand DEV-1 (1.893 Ha)	Total Area (ha)	None	None	1.893
Urban	CoGC - Industrial LANDSCAPE DEV-1 (0.473 Ha)	Area Impervious (ha)	None	None	0.284
Urban	CoGC - Industrial LANDSCAPE DEV-1 (0.473 Ha)	Area Pervious (ha)	None	None	0.188
Urban	CoGC - Industrial LANDSCAPE DEV-1 (0.473 Ha)	Total Area (ha)	None	None	0.473
Urban	CoGC - Industrial LOT ROOF DEV-1 (2.3662 Ha)	Area Impervious (ha)	None	None	2.366
Urban	CoGC - Industrial LOT ROOF DEV-1 (2.3662 Ha)	Area Pervious (ha)	None	None	0
Urban	CoGC - Industrial LOT ROOF DEV-1 (2.3662 Ha)	Total Area (ha)	None	None	2.366
Urban	CoGC - Industrial Road Reserve DEV- 1 (0.5303 Ha)	Area Impervious (ha)	None	None	0.396
Urban	CoGC - Industrial Road Reserve DEV- 1 (0.5303 Ha)	Area Pervious (ha)	None	None	0.133
Urban	CoGC - Industrial Road Reserve DEV- 1 (0.5303 Ha)	Total Area (ha)	None	None	0.53

Only certain parameters are reported when they pass validation

MUSIC-link Report

Project Details		Company Details	
Project:	5941 Vantage Industrial Development Yatala - Stage 3 Basin 2	Company:	Gassman Development Perspectives
Report Export Date:	19/12/2022	Contact:	Mitchell Gassman
Catchment Name:	5941 Stage 3 Music Model Basin 2	Address:	76 Business Street, Yatala, QLD 4207
Catchment Area:	11.012ha	Phone:	(07) 3807 3333
Impervious Area*:	91.58%	Email:	mitchell@gassman.com.au
Rainfall Station:	40406 BEENLEIGH		
Modelling Time-step:	6 Minutes		
Modelling Period:	1/01/1990 - 31/12/1999 11:54:00 PM		
Mean Annual Rainfall:	1105mm		
Evapotranspiration:	1492mm		
MUSIC Version:	6.3.0		
MUSIC-link data Version:	6.34		
Study Area:	City of Gold Coast (North)		
Scenario:	City of Gold Coast (North)		

* takes into account area from all source nodes that link to the chosen reporting node, excluding Import Data Nodes

Treatment Train Effectiveness		Treatment Nodes		Source Nodes	
Node: LPoD-2	Reduction	Node Type	Number	Node Type	Number
Flow	3.35%	Bio Retention Node	1	Urban Source Node	4
TSS	82.3%				
TP	72.4%				
TN	51.9%				
GP	100%				

Comments

Passing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
Bio	Bio-Retention Basin DEV-2 (1250m2 Filter)	Exfiltration Rate (mm/hr)	None	None	0
Bio	Bio-Retention Basin DEV-2 (1250m2 Filter)	Extended detention depth (m)	None	1	0.3
Bio	Bio-Retention Basin DEV-2 (1250m2 Filter)	Filter depth (m)	0.4	1	0.6
Bio	Bio-Retention Basin DEV-2 (1250m2 Filter)	Hi-flow bypass rate (cum/sec)	None	None	20
Bio	Bio-Retention Basin DEV-2 (1250m2 Filter)	Orthophosphate Content in Filter (mg/kg)	None	None	30
Bio	Bio-Retention Basin DEV-2 (1250m2 Filter)	PET Scaling Factor	2.1	2.1	2.1
Bio	Bio-Retention Basin DEV-2 (1250m2 Filter)	Saturated Hydraulic Conductivity (mm/hr)	50	200	200
Bio	Bio-Retention Basin DEV-2 (1250m2 Filter)	Total Nitrogen Content in Filter (mg/kg)	None	None	400
Receiving	LPoD-2	% Load Reduction	None	None	3.35
Receiving	LPoD-2	GP % Load Reduction	90	None	100
Receiving	LPoD-2	TN % Load Reduction	45	None	51.9
Receiving	LPoD-2	TP % Load Reduction	60	None	72.4
Receiving	LPoD-2	TSS % Load Reduction	80	None	82.3
Urban	CoGC - Industrial Hardstand DEV-2 (4.3371 Ha)	Area Impervious (ha)	None	None	3.884
Urban	CoGC - Industrial Hardstand DEV-2 (4.3371 Ha)	Area Pervious (ha)	None	None	0.452
Urban	CoGC - Industrial Hardstand DEV-2 (4.3371 Ha)	Total Area (ha)	None	None	4.337
Urban	CoGC - Industrial LANDSCAPE DEV-2 (1.0843 Ha)	Area Impervious (ha)	None	None	0.652
Urban	CoGC - Industrial LANDSCAPE DEV-2 (1.0843 Ha)	Area Pervious (ha)	None	None	0.431
Urban	CoGC - Industrial LANDSCAPE DEV-2 (1.0843 Ha)	Total Area (ha)	None	None	1.084
Urban	CoGC - Industrial LOT ROOF DEV-2 (5.4214 Ha)	Area Impervious (ha)	None	None	5.421
Urban	CoGC - Industrial LOT ROOF DEV-2 (5.4214 Ha)	Area Pervious (ha)	None	None	0
Urban	CoGC - Industrial LOT ROOF DEV-2 (5.4214 Ha)	Total Area (ha)	None	None	5.421
Urban	CoGC - Industrial Road Reserve DEV - 2 (0.1702 Ha)	Area Impervious (ha)	None	None	0.127
Urban	CoGC - Industrial Road Reserve DEV - 2 (0.1702 Ha)	Area Pervious (ha)	None	None	0.042
Urban	CoGC - Industrial Road Reserve DEV - 2 (0.1702 Ha)	Total Area (ha)	None	None	0.17

Only certain parameters are reported when they pass validation

MUSIC-link Report

Project Details		Company Details	
Project:	5941 Vantage Industrial Development Yatala - Stage 3 Basin 3	Company:	Gassman Development Perspectives
Report Export Date:	28/02/2023	Contact:	Mitchell Gassman
Catchment Name:	5941 Stage 3 Music Model Basin 3	Address:	76 Business Street, Yatala, QLD 4207
Catchment Area:	0.723ha	Phone:	(07) 3807 3333
Impervious Area*:	91.54%	Email:	mitchell@gassman.com.au
Rainfall Station:	40406 BEENLEIGH		
Modelling Time-step:	6 Minutes		
Modelling Period:	1/01/1990 - 31/12/1999 11:54:00 PM		
Mean Annual Rainfall:	1105mm		
Evapotranspiration:	1492mm		
MUSIC Version:	6.3.0		
MUSIC-link data Version:	6.34		
Study Area:	City of Gold Coast (North)		
Scenario:	City of Gold Coast (North)		

* takes into account area from all source nodes that link to the chosen reporting node, excluding Import Data Nodes

Treatment Train Effectiveness		Treatment Nodes		Source Nodes	
Node: LPoD-3	Reduction	Node Type	Number	Node Type	Number
Flow	4.07%	Bio Retention Node	1	Urban Source Node	3
TSS	81.5%				
TP	75.7%				
TN	54.5%				
GP	100%				

Comments

Passing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
Bio	Bio-Retention Basin DEV-3 (100m2 Filter)	Exfiltration Rate (mm/hr)	None	None	0
Bio	Bio-Retention Basin DEV-3 (100m2 Filter)	Extended detention depth (m)	None	1	0.3
Bio	Bio-Retention Basin DEV-3 (100m2 Filter)	Filter depth (m)	0.4	1	0.6
Bio	Bio-Retention Basin DEV-3 (100m2 Filter)	Hi-flow bypass rate (cum/sec)	None	None	20
Bio	Bio-Retention Basin DEV-3 (100m2 Filter)	Orthophosphate Content in Filter (mg/kg)	None	None	30
Bio	Bio-Retention Basin DEV-3 (100m2 Filter)	PET Scaling Factor	2.1	2.1	2.1
Bio	Bio-Retention Basin DEV-3 (100m2 Filter)	Saturated Hydraulic Conductivity (mm/hr)	50	200	200
Bio	Bio-Retention Basin DEV-3 (100m2 Filter)	Total Nitrogen Content in Filter (mg/kg)	None	None	400
Receiving	LPoD-3	% Load Reduction	None	None	4.07
Receiving	LPoD-3	GP % Load Reduction	90	None	100
Receiving	LPoD-3	TN % Load Reduction	45	None	54.5
Receiving	LPoD-3	TP % Load Reduction	60	None	75.7
Receiving	LPoD-3	TSS % Load Reduction	80	None	81.5
Urban	CoGC - Industrial Hardstand DEV-3 (0.29964 Ha)	Area Impervious (ha)	None	None	0.268
Urban	CoGC - Industrial Hardstand DEV-3 (0.29964 Ha)	Area Pervious (ha)	None	None	0.031
Urban	CoGC - Industrial Hardstand DEV-3 (0.29964 Ha)	Total Area (ha)	None	None	0.3
Urban	CoGC - Industrial LANDSCAPE DEV-3 (0.07491 Ha)	Area Impervious (ha)	None	None	0.045
Urban	CoGC - Industrial LANDSCAPE DEV-3 (0.07491 Ha)	Area Pervious (ha)	None	None	0.029
Urban	CoGC - Industrial LANDSCAPE DEV-3 (0.07491 Ha)	Total Area (ha)	None	None	0.075
Urban	CoGC - Industrial LOT ROOF DEV-3 (0.34755 Ha)	Area Impervious (ha)	None	None	0.348
Urban	CoGC - Industrial LOT ROOF DEV-3 (0.34755 Ha)	Area Pervious (ha)	None	None	0
Urban	CoGC - Industrial LOT ROOF DEV-3 (0.34755 Ha)	Total Area (ha)	None	None	0.348

Only certain parameters are reported when they pass validation

Appendix G – WSUD Bio Retention Basin Maintenance Checklists

Appendix H – Bureau of Meteorology Rainfall Data



Location

Label: 60 Stapylton Road FRASERS

Latitude: -27.736 [Nearest grid cell: 27.7375 (S)]

Longitude: 153.238 [Nearest grid cell: 153.2375 (E)]

IFD Design Rainfall Intensity (mm/h)

Issued: 13 December 2019

Rainfall intensity for Durations, Exceedance per Year (EY), and Annual Exceedance Probabilities (AEP).

[FAQ for New ARR probability terminology](#)

Duration	Annual Exceedance Probability (AEP)						
	63.2%	50%#	20%*	10%	5%	2%	1%
1 min	155	175	239	281	323	378	419
2 min	127	144	200	240	281	339	386
3 min	119	135	187	224	261	313	354
4 min	114	130	178	212	246	292	328
5 min	110	124	170	202	233	275	307
10 min	90.5	102	139	163	187	217	240
11 min	87.4	98.9	134	158	180	209	230
15 min	76.8	86.8	118	138	158	183	202
20 min	66.7	75.5	103	121	138	160	177
25 min	59.2	67.0	91.1	107	123	143	159
30 min	53.3	60.3	82.3	97.1	112	131	145
45 min	41.5	47.0	64.6	76.6	88.6	105	117
1 hour	34.4	39.0	53.9	64.2	74.7	88.9	100
1.5 hour	26.2	29.7	41.4	49.8	58.3	70.1	79.5
2 hour	21.5	24.5	34.3	41.4	48.8	59.0	67.3
3 hour	16.4	18.7	26.4	32.1	38.0	46.3	53.1
4.5 hour	12.6	14.4	20.5	25.0	29.7	36.4	41.8
6 hour	10.5	12.0	17.2	21.0	25.0	30.7	35.3
9 hour	8.14	9.38	13.5	16.6	19.8	24.3	27.9
12 hour	6.85	7.92	11.5	14.1	16.8	20.6	23.7
18 hour	5.38	6.24	9.11	11.2	13.4	16.4	18.8
24 hour	4.53	5.27	7.72	9.51	11.4	13.9	16.0
30 hour	3.95	4.60	6.76	8.35	10.0	12.2	14.0
36 hour	3.53	4.11	6.05	7.48	8.98	11.0	12.6
48 hour	2.92	3.41	5.04	6.24	7.51	9.20	10.6
72 hour	2.19	2.56	3.79	4.72	5.71	7.01	8.07
96 hour	1.76	2.04	3.03	3.79	4.59	5.65	6.51

120 hour	1.46	1.69	2.51	3.14	3.82	4.70	5.41
144 hour	1.24	1.44	2.13	2.66	3.24	3.98	4.58
168 hour	1.08	1.24	1.83	2.29	2.79	3.42	3.93

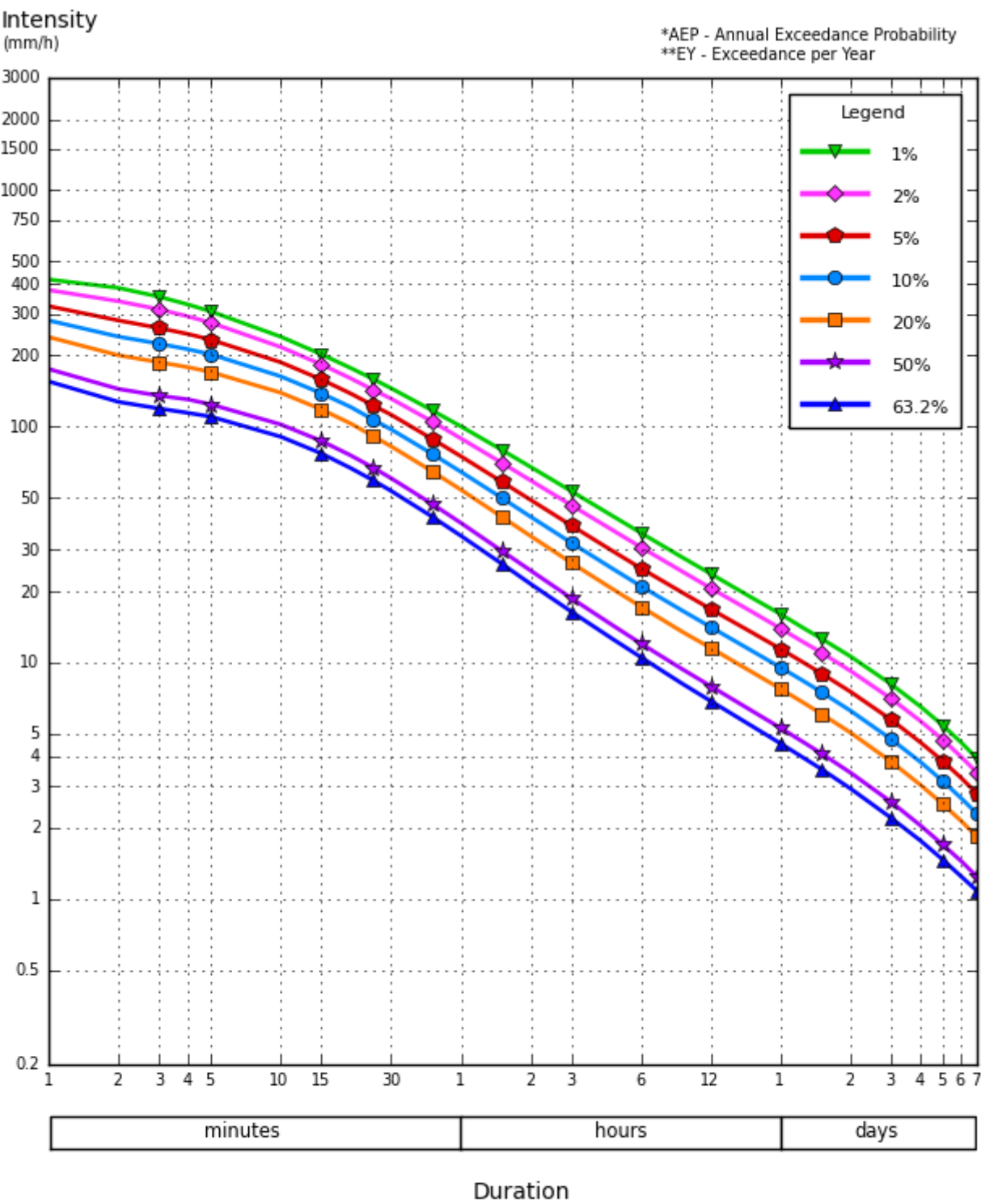
Note:

The 50% AEP IFD **does not** correspond to the 2 year Average Recurrence Interval (ARI) IFD.
Rather it corresponds to the 1.44 ARI.

* The 20% AEP IFD **does not** correspond to the 5 year Average Recurrence Interval (ARI) IFD.
Rather it corresponds to the 4.48 ARI.

This page was created at **12:43 on Friday 13 December 2019 (AEST)**

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This page was created at **12:43 on Friday 13 December 2019 (AEST)**

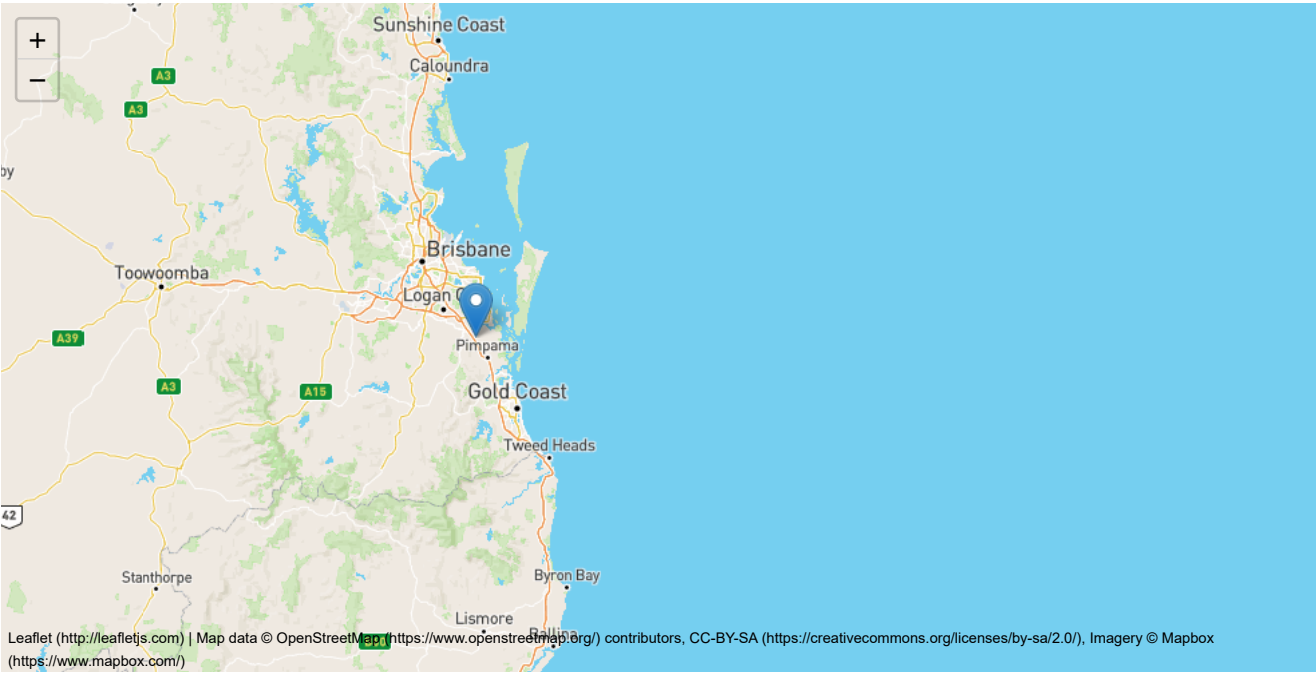
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Appendix I – AR&R Storm & Loss Data

Australian Rainfall & Runoff Data Hub - Results

Input Data

Longitude	153.241
Latitude	-27.741
Selected Regions (clear)	
River Region	show
ARF Parameters	show
Storm Losses	show
Temporal Patterns	show
Areal Temporal Patterns	show
BOM IFDs	show
Median Preburst Depths and Ratios	show
10% Preburst Depths	show
25% Preburst Depths	show
75% Preburst Depths	show
90% Preburst Depths	show
Interim Climate Change Factors	show



Data

River Region

Division	North East Coast
River Number	45
River Name	Logan-Albert Rivers

Layer Info

Time Accessed	14 December 2022 05:28PM
Version	2016_v1

ARF Parameters

$$ARF = Min \left\{ 1, \left[1 - a \left(Area^b - c \log_{10} Duration \right) Duration^{-d} \right. \right. \\ \left. \left. + e Area^f Duration^g \left(0.3 + \log_{10} AEP \right) \right. \right. \\ \left. \left. + h 10^{i Area \frac{Duration}{1440}} \left(0.3 + \log_{10} AEP \right) \right] \right\}$$

Zone	a	b	c	d	e	f	g	h	i
East Coast North	0.327	0.241	0.448	0.36	0.00096	0.48	-0.21	0.012	-0.0013

Short Duration ARF

$$ARF = Min \left[1, 1 - 0.287 \left(Area^{0.265} - 0.439 \log_{10} (Duration) \right) . Duration^{-0.36} \right. \\ \left. + 2.26 \times 10^{-3} \times Area^{0.226} . Duration^{0.125} \left(0.3 + \log_{10} (AEP) \right) \right. \\ \left. + 0.0141 \times Area^{0.213} \times 10^{-0.021 \frac{(Duration-180)^2}{1440}} \left(0.3 + \log_{10} (AEP) \right) \right]$$

Layer Info

Time Accessed	14 December 2022 05:28PM
Version	2016_v1

Storm Losses

Note: Burst Loss = Storm Loss - Preburst
Note: These losses are only for rural use and are **NOT FOR DIRECT USE** in urban areas

ID	27987.0
Storm Initial Losses (mm)	27.0
Storm Continuing Losses (mm/h)	1.6

Layer Info

Time Accessed	14 December 2022 05:28PM
Version	2016_v1

Temporal Patterns | Download (.zip) (static/temporal_patterns/TP/ECnorth.zip)

code	ECnorth
Label	East Coast North

Layer Info

Time Accessed	14 December 2022 05:28PM
Version	2016_v2

Areal Temporal Patterns | Download (.zip) (./static/temporal_patterns/Areal/Areal_ECnorth.zip)

code	ECnorth
arealabel	East Coast North

Layer Info

Time Accessed	14 December 2022 05:28PM
Version	2016_v2

BOM IFDs

Click here (http://www.bom.gov.au/water/designRainfalls/revised-ifd/?year=2016&coordinate_type=dd&latitude=-27.741&longitude=153.241&sadmin=true&sdhr=true&sdday=true&user_label=) to obtain the IFD depths for catchment centroid from the BoM website

Layer Info

Time Accessed

14 December 2022 05:28PM

Median Preburst Depths and Ratios

Values are of the format depth (ratio) with depth in mm

min (h)\AEP(%)	50	20	10	5	2	1
60 (1.0)	3.0 (0.078)	5.5 (0.103)	7.2 (0.112)	8.8 (0.117)	10.0 (0.112)	10.8 (0.108)
90 (1.5)	4.0 (0.089)	12.8 (0.206)	18.7 (0.250)	24.3 (0.278)	16.2 (0.154)	10.1 (0.085)
120 (2.0)	2.0 (0.041)	9.2 (0.134)	14.0 (0.169)	18.6 (0.191)	20.9 (0.177)	22.6 (0.168)
180 (3.0)	3.8 (0.067)	14.9 (0.188)	22.2 (0.231)	29.3 (0.257)	37.3 (0.269)	43.3 (0.272)
360 (6.0)	7.4 (0.103)	24.7 (0.240)	36.2 (0.287)	47.2 (0.314)	73.5 (0.399)	93.1 (0.439)
720 (12.0)	13.4 (0.142)	25.6 (0.186)	33.7 (0.199)	41.4 (0.205)	63.0 (0.254)	79.1 (0.278)
1080 (18.0)	13.2 (0.117)	22.3 (0.136)	28.3 (0.140)	34.1 (0.141)	51.2 (0.173)	63.9 (0.189)
1440 (24.0)	2.9 (0.023)	14.1 (0.076)	21.6 (0.095)	28.7 (0.105)	54.8 (0.164)	74.3 (0.194)
2160 (36.0)	0.4 (0.003)	7.4 (0.034)	12.1 (0.045)	16.5 (0.051)	39.4 (0.100)	56.5 (0.125)
2880 (48.0)	0.0 (0.000)	8.0 (0.033)	13.3 (0.045)	18.4 (0.051)	30.1 (0.068)	38.9 (0.077)
4320 (72.0)	0.0 (0.000)	1.2 (0.004)	2.0 (0.006)	2.7 (0.007)	7.8 (0.015)	11.6 (0.020)

Layer Info

Time Accessed	14 December 2022 05:28PM
Version	2018_v1
Note	Preburst interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.

10% Preburst Depths

Values are of the format depth (ratio) with depth in mm

min (h)\AEP(%)	50	20	10	5	2	1
60 (1.0)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)
90 (1.5)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)
120 (2.0)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)
180 (3.0)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)
360 (6.0)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)
720 (12.0)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	1.4 (0.006)	2.5 (0.009)
1080 (18.0)	0.0 (0.000)	0.1 (0.001)	0.2 (0.001)	0.2 (0.001)	0.3 (0.001)	0.3 (0.001)
1440 (24.0)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	2.8 (0.008)	4.9 (0.013)
2160 (36.0)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.5 (0.001)	0.9 (0.002)
2880 (48.0)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)
4320 (72.0)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)

Layer Info

Time Accessed	14 December 2022 05:28PM
Version	2018_v1
Note	Preburst interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.

25% Preburst Depths

Values are of the format depth (ratio) with depth in mm

min (h)\AEP(%)	50	20	10	5	2	1
60 (1.0)	0.0 (0.000)	0.1 (0.003)	0.2 (0.004)	0.3 (0.004)	0.3 (0.004)	0.3 (0.003)
90 (1.5)	0.0 (0.000)	0.8 (0.013)	1.4 (0.018)	1.9 (0.022)	0.9 (0.009)	0.2 (0.002)
120 (2.0)	0.0 (0.000)	1.1 (0.016)	1.9 (0.022)	2.6 (0.026)	1.6 (0.013)	0.9 (0.006)
180 (3.0)	0.0 (0.000)	1.3 (0.017)	2.2 (0.023)	3.0 (0.026)	4.1 (0.029)	4.9 (0.031)
360 (6.0)	0.0 (0.000)	2.7 (0.026)	4.4 (0.035)	6.1 (0.041)	6.7 (0.036)	7.1 (0.034)
720 (12.0)	0.0 (0.000)	4.4 (0.032)	7.3 (0.043)	10.0 (0.050)	20.4 (0.082)	28.1 (0.099)
1080 (18.0)	0.0 (0.000)	3.9 (0.024)	6.5 (0.032)	8.9 (0.037)	10.7 (0.036)	12.1 (0.036)
1440 (24.0)	0.0 (0.000)	1.0 (0.006)	1.7 (0.007)	2.4 (0.009)	17.1 (0.051)	28.2 (0.074)
2160 (36.0)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	6.2 (0.016)	10.8 (0.024)
2880 (48.0)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	2.2 (0.005)	3.8 (0.008)
4320 (72.0)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)	0.0 (0.000)

Layer Info

Time Accessed	14 December 2022 05:28PM
Version	2018_v1
Note	Prebust interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.

75% Preburst Depths

Values are of the format depth (ratio) with depth in mm

min (h)\AEP(%)	50	20	10	5	2	1
60 (1.0)	32.6 (0.837)	43.3 (0.804)	50.4 (0.785)	57.2 (0.766)	49.4 (0.556)	43.6 (0.436)
90 (1.5)	30.8 (0.690)	49.7 (0.800)	62.3 (0.834)	74.3 (0.850)	85.2 (0.810)	93.3 (0.782)
120 (2.0)	30.7 (0.627)	62.5 (0.910)	83.6 (1.008)	103.8 (1.064)	140.1 (1.187)	167.3 (1.242)
180 (3.0)	37.7 (0.672)	72.7 (0.917)	95.9 (0.996)	118.2 (1.038)	156.9 (1.130)	185.9 (1.167)
360 (6.0)	46.5 (0.646)	81.5 (0.790)	104.7 (0.829)	126.9 (0.845)	161.4 (0.876)	187.2 (0.883)
720 (12.0)	70.9 (0.746)	86.9 (0.631)	97.5 (0.576)	107.7 (0.533)	183.3 (0.741)	240.0 (0.844)
1080 (18.0)	39.0 (0.347)	58.6 (0.357)	71.5 (0.354)	84.0 (0.348)	131.5 (0.446)	167.2 (0.494)
1440 (24.0)	21.8 (0.173)	48.6 (0.262)	66.2 (0.290)	83.2 (0.305)	120.3 (0.360)	148.0 (0.387)
2160 (36.0)	13.4 (0.090)	29.8 (0.137)	40.7 (0.151)	51.1 (0.158)	93.3 (0.236)	124.8 (0.275)
2880 (48.0)	17.4 (0.106)	40.2 (0.166)	55.3 (0.185)	69.8 (0.194)	90.0 (0.204)	105.1 (0.207)
4320 (72.0)	2.0 (0.011)	19.9 (0.073)	31.7 (0.093)	43.1 (0.105)	63.2 (0.125)	78.2 (0.135)

Layer Info

Time Accessed	14 December 2022 05:28PM
Version	2018_v1
Note	Prebust interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.

90% Preburst Depths

Values are of the format depth (ratio) with depth in mm

min (h)\AEP(%)	50	20	10	5	2	1
60 (1.0)	115.7 (2.966)	135.4 (2.514)	148.4 (2.310)	160.9 (2.155)	192.9 (2.171)	216.9 (2.167)
90 (1.5)	134.5 (3.015)	160.4 (2.581)	177.5 (2.378)	193.9 (2.220)	240.5 (2.288)	275.4 (2.308)
120 (2.0)	76.6 (1.564)	131.5 (1.915)	167.8 (2.025)	202.7 (2.079)	256.9 (2.177)	297.6 (2.210)
180 (3.0)	136.0 (2.424)	187.5 (2.365)	221.7 (2.302)	254.5 (2.234)	308.6 (2.222)	349.2 (2.192)
360 (6.0)	96.7 (1.342)	155.0 (1.501)	193.6 (1.533)	230.6 (1.534)	286.8 (1.556)	328.8 (1.550)
720 (12.0)	137.5 (1.447)	180.2 (1.308)	208.4 (1.232)	235.5 (1.167)	300.2 (1.214)	348.7 (1.226)
1080 (18.0)	111.0 (0.988)	143.4 (0.875)	164.9 (0.817)	185.4 (0.769)	238.2 (0.808)	277.8 (0.821)
1440 (24.0)	80.5 (0.637)	121.1 (0.654)	148.0 (0.648)	173.8 (0.636)	256.0 (0.767)	317.7 (0.829)
2160 (36.0)	60.0 (0.406)	102.5 (0.470)	130.6 (0.485)	157.6 (0.488)	218.9 (0.554)	264.9 (0.584)
2880 (48.0)	54.6 (0.334)	84.5 (0.349)	104.3 (0.348)	123.3 (0.342)	172.5 (0.391)	209.3 (0.413)
4320 (72.0)	35.2 (0.191)	53.8 (0.197)	66.2 (0.195)	78.0 (0.190)	114.6 (0.227)	142.1 (0.245)

Layer Info

Time Accessed	14 December 2022 05:28PM
Version	2018_v1
Note	Prebust interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.

Interim Climate Change Factors

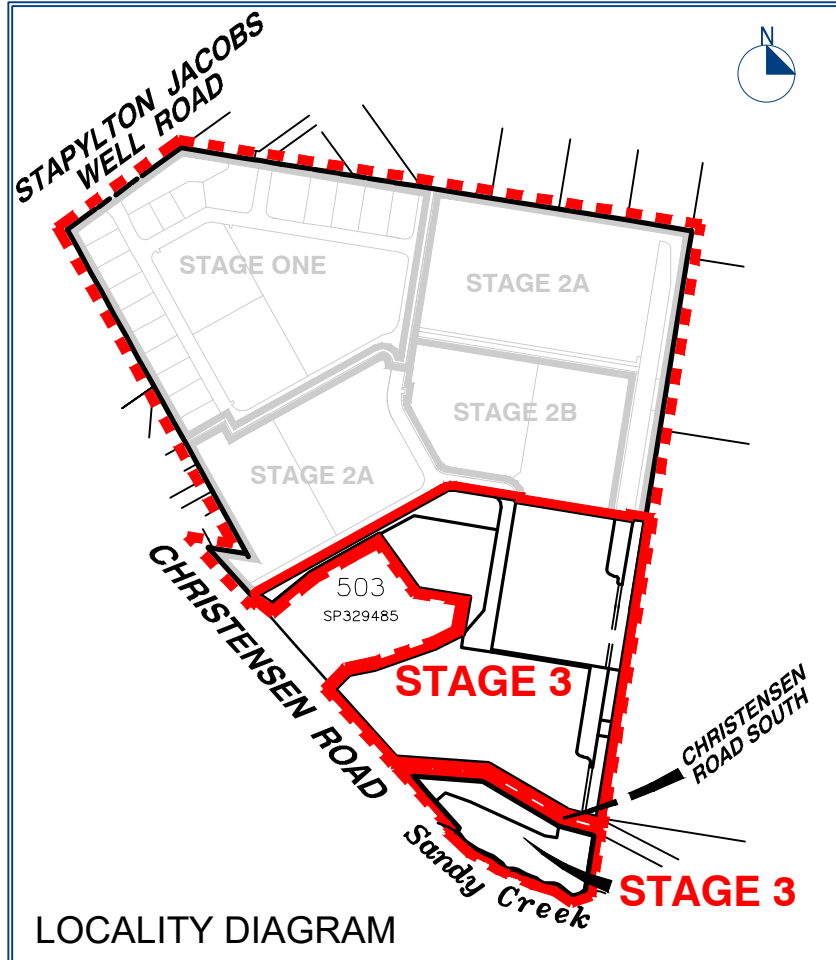
	RCP 4.5	RCP6	RCP 8.5
2030	0.869 (4.3%)	0.783 (3.9%)	0.983 (4.9%)
2040	1.057 (5.3%)	1.014 (5.1%)	1.349 (6.8%)
2050	1.272 (6.4%)	1.236 (6.2%)	1.773 (9.0%)
2060	1.488 (7.5%)	1.458 (7.4%)	2.237 (11.5%)
2070	1.676 (8.5%)	1.691 (8.6%)	2.722 (14.2%)
2080	1.810 (9.2%)	1.944 (9.9%)	3.209 (16.9%)
2090	1.862 (9.5%)	2.227 (11.5%)	3.679 (19.7%)

Layer Info

Time Accessed	14 December 2022 05:28PM
Version	2019_v1
Note	ARR recommends the use of RCP4.5 and RCP 8.5 values. These have been updated to the values that can be found on the climate change in Australia website.

- Download TXT (downloads/c5140dc4-4c10-46a1-bbf4-6118b7e1b24a.txt)
- Download JSON (downloads/8dfc731b-4534-4110-ad19-828fd065be4d.json)
- Generating PDF... (downloads/3d027edb-5dae-48dc-8b96-24df14d19667.pdf)

Appendix J – Proposed Reconfiguration of Lot Plan (ROL)



LOCALITY DIAGRAM

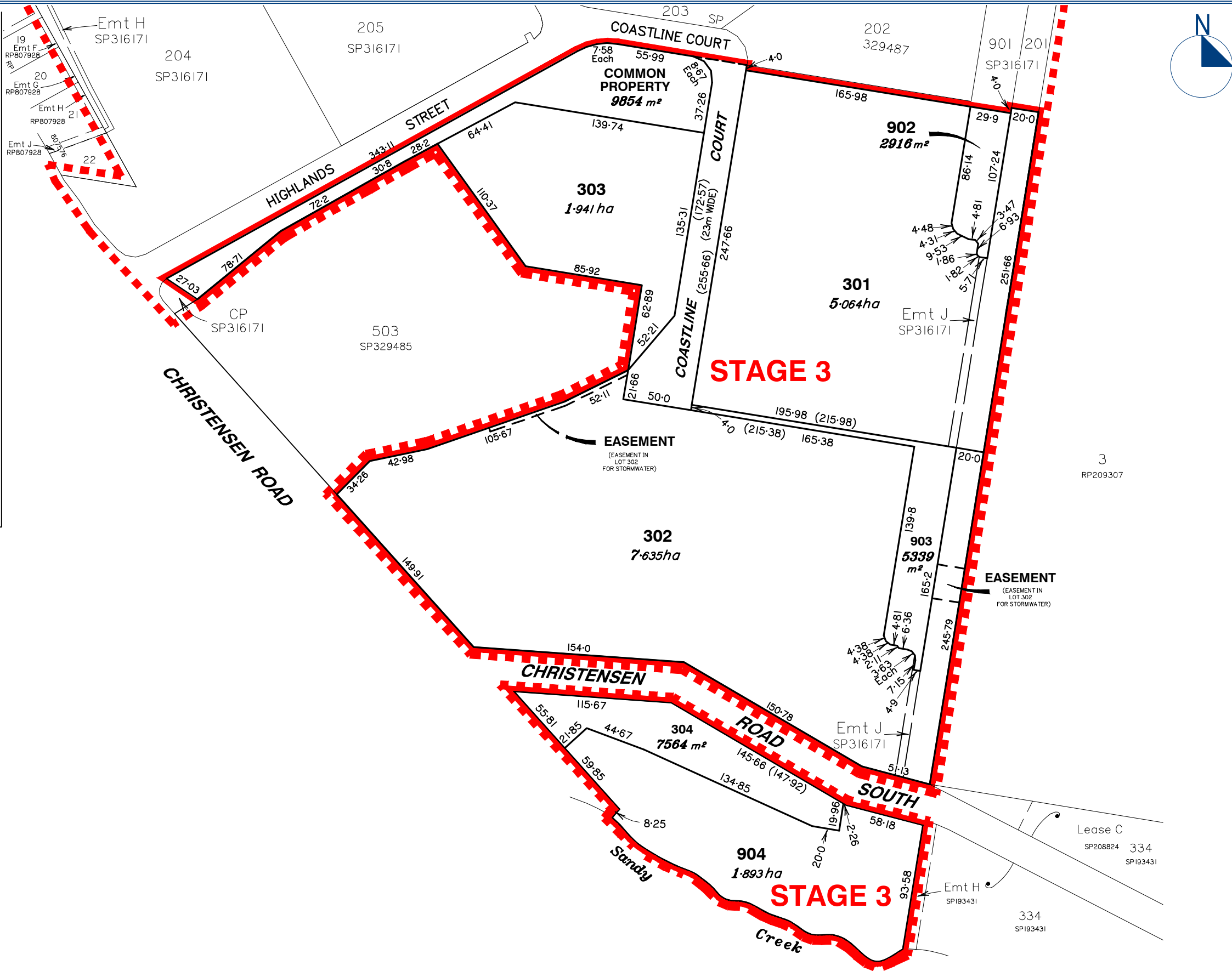
- LEGEND**
- LIMIT OF APPLICATION
 - STAGE 3 BOUNDARY

PLEASE NOTE:
ALL NEW ROADS, DRAINAGE AND SERVICES INFRASTRUCTURE TO BE DEDICATED TO COUNCIL OF THE CITY OF GOLD COAST.

DEVELOPMENT SUMMARY				
Total Site Area 69.058Ha				
LOT YIELD	STAGE AREA	APPROX. AREA & LENGTH OF NEW ROAD	DRAINAGE RESERVE LOTS	
STAGE 3	4 Lots	19.81 ha	7139 m ² 256m	2

Scale 1:3000 - Lengths are in Metres.

0 50 100 150 200 250 300





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Gold Coast | 76 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

Scale at A3: 1:3000

Date: 13-03-23

Design: MG

Drawn: SH

Checked: MG/AWG

Issue	Date	Description	DRN	CHK
A	13/03/2023	Revised Lot 902, 301, 304, 904	SJH	AWG
-	02/02/2023	ORIGINAL ISSUE	SJH	AWG

Project:

VantageYatala

Client:



FRASERS
PROPERTY

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This plan has been prepared for the exclusive use of the client as stated on this plan for the purpose of application to the relevant local authority for material change of use and/or reconfiguration of the land as described and should not be used by any other person or corporation and for any other purpose.

All dimensions and areas are approximate only and subject to survey.

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Drawing Title:

Proposed Staged,
Community Title Scheme
Reconfiguration of Land
Lots 301-304, 904, Common Property,
Drainage Reserves (Lots 902 & 903) & New Road

CANCELLING LOT: 505 on SP316171

LOCATION: 60 Stapylton Jacobs Well Road, Stapylton QLD

Drawing No: 5941 P STAGE 3 001 A

Revision No:

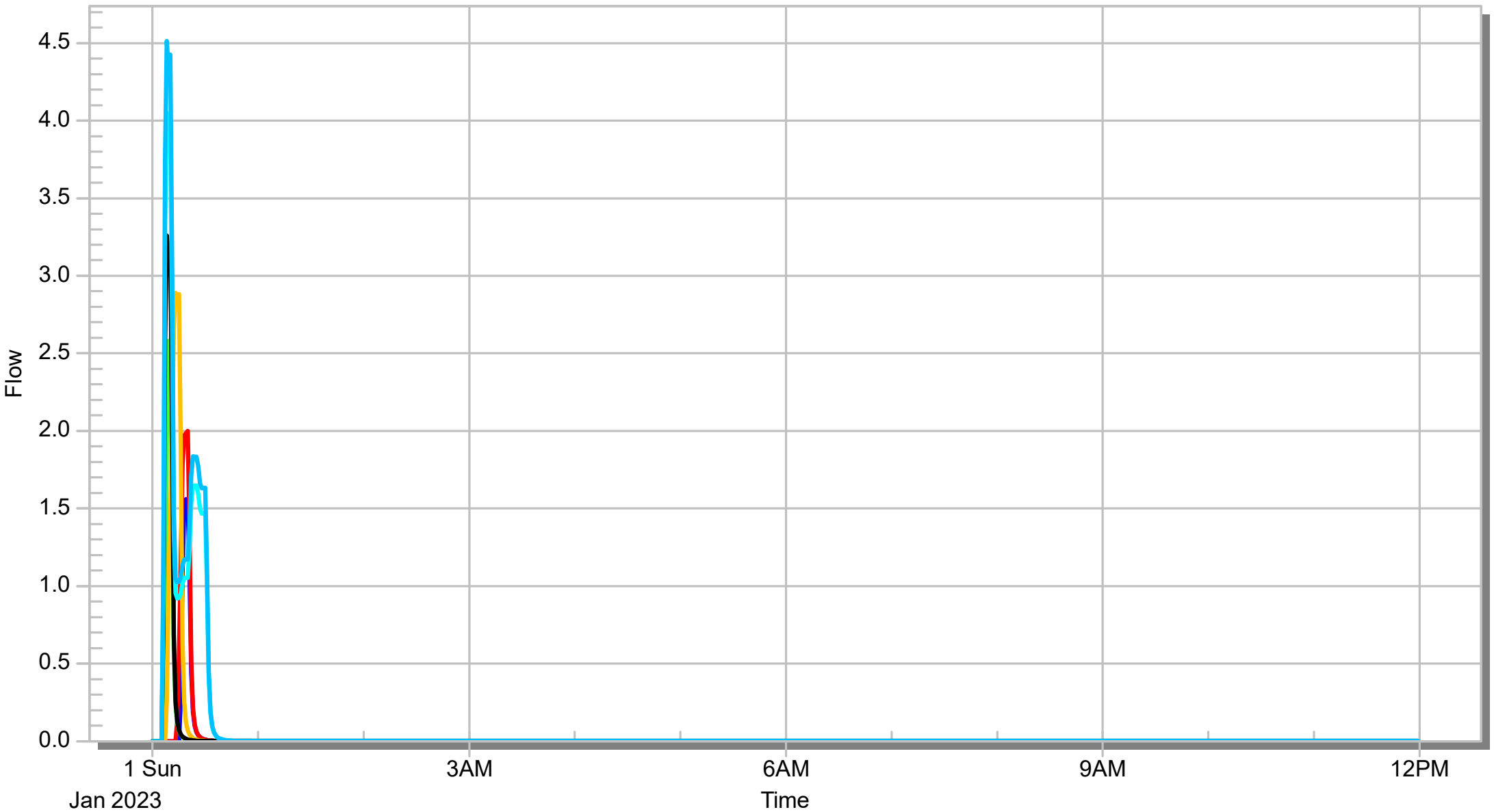
Appendix K – Pre and Post Development Peak Flow Hydrographs

Node - DEV LPoD1

ECN_63pct_20min_10[Max 1.559]
ECN_10pct_15min_9[Max 2.890]
ECN_1pct_30min_6[Max 4.514]

ECN_0.5EY_20min_10[Max 1.999]
ECN_5pct_10min_7[Max 3.260]

ECN_0.2EY_10min_4[Max 2.579]
ECN_2pct_30min_6[Max 4.052]

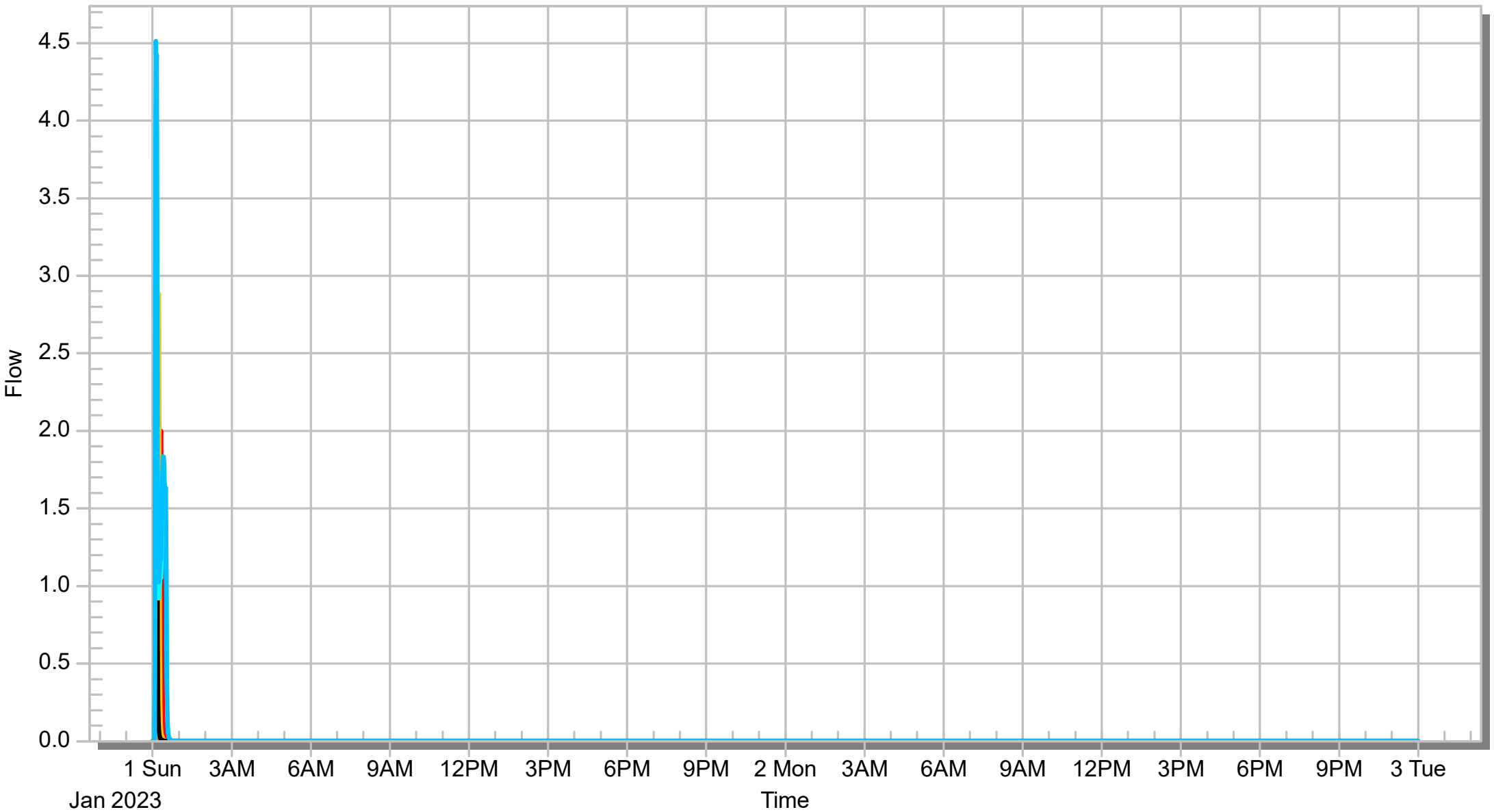


Node - DEV LPoD1

ECN_63pct_20min_10[Max 1.559]
ECN_10pct_15min_9[Max 2.890]
ECN_1pct_30min_6[Max 4.514]

ECN_0.5EY_20min_10[Max 1.999]
ECN_5pct_10min_7[Max 3.260]

ECN_0.2EY_10min_4[Max 2.579]
ECN_2pct_30min_6[Max 4.052]

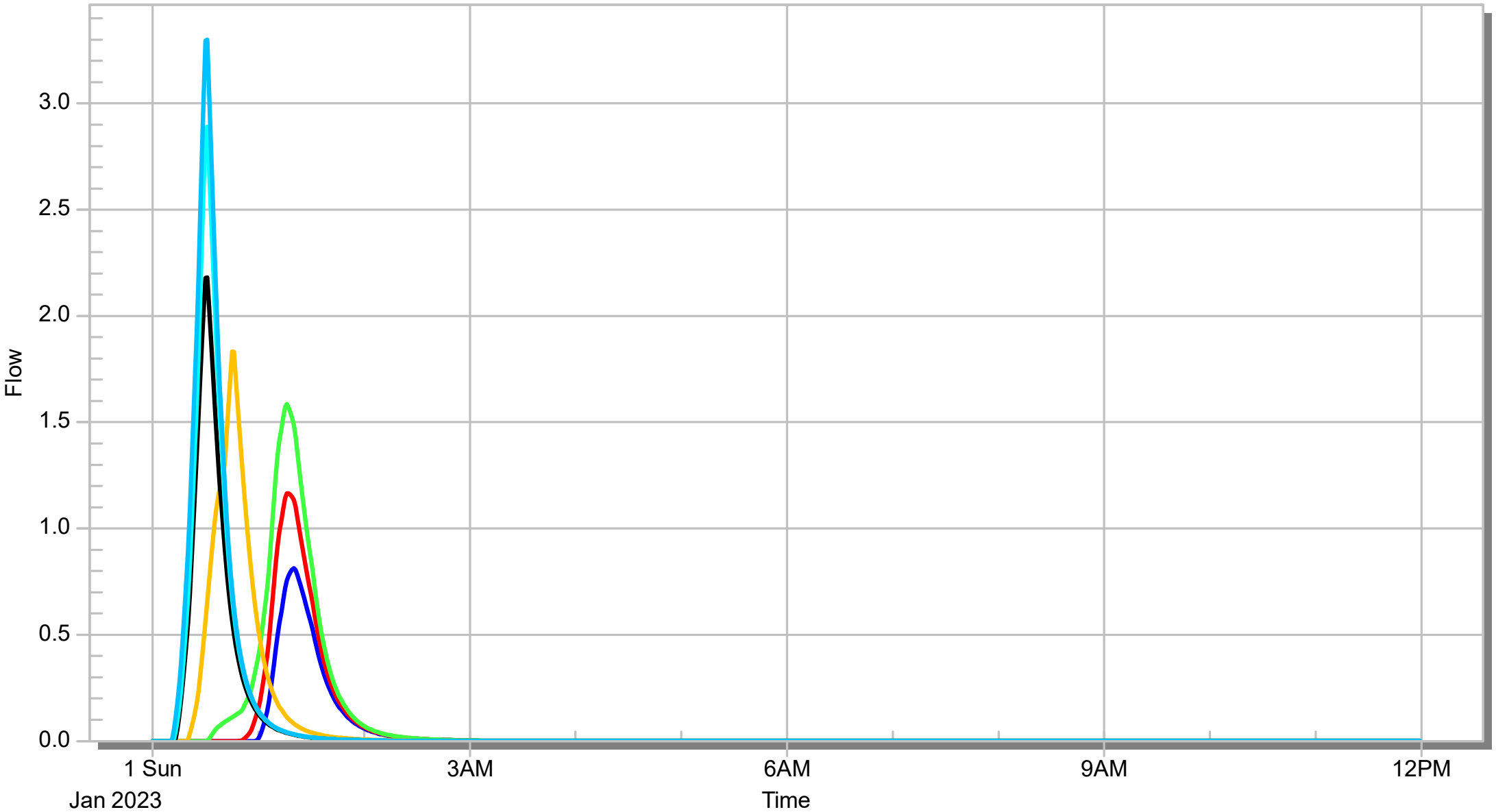


Node - EX LPoD1

ECN_63pct_1_5hr_9[Max 0.813]
ECN_10pct_45min_10[Max 1.832]
ECN_1pct_30min_3[Max 3.300]

ECN_0.5EY_1_5hr_9[Max 1.165]
ECN_5pct_30min_10[Max 2.181]

ECN_0.2EY_1_5hr_9[Max 1.585]
ECN_2pct_30min_3[Max 2.889]

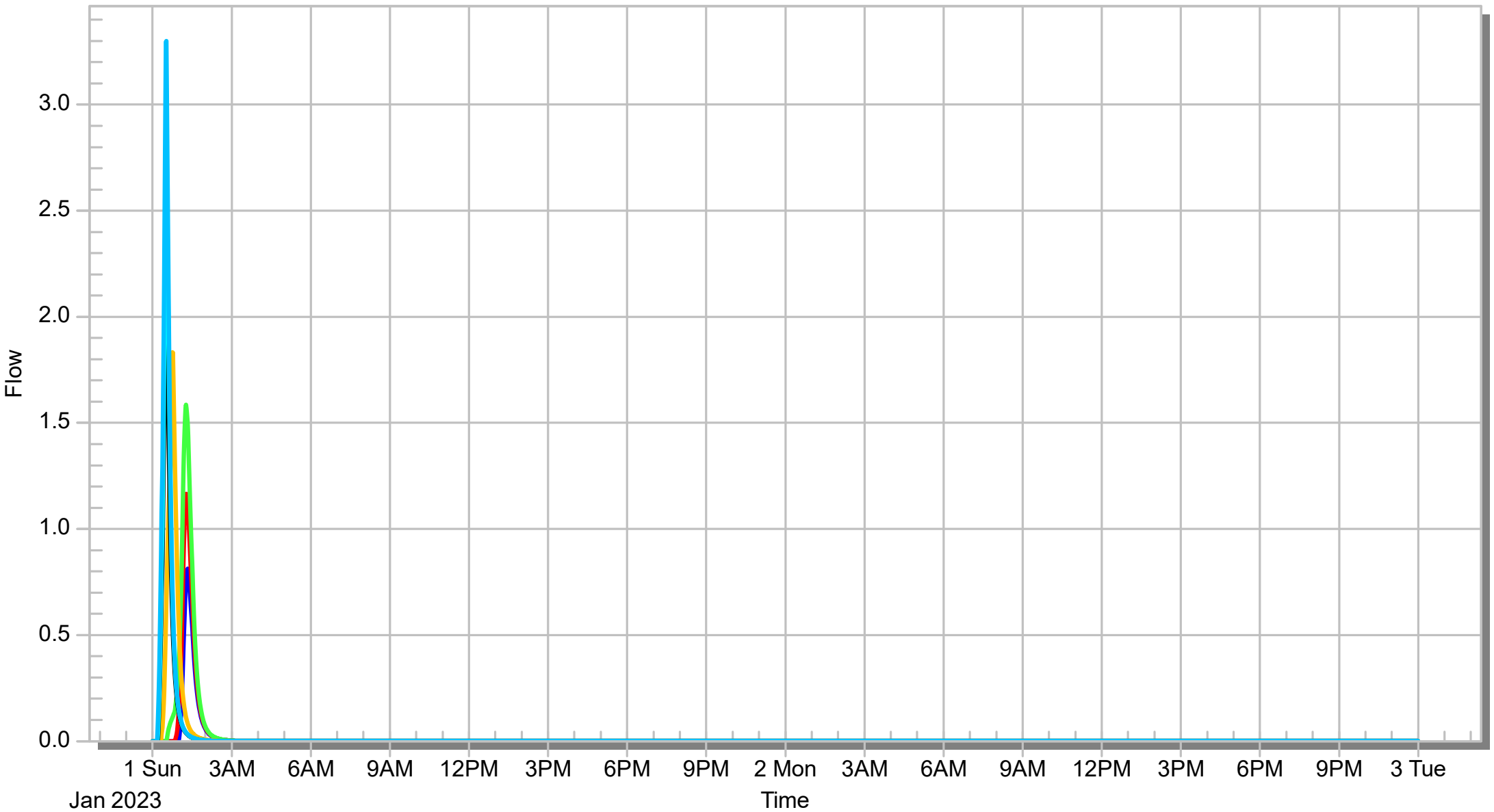


Node - EX LPoD1

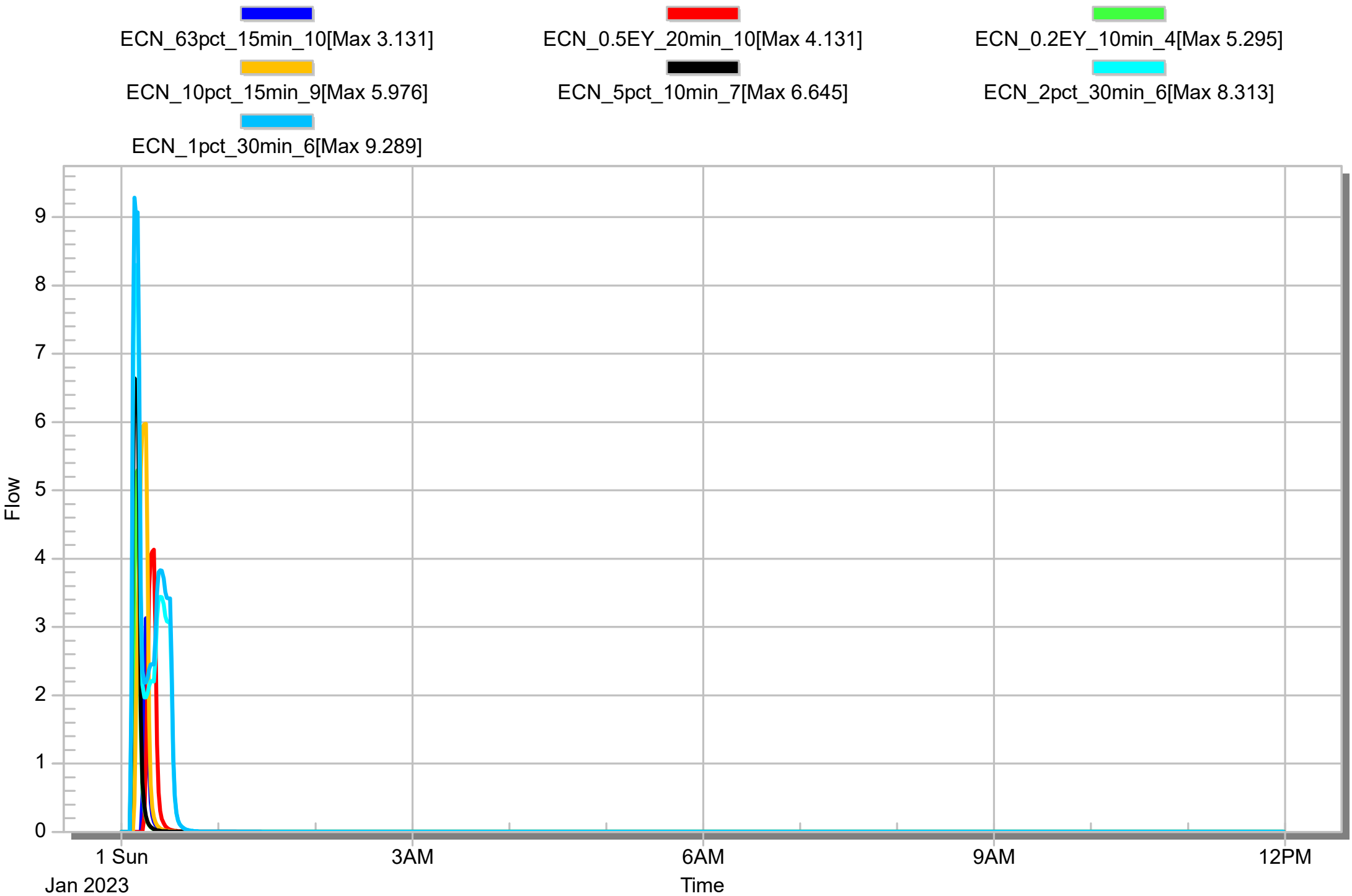
ECN_63pct_1_5hr_9[Max 0.813]
ECN_10pct_45min_10[Max 1.832]
ECN_1pct_30min_3[Max 3.300]

ECN_0.5EY_1_5hr_9[Max 1.165]
ECN_5pct_30min_10[Max 2.181]

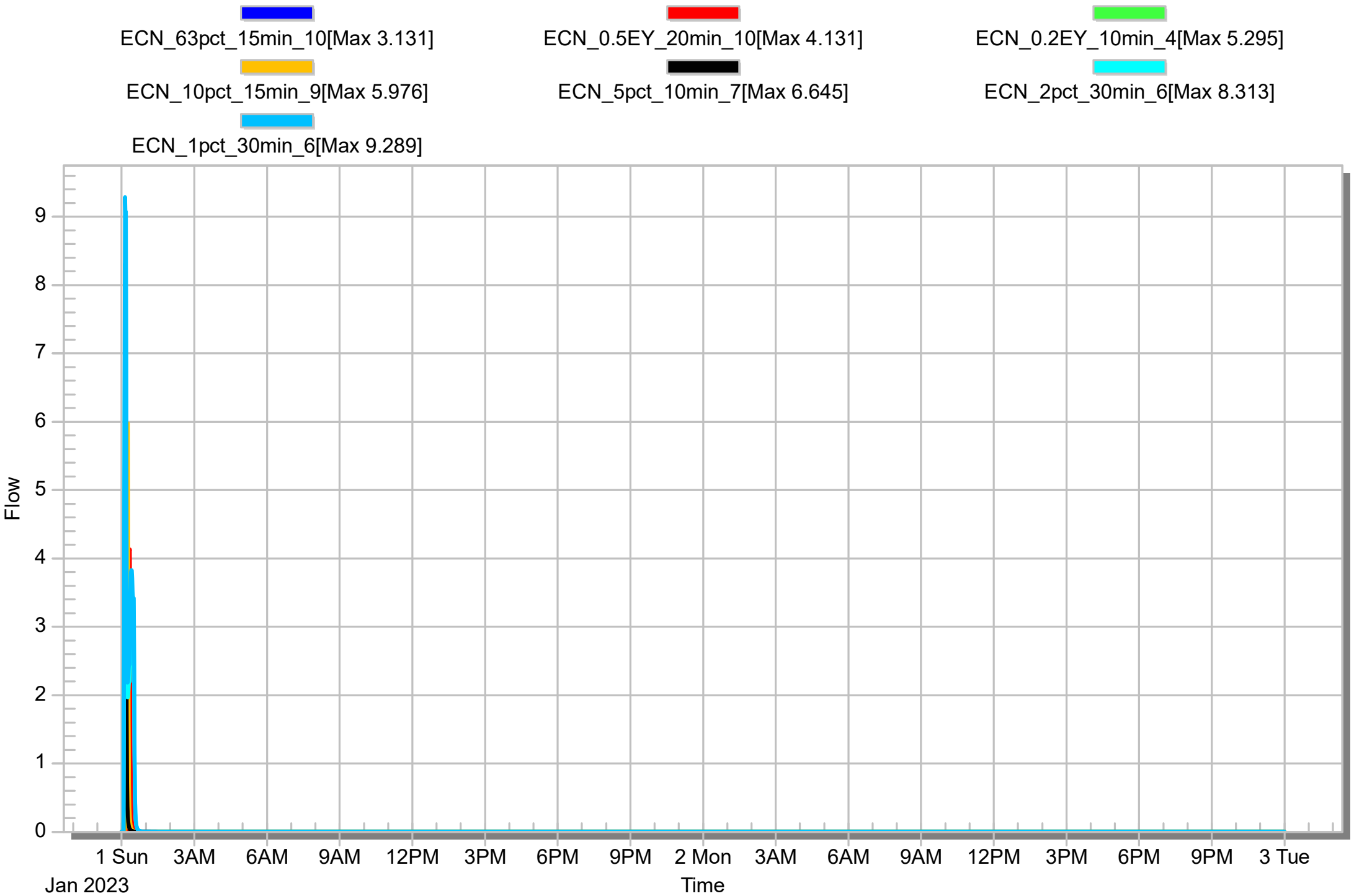
ECN_0.2EY_1_5hr_9[Max 1.585]
ECN_2pct_30min_3[Max 2.889]



Node - DEV LPoD2



Node - DEV LPoD2

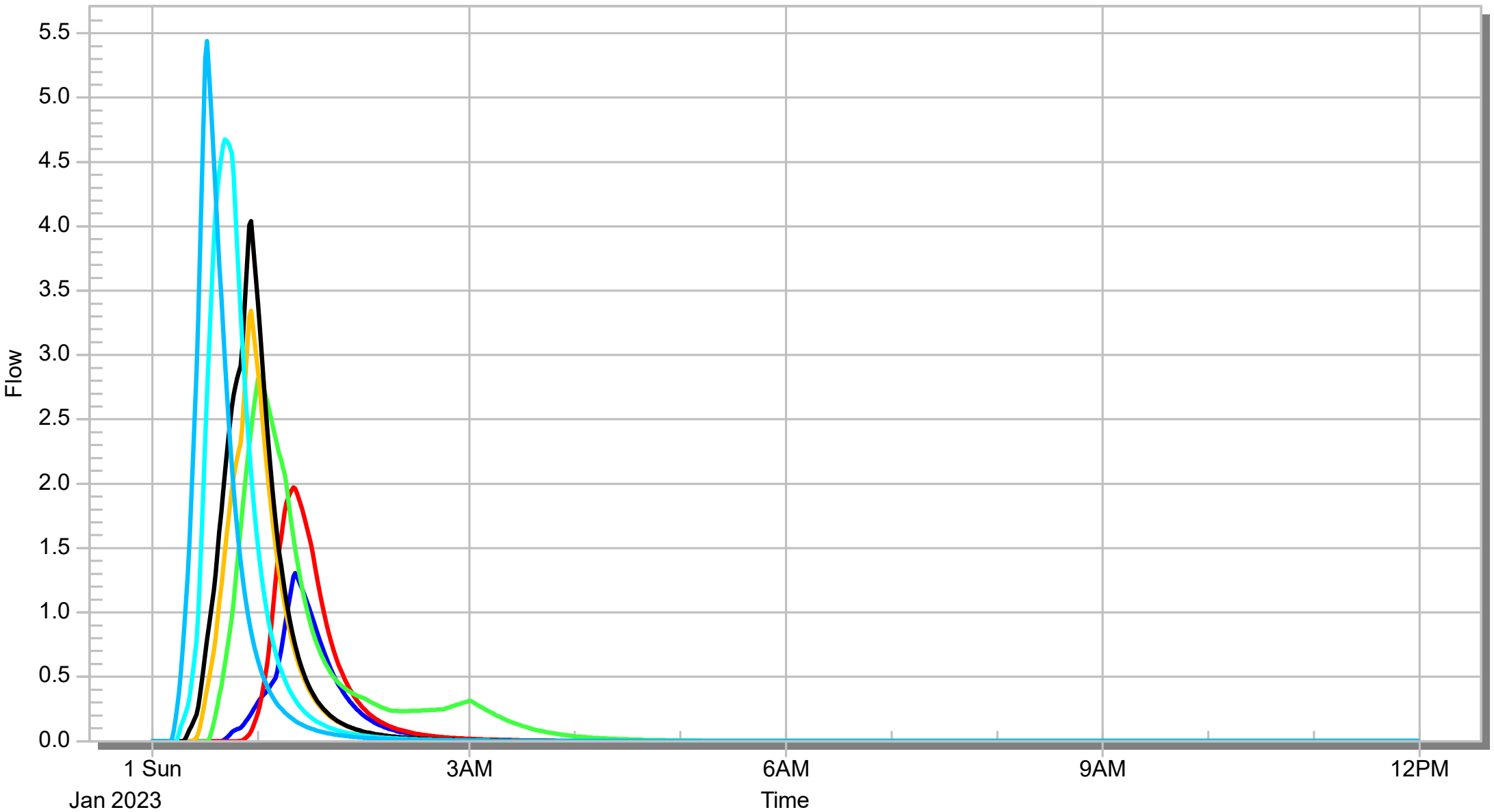


Node - EX LPoD2

ECN_63pct_1_5hr_5[Max 1.305]
ECN_10pct_1hr_1[Max 3.344]
ECN_1pct_30min_3[Max 5.441]

ECN_0.5EY_1_5hr_9[Max 1.971]
ECN_5pct_1hr_1[Max 4.042]

ECN_0.2EY_3hr_3[Max 2.836]
ECN_2pct_45min_4[Max 4.674]

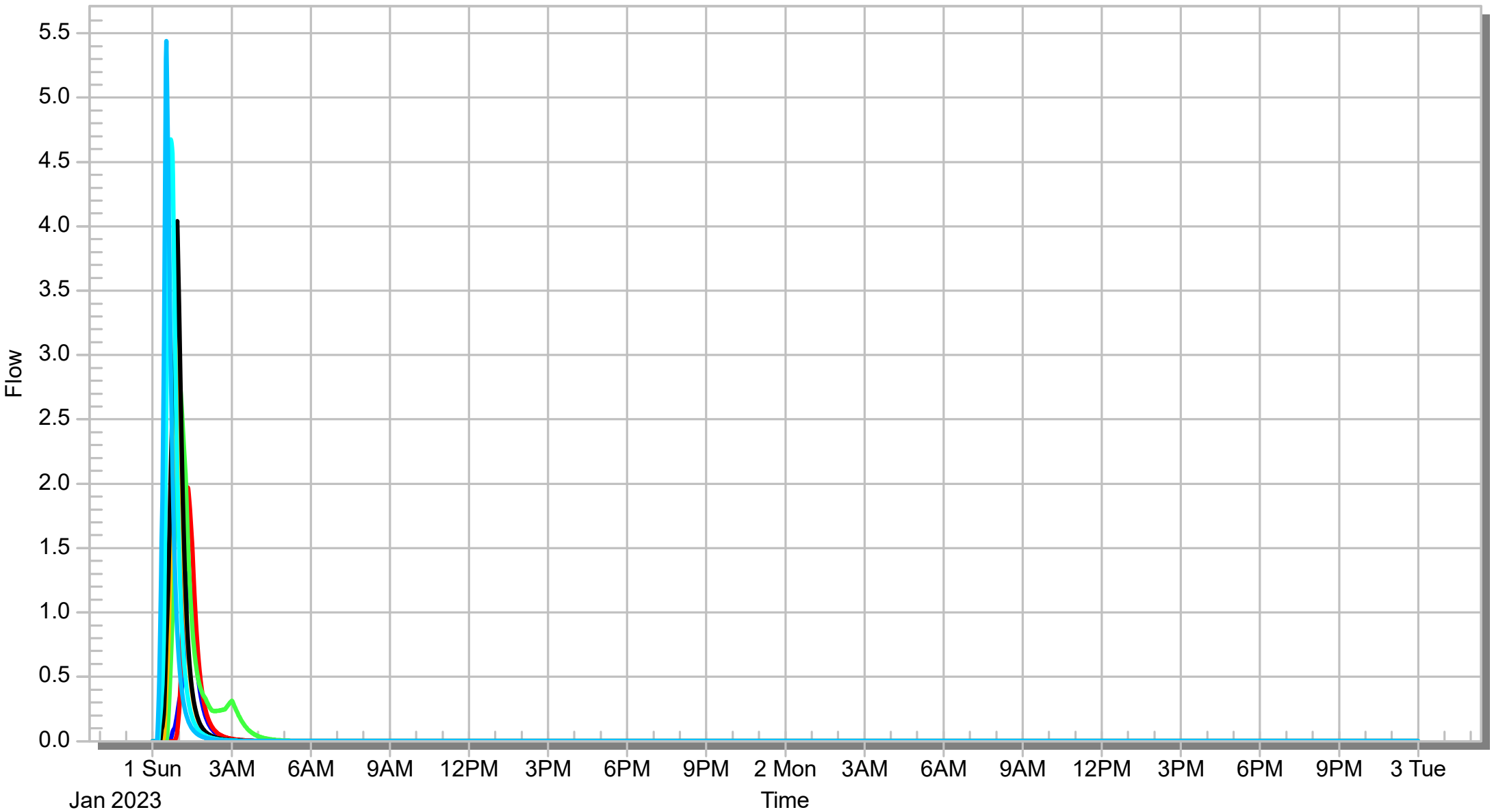


Node - EX LPoD2

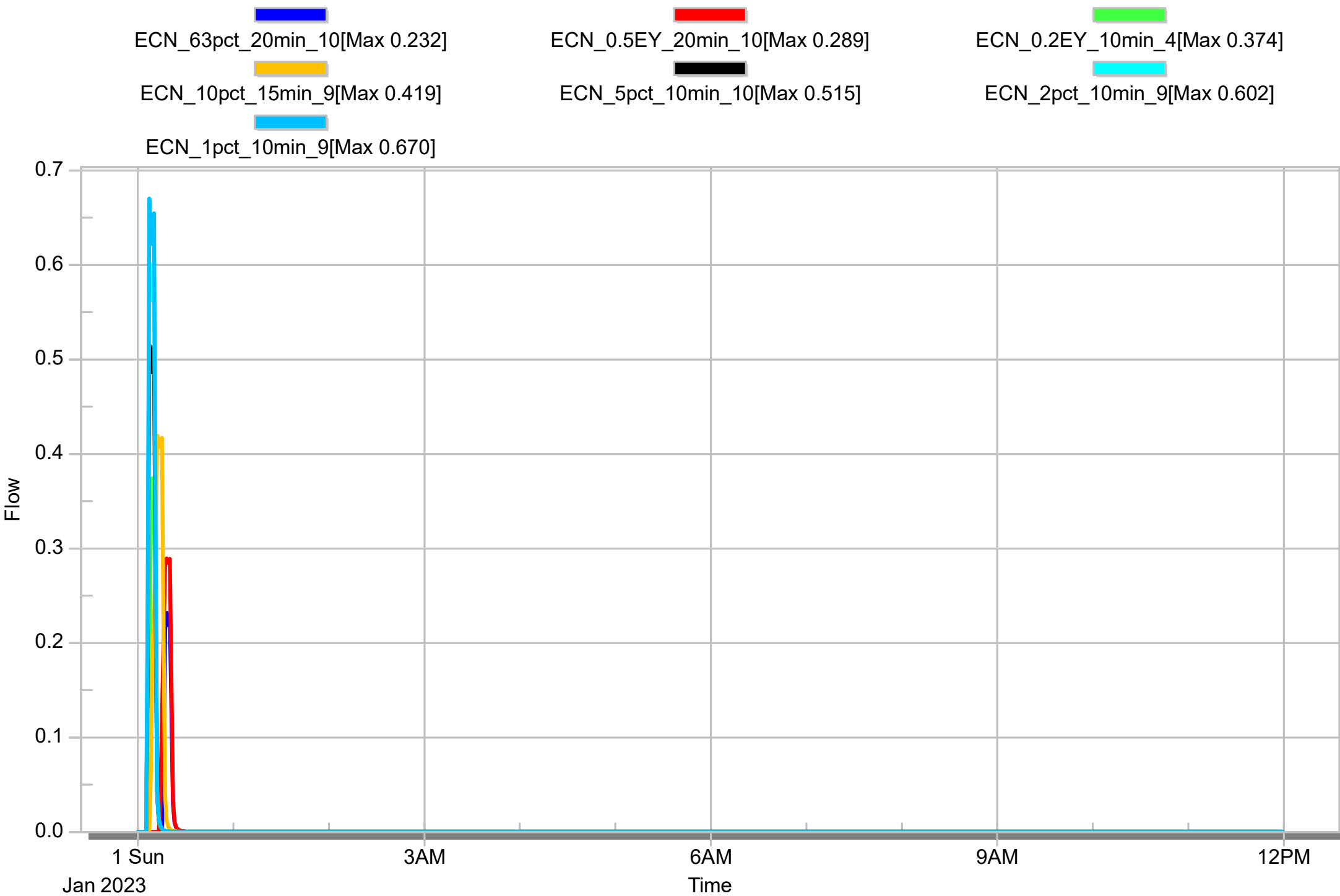
ECN_63pct_1_5hr_5[Max 1.305]
ECN_10pct_1hr_1[Max 3.344]
ECN_1pct_30min_3[Max 5.441]

ECN_0.5EY_1_5hr_9[Max 1.971]
ECN_5pct_1hr_1[Max 4.042]

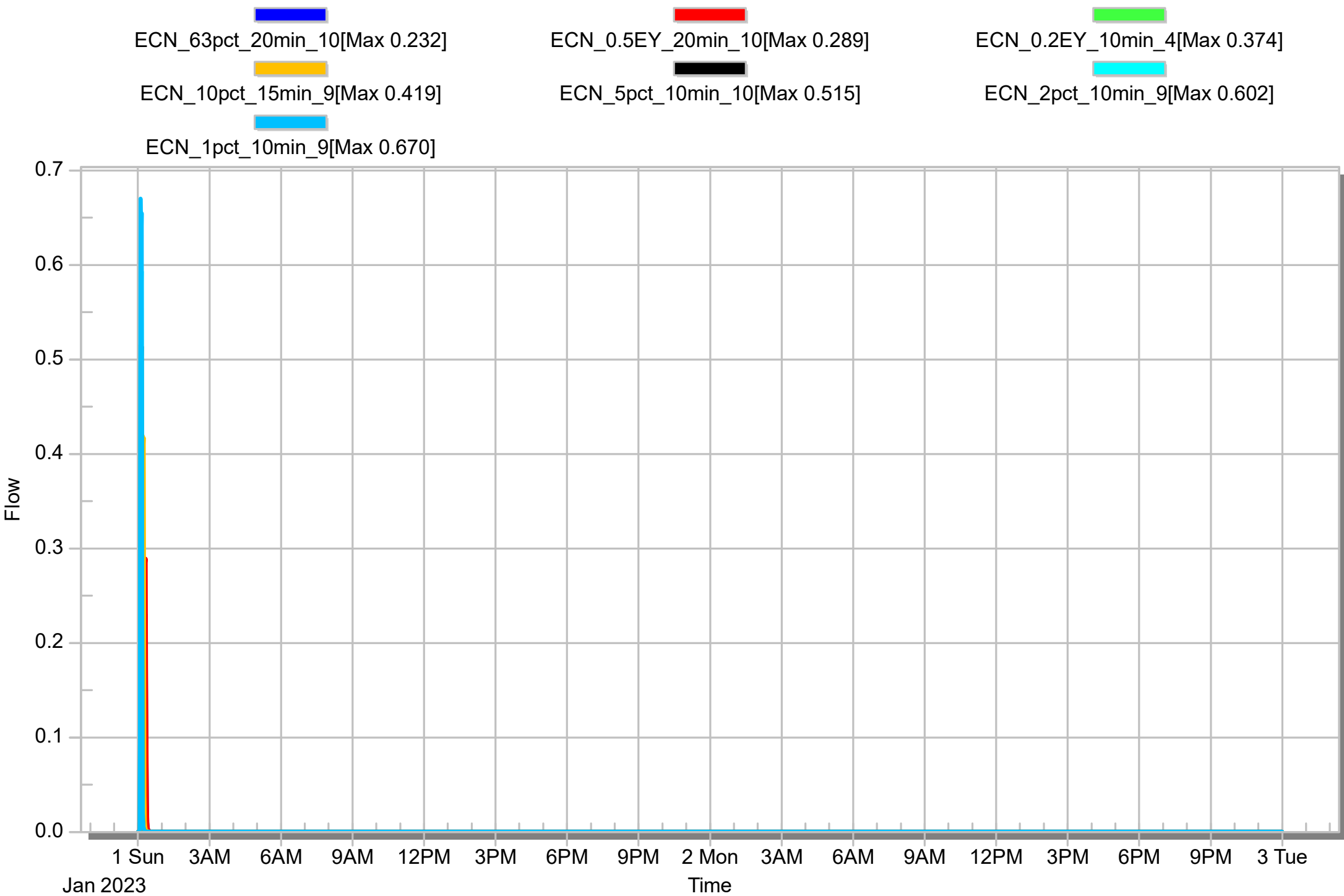
ECN_0.2EY_3hr_3[Max 2.836]
ECN_2pct_45min_4[Max 4.674]



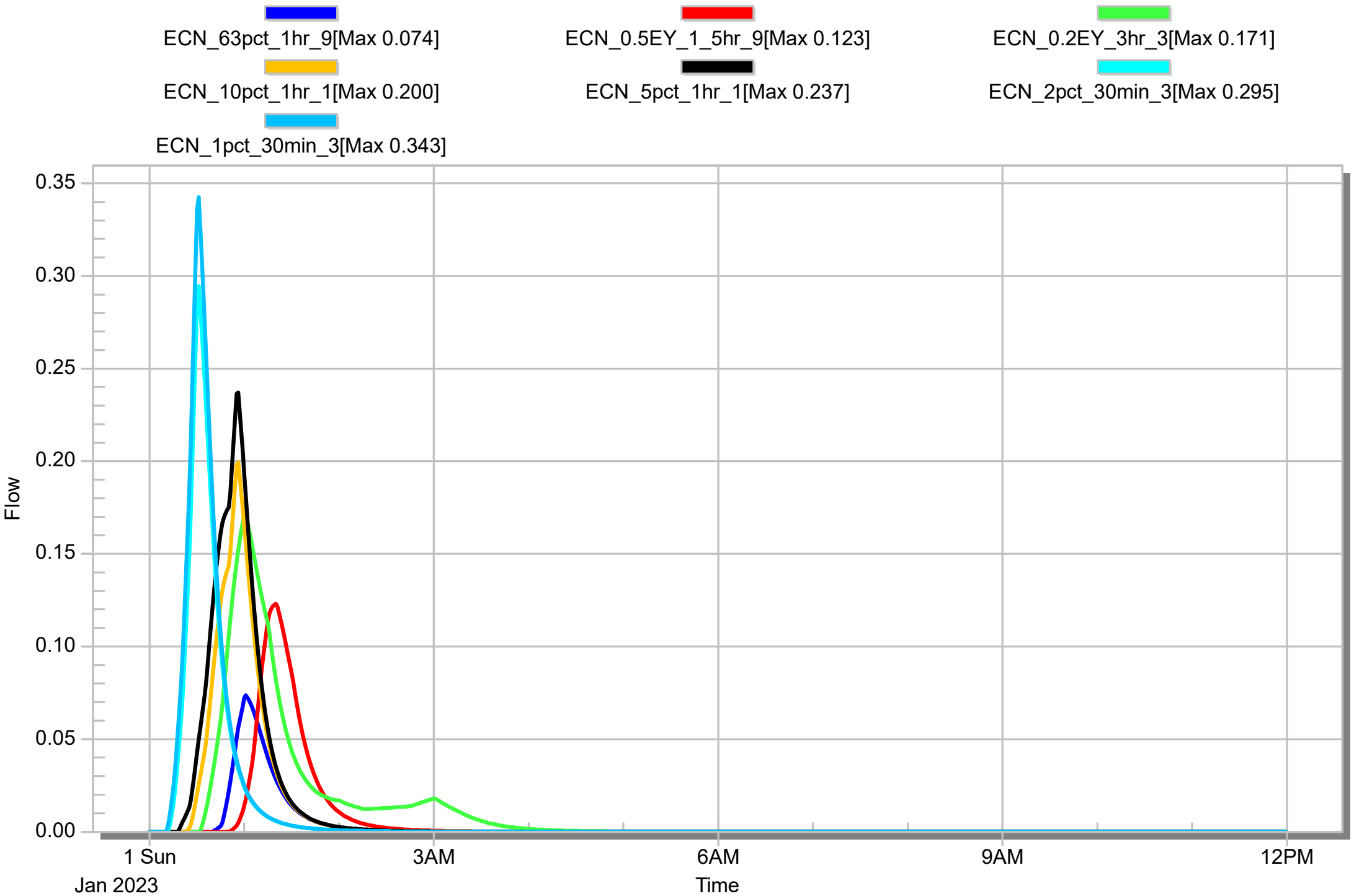
Node - DEV LPoD3



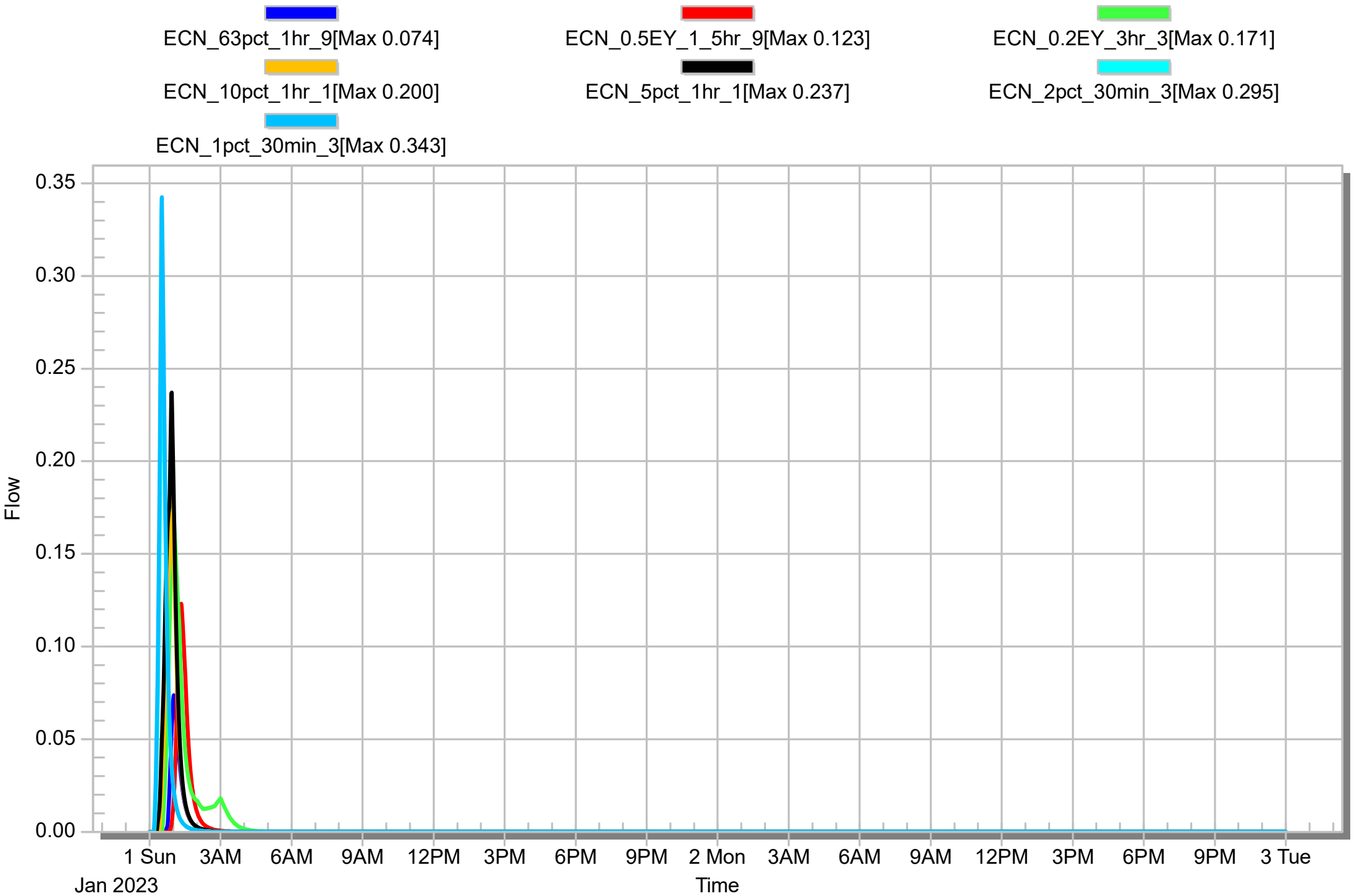
Node - DEV LPoD3



Node - EX LPoD3

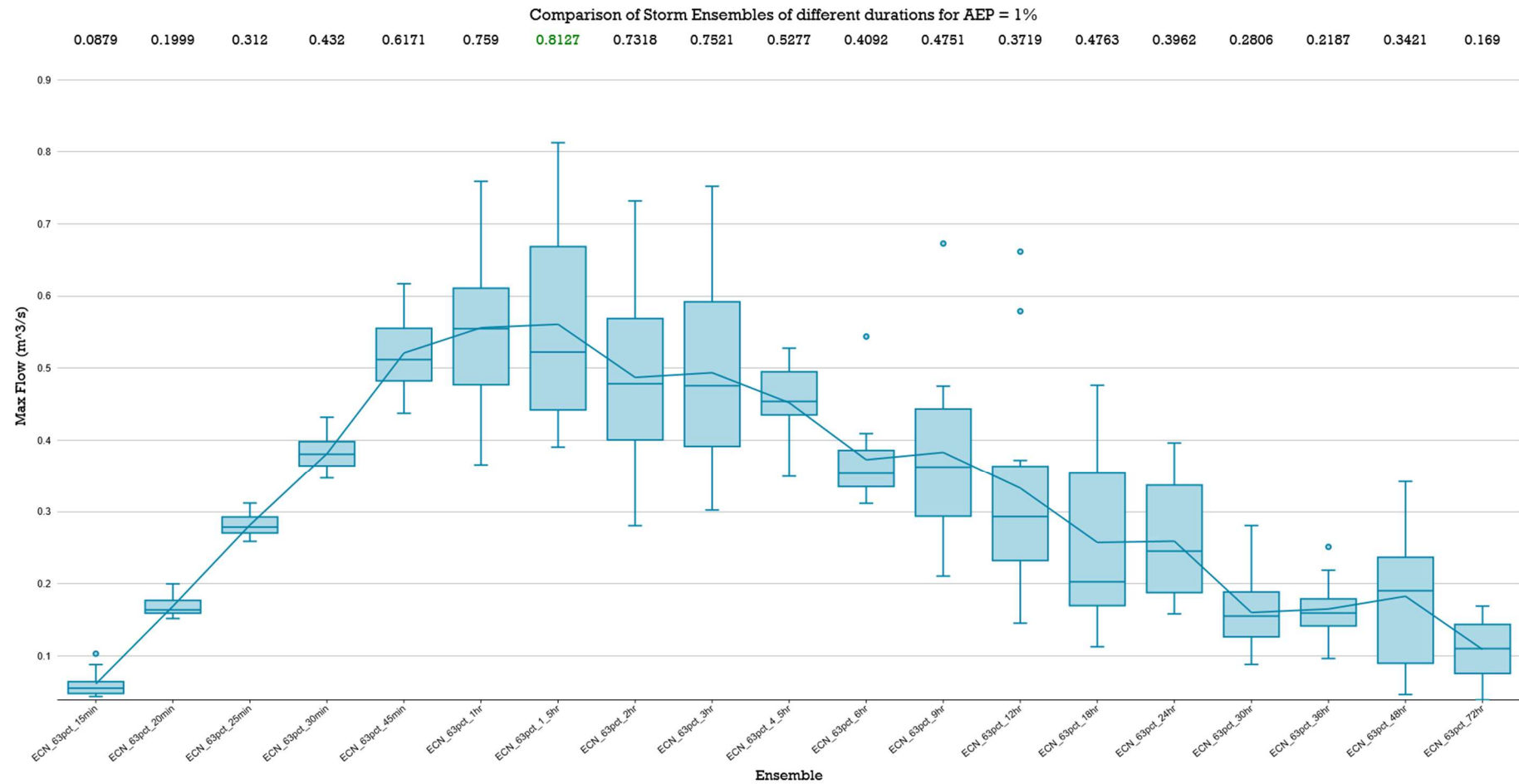


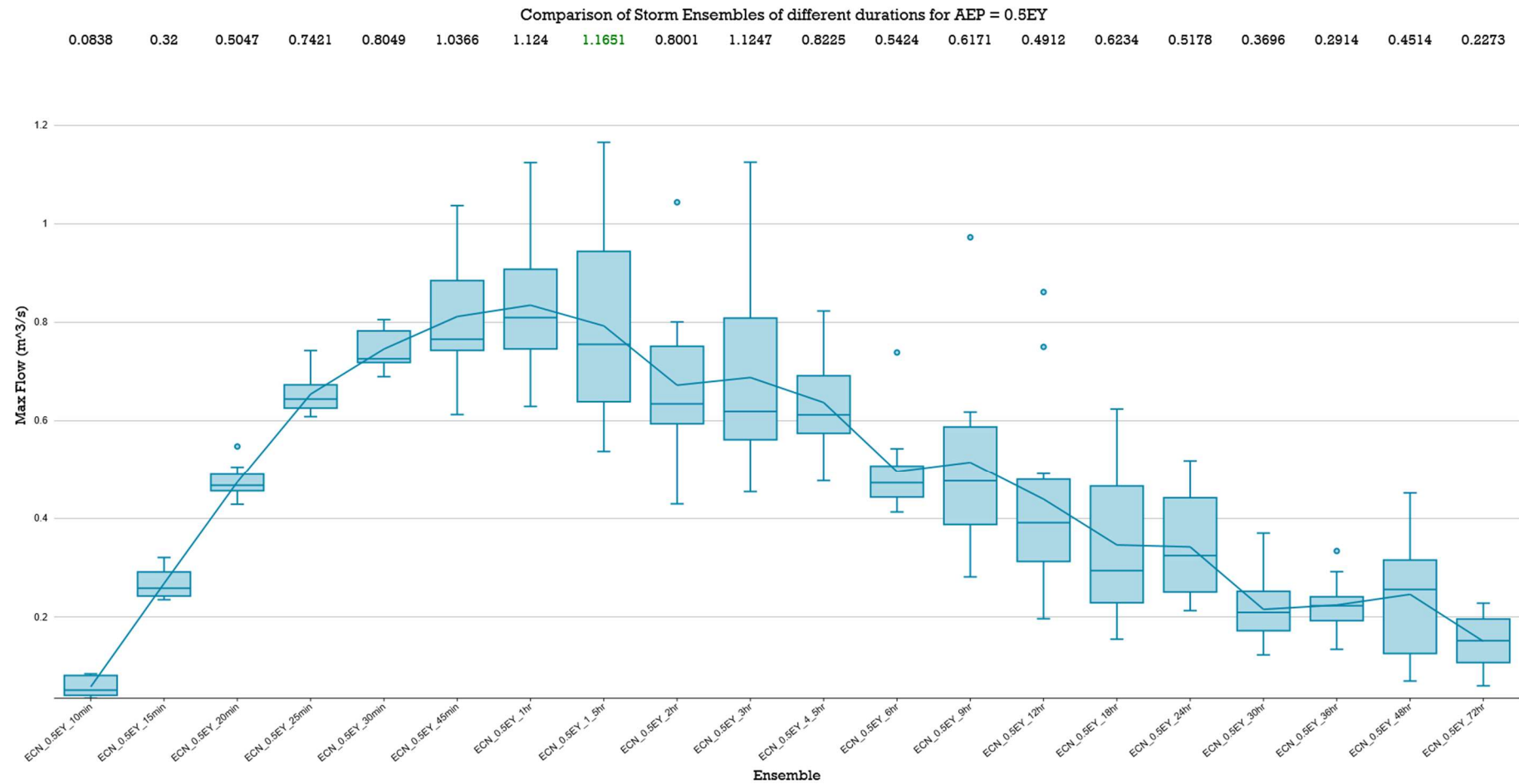
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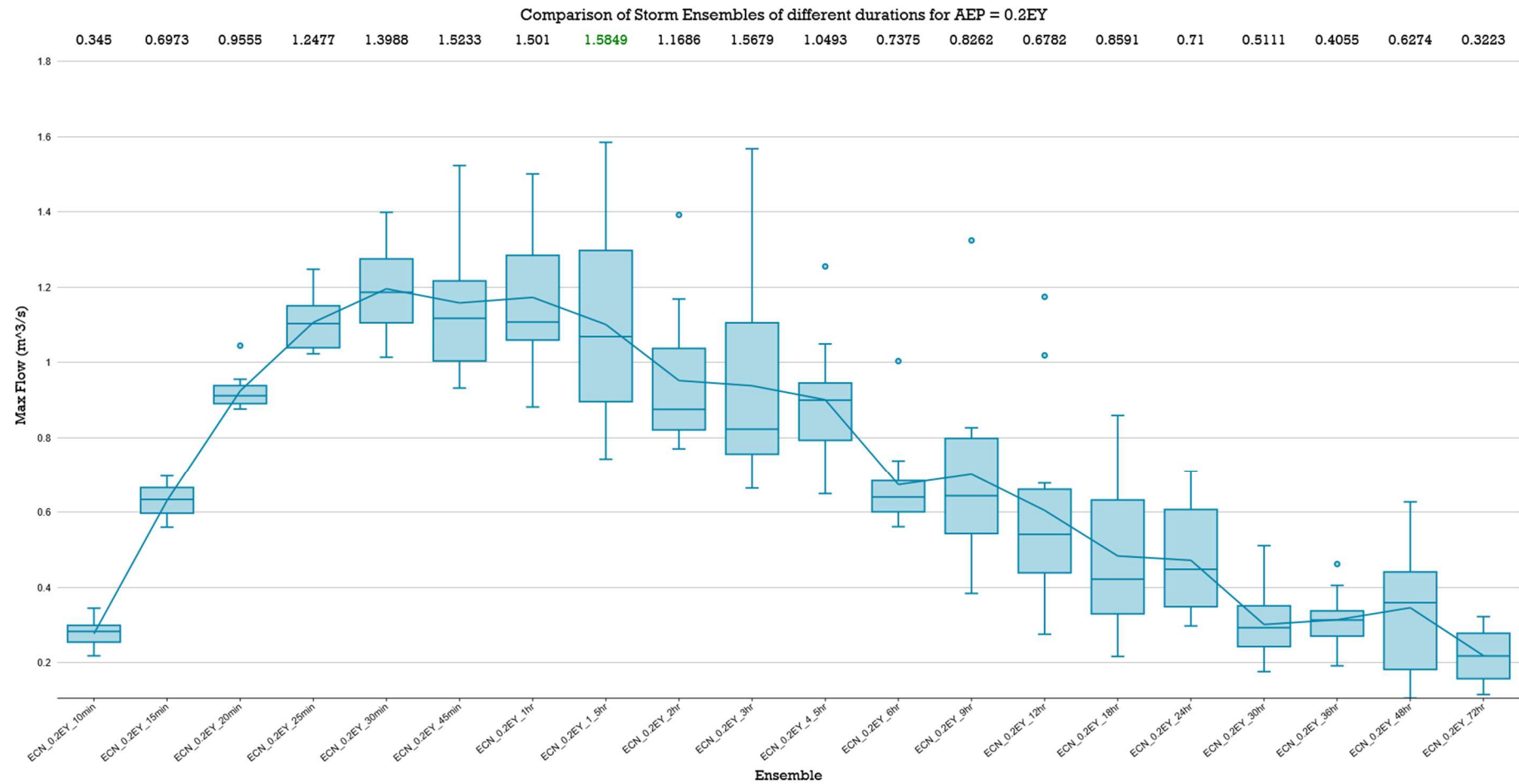


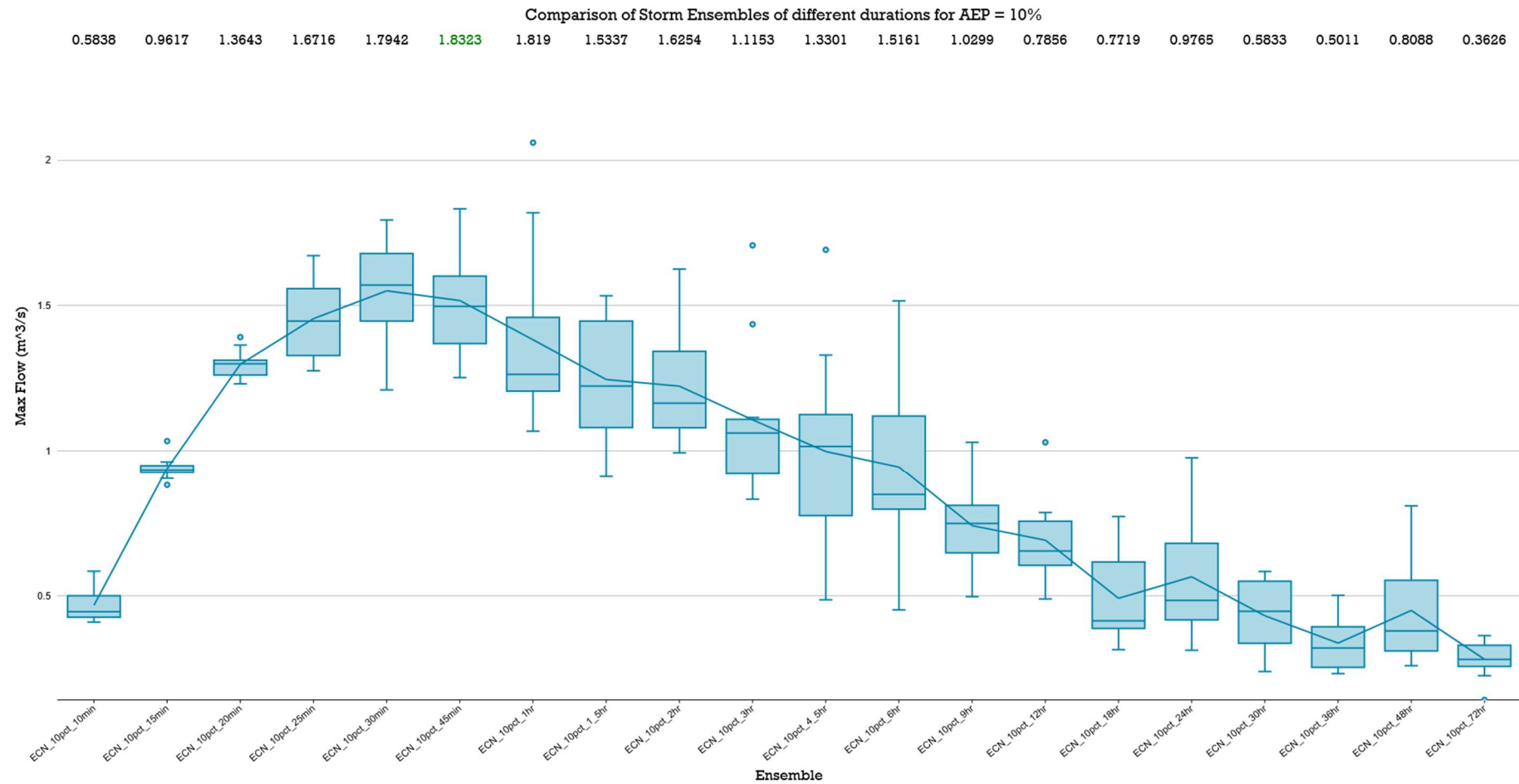
Appendix L – Peak Flow Box & Whisker Plots

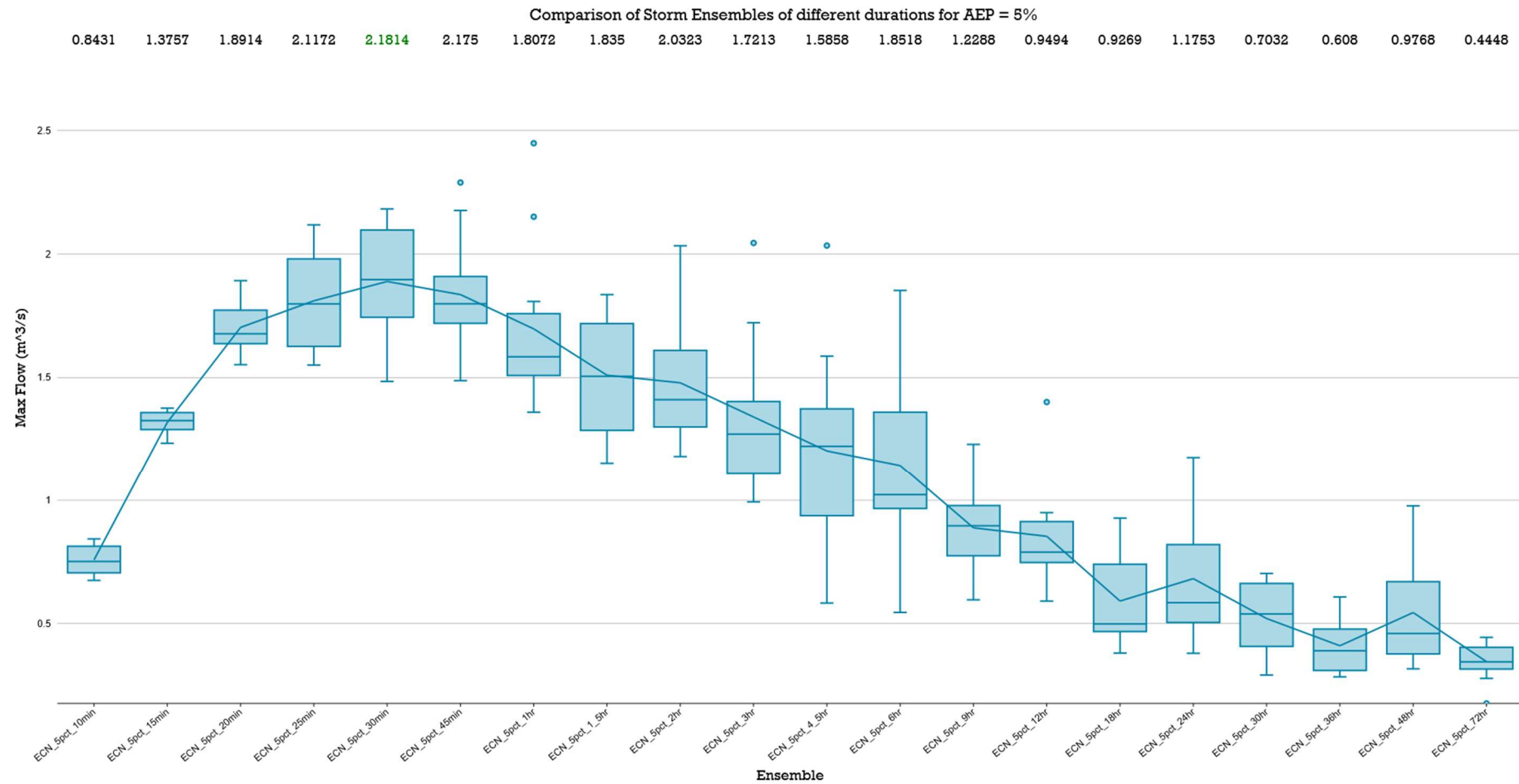
LPoD-1 PRE DEVELOPED 'MAXIMUM PEAK' Box & Whisker Plots – 72 *Hour*

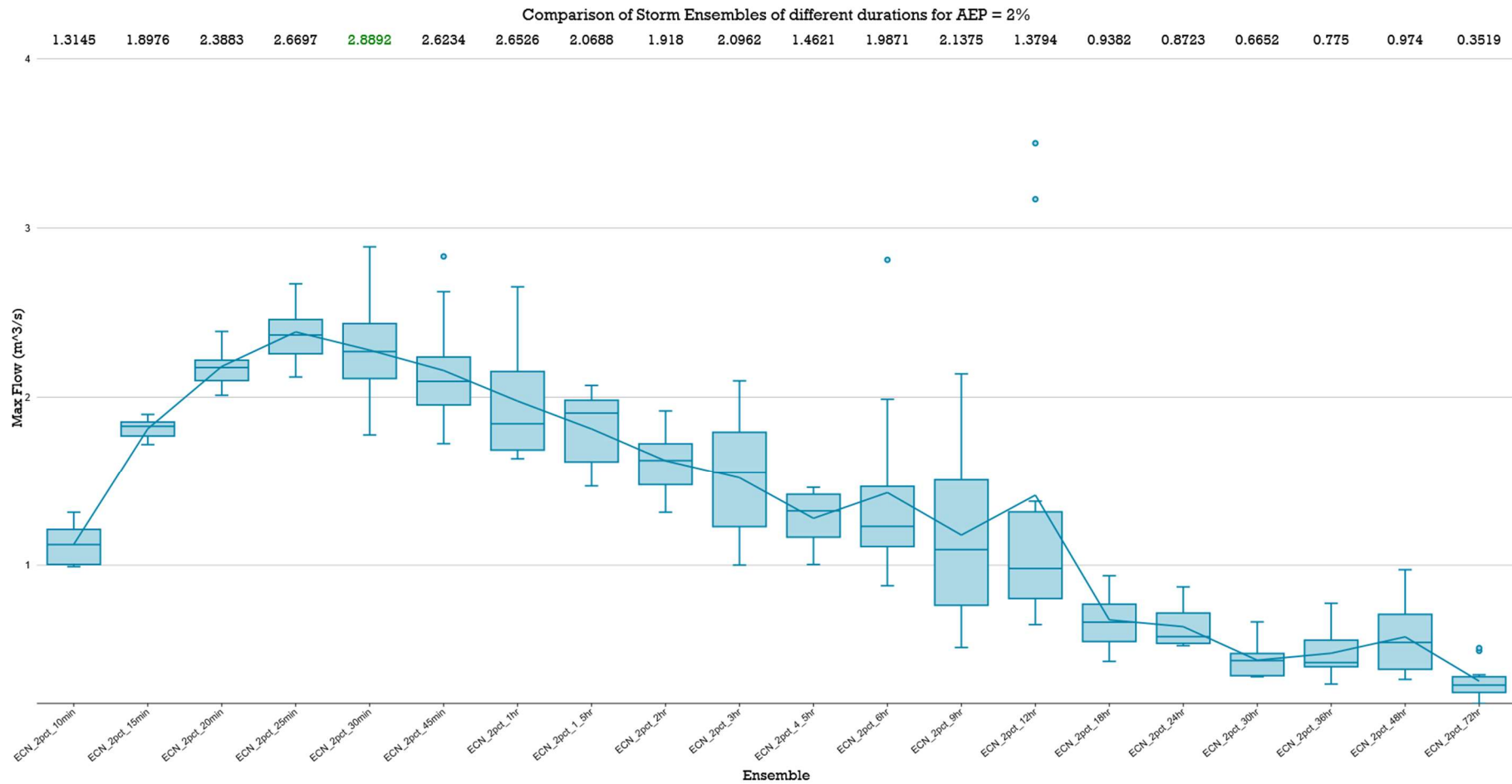


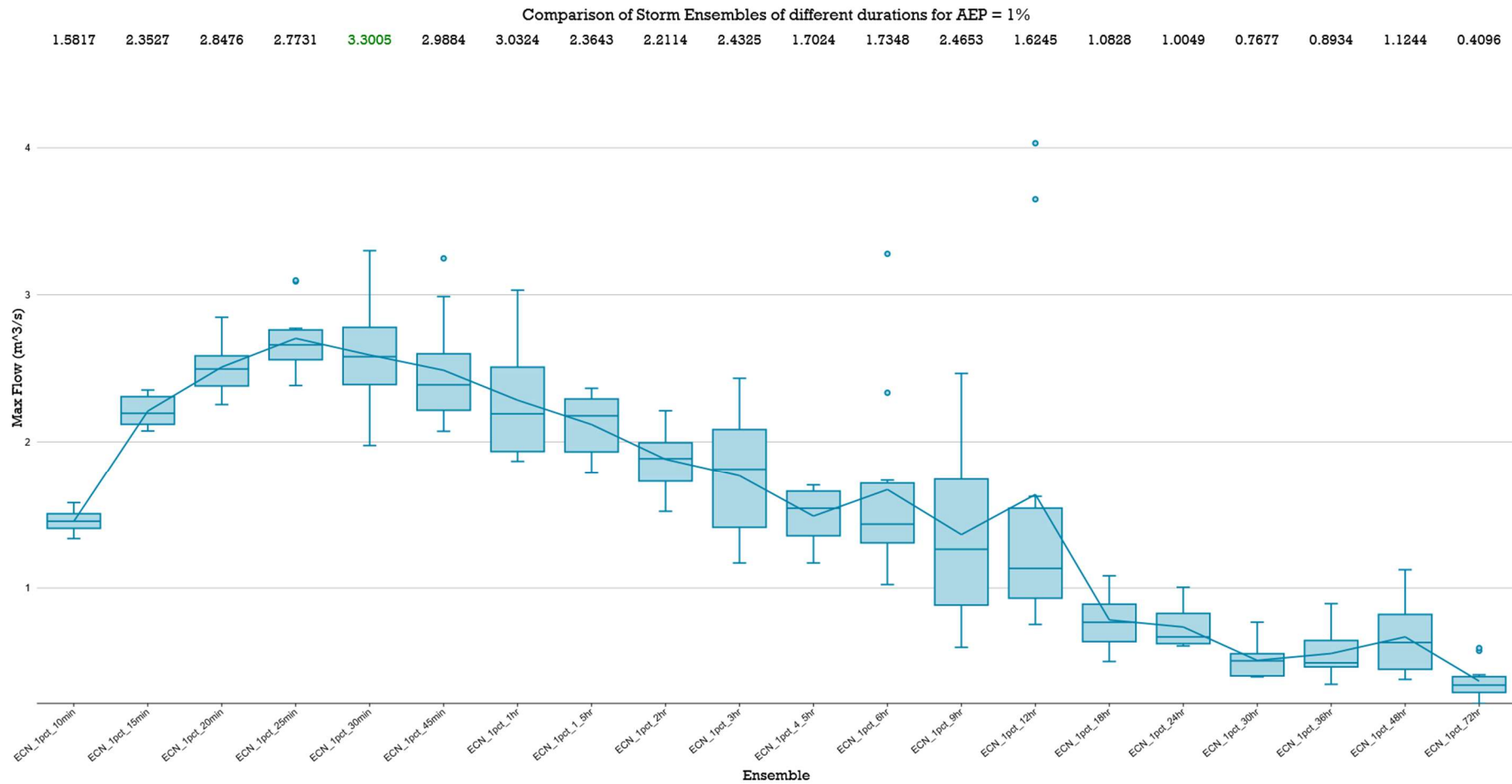




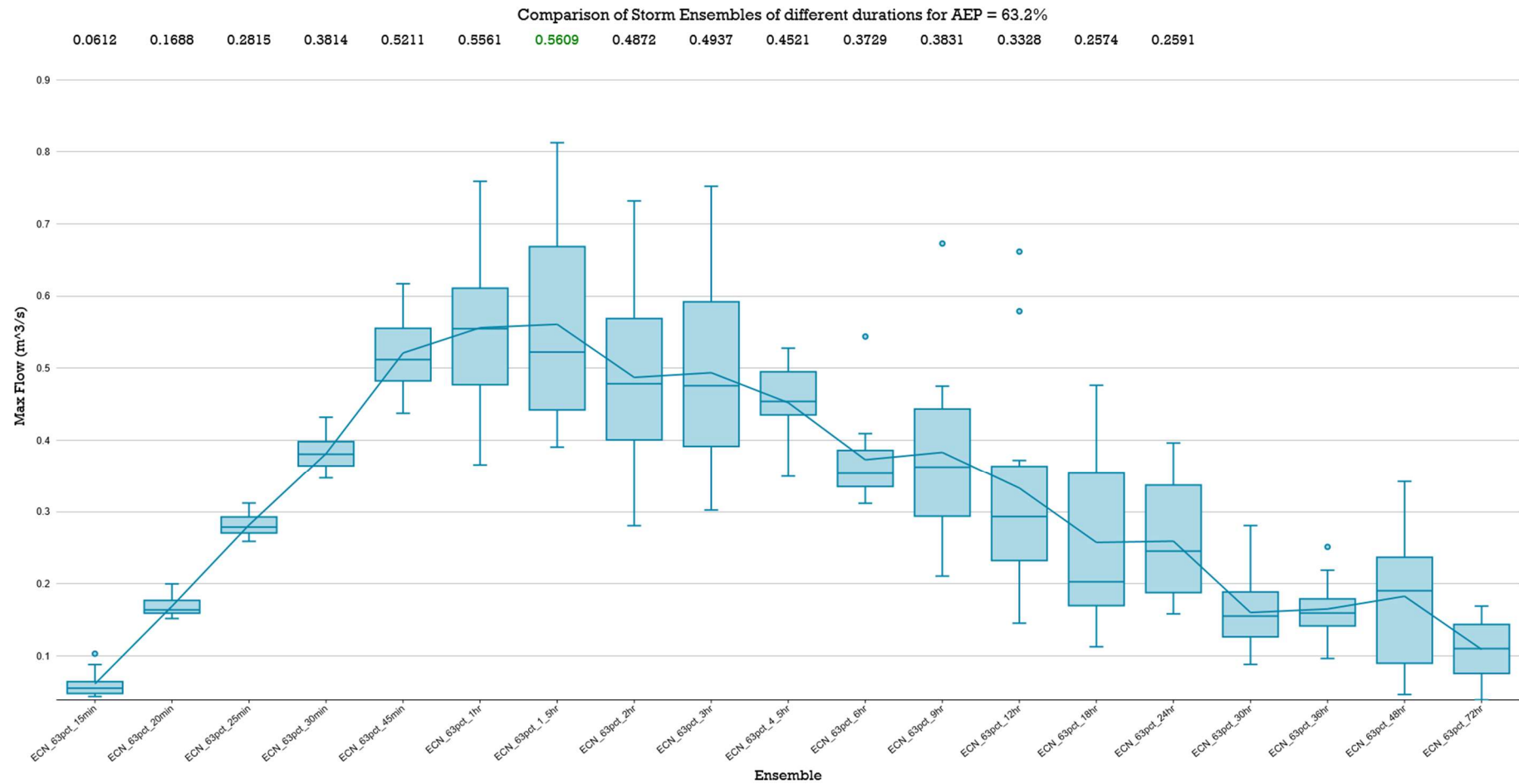


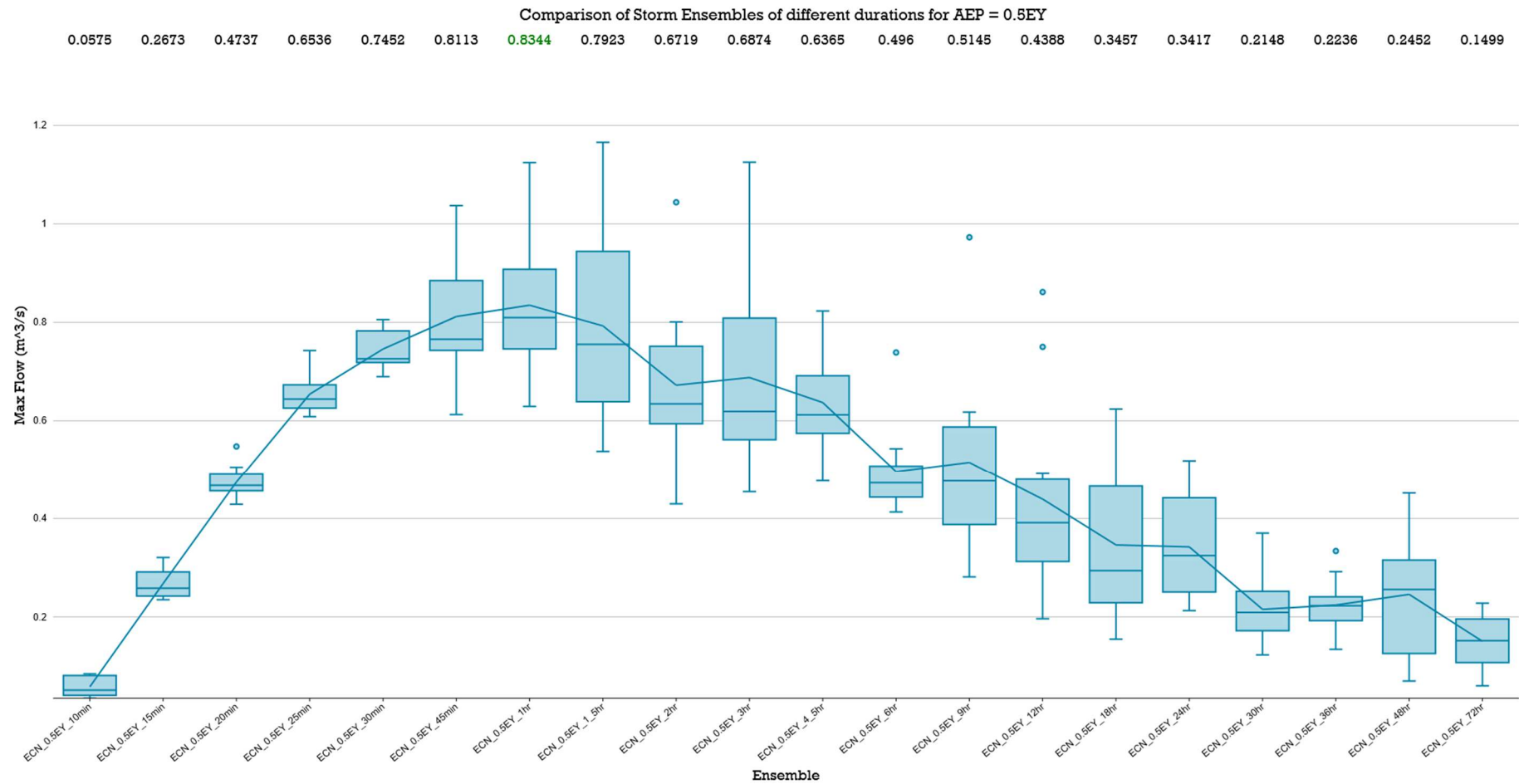


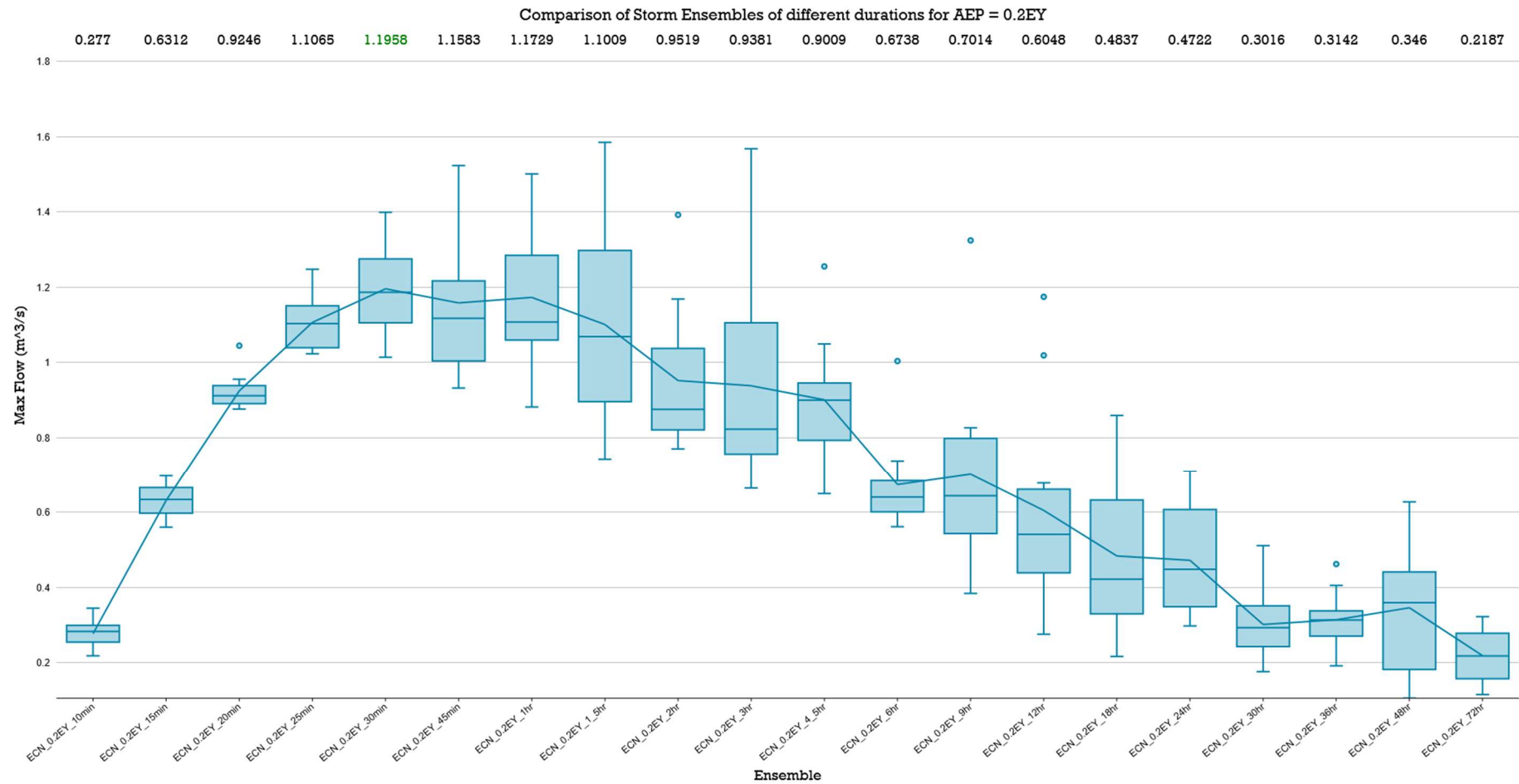


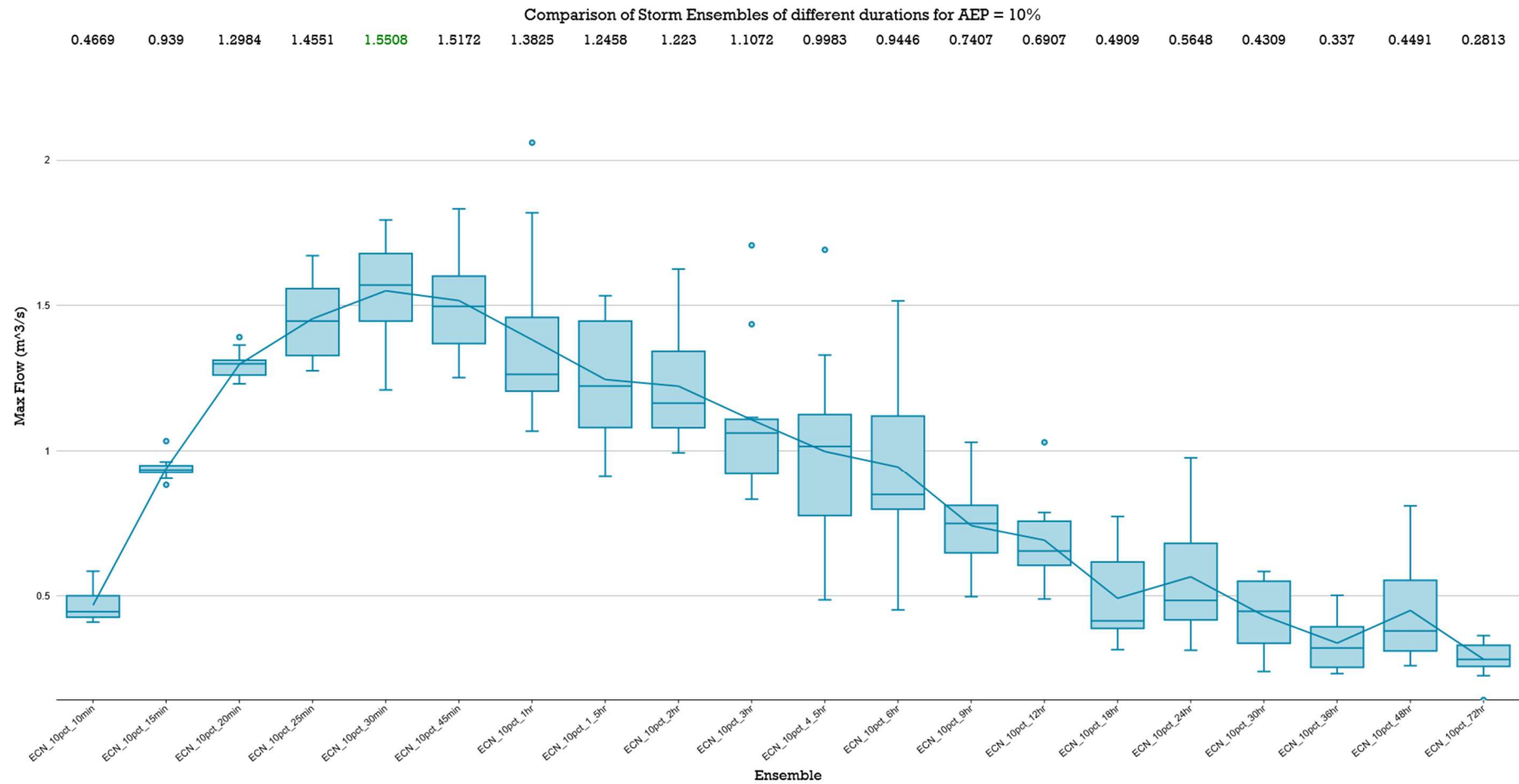


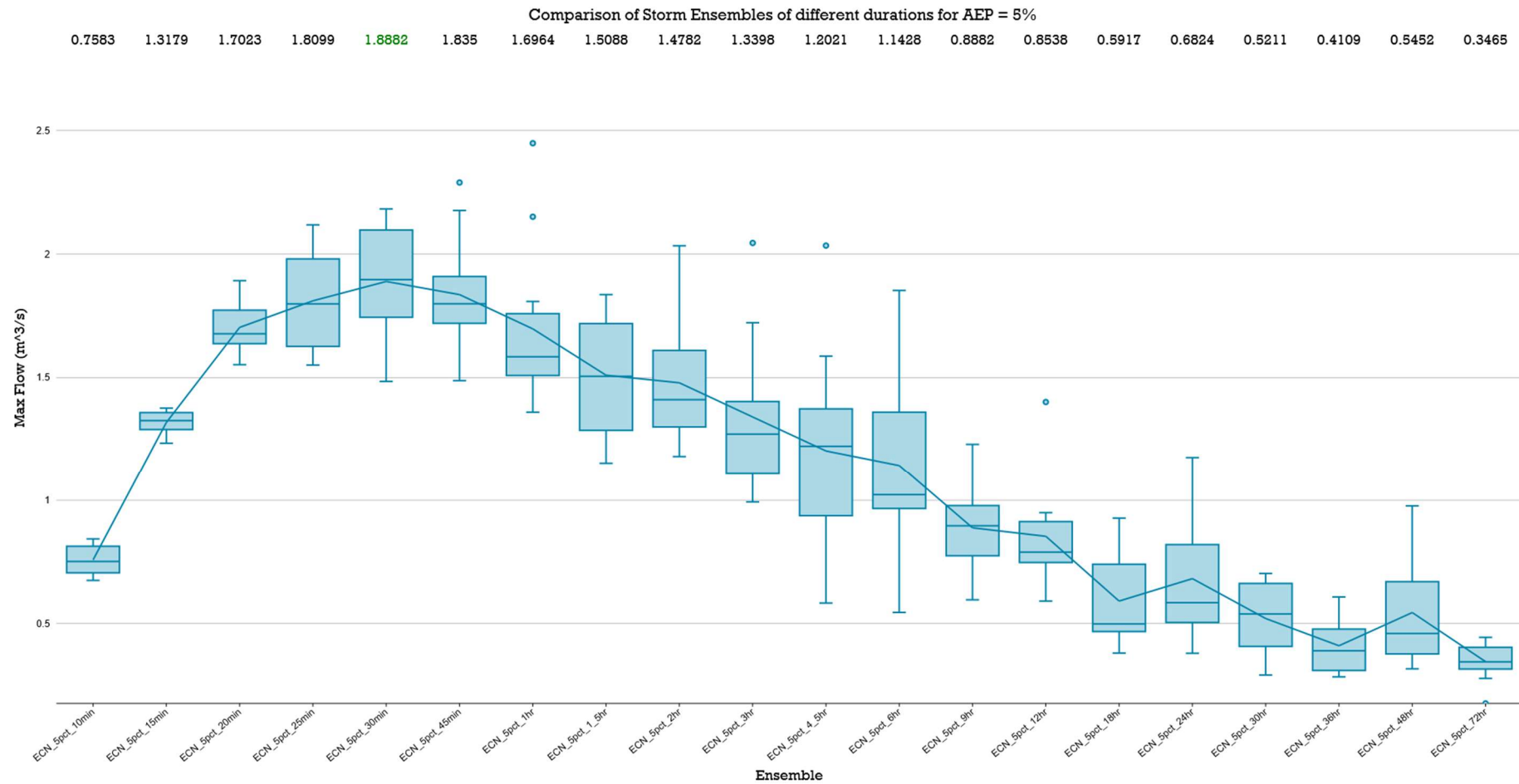
LPoD-1 PRE DEVELOPED 'MEAN PEAK' Box & Whisker Plots – 72 Hour

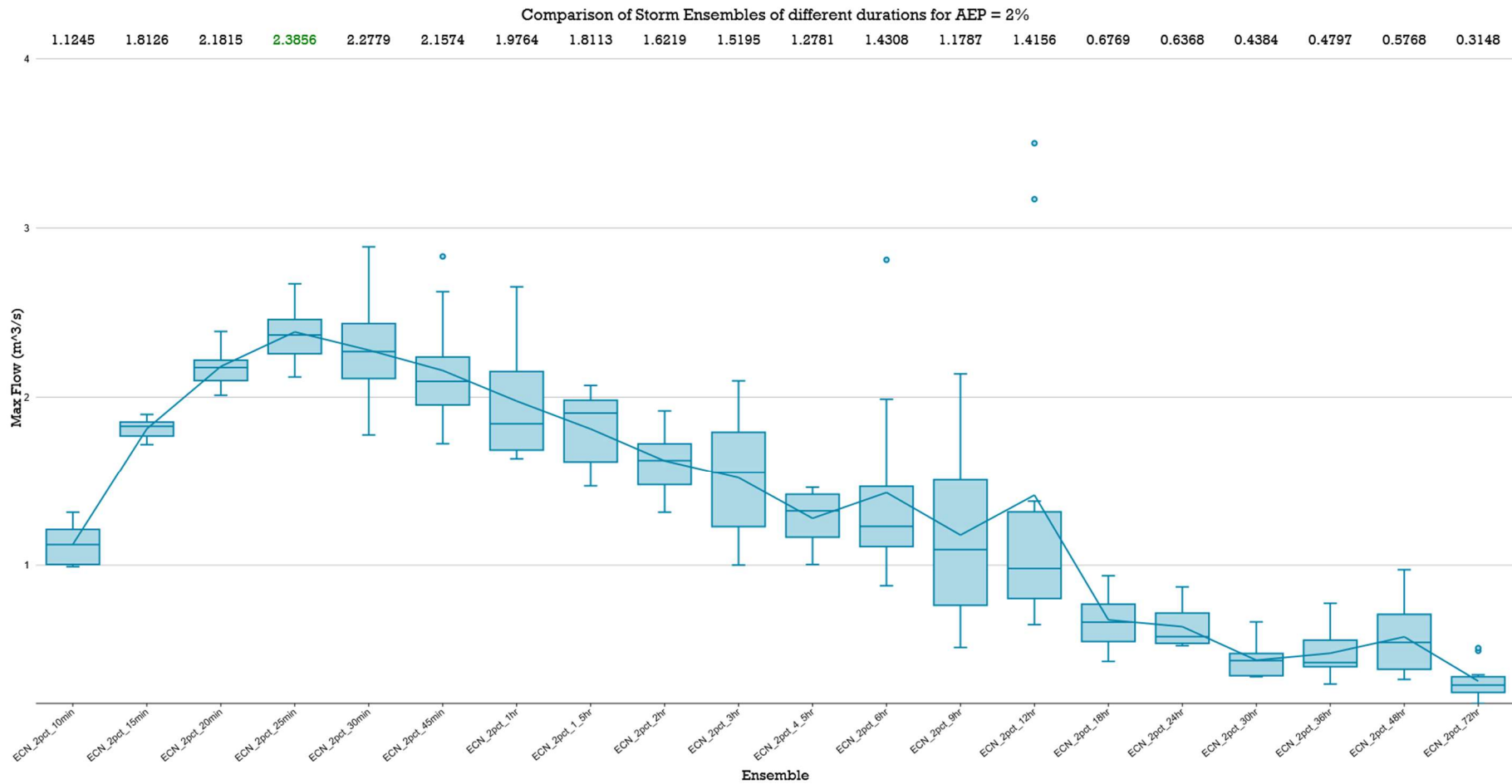


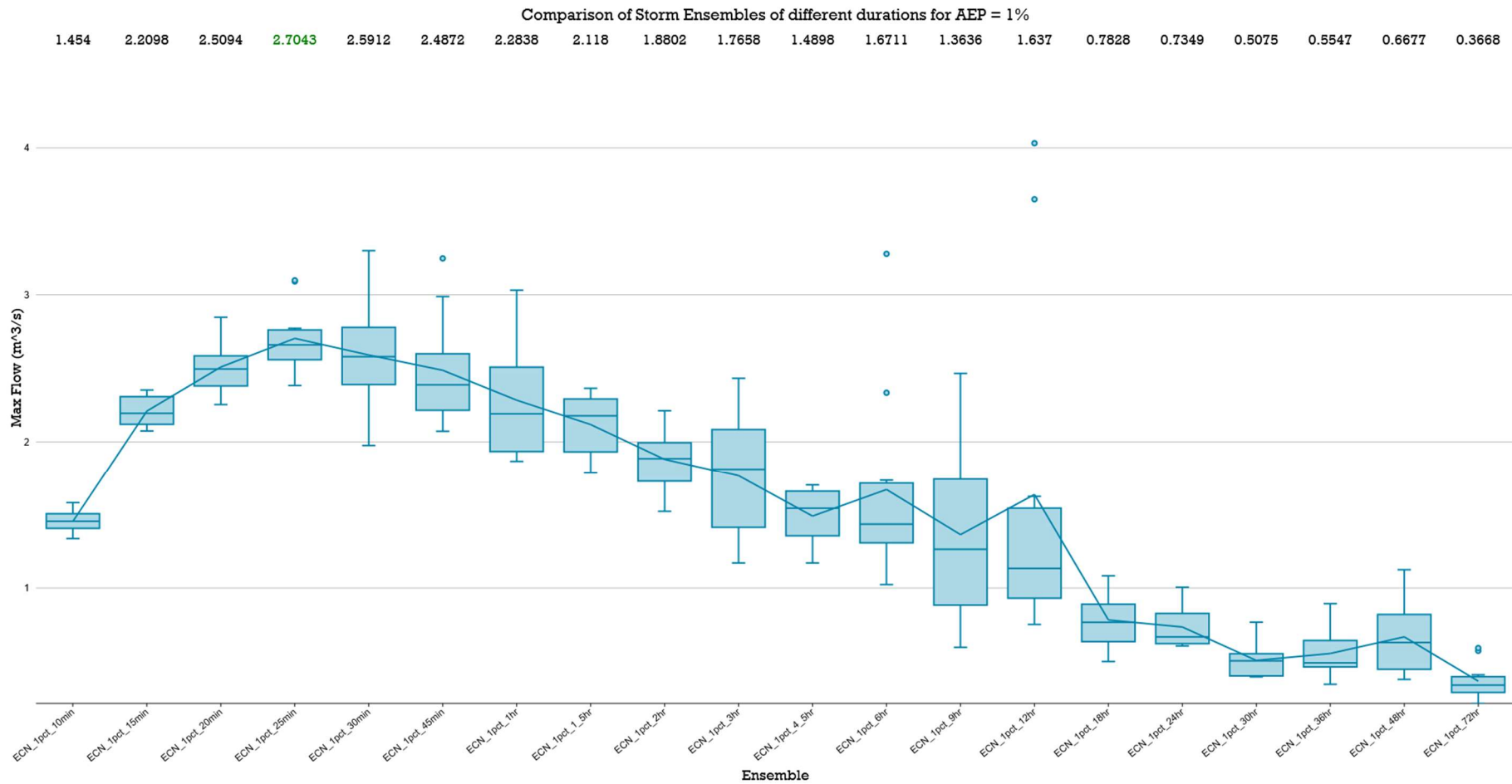




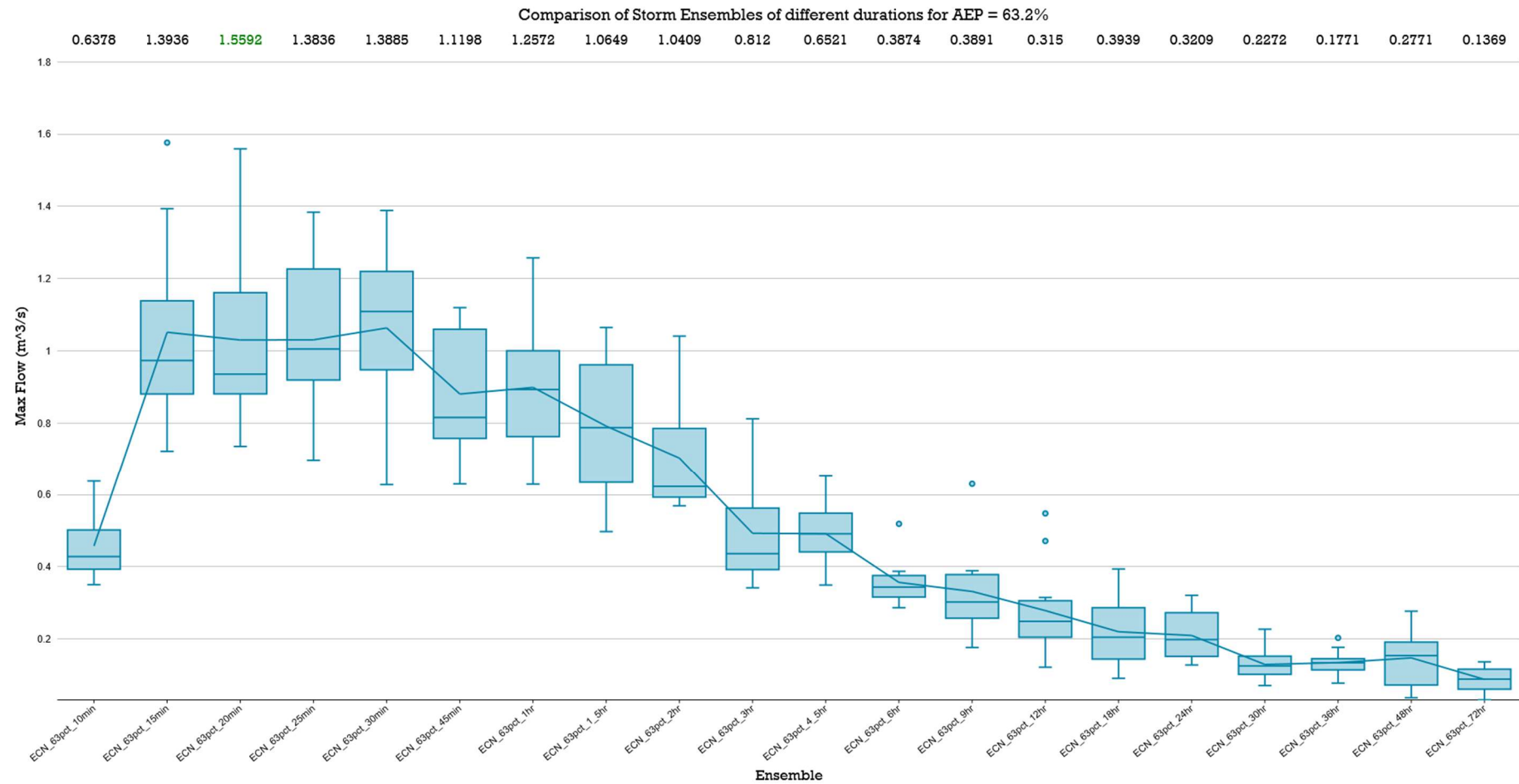


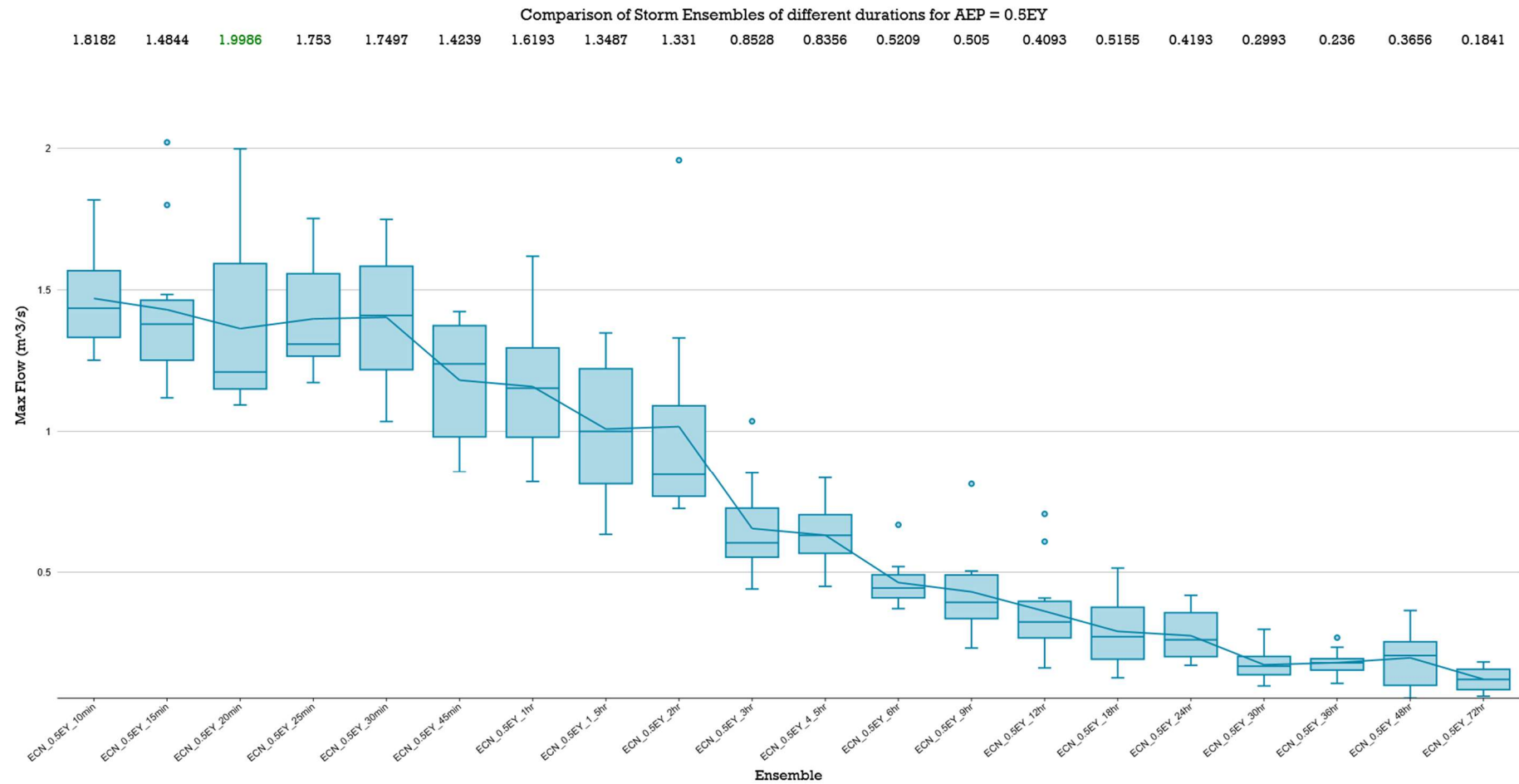


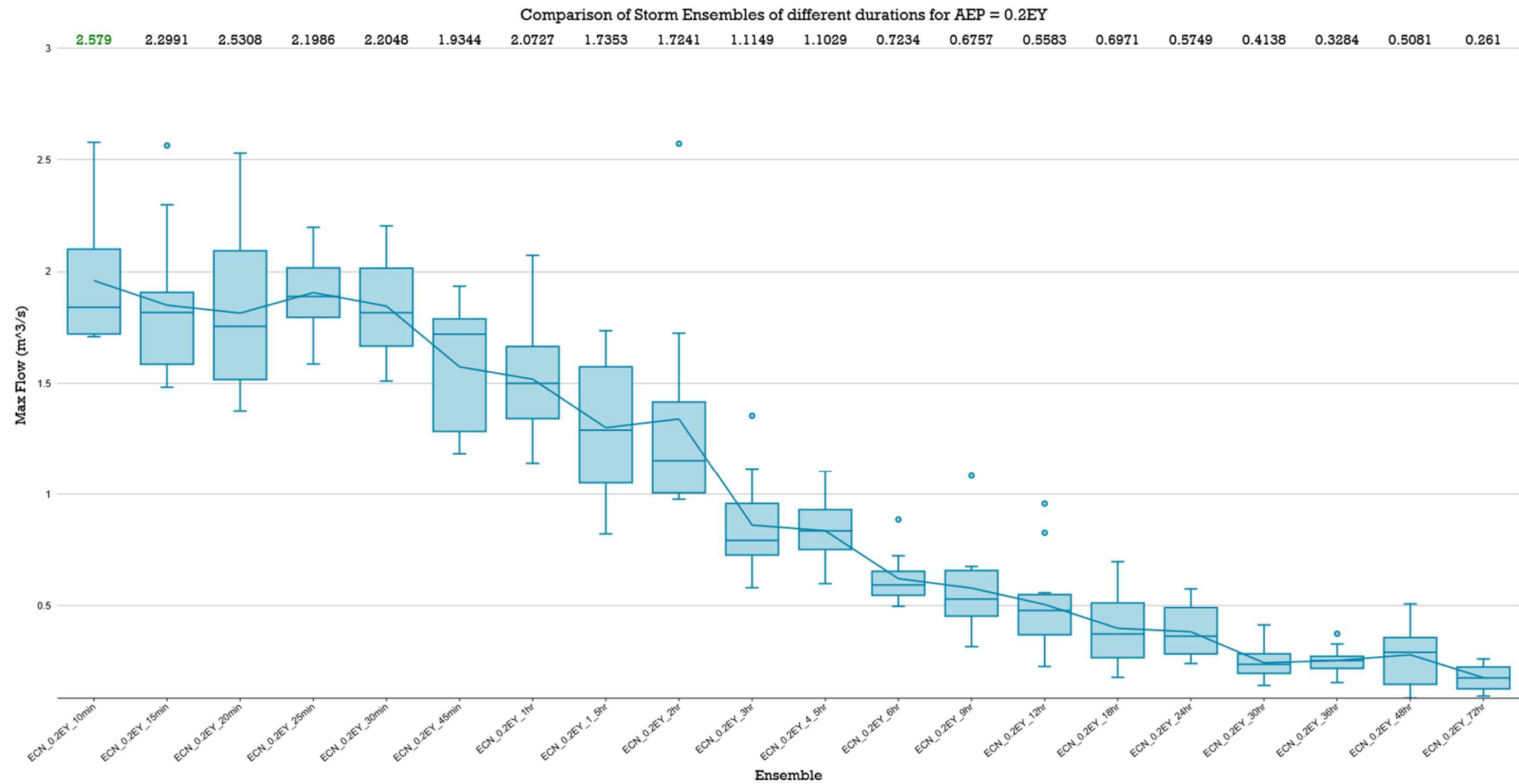


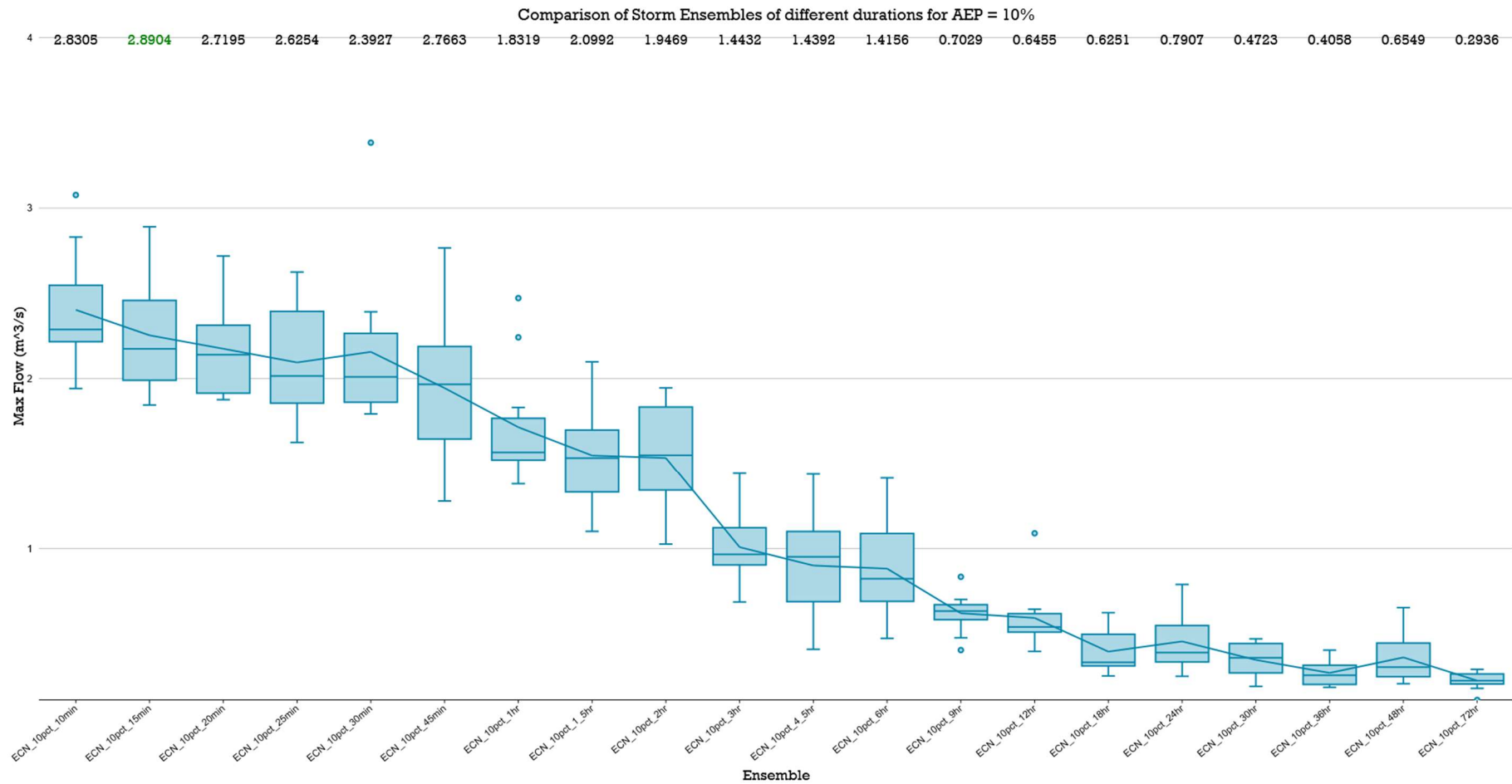


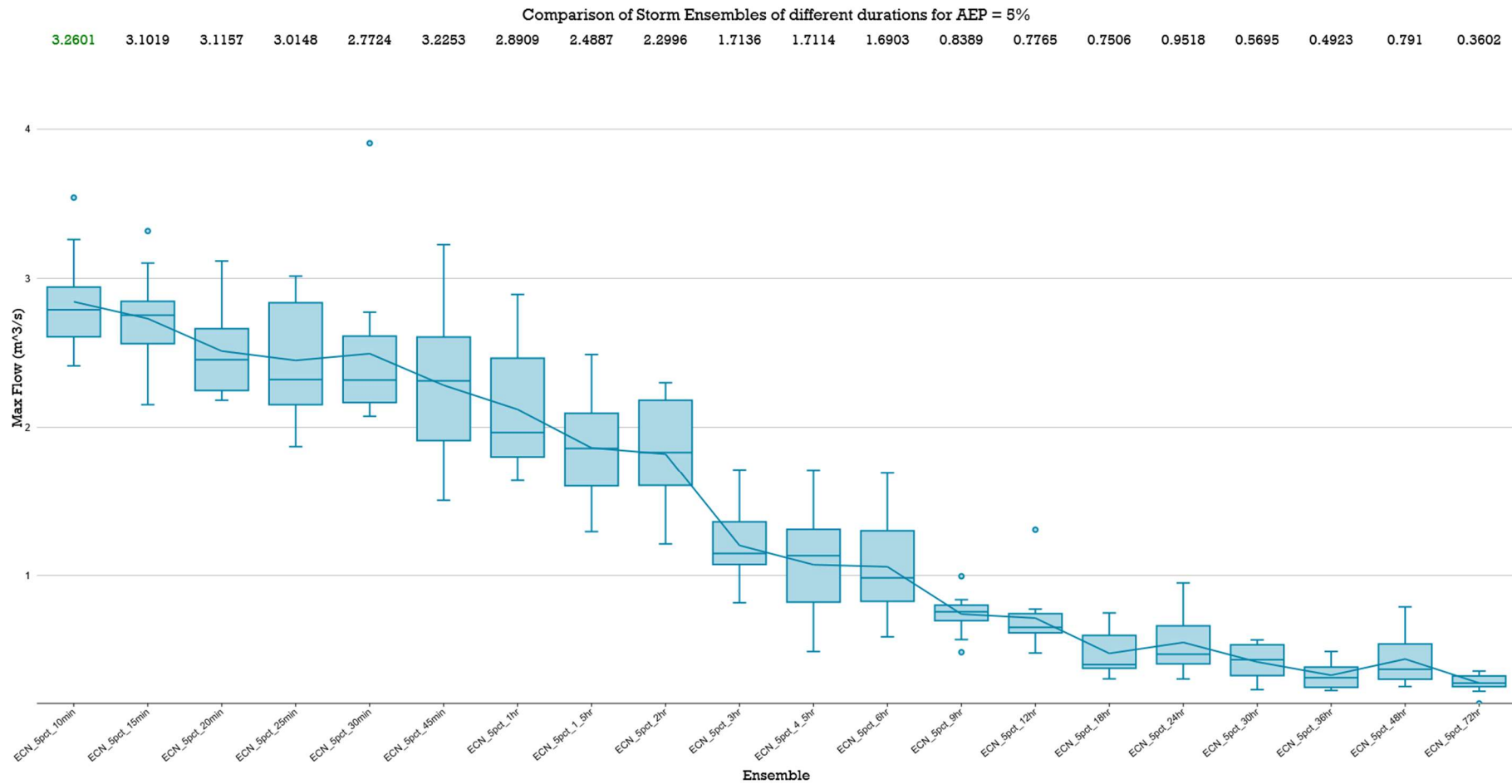
LPoD-1 POST DEVELOPED 'MAXIMUM PEAK' Box & Whisker Plots – 72 Hour

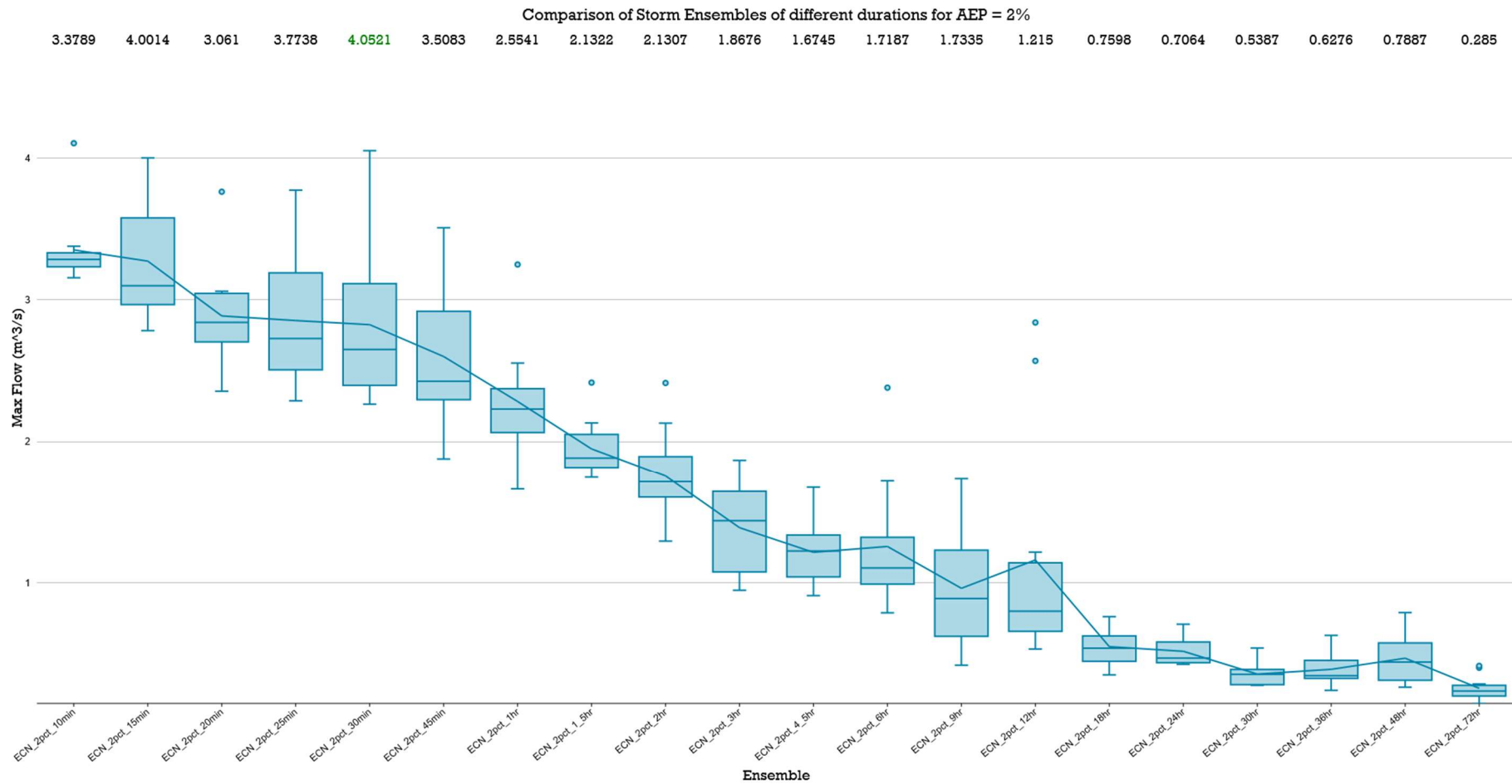


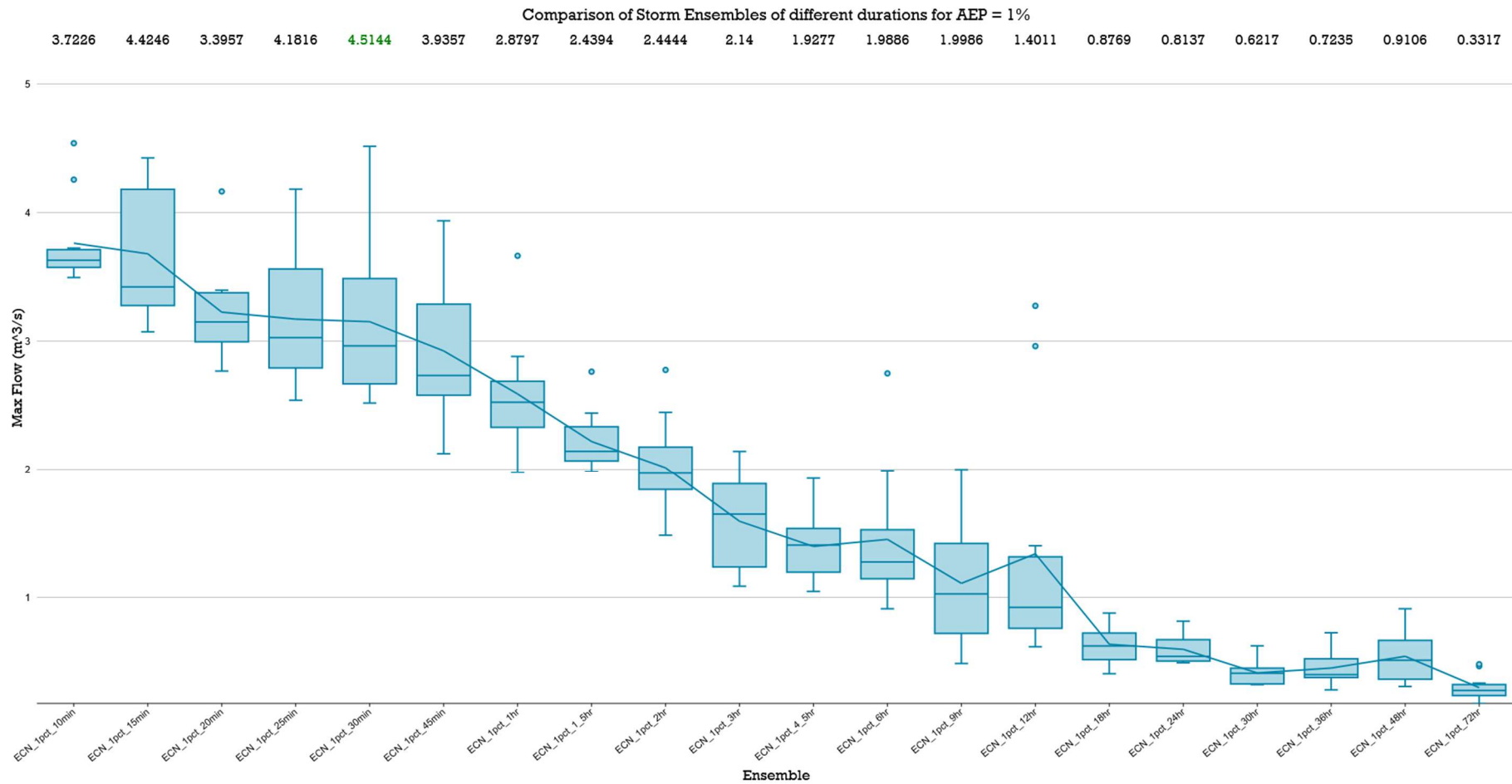




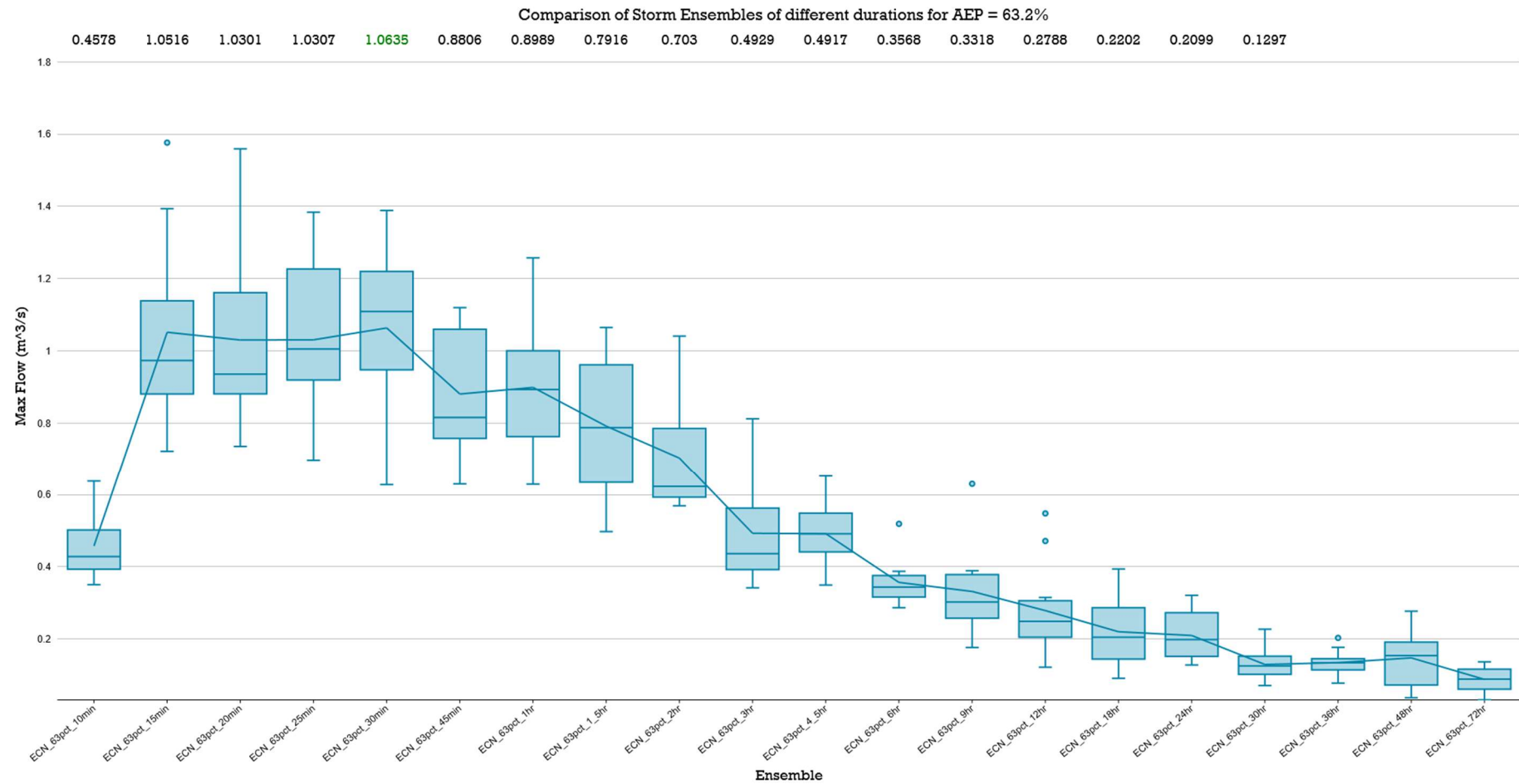


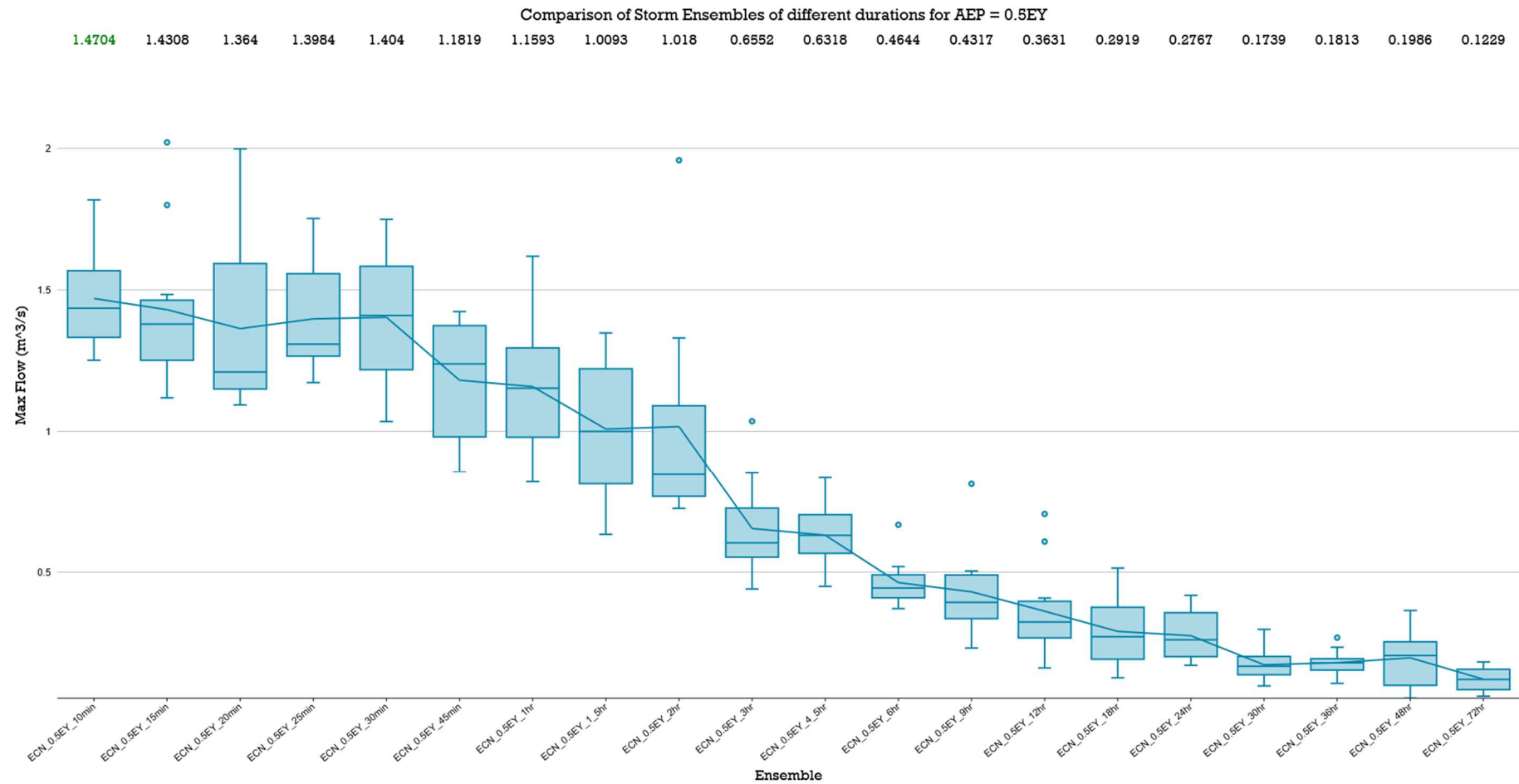


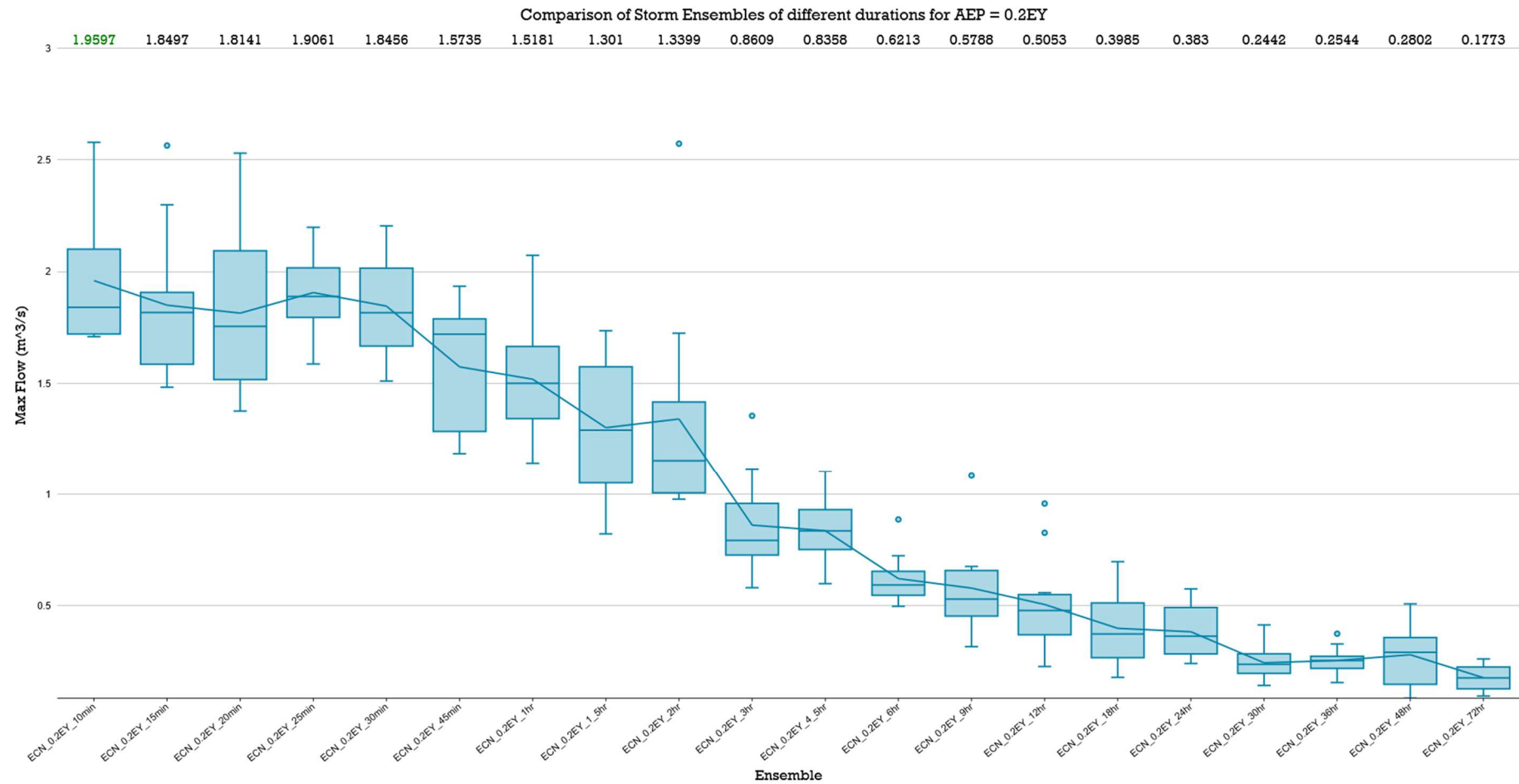


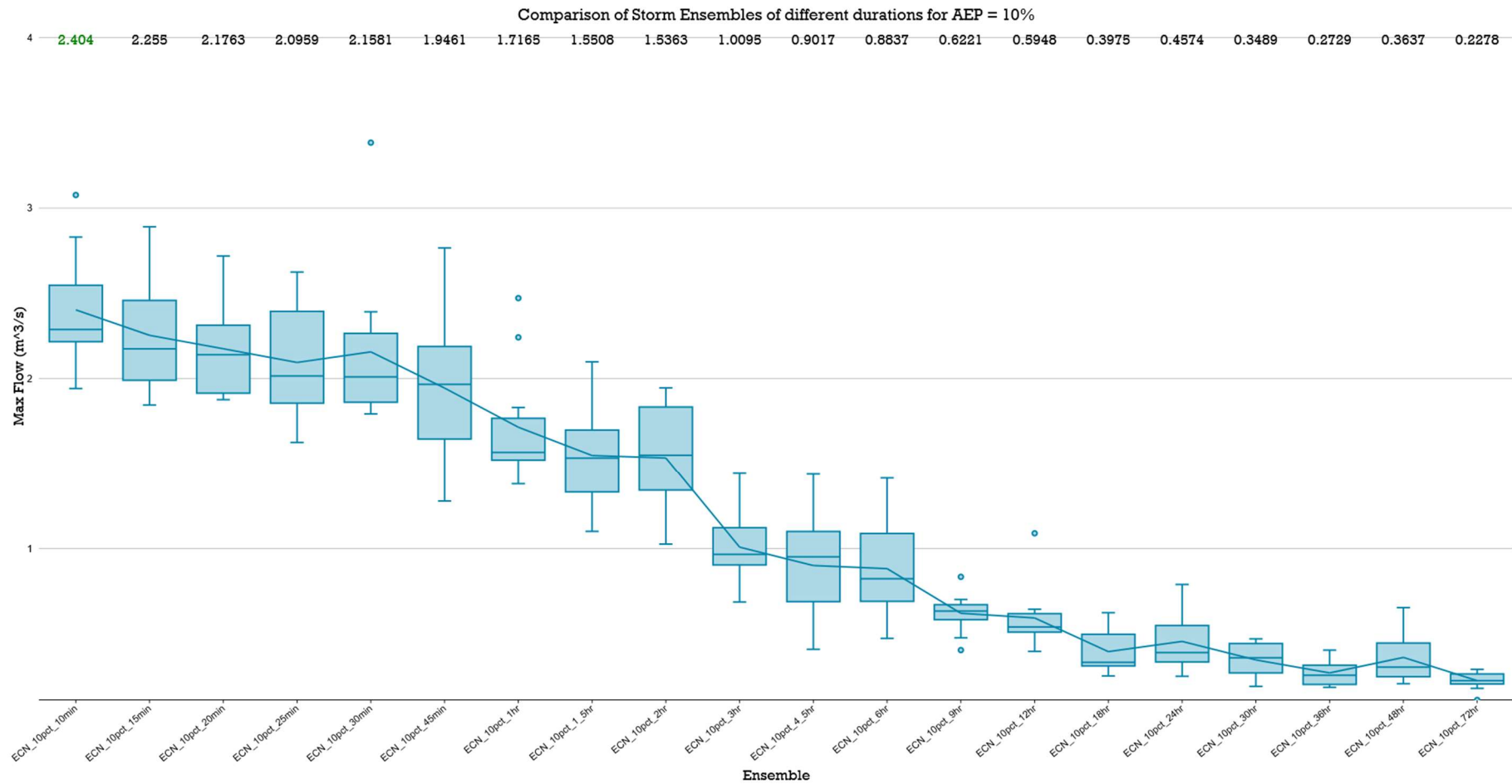


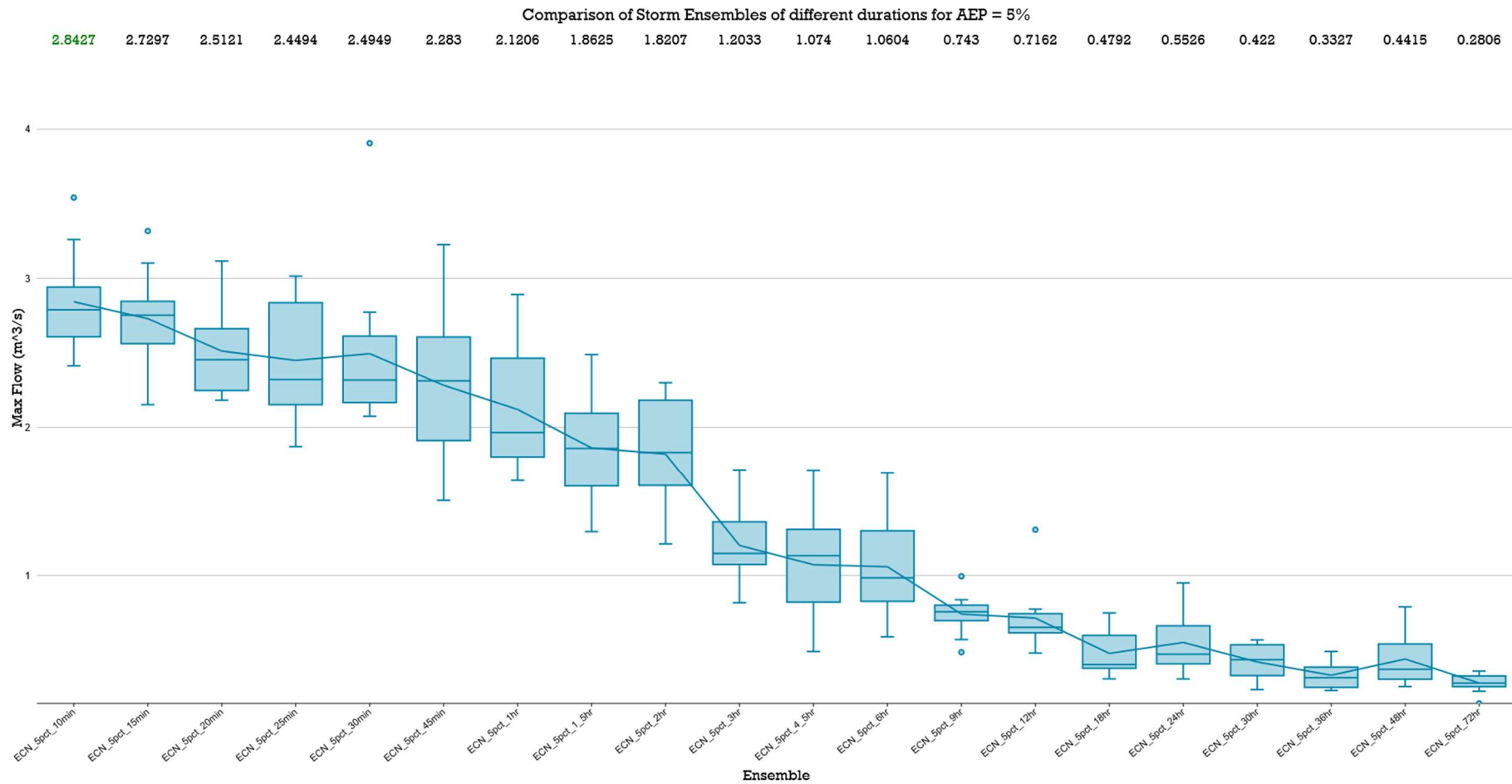
LPoD-1 POST DEVELOPED 'MEAN PEAK' Box & Whisker Plots – 72 Hour

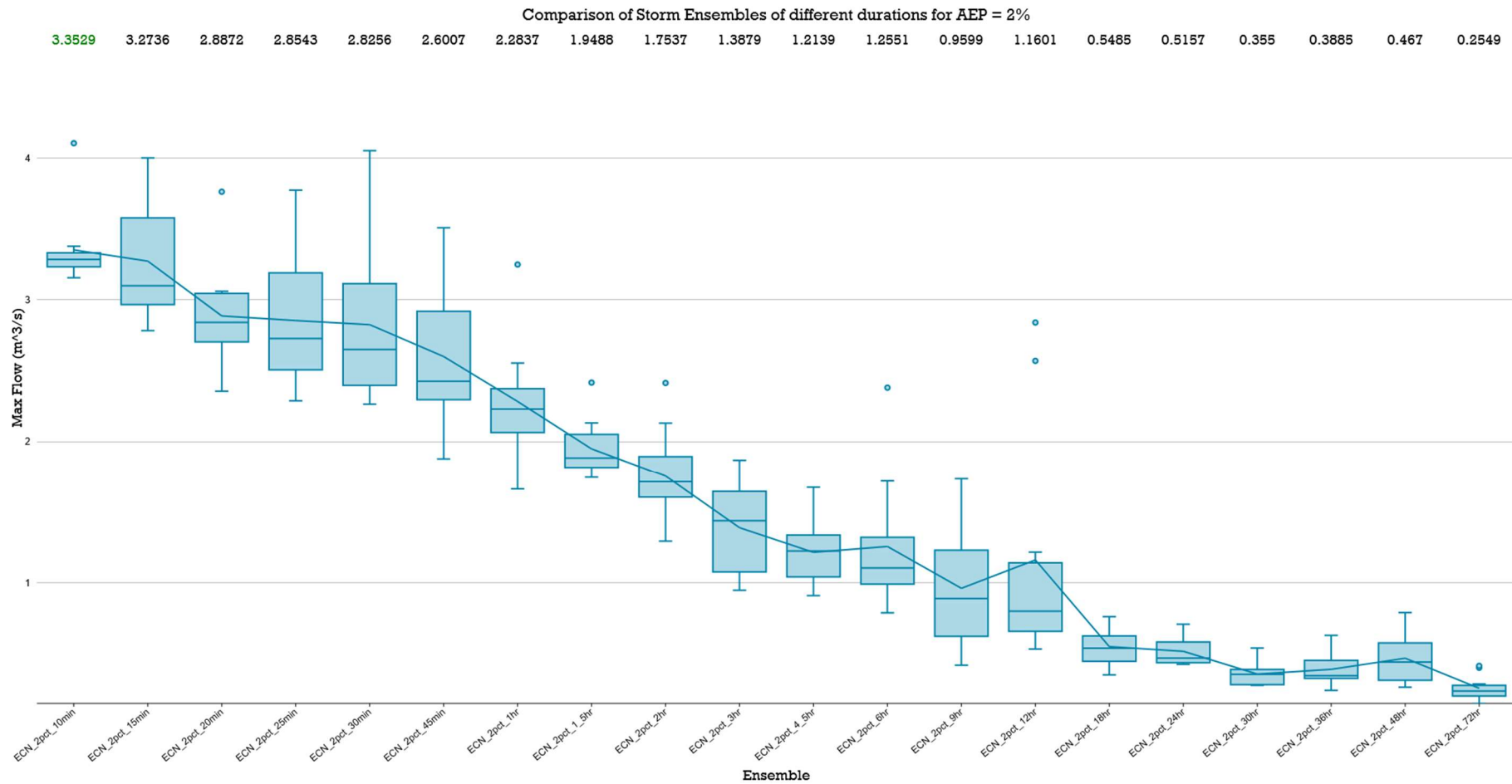


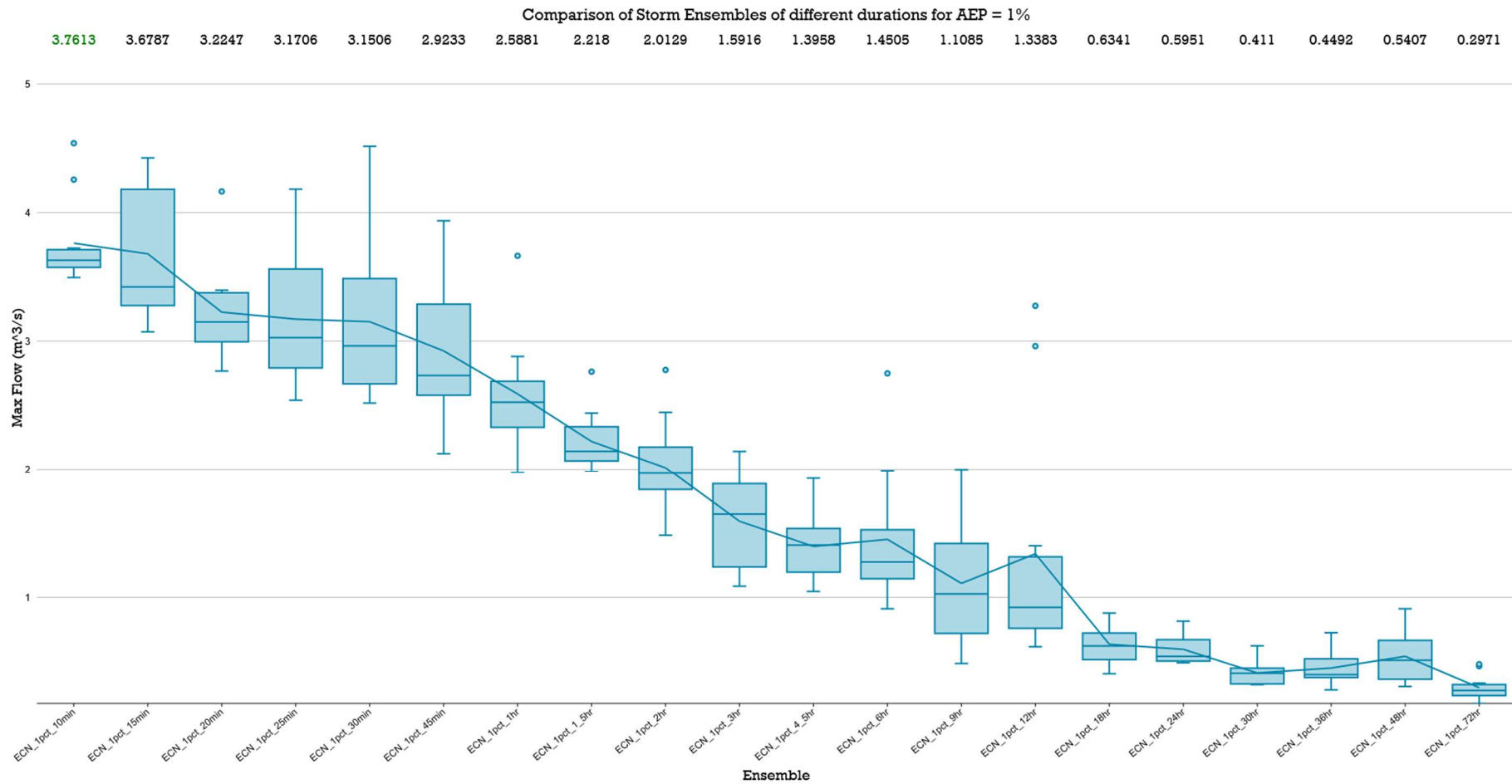




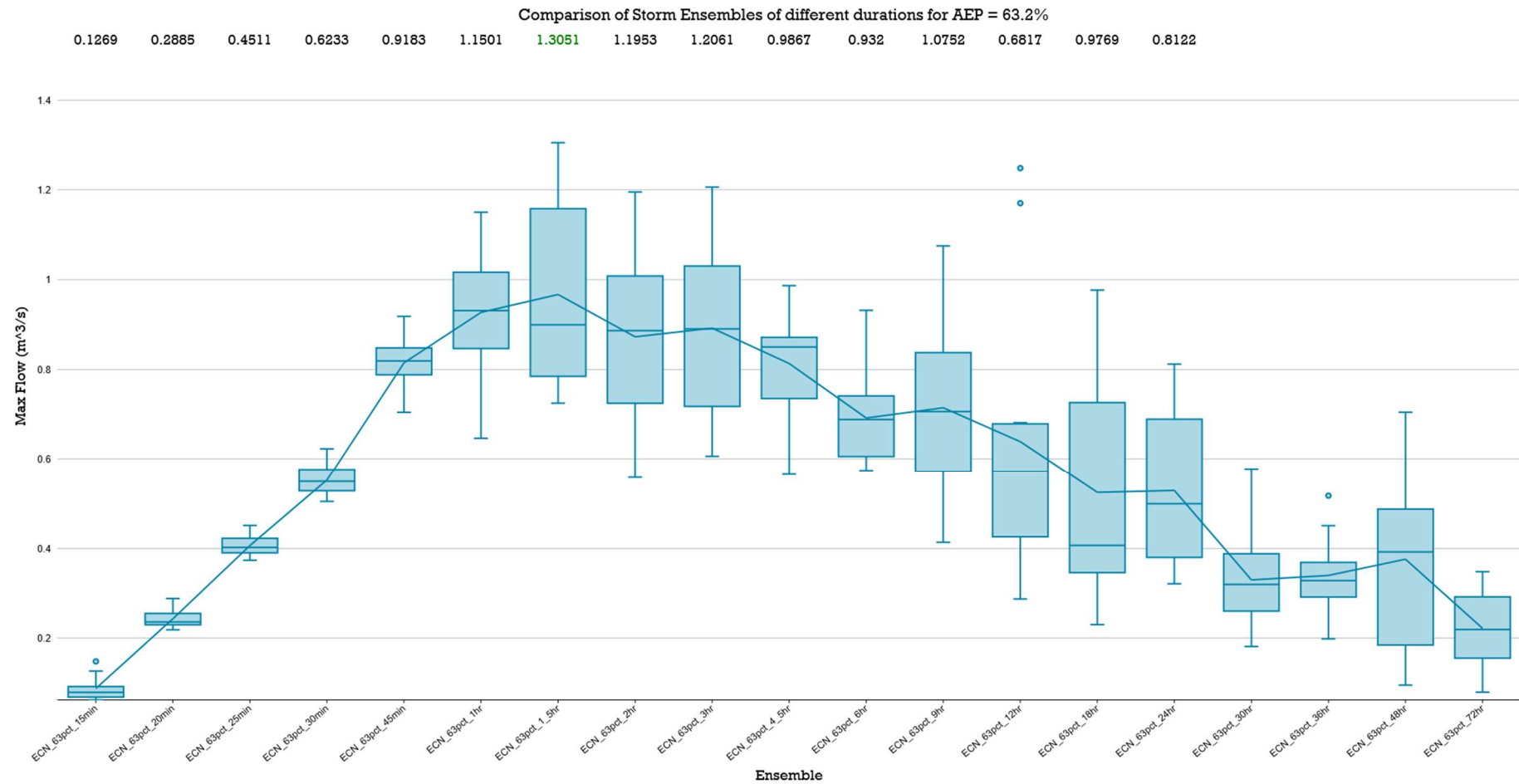


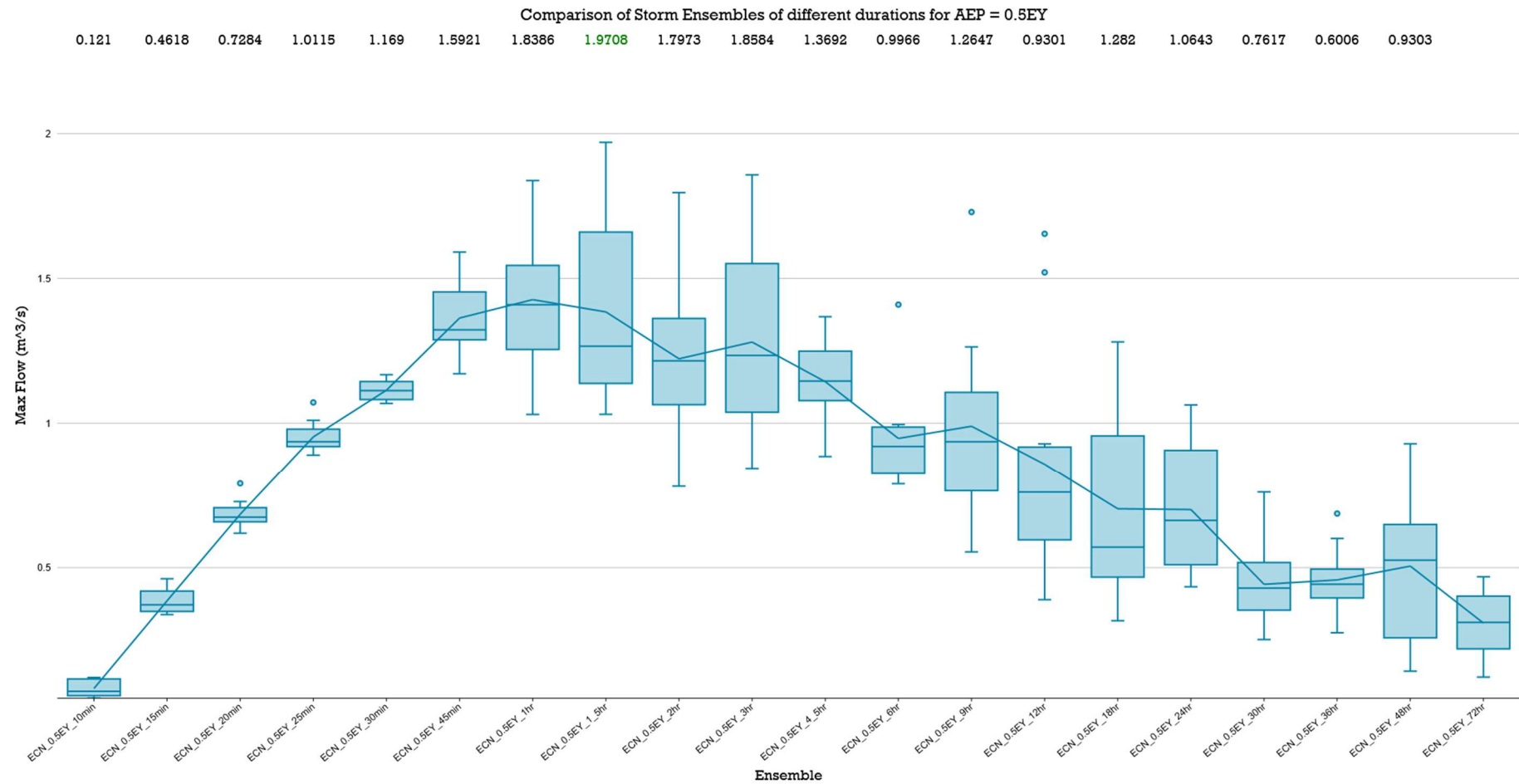


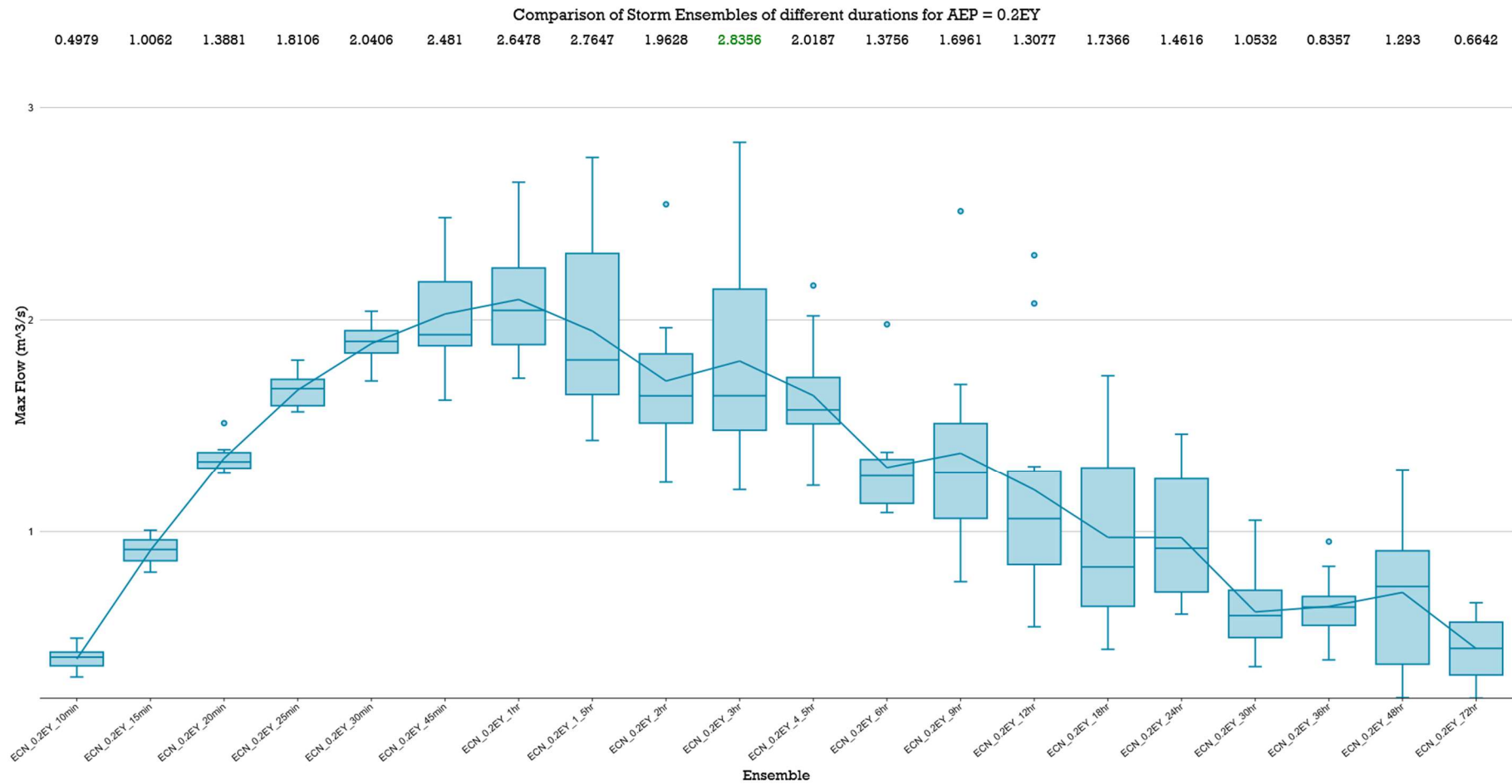


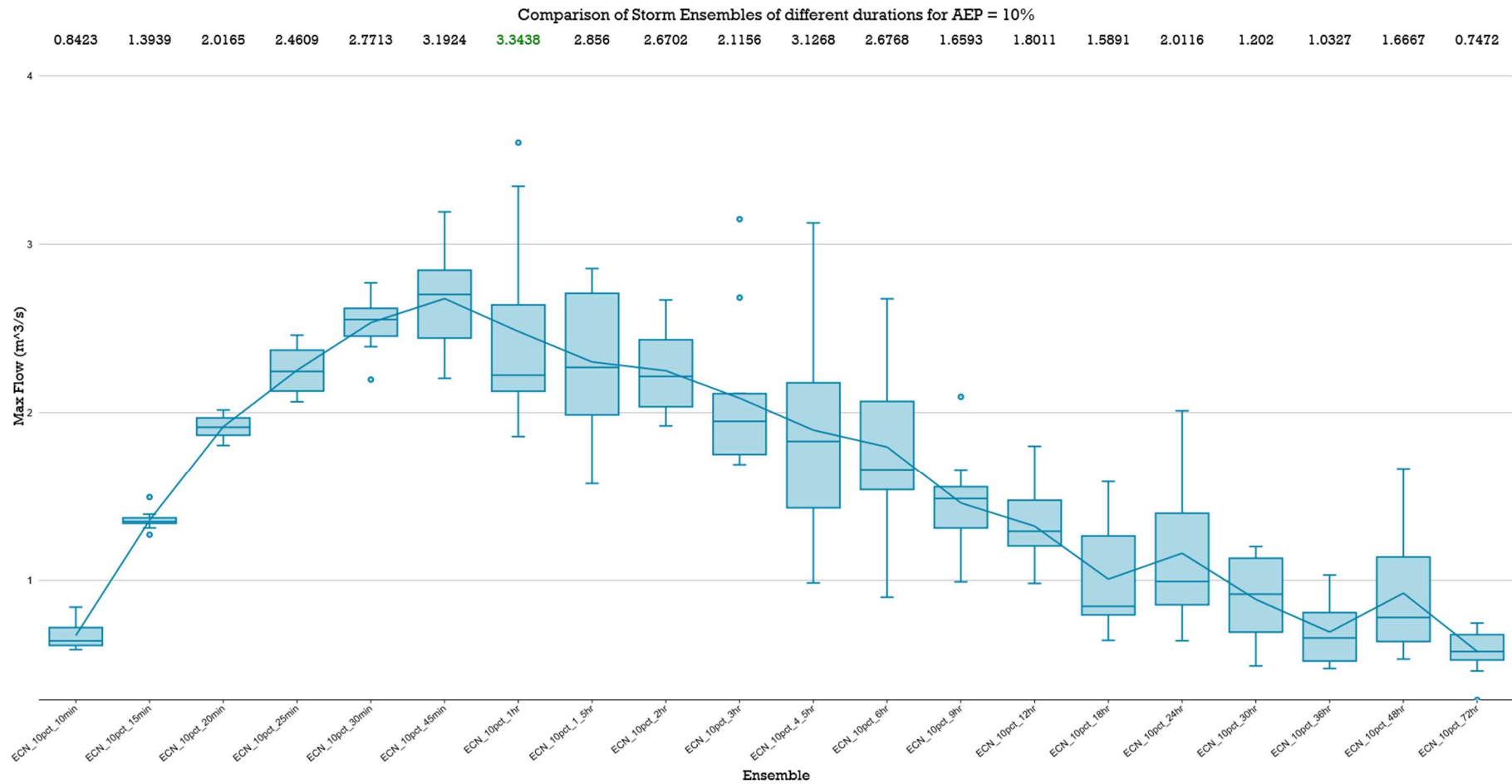


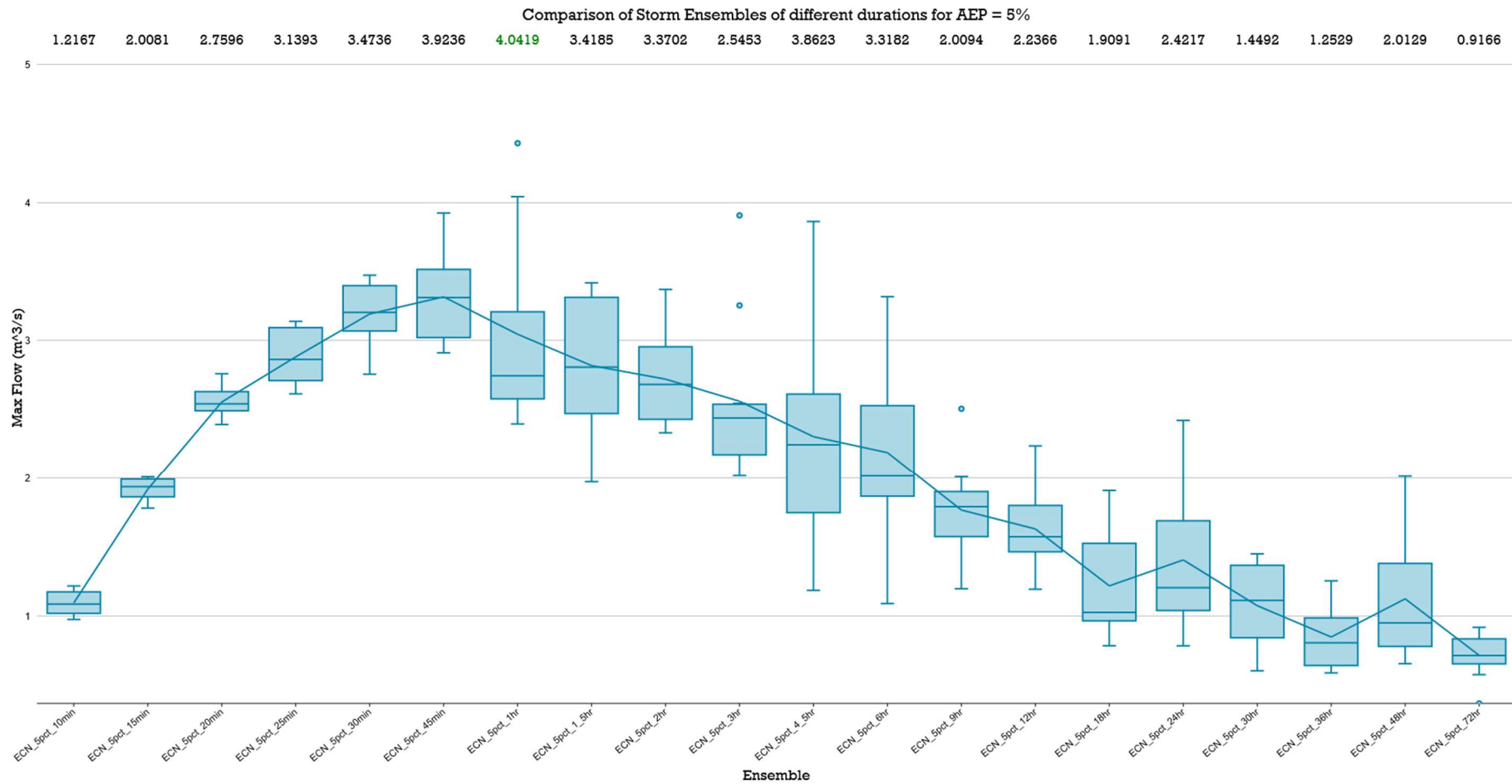
LPoD-2 PRE DEVELOPED 'MAXIMUM PEAK' Box & Whisker Plots – 72 *Hour*

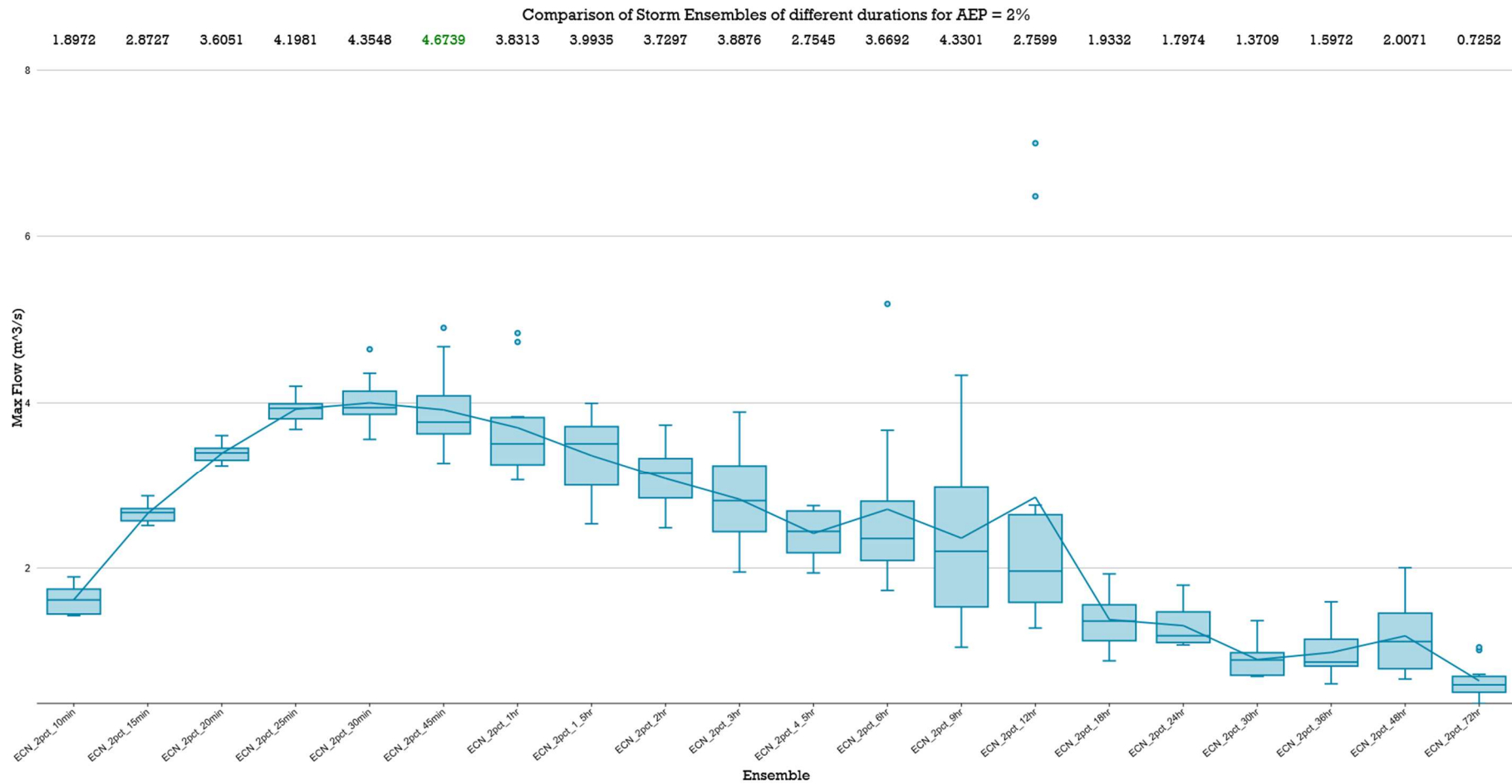


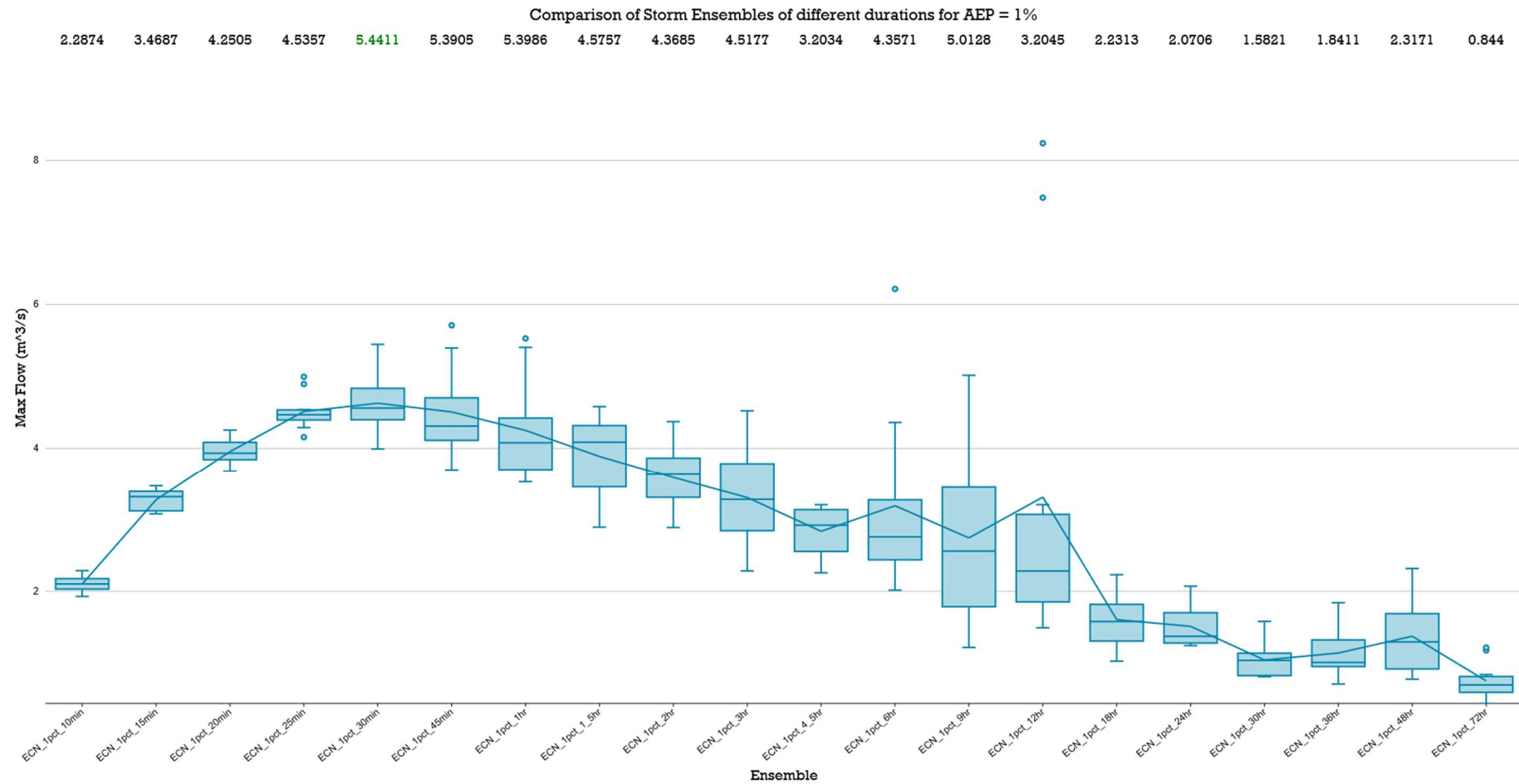




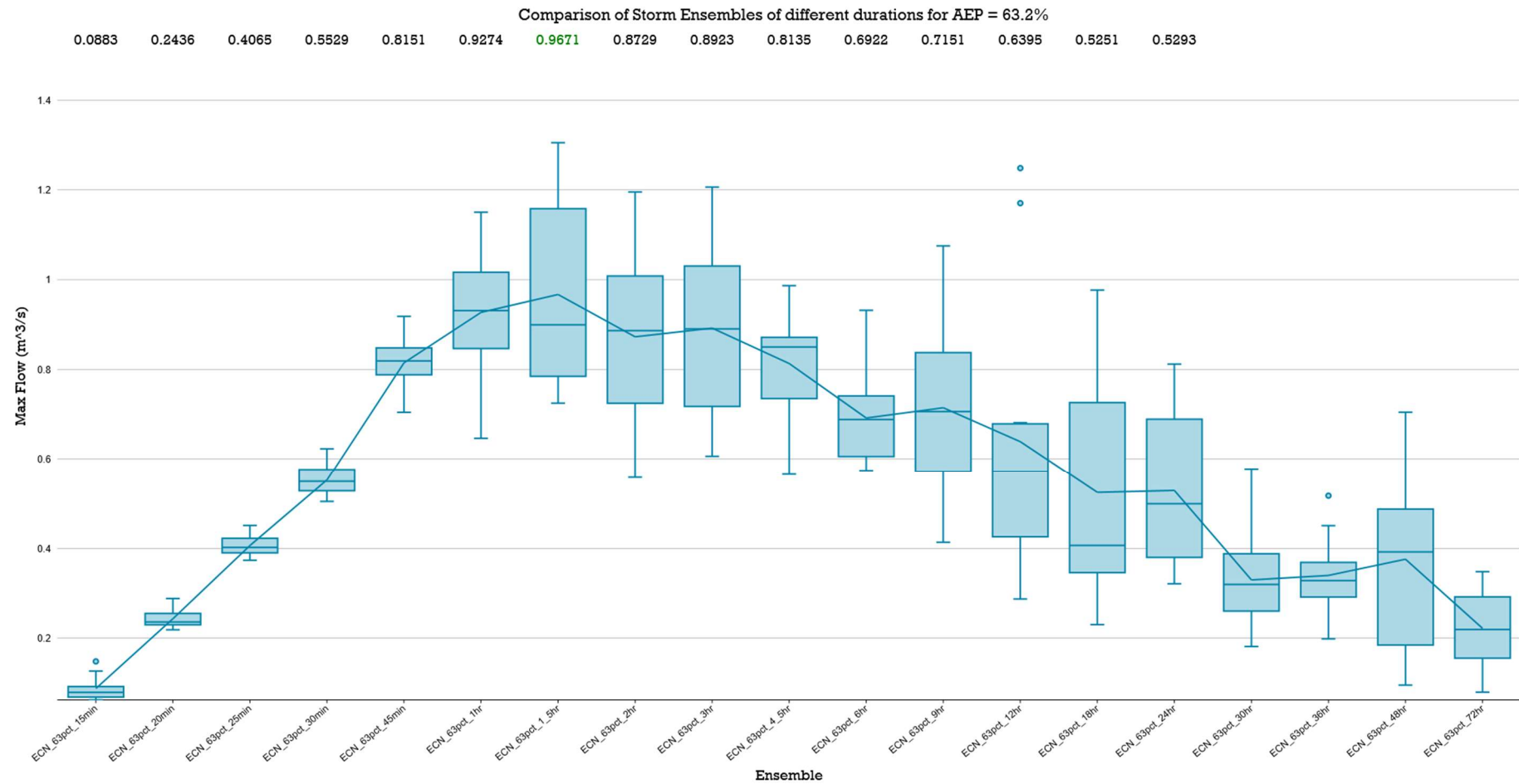


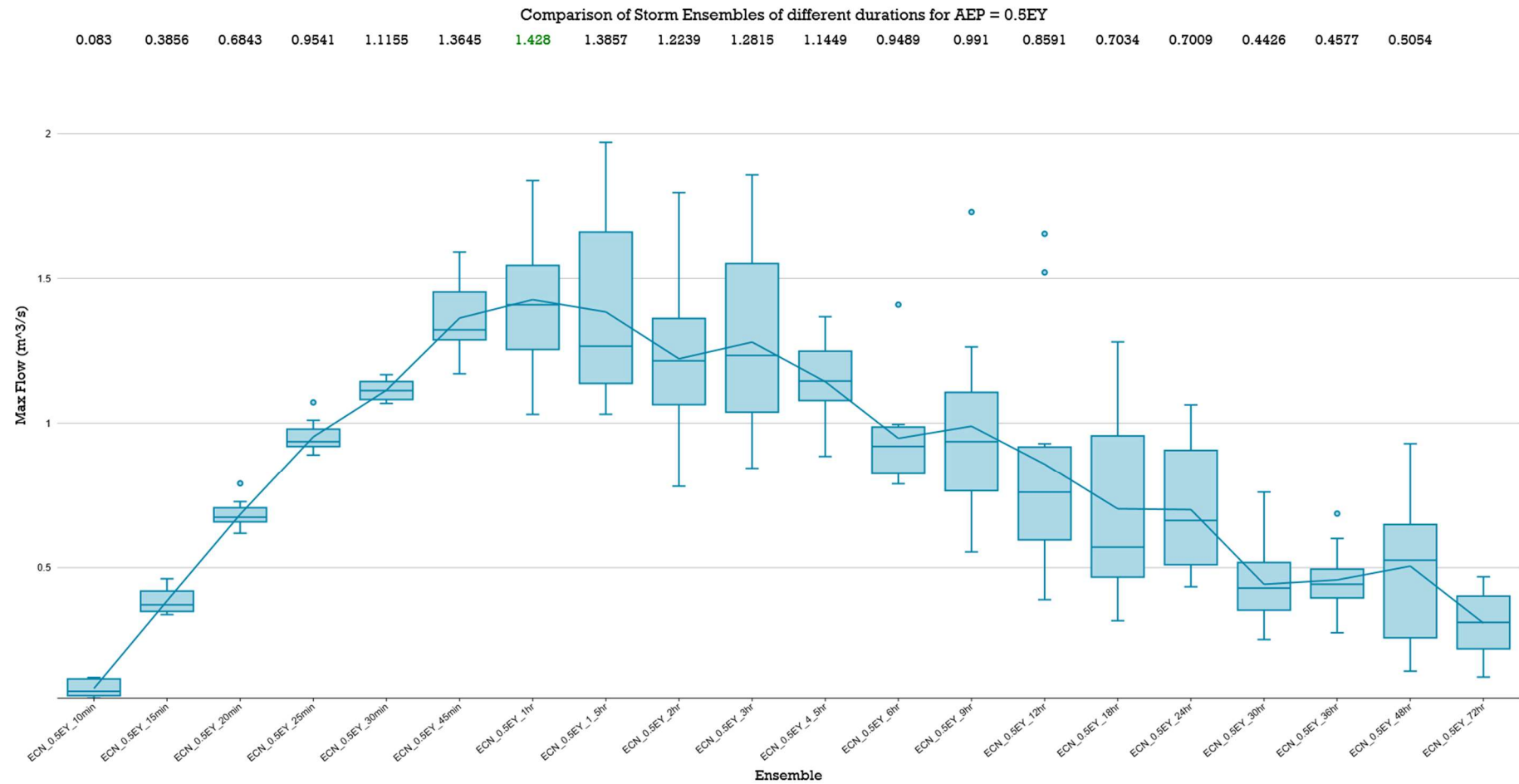


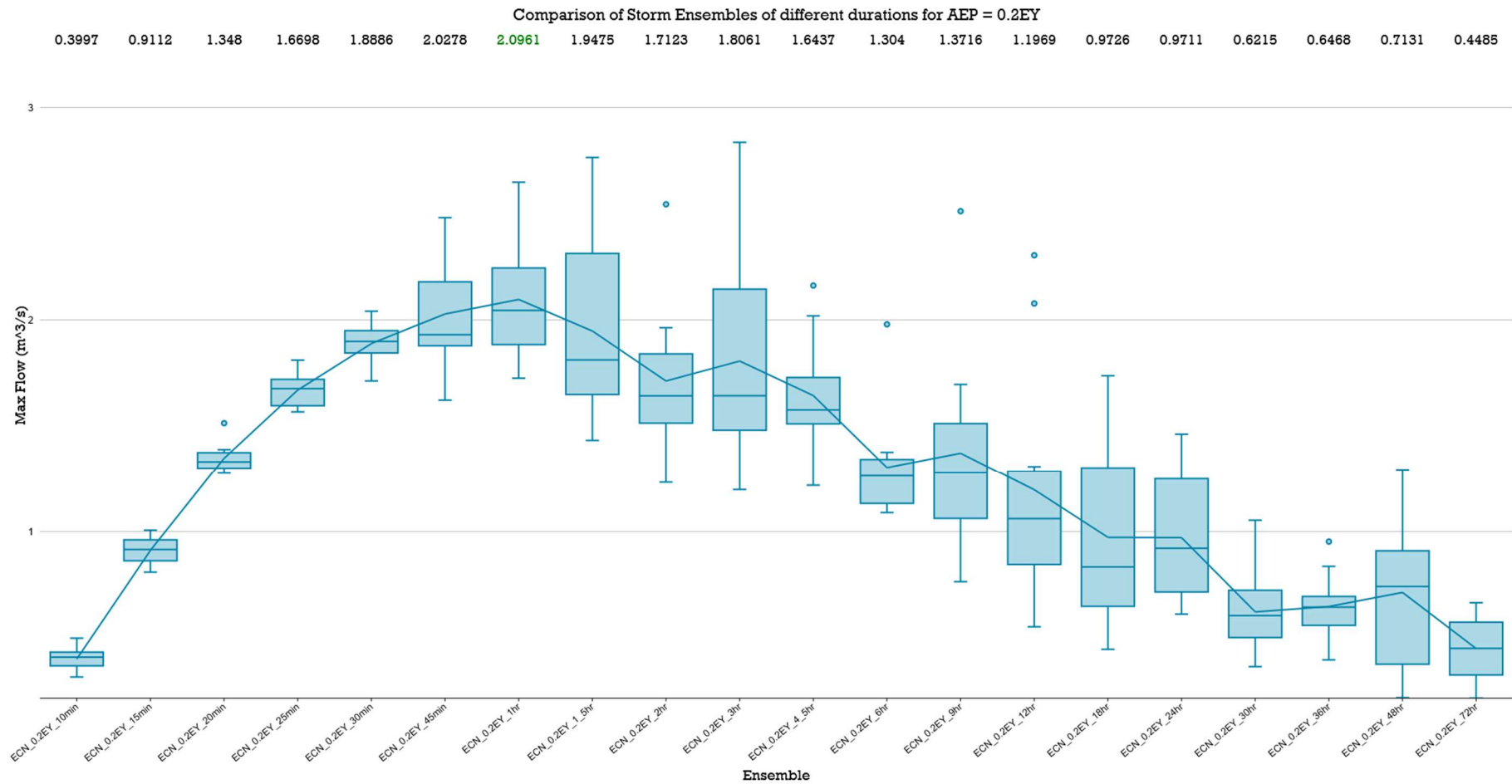


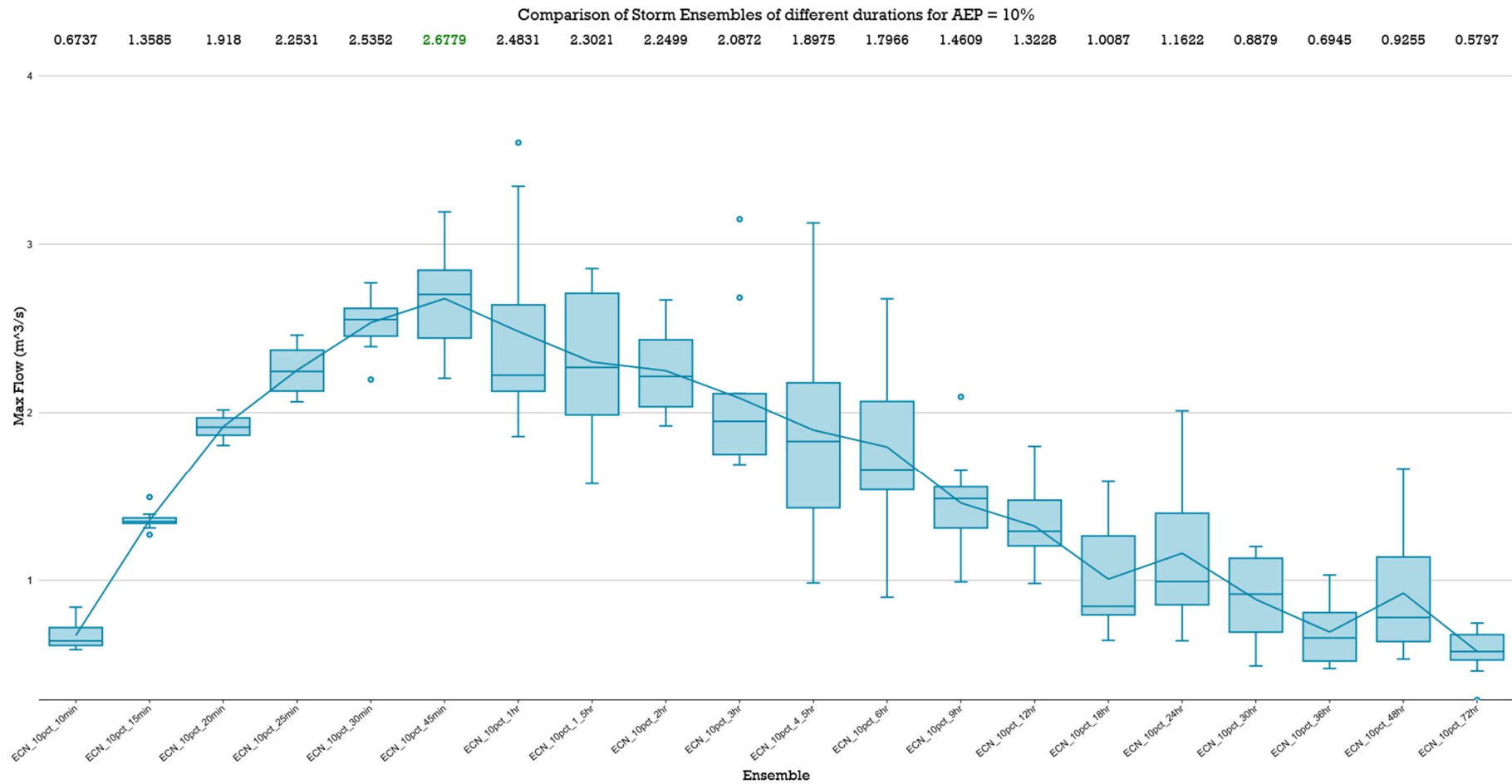


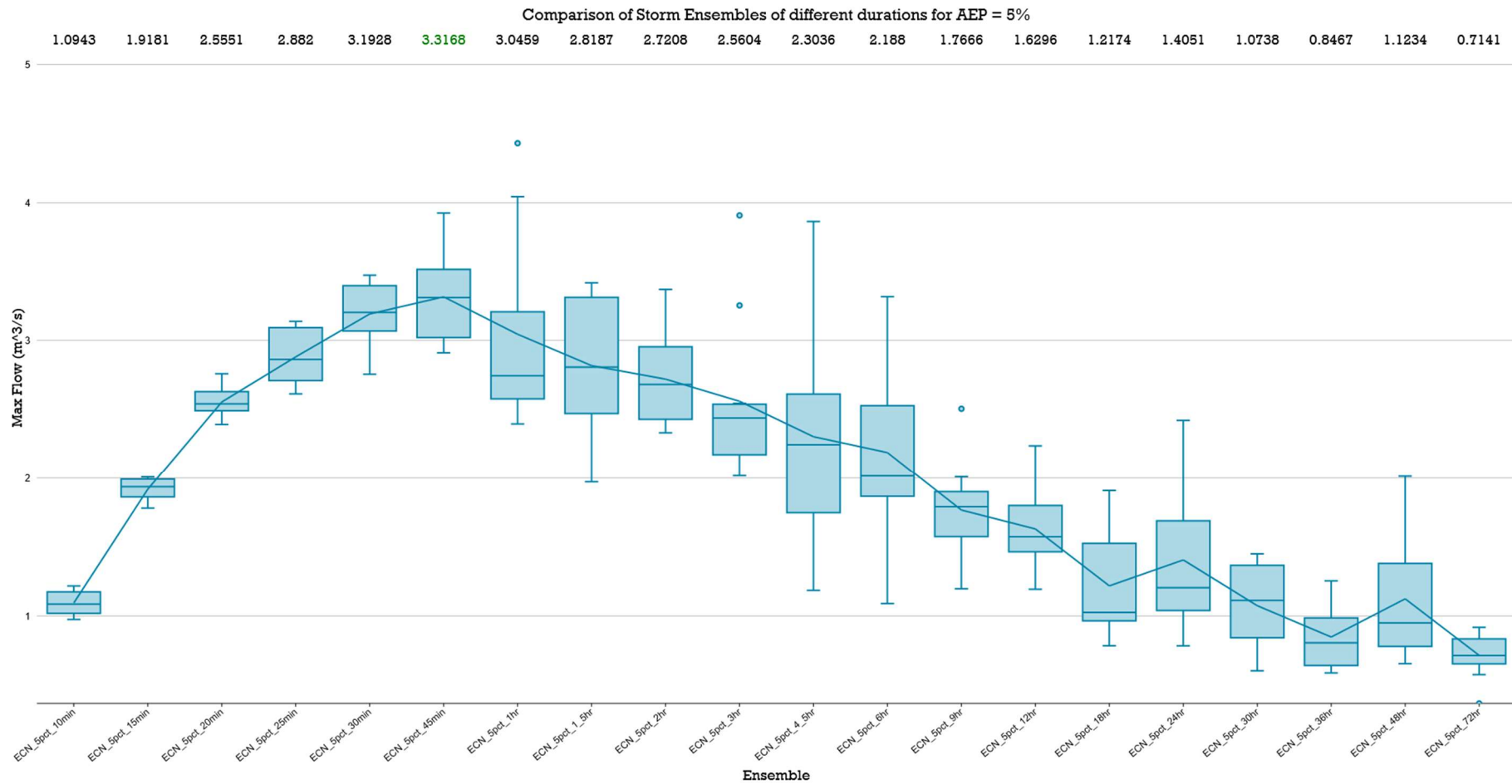
LPoD-2 PRE DEVELOPED 'MEAN PEAK' Box & Whisker Plots – 72 Hour

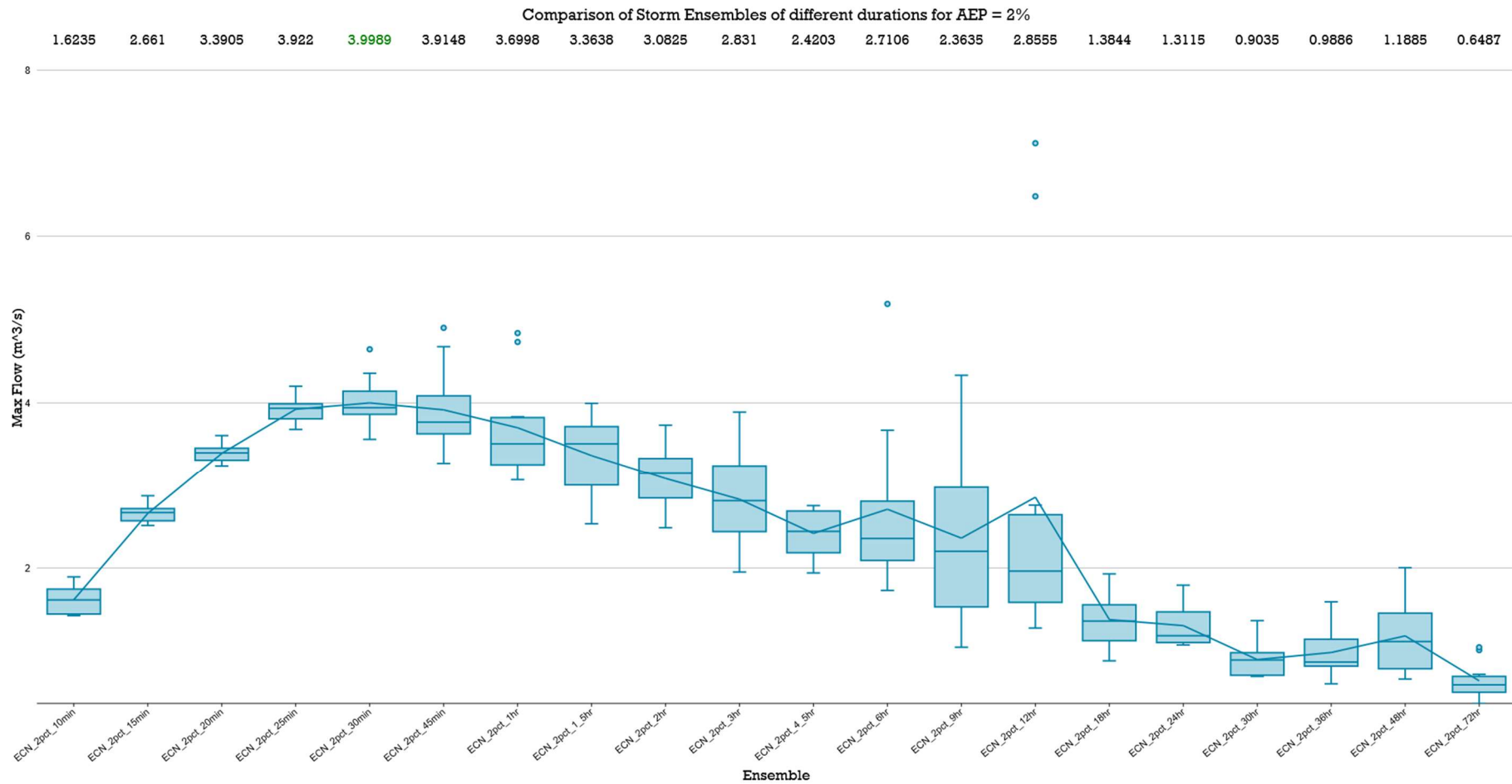


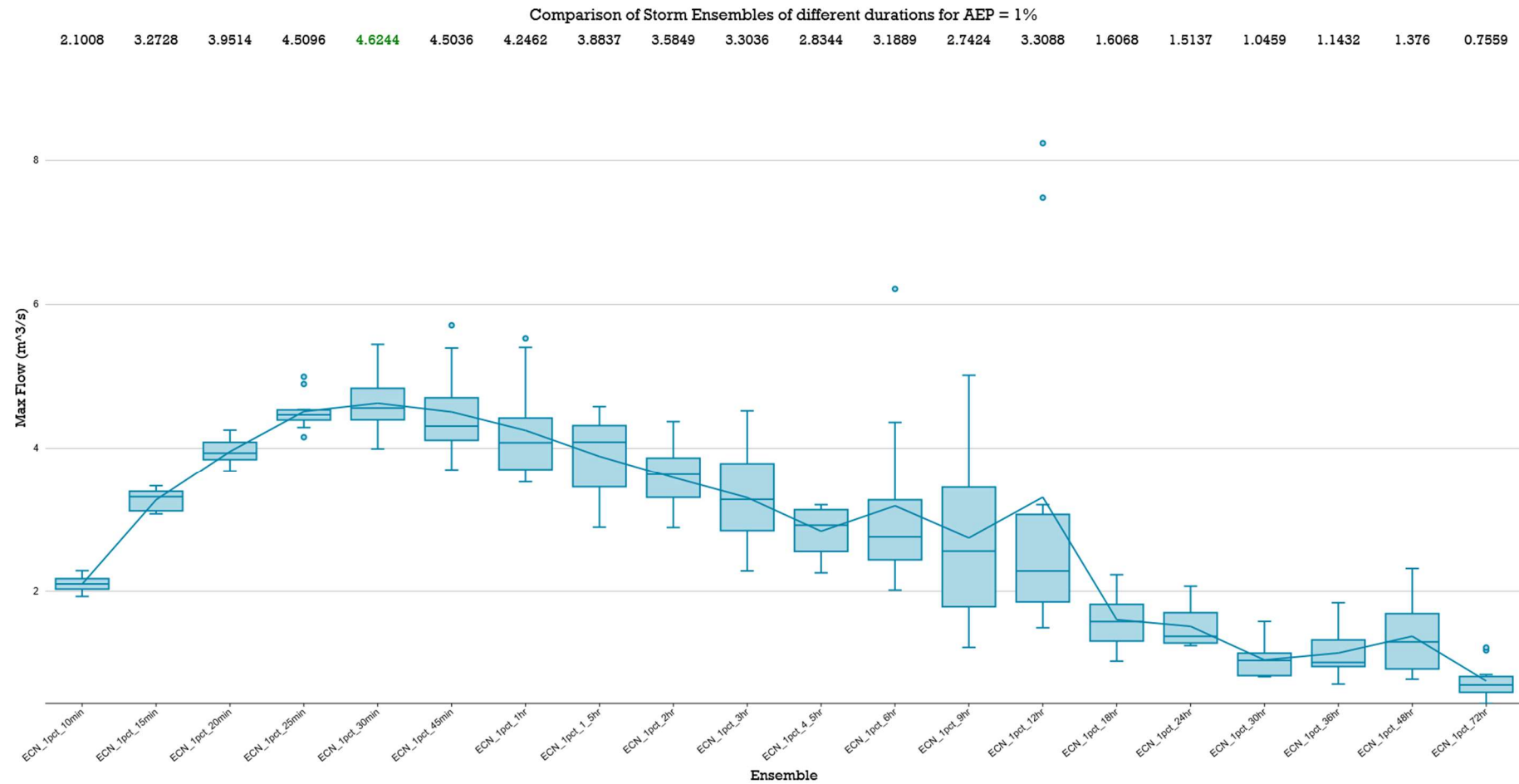




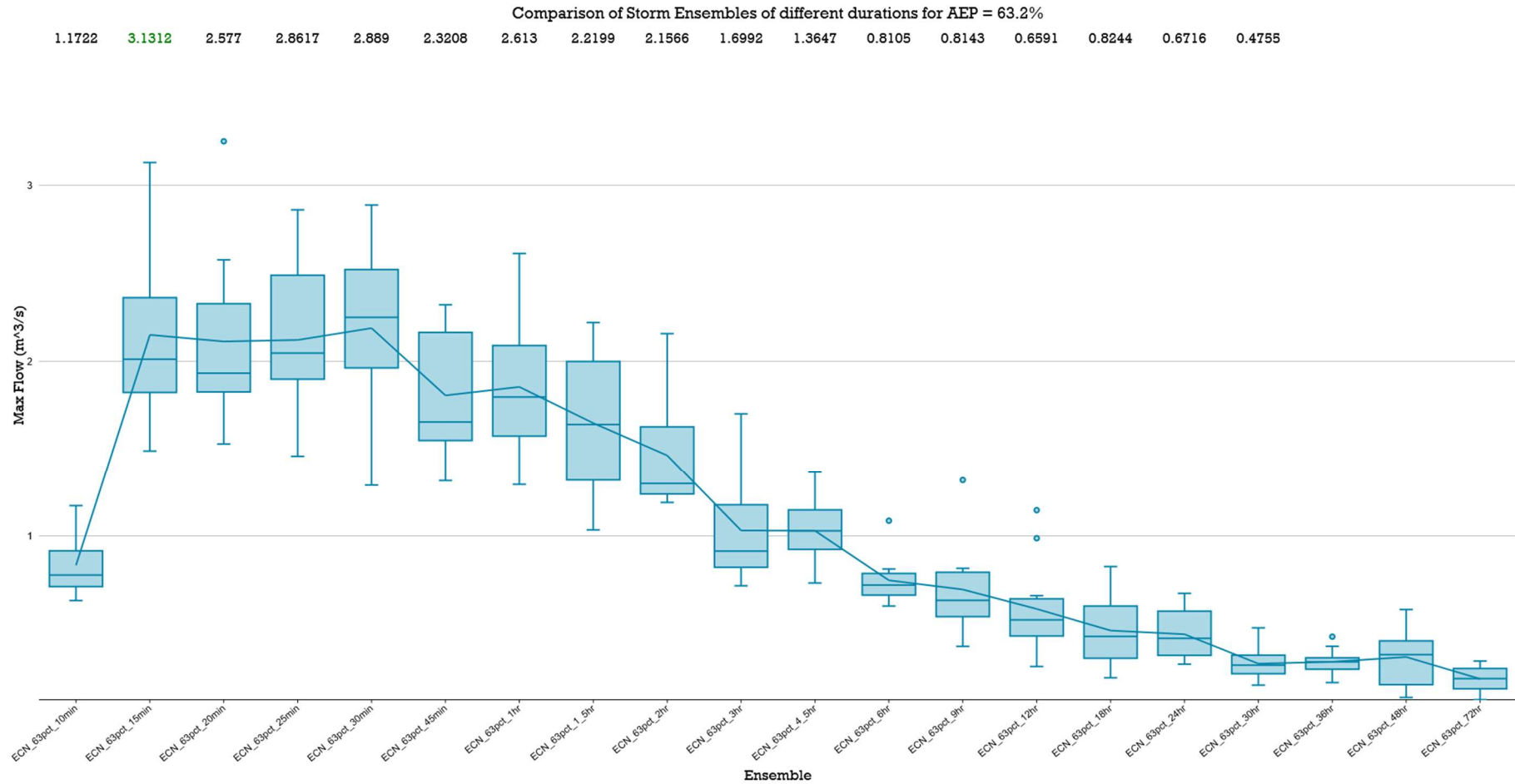


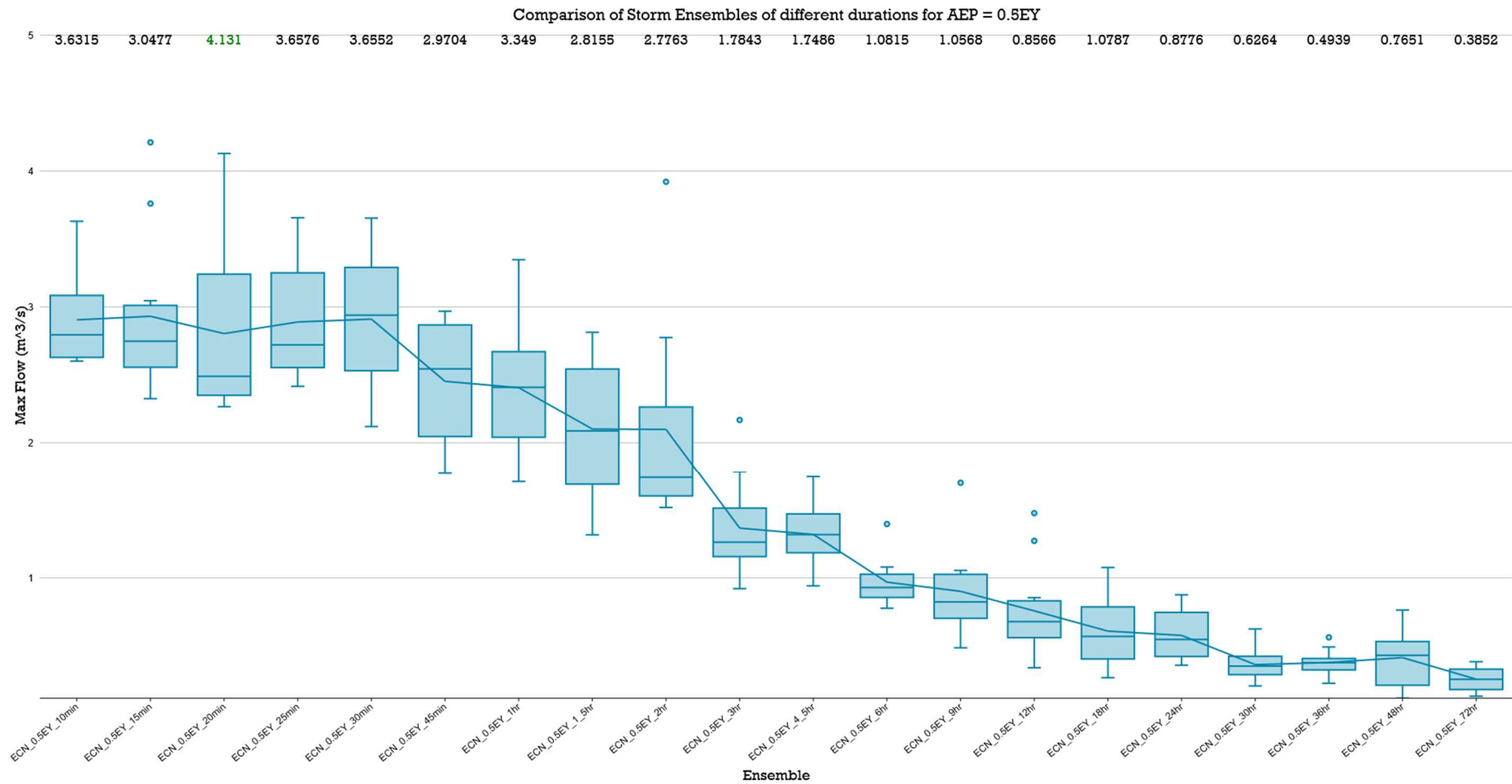


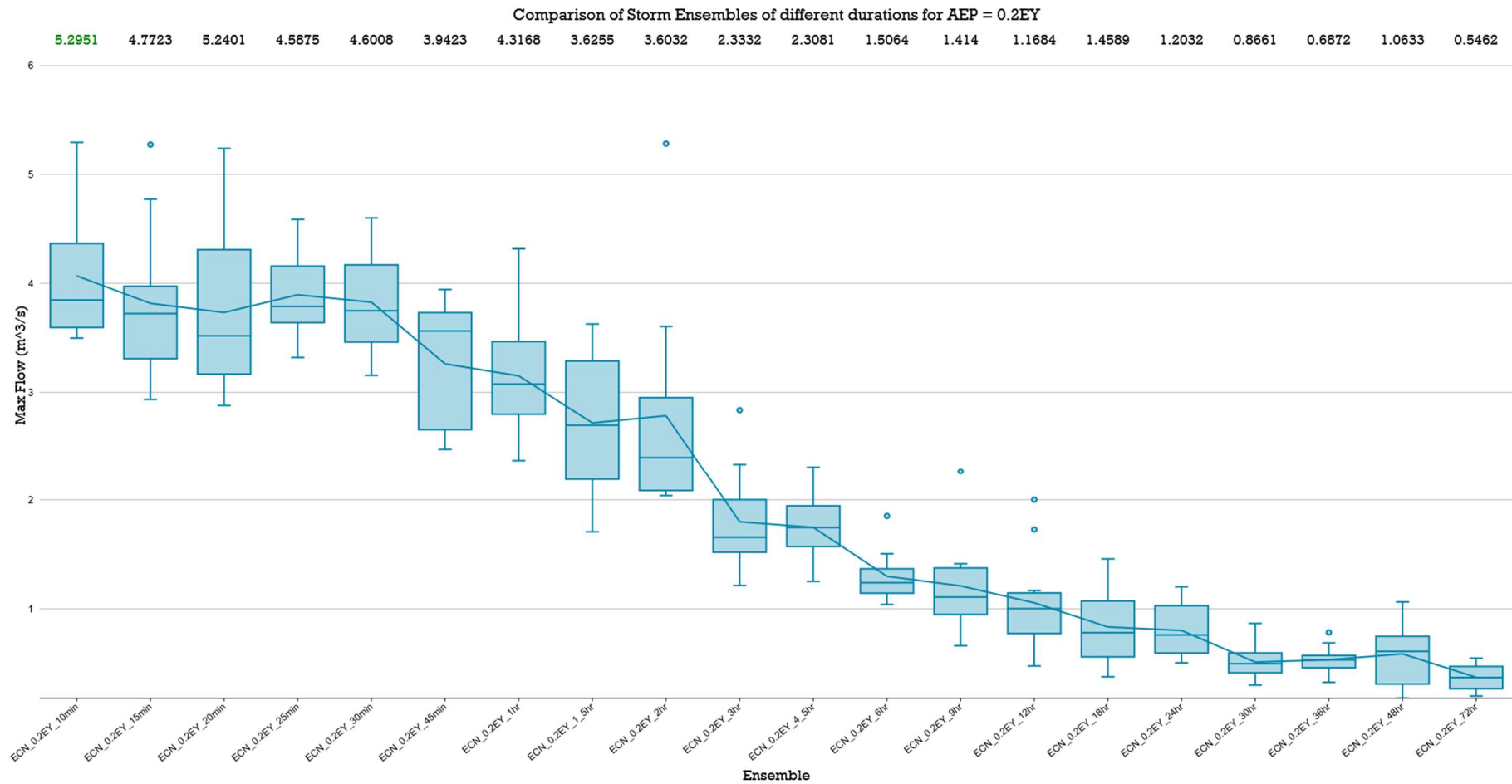


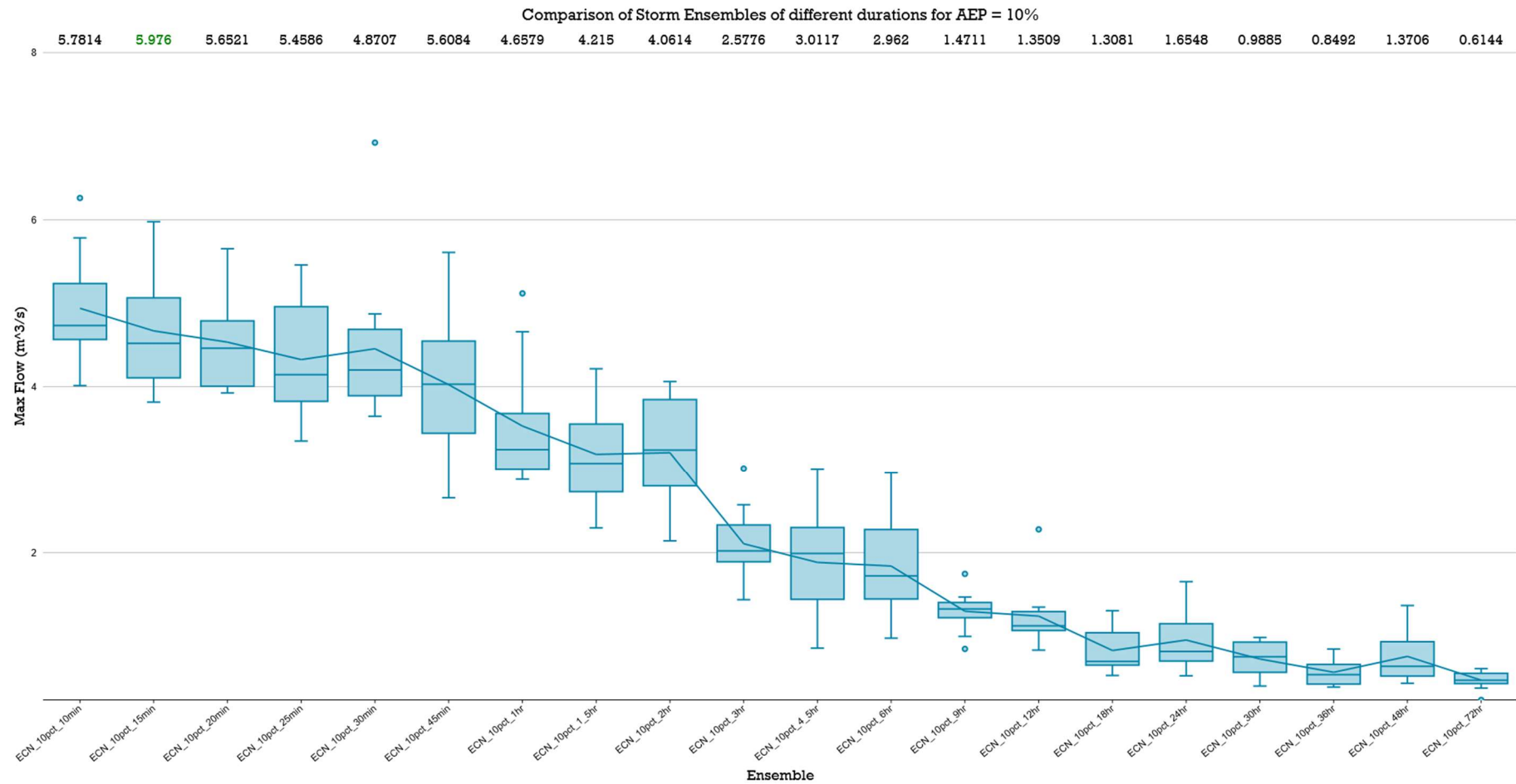


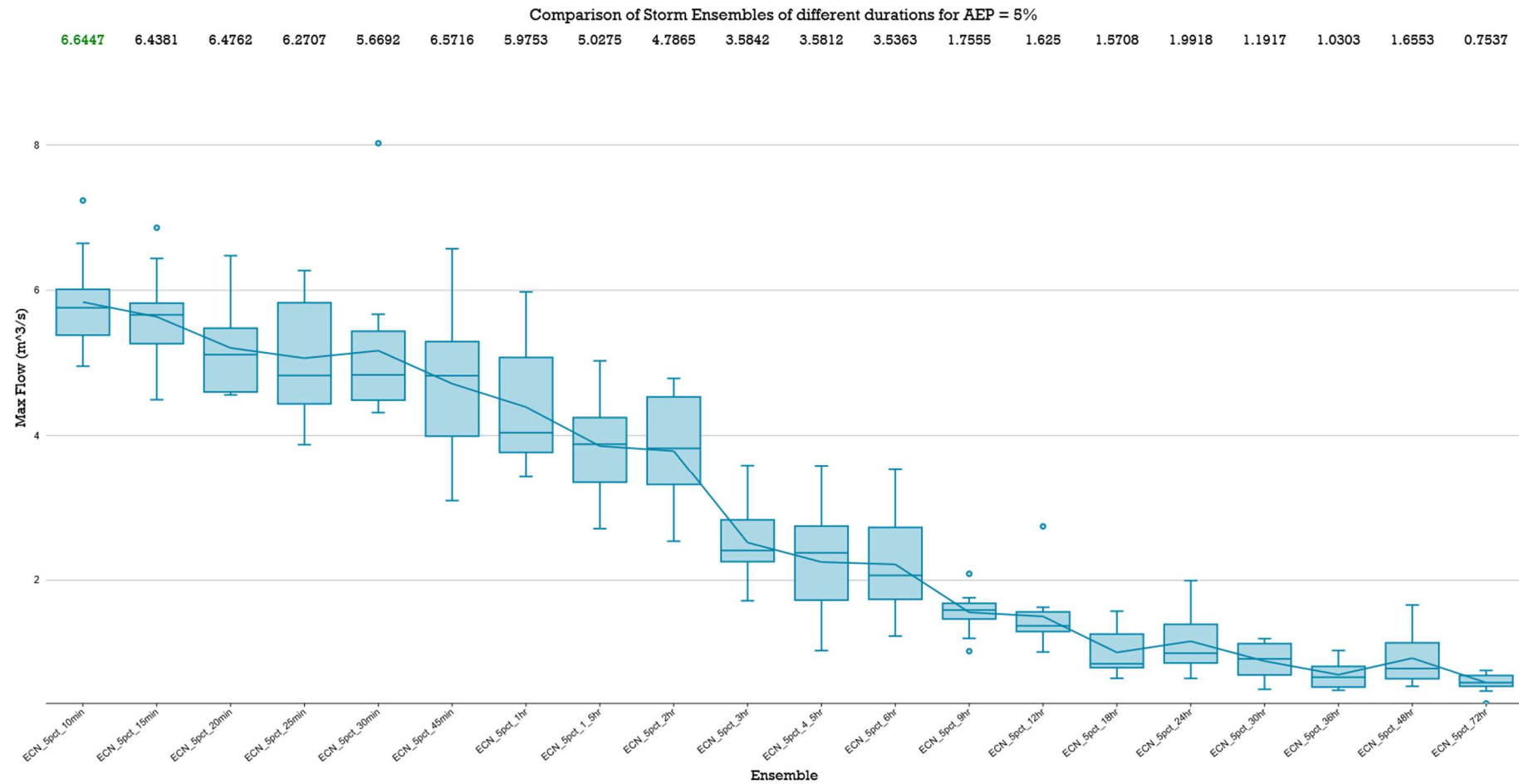
LPoD-2 POST DEVELOPED 'MAXIMUM PEAK' Box & Whisker Plots – 72 Hour

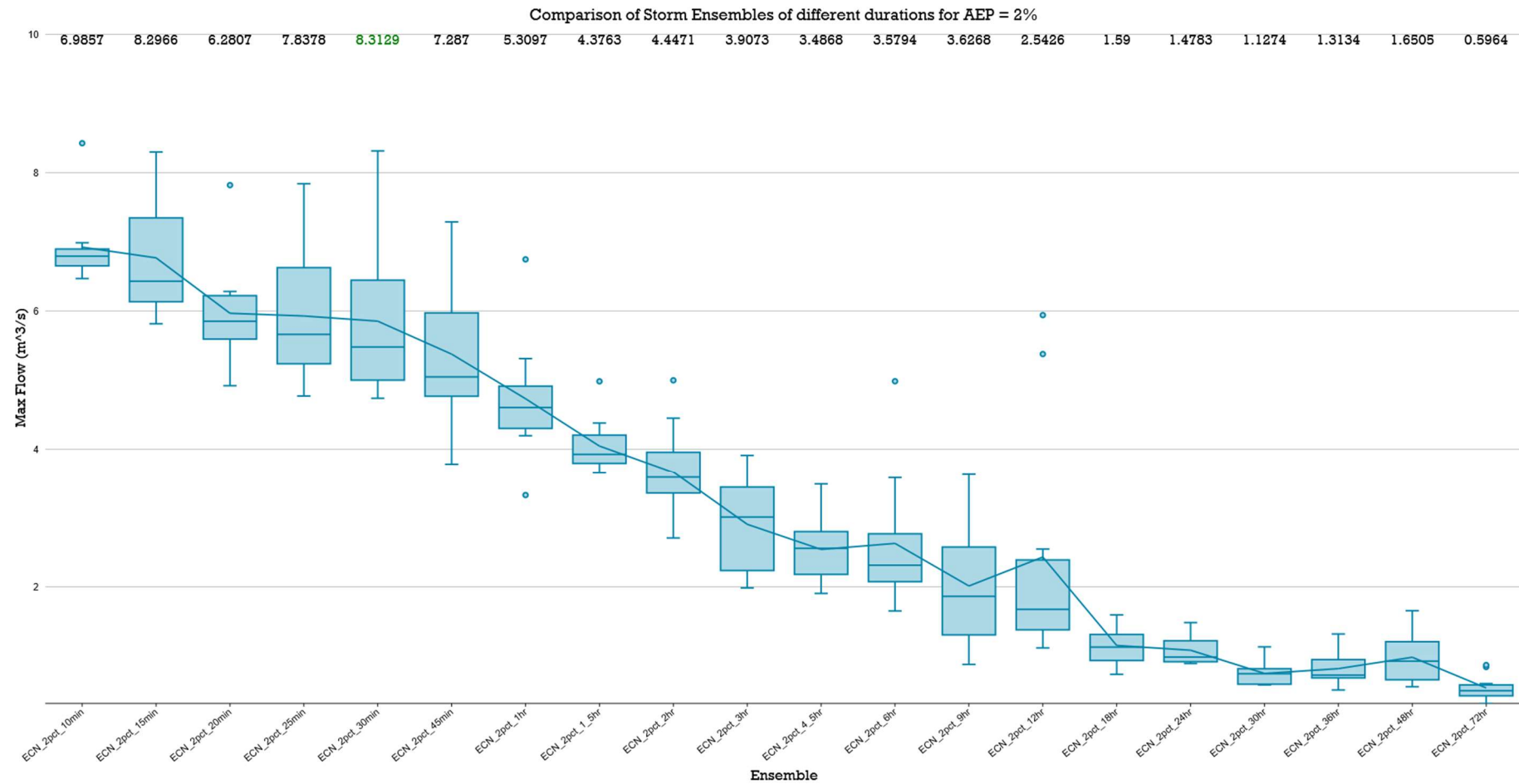


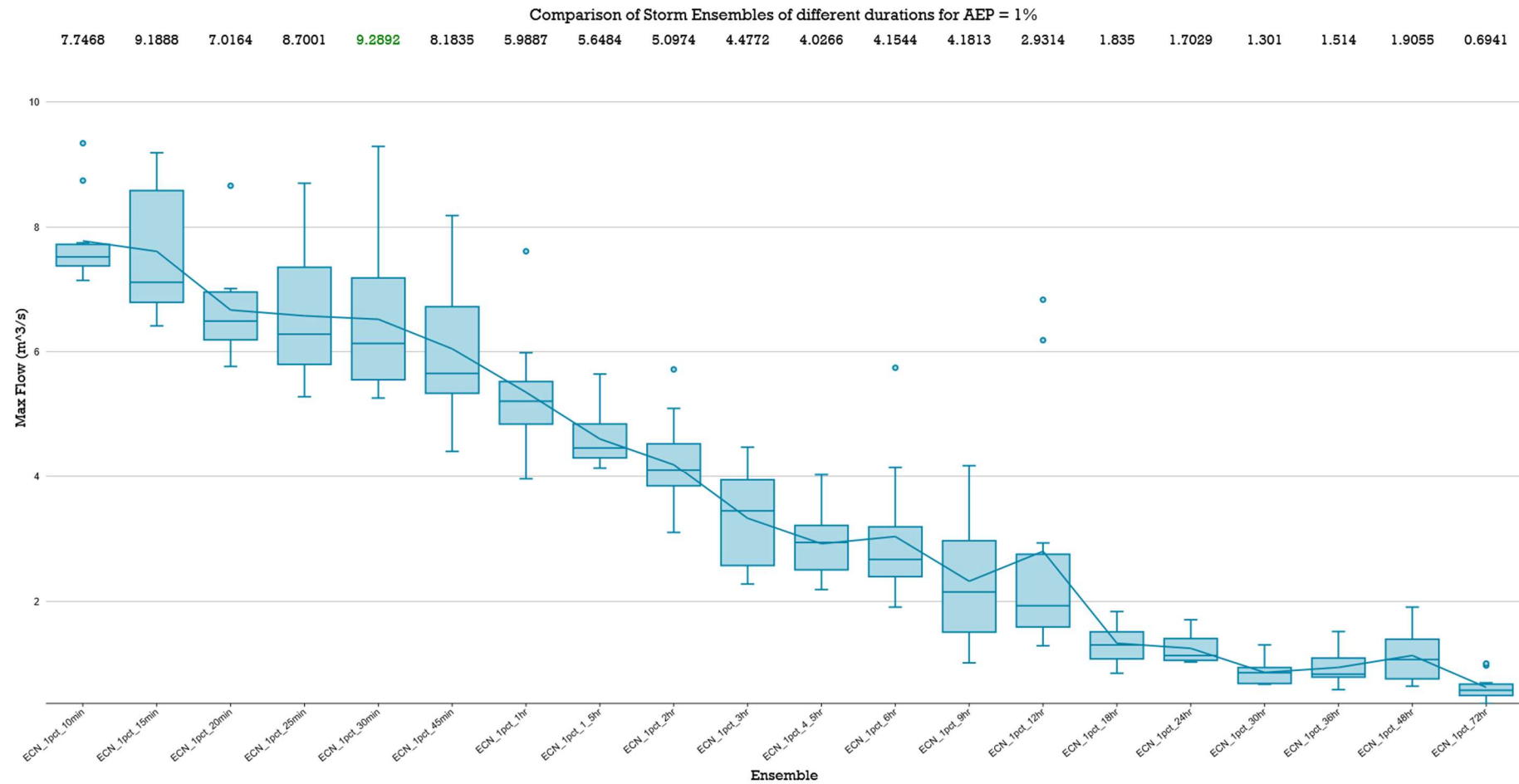




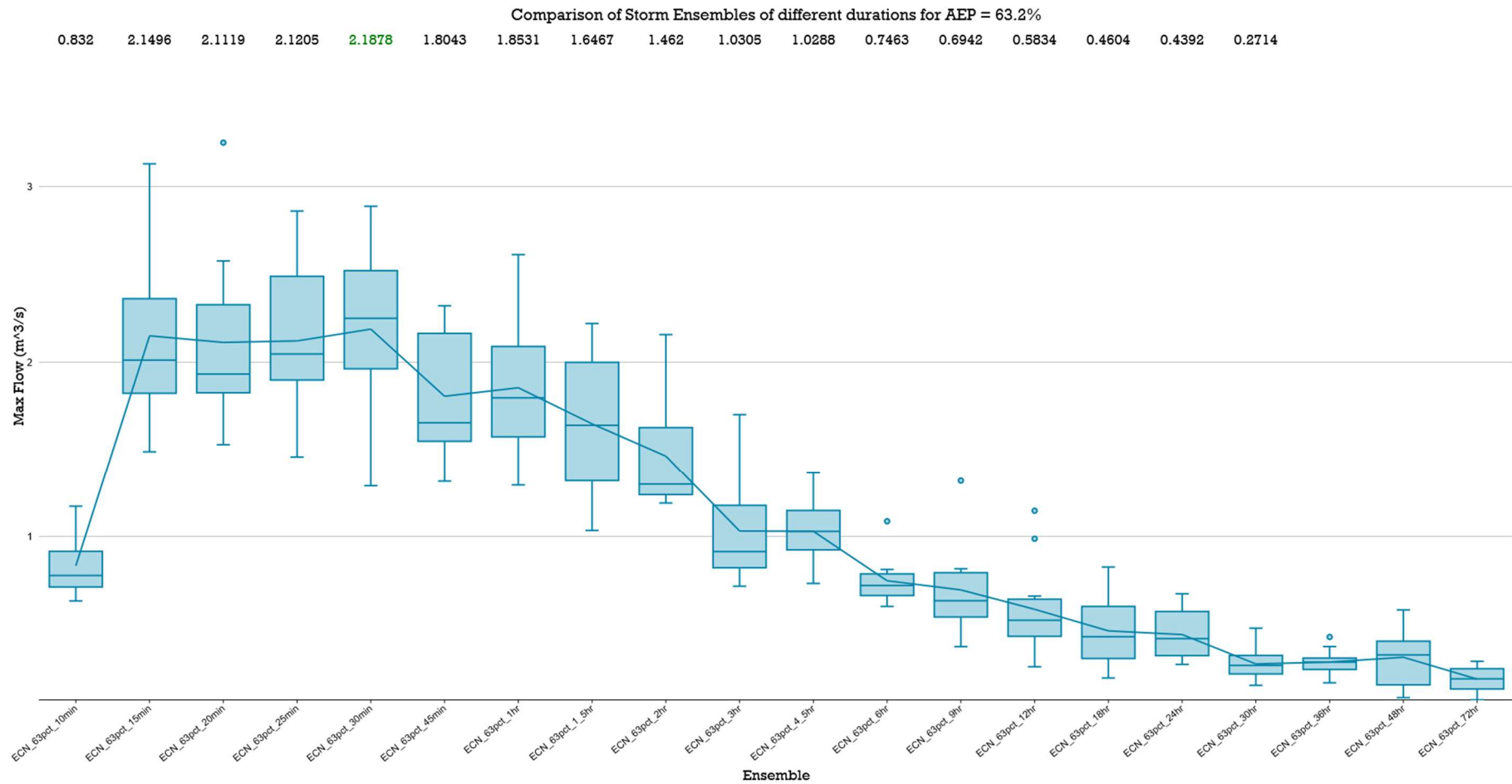


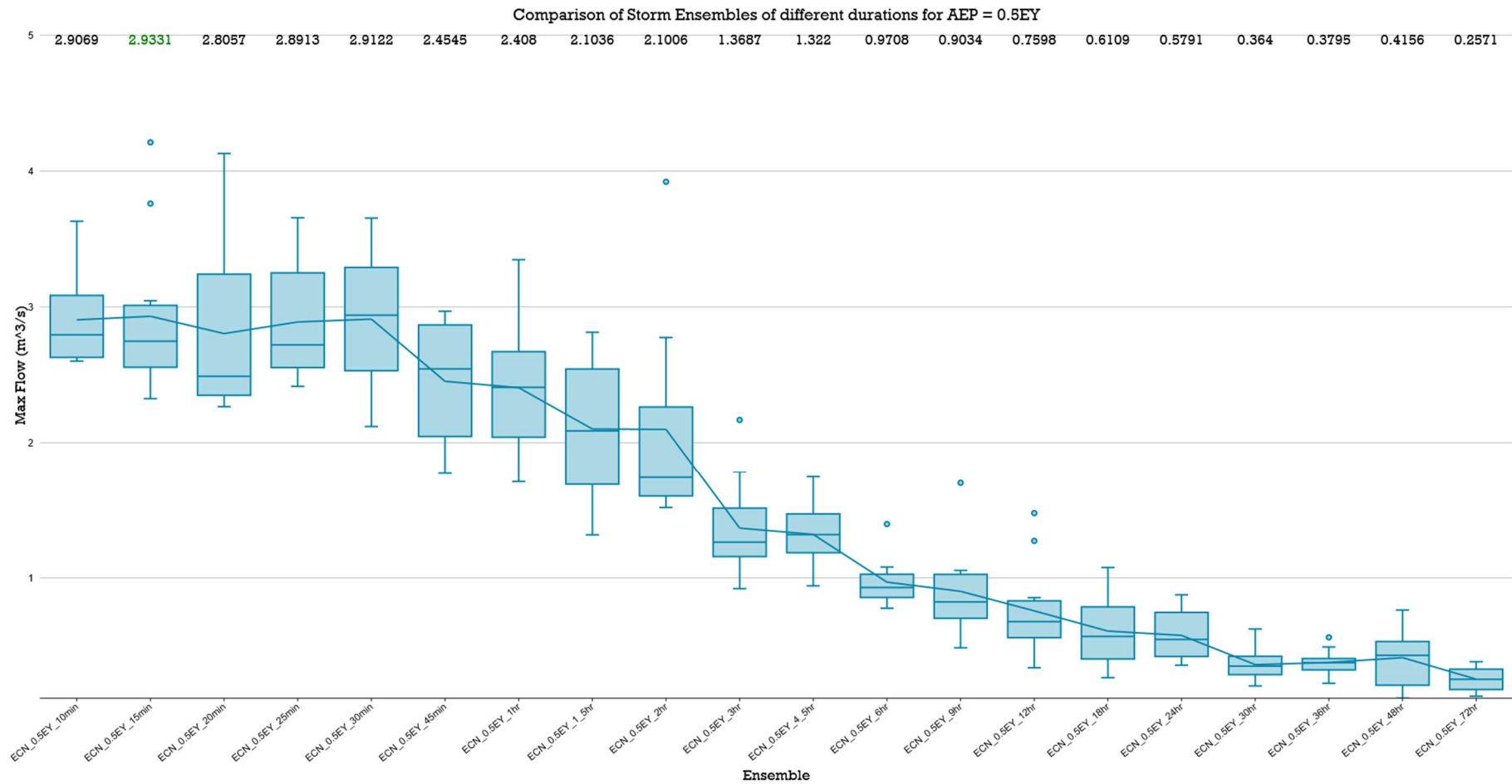


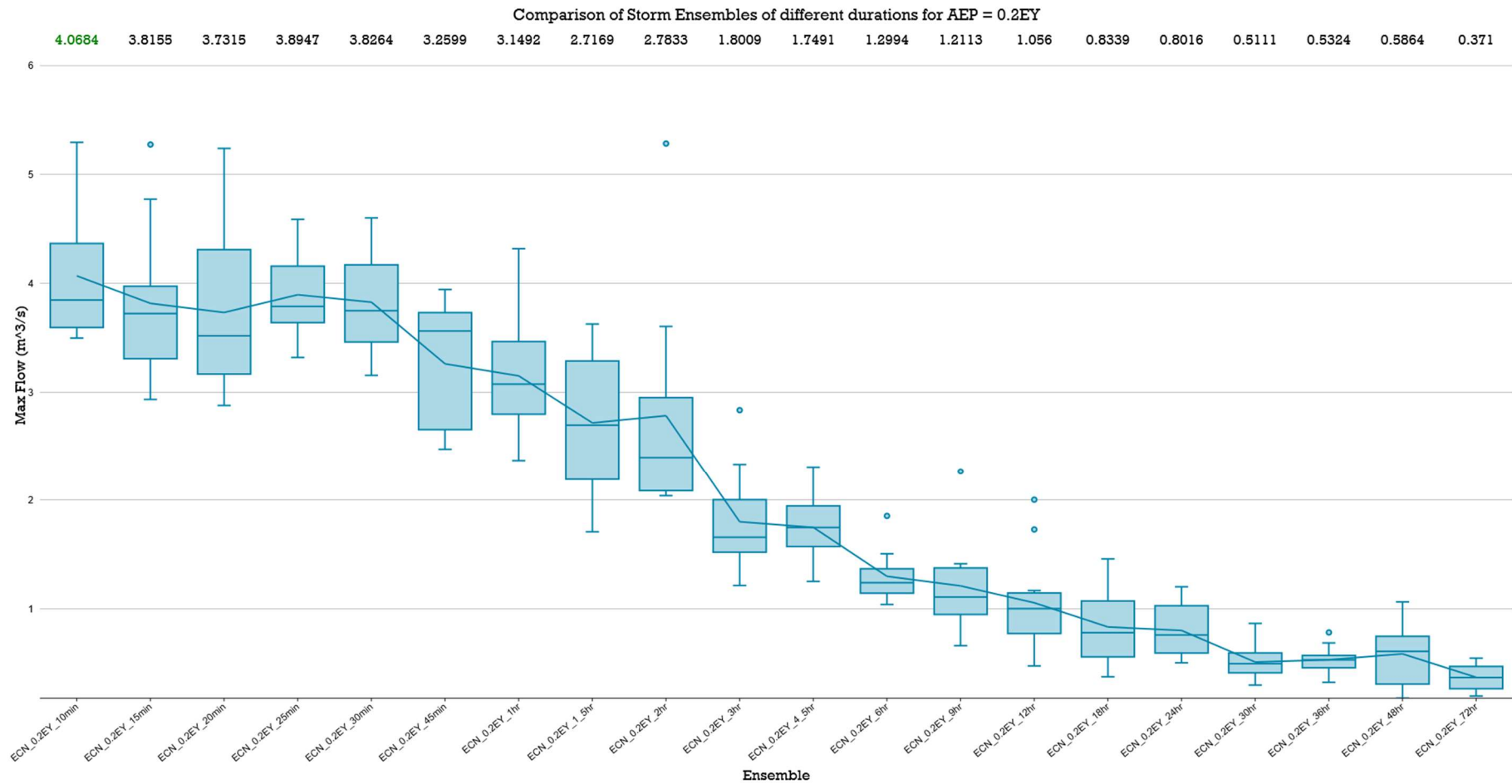


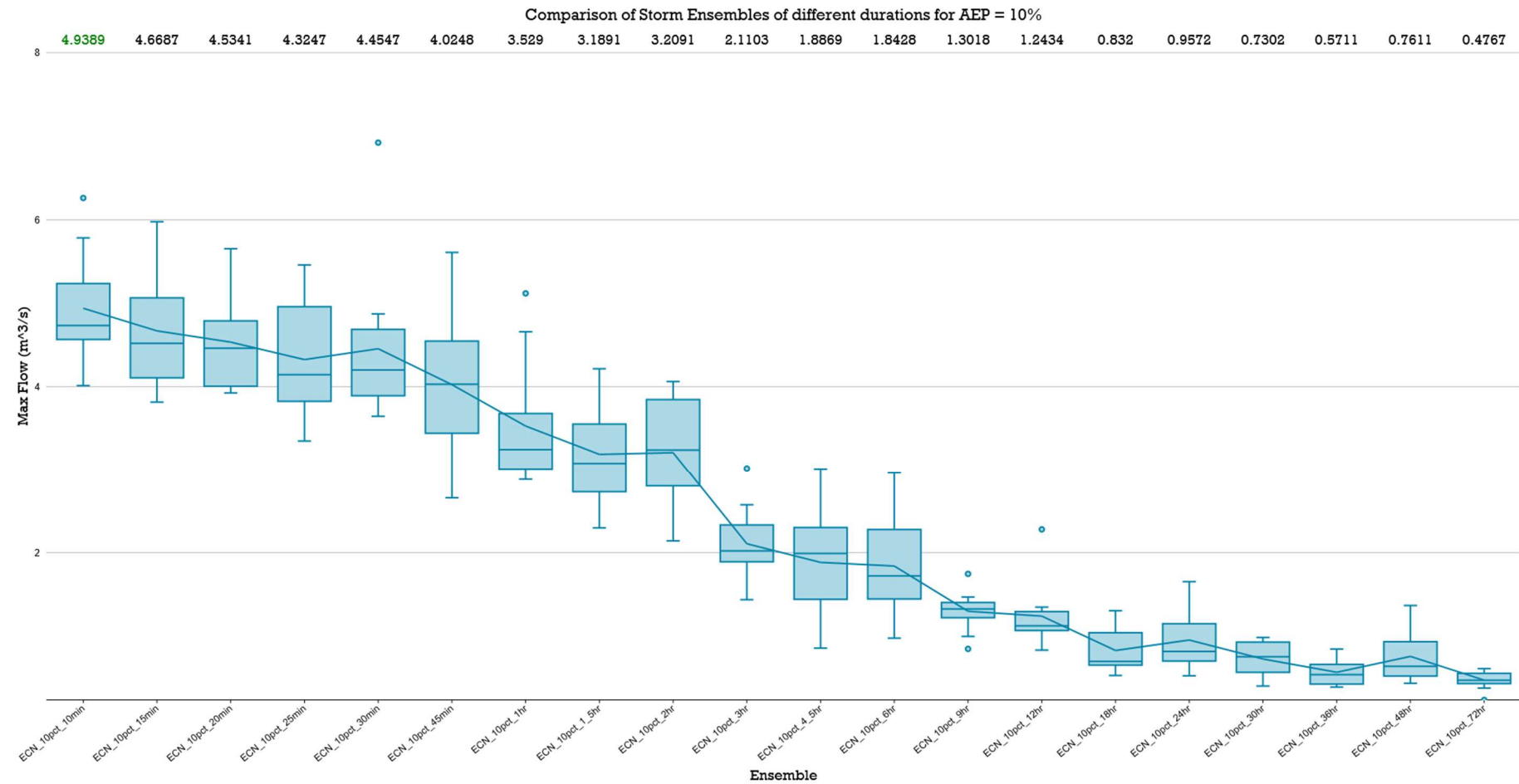


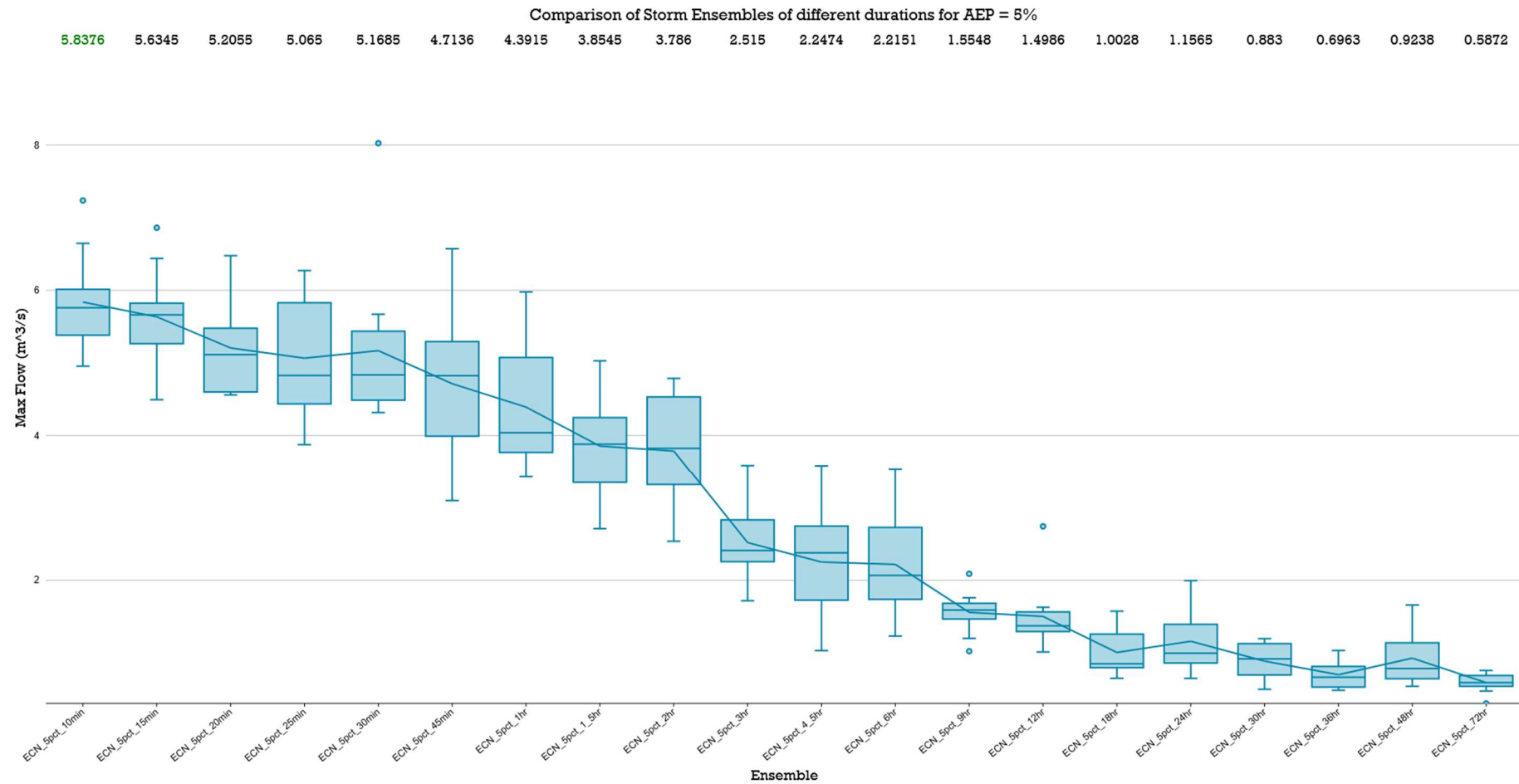
LPoD-2 POST DEVELOPED 'MEAN PEAK' Box & Whisker Plots – 72 Hour

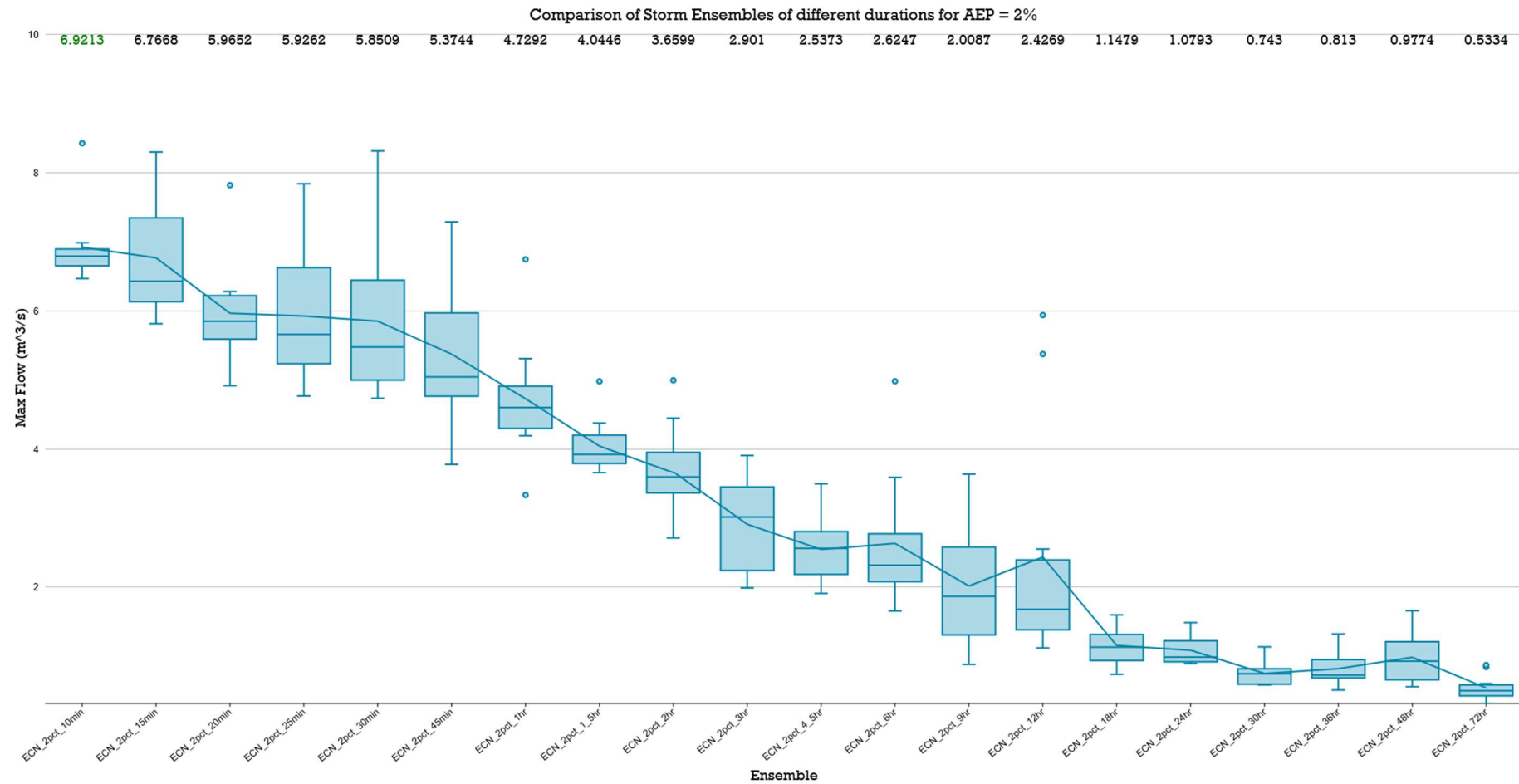


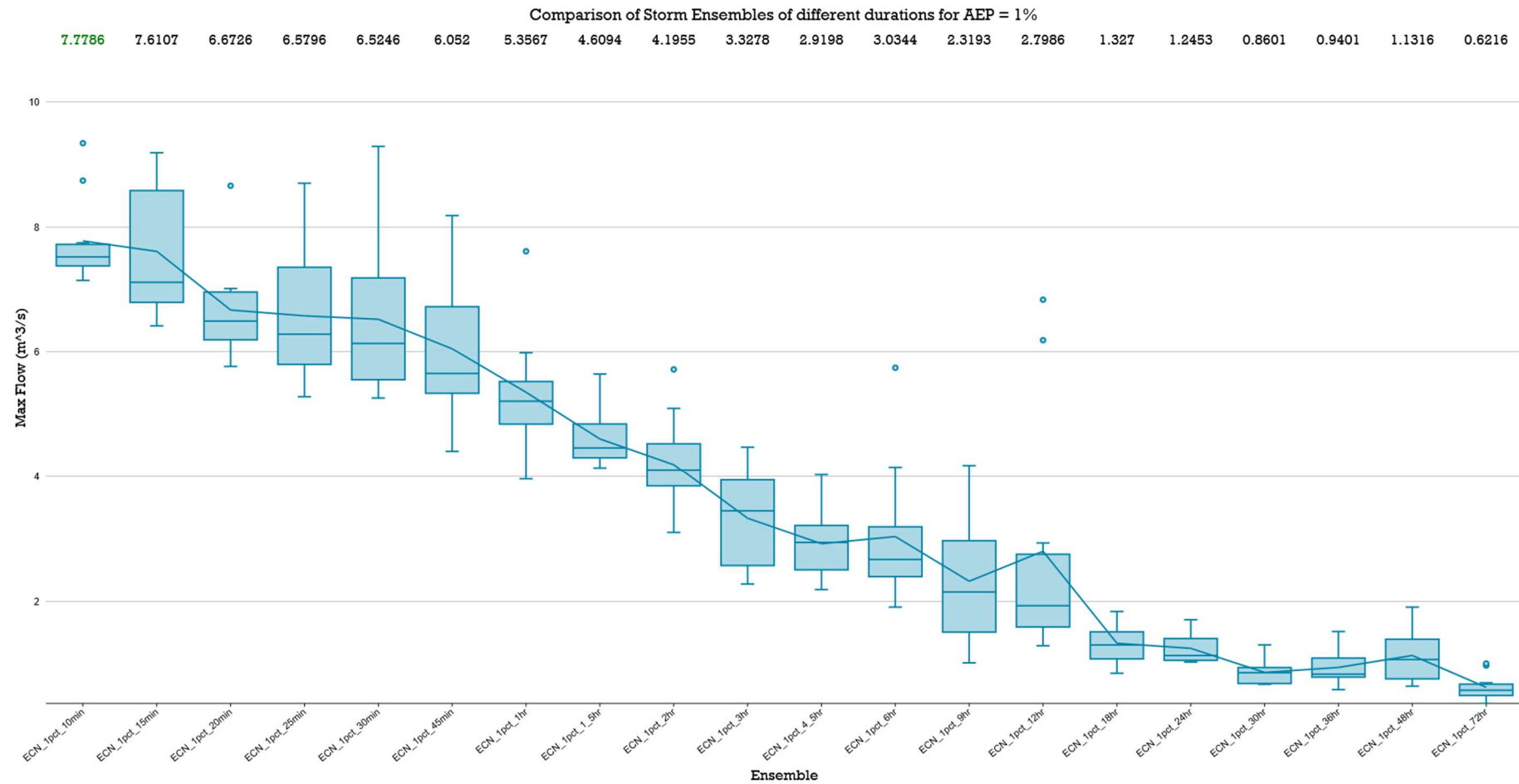




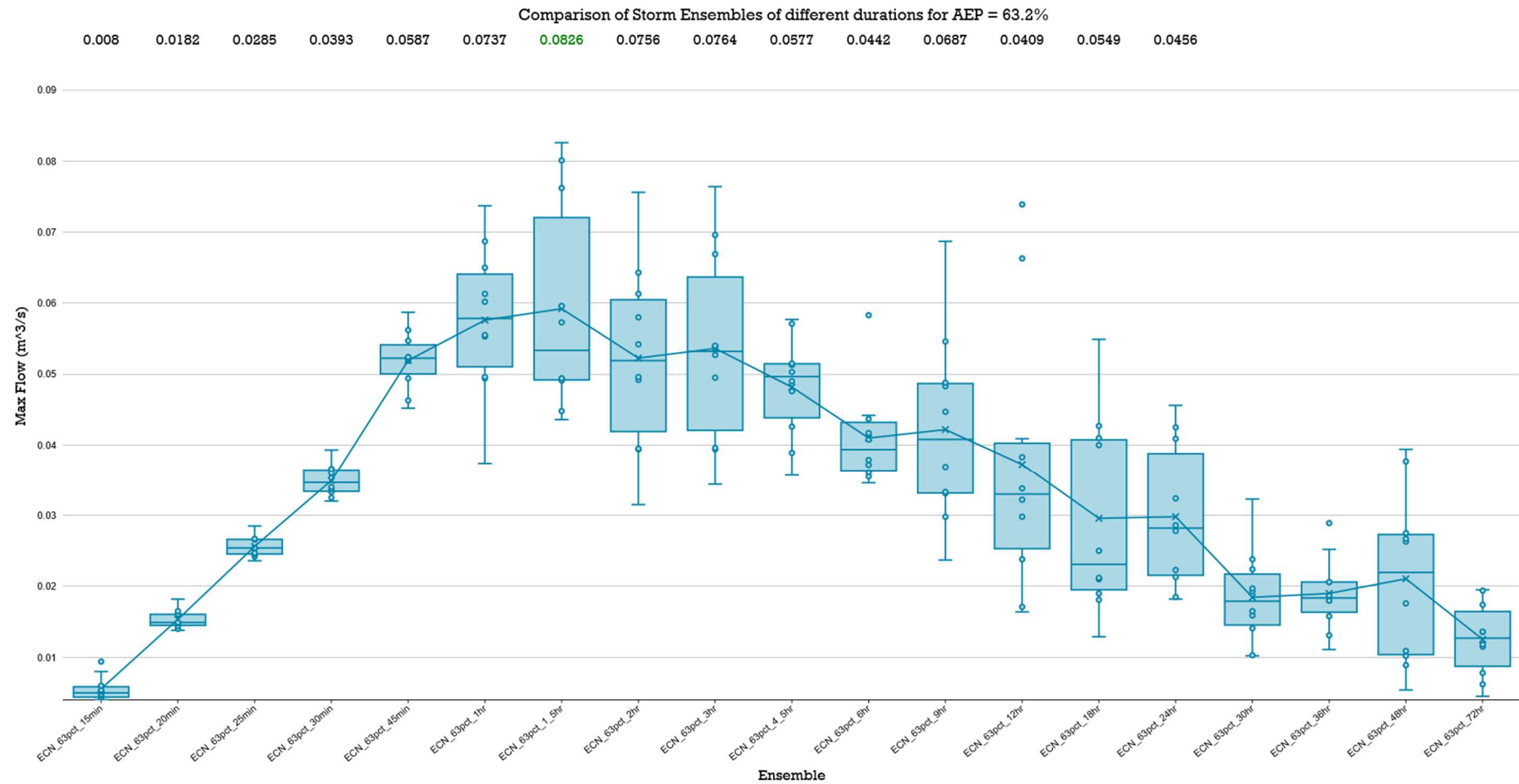


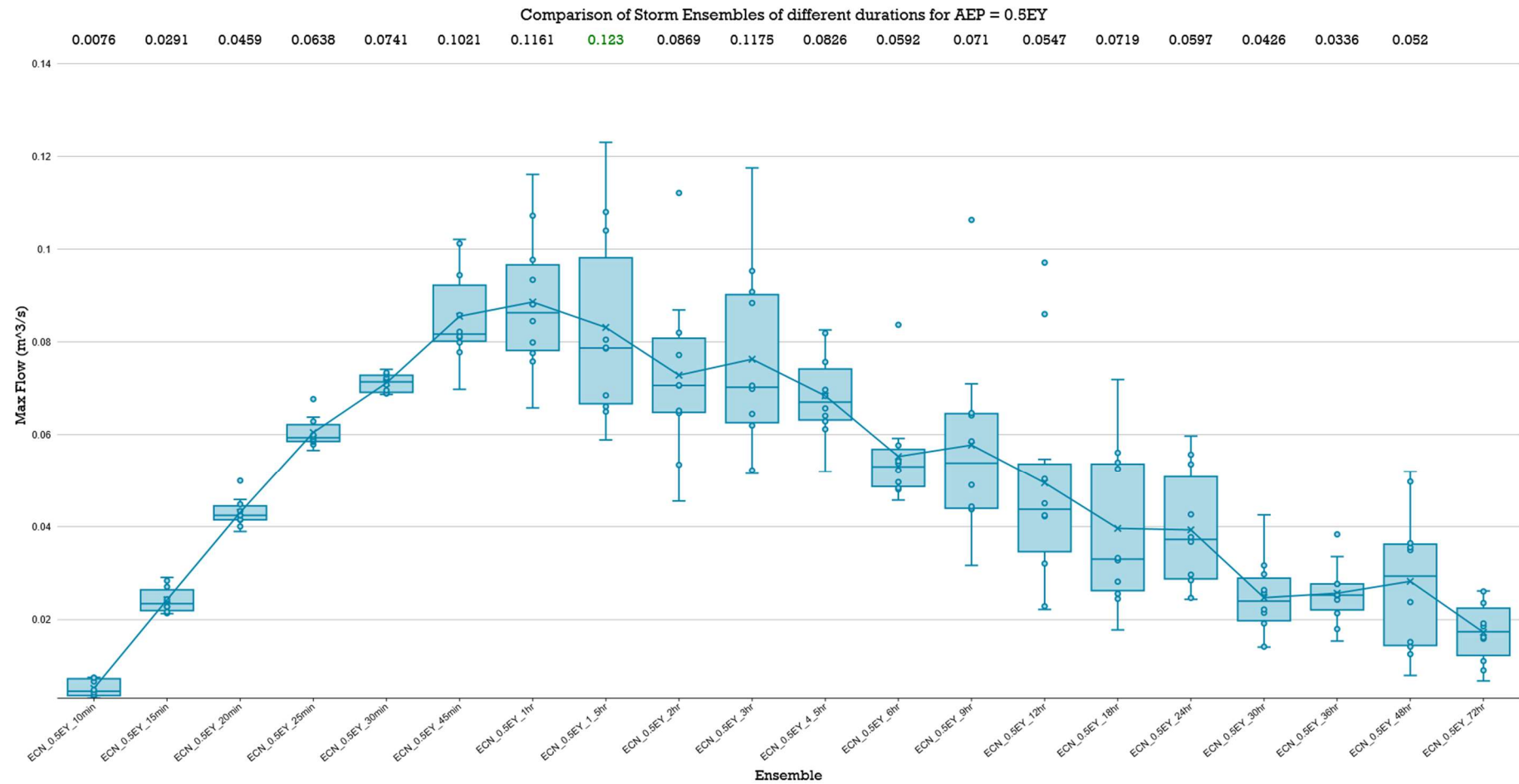


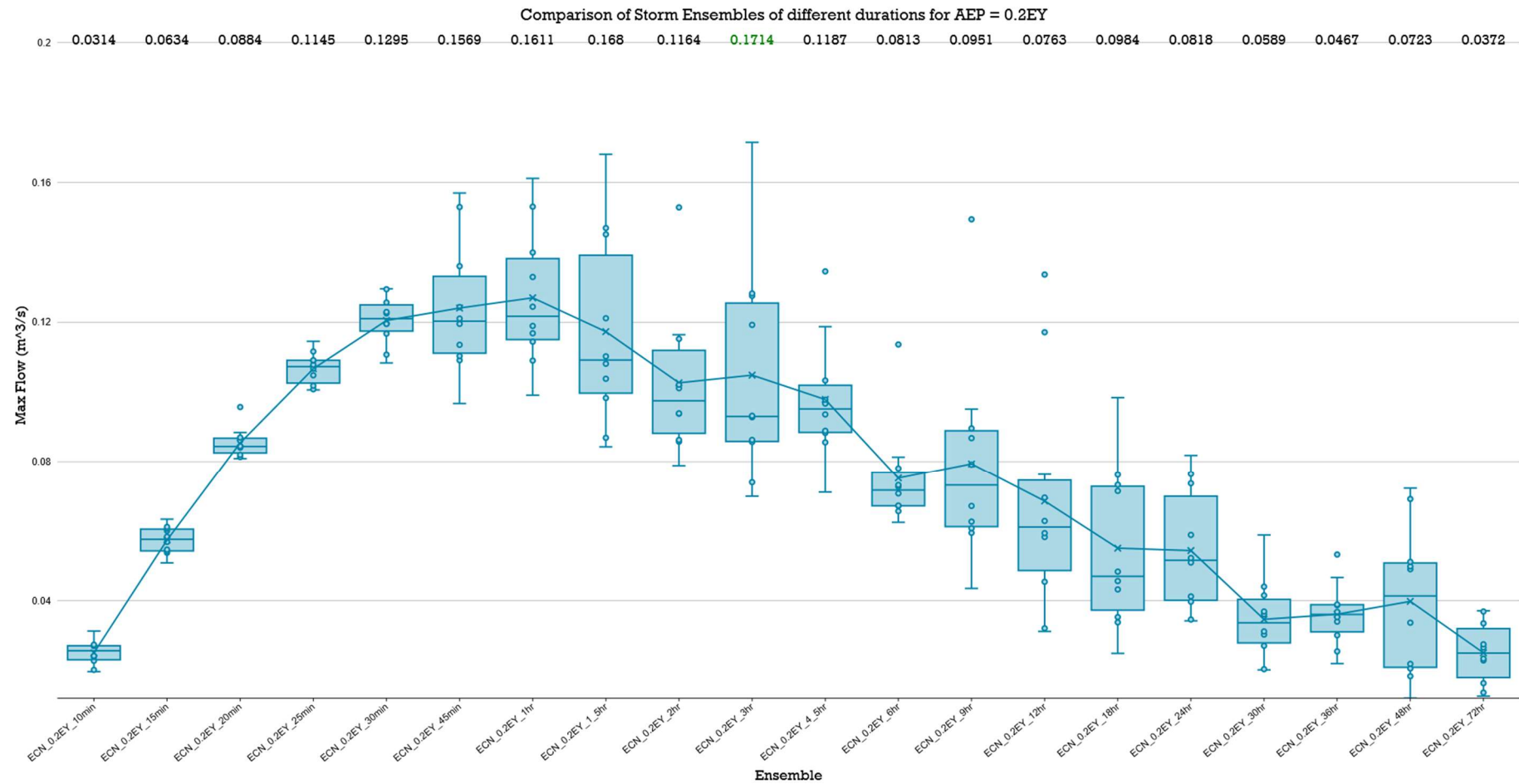


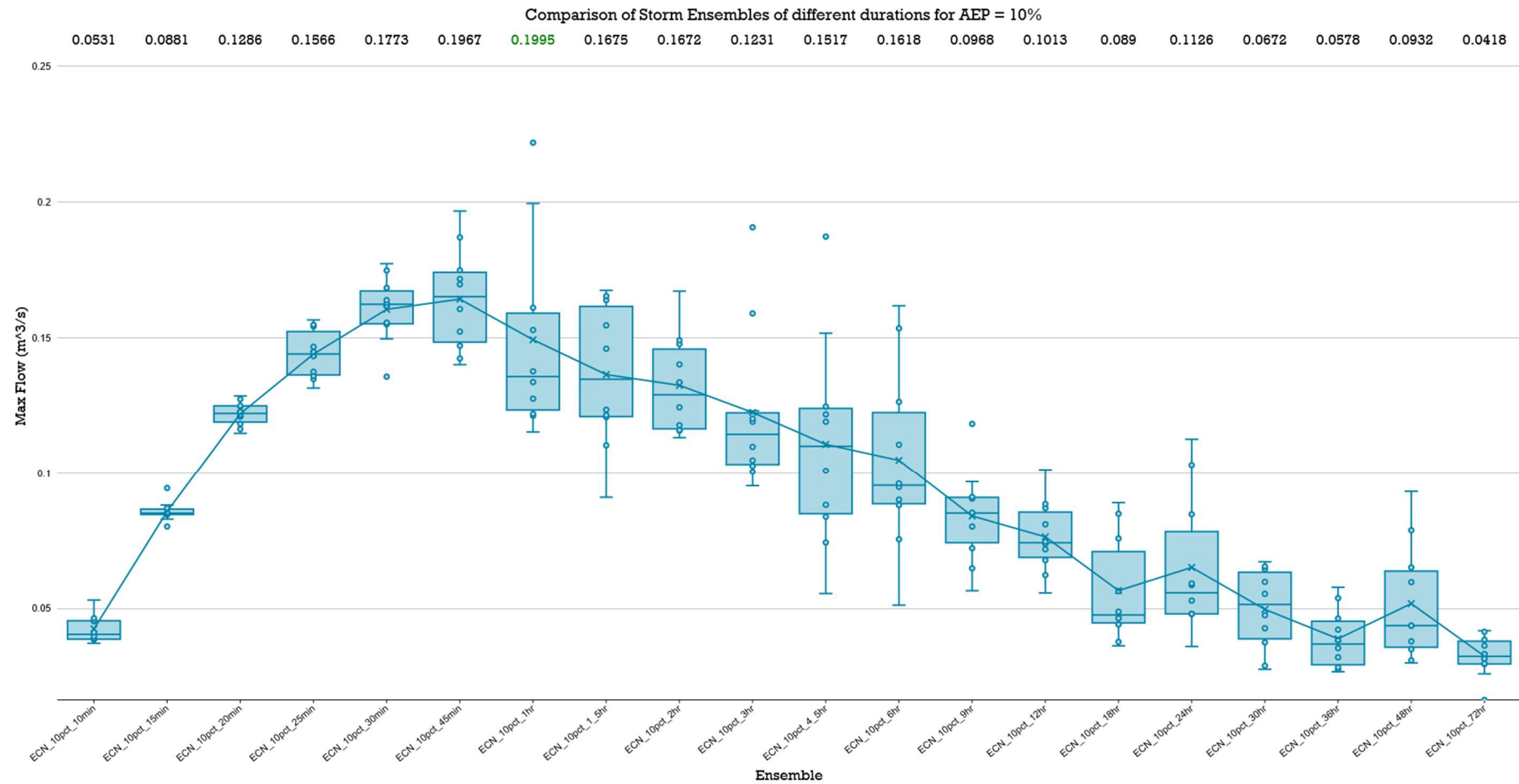


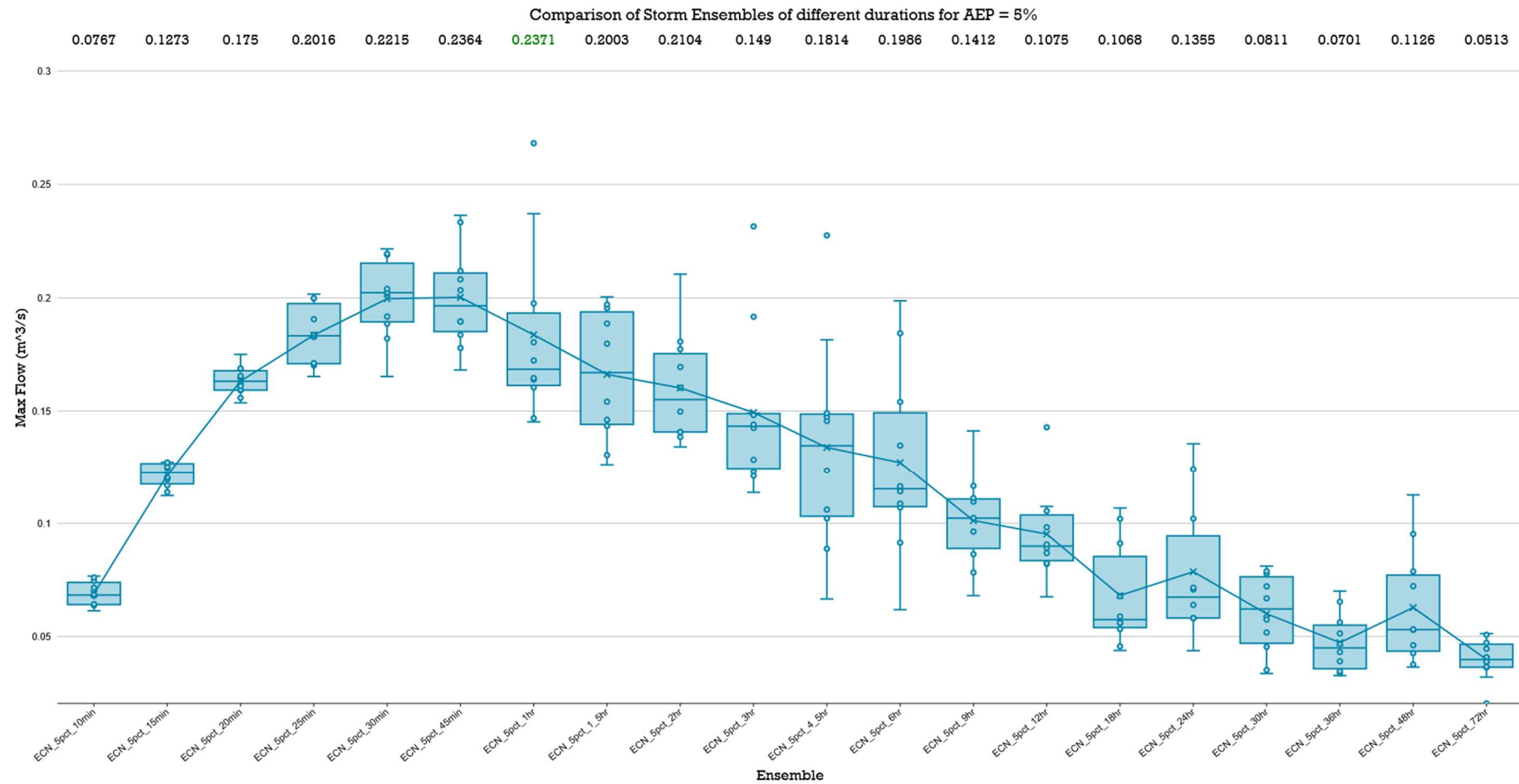
LPoD-3 PRE DEVELOPED 'MAXIMUM PEAK' Box & Whisker Plots – 72 *Hour*

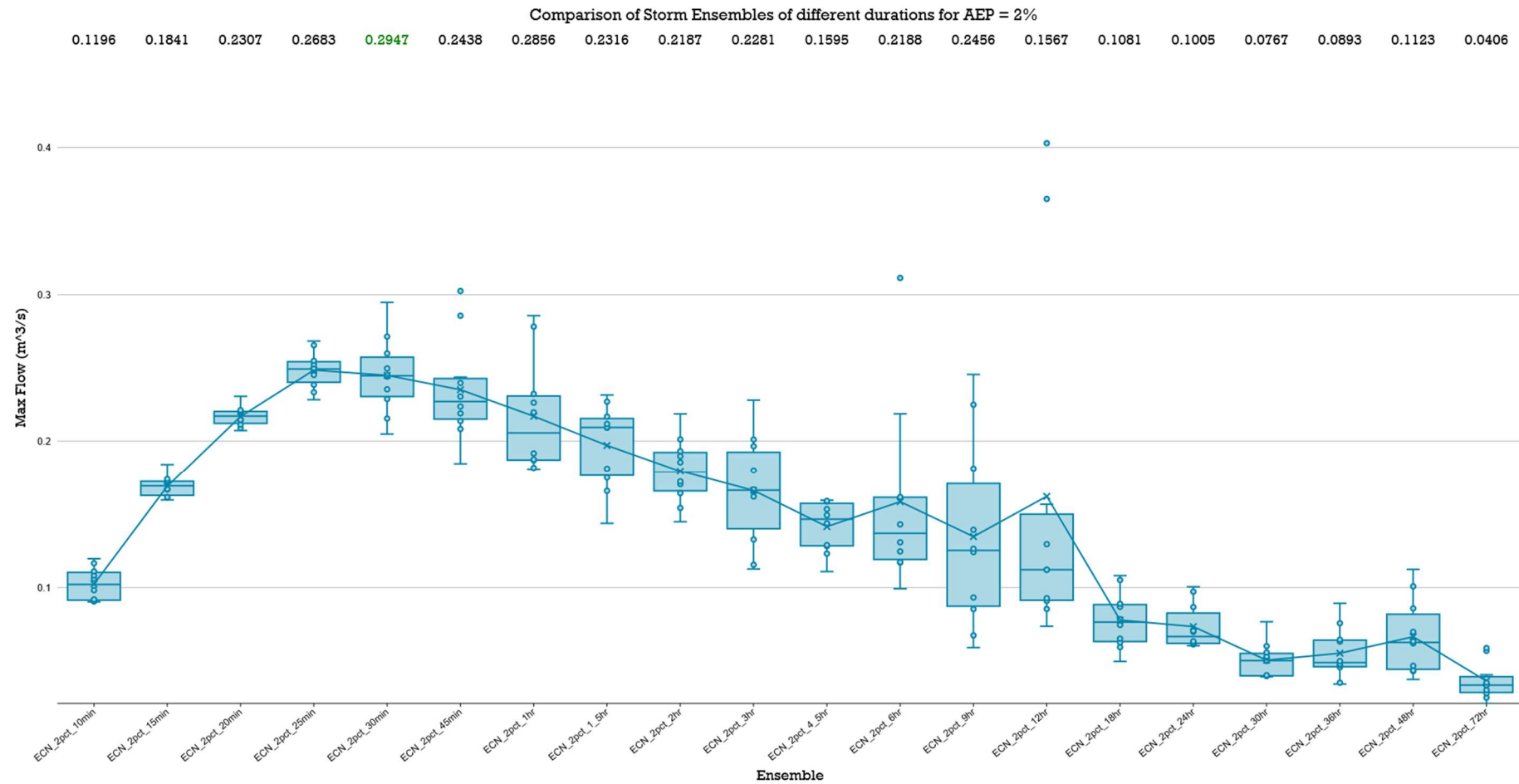


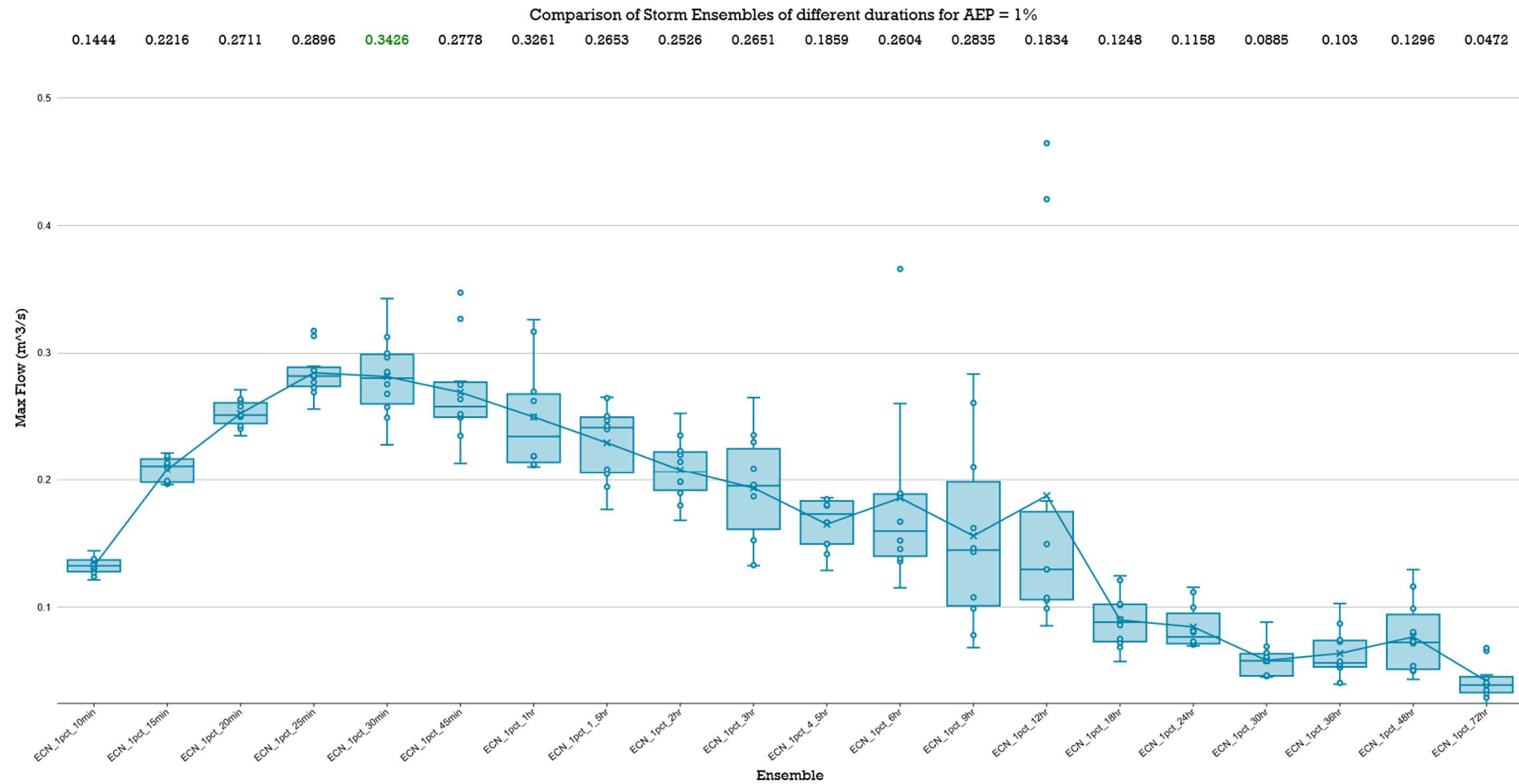




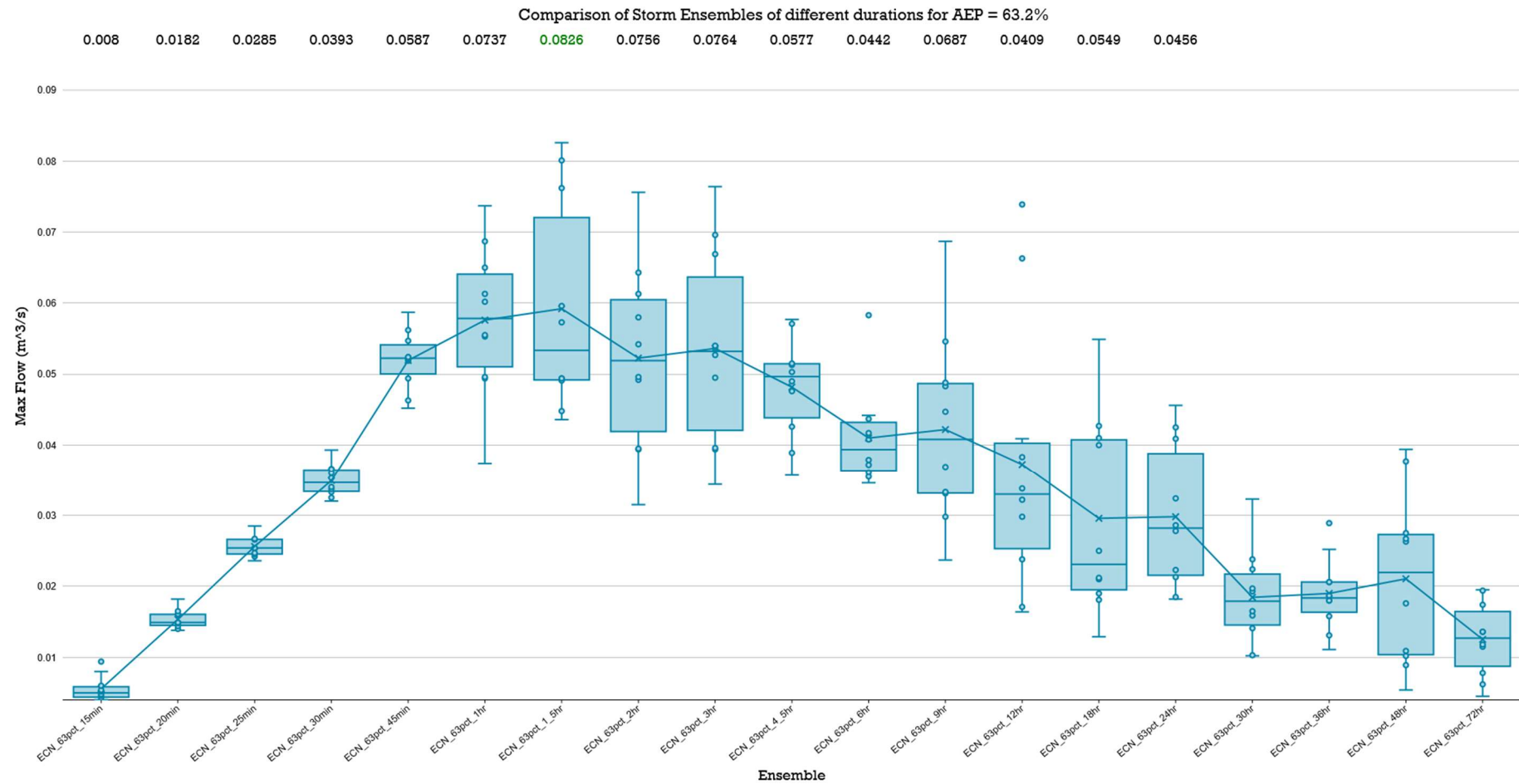


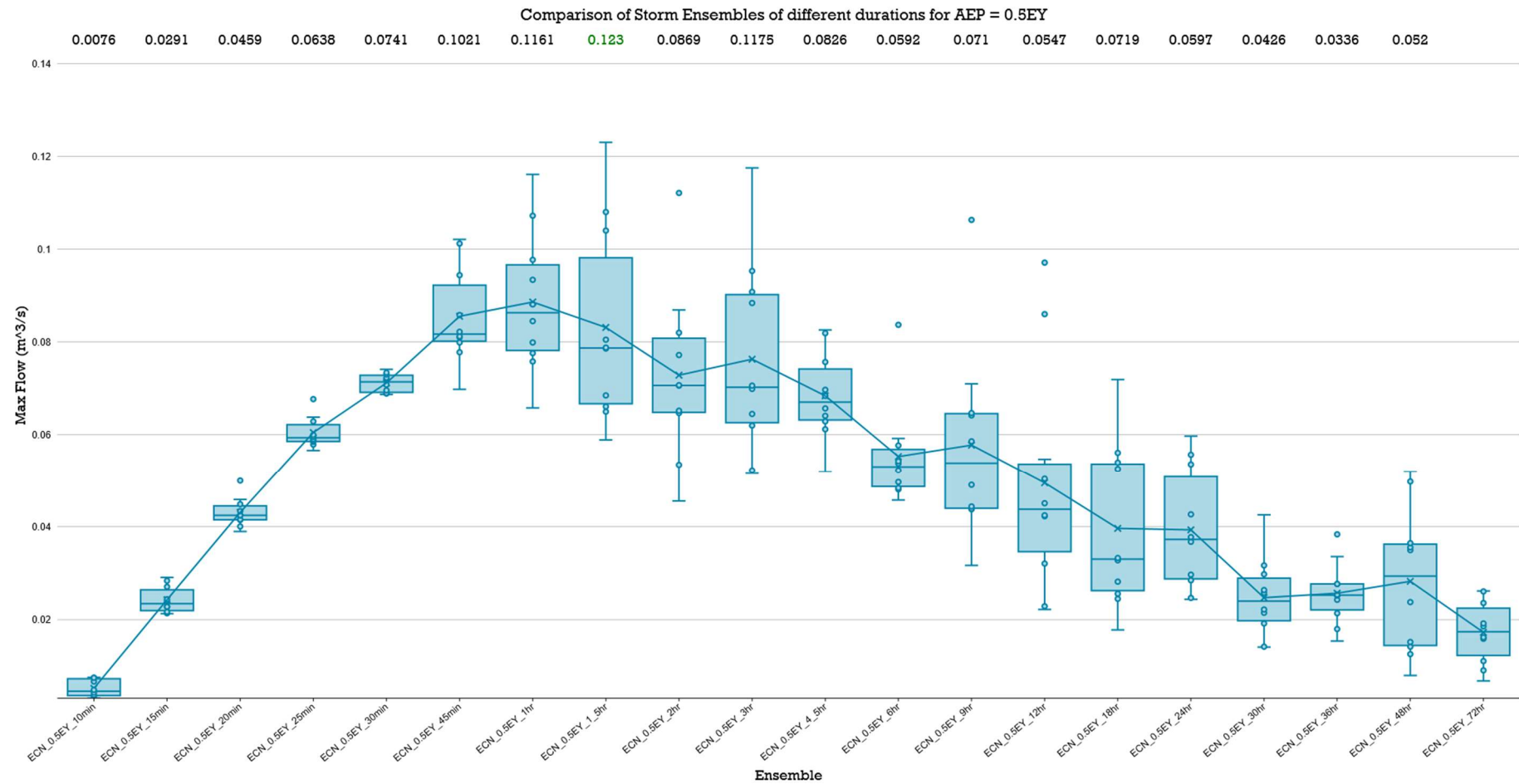


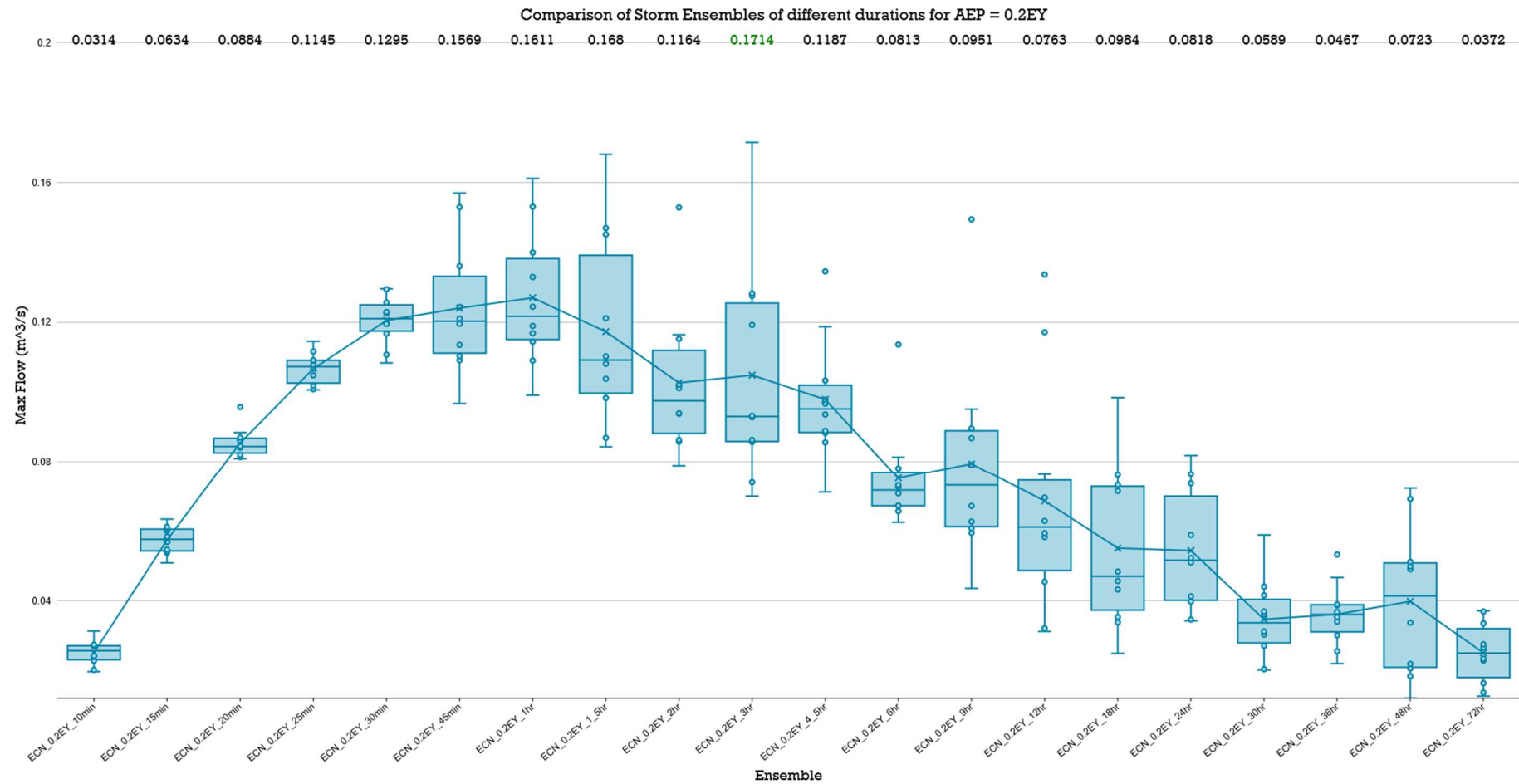


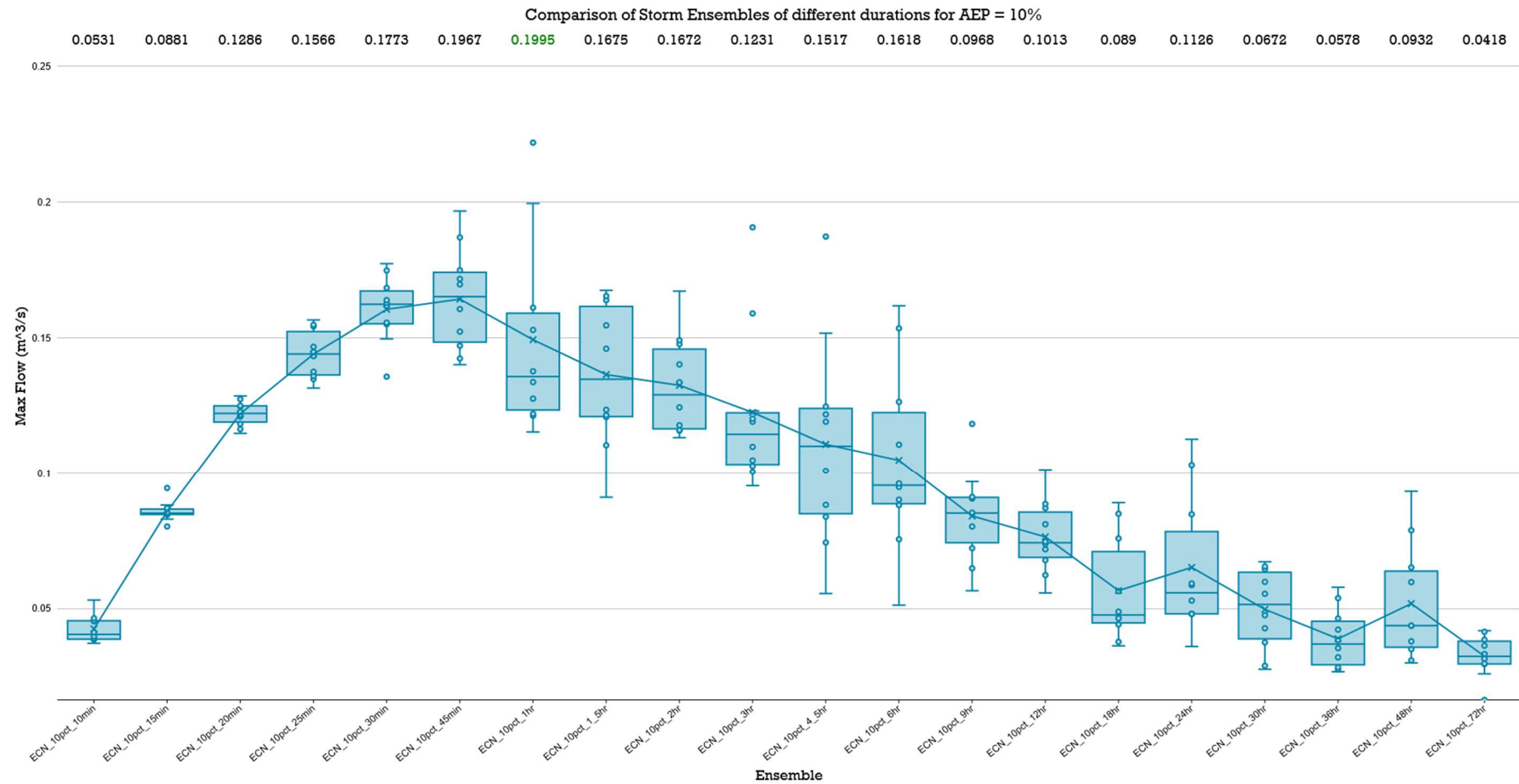


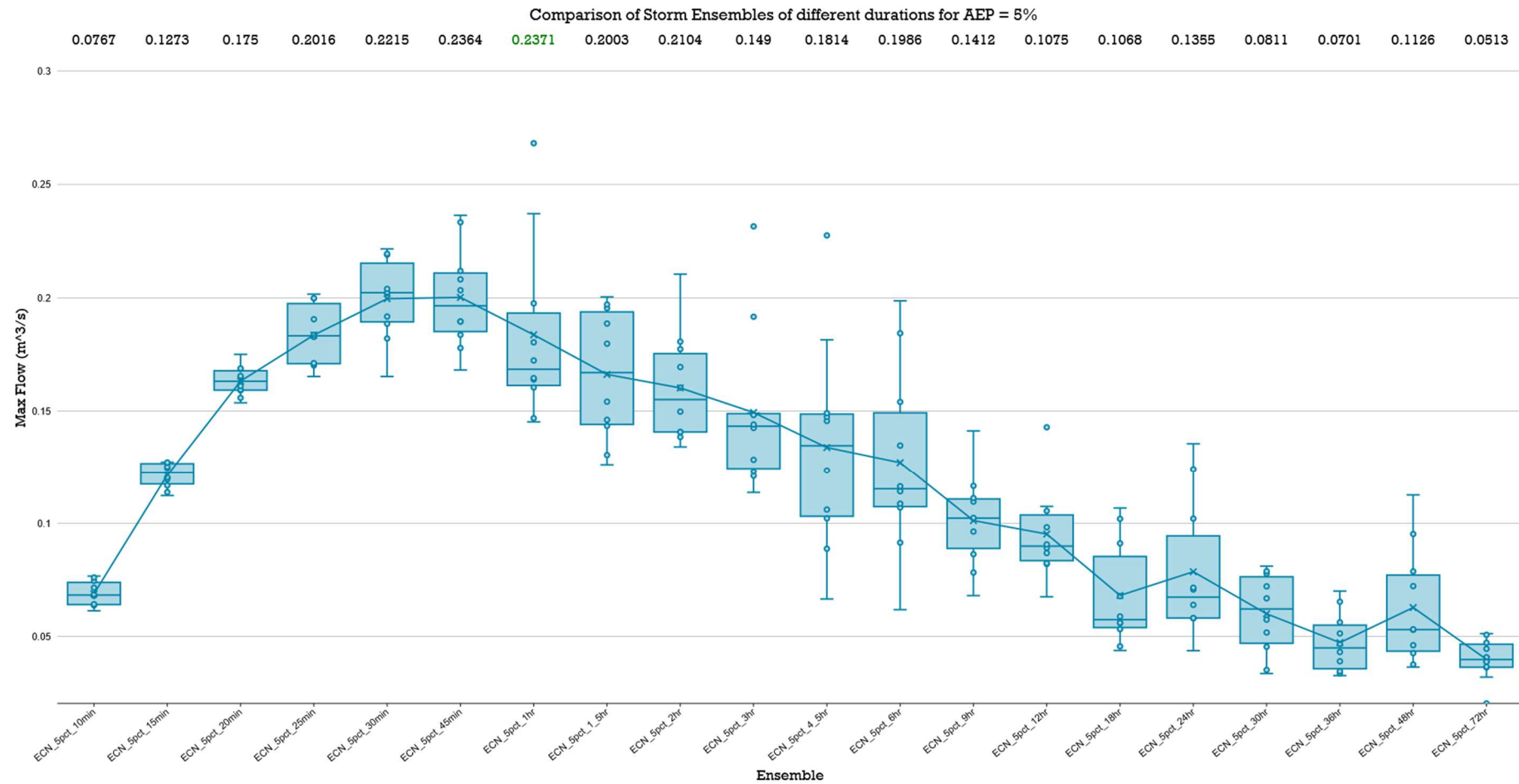
LPoD-3 PRE DEVELOPED 'MEAN PEAK' Box & Whisker Plots – 72 Hour

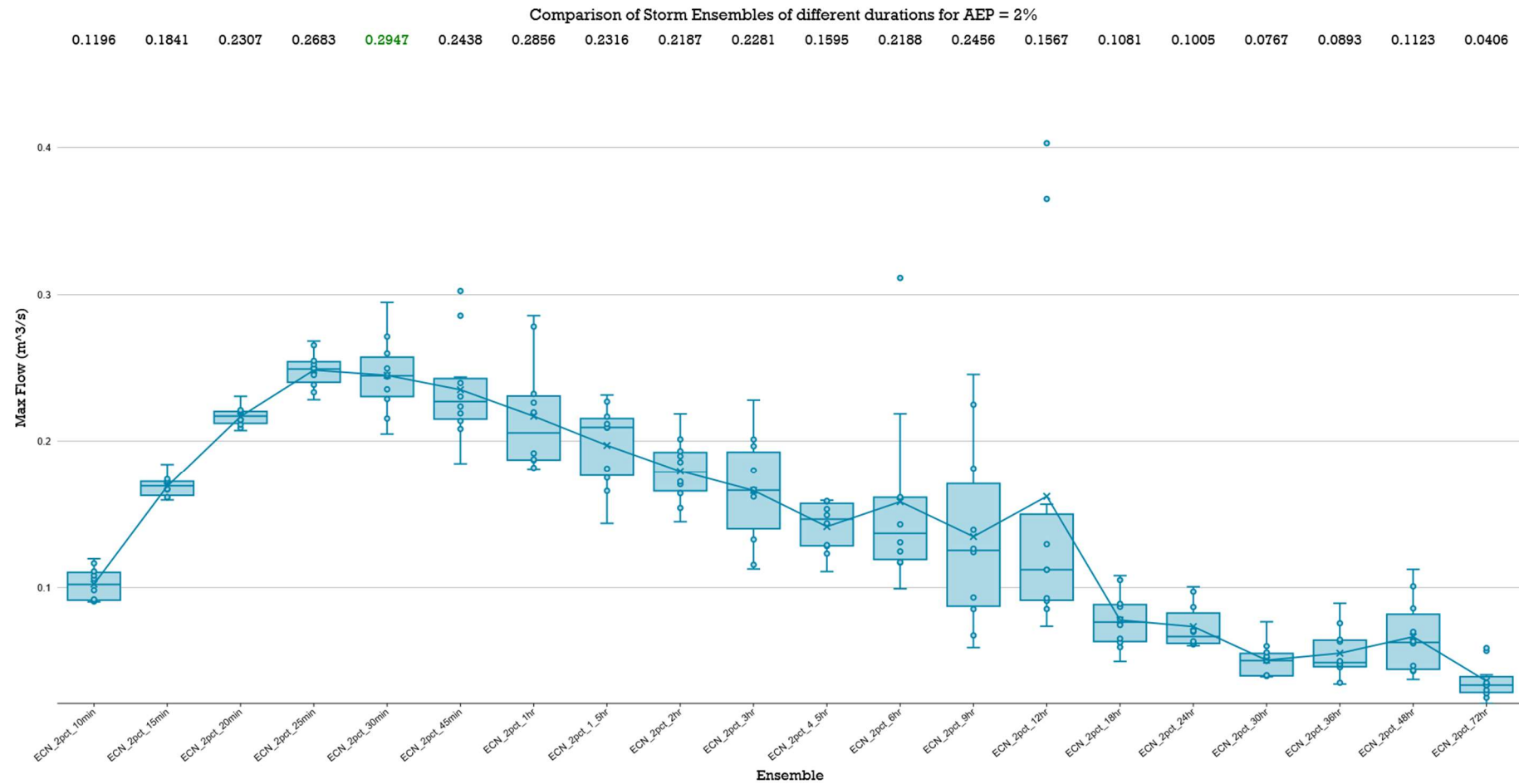


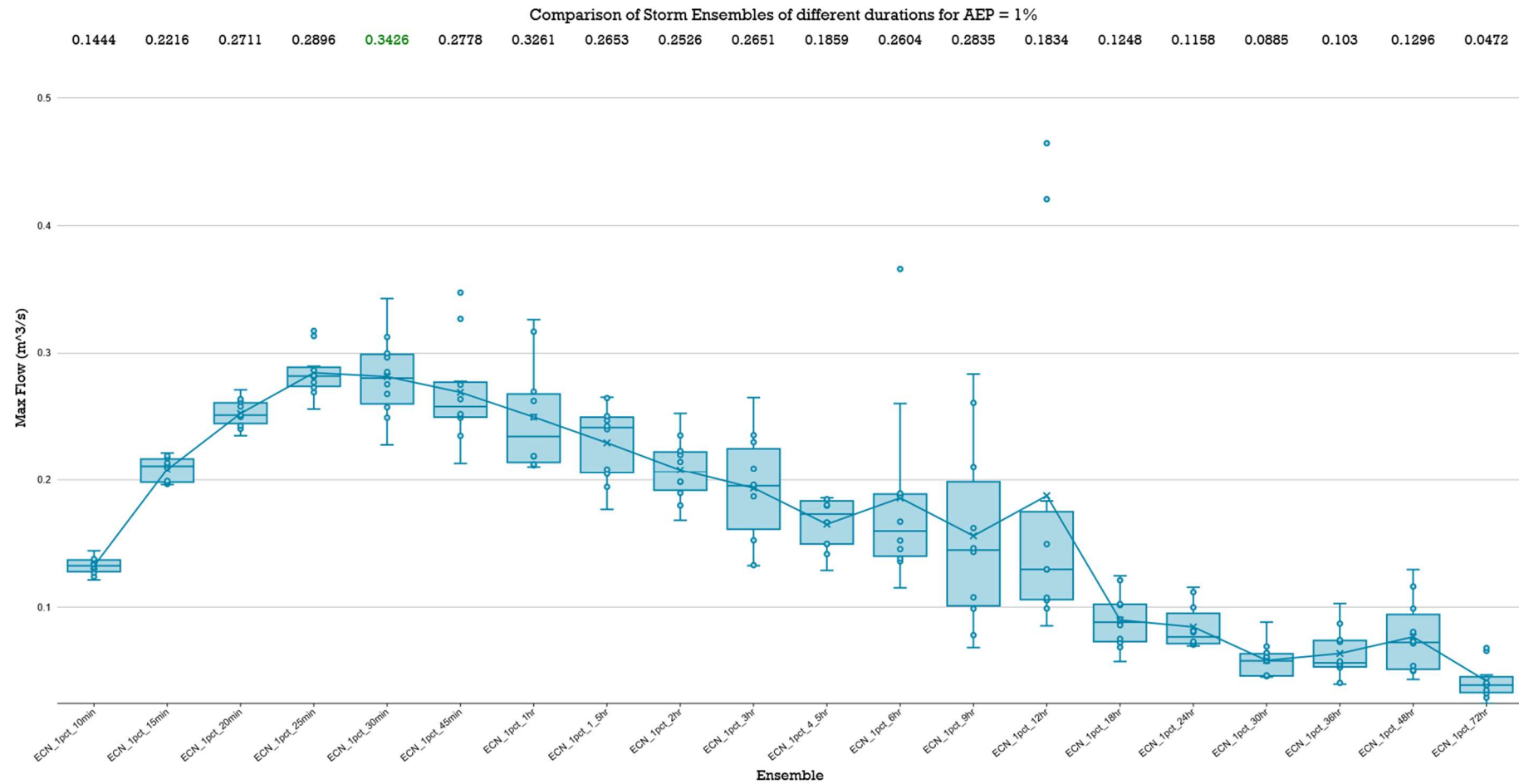




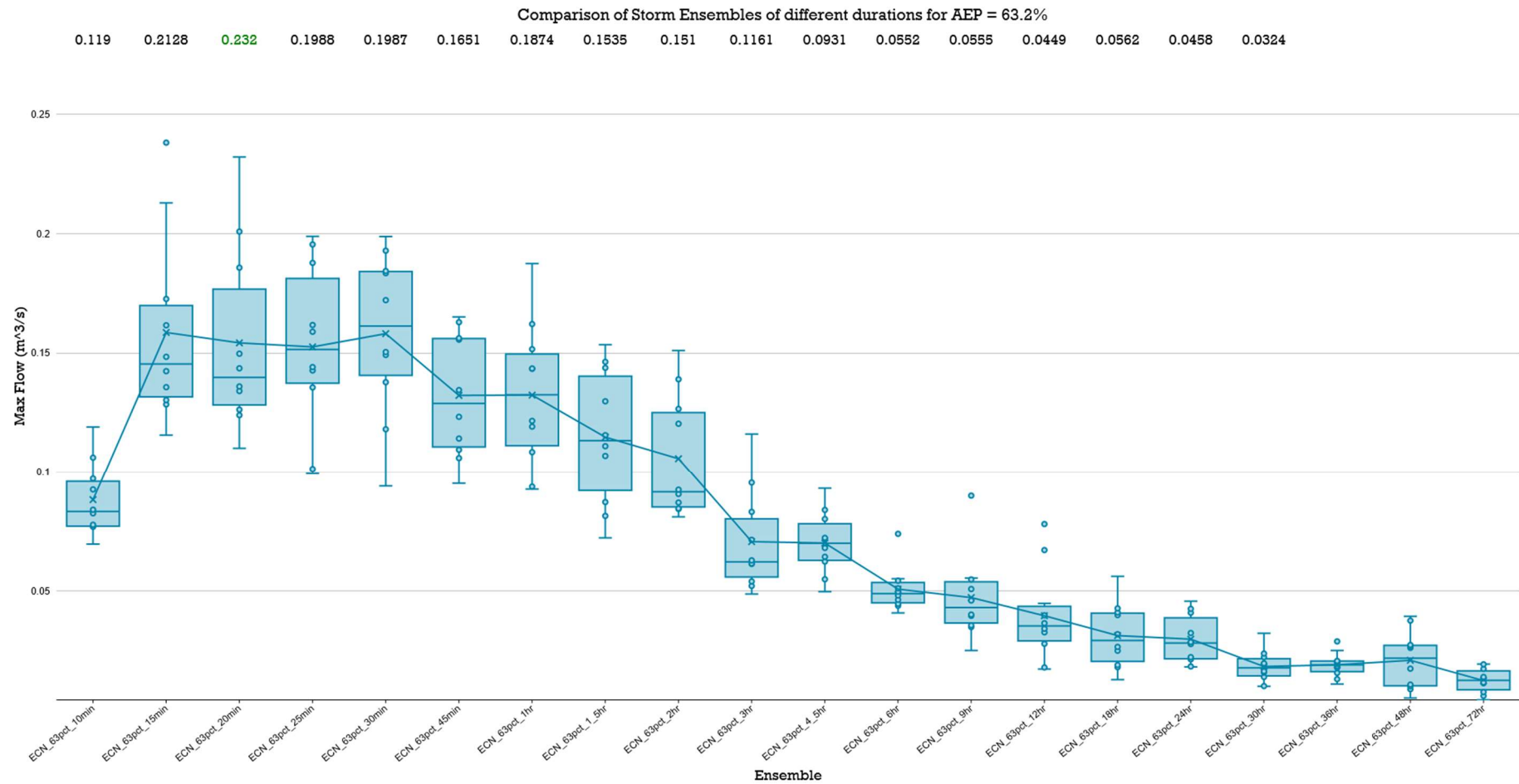


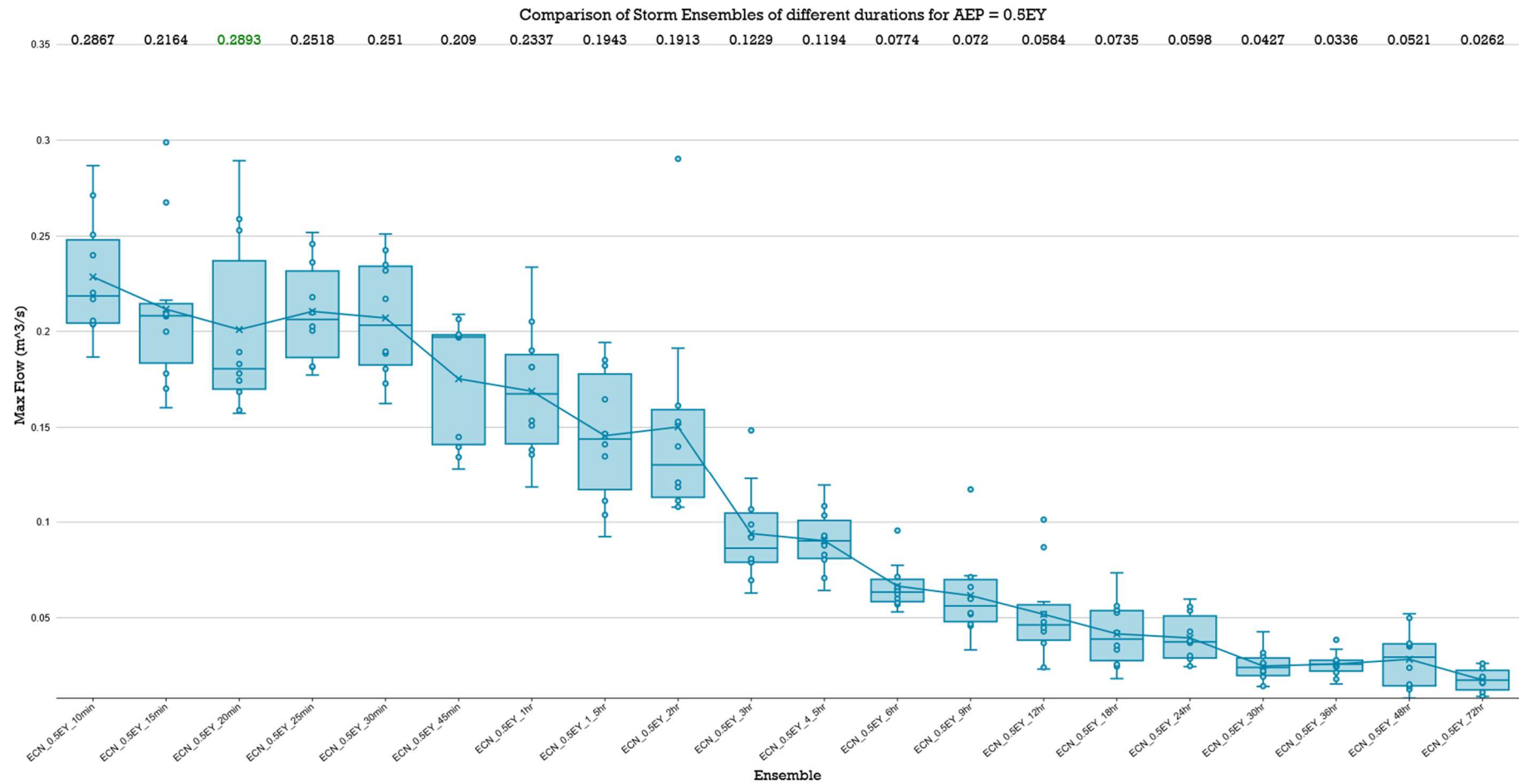


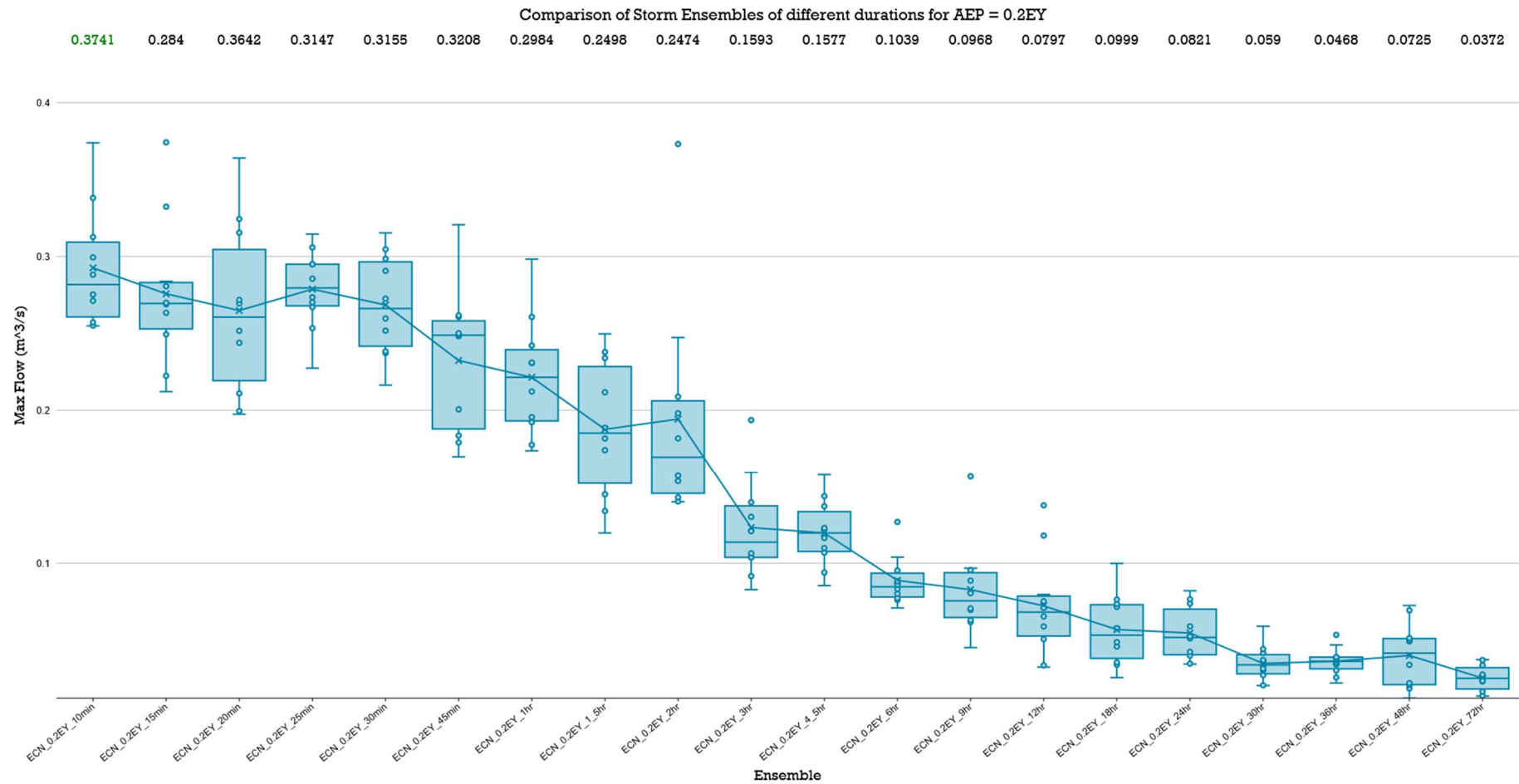


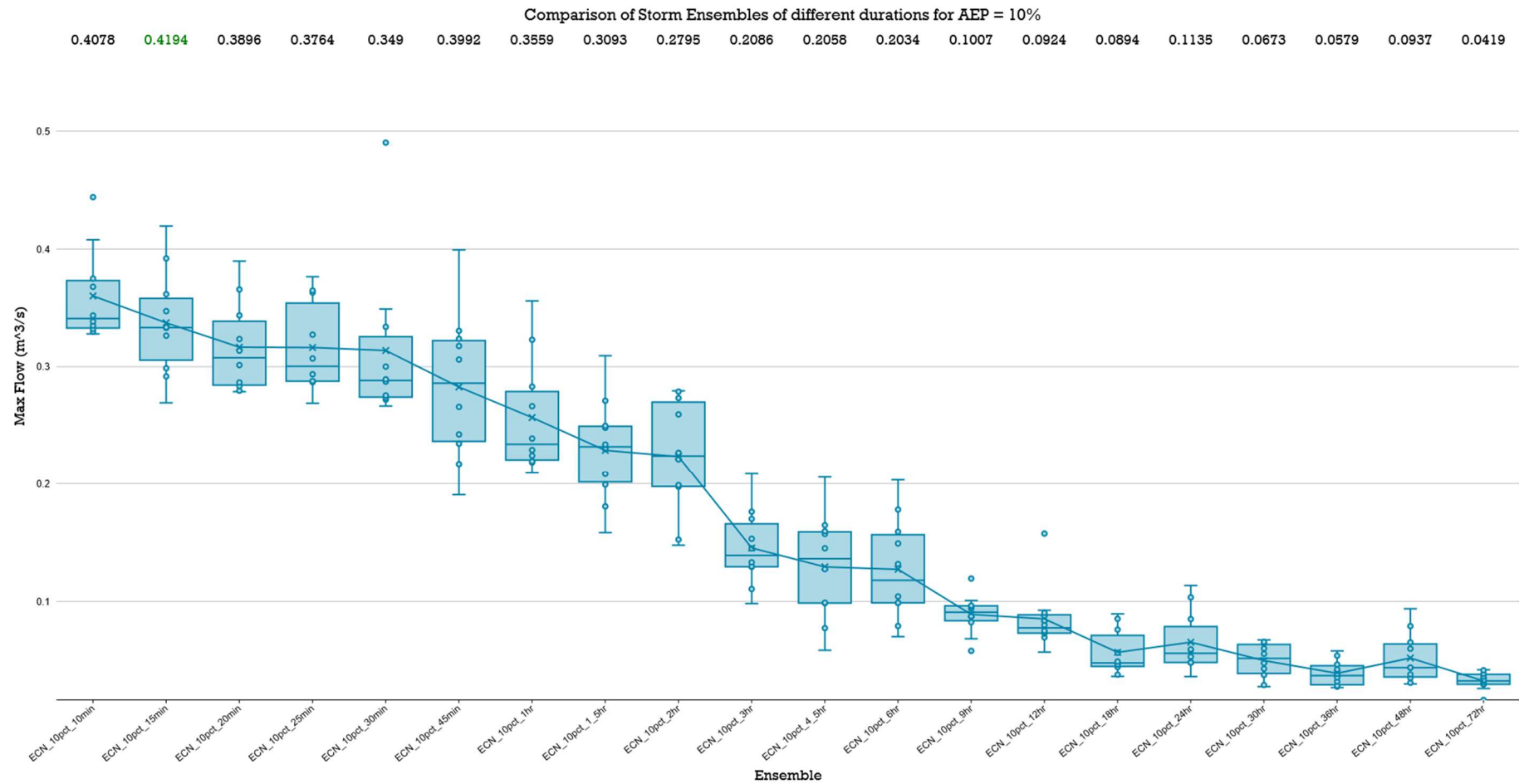


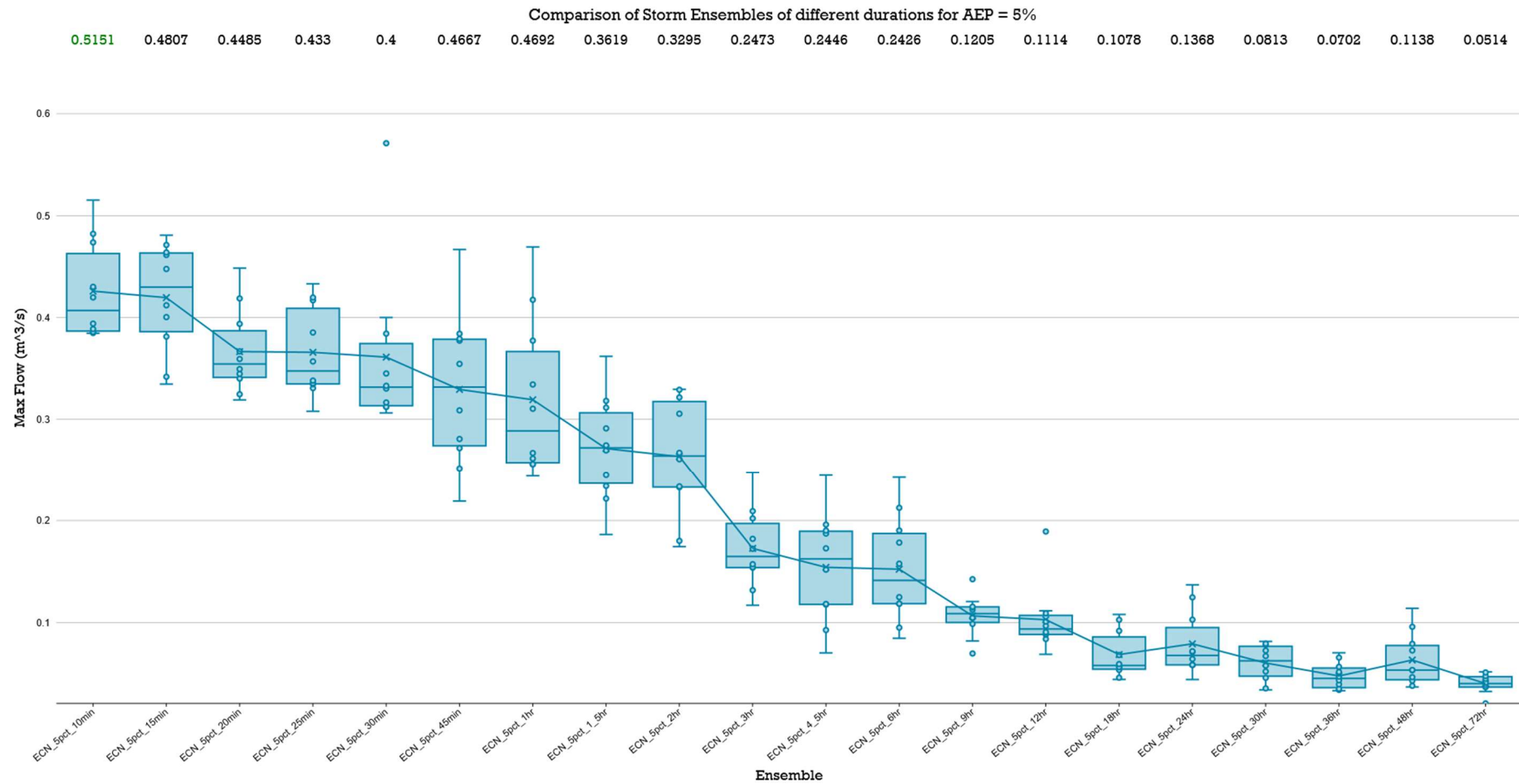
LPoD-3 POST DEVELOPED 'MAXIMUM PEAK' Box & Whisker Plots – 72 Hour

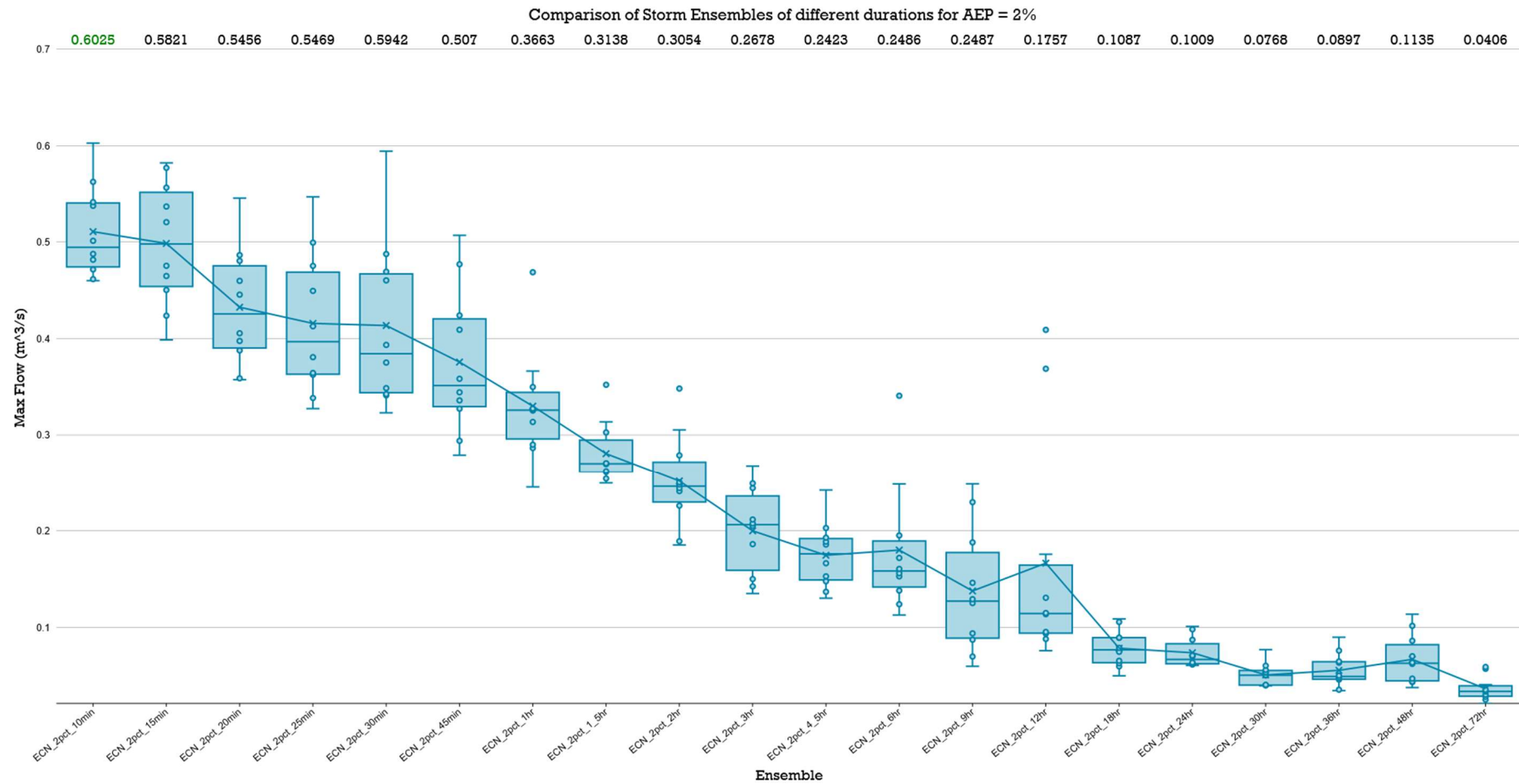


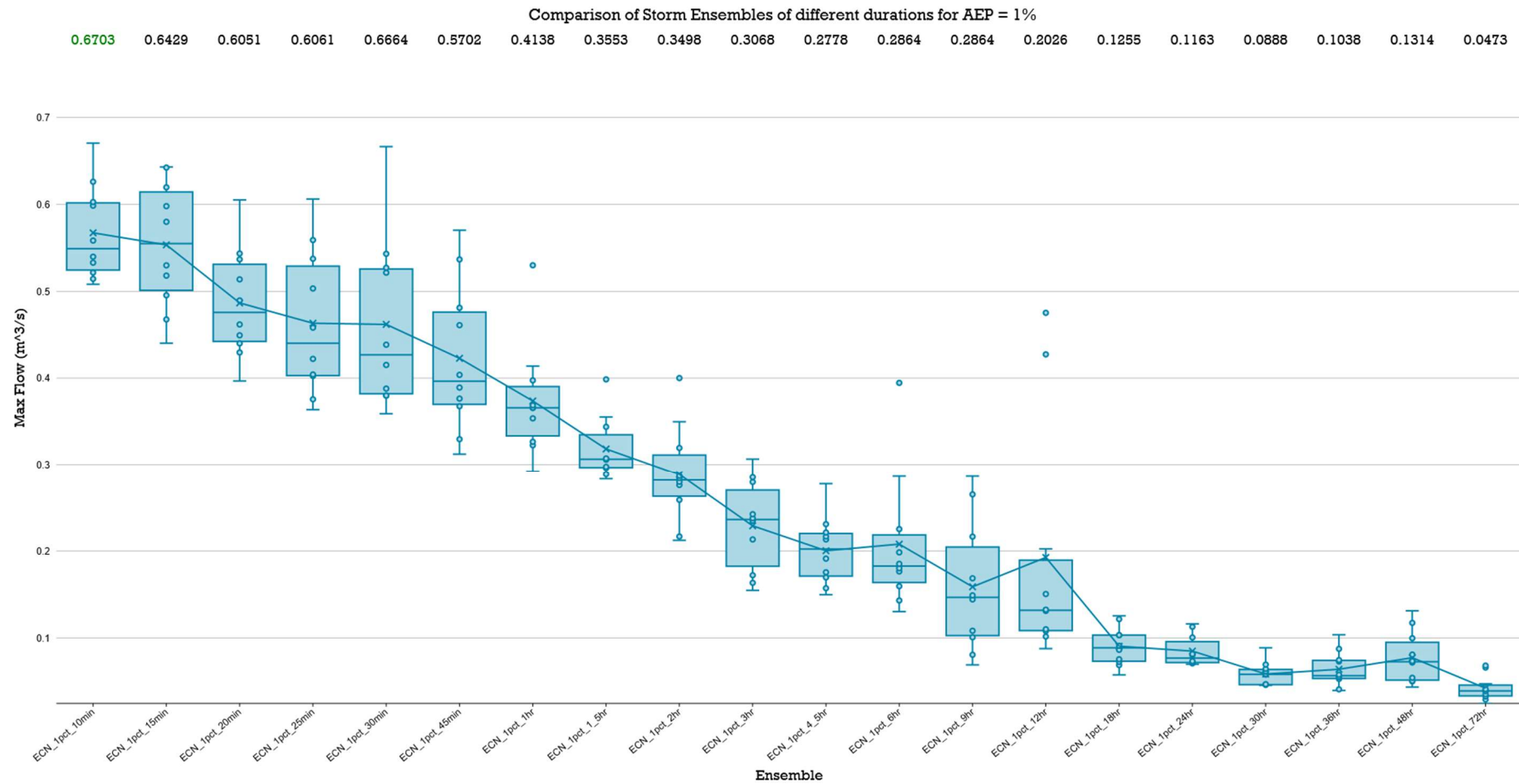




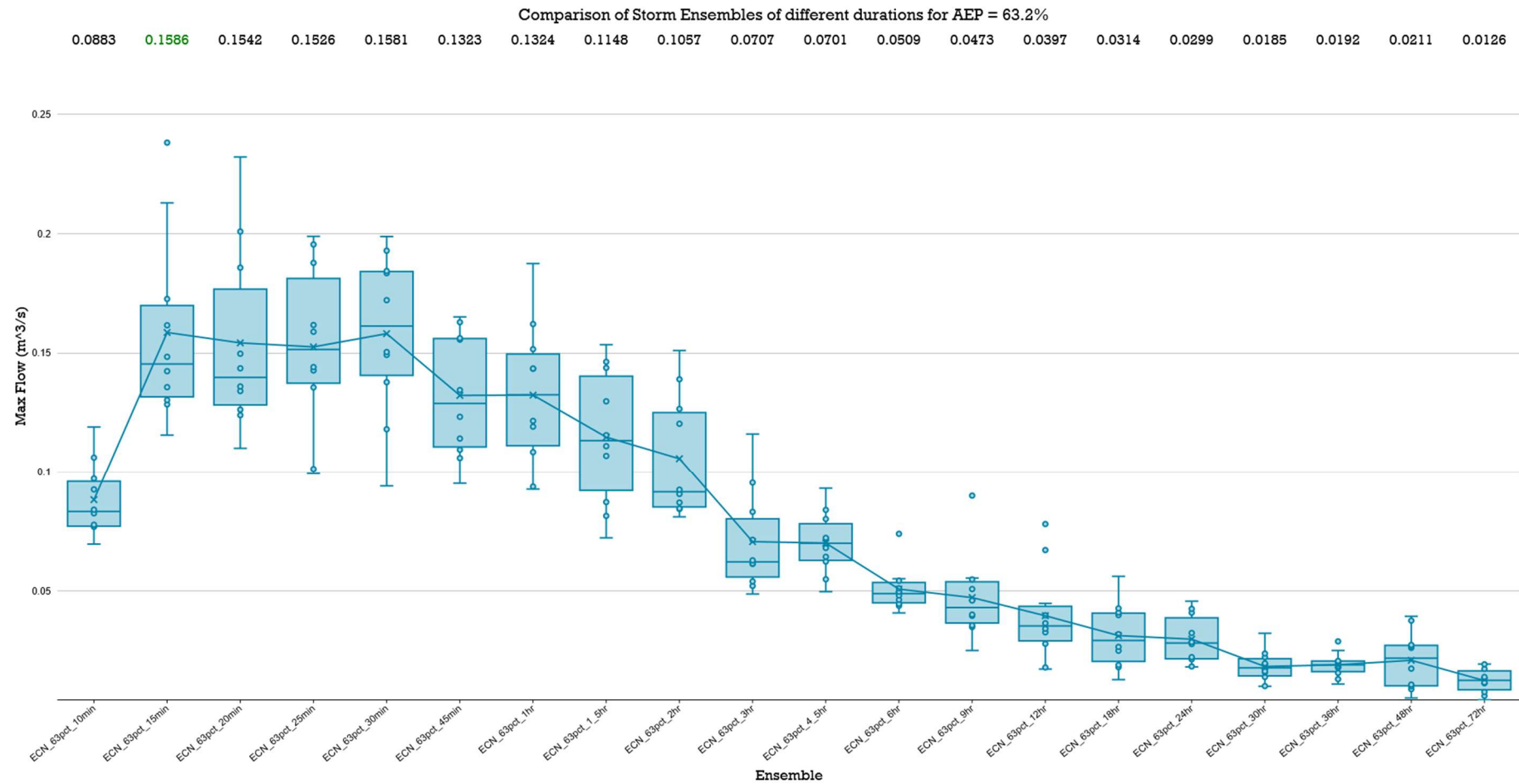


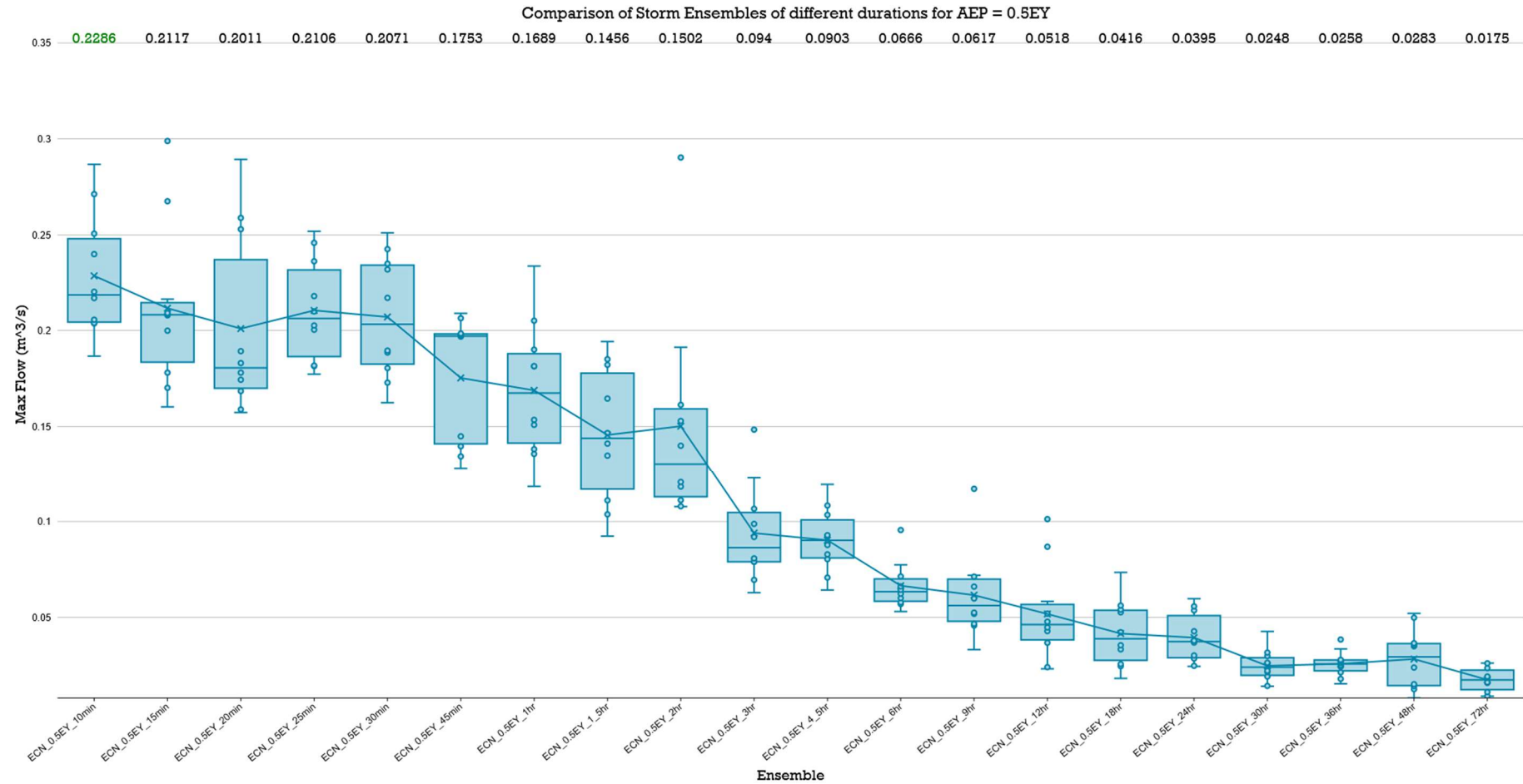


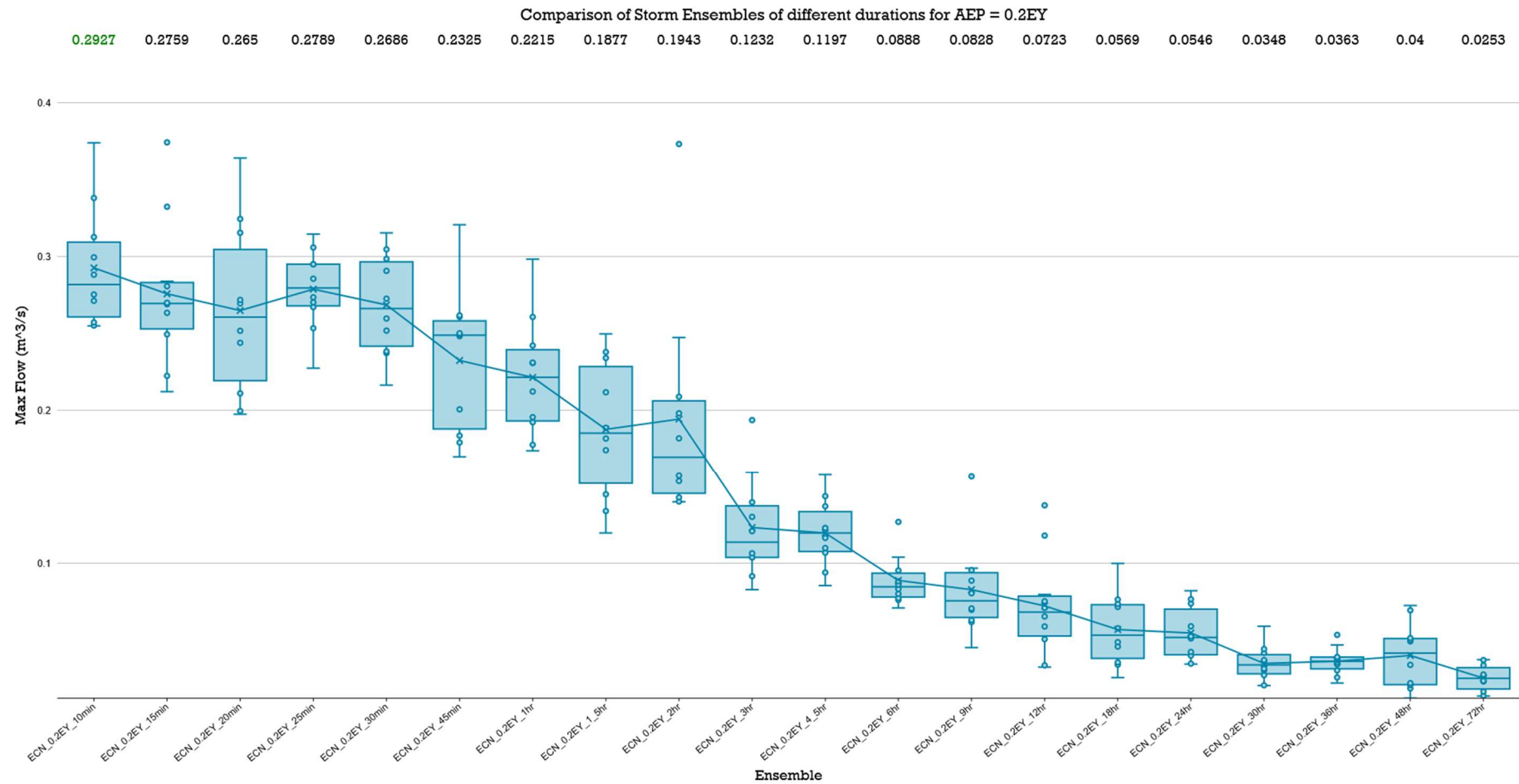


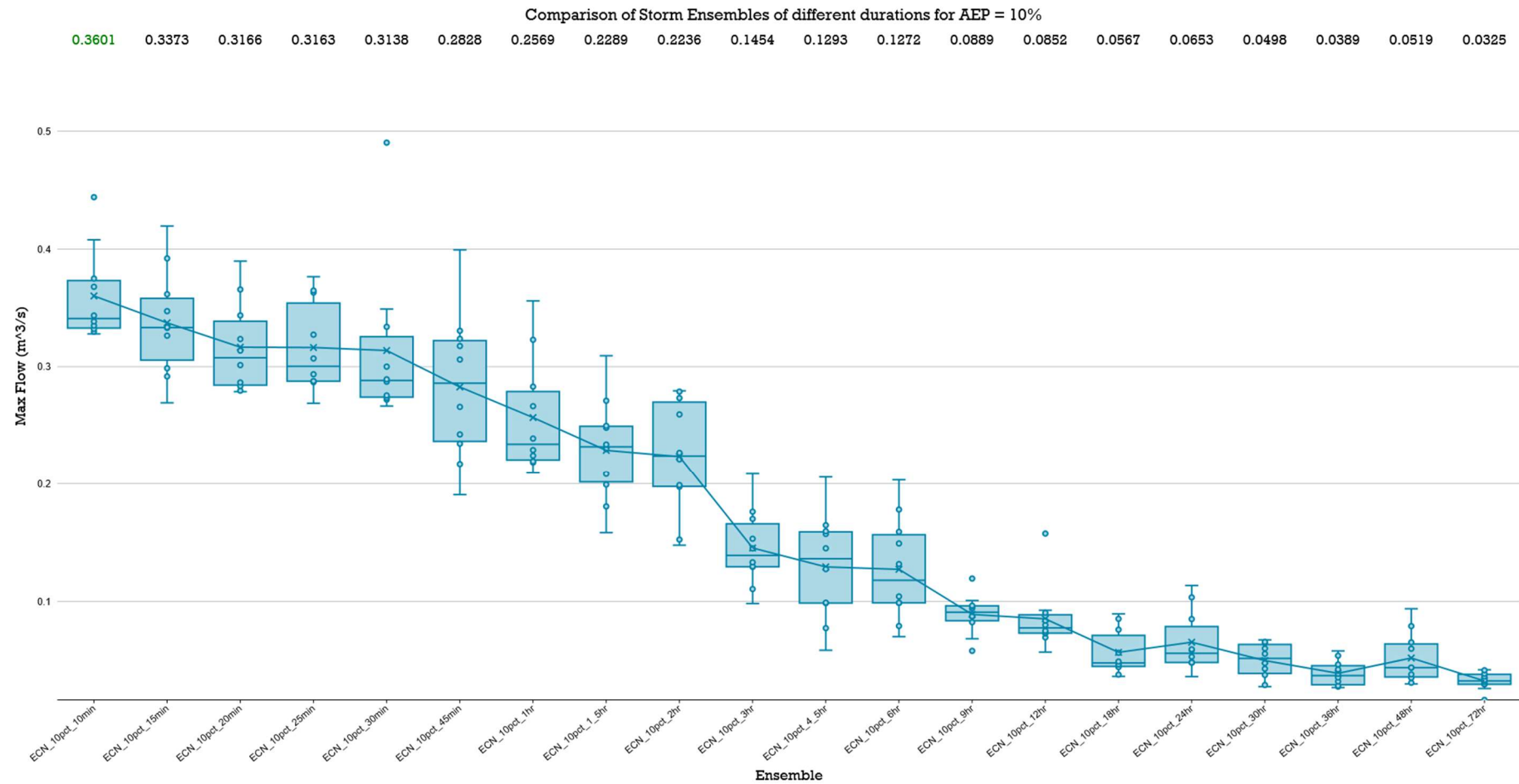


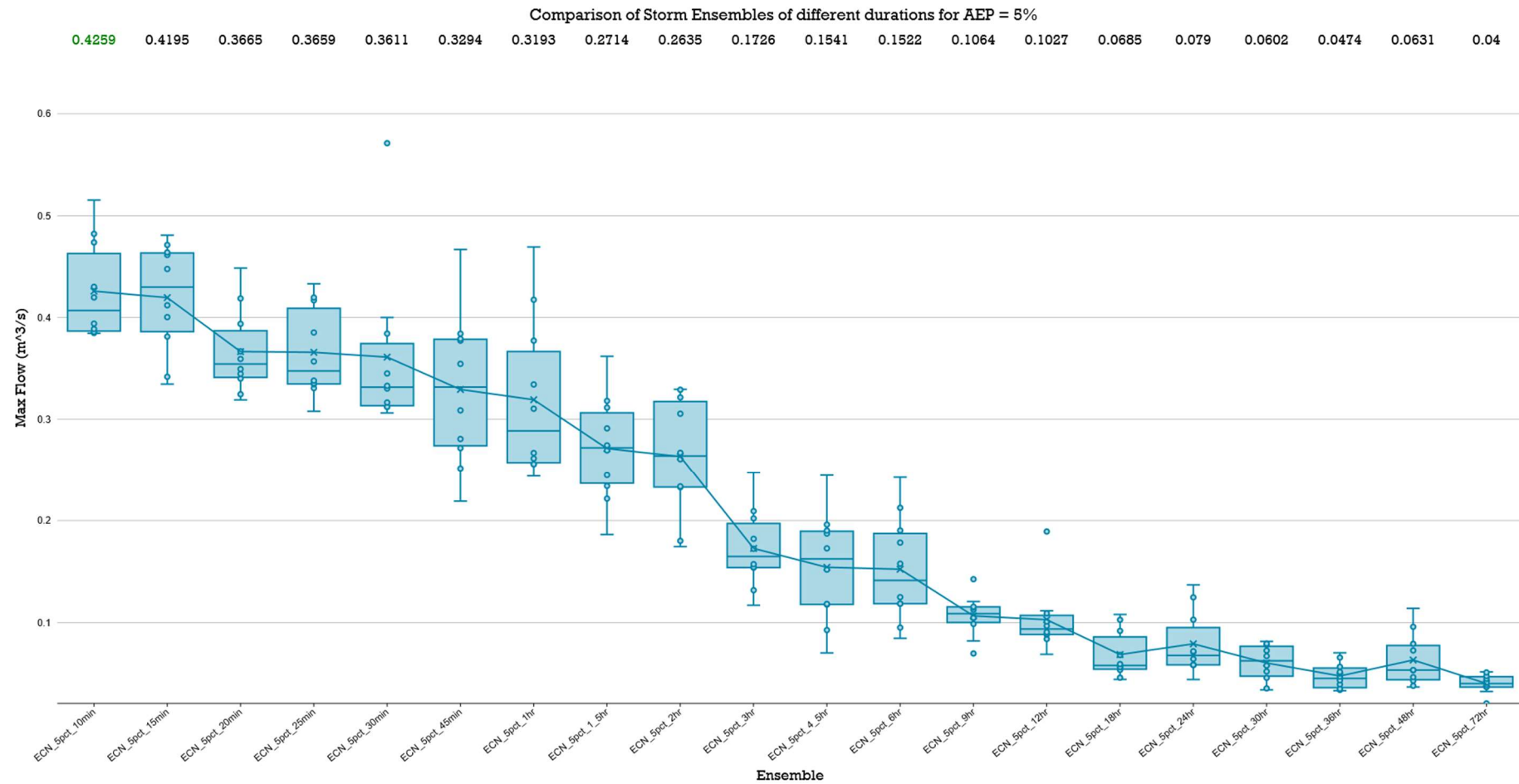
LPoD-3 POST DEVELOPED 'MEAN PEAK' Box & Whisker Plots – 72 Hour

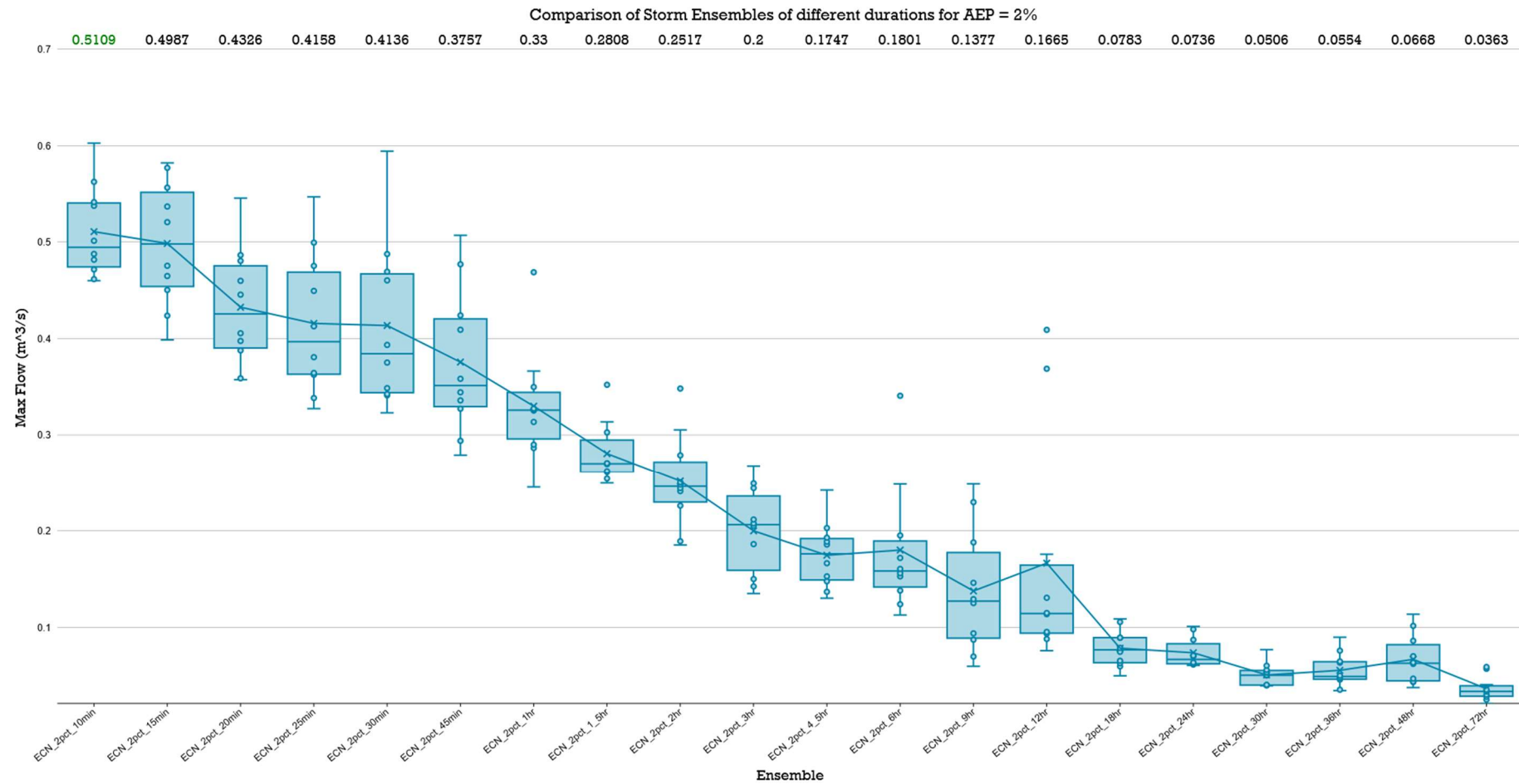


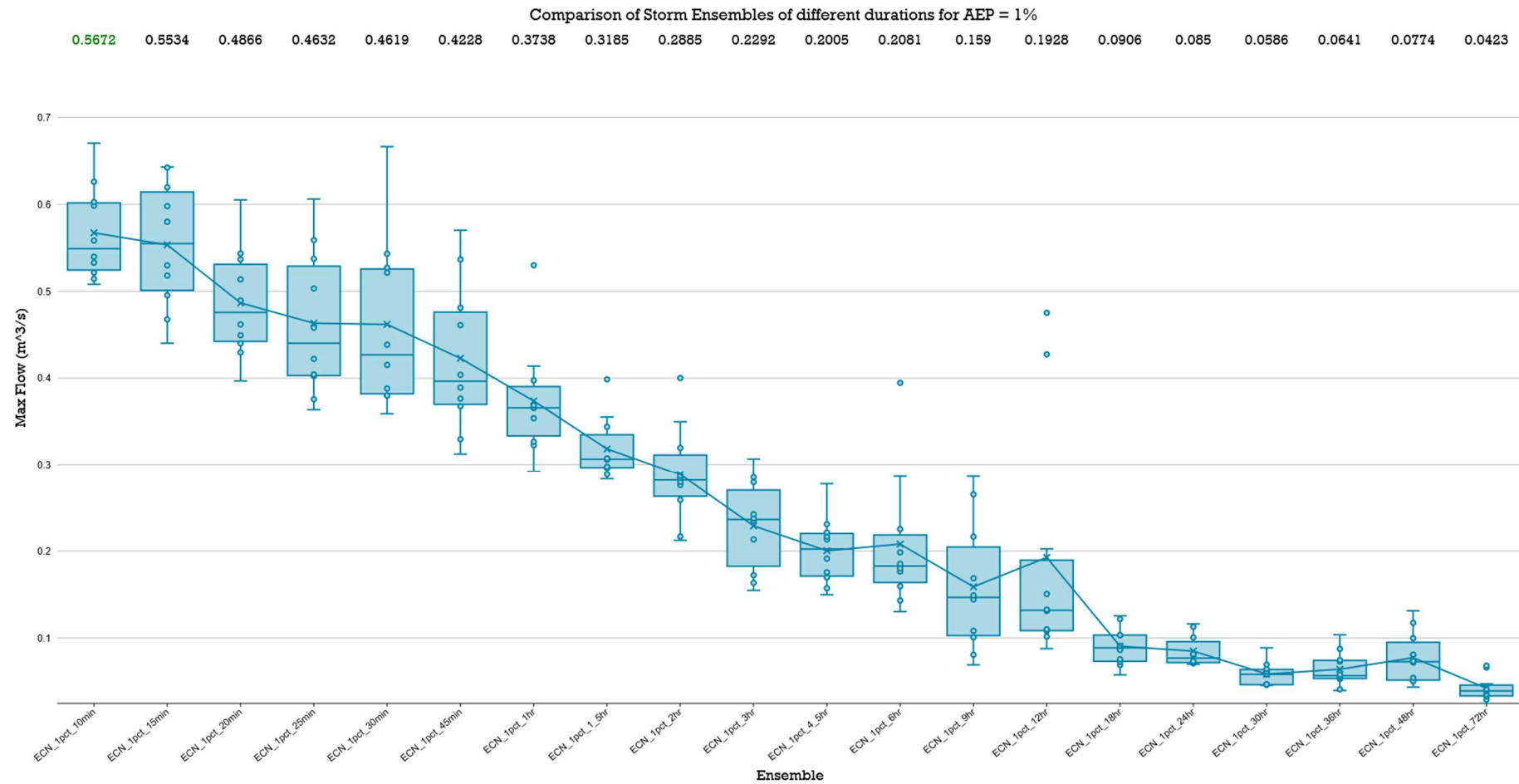












Appendix M – Mitigation Results

EVENT	PEAK <i>UNMITIGATED</i> FLOW	PEAK <i>MITIGATED</i> FLOW m3/s	TARGET FLOW (PRE-DEV) m3/s	PRE-DEVELOPED MEAN PEAK STORM	PASS?	POST-DEVELOPED CRITICAL MEAN PEAK STORM	BASIN OUTLET CONFIGURATION "CONDUIT" MEAN PEAK FLOWS								BASIN INUNDATION DEPTHS			Compliance
				DURATION		DURATION	1	2	3	4	5	6	7	TOTAL	Depth	WSE R.L.	Nominal Basin IL	
63pct	1.0635	0.5551	0.5609	ECN_63pct_1_5hr	Yes	ECN_63pct_30min	0.0000	0.2921	0.0000	0.1846	0.0784	0.0000	0.0000	0.5551	0.671	13.171	12.500	-
0.5EY	1.4704	0.8339	0.8344	ECN_0.50EY_1hr	Yes	ECN_0.50EY_10min	0.0000	0.3331	0.0076	0.2486	0.2446	0.0000	0.0000	0.8339	0.784	13.284	12.500	-
20pct	1.9597	1.1686	1.1958	ECN_20pct_30min	Yes	ECN_20pct_10min	0.0045	0.3717	0.0737	0.3020	0.4168	0.0000	0.0000	1.1686	0.899	13.399	12.500	-
10pct	2.4040	1.4215	1.5508	ECN_10pct_30min	Yes	ECN_10pct_10min	0.0496	0.3961	0.1551	0.3343	0.4864	0.0000	0.0000	1.4215	0.980	13.480	12.500	-
5pct	2.8427	1.7018	1.8882	ECN_5pct_30min	Yes	ECN_5pct_10min	0.1691	0.4186	0.2330	0.3633	0.5178	0.0000	0.0000	1.7018	1.060	13.560	12.500	YES
2pct	3.3529	2.1316	2.3856	ECN_2pct_25min	Yes	ECN_2pct_10min	0.4624	0.4409	0.2802	0.3913	0.5569	0.0000	0.0000	2.1316	1.141	13.641	12.500	
1pct	3.7613	2.4478	2.7043	ECN_1pct_25min	Yes	ECN_1pct_10min	0.7047	0.4530	0.2986	0.4063	0.5852	0.0000	0.0000	2.4478	1.188	13.688	12.500	YES

< 1.20m

< 1.50m

DESCRIPTION OF OUTLETS:	Weir	600x600FI +000	600x600FI +500	dia240 Orifice	High Flow 450	UPDATE	UPDATE
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EVENT	PEAK <i>MITIGATED</i> FLOW m3/s	TARGET FLOW (PRE-DEV) m3/s	MITIGATED BY m3/s	MITIGATED BY %
63pct	0.5551	0.5609	0.0058	1.0%
0.5EY	0.8339	0.8344	0.0004	0.0%
20pct	1.1686	1.1958	0.0272	2.3%
10pct	1.4215	1.5508	0.1294	8.3%
5pct	1.7018	1.8882	0.1864	9.9%
2pct	2.1316	2.3856	0.2540	10.6%
1pct	2.4478	2.7043	0.2565	9.5%

AREA FOR DETENTION	0m2	<----- Surface Area measured at Weir Crest Level of RLXX.XXXm AHD	
AREA FOR TREATMENT	300 m2	<----- Refer MUSIC-Link Report	
BASIN FLOOR IL:		12.500	
TOP OF FREEBOARD IL:		12.800	
BASIN WEIR RL:		13.500	
BASIN CROWN:		14.000	(at lowest point)
FREEBOARD to 1% AEP ACHIEVED:		0.312	m
NORMAL' REPORTING OUTLINED IN ORANGE			

EVENT	PEAK <i>UNMITIGATED</i> FLOW	PEAK <i>MITIGATED</i> FLOW m3/s	TARGET FLOW (PRE-DEV) m3/s	PRE-DEVELOPED MEAN PEAK STORM	PASS?	POST-DEVELOPED CRITICAL MEAN PEAK STORM	BASIN OUTLET CONFIGURATION "CONDUIT" MEAN PEAK FLOWS								BASIN INUNDATION DEPTHS			Compliance	
				DURATION		DURATION	1	2	3	4	5	6	7	TOTAL	Depth	WSE R.L.	Nominal Basin IL		
63pct	2.1878	0.9574	0.9671	ECN_63pct_1_5hr	Yes	ECN_63pct_30min	0.0000	0.7092	0.0460	0.2023	0.0000	0.0000	0.0000	0.9574	0.732	15.432	14.700	-	< 1.20m
0.5EY	2.9122	1.3743	1.4280	ECN_0.50EY_1hr	Yes	ECN_0.50EY_30min	0.0000	0.8221	0.2774	0.2659	0.0044	0.0044	0.0000	1.3743	0.879	15.579	14.700	-	
20pct	4.0684	2.0339	2.0961	ECN_20pct_1hr	Yes	ECN_20pct_10min	0.0000	0.9200	0.6133	0.3165	0.0921	0.0921	0.0000	2.0339	1.025	15.725	14.700	-	
10pct	4.9389	2.5357	2.6779	ECN_10pct_45min	Yes	ECN_10pct_10min	0.0000	0.9861	0.7094	0.3496	0.2453	0.2453	0.0000	2.5357	1.133	15.833	14.700	-	
5pct	5.8376	3.0155	3.3168	ECN_5pct_45min	Yes	ECN_5pct_10min	0.0000	1.0478	0.7930	0.3798	0.3974	0.3974	0.0000	3.0155	1.240	15.940	14.700	NO	< 1.50m
2pct	6.9213	3.7250	3.9989	ECN_2pct_30min	Yes	ECN_2pct_10min	0.2840	1.1234	0.8913	0.4165	0.5049	0.5049	0.0000	3.7250	1.380	16.080	14.700		
1pct	7.7786	4.1298	4.6244	ECN_1pct_30min	Yes	ECN_1pct_10min	0.4330	1.1787	0.9598	0.4430	0.5577	0.5577	0.0000	4.1298	1.489	16.189	14.700	YES	

< 1.20m

< 1.50m

DESCRIPTION OF OUTLETS:	Weir	900x900FI +000	900x900FI +400	dia230 Orifice	High Flow dia450 IL15.7	High Flow dia450 IL15.7_2	UPDATE
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EVENT	PEAK <i>MITIGATED</i> FLOW m3/s	TARGET FLOW (PRE-DEV) m3/s	MITIGATED BY m3/s	MITIGATED BY %
63pct	0.9574	0.9671	0.0097	1.0%
0.5EY	1.3743	1.4280	0.0537	3.8%
20pct	2.0339	2.0961	0.0622	3.0%
10pct	2.5357	2.6779	0.1422	5.3%
5pct	3.0155	3.3168	0.3014	9.1%
2pct	3.7250	3.9989	0.2740	6.9%
1pct	4.1298	4.6244	0.4946	10.7%

BASIN FLOOR IL: 14.700

TOP OF FREEBOARD IL: 15.000

BASIN WEIR RL: 16.200

BASIN CROWN: 16.500 (at lowest point)

FREEBOARD to 1% AEP ACHIEVED: 0.311

 m

NORMAL' REPORTING OUTLINED IN ORANGE

EVENT	PEAK <i>UNMITIGATED</i> FLOW	PEAK <i>MITIGATED</i> FLOW m3/s	TARGET FLOW (PRE-DEV) m3/s	PRE-DEVELOPED MEAN PEAK STORM	PASS?	POST-DEVELOPED CRITICAL MEAN PEAK STORM	BASIN OUTLET CONFIGURATION "CONDUIT" MEAN PEAK FLOWS								BASIN INUNDATION DEPTHS			Compliance
				DURATION		DURATION	1	2	3	4	5	6	7	TOTAL	Depth	WSE R.L.	Nominal Basin IL	
63pct	0.1581	0.0557	0.0592	ECN_63pct_1hr	Yes	ECN_63pct_30min	0.0557	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0557	0.596	12.096	11.500	-
0.5EY	0.2286	0.0730	0.0886	ECN_0.50EY_1hr	Yes	ECN_0.50EY_10min	0.0716	0.0014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0730	0.694	12.194	11.500	-
20pct	0.2927	0.1005	0.1270	ECN_20pct_1hr	Yes	ECN_20pct_10min	0.0880	0.0125	0.0000	0.0000	0.0000	0.0000	0.0000	0.1005	0.821	12.321	11.500	-
10pct	0.3601	0.1264	0.1643	ECN_10pct_45min	Yes	ECN_10pct_10min	0.0998	0.0261	0.0005	0.0000	0.0000	0.0000	0.0000	0.1264	0.925	12.425	11.500	-
5pct	0.4259	0.1501	0.2001	ECN_5pct_45min	Yes	ECN_5pct_10min	0.1106	0.0368	0.0028	0.0000	0.0000	0.0000	0.0000	0.1501	1.031	12.531	11.500	YES
2pct	0.5109	0.2125	0.2486	ECN_2pct_25min	Yes	ECN_2pct_10min	0.1204	0.0450	0.0105	0.0367	0.0000	0.0000	0.0000	0.2125	1.137	12.637	11.500	
1pct	0.5672	0.2409	0.2845	ECN_1pct_25min	Yes	ECN_1pct_10min	0.1267	0.0499	0.0164	0.0479	0.0000	0.0000	0.0000	0.2409	1.208	12.708	11.500	YES

< 1.20m

< 1.50m

DESCRIPTION OF OUTLETS:	140 Orifice +000	120 Orifice +400	100 Orifice +700	Weir	UPDATE	UPDATE	UPDATE
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EVENT	PEAK <i>MITIGATED</i> FLOW m3/s	TARGET FLOW (PRE-DEV) m3/s	MITIGATED BY m3/s	MITIGATED BY %
63pct	0.0557	0.0592	0.0035	6.0%
0.5EY	0.0730	0.0886	0.0157	17.7%
20pct	0.1005	0.1270	0.0264	20.8%
10pct	0.1264	0.1643	0.0379	23.1%
5pct	0.1501	0.2001	0.0500	25.0%
2pct	0.2125	0.2486	0.0360	14.5%
1pct	0.2409	0.2845	0.0437	15.3%

BASIN FLOOR IL: 11.500

TOP OF FREEBOARD IL: 11.800

BASIN WEIR RL: 12.700

BASIN CROWN: 13.000 (at lowest point)

FREEBOARD to 1% AEP ACHIEVED: 0.292 m

NORMAL' REPORTING OUTLINED IN ORANGE

Appendix N – External Stormwater Catchment Conveyance Strategy



Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VantageYatala

STAGE 3

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST COUNCIL
Level Datum:	AHD
Meridian:	-
Contour Interval:	-
PSM:	-
RI:	-

ISSUED FOR CONSTRUCTION

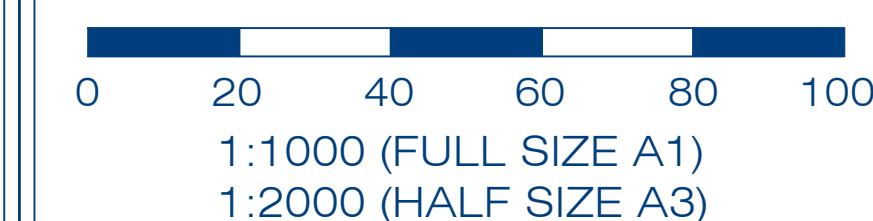
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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

DRAWING TITLE

STORMWATER CONVEYANCE LAYOUT PLAN

A	20/04/23	ORIGINAL ISSUE	JH	M
Issue	Date	Description	DRN	Ch



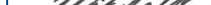
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Designed:	JH
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Drafted:	MG
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Approved:	MG
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RPEQ:	16030
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Signed:	
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Date:	20/04/2023
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Drawing No:	Rev. No:
5941 ENG SMP3 005	A

Appendix O – WSUD Design Checklists

TABLE D.1 GENERAL APPLICATION INFORMATION

(GDP Ref: 5941)

APPLICATION INFORMATION			
Site or Project Name	Vantage Stage 3	DA No.	
Lot and Plan No.	Lot 201 on PS295994		
Location	60 Stapylton Jacobs Well Road, Stapylton, QLD		

TABLE D.2 CLIMATE AND TIME STEP ASSESSMENT CHECKLIST (REFER TO SECTION 3 & APPENDIX A)

CLIMATE & TIME-STEP (CHECK REPORTING TABLE C1)	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Has the correct rainfall station been used?	Y		CoGC Misuc Link North
Has a 6-minute time-step been used for assessment against stormwater quality management objectives?	Y		
Has the correct modelling period been selected?	Y		
Has the correct potential evapotranspiration been selected?	Y		

TABLE D.3 CATCHMENT AND SOURCE NODE ASSESSMENT CHECKLIST (REFER TO SECTION 3.3)

CLIMATE & TIME-STEP (CHECK REPORTING TABLE C1)	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Are the source node areas reported appropriate with respect to catchment areas shown on the plan?	Y		
Does the total area reported reflect the total catchment relative to the development application?	Y		
Does the land use reported reflect the proposed land use?	Y		
Is the total imperviousness percentage for each land type appropriate (for development applications this must be measured direct from plans)?	Y		

CATCHMENT SPLIT (CHECK REPORTING TABLE C3)	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Has a 'split catchment' approach been used?	Y		
Does the area of each land use/surface type reported reflect the areas shown on the plan?	Y		
Does the total area reported reflect the total catchment?	Y		
Do the land uses or surface types reported reflect the proposed development i.e. have correct source nodes been used?	Y		
Is the fraction imperviousness for each land uses or surface type appropriate? Nb: for development applications this must be measured direct from plan, otherwise refer Section 3.3.3.	Y		
For split catchment modelling where rainwater tanks are proposed as treatment nodes, is the percentage of connected roof area appropriate (Section 4.2)?	N/A		

TABLE D.4 RAINFALL AND RUNOFF ASSESSMENT CHECKLIST (REFER TO SECTION 3.3 AND APPENDIX A)

RAINFALL RUN-OFF AND POLLUTANT EXPORT PARAMETER (CHECK REPORTING TABLE B4 AND TABLE)	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Have the correct rainfall runoff parameters been used?	Y		
Are appropriate pollutant export parameters used?	Y		
Has stochastic generation been used for all pollutants?	Y		

TABLE D.5 ALL TREATMENT NODES ASSESSMENT CHECKLIST

ALL TREATMENT NODES	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Will treatment nodes modelled be free draining? Compare the total depth of the treatment measures modelled against development plan levels.	Y		
Have any receiving environments been modelled as treatment systems? These include natural waterways, natural wetlands, naturalised channel systems, environmental buffers, freshwater and brackish lake and pond systems (existing or constructed). Stormwater must be treated before it discharges to these systems.	N/A		

TABLE D.6 RAINWATER TANK NODES ASSESSMENT CHECKLIST (REFER TO SECTION 4.2)

RAINWATER TANKS (CHECK REPORTING TABLE B6)	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Has the volume below overflow pipe (kL) been calculated appropriately?			
Has the depth above the overflow been calculated appropriately?			
If tanks are lumped, is depth below overflow the same as a single tank and overflow pipe scaled accordingly (Section 4.2.5)?			
Has the total tank surface area been calculated appropriately? For lumped tanks refer to Section 4.2.5.			
Has the overflow pipe diameter been calculated appropriately? For lumped tanks this must be equivalent to the diameter of the overflow pipe of a single tank multiplied by the square root of the number of tanks (Section 4.2.5).			
Has stormwater reuse been calculated appropriately? PET PET – Rain			
Have appropriate indoor connections been selected?			
Has the indoor demand been calculated appropriately?			
Has the outdoor demand been calculated appropriately?			
Has the daily demand been calculated appropriately?			
Has the monthly distribution of annual demand been calculated appropriately?			
Have K and C* been retained as default values? (Y/N)			

N/A

TABLE D.7 WETLAND NODE ASSESSMENT CHECKLIST (REFER TO SECTION 4.3)

RAINWATER TANKS (CHECK REPORTING TABLE B6)	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Has the inlet pond volume sized appropriately to capture coarse sediment?			
Has the macrophyte zone surface area been calculated appropriately?			
Is the extended detention depth less than, or equal to, 0.5 m?			
Has the permanent pool volume been calculated appropriately?			
Is the exfiltration rate set to 0 mm/hr?			
If an exfiltration rate has been used, has the secondary drainage link been used to return the exfiltrated flows to the model? (Section 4.1)			
Has the evaporative loss as % of PET been set to 125% or less?			
Has the equivalent pipe diameter been set so that the notional detention time is about 48 hours?			
Has the overflow weir width been calculated appropriately?			
Is the notional detention time (hrs) approximately 48 hours?			
Are the number of CSTRs appropriate for the shape of the system?			
Have K and C* been retained as default values for all parameters except nitrogen which has been adjusted to reflect Section 4.3.4? (Y/N)			

N/A

TABLE D.8 SWALE NODE ASSESSMENT CHECKLIST (REFER TO SECTION 4.4)

SWALES (CHECK REPORTING TABLE C8)	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Is the length equivalent to the length shown on the development plans and does it account for conveyance capacity and safety limitations selected in accordance with the WSUD Technical Design Guidelines for SEQ?			
Is the bed slope less than or equal to 4%?			
Are the base width, top width and depth equivalent to the length shown on the development plans?			
Is the set vegetation height appropriate for the selected species (Section 4.4)?			
Is the exfiltration rate set to 0 mm/hr?			
If an exfiltration rate has been used, has the secondary drainage link been used to return the exfiltrated flows to the model? (Section 4.1)			
If the swale accepts point source discharges at given locations, is it split into separate lengths?			
Have K and C* been retained as default values?			
BIORETENTION SWALE CHECKS			
Is the swale node located in the model downstream of bioretention swale surface component? (Y/N)			
Is the low-flow bypass of the swale node set to the infiltration rate of the filter? (Y/N)			

N/A

TABLE D.9 BIORETENTION AND BIORETENTION SWALE NODES ASSESSMENT CHECKLIST (REFER TO SECTION 4.5)

BIORETENTION AND BIORETENTION SWALE FILTER COMPONENTS (CHECK REPORTING TABLE C8 AND TABLE C9)	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Has the filter surface area been calculated appropriately?	Y		
Is the extended detention depth consistent with the depth shown on the development plans and between 0-0.4 m?	Y		0.4m
Is the filter media area consistent with the area shown on the development plans?	Y		
Has an appropriate unlined filter media perimeter been set?	Y		200mm/Hr
Has an appropriate saturated hydraulic conductivity been set? This should be modelled once at 50 mm/hr, once at 200 mm/hr and both scenarios reported.	Y		
Is the filter media depth modelled equivalent to the depth of media shown on the plans? This depth should not include the intermediate layer, drainage layers, or submerged zone.	Y		
Is the TN content in the filter media set to either 400 mg/kg or another suitably justified value?	Y		
Is the orthophosphate content in the filter media set to 30 mg/kg or another suitably justified value?	Y		
Is the base lined?	Y		
Has the system been modelled to reflect the nutrient removal properties of the plants to be used on site?	Y		
Is the overflow weir width appropriate?	Y		10.0m
Is the exfiltration rate set to zero?	Y		
If an exfiltration rate has been used, has the secondary drainage link been used to return the exfiltrated flows to the model? (Section 4.1)	N/A		
If exfiltration rate has been used, is the exfiltration rate justified?	N/A		
Has the system been modelled with underdrains present?	Y		
Is a submerged zone with carbon present?		N	
Is the depth of submerged zone consistent with plans?		N/A	
If bioretention systems are modelled in series, is there a low-flow bypass modelled in the downstream bioretention system/s? (Note: separate drainage systems are required if a low-flow bypass is modelled)	N/A		
Have K and C* been retained as default values? (Y/N)	Y		
BIORETENTION SWALE COMPONENT ONLY (CHECK TABLE C8)			
Has an extended detention depth of 0 m been used? (Y/N)		N/A	
Has the low flow bypass been calculated? The calculation should be provided by the applicant separately.			

TABLE D.10 BUFFER NODE ASSESSMENT CHECKLIST (REFER TO SECTION 4.7)

BUFFERS (CHECK REPORTING TABLE C10)	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Does the treatment node reflect the vegetated area receiving sheet flow only?			
Is the percentage of upstream area buffered consistent with catchment plans?			
Does the buffer area accurately reflect the percentage impervious area as shown on the development plans?			
Is the exfiltration rate set to zero?			
If an exfiltration rate has been used, has the secondary drainage link been used to return the exfiltrated flows to the model? (Section 4.1)			

TABLE D.11 PROPRIETARY & CUSTOM PRODUCTS (INC GROSS POLLUTANT TRAPS) NODE ASSESSMENT CHECKLIST (REFER TO SECTION 4.8)

PROPRIETARY & CUSTOM PRODUCTS (CHECK REPORTING TABLE C11)	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Are the proposed pollutant reduction efficiencies independently verified using a method suited to local conditions (Section 4.8)?			
Does the data provided include performance results under dry weather flows (to account for potential pollutant leeching)? (Y/N).			
Is the assumed high-flow bypass rate consistent with manufacturer specifications? (Y/N)			
UNLESS "YES" HAS BEEN ANSWERED TO ALL THREE QUESTIONS ABOVE THE PROPOSED POLLUTANT REDUCTION RATES CANNOT BE RELIED UPON AS BEING REASONABLE ASSUMPTIONS OF THE UNIT'S PERFORMANCE.			
Is the storage volume modelled consistent with the proposed unit?			
Is the expected maintenance frequency a reasonable assumption?			
Is the storage volume large enough to contain all sediments and gross pollutants received by unit during inter-maintenance periods?			

TABLE D.12 SEDIMENT BASIN NODE ASSESSMENT CHECKLIST (SECTION 4.9)

SEDIMENT BASTINS (CHECK REPORTING TABLE C12)	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Has the surface area been calculated appropriately (Section 4.3.2)?			
Is the extended detention depth consistent with the development plans?			
Is the permanent pool volume consistent with the development plans?			
Is the exfiltration rate set to 0 mm/hr?			
If an exfiltration rate has been used, has the secondary drainage link been used to return the exfiltrated flows to the model? (Section 4.1)			
Is the evaporative loss as % of PET reasonable?			
Has the equivalent pipe diameter been set appropriately? (Where appropriate refer to Section 4.3.3 for advice on accounting for user-defined stage–discharge relationship)?			
Is the overflow weir width consistent with the development plans?			
Is the notional detention time set to account for potential flow restriction?			
Are the number of CSTRs appropriate for the shape of the system?			
Have the K and C* values been retained as default values? (Y/N)			

N/A

TABLE D.13 INFILTRATION NODE ASSESSMENT CHECKLIST (REFER TO SECTION 4.10)

INFILTRATION (CHECK REPORTING TABLE C13)	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Is the exfiltration rate justified?			
Has the secondary drainage link been used to return the exfiltrated flows to the model? (Section 4.1). If the secondary drainage link is not used, WQO's must be achieved prior to stormwater entering an infiltration system.			
Can the hydraulic conductivity of the in-situ soils be guaranteed even during earthworks?			
IF "NO" WAS ANSWERED TO ANY OF THE ABOVE QUESTIONS THIS NODE CANNOT BE USED.			
Is the pond surface area consistent with the plans?			
Is the extended detention depth consistent with the plans?			
Is the filter area consistent with the plans?			
Is the unlined filter media perimeter appropriate?			
Is the depth of infiltration media consistent with the plans?			
Is the exfiltration rate justified?			
Is the overflow weir width consistent with the plans?			
Is the evaporative loss as % of PET reasonable?			
Have the K and C* values been retained as default values?			

TABLE D.14 POROUS PAVEMENT NODE ASSESSMENT CHECKLIST (REFER TO SECTION 4.11)

POROUS PAVEMENTS (CHECK REPORTING TABLE C14)	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Has the applicant answered "Y" to all questions in the reporting table?	N/A		

NB: Check all other parameters for the porous pavement using Table C9.

TABLE D.15 MEDIA FILTRATION NODE ASSESSMENT CHECKLIST (REFER TO SECTION 4.8.3)

MEDIA FILTRATION SYSTEM (CHECK REPORTING TABLE C15)	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Is the extended detention depth consistent with plans?			
Is the surface area consistent with plans?			
Is the exfiltration rate set to zero?			
If an exfiltration rate has been used, has the secondary drainage link been used to return the exfiltrated flows to the model? (Section 4.1)			
Is the filter area consistent with plans?			
Is the filter depth consistent with plans?			
Is the filter media particle diameter consistent with manufacturer information?			
Is the saturated hydraulic conductivity consistent with manufacturer information?			
Is the depth below underdrain consistent with plans?			
Have the K and C* values been retained as default values or otherwise justified?			

N/A

TABLE D.16 OVERALL APPROVAL ASSESSMENT CHECKLIST

DESIGN OBJECTIVES (CHECK REPORTING TABLE C16)	Y	N	COMMENTS/ISSUES TO FOLLOW UP
Have all water quality objectives been met?	Y		
Is the MUSIC model approved?			

A low-angle photograph of a modern building's exterior. The building features large glass windows reflecting the sky and clouds, and a prominent red vertical panel on the right side. A small tree with green and yellowing leaves is in the foreground. The text 'APPENDIX G' is overlaid in the top right corner.

APPENDIX G

ENGINEERING SERVICES REPORT

ENGINEERING SERVICES REPORT

APPLICATION FOR RECONFIGURING A LOT VANTAGE YATALA STAGE 3

ADDRESS

Lot 504 Homestead Drive, Stapylton

REAL PROPERTY DESCRIPTION

Lot 504 on SP329485

PREPARED FOR

FPI Queensland Pty. Ltd.

April 2023 (Rev. 1)



gassman
development
perspectives

project coordination
urban + regional planning
landscape + urban design
engineering services
environmental management
visualisation + spatial services
surveying services
advisory services

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In preparing this report we have made certain assumptions. We have assumed that all information and documents provided to us by the Client or as a result of a specific request or enquiry were complete, accurate and up-to-date. Where we have obtained information from a government register or database, we have assumed that the information is accurate. Where an assumption has been made, we have not made any independent investigations with respect to the matters the subject of that assumption. We are not aware of any reason why any of the assumptions are incorrect.

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Revision / Checking History

No.	Author	Reviewer
INTERNAL DRAFT	Mitchell Gassman	James Hunt
1.	Mitchell Gassman	James Hunt

Approval for Issue

Rev. No.	Name	Position	Signature	Date
1.	Mitchell Gassman	Civil Project Engineer RPEQ 16939		10 April 2023

Final Distribution

FPI Queensland Pty. Ltd. (Client)	1 electronic copy
City of Gold Coast Council (Assessment Manager)	1 electronic copy
GDP File	1 electronic copy

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1.0 INTRODUCTION

Gassman Development Perspectives (GDP) has been engaged by FPI Queensland Pty. Ltd. (Client) to prepare an Engineering Services Report over land situated at Lot 504 Homestead Drive, Stapylton (Lot 504 on SP329485) being the 'subject site'.

This report has been prepared for submission to City of Gold Coast Council (Council) as part of an Application for Reconfiguring a Lot for Stage 3 of the Vantage Yatala industrial development (refer **Appendix A – Reconfiguration of Lot Plan**)

The purpose of this report is to supply information relating specifically to Civil Engineering infrastructure, services and issues over the subject site and how the proposed lot configuration changes still align with the previously approved servicing strategy for the subject site.

2.0 SITE DESCRIPTION

2.1 SITE LOCATION

The subject site is located within the City of Gold Coast Council's (Council) local government boundaries, in Council's "Future Low Impact Industry" and "Future Medium Impact Industry" zone precinct. The subject site is bounded by Stapylton Jacobs Well Road to the north, Christensen Road and existing industrial uses to the west and Council's land fill facility to the south-east (refer to **Figure 2.1**).

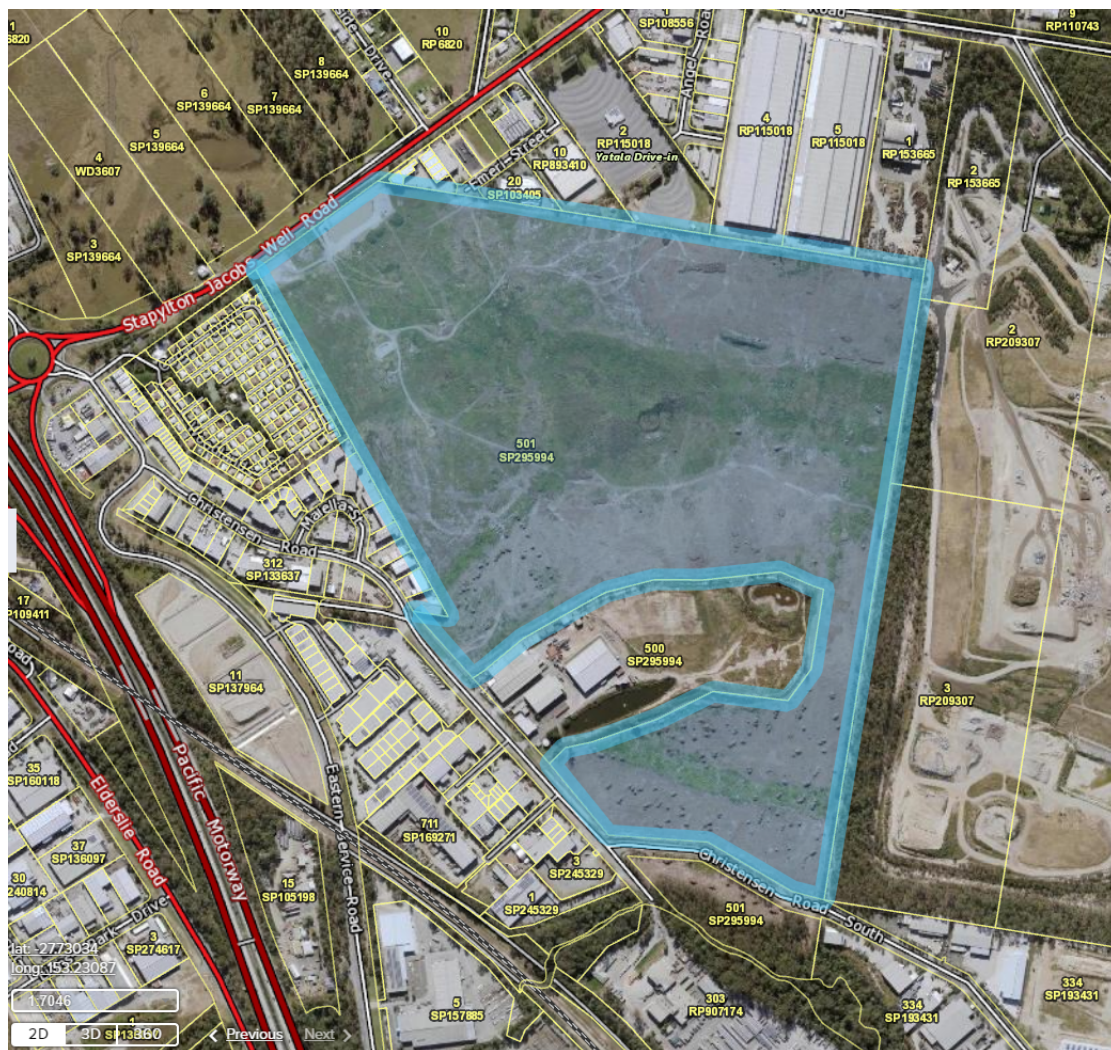


Figure 2.1: Site Locality Plan, Source: Google Earth 2017

2.2 LAND ENCUMBRANCES

There are no existing encumbrances over the subject site.

2.3 EXISTING LAND USES

The subject land is vacant following recent vegetation clearing.

2.4 TOPOGRAPHY

Along the south-eastern boundary of the subject site is the existing high point of 29.23m AHD with a ridge line extending through to the properties' northern boundary. This existing topography defines the existing catchments of the site and current stormwater discharge locations along the northern and eastern boundaries

2.5 EXISTING VEGETATION

The subject land is vacant of vegetation following recent clearing completed under Council approvals OPW201800486 and OPW201801219. A 10m retained vegetation buffer exists along the subject site's south-east boundary shared with Council's landfill facility. A component of this buffer falls within the Stage 3 extent of development.

2.6 CONTAMINATED LAND

The subject site is not known to be contaminated.

3.0 EARTHWORKS

Due to the existing topography of the subject site (refer **Appendix B**) major bulk earthworks will be required to provide generally flat pads suitable for the intended industrial use.

A bulk earthworks strategy has been developed by Gassman Development Perspectives over the subject site (refer **Appendix C**) to facilitate the creation of suitable flat earthworked pads capable of being serviced to City of Gold Coast Council standards. The current earthworks strategy for Stage 3 ties into the existing Change to Ground Level design (Council Ref: MIN/2022/245) for Stage 2 to provide connectivity through the development.

4.0 ROADWORKS AND ACCESS

Stage 3 of the proposed development will gain access via the extension of Coastlink Court being the existing approved road network at the common stage boundary with Stage 2 of the development which links the overall subject site to its frontage to the State-controlled Stapylton Jacobs Well Road via a signalised intersection along with a secondary connection to the local road network (Christensen Road) constructed as part of Stage 2. Due to the subject site's proximity to Exit 38 of the M1 Motorway the conceptual design of the Christensen Road external intersection has included access provisions for A-Double vehicular movements into the development. Adequate provision for these external works and any land dedication within the subject site to accommodate the ultimate design have been made within the ROL Plan for Stage 2 (refer **Appendix A**).

In accordance with the superseded planning scheme approval in place over the subject site, the internal road network will be constructed in accordance with the typical cross section shown on Council standard drawing 05-02-004 for an Industrial Collector Street (refer **Figure 4.1** below). It is noted this road reserve configuration has been applied to internal roads that would typically be classed as “Industrial Access Streets” to maintain greater access and manoeuvrability throughout the proposed development. In line with the design intent of the external intersection, the radii of kerb returns throughout the estate have also been designed to accommodate A-Double vehicular movements.

The truncations to lot boundaries necessary to maintain minimum road verge widths through these kerb returns have been incorporated into the Reconfiguration of Lot plan for Stage 3 including the final cul-de-sac dimensions for Coastlink Court.

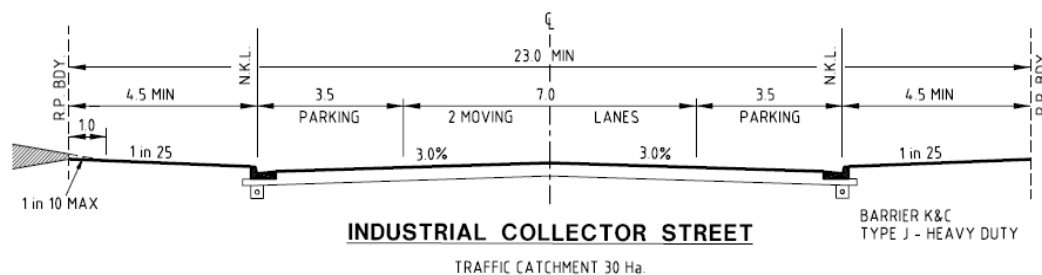


Figure 4.1: Proposed Internal Roads Cross Section, Source: CoGC Std Dwg 05-02-004

5.0 INFRASTRUCTURE SERVICES

5.1 SEWERAGE

Consultation has been undertaken with Gold Coast Water’s Sewer Catchment Planning officers to establish the Sewer Network Analysis Report that was approved as part of the original Stage 1 Development Permit for Reconfiguration of Lot. This involved the creation of an overall sewer strategy internal to the site along with outlining the key trunk sewer infrastructure upgrades required external to the subject site to facilitate the scale of development proposed.

As per the approved Sewer Network Analysis, Stage 3 will be serviced via connection to the to the deeper gravity sewer network (225mm diameter) constructed through the Stage 3 development extent as part of the Stage 2 link to the external trunk gravity sewer main connecting to GCWW’s existing infrastructure south-east of the subject site (refer **Figure 5.1** below).

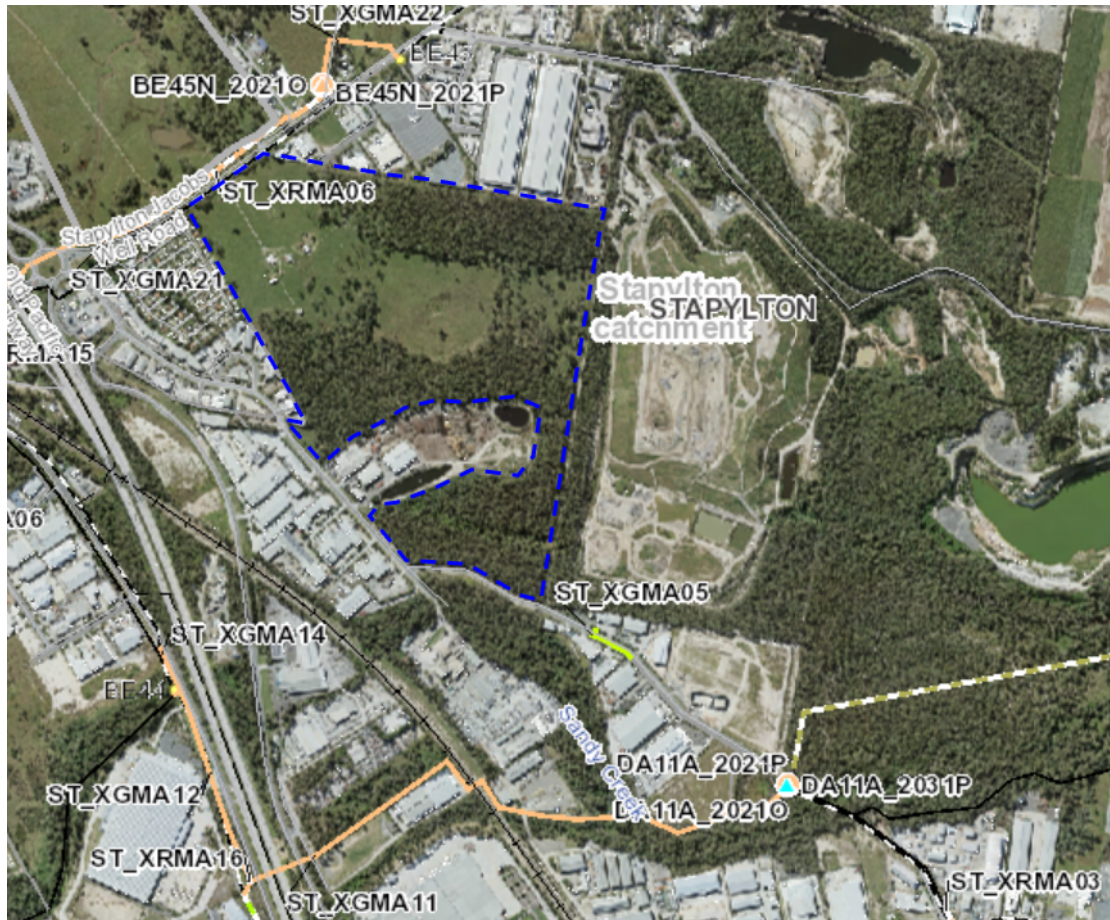


Figure 5.1: GCWW Trunk Sewer Infrastructure, Source: GCCC Interactive Mapping Version 7

A preliminary design of the proposed gravity sewer reticulation network necessary to service Stage 3 lots and how it integrates to the existing deeper gravity line constructed as part of previous Stage 2 is contained within **Appendix E**.

5.2 WATER SUPPLY

A copy of Council's water reticulation as constructed plans has been obtained for roads within the vicinity of the subject site. These plans confirm that Stage 3 of the development will be serviced off Council's existing 150mm diameter potable water main located within the verge of Coastlink Court.

A preliminary design of the proposed potable water reticulation network necessary to service Stage 3 lots is contained within **Appendix E**.

5.3 ELECTRICITY AND TELECOMMUNICATIONS

A Dial-before-you-dig (DBYD) search was undertaken over the subject site (refer **Appendix F**) which confirmed the presence of electrical and communications reticulation to the subject site's road frontage.

The adequacy of this infrastructure in its current form along with the necessity for any augmentation or upgrades to cater for the proposed use will be confirmed through the detailed design process by the appointed electrical consultant.

6.0 SITE BASED STORMWATER MANAGEMENT

6.1 STORMWATER QUANTITY

A stormwater drainage network will be designed to ensure the proposed lot configuration adequately drains to a Lawful Point of Discharge (refer **Appendix E**).

A Site Based Stormwater Management Plan has been prepared by Gassman Development Perspectives that demonstrates that attenuation measures are able to be incorporated into the proposed development to ensure there is no adverse impacts to downstream properties, waterways or infrastructure as a result of an increase in peak stormwater flow rates discharging from the subject site upon development.

This is achieved through the conceptual design of appropriately sized detention basins that comply with City of Gold Coast Council's Land Development Guidelines along with the Queensland Urban Drainage Manual (QUDM).

6.2 STORMWATER QUALITY

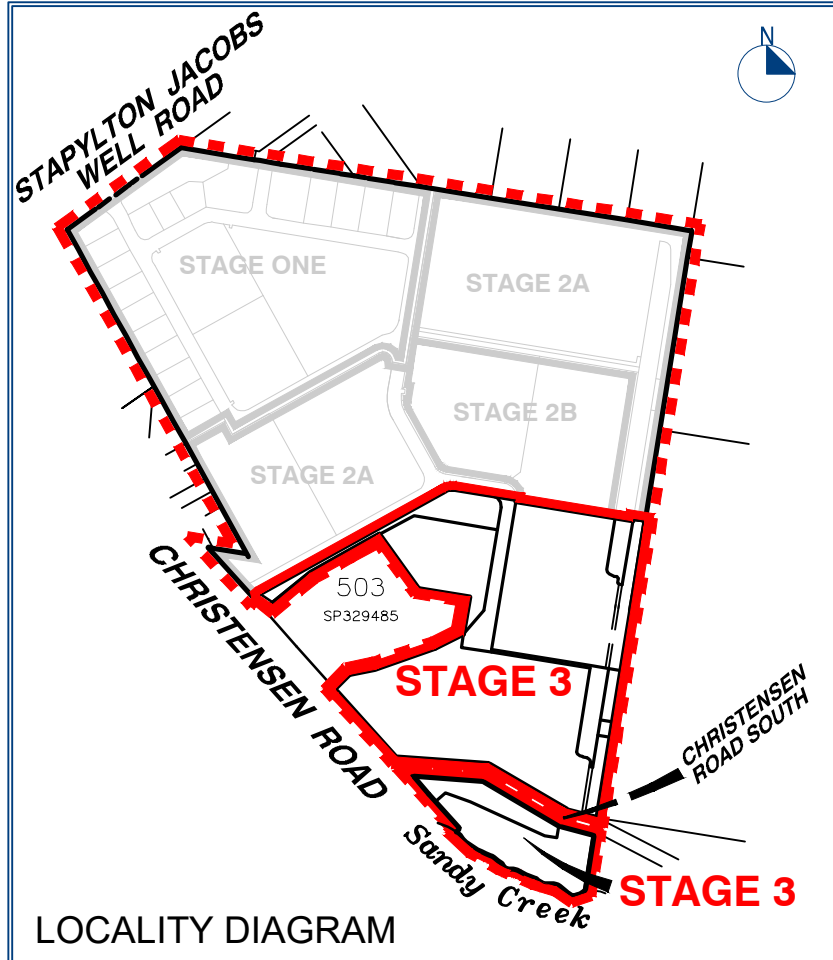
A suitable stormwater treatment train will need to be implemented to ensure the servicing of both the proposed industrial lots, surrounding public road reserves and common property.

A site based stormwater management plan for the subject site outlining how all necessary steps to ensure that the quality of stormwater discharging from the subject site meets the necessary standards to comply with City of Gold Coast Council's Water Sensitive Urban Design (WSUD) requirements, Queensland Urban Drainage Manual (QUDM) and the performance objectives of the Queensland State Planning Policy (SPP) has been prepared by Gassman Development Perspectives and lodged under separate cover for Compliance Assessment by Council.

7.0 CONCLUSION

The above reporting demonstrates that proposed development can be undertaken through the construction of Civil Engineering infrastructure and services that meet the requirements of City of Gold Coast City Council's Land Development Guidelines and associated Australian Standards.

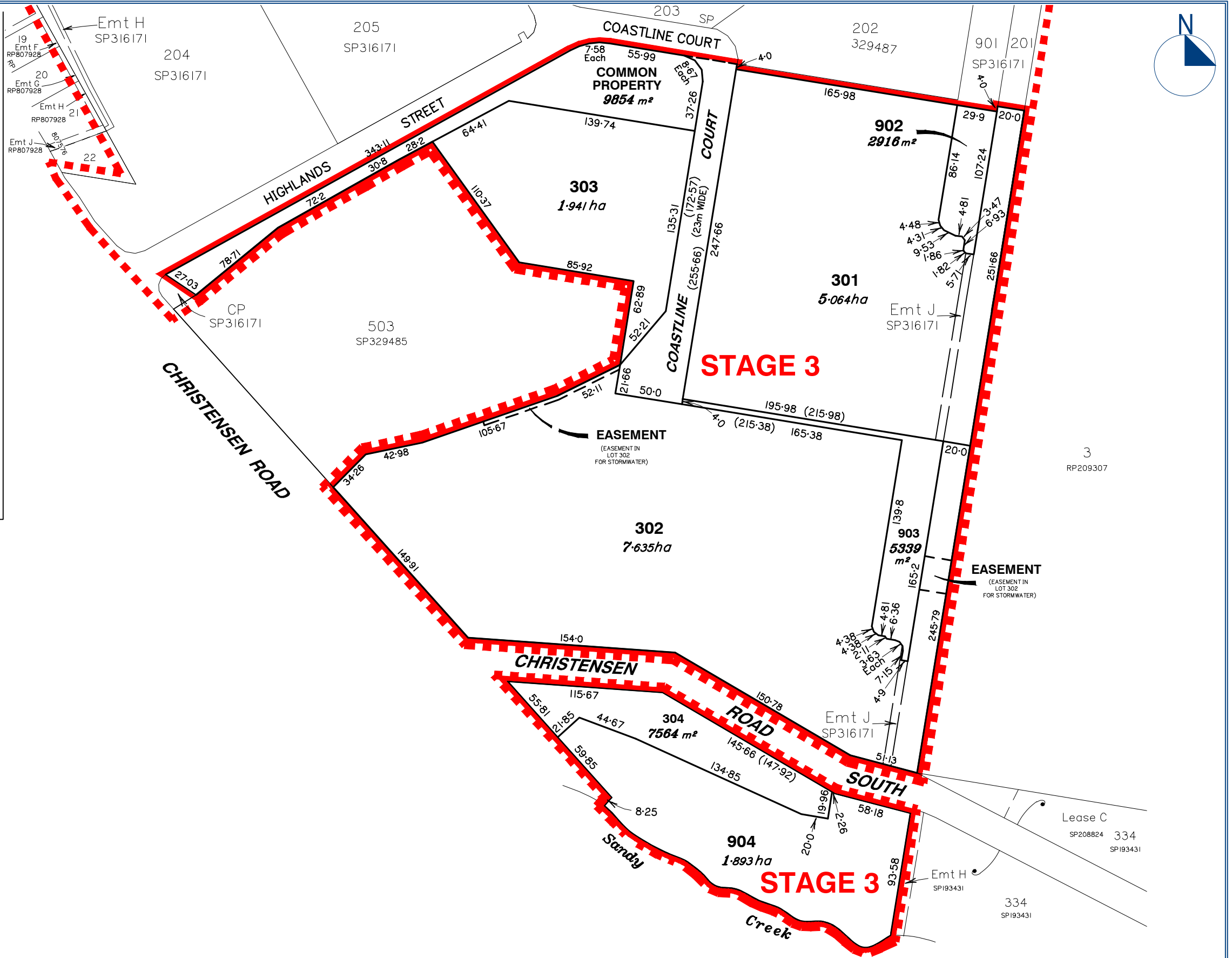
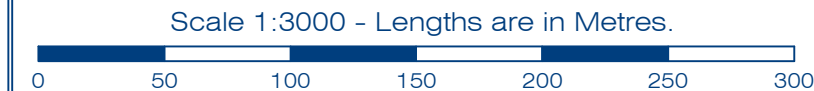
Appendix A – Stage 3 Reconfiguration of Lot Plan



- LEGEND**
- LIMIT OF APPLICATION
 - STAGE 3 BOUNDARY

PLEASE NOTE:
ALL NEW ROADS, DRAINAGE AND SERVICES INFRASTRUCTURE TO BE DEDICATED TO COUNCIL OF THE CITY OF GOLD COAST.

DEVELOPMENT SUMMARY				
Total Site Area 69.058Ha				
LOT YIELD	STAGE AREA	APPROX. AREA & LENGTH OF NEW ROAD	DRAINAGE RESERVE LOTS	
STAGE 3	4 Lots	19.81 ha	7139 m ² 256m	2



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Scale at A3: 1:3000

Date: 13-03-23

Design: MG

Drawn: SH

Checked: MG/AWG

A	13/03/2023	Revised Lot 902, 301, 304, 904	SJH	AWG	
-	02/02/2023	ORIGINAL ISSUE	SJH	AWG	
Issue	Date	Description	DRN	CHK	

Project:

VantageYatala

Client:

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Drawing Title:

Proposed Staged,
Community Title Scheme
Reconfiguration of Land
Lots 301-304, 904, Common Property,
Drainage Reserves (Lots 902 & 903) & New Road

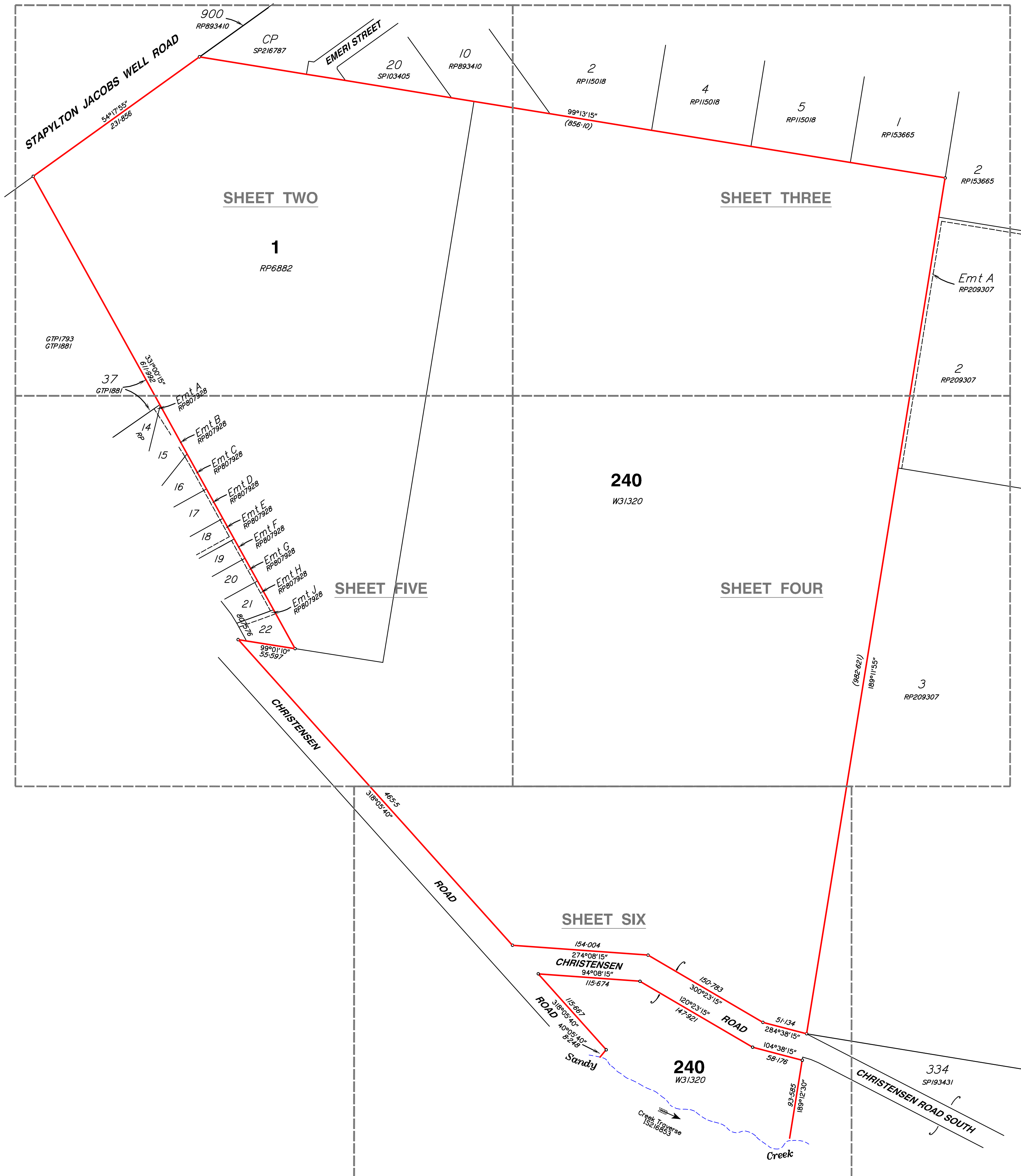
CANCELLING LOT: 505 on SP316171

LOCATION: 60 Stapylton Jacobs Well Road, Stapylton QLD

Drawing No: 5941 P STAGE 3 001 A

Revision No:

Appendix B – Site Survey



Notes

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Client

HESTER

Project

CONTOUR AND DETAIL PLAN

Over Lot 1 on RP6882 and Lot 240 on WD31320

Parish of **ALBERT**

County of **Ward**

Local Govt **GOLD COAST CITY COUNCIL**

Level Datum	A.H.D.	Date Surveyed	Jan 2011
Meridian	15216853	Surveyor	A. Macdonald
Contour Interval	0.2	Drawn	S. Holt
F.B.	No	Date Drafted	02-02-2011
Origin	PSM 133471	Checked	
	RL 22.169		

Scale (on A1 original)

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Designed

Drawn

Date Designed

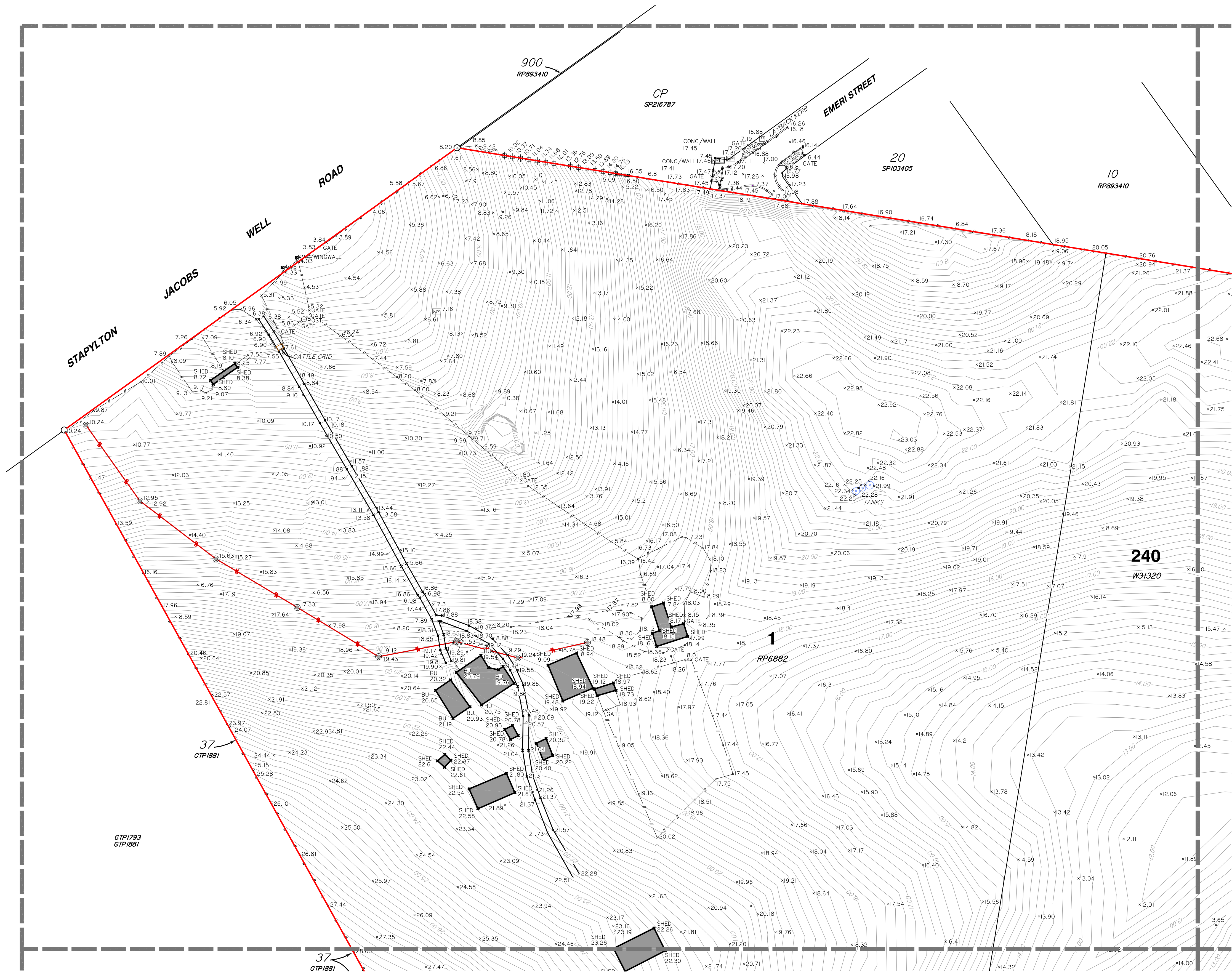
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e: mail@gassman.com.au
w: www.gassman.com.au

REFERENCE No. **5093-10**

PLAN No. **5093 S CD 01**



LEGEND

- PERMANENT MARK
- SEWER MANHOLE
- SEWER INSPECTION OUTLET
- ELECTRICITY PILLAR
- ELECTRICITY POLE
- ELECTRICITY POLE WITH LIGHT
- TELSTRA PIT
- MANHOLE
- STORMWATER MANHOLE
- GULLY TRAP
- WATER METER
- FIRE HYDRANT
- VALVE
- GATE
- BOLLARD
- CONCRETE
- EDGE OF BITUMEN
- FENCE
- OVERHEAD ELECTRICITY
- OPEN DRAIN
- RETAINING WALL
- EDGE OF GARDEN
- CONTOUR LEVEL

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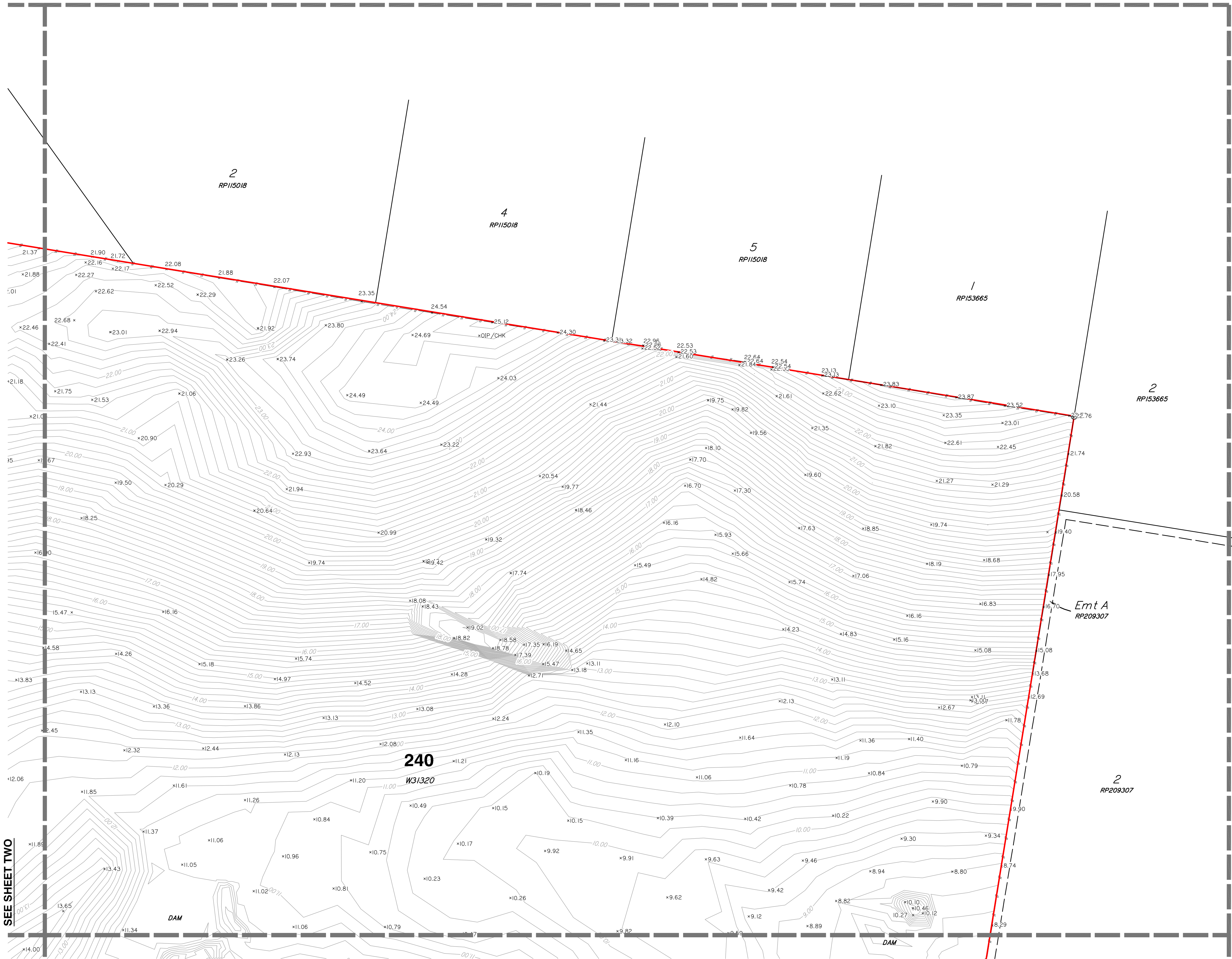
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		Date Designed	

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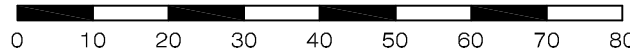
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SEE SHEET TWO

SEE SHEET FOUR

Scale 1:1000 - Lengths are in Metres.



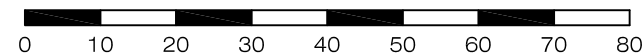


SEE SHEET THREE



SEE SHEET SIX

Scale 1:1000 - Lengths are in Metres.



LEGEND

- PERMANENT MARK
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CONTOUR AND DETAIL PLAN

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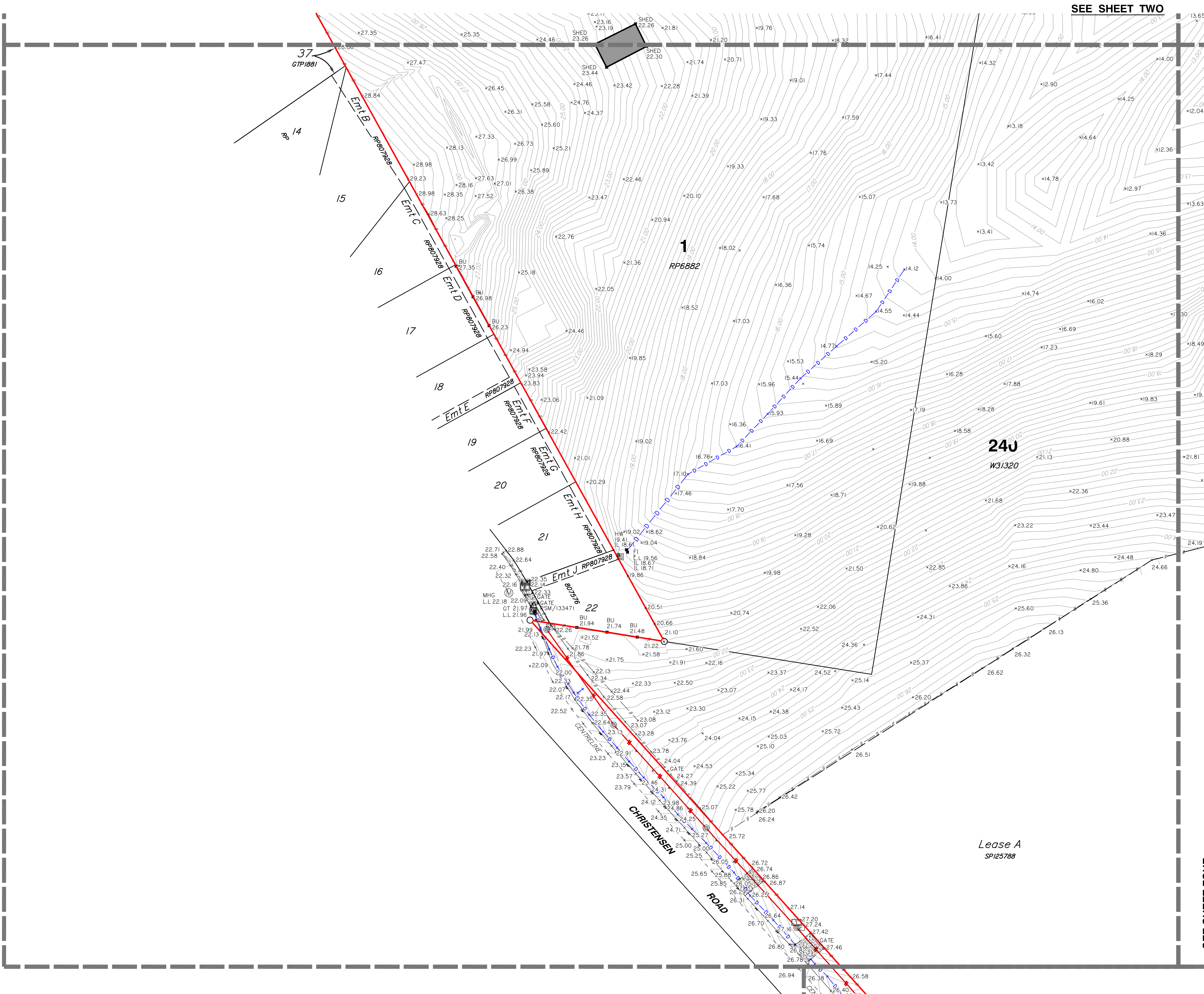
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f: (07) 32975461
e: mail@gassman.com.au
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REFERENCE No. **5093-10**

PLAN No. **5093 S CD 01**



Scale 1:1000 - Lengths are in Metres.
0 10 20 30 40 50 60 70 80

- LEGEND**
- PERMANENT MARK
 - SEWER MANHOLE
 - SEWER INSPECTION OUTLET
 - ELECTRICITY PILLAR
 - ELECTRICITY POLE
 - ELECTRICITY POLE WITH LIGHT
 - TELSTRA PIT
 - MANHOLE
 - STORMWATER MANHOLE
 - GULLY TRAP
 - WATER METER
 - FIRE HYDRANT
 - VALVE
 - GATE
 - BOLLARD
 - CONCRETE
 - EDGE OF BITUMEN
 - FENCE
 - OVERHEAD ELECTRICITY
 - OPEN DRAIN
 - RETAINING WALL
 - EDGE OF GARDEN
 - CONTOUR LEVEL

Notes

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Client

HESTER

Project

CONTOUR AND DETAIL PLAN

Over Lot 1 on RP6882 and Lot 240 on WD31320

Parish of **ALBERT**

County of **Ward**

Local Govt **GOLD COAST CITY COUNCIL**

Level Datum	A.H.D.	Date Surveyed	Jan 2011
Meridian	IS216853	Surveyor	A. Macdonald
Contour Interval	0.2	Drawn	S. Holt
F.B.	No	Date Drafted	02-02-2011
Origin	PSM 133471	Checked	RL 22.169

Scale (on A1 original)	Designed
1:1000	Date Designed



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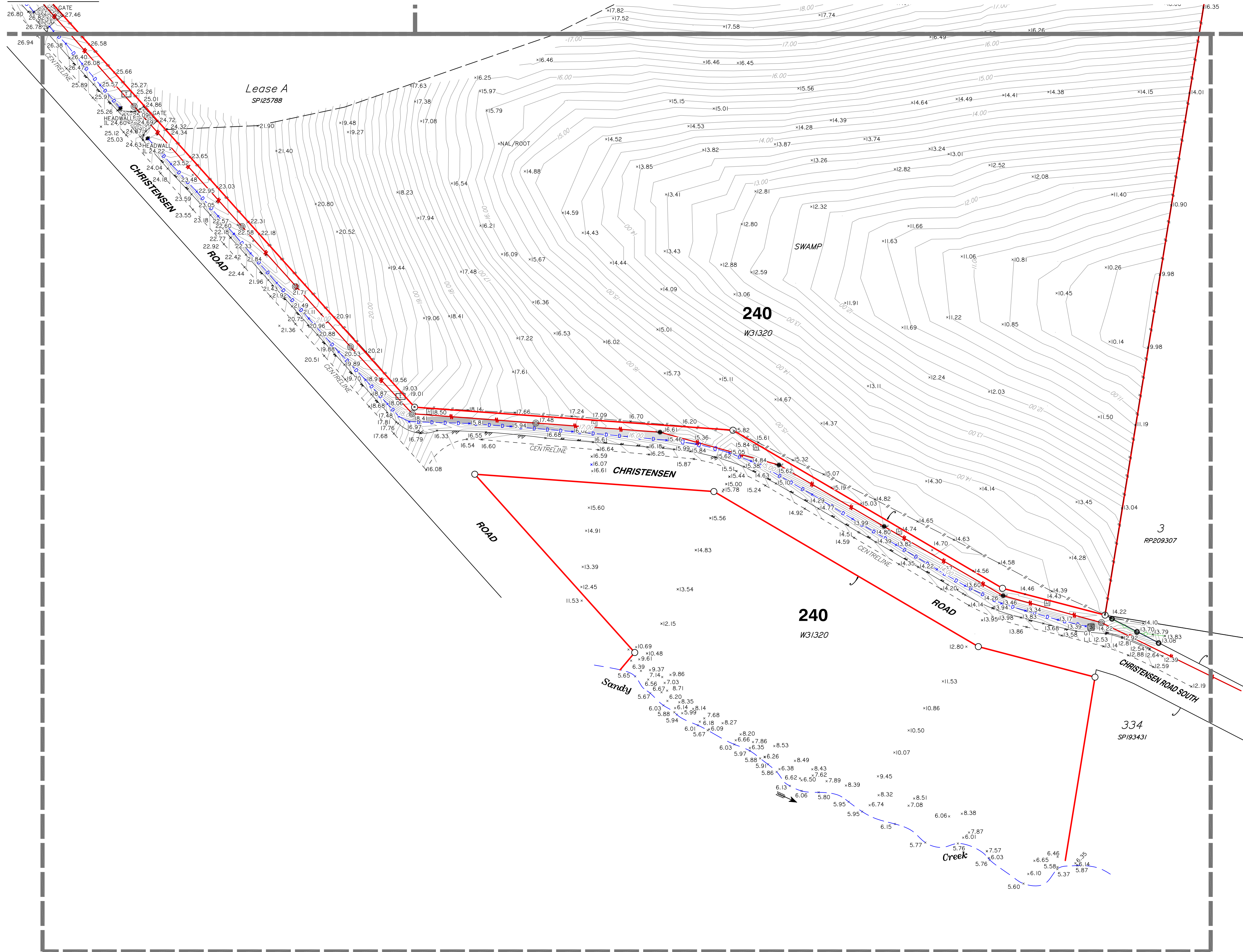
REFERENCE No. **5093-10**

PLAN No. **5093 S CD 01**



SEE SHEET FIVE

SEE SHEET FOUR



LEGEND

- PERMANENT MARK
- SEWER MANHOLE
- SEWER INSPECTION OUTLET
- ELECTRICITY PILLAR
- ELECTRICITY POLE
- ELECTRICITY POLE WITH LIGHT
- TELSTRA PIT
- MANHOLE
- STORMWATER MANHOLE
- GULLY TRAP
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- FIRE HYDRANT
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- CONTOUR LEVEL

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Over Lot 1 on RP6882 and Lot 240 on WD31320

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Level Datum	A.H.D.	Date Surveyed	Jan 2011
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Contour Interval	0.2	Drawn	S. Holt
F.B.	No	Date Drafted	02-02-2011
Origin	PSM 133471	Checked	RL 22.169

Scale (on A1 original)	Designed
1:1000	Date Designed

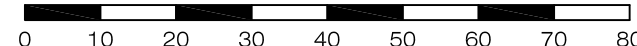


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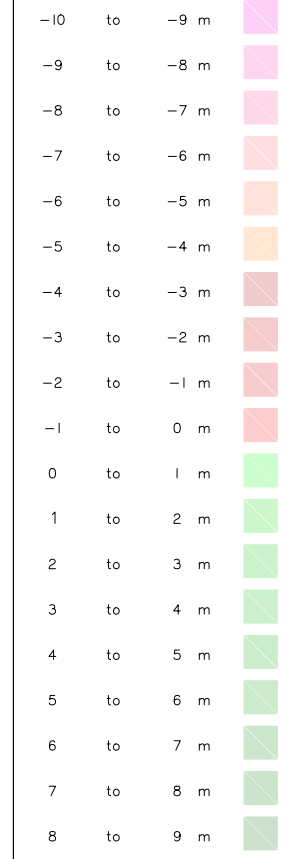
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PLAN No. **5093 S CD 01**

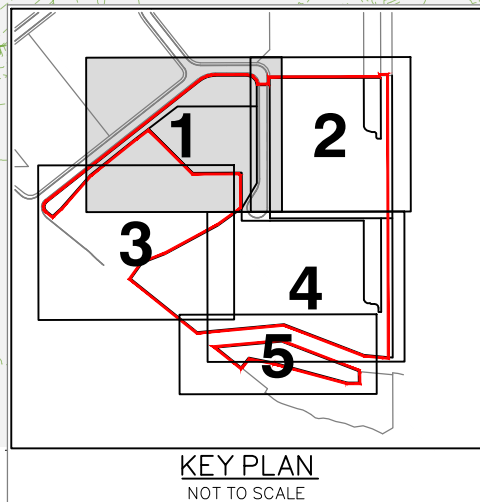
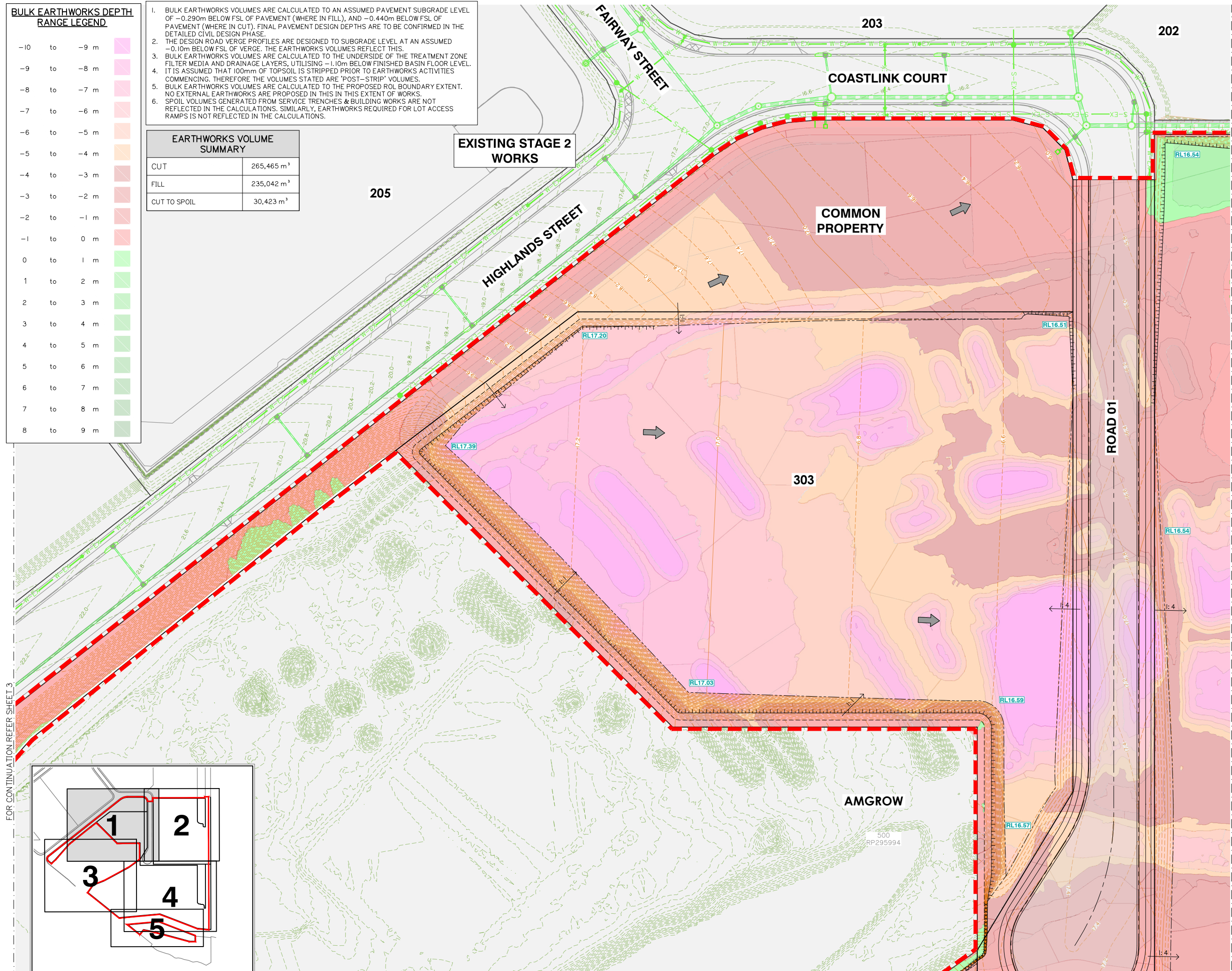
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Appendix C – Bulk Earthworks Strategy



- | EARTHWORKS VOLUME SUMMARY | |
|---------------------------|------------------------|
| CUT | 265,465 m ³ |
| FILL | 235,042 m ³ |
| CUT TO SPOIL | 30,423 m ³ |



Client:



FRASERS PROPERTY

Project:

VANTAGE YATALA STAGE 3

Site Address:

60 STAPYLTON JACOBS
WELL ROAD, STAYPLTON
QLD, 4207

RPD:

Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST

Level Datum: AHD
Meridian:
PSM:
RL:

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BULK EARTHWORKS
LAYOUT PLAN
SHEET 1 OF 5

A	03/02/23	ORIGINAL ISSUE	JH	MG	
Rev	Date	Description	DIN	CHK	
DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE					
CULVERT AND PIPE SIZES IN MILLIMETRES					
				A1 UNREDUCED	
				A3 REDUCED	

Scale:



PROJECT NORTH POINT



Project No. 5941

Designed: JH

Approved:

RPEQ	16939
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Signed:	
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Date:	03/02/2023
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Drawing No:	Revision
5941 ENG BE3 050	A



Project:

VANTAGE YATALA
STAGE 3

Site Address:

60 STAPYLTON JACOBS
WELL ROAD, STAYPLTON
QLD, 4207

RPD:

Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST
Level Datum:	AHD
Meridian:	
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BULK EARTHWORKS
LAYOUT PLAN
SHEET 5 OF 5

[illegible]

A Rev	03/02/23 Date	ORIGINAL ISSUE Description	JH DRN	M CHK
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CULVERT AND PIPE SIZES IN MILLIMETRES			A3 REDUCED	

Scale:



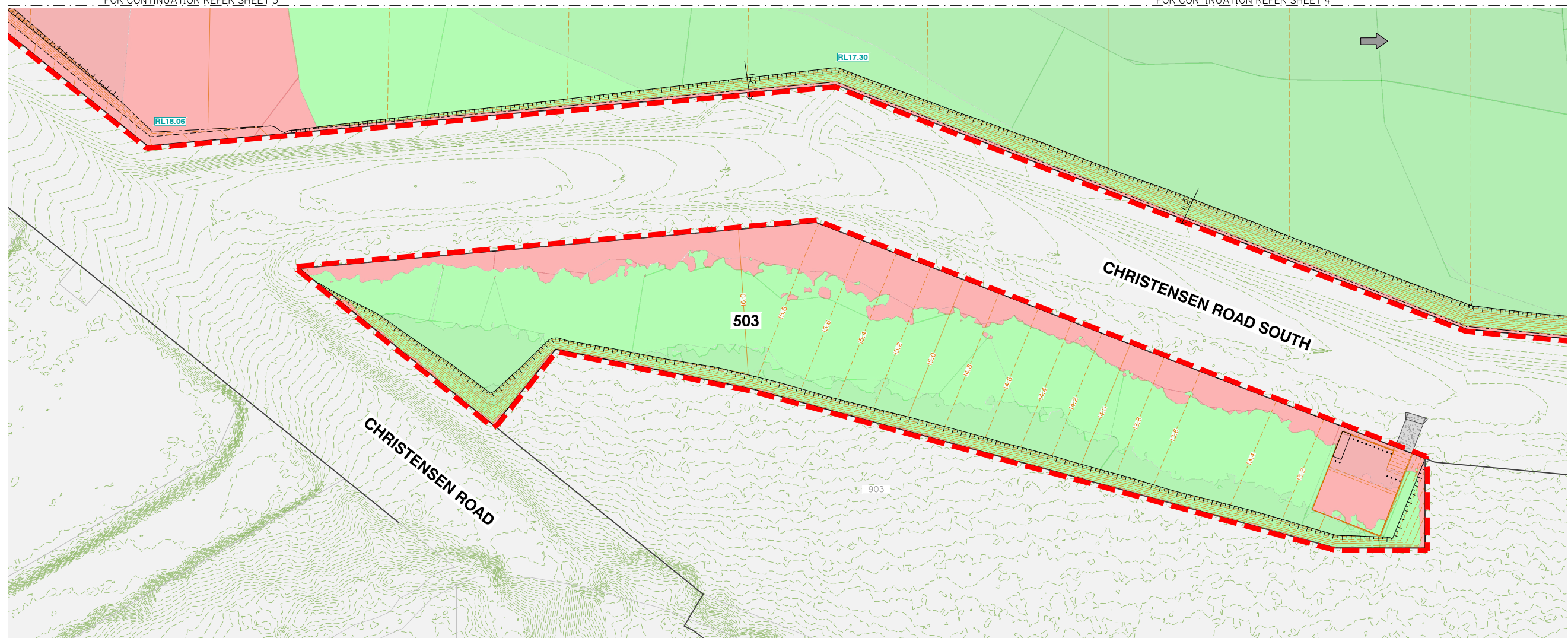
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PROJECT NORTH POINT

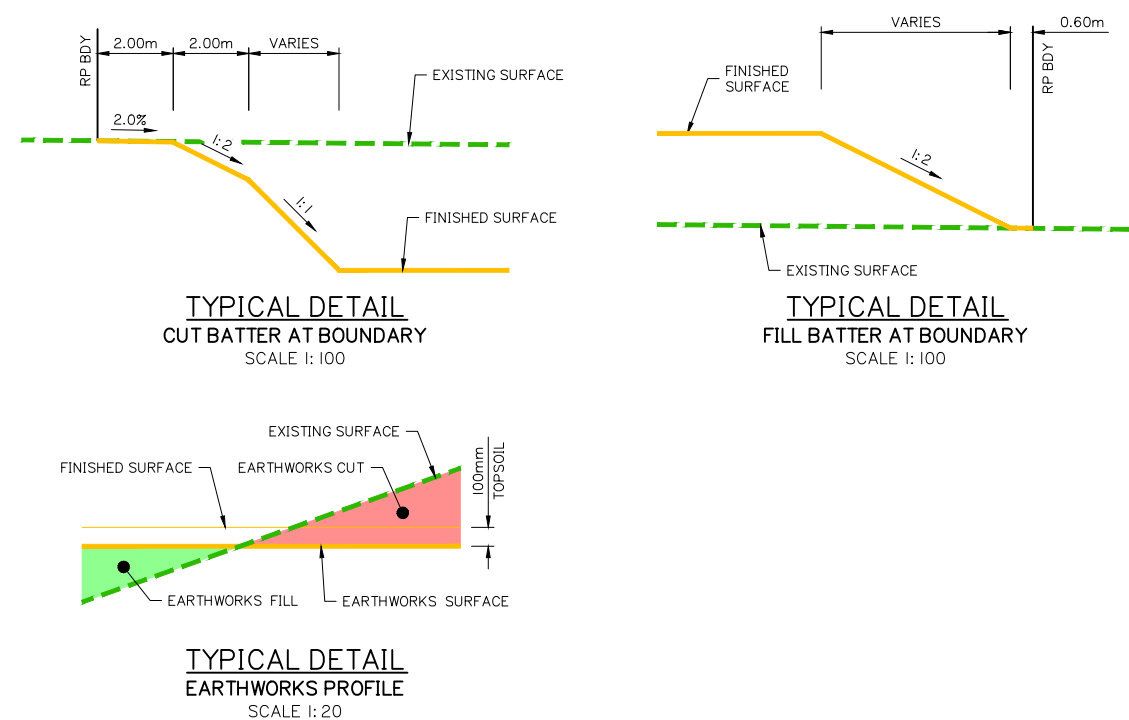
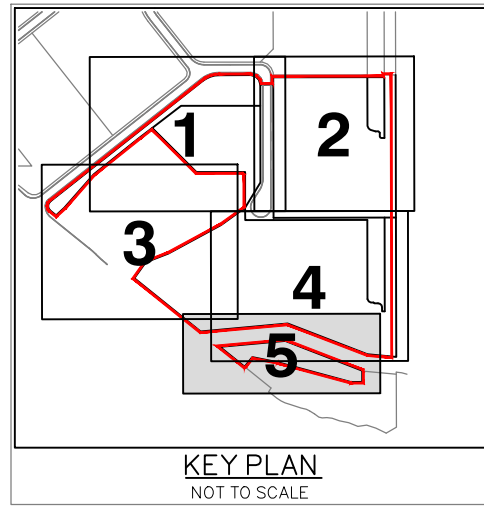


Project No. 5941	
Designed: JH	Drafted: JH
Approved:	MG
RPEQ	16939
Signed:	
Date:	03/02/2023
Drawing No: 5941 ENG BE3 054	
Revision: A	



1. BULK EARTHWORKS VOLUMES ARE CALCULATED TO AN ASSUMED PAVEMENT SUBGRADE LEVEL OF -0.290m BELOW FSL OF PAVEMENT (WHERE IN FILL), AND -0.440m BELOW FSL OF PAVEMENT (WHERE IN CUT). FINAL PAVEMENT DESIGN DEPTHS ARE TO BE CONFIRMED IN THE DETAILED CIVIL DESIGN PHASE.
2. THE DESIGN ROAD VERGE PROFILES ARE DESIGNED TO SUBGRADE LEVEL AT AN ASSUMED -0.10m BELOW FSL OF VERGE. THE EARTHWORKS VOLUMES REFLECT THIS.
3. BULK EARTHWORKS VOLUMES ARE CALCULATED TO THE UNDERSIDE OF THE TREATMENT ZONE FILTER MEDIA AND DRAINAGE LAYERS, UTILISING -1.0m BELOW FINISHED BASIN FLOOR LEVEL.
4. IT IS ASSUMED THAT 100mm OF TOPSOIL IS STRIPPED PRIOR TO EARTHWORKS ACTIVITIES COMMENCING. THEREFORE THE VOLUMES STATED ARE 'POST-STRIP' VOLUMES.
5. BULK EARTHWORKS VOLUMES ARE CALCULATED TO THE PROPOSED LOT BOUNDARY EXTENT. NO EXTERNAL EARTHWORKS HAS BEEN IMPOSED IN THE IN THIS EXTENDED WORK.
6. SPOIL VOLUMES GENERATED FROM SERVICE TRENCHES & BUILDING WORKS ARE NOT REFLECTED IN THE CALCULATIONS. SIMILARLY, EARTHWORKS REQUIRED FOR LOT ACCESS RAMPS IS NOT REFLECTED IN THE CALCULATIONS.

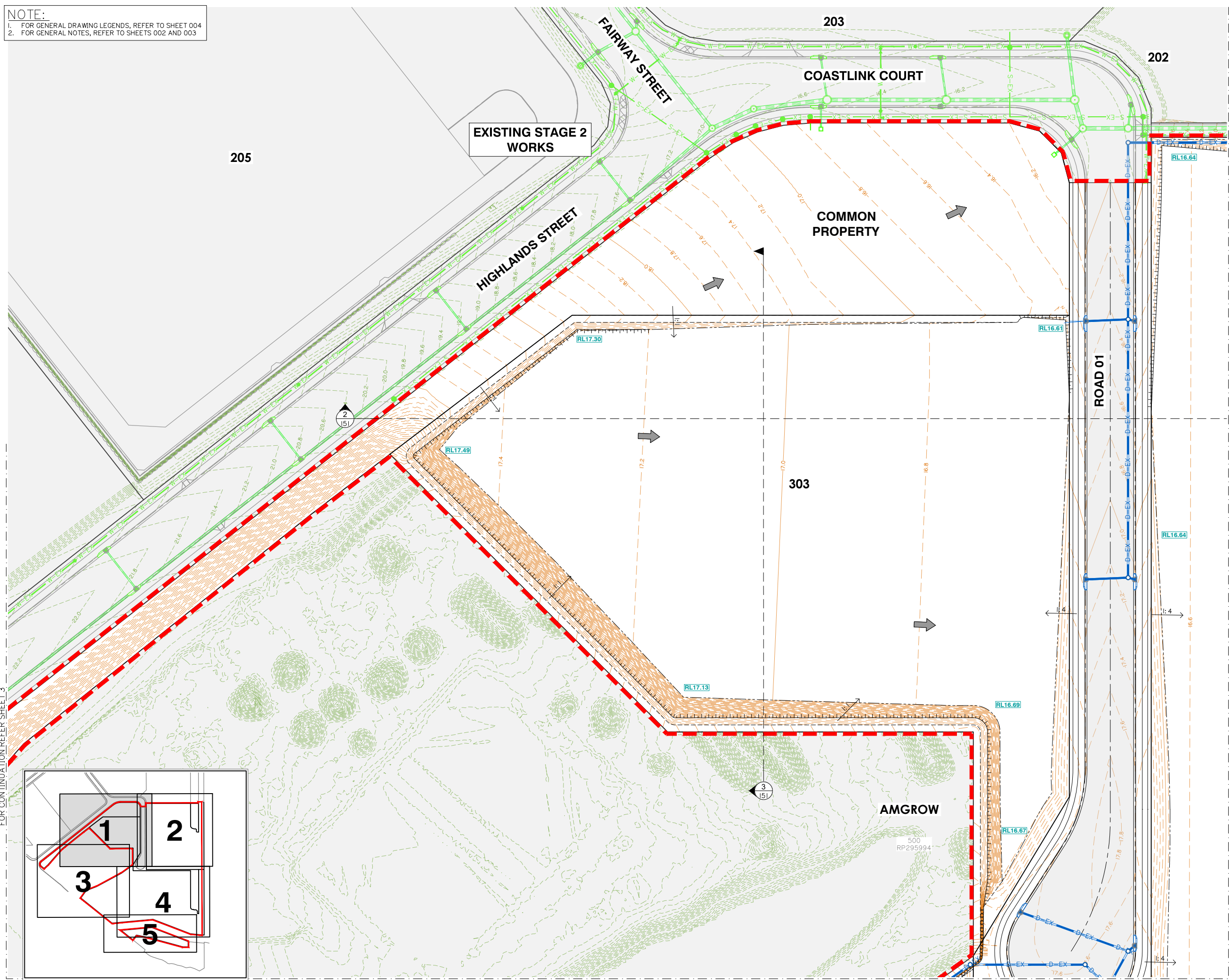
EARTHWORKS VOLUME SUMMARY	
CUT	265,465 m ³
FILL	235,042 m ³
CUT TO SPOIL	30,423 m ³



BULK EARTHWORKS DEPTH RANGE LEGEND			
-10	to	-9 m	
-9	to	-8 m	
-8	to	-7 m	
-7	to	-6 m	
-6	to	-5 m	
-5	to	-4 m	
-4	to	-3 m	
-3	to	-2 m	
-2	to	-1 m	
-1	to	0 m	
0	to	1 m	
1	to	2 m	
2	to	3 m	
3	to	4 m	
4	to	5 m	
5	to	6 m	
6	to	7 m	
7	to	8 m	
8	to	9 m	

NOTE:

1. FOR GENERAL DRAWING LEGENDS, REFER TO SHEET 004
2. FOR GENERAL NOTES, REFER TO SHEETS 002 AND 003



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 **FRASERS
PROPERTY**

FRASERS PROPERTY

Project:

VANTAGE YATALA
STAGE 3

Site Address:

60 STAPYLTON JACOBS
WELL ROAD, STAYPLTON
QLD, 4207

RPD:	
Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST
Level Datum:	AHD
Meridian:	
PSM:	
RL:	

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FINISHED SURFACE
LAYOUT PLAN
SHEET 1 OF 5

[illegible]

A	03/02/23	ORIGINAL ISSUE	JH	MG
Rev	Date	Description	DRN	CHK
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CULVERT AND PIPE SIZES IN MILLIMETERS			A3 REDUCED	

Scale:



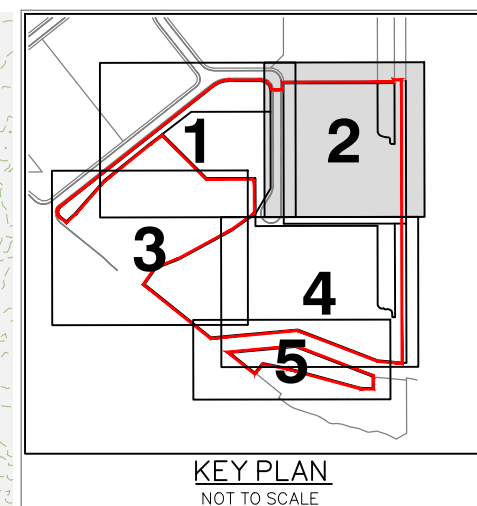
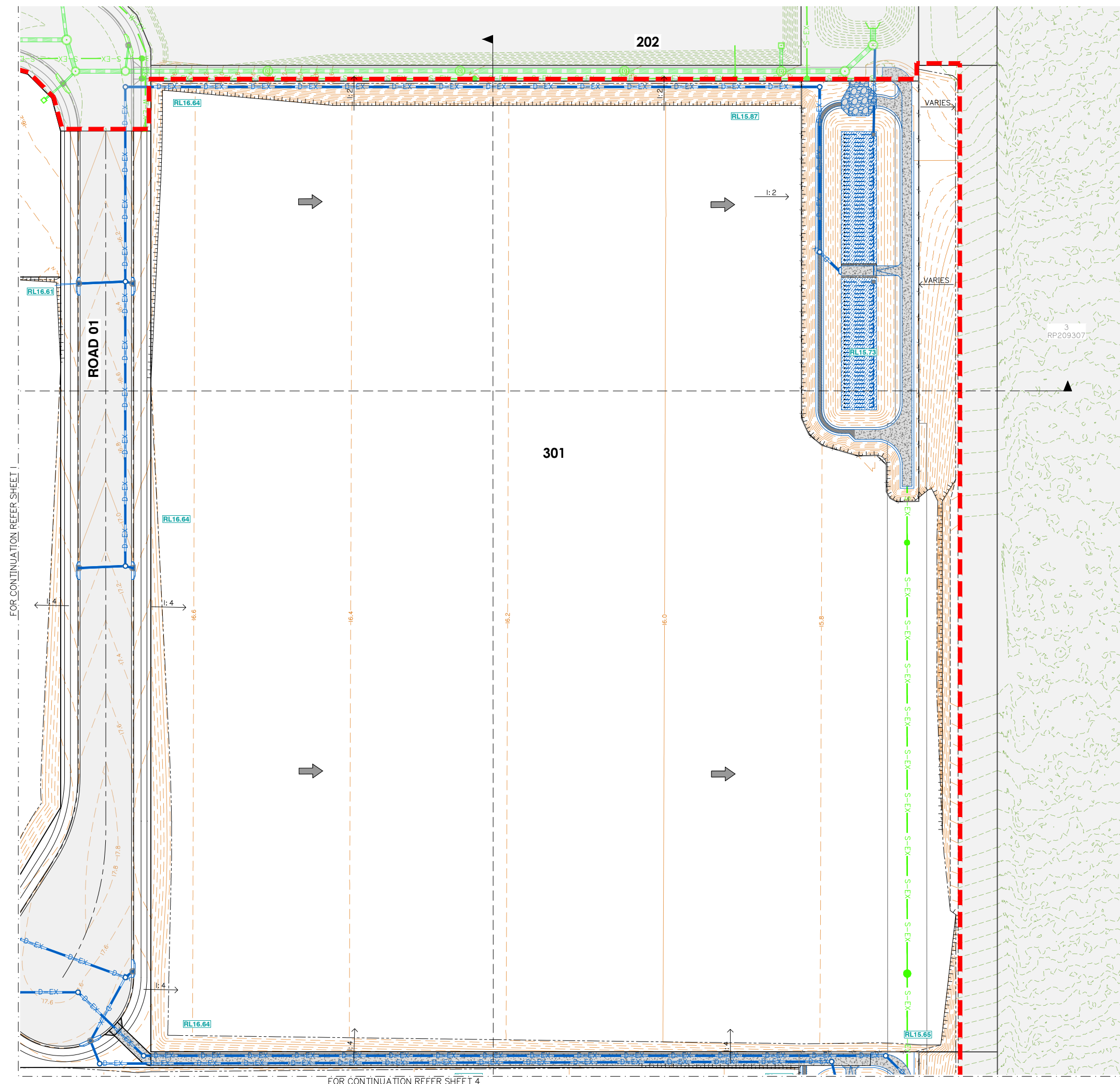
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PROJECT NORTH POINT

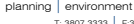


Project No. 5941	
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Approved:	MG
RPEQ	16939
Signed:	
Date:	03/02/2023
Drawing No: 5941 ENG BE3 100	
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Rev	Date	Description	DRN	CHK

DIMENSIONS IN METRES EXCEPT WHERE SHOWN OTHERWISE.	A1 UNREDUCED
CULVERT AND PIPE SIZES IN MILLIMETRES	A3 REDUCED

Scale:

0 5 10 15 20 25m 1:500 (A1) 1:1000 (A3)

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PROJECT NORTH POINT



Project No. 5941

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Approved:	MG
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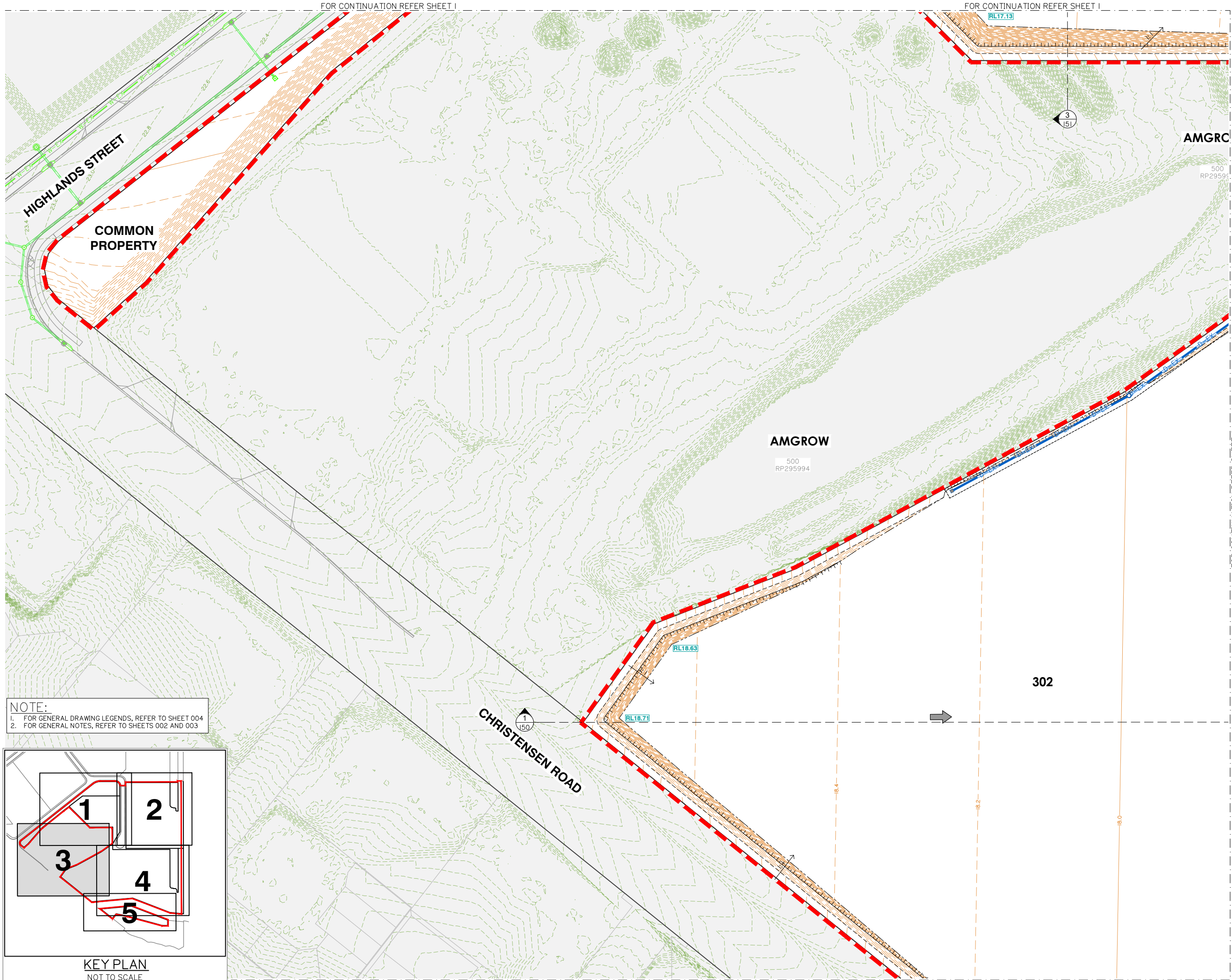
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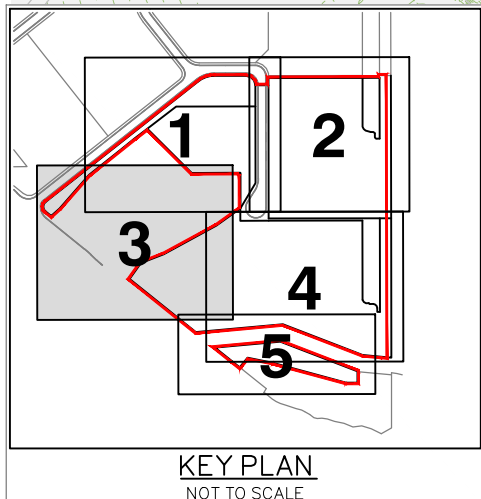
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VANTAGE YATALA
STAGE 3

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RPD:

Lot: 501
Plan: SP295994
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LAYOUT PLAN
SHEET 3 OF 5

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CULVERT AND PIPE SIZES IN MILLIMETRES

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A3 REDUCED

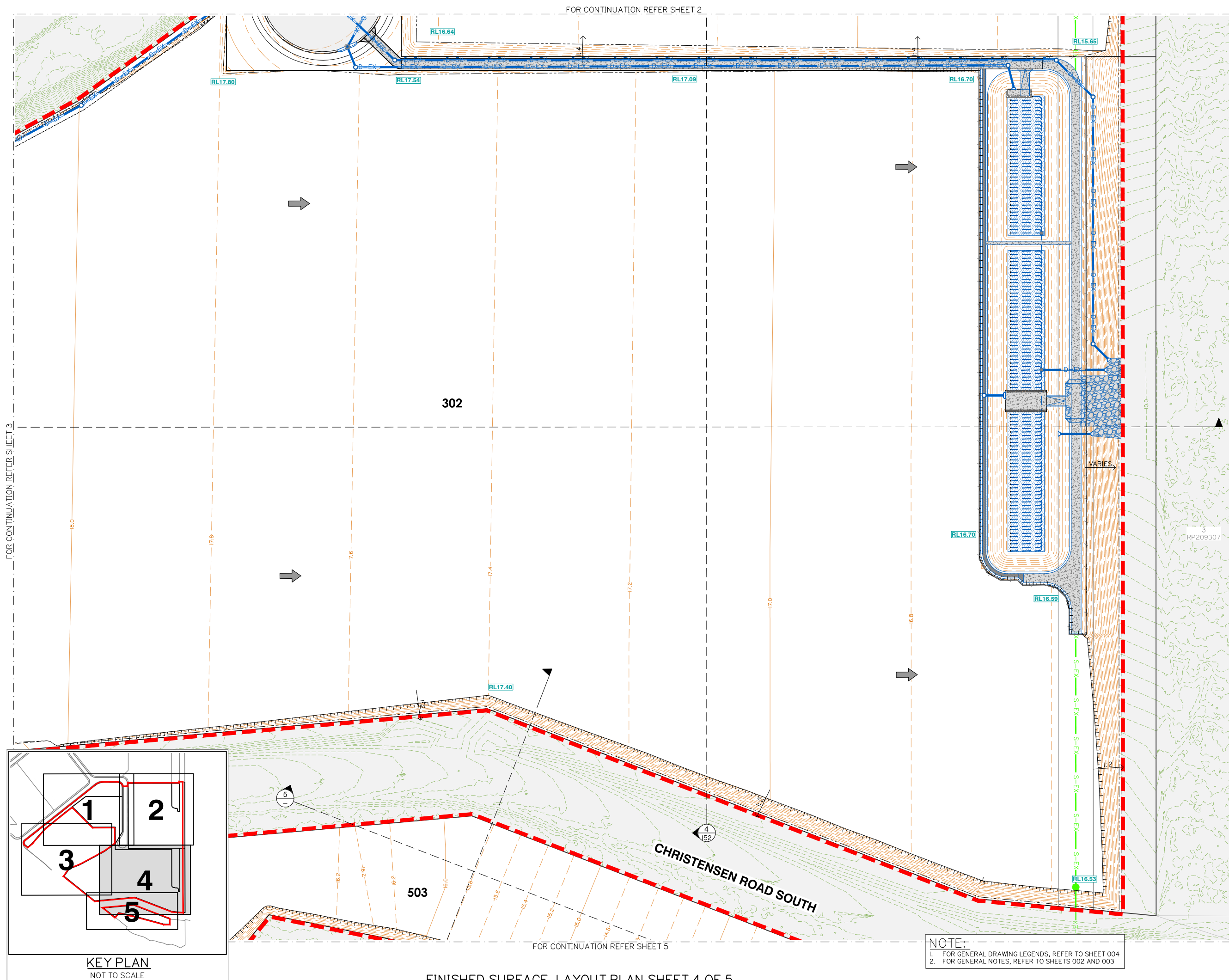
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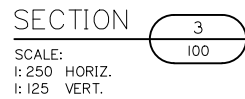
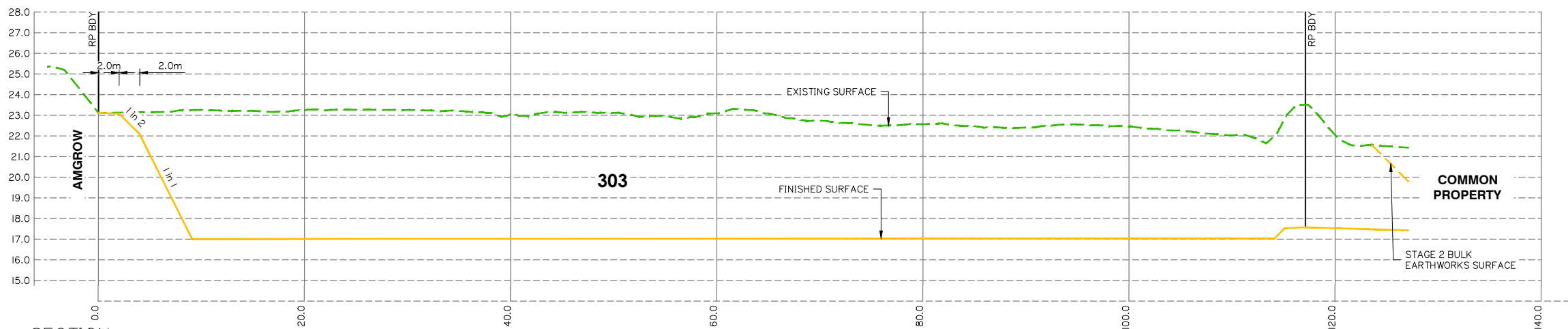
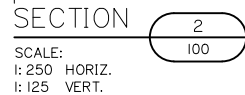
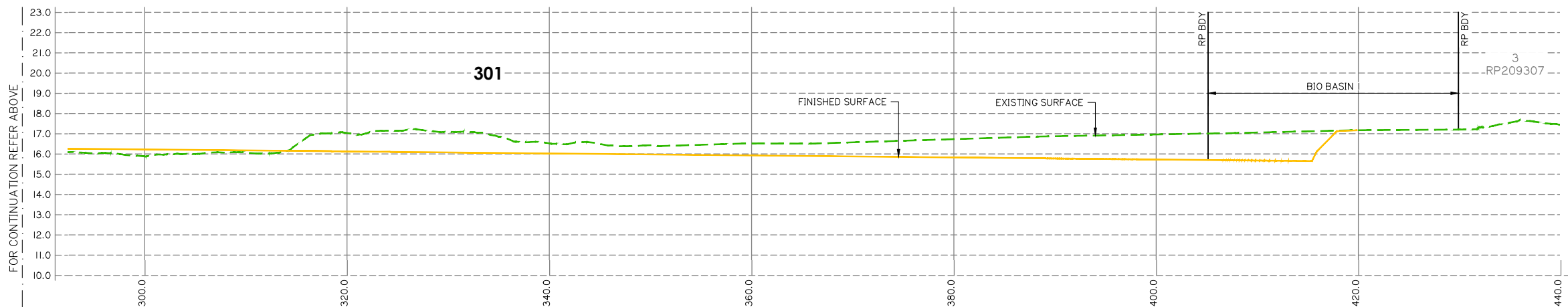
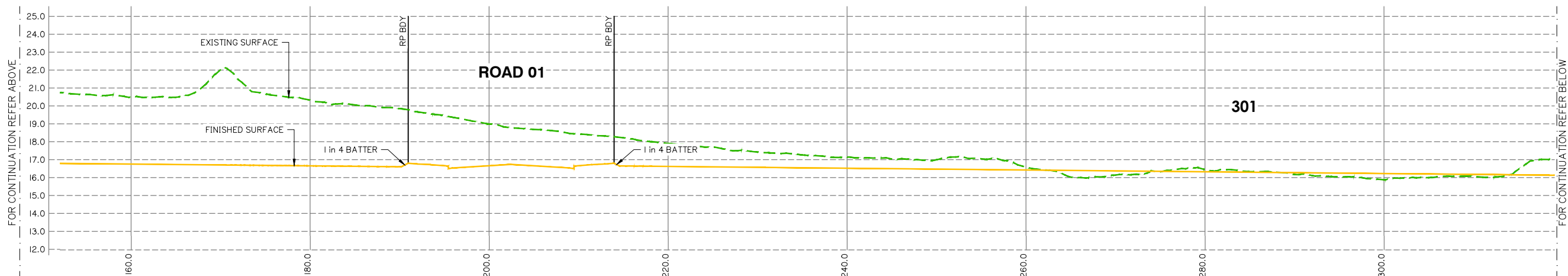
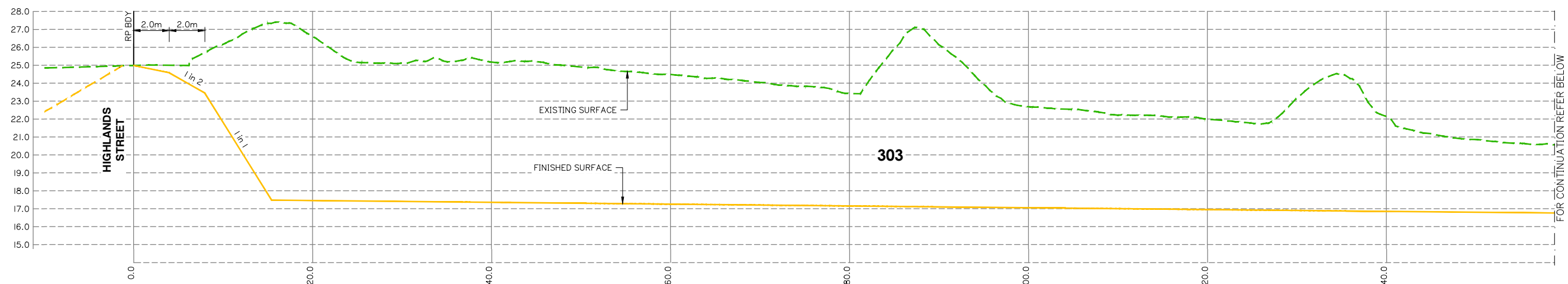
PROJECT NORTH POINT



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RPEQ	16939
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Date:	03/02/2023
Drawing No: 5941 ENG BE3 102	Revision A

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FRASERS PROPERTY

Project:

VANTAGE YATALA STAGE 3

Site Address:

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WELL ROAD, STAYPLTON
QLD, 4207

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST

Level Datum: AHD
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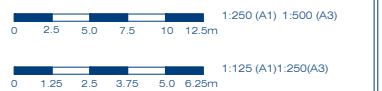
Drawing Title:

FINISHED SURFACE
CROSS SECTIONS
SHEET 2 OF 4

[illegible]

A	03/02/23	ORIGINAL ISSUE	JH	MG
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CULVERT AND PIPE SIZES IN MILLIMETRES			A3 REDUCED	

Scale:



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Project No. 5941

Designed: JH

Drafted: JH

Approved:

MG

RPEQ

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Signed:

[Signature]

Date:	03/02/2023
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Drawing No:	Revision
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vision

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FINISHED SURFACE CROSS SECTIONS SHEET 2 OF 4

Appendix D – External Intersection Layout Plan

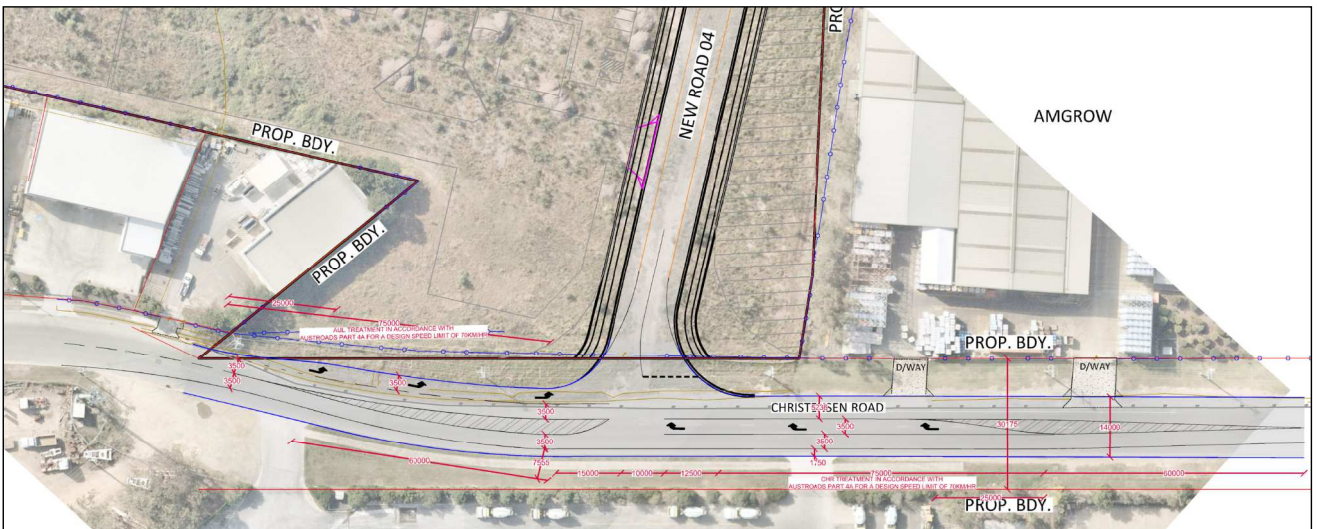
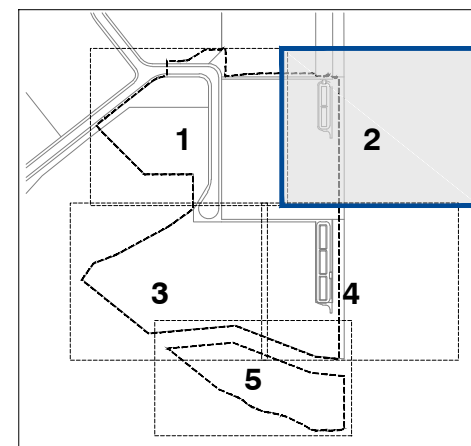
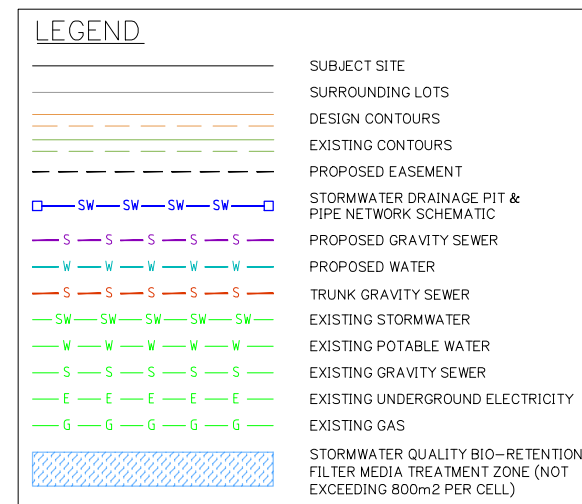
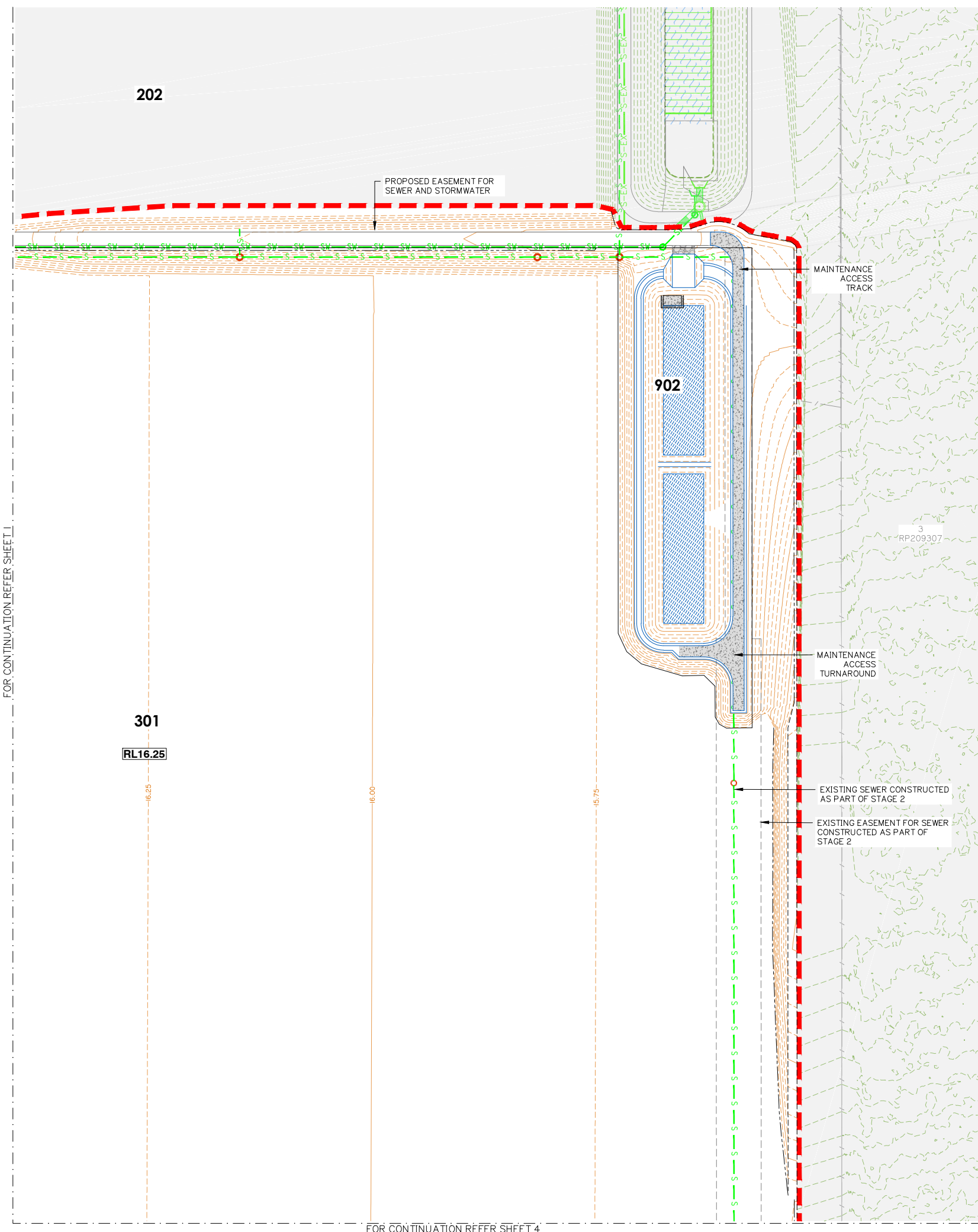


FIGURE 5.1 – CONCEPT DESIGN OF THE PROPOSED SITE ACCESS / CHRISTENSEN ROAD INTERSECTION

Appendix E – Civil Servicing Strategy Plan



Project: **VantageYatala**
STAGE 3

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Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST COUNCIL
Level Datum:	AHD
Meridian:	-
Contour Interval:	-
PSM:	-
RL:	-

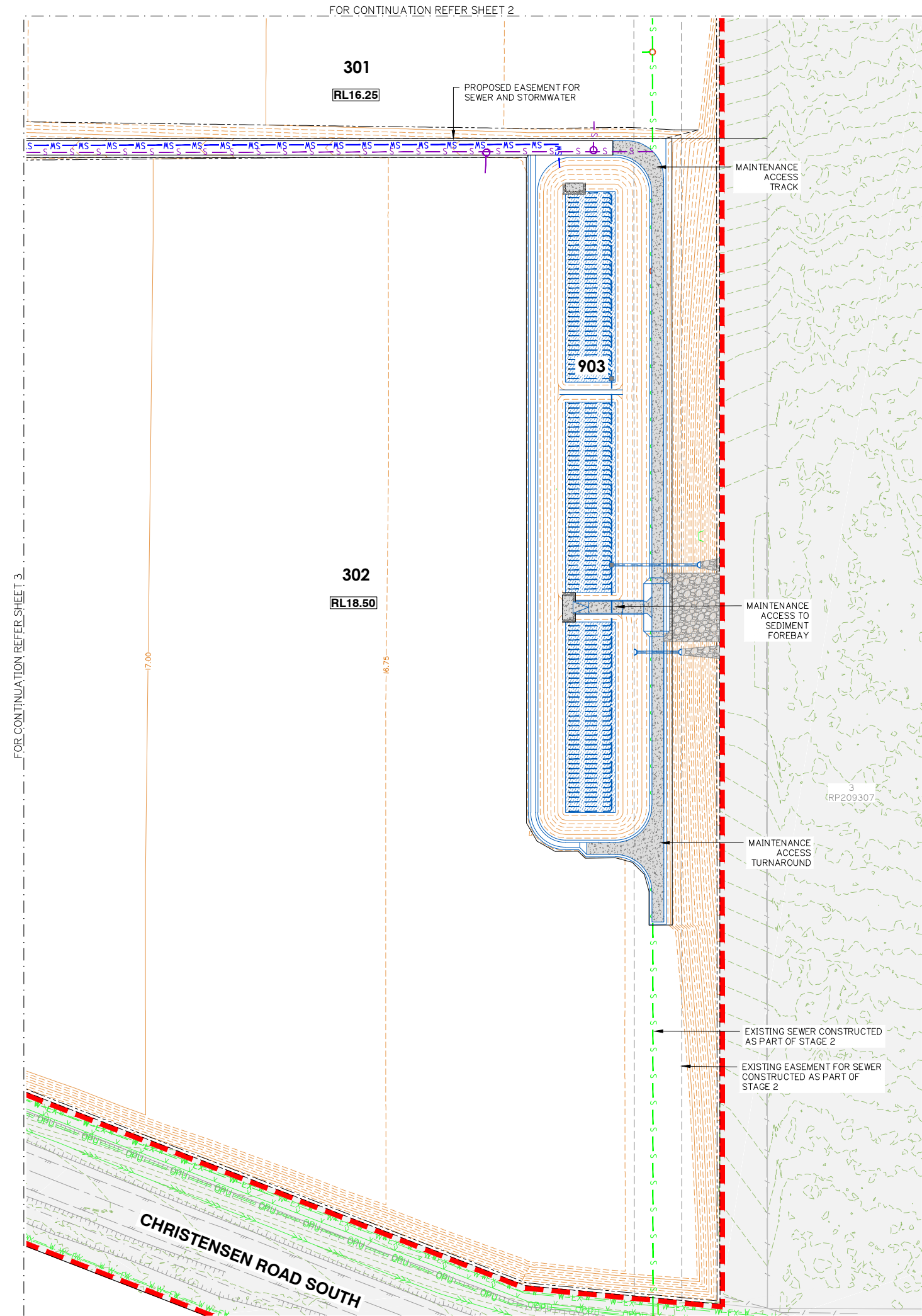
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DRAWING TITLE
STAGE 3 - ENGINEERING
SERVICING STRATEGY
PLAN SHEET 2 OF 5

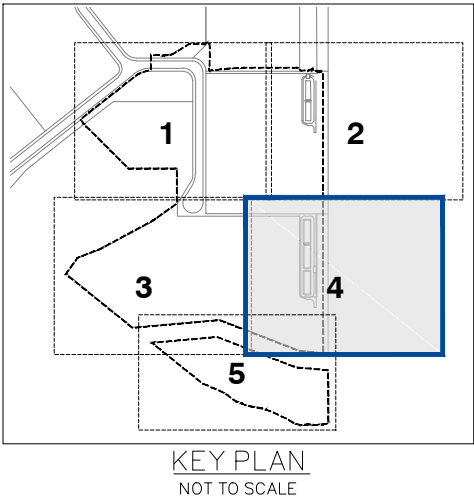
A	28-03-2023	ORIGINAL ISSUE	TGP	MG
Issue	Date	Description	DRN	CHI

Scale at A1: 1:500

Drawing No:	Rev. No:
5941 ENG SP3 002	A



- LEGEND
- SUBJECT SITE
 - SURROUNDING LOTS
 - DESIGN CONTOURS
 - EXISTING CONTOURS
 - PROPOSED EASEMENT
 - STORMWATER DRAINAGE PIT & PIPE NETWORK SCHEMATIC
 - PROPOSED GRAVITY SEWER
 - PROPOSED WATER
 - TRUNK GRAVITY SEWER
 - EXISTING STORMWATER
 - EXISTING POTABLE WATER
 - EXISTING GRAVITY SEWER
 - EXISTING UNDERGROUND ELECTRICITY
 - EXISTING GAS
 - STORMWATER QUALITY BIO-RETENTION FILTER MEDIA TREATMENT ZONE (NOT EXCEEDING 800m2 PER CELL)



Client:



FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VantageYatala
STAGE 3

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO
BE PRINTED IN COLOUR

RPD:

Lot: 501
Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

ISSUED FOR APPROVAL
NOT FOR CONSTRUCTION

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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

DRAWING TITLE
STAGE 3 - ENGINEERING
SERVICING STRATEGY
PLAN SHEET 4 OF 5

Issue	Date	Original Issue Description	TGP	MG	CHK
A	28-03-2023	ORIGINAL ISSUE			

SCALE IN METRES



1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1: 1:500

Designed: JH

Drafted: TGP

Approved: MG

RPEQ: 16939

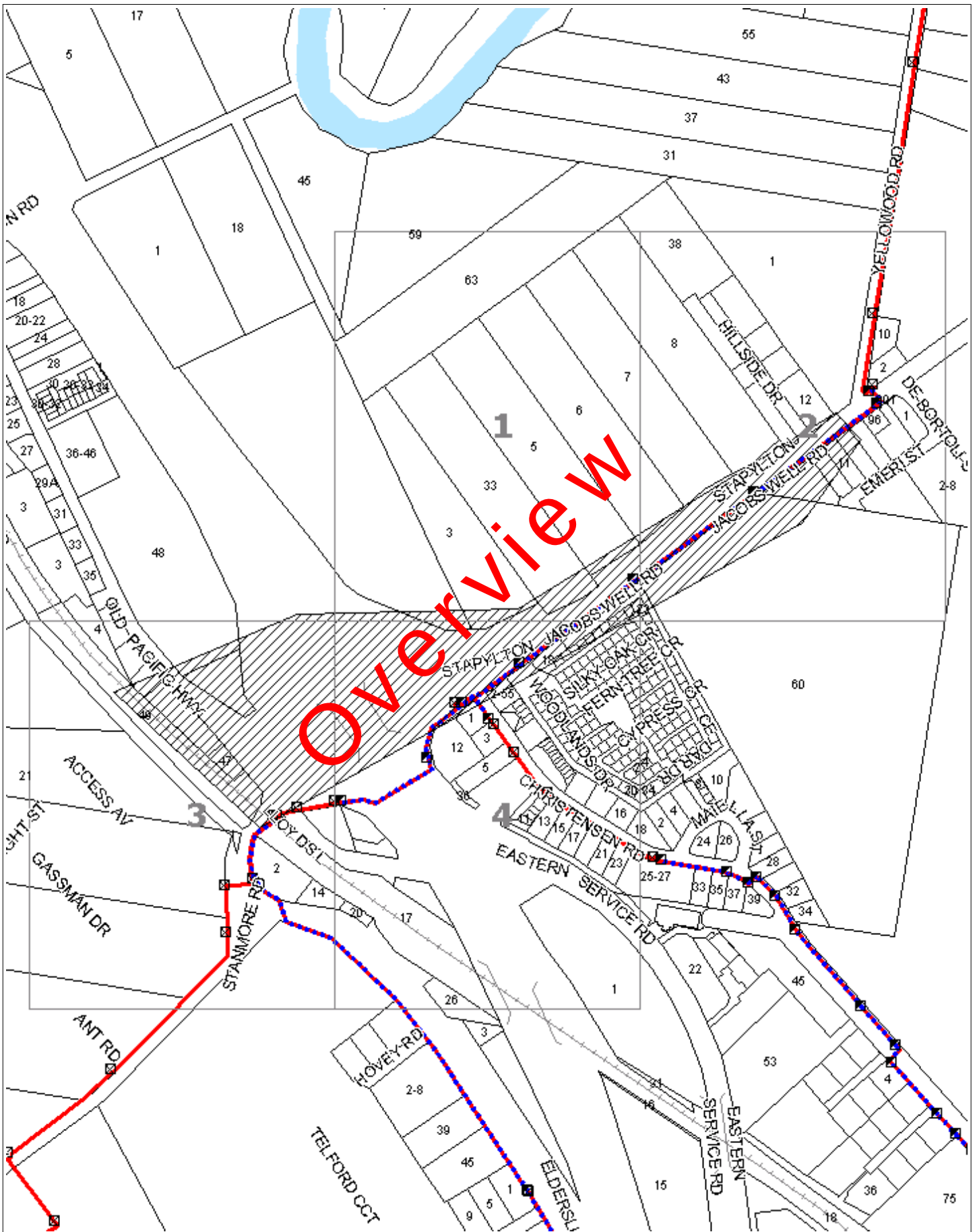
Signed:

Date: 28-03-2023

Drawing No:
5941 ENG SP3 004

Rev. No:
A

Appendix F – Dial Before You Dig Search Results



WARNING: This document is confidential and may also be privileged. Confidentiality nor privilege is not waived or destroyed by virtue of it being transmitted to an incorrect addressee. Unauthorised use of the contents is therefore strictly prohibited. Any information contained in this document that has been extracted from our records is believed to be accurate, but no responsibility is assumed for any error or omission. Optus Plans and information supplied are valid for 30 days from the date of issue. If this timeline has elapsed please raise a new enquiry.

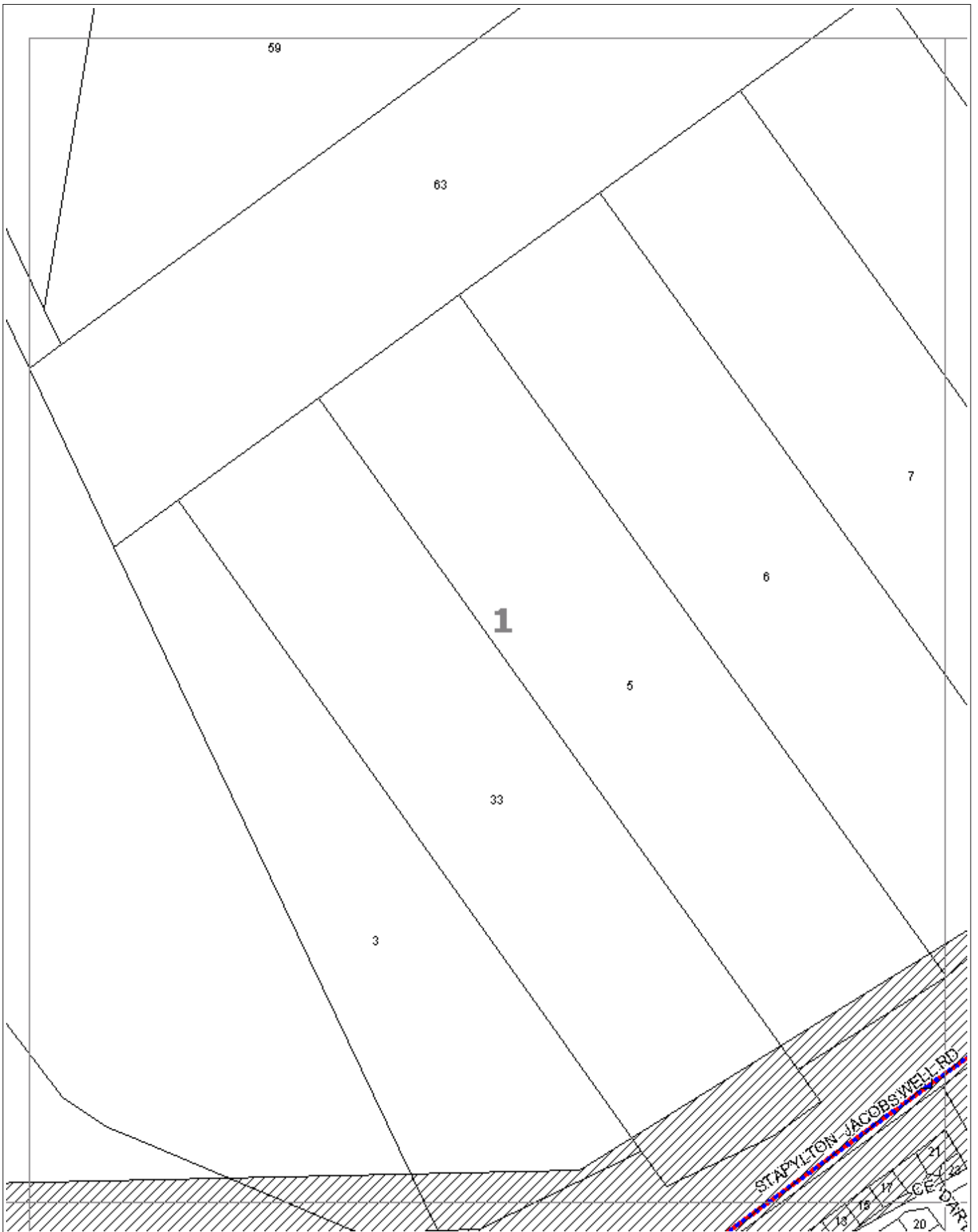
Sequence Number: 88097343

Date Generated: 20/08/2019



For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208





WARNING: This document is confidential and may also be privileged. Confidentiality nor privilege is not waived or destroyed by virtue of it being transmitted to an incorrect addressee. Unauthorised use of the contents is therefore strictly prohibited. Any information contained in this document that has been extracted from our records is believed to be accurate, but no responsibility is assumed for any error or omission. Optus Plans and information supplied are valid for 30 days from the date of issue. If this timeline has elapsed please raise a new enquiry.

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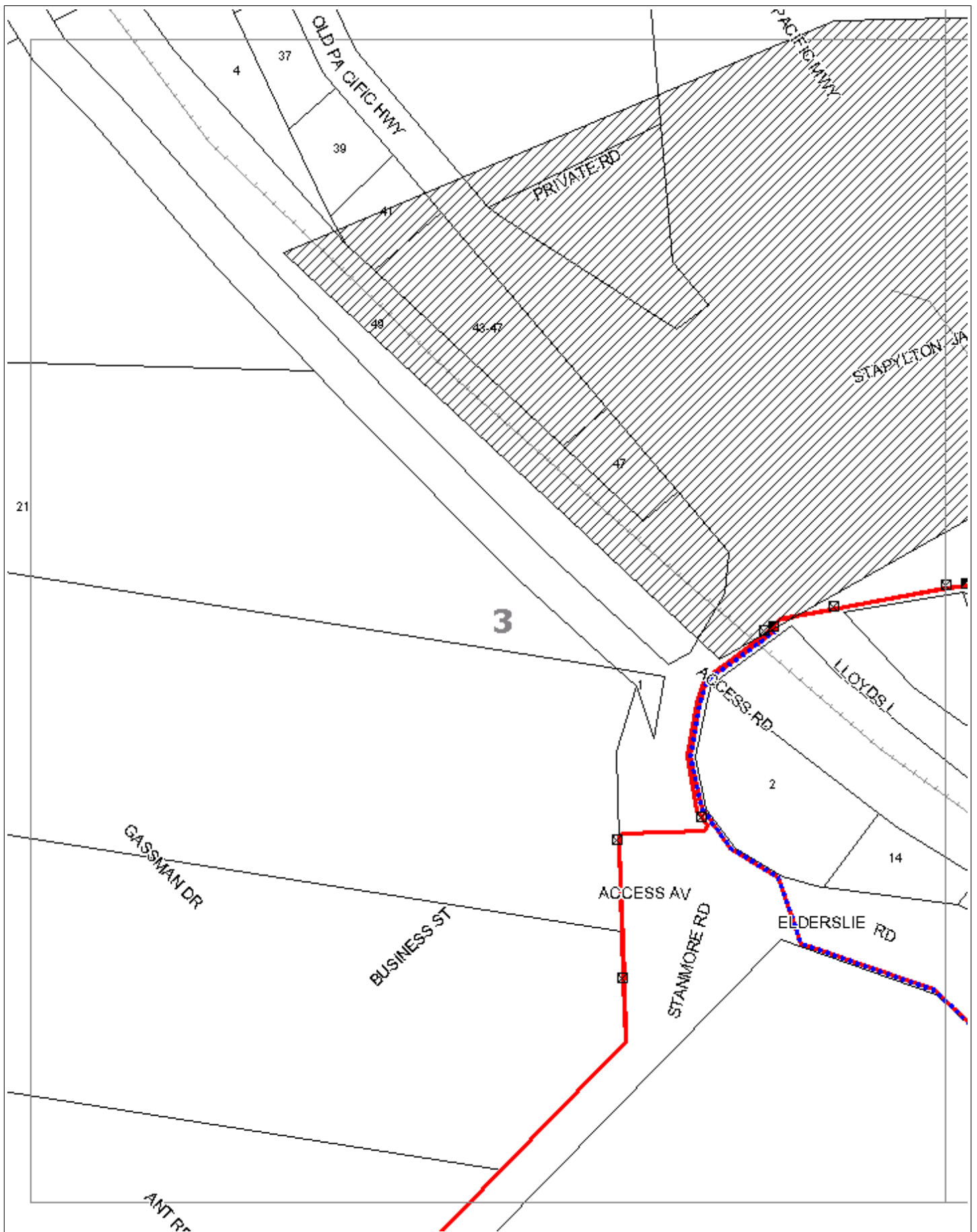
Sequence Number: 88097343

Date Generated: 20/08/2019



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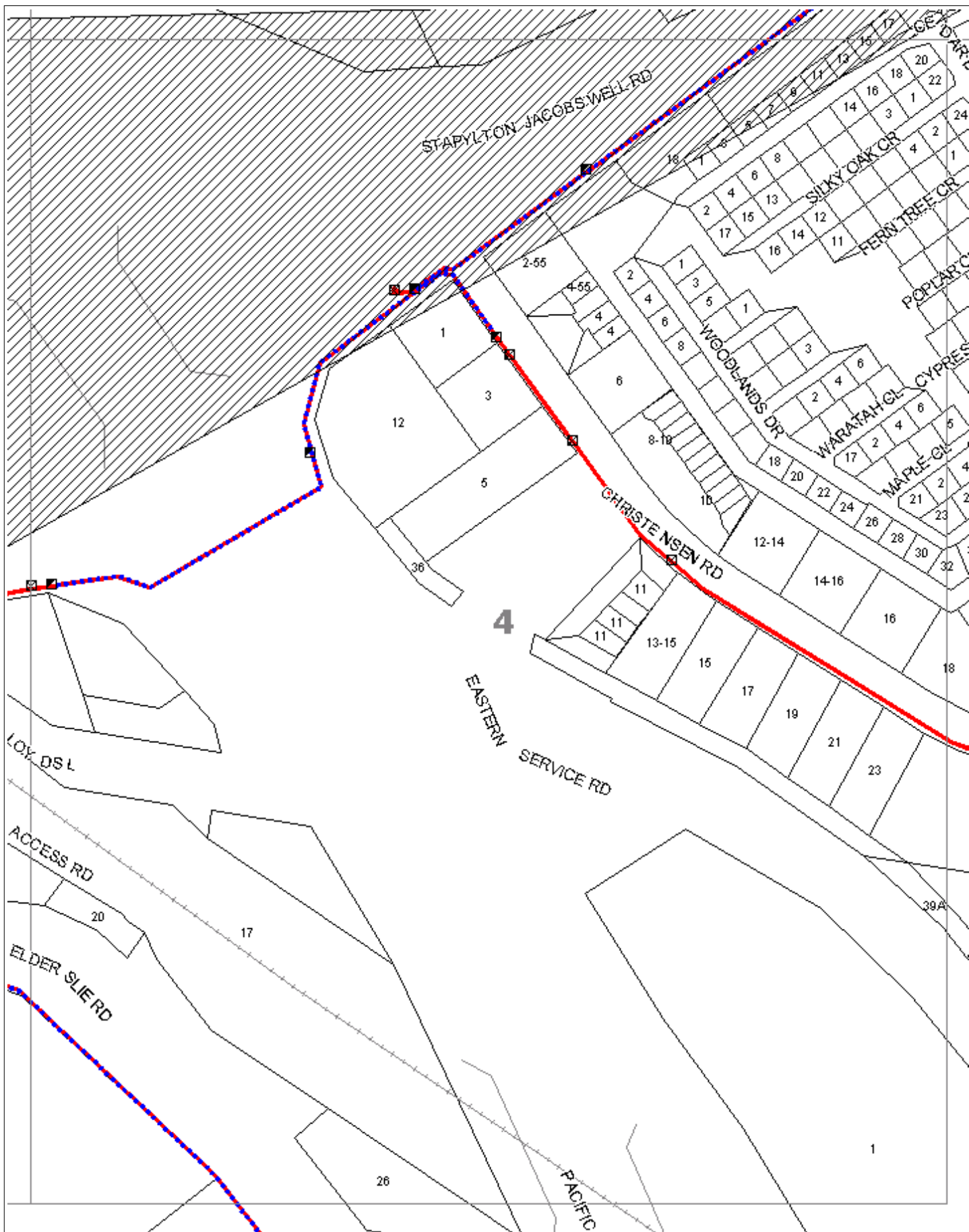
Sequence Number: 88097343

Date Generated: 20/08/2019



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Sequence Number: 88097343

Date Generated: 20/08/2019



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Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208





Response Cover Letter

Date: 20/08/2019

AAPT (PowerTel) Limited
GPO Box 7041 Sydney 2001
Phone: 1800 786 306
A/H: 1800 786 306

To:
Mr Tom Herbert - Customer ID: 1630751

76 Business st
Yatala QLD 4207

Email: therbert@gassman.com.au
Phone: 0419226407
Fax: Not Supplied
Mobile: Not Supplied



Dear Mr Tom Herbert

The following is our response to your Dial Before You Dig enquiry.

AAPT ASSETS ARE AFFECTED BY YOUR ENQUIRY 88097338

Sequence Number: 88097338

Location: Access Ave
Yatala
QLD
4207

Commencement Date: 21/08/2019

In relation to your enquiry at the above address, AAPT (PowerTel) advises as follows.

The records of AAPT (PowerTel) Limited disclose that there are underground FIBRE OPTIC / TELECOMMUNICATIONS cables in the vicinity of the above enquiry. The AAPT network is in a 3rd party ducted network in this area. The 3rd party supplier will manage any duct issues related to this request. The 3rd party supplier will also contact AAPT directly if they believe the AAPT network would be impacted.

It is essential that no excavations are undertaken until you have received and appraised the duct owner's plans and conditions for this area.

Should the scope of your work or the area of your work change, please contact as below to receive further advice. Due to continued network expansion, the network information can only be considered valid and accurate for 28 days from issue.

AAPT will seek compensation for any damage to its network through negligence or ignorance of duty of care. Should you require any further information, please contact as below:

AAPT
Ph: 1800 786 306

DUTY OF CARE

Due to the nature of underground cables and the age of some cables and records the accuracy and/or completeness of the information cannot be guaranteed and, accordingly, they are indicative only and as a result AAPT (PowerTel) does not accept any responsibility for any inaccuracies of its plans. They should not be solely relied upon when undertaking underground works. It is also inaccurate to assume that fibre optic cables follow straight lines and careful onsite investigations are essential to locate an assets exact position.

The following minimum clearances must be maintained.

- 1) 300mm when laying asset's inline, horizontal or vertical.**
- 2) 500mm when operating vibrating equipment. Eg: Vibrating plates.**
- 3) 1000mm when operating mechanical excavators or Jackhammers.**

ON SITE LOCATING OF AAPT'S (POWERTEL) CABLING AND INFRASTRUCTURE MUST BE CONDUCTED BY AAPT'S (POWERTEL) PERSONNEL ONLY. AAPT (POWERTEL) WILL USE ALL LEGAL MEANS TO SEEK DAMAGES AND ANY OTHER REMEDIES AVAILABLE TO IT IN THE EVENT THAT ITS CABLE OR ANY OTHER NETWORK INFRASTRUCTURE IS DAMAGED BY YOU OR YOUR PERSONNEL AND/OR CONTRACTORS. IT IS AN OFFENCE TO OPEN ANY AAPT'S (POWERTEL) PITS OR MANHOLES AND/OR ANY ASSOCIATED INFRASTRUCTURE BELONGING TO OR PART OF AAPT'S (POWERTEL) NETWORK

Due to the inherent dangers associated with excavation in the vicinity of underground cables, precautions should be taken in the undertaking of any underground works, including (but not limited to) the following.

All excavation sites should be examined for underground cables by careful hand excavation. Cable cover slabs & Manhole covers must not be disturbed. Hand excavation needs to be undertaken with extreme care to minimise the possibility of damage to the cable.

EG: Blades of hand equipment should be orientated parallel to the line of the cable rather than digging across the cable.

All personnel must be properly briefed, particularly those associated with the use of earth-moving equipment, trenching, boring and pneumatic equipment.

All excavations must be undertaken in accordance with the relevant legislation and regulations.

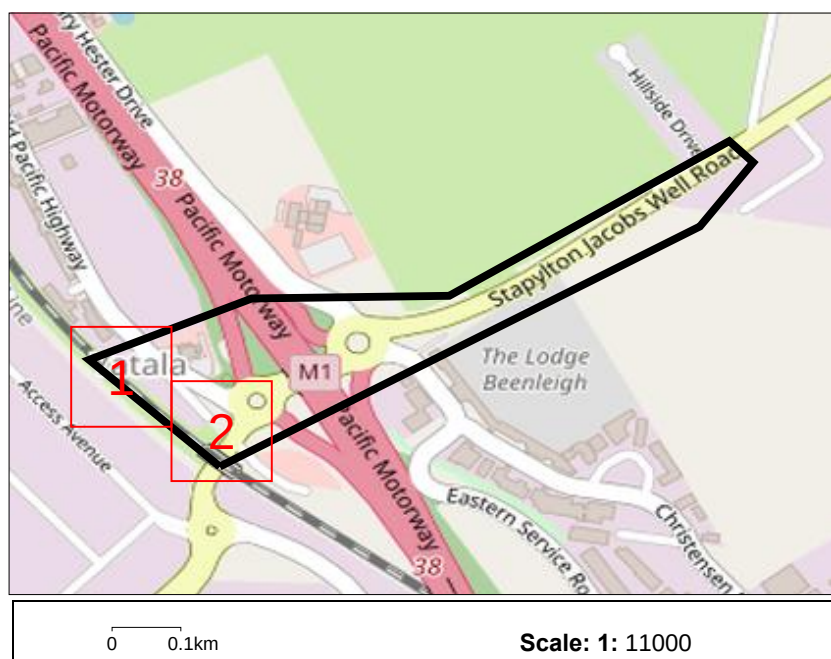
ANY DAMAGE TO AAPT (POWERTEL) NETWORK MUST BE REPORTED IMMEDIATELY TO 1800 786 306

Any information provided is valid only for 28 days from the date of issue of this document.

If the work operations extend beyond this period, or if the designs are altered in any way, you are requested to re-submit your proposal for re-assessment by contacting Dial Before You Dig ph:1100 or www.dialbeforeyoudig.com.au

Onsite visits by AAPT (PowerTel) agents may incur costs, this would solely depend on the type and extent of the work to be carried out. EG: Major roadwork's, network relocation's, Large planning and design work's.

Overview Map

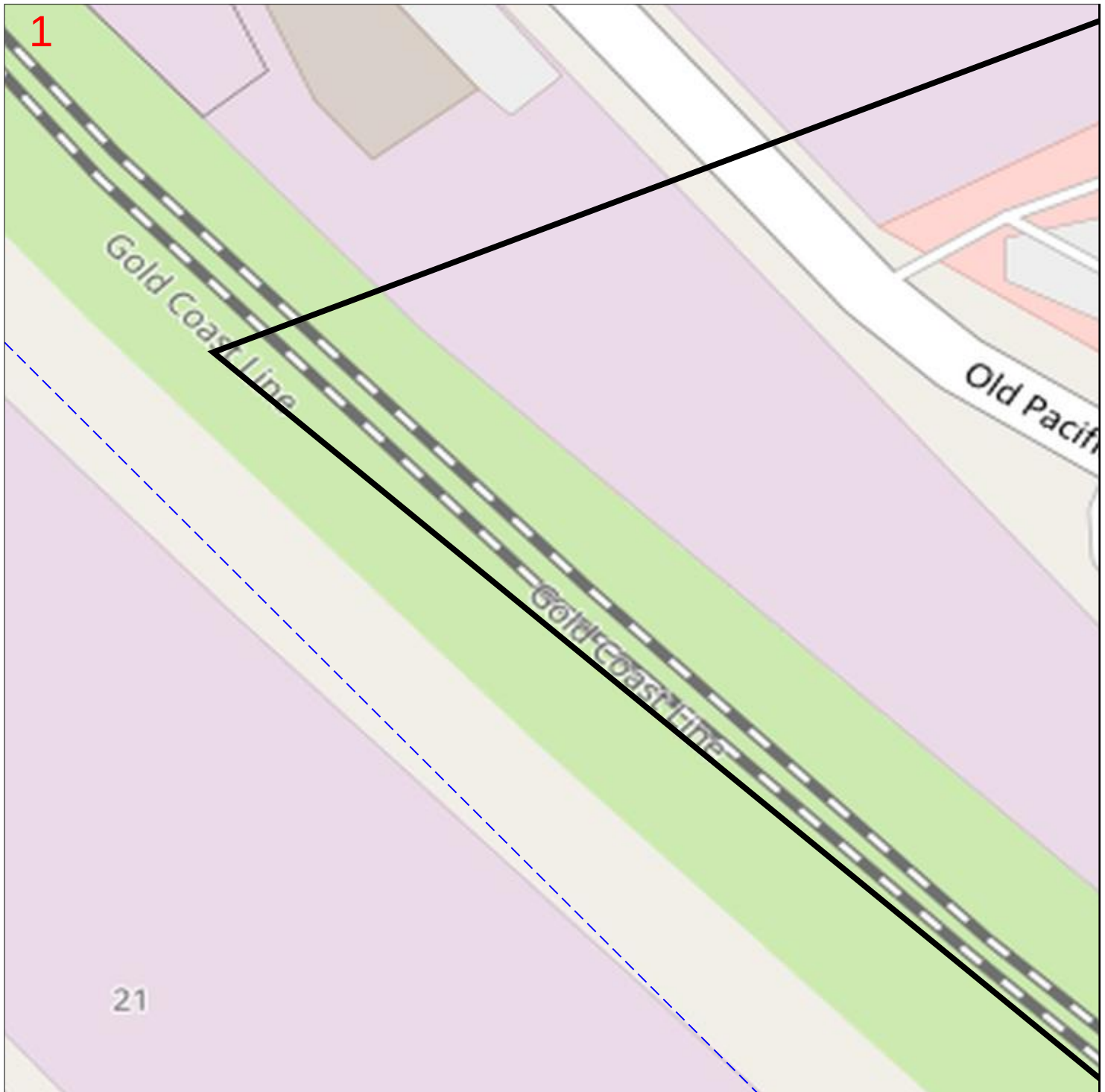


AAPT (for information specific to this job only) Ph 1800 786 306

DISCLAIMER: This document has been prepared solely for the use of AAPT. It should not be scaled to locate any asset. No warranty is given that the information given is accurate or complete



AAPT (PowerTel) Limited GPO Box 7041 Sydney 2001
Phone: 1800 786 306 A/H 1800 786 306



Enquiry Number: 88097338

Map Sheet: 1

Scale: 1:750

0 0.008km

LEGEND:

- DBYD Work Area
- AAPT Duct
- Non AAPT Duct
- AAPT Manhole



DISCLAIMER: This document has been prepared solely for the use of AAPT. It should not be scaled to locate any asset. No warranty is given that the information given is accurate or complete



AAPT (PowerTel) Limited GPO Box 7041 Sydney 2001
Phone: 1800 786 306 A/H 1800 786 306



Enquiry Number: 88097338

Map Sheet: 2

Scale: 1:750

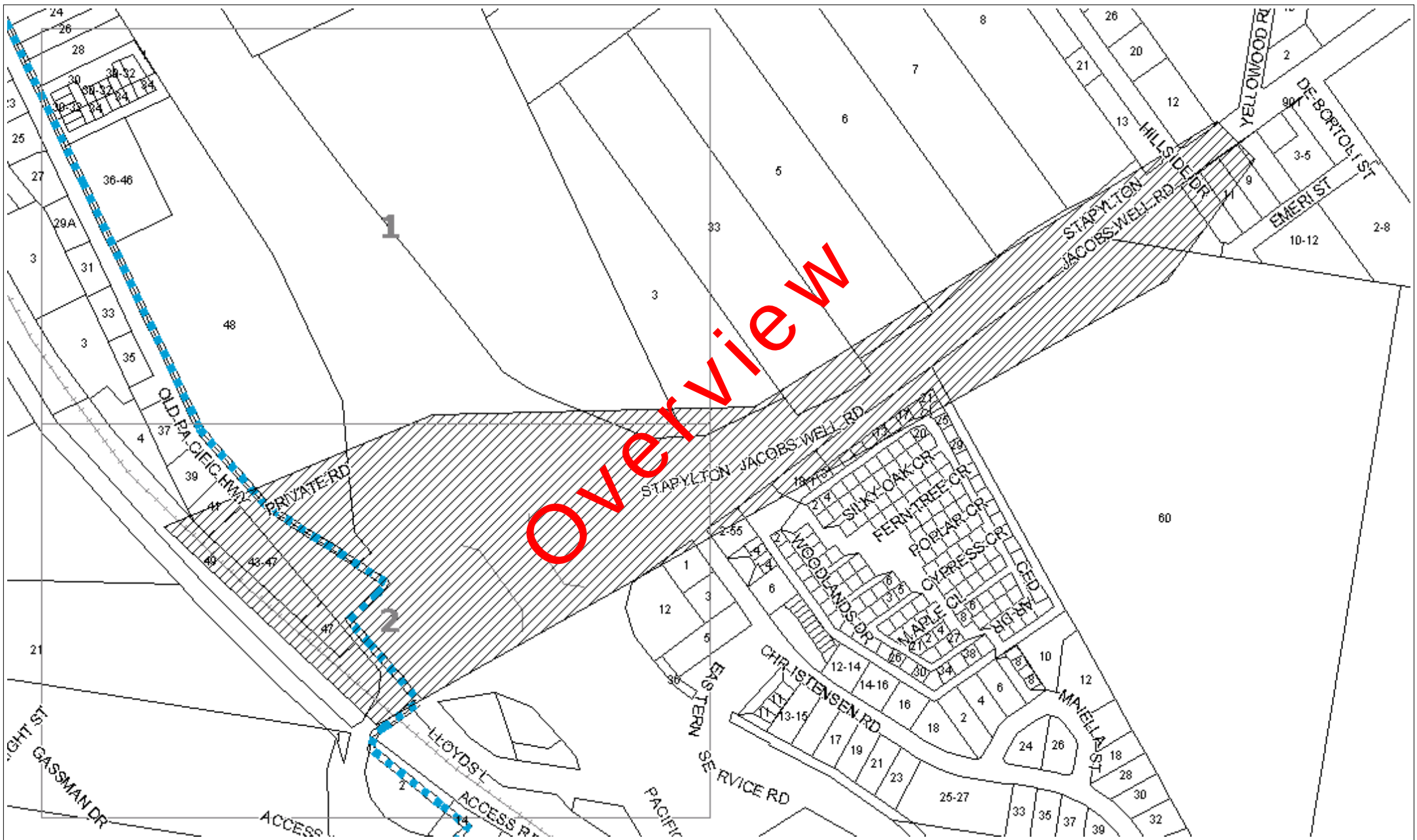
0 0.008km

LEGEND:

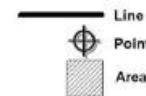
-  DBYD Work Area
-  AAPT Duct
-  Non AAPT Duct
-  AAPT Manhole



DISCLAIMER: This document has been prepared solely for the use of AAPT. It should not be scaled to locate any asset. No warranty is given that the information given is accurate or complete



Job Location



Underground Asset

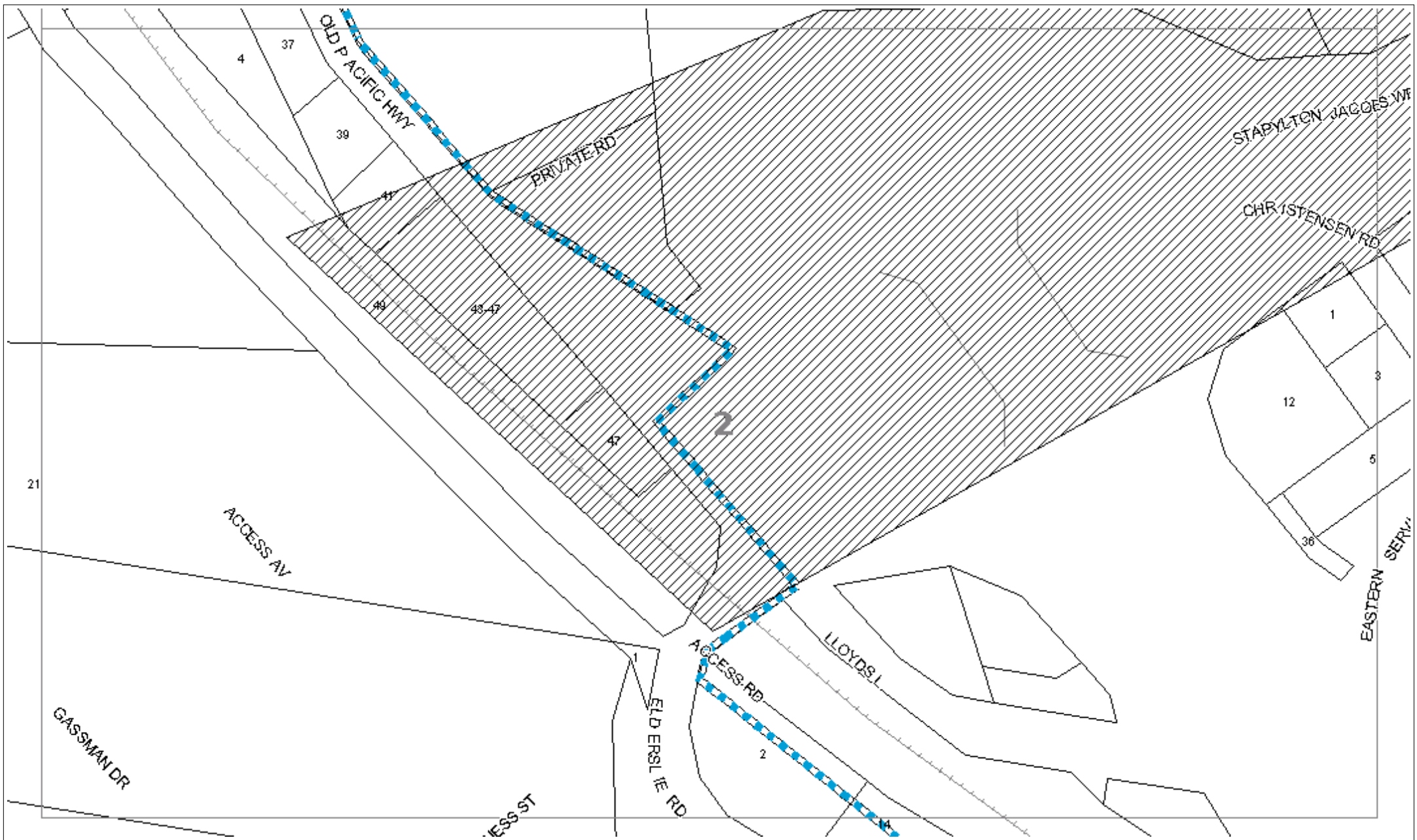




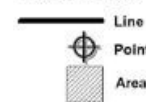
Location: Access Ave



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Job Location



Underground Asset



All underground cables shall be treated as being energised. Where a cable is located that is not represented on the *ENERGEX EnerGISE DBYD* map, then *ENERGEX* shall be contacted immediately.

For Emergency Situations
Please call 13 19 62

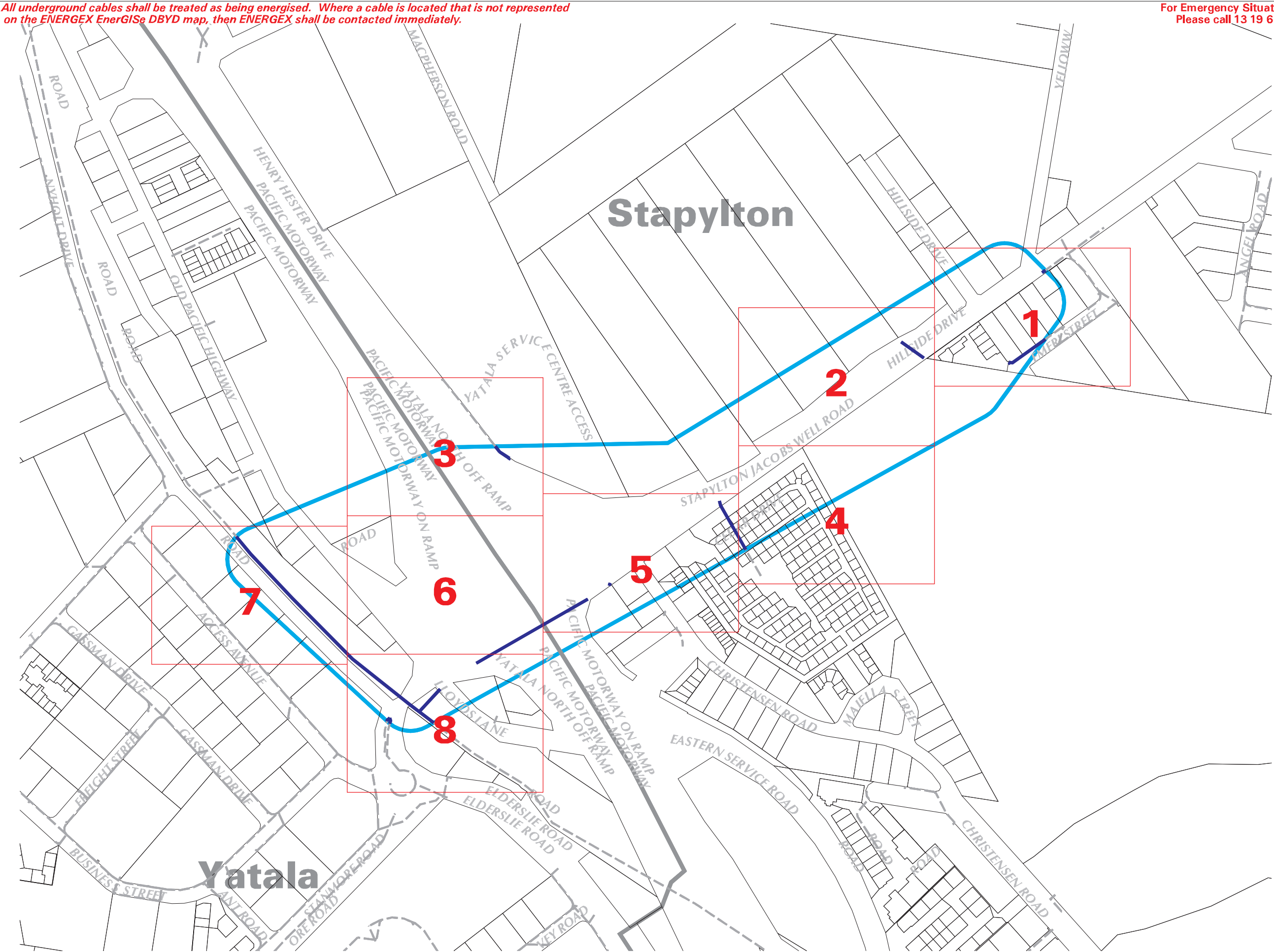


Date: 20 Aug 19 Time: 15.01.06
Requested By: DBYD

NOT TO SCALE
0 200m

Enquiry No: 88097341
KEY MAP

Enquiry Area



This output provides details of the *ENERGEX* electrical network. As variations may exist no responsibility is incurred by *ENERGEX* for the accuracy or completeness of the information provided. Exact positions of cables and electrical connectivity should be confirmed on site.

UNCONTROLLED COPY

LOCALITY DIAGRAM



All underground cables shall be treated as being energised. Where a cable is located that is not represented on the ENERGEX EnerGISE DBYD map, then ENERGEX shall be contacted immediately.

For Emergency Situations
Please call 13 19 62



Date: 20 Aug 19 Time: 15.01.18
Requested By: DBYD

SCALE 1:1000



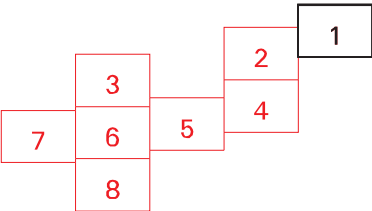
Enquiry No: 88097341

STRIP No: 1

- | | | | |
|--|-------------------------------------|--|------------------------------|
| | Ground Transformer | | Cable Voltage Less Than 33kV |
| | Cubicle Transformer | | Cable Voltage 33kV or Higher |
| | Ring Main Unit | | |
| | Metering Unit | | Direct-Lay Cable |
| | Link Pillar | | Conduit |
| | Service Pillar | | Multi-Section Duct |
| | Junction Pillar | | Trench |
| | Pit | | Cable Tray |
| | Cable Joint | | Tunnel |
| | Cable Termination | | |
| | Cable Marker | | |
| | Street Light Pole | | |
| | Earth | | |
| | Planned Work labelled by Work Order | | |



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LOCALITY DIAGRAM



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For Emergency Situations
Please call 13 19 62



Date: 20 Aug 19 Time: 15.01.39
Requested By: DBYD

SCALE 1:1000



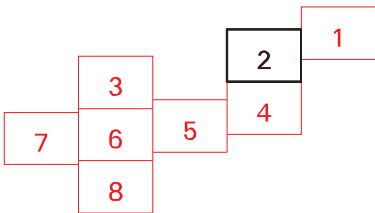
Enquiry No: 88097341

STRIP No: 2

- | | | | |
|--|-------------------------------------|--|------------------------------|
| | Ground Transformer | | Cable Voltage Less Than 33kV |
| | Cubicle Transformer | | Cable Voltage 33kV or Higher |
| | Ring Main Unit | | |
| | Metering Unit | | Direct-Lay Cable |
| | Link Pillar | | Conduit |
| | Service Pillar | | Multi-Section Duct |
| | Junction Pillar | | Trench |
| | Pit | | Cable Tray |
| | Cable Joint | | Tunnel |
| | Cable Termination | | |
| | Cable Marker | | |
| | Street Light Pole | | |
| | Earth | | |
| | Planned Work labelled by Work Order | | |



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LOCALITY DIAGRAM



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UNCONTROLLED COPY

All underground cables shall be treated as being energised. Where a cable is located that is not represented on the **ENERGEX EnerGISE DBYD** map, then **ENERGEX** shall be contacted immediately.

For Emergency Situations
Please call 13 19 62



Date: 20 Aug 19 Time: 15.01.55
Requested By: DBYD

SCALE 1:1000



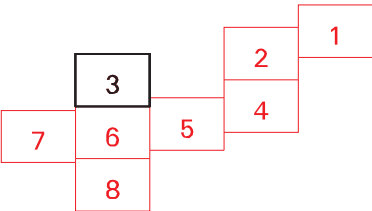
Enquiry No: 88097341

STRIP No: 3

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|--|-------------------------------------|--|------------------------------|
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| | Cubicle Transformer | | Cable Voltage 33kV or Higher |
| | Ring Main Unit | | |
| | Metering Unit | | Direct-Lay Cable |
| | Link Pillar | | Conduit |
| | Service Pillar | | Multi-Section Duct |
| | Junction Pillar | | Trench |
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| | Cable Joint | | Tunnel |
| | Cable Termination | | |
| | Cable Marker | | |
| | Street Light Pole | | |
| | Earth | | |
| | Planned Work labelled by Work Order | | |



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LOCALITY DIAGRAM



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UNCONTROLLED COPY

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For Emergency Situations
Please call 13 19 62



Date: 20 Aug 19 Time: 15.02.12
Requested By: DBYD

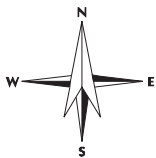
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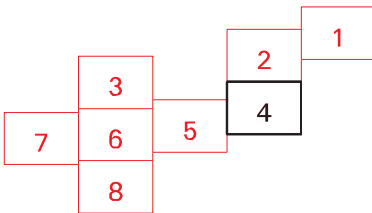
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STRIP No: 4

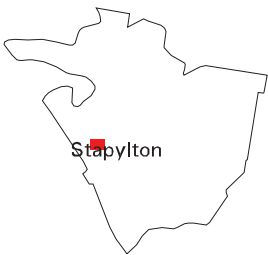
- | | | | |
|--|-------------------------------------|--|------------------------------|
| | Ground Transformer | | Cable Voltage Less Than 33kV |
| | Cubicle Transformer | | Cable Voltage 33kV or Higher |
| | Ring Main Unit | | |
| | Metering Unit | | Direct-Lay Cable |
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| | Earth | | |
| | Planned Work labelled by Work Order | | |



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UNCONTROLLED COPY

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For Emergency Situations
Please call 13 19 62



Date: 20 Aug 19 Time: 15.02.29
Requested By: DBYD

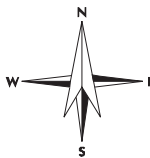
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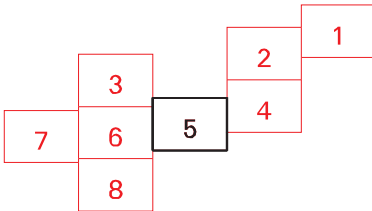
Enquiry No: 88097341

STRIP No: 5

- | | | | |
|--|--|--|------------------------------|
| | Ground Transformer | | Cable Voltage Less Than 33kV |
| | Cubicle Transformer | | Cable Voltage 33kV or Higher |
| | Ring Main Unit | | |
| | Metering Unit | | Direct-Lay Cable |
| | Link Pillar | | Conduit |
| | Service Pillar | | Multi-Section Duct |
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UNCONTROLLED COPY

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For Emergency Situations
Please call 13 19 62



Date: 20 Aug 19 Time: 15.02.49
Requested By: DBYD

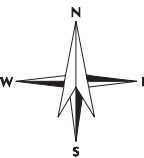
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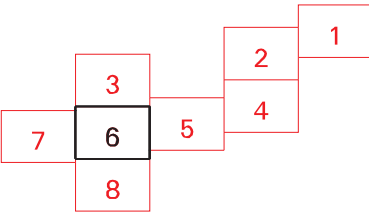
Enquiry No: 88097341

STRIP No: 6

- | | | | |
|--|--|--|------------------------------|
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| | Cubicle Transformer | | Cable Voltage 33kV or Higher |
| | Ring Main Unit | | |
| | Metering Unit | | Direct-Lay Cable |
| | Link Pillar | | Conduit |
| | Service Pillar | | Multi-Section Duct |
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INDEX TO SHEETS



LOCALITY DIAGRAM



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UNCONTROLLED COPY

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For Emergency Situations
Please call 13 19 62



Date: 20 Aug 19 Time: 15.03.10
Requested By: DBYD

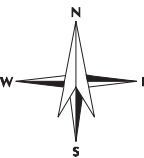
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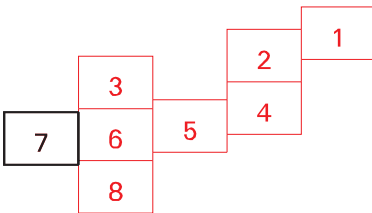
Enquiry No: 88097341

STRIP No: 7

- | | | | |
|--|-------------------------------------|--|------------------------------|
| | Ground Transformer | | Cable Voltage Less Than 33kV |
| | Cubicle Transformer | | Cable Voltage 33kV or Higher |
| | Ring Main Unit | | |
| | Metering Unit | | Direct-Lay Cable |
| | Link Pillar | | Conduit |
| | Service Pillar | | Multi-Section Duct |
| | Junction Pillar | | Trench |
| | Pit | | Cable Tray |
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UNCONTROLLED COPY

All underground cables shall be treated as being energised. Where a cable is located that is not represented on the ENERGEX EnerGISE DBYD map, then ENERGEX shall be contacted immediately.

For Emergency Situations
Please call 13 19 62



Date: 20 Aug 19 Time: 15.03.34
Requested By: DBYD

SCALE 1:1000



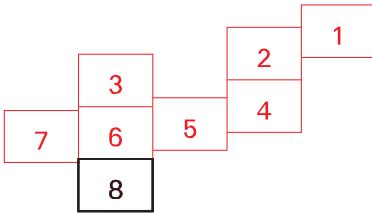
Enquiry No: 88097341

STRIP No: 8

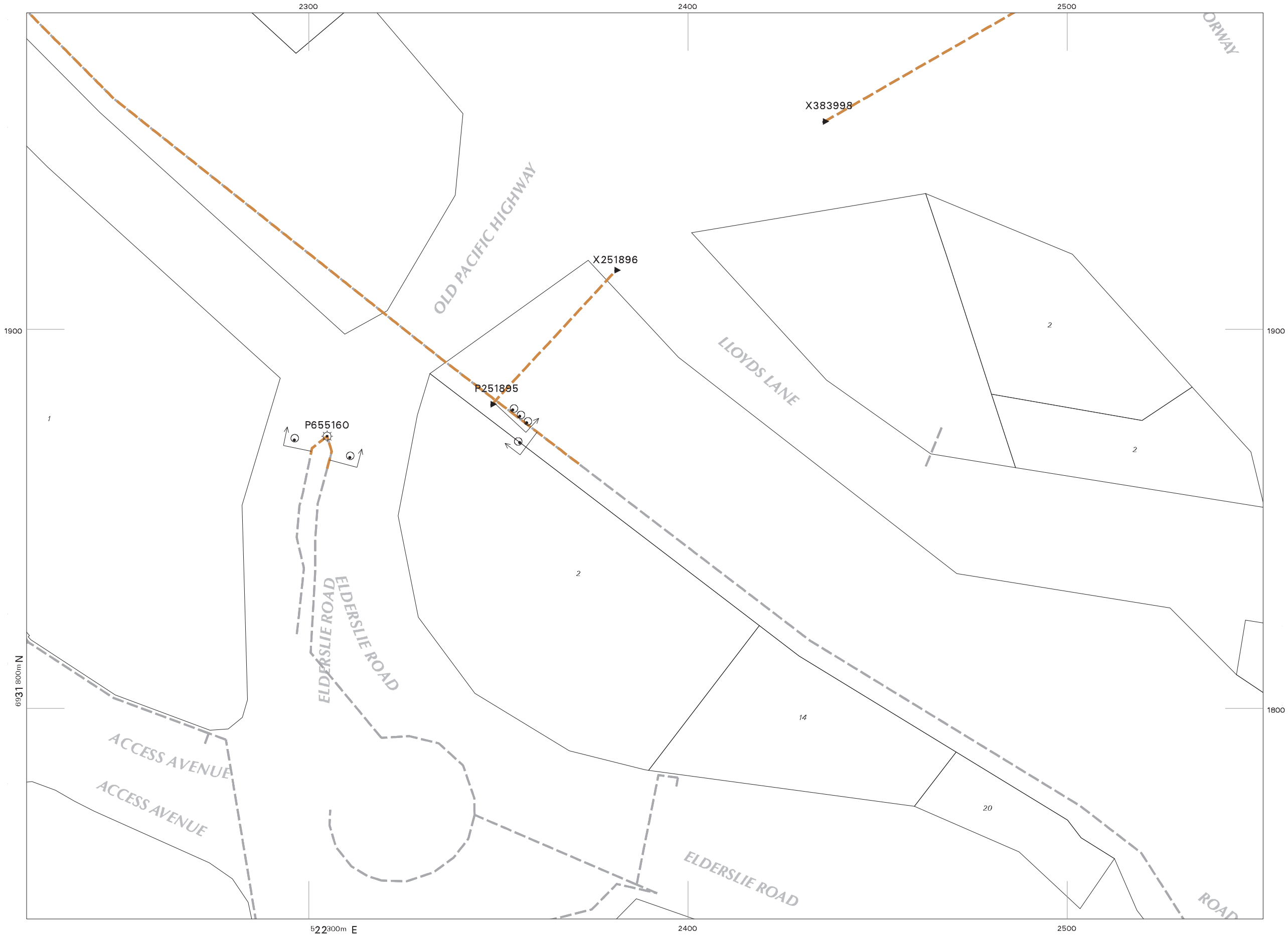
- | | | | |
|--|------------------------|--|------------------------------|
| | Ground Transformer | | Cable Voltage Less Than 33kV |
| | Cubicle Transformer | | Cable Voltage 33kV or Higher |
| | Ring Main Unit | | |
| | Metering Unit | | Direct-Lay Cable |
| | Link Pillar | | Conduit |
| | Service Pillar | | Multi-Section Duct |
| | Junction Pillar | | Trench |
| | Pit | | Cable Tray |
| | Cable Joint | | Tunnel |
| | Cable Termination | | |
| | Cable Marker | | |
| | Street Light Pole | | |
| | Earth | | |
| | Planned Work | | |
| | Labelled by Work Order | | |



INDEX TO SHEETS



LOCALITY DIAGRAM



This output provides details of the ENERGEX electrical network. As variations may exist no responsibility is incurred by ENERGEX for the accuracy or completeness of the information provided. Exact positions of cables and electrical connectivity should be confirmed on site.

UNCONTROLLED COPY

20/08/2019

Company:
Mr Tom Herbert
76 Business st
Yatala
QLD 4207

therbert@gassman.com.au

Dear Mr Tom Herbert

Sequence Number: 88097344
Worksite Address: Access Ave
Yatala
QLD 4207

RE: REQUEST FOR APA GROUP (APA) UNDERGROUND DIAL BEFORE YOU DIG

Dear Sir/Madam

In response to the above enquiry we wish to confirm that APA **operates underground plant** (Mains and / or Services) at or in the vicinity of the above address.

Please check that the following map represents the area you requested - if the area is not correct please contact our Dial Before You Dig Officer - 1800 085 628. If works are proposed adjacent to any underground plant operated by APA please ensure compliance with the attached "DUTY OF CARE"

Please find enclosed the following information in support of the above: -

1. A location map of the **suburb** the service is in and an A4 location map showing the **status** of APA underground plant (Mains and / or Services) adjacent to the subject site
2. DUTY OF CARE statement which forms **an integral part** of any information supplied by APA

For **GAS EMERGENCIES 24 HOURS - 1800 GAS LEAK (1800 427 532)**

Please note that as work on APA underground plant is ongoing any information supplied on their status can only be considered current for **30 days from the date of this response**. Expired locations, i.e., over 30 days from the date of this response, require a new Dial Before You Dig request to validate location information.

Should you have any questions with **regards to the attached information** please contact our Dial Before You Dig officer - 1800 085 628.

For any excavation works, including vacuum excavations, an "Authority to Work" Permit may be required and a Site Watch may need to be scheduled.

A minimum of 5 business days' notice is required to process permit applications. Permit applications can be made by: -

Post: Permit Applications QLD, PO Box 885 Hamilton Central QLD 4007 or

Email: permitsqld@apa.com.au or Phone: (07) 3215 6700 though an application will most likely be required

Charges may apply for Site Watch requests. Your sequence number may be requested when making your booking, please have this available when you request either a mains location or site watch.

For other enquiries please contact your gas retailer

To find out who your retailer is call 1800 657 567

Warning: if there are high or transmission pressure gas mains present in the vicinity of your area of interest, an APA employee must be in attendance during any excavation within 3 metres of high or transmission pressure mains, and an "Authority to Work" permit must be issued prior to work commencing.

Please contact us for a permit to work request if you believe your work is within this zone, by completing the "Authority to Work" request form attached and sending to APA. 5 days' notice is required prior to the commencement of any excavation to assess and allocate resources. Contact phone numbers are shown at the end of the notice of location.

Please Note: For some DBYD enquiries, you might receive 2 responses from the APA Group. Please read both responses carefully as they will relate to different assets. It is your responsibility to action all requirements set out in APA Group responses.

Please take some time to review the entire response document and check the information supplied and please let us have any feedback by sending an email to DBYDNetworksAPA@apa.com.au or contacting us direct on 1800 085 628.

Yours faithfully

Dial Before You Dig Officer
APA Group

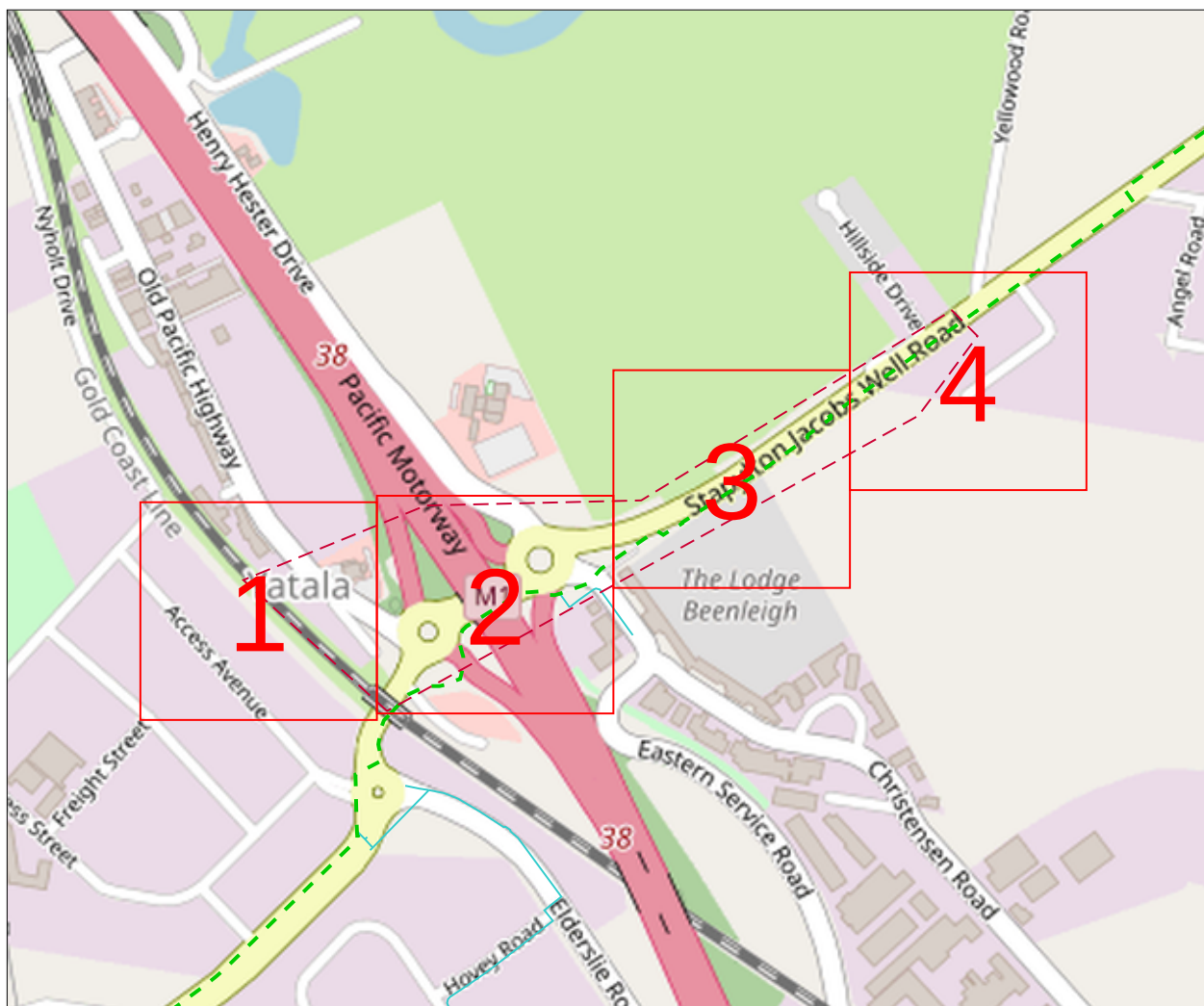
Email DBYDNetworksAPA@apa.com.au
Ph. 1800 085 628

20/08/2019

SCALE: DO NOT SCALE

REF NO: 88097344

As work on APA underground plant is ongoing any drawing with an issue date of more than 30 days previous can no longer be considered valid. All persons planning civil works on any site are advised to contact APA to confirm location. All underground gas pipelines are the property of APA & are not to be accessed by unauthorised persons. All care is taken with preparation of the drawings & no responsibility is accepted for errors or omissions



Enquiry: 88097344

Papersize: A4 Scale: 1: 8500

0 0.1km



Data Source

Pipeline Data Copyright APA Group, Property Parcels Copyright QLD Government, UBD Imagery – Copyright Sensis, DBYD Dig Location provided by DBYD.

operated by



This maps is created in colour and shall be printed in colour

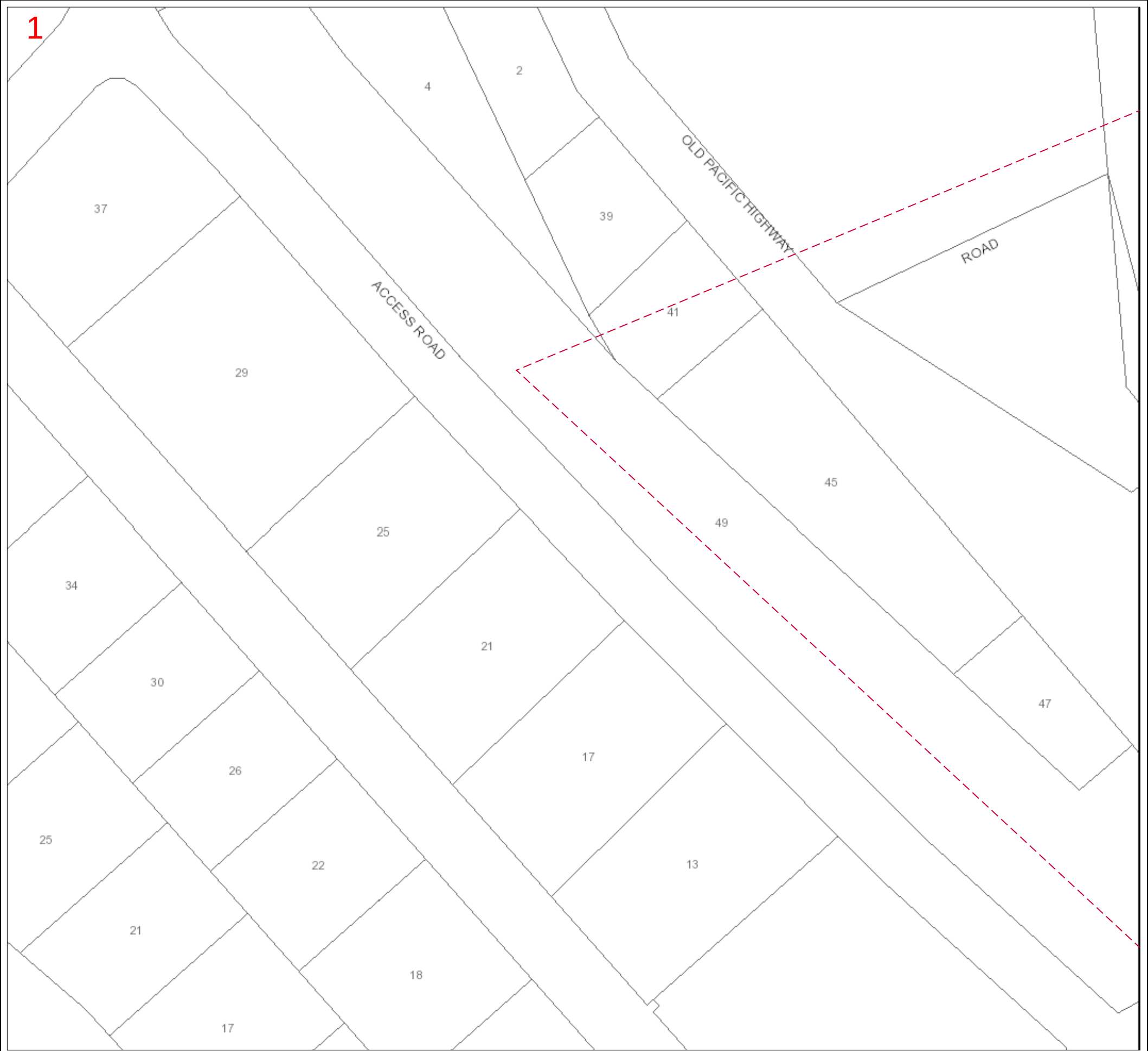
Legend

Distribution Main	Gas Assets and Fittings	Pipe Materials
- Class 900 Transmission - Class 600 Transmission - Class 300 Transmission - High Pressure Steel - High Pressure PE Trunk - High Pressure/ Class 500 - Medium Pressure PE/ Nylon - Medium Pressure (Allgas) - Low Pressure - LPG - TLP - Proposed/ Under Construction - Idle Gas Pipe - Abandoned Gas Pipe - Sleeve	- Gate Station - Regulator Station - Block/ Emergency Valve - Isolation Valve - Test Point - Syphon - Anode - Pipeline Marker - Trace Wire Point - Reducer - Pipe Connector/ Tee - Pipe Connector - End Cap	- CI Cast Iron - CU Copper - GAL Wrought Galvanised Iron - PGAL Poly Coated Wrought Galvanised Iron - ST Steel - NY/ NY11 Nylon - PE Polyethylene - MDPE Medium Density Polyethylene - HDPE High Density Polyethylene - DN Nominal Diameter - OD Outside Diameter

Examples: 40PE in DN80 CI 40mm Polyethylene in an 80mm (Nominal Diameter) Cast Iron Sleeve
63PE INS 63mm Polyethylene inserted in another pipe

Line/ Polygon Request

APA Group does not guarantee the accuracy or completeness of the map and does not make any warranty about the data. APA Group is not under any liability to the user for any loss or damage (including consequential loss or damage) which the user may suffer resulting from the use of this map.



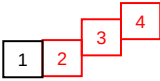
88097344 Map Sheet: 1

Papersize: A3 Scale: 1: 1000

0 0.01km



Map Key:



This maps is created in colour and shall be printed in colour

Legend

Distribution Main

- Class 900 Transmission
- Class 600 Transmission
- Class 300 Transmission
- High Pressure Steel
- High Pressure PE Trunk
- High Pressure/ Class 500
- Medium Pressure PE/ Nylon
- Medium Pressure (Allgas)
- Low Pressure
- LPG
- TLP
- Proposed/ Under Construction
- Idle Gas Pipe
- Abandoned Gas Pipe
- Sleeve

(1) Medium Pressure in AGN/ Nylon in Allgas

Gas Assets and Fittings

- Gate Station
- Regulator Station
- Block/ Emergency Valve
- Isolation Valve
- Test Point
- Syphon
- Anode
- Pipeline Marker
- Trace Wire Point
- Reducer
- Pipe Connector/ Tee
- Pipe Connector
- End Cap

Pipe Materials

- CI Cast Iron
- CU Copper
- GAL Wrought Galvanised Iron
- PGAL Poly Coated Wrought Galvanised Iron
- ST Steel
- NY/ NY11 Nylon
- PE Polyethylene
- MDPE Medium Density Polyethylene
- HDPE High Density Polyethylene
- DN Nominal Diameter
- OD Outside Diameter

Examples:

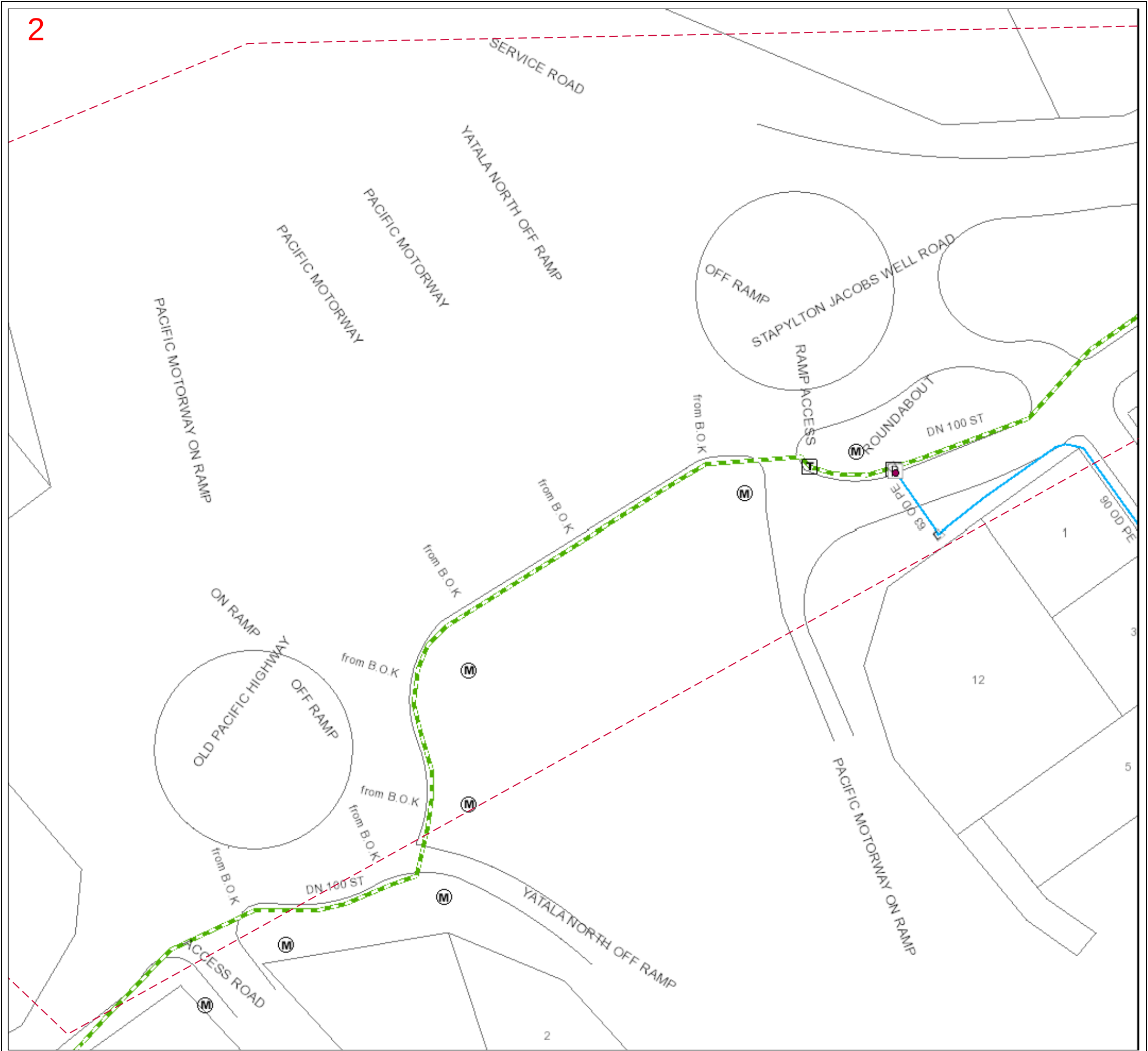
40PE in DN80 CI
63PE INS

40mm Polyethylene in an 80mm (Nominal Diameter) Cast Iron Sleeve
63mm Polyethylene inserted in another pipe

Line/ Polygon Request

Data Source

Pipeline Data Copyright APA Group, Property Parcels Copyright QLD Government, UBD Imagery – Copyright Sensis, DBYD Dig Location provided by DBYD.



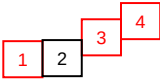
88097344 Map Sheet: 2

Papersize: A3 Scale: 1: 1000

0 0.01km



Map Key:



This maps is created in colour and shall be printed in colour

Legend

Distribution Main

- Class 900 Transmission
- Class 600 Transmission
- Class 300 Transmission
- High Pressure Steel
- High Pressure PE Trunk
- High Pressure/ Class 500
- Medium Pressure PE/ Nylon
- Medium Pressure (Allgas)
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- Block/ Emergency Valve
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- Test Point
- Syphon
- Anode
- Pipeline Marker
- Trace Wire Point
- Reducer
- Pipe Connector/ Tee
- Pipe Connector
- End Cap

Pipe Materials

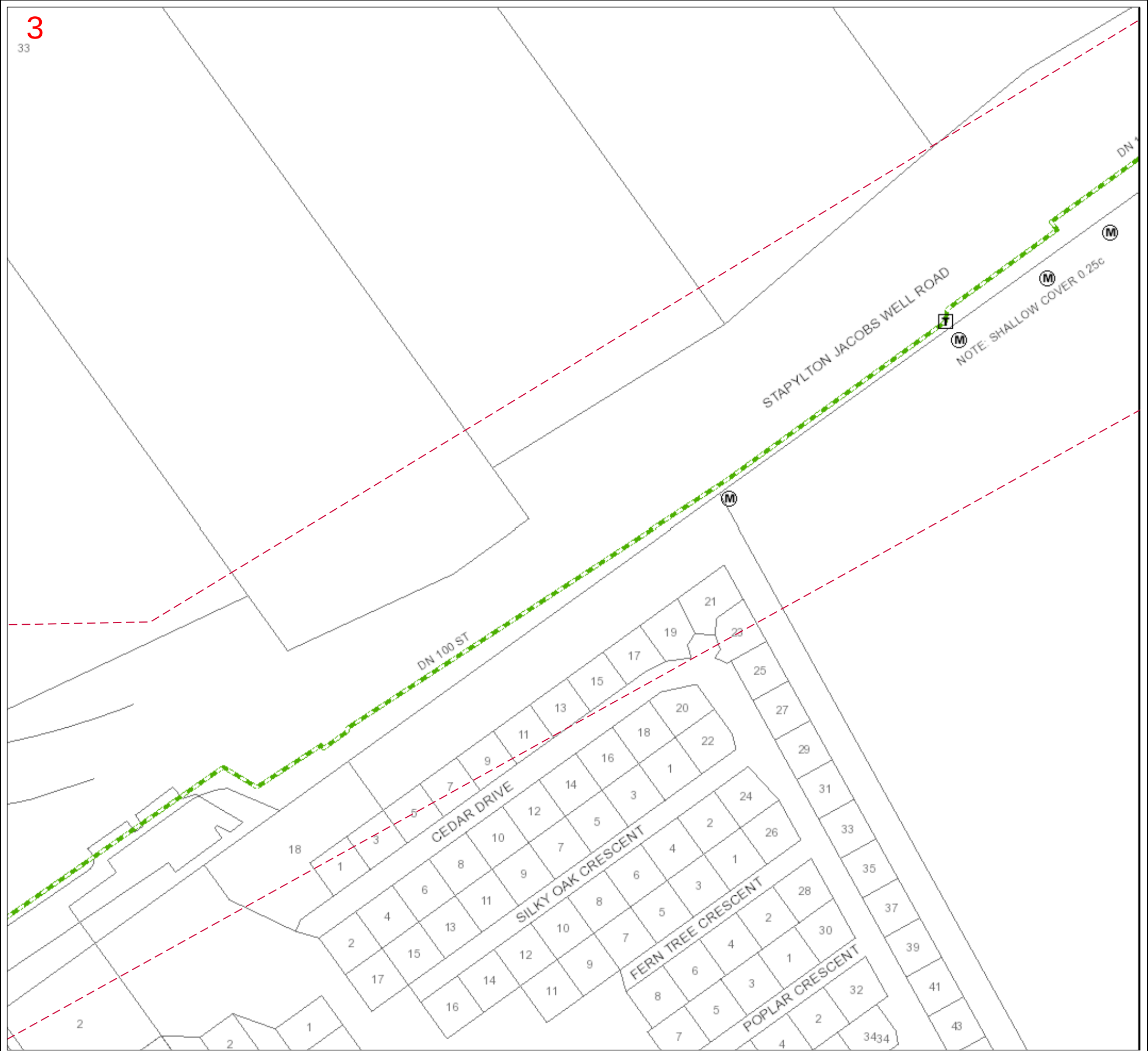
- | | |
|----------|-------------------------------------|
| CI | Cast Iron |
| CU | Copper |
| GAL | Wrought Galvanised Iron |
| PGAL | Poly Coated Wrought Galvanised Iron |
| ST | Steel |
| NY/ NY11 | Nylon |
| PE | Polyethylene |
| MDPE | Medium Density Polyethylene |
| HDPE | High Density Polyethylene |
| DN | Nominal Diameter |
| OD | Outside Diameter |

Examples: 40PE in DN80 CI 40mm Polyethylene in an 80mm (Nominal Diameter) Cast Iron Sleeve
63PE INS 63mm Polyethylene inserted in another pipe

Line/ Polygon Request

Data Source

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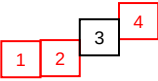
88097344 Map Sheet: 3

Papersize: A3 Scale: 1: 1000

0 0.01km



Map Key:



This maps is created in colour and shall be printed in colour

Legend

Distribution Main

- Class 900 Transmission
- Class 600 Transmission
- Class 300 Transmission
- High Pressure Steel
- High Pressure PE Trunk
- High Pressure/ Class 500
- Medium Pressure PE/ Nylon
- Medium Pressure (Allgas)
- Low Pressure
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(1) Medium Pressure in AGN/ Nylon in Allgas

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- Syphon
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- Pipe Connector
- End Cap

Pipe Materials

- CI Cast Iron
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- ST Steel
- NY/ NY11 Nylon
- PE Polyethylene
- MDPE Medium Density Polyethylene
- HDPE High Density Polyethylene
- DN Nominal Diameter
- OD Outside Diameter

Examples:

40PE in DN80 CI

40mm Polyethylene in an 80mm (Nominal Diameter) Cast Iron Sleeve

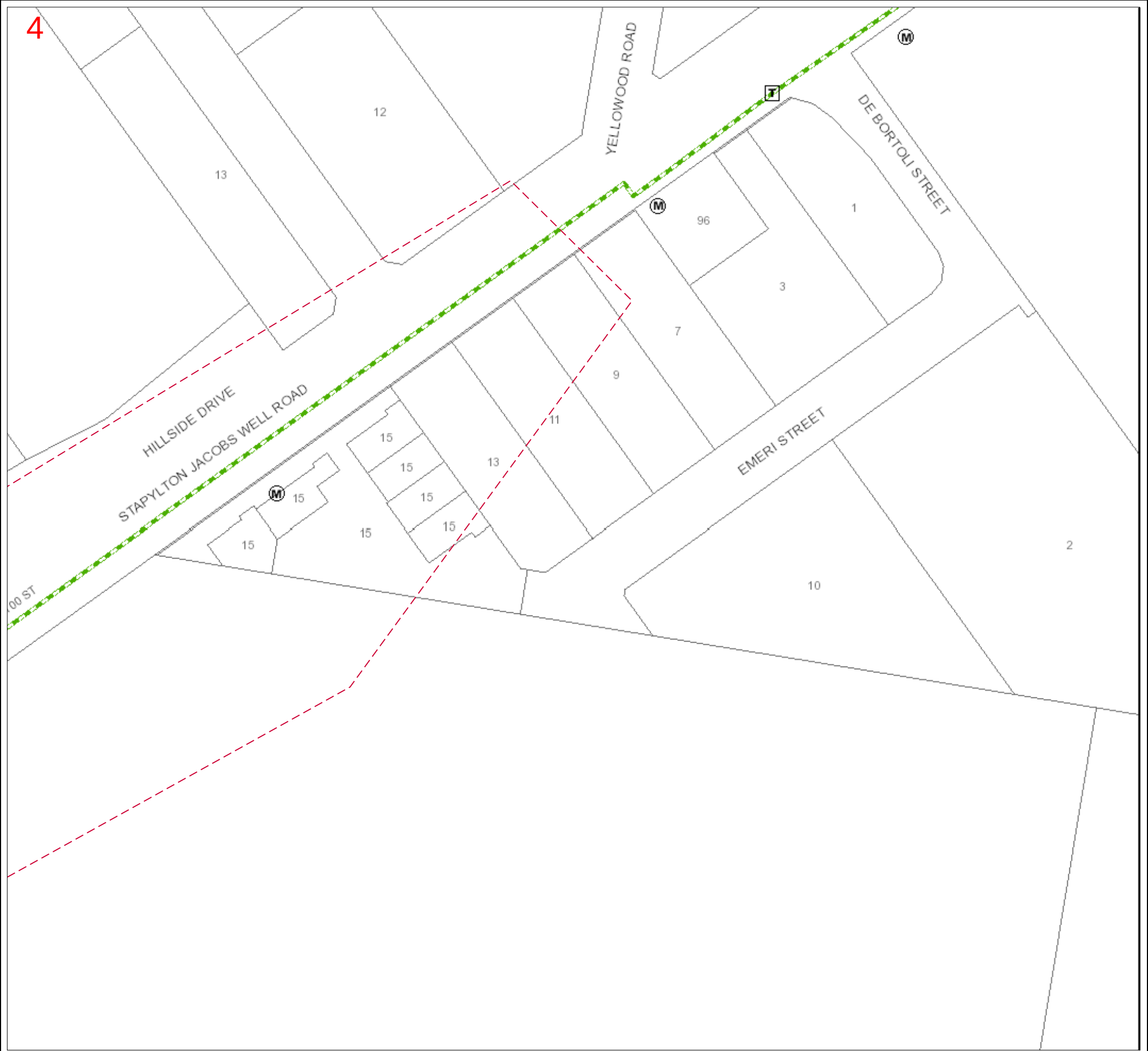
63PE INS

63mm Polyethylene inserted in another pipe

Line/ Polygon Request

Data Source

Pipeline Data Copyright APA Group, Property Parcels Copyright QLD Government, UBD Imagery – Copyright Sensis, DBYD Dig Location provided by DBYD.



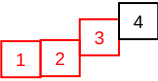
88097344 Map Sheet: 4

Papersize: A3 Scale: 1: 1000

0 0.01km



Map Key:



This maps is created in colour and shall be printed in colour

Legend

Distribution Main	Gas Assets and Fittings	Pipe Materials
Class 900 Transmission	Gate Station	CI Cast Iron
Class 600 Transmission	Regulator Station	CU Copper
Class 300 Transmission	Block/ Emergency Valve	GAL Wrought Galvanised Iron
High Pressure Steel	Isolation Valve	PGAL Poly Coated Wrought Galvanised Iron
High Pressure PE Trunk	Test Point	ST Steel
High Pressure/ Class 500	Syphon	NY/ NY11 Nylon
Medium Pressure PE/ Nylon	Anode	PE Polyethylene
Medium Pressure (Allgas)	Pipeline Marker	MDPE Medium Density Polyethylene
Low Pressure	Trace Wire Point	HDPE High Density Polyethylene
LPG	Reducer	DN Nominal Diameter
TLP	Pipe Connector/ Tee	OD Outside Diameter
Proposed/ Under Construction	Pipe Connector	
Idle Gas Pipe	End Cap	
Abandoned Gas Pipe		
Sleeve		

(1) Medium Pressure in AGN/ Nylon in Allgas

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Line/ Polygon Request

Data Source

Pipeline Data Copyright APA Group, Property Parcels Copyright QLD Government, UBD Imagery – Copyright Sensis, DBYD Dig Location provided by DBYD.

Working Around Gas Assets: Duty of Care and Responsibilities

It is illegal to interfere or tamper with gas infrastructure.

Offenders who interfere or tamper with gas infrastructure may be prosecuted under relevant legislation and there are very serious penalties for such offences

"Gas infrastructure" or "infrastructure" in this document refers to any infrastructure or property owned or operated by APA Group including, but not limited to natural gas mains, services and regulator/meter stations or regulator pits.

1. Planning Your Work

- a. The constructor must:
 - i. Request plans of APA Group infrastructure for a particular location at a reasonable time before construction begins (at least 5 business days);
 - ii. Design for minimal impact and ensure protection of APA Group infrastructure, this includes networks managed by APA on behalf of Australian Gas Networks and Allgas; and
 - iii. Contact APA Group if their infrastructure is in any way affected by planned construction activities.

2. Before You Start Work

- a. Please Note: You will be responsible to pay for the repair of **any damage by you to gas assets.**
- b. You must obtain **Dial Before You Dig (DBYD)** documentation before any on-site construction or excavation commences. This document is to be read in conjunction with the Dial Before You Dig plans and other relevant documentation.
APA Group will provide free site plans if an APA Group infrastructure location request is made to APA on **1800 085 628**
- c. If DBYD documents indicate you will be working within 3m of a high pressure or transmission gas pipeline, you must complete and submit the **Authority to Work Request** provided with your DBYD documentation **five (5) business days** prior to commencing the work. Requests **under** five (5) business days will incur extra charges.
- d. APA Group shall assess your Authority to Work Request and will inform you if a Site Watch is required. A Site Watch involves the presence of an APA representative at site to advise on locating and working around the asset. Where on-site location advice is provided, the constructor is responsible for all hand digging (potholing) to visually locate and expose APA Group infrastructure. Vacuum excavations may only be used if permission is granted by APA and if it is used on high pressure mains Site Watch will be required. **Site Watch services are charged at an hourly rate.**
- e. The principal contractor for the site must provide APA Group with a written construction methodology for all works impacting or encroaching on APA infrastructure. All construction methodology documents will be reviewed by APA Group prior to the commencement of site works. Construction methodology documents must be submitted as part of an Authority to Work Request (send to permitsqld@apa.com.au).
- f. Site Plans
 - i. Plans and/or details provided by APA Group through DBYD or otherwise are current for one (1) month from the date of dispatch and should be disposed of by shredding or any other secure disposal method after use.
 - ii. APA Group retains copyright in all plans and details provided in connection with any request.
 - iii. APA Group plans or other details are provided for the use of the applicant, its servants, employees, contractors and agents, and must not be used for any unauthorised purpose.
 - iv. APA Group plans are pipe indication diagrams only and indicate the presence of plant in the general vicinity of the geographical area shown. Exact ground cover and alignments cannot be given with any certainty as such levels can change over time.
 - v. APA Group, its servants, employees, or agents shall not be liable for any loss or damage caused or occasioned by the use of plans and/or details so supplied to the applicant/constructor, its servants, employees, contractors and/or agents, and the applicant/constructor agrees to indemnify APA Group against any claim or demand for any such loss or damage.
 - vi. The constructor is responsible for all infrastructure damage occasioned to APA Group infrastructure.
 - vii. APA Group reserves all rights to recover compensation for loss or damage caused by interference or damage, including consequential loss and damages to its property and gas infrastructure.
 - viii. All care is taken in the preparation of location drawings and plans, but NO responsibility is accepted by APA Group for errors or omissions.

3. Working in the Vicinity of a Gas Pipeline

a. Excavation near Gas Mains and Services

PLEASE NOTE: Unless otherwise approved, mechanical excavation is not permitted above, or within 600mm of either side of APA Group infrastructure.

- i. **Location of Gas Mains and Services:** Examining the DBYD documentation and other plans is not sufficient as reference points may change from the time of installation and recording on documentation. You MUST use appropriately qualified plant locators to accurately locate and prove the position of all assets and then validate these positions prior to commencing work. For all work to be done within 3.0 metres of APA Group infrastructure, the constructor is required to hand dig (pothole) and expose the plant, hence proving its exact location before work can commence. Vacuum excavation can cause failure of some types of gas mains and therefore APA Group must be contacted prior to any vacuum excavation.
Please note that new APA Group gas mains generally have a plastic warning tape or lightweight plastic board buried above the pipe but this is not the case for older mains or when pipe is laid by means of boring or located in conduit.
 - ii. **IMPORTANT NOTE: Not all gas services (i.e. pipe from gas main to a gas meter in an individual property) are captured on APA Plans. Gas services shown on plans are indicative only and do not pinpoint the exact location of APA's asset. A gas service may also cross a road to reach a property. To confirm the presence of a gas service, please contact the APA DBYD number below for further information.**
 - iii. **Installation of Utilities Parallel to Gas Mains and Services:** If construction work is being undertaken parallel to APA Group gas mains, then hand digging (potholing) at least every 4 m is required to establish the location of all gas mains. Nominal locations must be confirmed before work can commence. A minimum clearance of 600mm must be maintained from gas mains unless otherwise approved by APA. If an excavation exceeds the depth of the gas mains and it is likely that the covers or bedding material around the pipes will move, approval must be sought from APA Group's Capital Works team.
 - iv. **Installation of Utilities Across Gas Mains and Services:** A minimum clearance of 300mm above and below and APA Group gas mains must be maintained unless otherwise approved by APA. If the width or depth of the excavation is such that the gas mains will be exposed or unsupported, then APA Group must be contacted to determine whether the gas mains should be taken out of service, or whether they need to be protected or supported. Protective cover strips when removed must be replaced under APA Group supervision.
 - v. **Exposed Gas mains and Services:** Exposure of APA infrastructure shall be limited to potholing for location purposes. Any other exposure of pipe is not permitted unless expressly approved by APA Group. Exposed gas pipes must be protected by the constructor against the effects of heat by shielding or covering with a suitable material. Heating of exposed plastic pipes is dangerous. If depth of cover is compromised in any way due to works, please contact APA immediately.
 - vi. **Heavy machinery Operation over Gas Mains and Services:** Where heavy "Crawler" or "Vibration" type machinery is operated over the top of gas mains, a minimum cover of 750mm to the gas mains must be maintained using load bearing protection whilst the machinery is in operation.
 - vii. **Directional Drilling Near Gas Mains and Services:** When drilling parallel to gas mains, trial holes must be carefully hand dug at least every 4m to prove the actual location of the conduits/pipes before using drilling machinery. Where it is required to drill across the line of gas mains, the actual location of the gas mains must first be proven by the constructor by hand digging. A trench must be excavated one metre from the side of the gas mains where the auger will approach to ensure a minimum clearance of 600mm for gas mains can be maintained unless otherwise approved by APA.
 - viii. **Explosives:** Clearances must be obtained from APA Group's Networks Engineering Manager for use of explosives in the vicinity of gas mains. Please contact the APA Group.
- b. **Damage Reporting:** All damage to conduits and pipes and any other gas infrastructure and property must be reported to APA Group no matter how insignificant the damage appears to be. Even very minor damage to protective coverings can lead to eventual failure through corrosion. All work in the vicinity of damaged infrastructure should cease and the area should be vacated until a clearance to continue work has been obtained from an APA Group officer. Please contact the Emergency number below to report damage.
- c. **Solutions and Assistance:** If it is determined that APA Group infrastructure is likely to be impacted or encroached upon by planned construction, APA Group must be contacted to arrange for possible engineering solutions. If APA Group relocation or protection works are part of the agreed solution, then payment to APA Group for the cost of this work will be the responsibility of the principal contractor. APA Group will provide an estimated quotation for work on receipt of the order number before work will proceed.
- d. **Reinstatement:** APA assets affected by third party works as highlighted above are to be reinstated as per APA requirements, potentially including but not limited to; warning tape/marker board, soft bedding/backfill materials, trench dimensions, depth of cover, trace wire for PE mains, compaction requirements, concrete protection, and surface re-instatement.

4. Contacting APA

GAS EMERGENCIES 24 HRS 1800 GAS LEAK (1800 427 532)	GAS PLANT RELOCATIONS APA CAPITAL WORKS PH: 07 3215 6709 FAX: 07 3215 6699 capitalworksqldnetworks@apa.com.au	APA GROUP GAS ASSET LOCATIONS TEAM (PERMITS OFFICE) PH: 07 3215 6700 FAX: 07 3215 6699 permitsqld@apa.com.au	DIAL BEFORE YOU DIG SUPPORT PH: 1800 085 628
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HIGH PRESSURE GAS DISTRIBUTION MAINS "AUTHORITY TO WORK" REQUEST

N.B. THIS IS NOT A PERMIT TO WORK

SITE ADDRESS:

SUBURB: UBD MAP REF:

DBYD Sequence Number: Date of DBYD Enquiry:

(Note: Only valid enquiries will be accepted and the currency of DBYD requests will affect your permit period. APA Group's DBYD requests are valid for 30 days only. Enquiries may need to be renewed and a new application may be required)

COMMENTS:

BROAD DESCRIPTION OF WORK (please provide any approvals from APA Group related to these works)

WORK TO BE CARRIED OUT:

- | | | |
|----------|---|--------------------------|
| Class 1. | Location | |
| | Works crossing a high pressure gas mains | ☐ |
| Class 2. | Location | |
| | Works within 3 metres of a high pressure gas mains | ☐ |
| Class 3. | Location | |
| | Works involving large excavations that would cause ground movement, vibrations or blasting beyond 3m of a high pressure gas mains | ☐ |
| Class 4. | Location | |
| | Works within 1m of gas service or connection to industrial gas meter | ☐ |

DETAILS OF WORK INVOLVED (Tick Applicable)

- | | | | |
|-----------------------------------|--------------------------|---------------------------|--------------------------|
| Excavation | ☐ | Change to surface level | ☐ |
| Service crossing (Gas CONNECTION) | ☐ | Boring | ☐ |
| Proving (Dial Before You Dig) | ☐ | Blasting | ☐ |
| Earthworks | ☐ | Road Construction/Change? | ☐ |
| Vacuum Excavation | ☐ | Other (give details) | ☐ |

Relevant drawings, Block Plans etc, attached Yes ☐ No ☐

PROPOSED DATES AND TIMES

From:

To:

Excavation / / 20... am/pm / / 20... am/pm

Backfill / / 20... am/pm / / 20... am/pm

Insurance Cover – Current Level None ☐ \$5M ☐ \$10M ☐ \$20M ☐ Other ☐ _

NOTES

1. This Authority to Work applies only to work in the vicinity of the Gas Mains. It does not authorise work near or on the Gas Mains itself.
2. A minimum of 5 business days must be allowed between receipt by APA Group of this Request and a response. However, more time for notification may be necessary.
3. For Class 1 and Class 2 classifications, this application must be accompanied by a detailed sequence of events, outlining all aspects of work involved and work is not permitted until an Authority to Work is issued.
4. For class 1 and 2 Dial Before You Dig, APA Group will arrange for an inspector to be on site as necessary during the work. An inspector must be present at all times for works involving excavation within 1m of the Gas Mains. APA Group will advise the requirement for an inspector for other works within 3m of the Gas Mains.
5. The applicant is responsible for any damage resulting from the work and all consequential damages and losses arising from such damage and therefore must insure against every liability of the contractor in respect of or arising out of any loss of life, loss of or damage to property of person (both real and personal), arising out of or in any way connected to this permit.

Such insurance must be arranged for an indemnity of not less than \$20 Million unless otherwise agreed.

Permit Requested By:(print name).....Signature:Date .../.../....

Company:..... Postal Address:.....

Phone No:..... Fax number..... Email.....

Requestors PO Number..... Site Contact Details: Name.....

Site Contact Number.....

Principal Contractors Details(if required).....

Principal Contractors Contact details:.....

Please be advised;
Under the Work Health and Safety Act 2011, each work place has an obligation to comply to Workplace Health and Safety Regulations and Codes of Practice.

APA Group brings to your attention Work Health and Safety Regulations 2011, Chapter 4: Hazardous Work. Failure to comply to the above regulation may result in APA Group reporting the non-compliance to Workplace Health and Safety.

Office use only

Received: Date .../.../....

Site Watch required? **Yes/No** (please circle)

Pipeline Officer:

(print name).....Signature:Date: .../.../....

Further information can be requested via:

Post: **Permit Applications QLD**

PO Box 885 Hamilton Central QLD 4007

Phone: (07) 3215 6700 though an application will most likely be required

Email: permitsqld@apa.com.au

24/01/2019

Company: Gassman Development Perspective
Mr Regardt Schutte
76 Business Street
Yatala
QLD 4207

rschutte@gassman.com.au

Dear Mr Regardt Schutte

Sequence Number: 79545758
Worksite Address: 60 Stapylton Jacobs Well Road
Stapylton
QLD 4207

RE: REQUEST FOR APA GROUP (APA) UNDERGROUND DIAL BEFORE YOU DIG

Dear Sir/Madam

In response to the above enquiry we wish to confirm that APA **operates underground plant** (Mains and / or Services) at or in the vicinity of the above address.

Please check that the following map represents the area you requested - if the area is not correct please contact our Dial Before You Dig Officer - (08) 8115 4500. If works are proposed adjacent to any underground plant operated by APA please ensure compliance with the attached "DUTY OF CARE"

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2. DUTY OF CARE statement which forms **an integral part** of any information supplied by APA

For **GAS EMERGENCIES 24 HOURS - 1800 GAS LEAK (1800 427 532)**

Please note that as work on APA underground plant is ongoing any information supplied on their status can only be considered current for **30 days from the date of this response**. Expired locations, i.e., over 30 days from the date of this response, require a new Dial Before You Dig request to validate location information.

Should you have any questions with **regards to the attached information** please contact our Dial Before You Dig officer - (08) 8115 4500.

For any excavation works, including vacuum excavations, an "Authority to Work" Permit may be required and a Site Watch may need to be scheduled.

A minimum of 5 business days' notice is required to process permit applications. Permit applications can be made by: -

Post: Permit Applications QLD, PO Box 885 Hamilton Central QLD 4007 or

Email: permitsqld@apa.com.au or Phone: (07) 3215 6700 though an application will most likely be required

Charges may apply for Site Watch requests. Your sequence number may be requested when making your booking, please have this available when you request either a mains location or site watch.

For other enquiries please contact your gas retailer

To find out who your retailer is call 1800 657 567

Warning: if there are high or transmission pressure gas mains present in the vicinity of your area of interest, an APA employee must be in attendance during any excavation within 3 metres of high or transmission pressure mains, and an "Authority to Work" permit must be issued prior to work commencing.

Please contact us for a permit to work request if you believe your work is within this zone, by completing the "Authority to Work" request form attached and sending to APA. 5 days' notice is required prior to the commencement of any excavation to assess and allocate resources. Contact phone numbers are shown at the end of the notice of location.

Please Note: For some DBYD enquiries, you might receive 2 responses from the APA Group. Please read both responses carefully as they will relate to different assets. It is your responsibility to action all requirements set out in APA Group responses.

Please take some time to review the entire response document and check the information supplied and please let us have any feedback by sending an email to DBYDNetworksAPA@apa.com.au or contacting us direct on (08) 8115 4500.

Yours faithfully

Dial Before You Dig Officer
APA Group

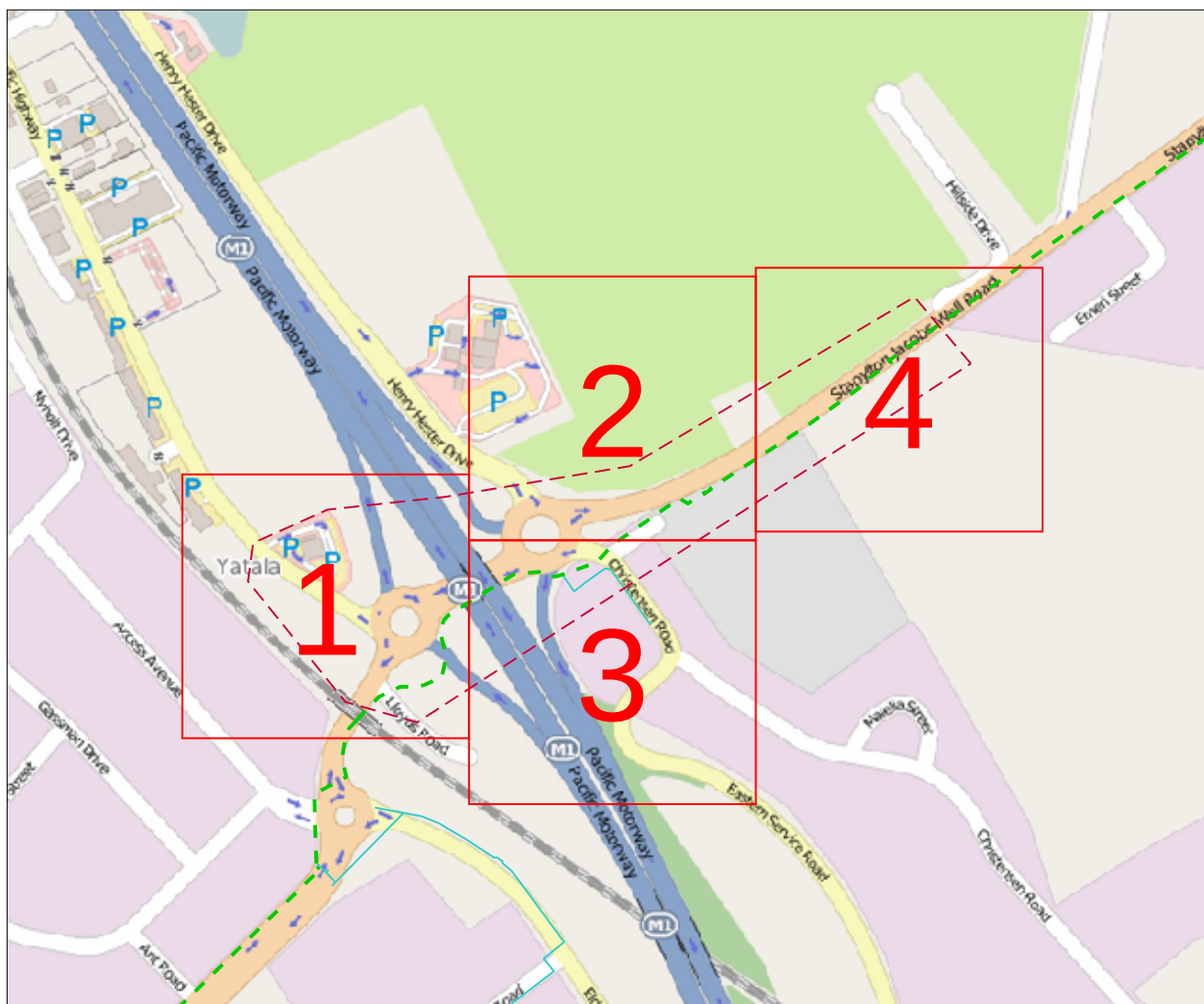
Email DBYDNetworksAPA@apa.com.au
Ph. (08) 8115 4500

24/01/2019

SCALE: DO NOT SCALE

REF NO: 79545758

As work on APA underground plant is ongoing any drawing with an issue date of more than 30 days previous can no longer be considered valid. All persons planning civil works on any site are advised to contact APA to confirm location. All underground gas pipelines are the property of APA & are not to be accessed by unauthorised persons. All care is taken with preparation of the drawings & no responsibility is accepted for errors or omissions



Enquiry: 79545758

Papersize: A4 Scale: 1: 7000

0 0.08km



Data Source

Pipeline Data Copyright APA Group, Property Parcels Copyright QLD Government, UBD Imagery – Copyright Sensis, DBYD Dig Location provided by DBYD.

operated by



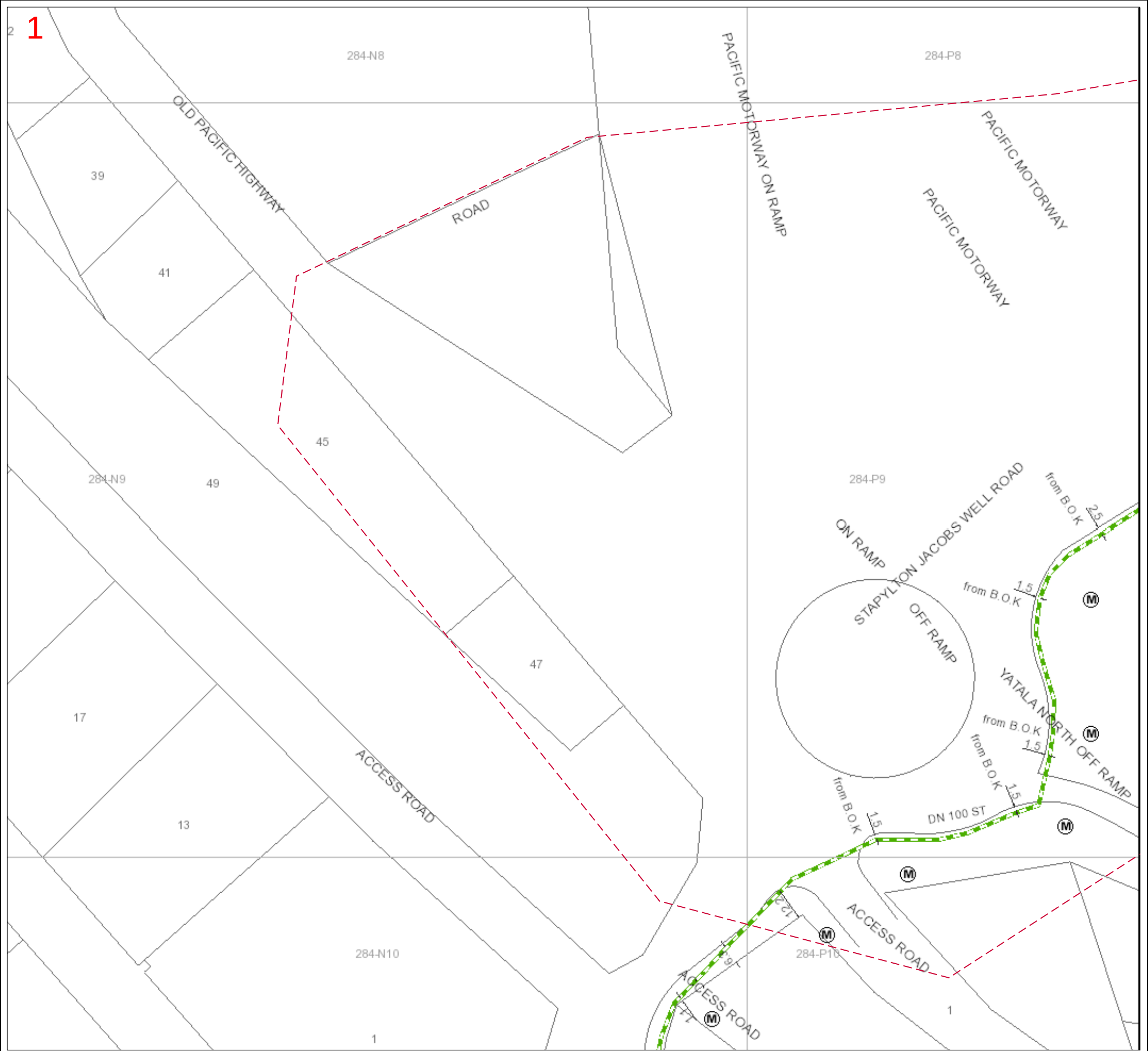
This maps is created in colour and shall be printed in colour

Legend

Distribution Main	Gas Assets and Fittings	Pipe Materials
- Class 900 Transmission - Class 600 Transmission - Class 300 Transmission - High Pressure Steel - High Pressure PE Trunk - High Pressure/ Class 500 - Medium Pressure PE/ Nylon - Medium Pressure (Allgas) - Low Pressure - LPG - TLP - Proposed/ Under Construction - Idle Gas Pipe - Abandoned Gas Pipe - Sleeve	- Gate Station - Regulator Station - Block/ Emergency Valve - Isolation Valve - Test Point - Syphon - Anode - Pipeline Marker - Trace Wire Point - Reducer - Pipe Connector/ Tee - Pipe Connector - End Cap	- CI Cast Iron - CU Copper - GAL Wrought Galvanised Iron - PGAL Poly Coated Wrought Galvanised Iron - ST Steel - NY/ NY11 Nylon - PE Polyethylene - MDPE Medium Density Polyethylene - HDPE High Density Polyethylene - DN Nominal Diameter - OD Outside Diameter

Examples: 40PE in DN80 CI 40mm Polyethylene in an 80mm (Nominal Diameter) Cast Iron Sleeve
63PE INS 63mm Polyethylene inserted in another pipe

Line/ Polygon Request



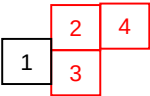
79545758 Map Sheet: 1

Papersize: A3 Scale: 1: 1000

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Map Key:



This maps is created in colour and shall be printed in colour

Legend

Distribution Main

- Class 900 Transmission
- Class 600 Transmission
- Class 300 Transmission
- High Pressure Steel
- High Pressure PE Trunk
- High Pressure/ Class 500
- Medium Pressure PE/ Nylon
- Medium Pressure (Allgas)
- Low Pressure
- LPG
- TLP
- Proposed/ Under Construction
- Idle Gas Pipe
- Abandoned Gas Pipe
- Sleeve

(1) Medium Pressure in AGN/ Nylon in Allgas

Gas Assets and Fittings

- Gate Station
- Regulator Station
- Block/ Emergency Valve
- Isolation Valve
- Test Point
- Syphon
- Anode
- Pipeline Marker
- Trace Wire Point
- Reducer
- Pipe Connector/ Tee
- Pipe Connector
- End Cap

Pipe Materials

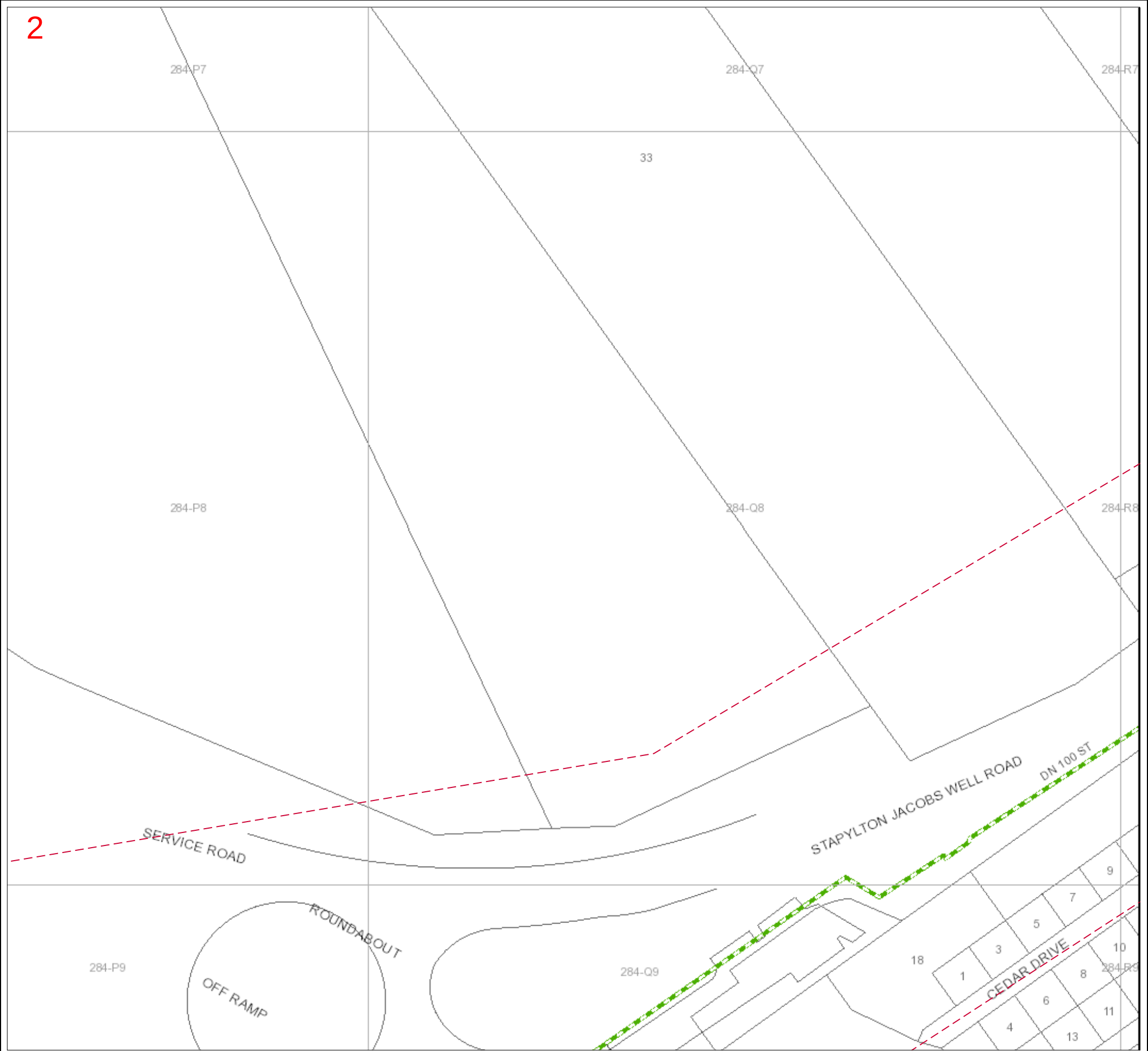
- CI Cast Iron
- CU Copper
- GAL Wrought Galvanised Iron
- PGAL Poly Coated Wrought Galvanised Iron
- ST Steel
- NY/ NY11 Nylon
- PE Polyethylene
- MDPE Medium Density Polyethylene
- HDPE High Density Polyethylene
- DN Nominal Diameter
- OD Outside Diameter

Examples: 40PE in DN80 CI 40mm Polyethylene in an 80mm (Nominal Diameter) Cast Iron Sleeve
63PE INS 63mm Polyethylene inserted in another pipe

Line/ Polygon Request

Data Source

Pipeline Data Copyright APA Group, Property Parcels Copyright QLD Government, UBD Imagery – Copyright Sensis, DBYD Dig Location provided by DBYD.



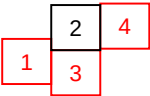
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Papersize: A3 Scale: 1: 1000

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Map Key:



This maps is created in colour and shall be printed in colour

Legend

Distribution Main	Gas Assets and Fittings	Pipe Materials
Class 900 Transmission	Gate Station	CI Cast Iron
Class 600 Transmission	Regulator Station	CU Copper
Class 300 Transmission	Block/ Emergency Valve	GAL Wrought Galvanised Iron
High Pressure Steel	Isolation Valve	PGAL Poly Coated Wrought Galvanised Iron
High Pressure PE Trunk	Test Point	ST Steel
High Pressure/ Class 500	Syphon	NY/ NY11 Nylon
Medium Pressure PE/ Nylon	Anode	PE Polyethylene
Medium Pressure (Allgas)	Pipeline Marker	MDPE Medium Density Polyethylene
Low Pressure	Trace Wire Point	HDPE High Density Polyethylene
LPG	Reducer	DN Nominal Diameter
TLP	Pipe Connector/ Tee	OD Outside Diameter
Proposed/ Under Construction	Pipe Connector	
Idle Gas Pipe	End Cap	
Abandoned Gas Pipe		
Sleeve		

(1) Medium Pressure in AGN/ Nylon in Allgas

Examples: 40PE in DN80 CI 40mm Polyethylene in an 80mm (Nominal Diameter) Cast Iron Sleeve

63PE INS 63mm Polyethylene inserted in another pipe

Line/ Polygon Request

Data Source

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Papersize: A3 Scale: 1: 1000



1	2	4
	3	

Distribution Main

- (1) Medium Pressure in AGN/ Nylon in Allgas

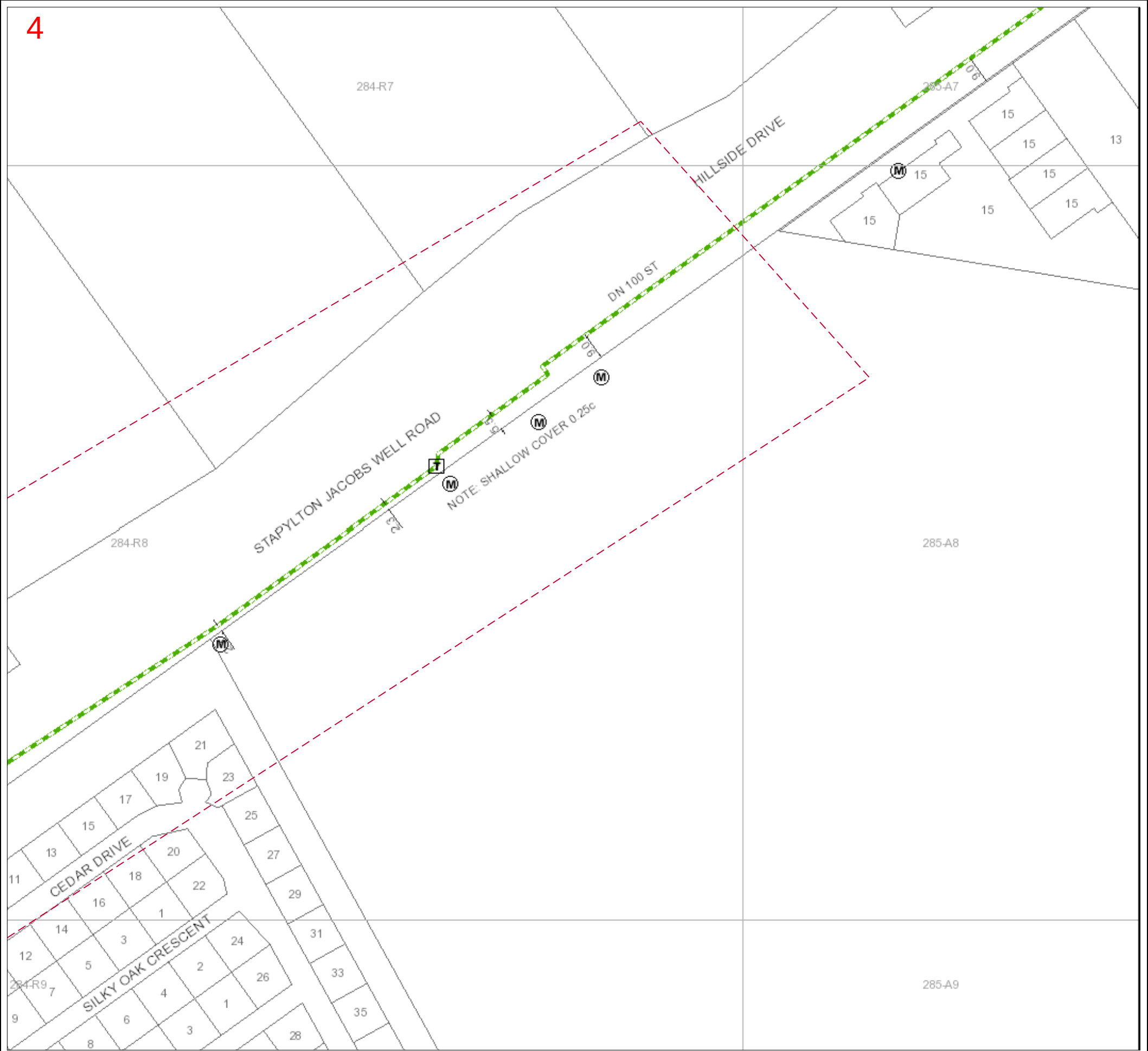
- Gate Station
- Regulator Station
- **V** Block/ Emergency Valve
- **V** Isolation Valve
- **T** Test Point
- **S** Syphon
- **A** Anode
- **M** Pipeline Marker
- **W** Trace Wire Point
- Reducer
- **T** Pipe Connector/ Tee
- **=** Pipe Connector
- **∩** End Cap

CI	Cast Iron
CU	Copper
GAL	Wrought Galvanised Iron
PGAL	Poly Coated Wrought Galvanised Iron
ST	Steel
NY/ NY11	Nylon
PE	Polyethylene
MDPE	Medium Density Polyethylene
HDPE	High Density Polyethylene
DN	Nominal Diameter
OD	Outside Diameter

----- Line/ Polygon Request

Pipeline Data Copyright APA Group, Property Parcels Copyright QLD Government, UBD Imagery – Copyright Sensis, DBYD Dig Location provided by DBYD.

operated by
apa



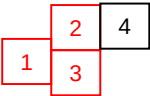
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Papersize: A3 Scale: 1: 1000

0 0.01km



Map Key:



This maps is created in colour and shall be printed in colour

Legend

Distribution Main	Gas Assets and Fittings	Pipe Materials
Class 900 Transmission	Gate Station	CI Cast Iron
Class 600 Transmission	Regulator Station	CU Copper
Class 300 Transmission	Block/ Emergency Valve	GAL Wrought Galvanised Iron
High Pressure Steel	Isolation Valve	PGAL Poly Coated Wrought Galvanised Iron
High Pressure PE Trunk	Test Point	ST Steel
High Pressure/ Class 500	Syphon	NY/ NY11 Nylon
Medium Pressure PE/ Nylon	Anode	PE Polyethylene
Medium Pressure (Allgas)	Pipeline Marker	MDPE Medium Density Polyethylene
Low Pressure	Trace Wire Point	HDPE High Density Polyethylene
LPG	Reducer	DN Nominal Diameter
TLP	Pipe Connector/ Tee	OD Outside Diameter
Proposed/ Under Construction	Pipe Connector	
Idle Gas Pipe	End Cap	
Abandoned Gas Pipe		
Sleeve		

(1) Medium Pressure in AGN/ Nylon in Allgas

Examples:	40PE in DN80 CI	40mm Polyethylene in an 80mm (Nominal Diameter) Cast Iron Sleeve
	63PE INS	63mm Polyethylene inserted in another pipe
	Line/ Polygon Request	

Data Source

Pipeline Data Copyright APA Group, Property Parcels Copyright QLD Government, UBD Imagery – Copyright Sensis, DBYD Dig Location provided by DBYD.

Working Around Gas Assets: Duty of Care and Responsibilities

It is illegal to interfere or tamper with gas infrastructure.

Offenders who interfere or tamper with gas infrastructure may be prosecuted under relevant legislation and there are very serious penalties for such offences

"Gas infrastructure" or "infrastructure" in this document refers to any infrastructure or property owned or operated by APA Group including, but not limited to natural gas mains, services and regulator/meter stations or regulator pits.

1. Planning Your Work

- a. The constructor must:
 - i. Request plans of APA Group infrastructure for a particular location at a reasonable time before construction begins (at least 5 business days);
 - ii. Design for minimal impact and ensure protection of APA Group infrastructure, this includes networks managed by APA on behalf of Australian Gas Networks and Allgas; and
 - iii. Contact APA Group if their infrastructure is in any way affected by planned construction activities.

2. Before You Start Work

- a. Please Note: You will be responsible to pay for the repair of **any damage by you to gas assets**.
- b. You must obtain **Dial Before You Dig (DBYD)** documentation before any on-site construction or excavation commences. This document is to be read in conjunction with the Dial Before You Dig plans and other relevant documentation.
APA Group will provide free site plans if an APA Group infrastructure location request is made to APA on **(08) 8115 4500**
- c. If DBYD documents indicate you will be working within 3m of a high pressure or transmission gas pipeline, you must complete and submit the **Authority to Work Request** provided with your DBYD documentation **five (5) business days** prior to commencing the work. Requests **under** five (5) business days will incur extra charges.
- d. APA Group shall assess your Authority to Work Request and will inform you if a Site Watch is required. A Site Watch involves the presence of an APA representative at site to advise on locating and working around the asset. Where on-site location advice is provided, the constructor is responsible for all hand digging (potholing) to visually locate and expose APA Group infrastructure. Vacuum excavations may only be used if permission is granted by APA and if it is used on high pressure mains Site Watch will be required. **Site Watch services are charged at an hourly rate.**
- e. The principal contractor for the site must provide APA Group with a written construction methodology for all works impacting or encroaching on APA infrastructure. All construction methodology documents will be reviewed by APA Group prior to the commencement of site works. Construction methodology documents must be submitted as part of an Authority to Work Request (send to permitsqld@apa.com.au).
- f. Site Plans
 - i. Plans and/or details provided by APA Group through DBYD or otherwise are current for one (1) month from the date of dispatch and should be disposed of by shredding or any other secure disposal method after use.
 - ii. APA Group retains copyright in all plans and details provided in connection with any request.
 - iii. APA Group plans or other details are provided for the use of the applicant, its servants, employees, contractors and agents, and must not be used for any unauthorised purpose.
 - iv. APA Group plans are pipe indication diagrams only and indicate the presence of plant in the general vicinity of the geographical area shown. Exact ground cover and alignments cannot be given with any certainty as such levels can change over time.
 - v. APA Group, its servants, employees, or agents shall not be liable for any loss or damage caused or occasioned by the use of plans and/or details so supplied to the applicant/constructor, its servants, employees, contractors and/or agents, and the applicant/constructor agrees to indemnify APA Group against any claim or demand for any such loss or damage.
 - vi. The constructor is responsible for all infrastructure damage occasioned to APA Group infrastructure.
 - vii. APA Group reserves all rights to recover compensation for loss or damage caused by interference or damage, including consequential loss and damages to its property and gas infrastructure.
 - viii. All care is taken in the preparation of location drawings and plans, but NO responsibility is accepted by APA Group for errors or omissions.

3. Working in the Vicinity of a Gas Pipeline

a. Excavation near Gas Mains and Services

PLEASE NOTE: Unless otherwise approved, mechanical excavation is not permitted above, or within 600mm of either side of APA Group infrastructure.

- i. **Location of Gas Mains and Services:** Examining the DBYD documentation and other plans is not sufficient as reference points may change from the time of installation and recording on documentation. You MUST use appropriately qualified plant locators to accurately locate and prove the position of all assets and then validate these positions prior to commencing work. For all work to be done within 3.0 metres of APA Group infrastructure, the constructor is required to hand dig (pothole) and expose the plant, hence proving its exact location before work can commence. Vacuum excavation can cause failure of some types of gas mains and therefore APA Group must be contacted prior to any vacuum excavation.
Please note that new APA Group gas mains generally have a plastic warning tape or lightweight plastic board buried above the pipe but this is not the case for older mains or when pipe is laid by means of boring or located in conduit.
 - ii. **IMPORTANT NOTE: Not all gas services (i.e. pipe from gas main to a gas meter in an individual property) are captured on APA Plans. Gas services shown on plans are indicative only and do not pinpoint the exact location of APA's asset. A gas service may also cross a road to reach a property. To confirm the presence of a gas service, please contact the APA DBYD number below for further information.**
 - iii. **Installation of Utilities Parallel to Gas Mains and Services:** If construction work is being undertaken parallel to APA Group gas mains, then hand digging (potholing) at least every 4 m is required to establish the location of all gas mains. Nominal locations must be confirmed before work can commence. A minimum clearance of 600mm must be maintained from gas mains unless otherwise approved by APA. If an excavation exceeds the depth of the gas mains and it is likely that the covers or bedding material around the pipes will move, approval must be sought from APA Group's Capital Works team.
 - iv. **Installation of Utilities Across Gas Mains and Services:** A minimum clearance of 300mm above and below and APA Group gas mains must be maintained unless otherwise approved by APA. If the width or depth of the excavation is such that the gas mains will be exposed or unsupported, then APA Group must be contacted to determine whether the gas mains should be taken out of service, or whether they need to be protected or supported. Protective cover strips when removed must be replaced under APA Group supervision.
 - v. **Exposed Gas mains and Services:** Exposure of APA infrastructure shall be limited to potholing for location purposes. Any other exposure of pipe is not permitted unless expressly approved by APA Group. Exposed gas pipes must be protected by the constructor against the effects of heat by shielding or covering with a suitable material. Heating of exposed plastic pipes is dangerous. If depth of cover is compromised in any way due to works, please contact APA immediately.
 - vi. **Heavy machinery Operation over Gas Mains and Services:** Where heavy "Crawler" or "Vibration" type machinery is operated over the top of gas mains, a minimum cover of 750mm to the gas mains must be maintained using load bearing protection whilst the machinery is in operation.
 - vii. **Directional Drilling Near Gas Mains and Services:** When drilling parallel to gas mains, trial holes must be carefully hand dug at least every 4m to prove the actual location of the conduits/pipes before using drilling machinery. Where it is required to drill across the line of gas mains, the actual location of the gas mains must first be proven by the constructor by hand digging. A trench must be excavated one metre from the side of the gas mains where the auger will approach to ensure a minimum clearance of 600mm for gas mains can be maintained unless otherwise approved by APA.
 - viii. **Explosives:** Clearances must be obtained from APA Group's Networks Engineering Manager for use of explosives in the vicinity of gas mains. Please contact the APA Group.
- b. **Damage Reporting:** All damage to conduits and pipes and any other gas infrastructure and property must be reported to APA Group no matter how insignificant the damage appears to be. Even very minor damage to protective coverings can lead to eventual failure through corrosion. All work in the vicinity of damaged infrastructure should cease and the area should be vacated until a clearance to continue work has been obtained from an APA Group officer. Please contact the Emergency number below to report damage.
- c. **Solutions and Assistance:** If it is determined that APA Group infrastructure is likely to be impacted or encroached upon by planned construction, APA Group must be contacted to arrange for possible engineering solutions. If APA Group relocation or protection works are part of the agreed solution, then payment to APA Group for the cost of this work will be the responsibility of the principal contractor. APA Group will provide an estimated quotation for work on receipt of the order number before work will proceed.
- d. **Reinstatement:** APA assets affected by third party works as highlighted above are to be reinstated as per APA requirements, potentially including but not limited to; warning tape/marker board, soft bedding/backfill materials, trench dimensions, depth of cover, trace wire for PE mains, compaction requirements, concrete protection, and surface re-instatement.

4. Contacting APA

GAS EMERGENCIES 24 HRS 1800 GAS LEAK (1800 427 532)	GAS PLANT RELOCATIONS APA CAPITAL WORKS PH: 07 3215 6709 FAX: 07 3215 6699 capitalworksqldnetworks@apa.com.au	APA GROUP GAS ASSET LOCATIONS TEAM (PERMITS OFFICE) PH: 07 3215 6700 FAX: 07 3215 6699 permitsqld@apa.com.au	DIAL BEFORE YOU DIG SUPPORT PH: (08) 8115 4500
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HIGH PRESSURE GAS DISTRIBUTION MAINS "AUTHORITY TO WORK" REQUEST

N.B. THIS IS NOT A PERMIT TO WORK

SITE ADDRESS:

SUBURB:UBD MAP REF:.....

DBYD Sequence Number:..... Date of DBYD Enquiry.....

(Note: Only valid enquiries will be accepted and the currency of DBYD requests will affect your permit period. APA Group's DBYD requests are valid for 30 days only. Enquiries may need to be renewed and a new application may be required)

COMMENTS:.....

BROAD DESCRIPTION OF WORK (please provide any approvals from APA Group related to these works)

WORK TO BE CARRIED OUT:

- | | | |
|----------|---|--------------------------|
| Class 1. | Location | |
| | Works crossing a high pressure gas mains | ☐ |
| Class 2. | Location | |
| | Works within 3 metres of a high pressure gas mains | ☐ |
| Class 3. | Location | |
| | Works involving large excavations that would cause ground movement, vibrations or blasting beyond 3m of a high pressure gas mains | ☐ |
| Class 4. | Location | |
| | Works within 1m of gas service or connection to industrial gas meter | ☐ |

DETAILS OF WORK INVOLVED (Tick Applicable)

- | | | | |
|-----------------------------------|--------------------------|---------------------------|--------------------------|
| Excavation | ☐ | Change to surface level | ☐ |
| Service crossing (Gas CONNECTION) | ☐ | Boring | ☐ |
| Proving (Dial Before You Dig) | ☐ | Blasting | ☐ |
| Earthworks | ☐ | Road Construction/Change? | ☐ |
| Vacuum Excavation | ☐ | Other (give details) | ☐ |

Relevant drawings, Block Plans etc, attached Yes ☐ No ☐

PROPOSED DATES AND TIMES

From:

To:

Excavation / / 20... am/pm / / 20... am/pm

Backfill / / 20... am/pm / / 20... am/pm

Insurance Cover – Current Level None ☐ \$5M ☐ \$10M ☐ \$20M ☐ Other ☐ _

NOTES

1. This Authority to Work applies only to work in the vicinity of the Gas Mains. It does not authorise work near or on the Gas Mains itself.
2. A minimum of 5 business days must be allowed between receipt by APA Group of this Request and a response. However, more time for notification may be necessary.
3. For Class 1 and Class 2 classifications, this application must be accompanied by a detailed sequence of events, outlining all aspects of work involved and work is not permitted until an Authority to Work is issued.
4. For class 1 and 2 Dial Before You Dig, APA Group will arrange for an inspector to be on site as necessary during the work. An inspector must be present at all times for works involving excavation within 1m of the Gas Mains. APA Group will advise the requirement for an inspector for other works within 3m of the Gas Mains.
5. The applicant is responsible for any damage resulting from the work and all consequential damages and losses arising from such damage and therefore must insure against every liability of the contractor in respect of or arising out of any loss of life, loss of or damage to property of person (both real and personal), arising out of or in any way connected to this permit.

Such insurance must be arranged for an indemnity of not less than \$20 Million unless otherwise agreed.

Permit Requested By:(print name).....Signature:Date .../.../....

Company:..... Postal Address:.....

Phone No:..... Fax number..... Email.....

Requestors PO Number..... Site Contact Details: Name.....

Site Contact Number.....

Principal Contractors Details(if required).....

Principal Contractors Contact details:.....

Please be advised;
Under the Work Health and Safety Act 2011, each work place has an obligation to comply to Workplace Health and Safety Regulations and Codes of Practice.

APA Group brings to your attention Work Health and Safety Regulations 2011, Chapter 4: Hazardous Work. Failure to comply to the above regulation may result in APA Group reporting the non-compliance to Workplace Health and Safety.

Office use only

Received: Date .../.../....

Site Watch required? **Yes/No** (please circle)

Pipeline Officer:

(print name).....Signature:Date: .../.../....

Further information can be requested via:

Post: **Permit Applications QLD**

PO Box 885 Hamilton Central QLD 4007

Phone: (07) 3215 6700 though an application will most likely be required

Email: permitsqld@apa.com.au



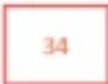
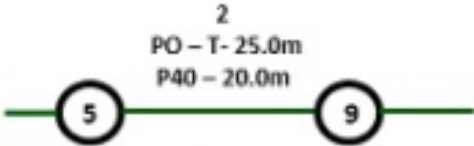
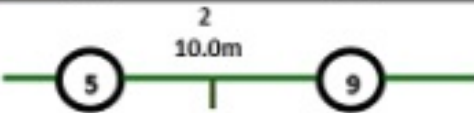
Indicative Plans

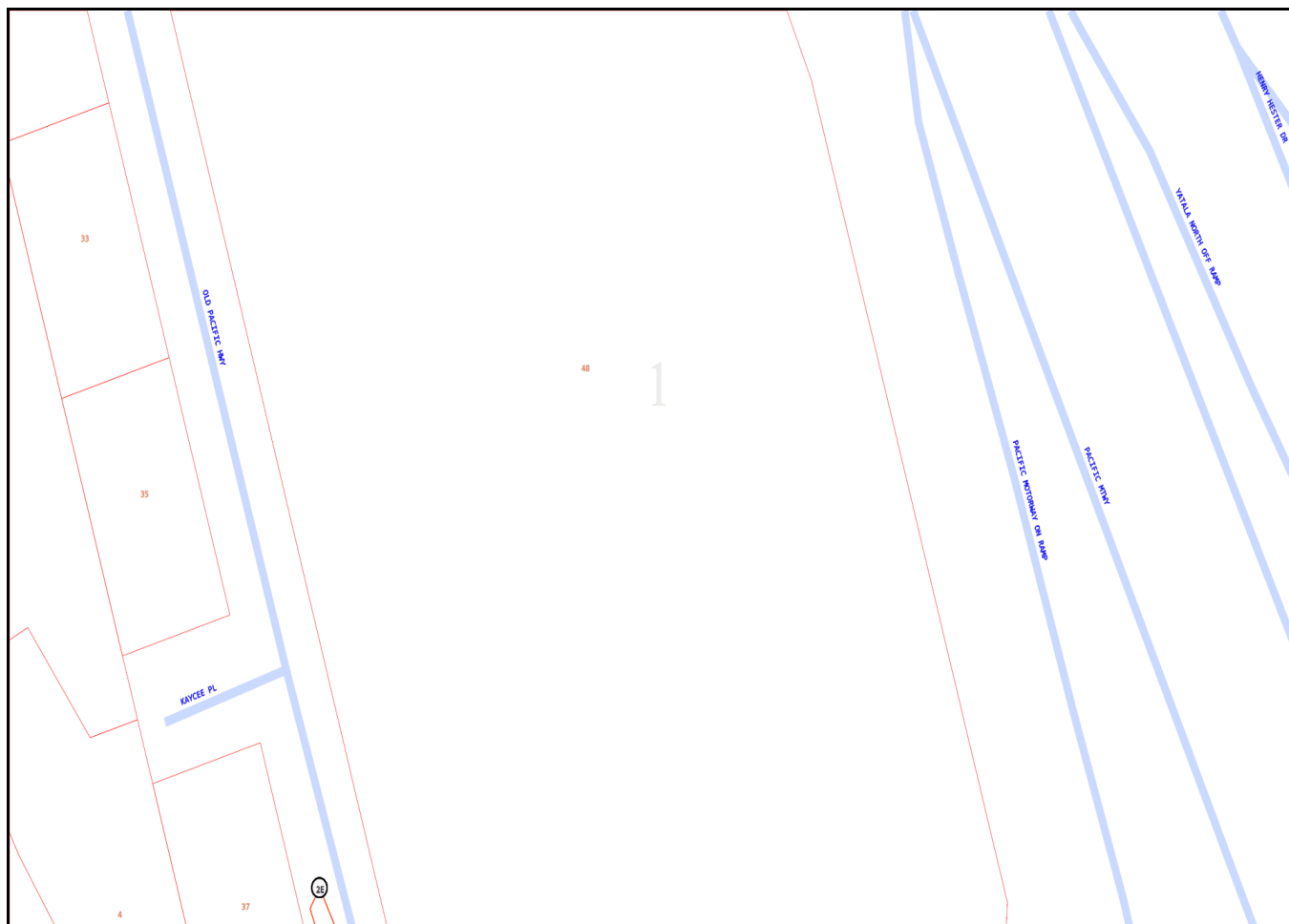
Issue Date:	20/08/2019	 DIAL BEFORE YOU DIG www.1100.com.au
Location:	Access Ave , Yatala , QLD , 4207	

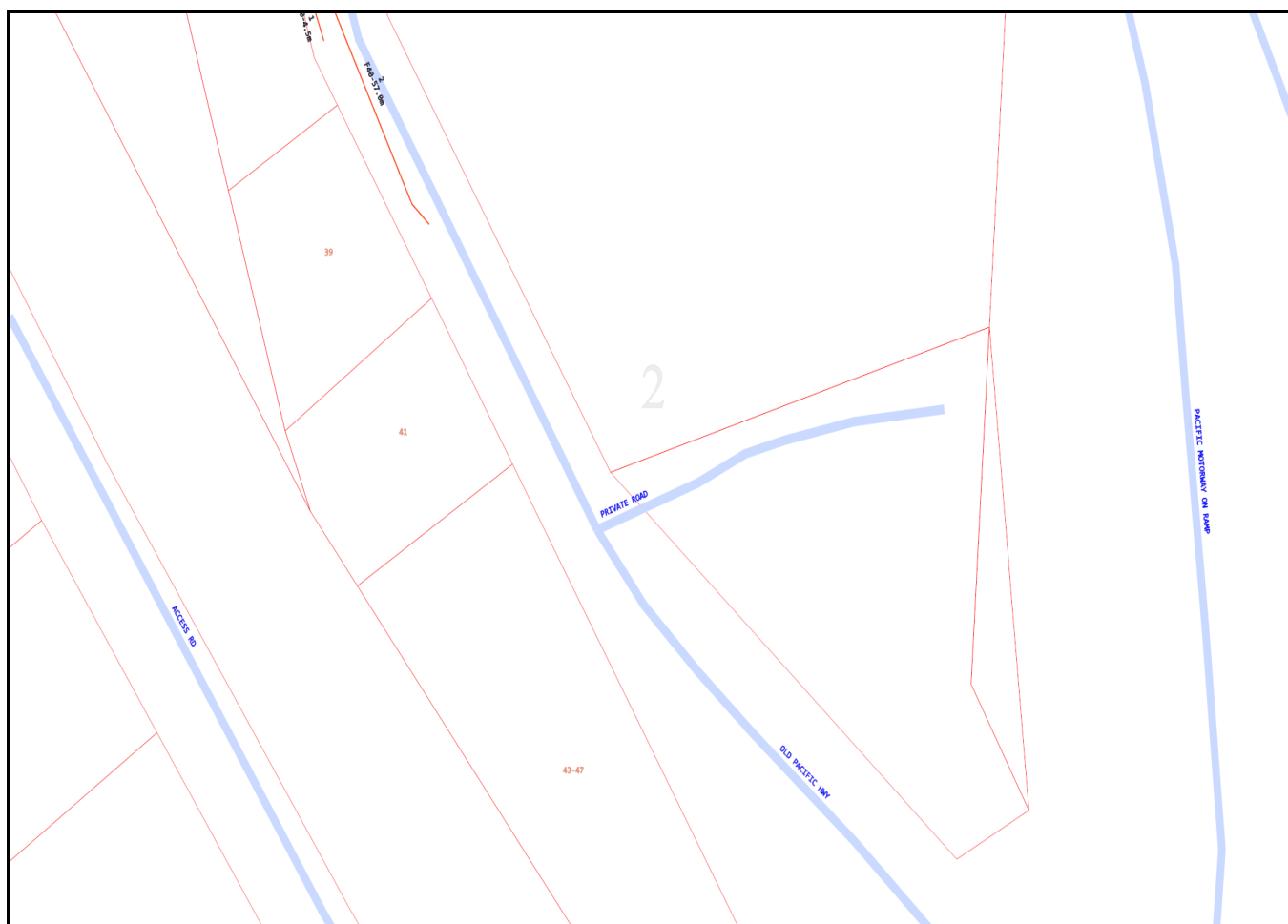
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3	6	9	12

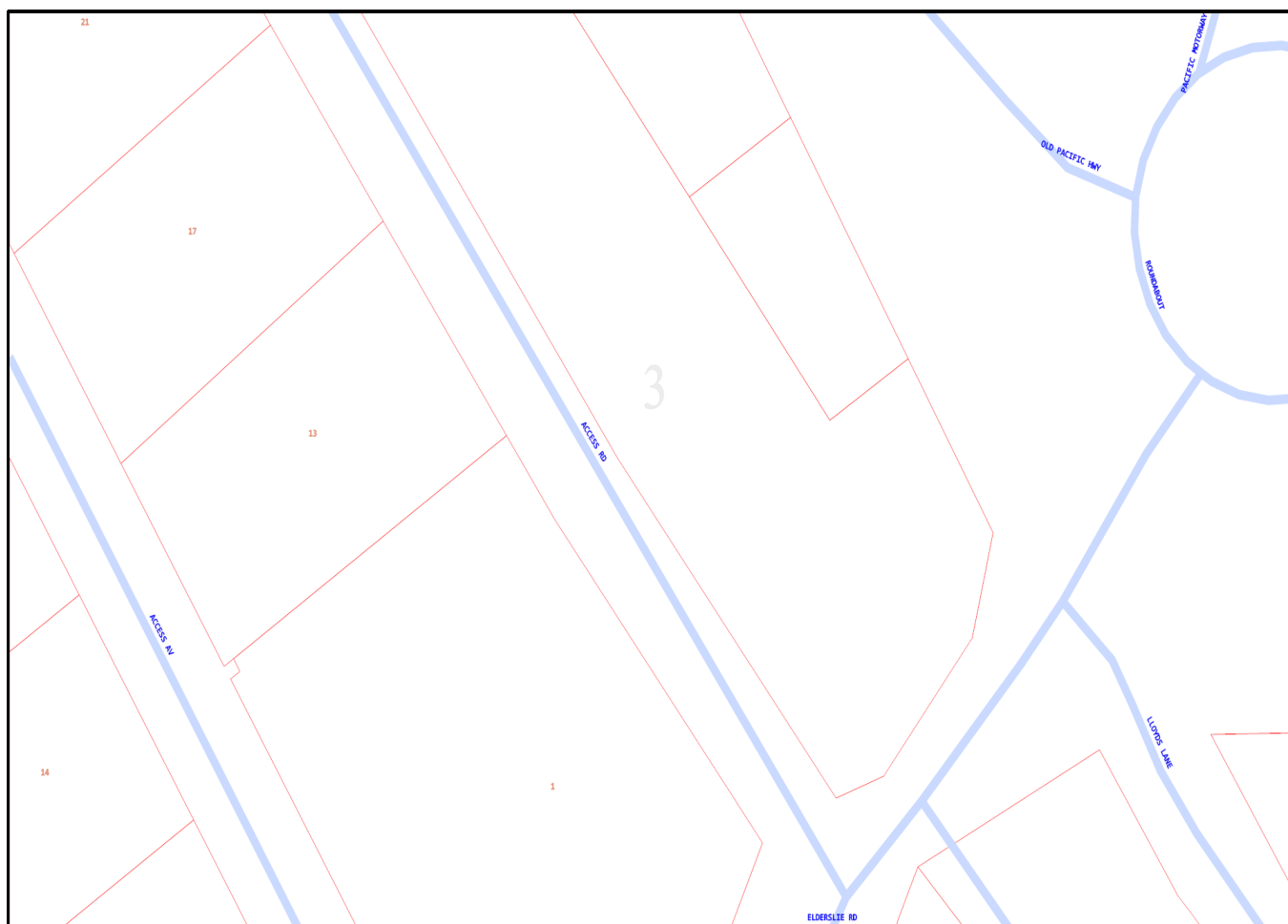


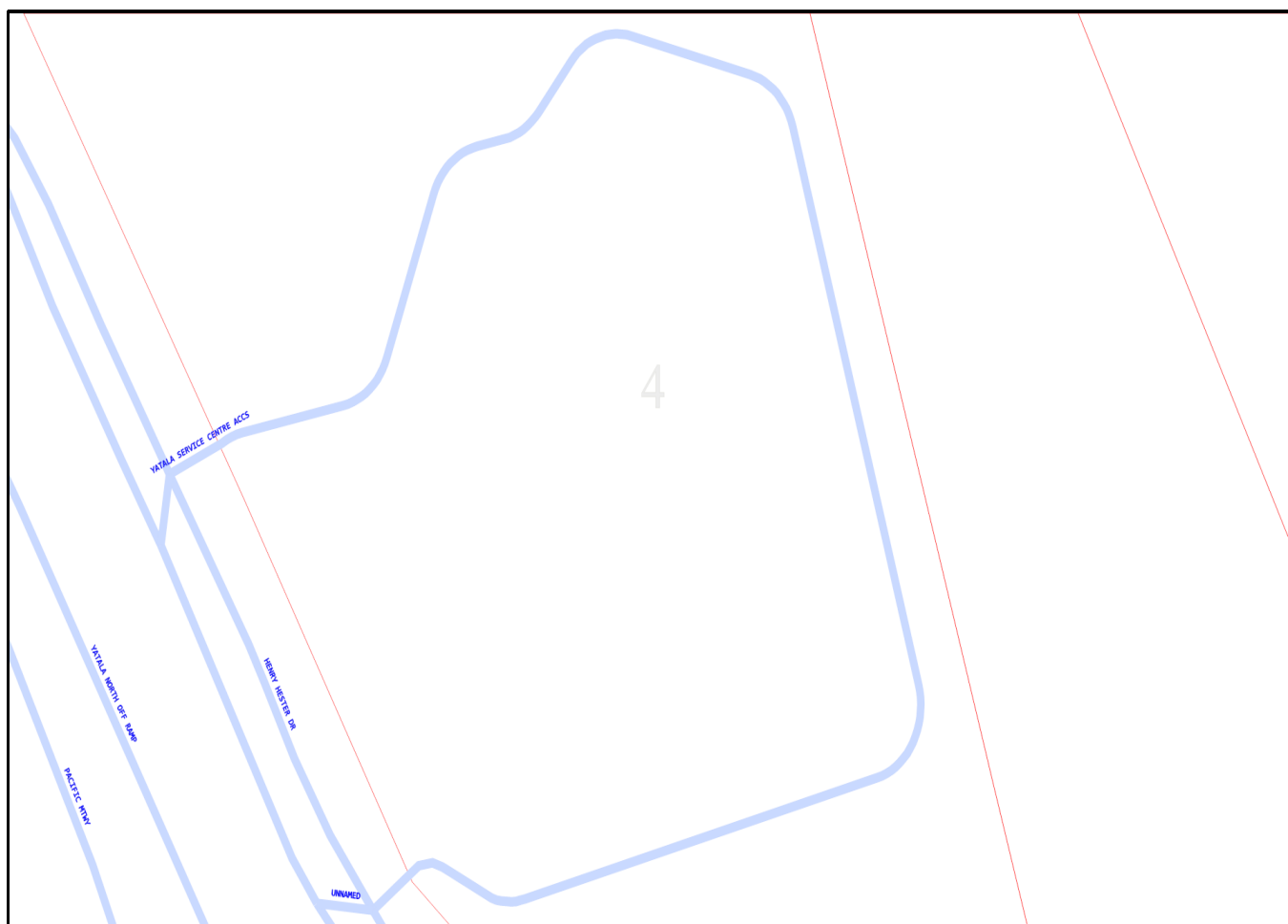
LEGEND

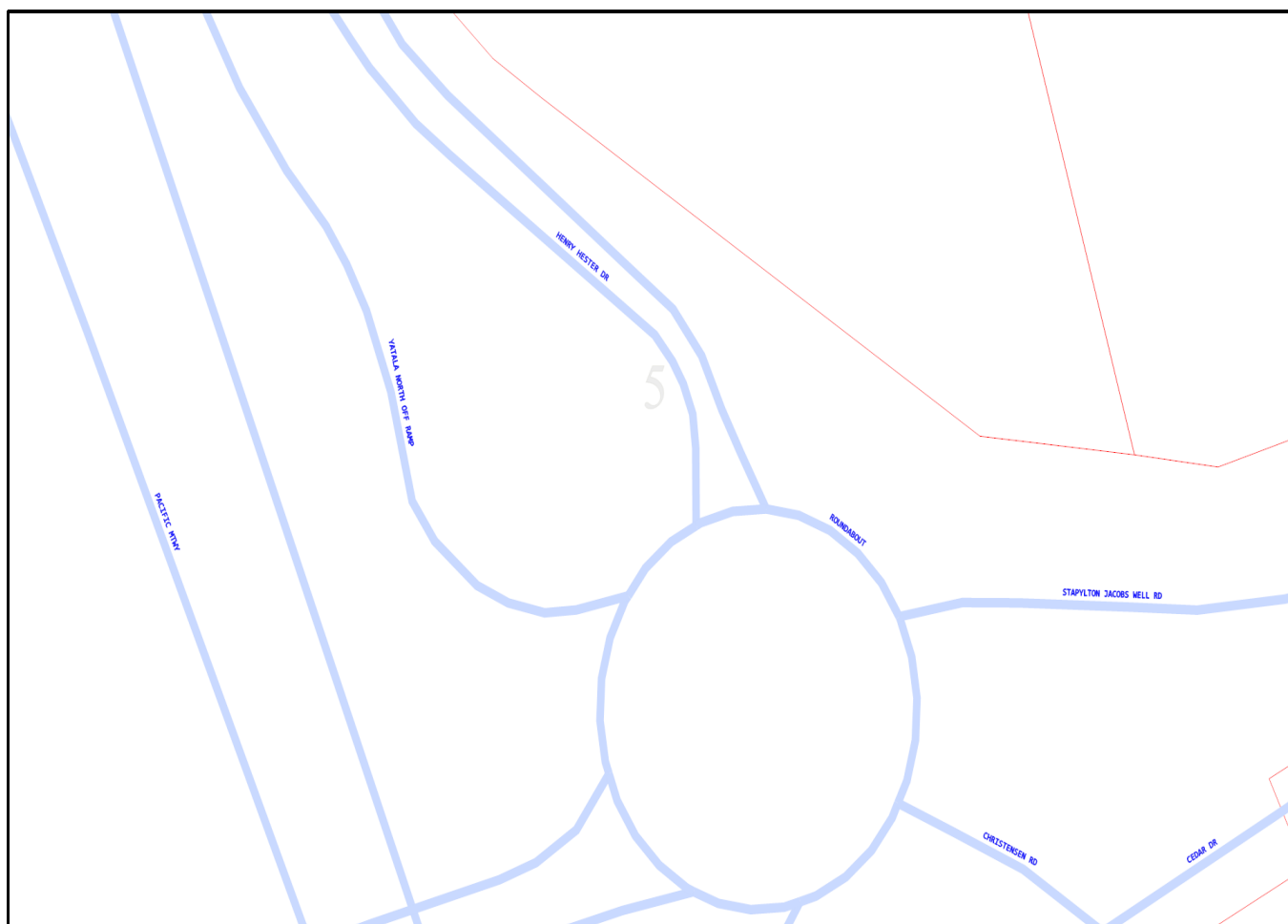
	Parcel and the location
	Pit with size "5"
	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
	2 Direct buried cables between pits of sizes, "5" and "9" are 10.0m apart.
	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
	Road and the street name "Broadway ST"
Scale	0 20 40 60 Meters 1:2000 1 cm equals 20 m 

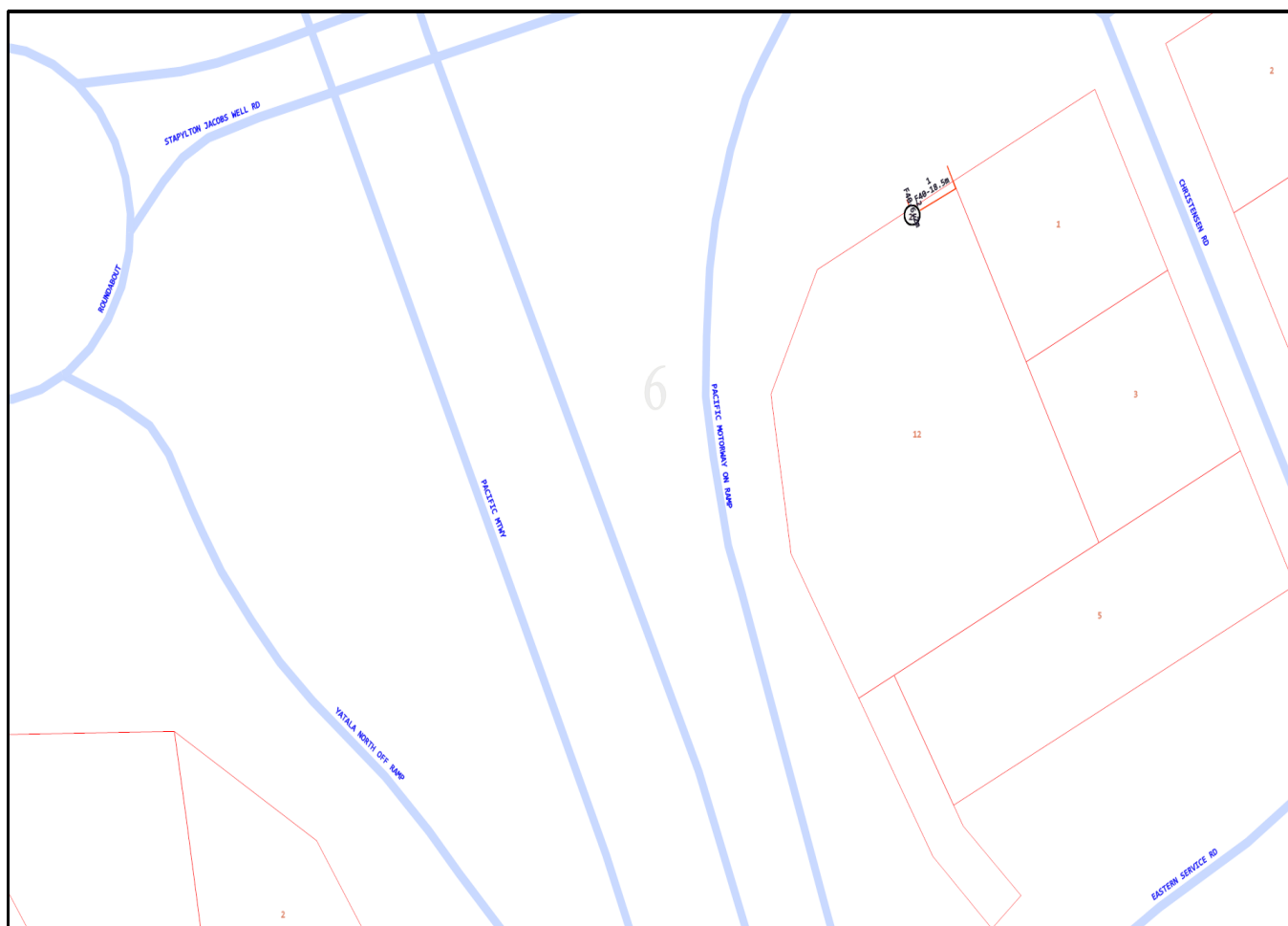


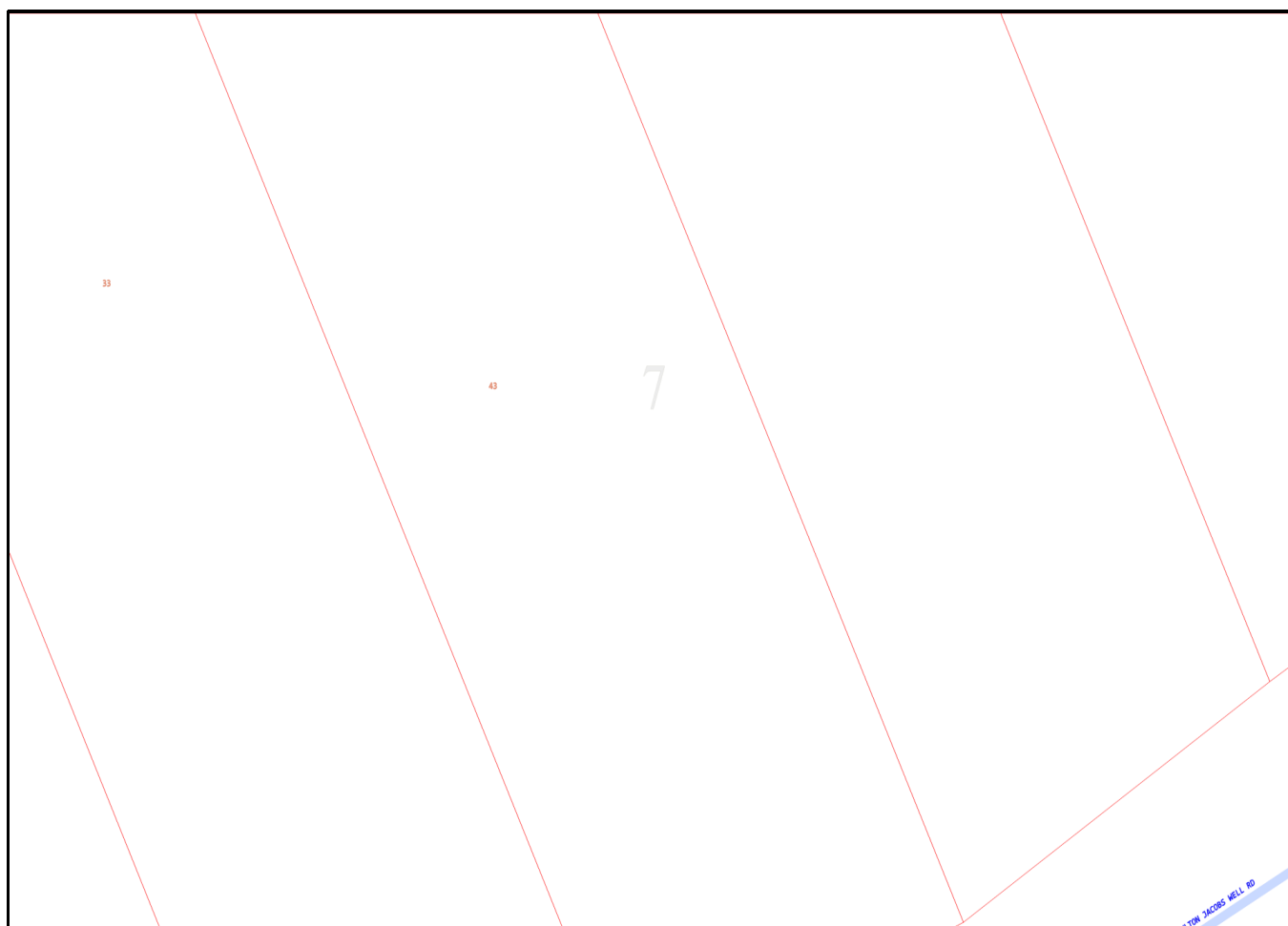


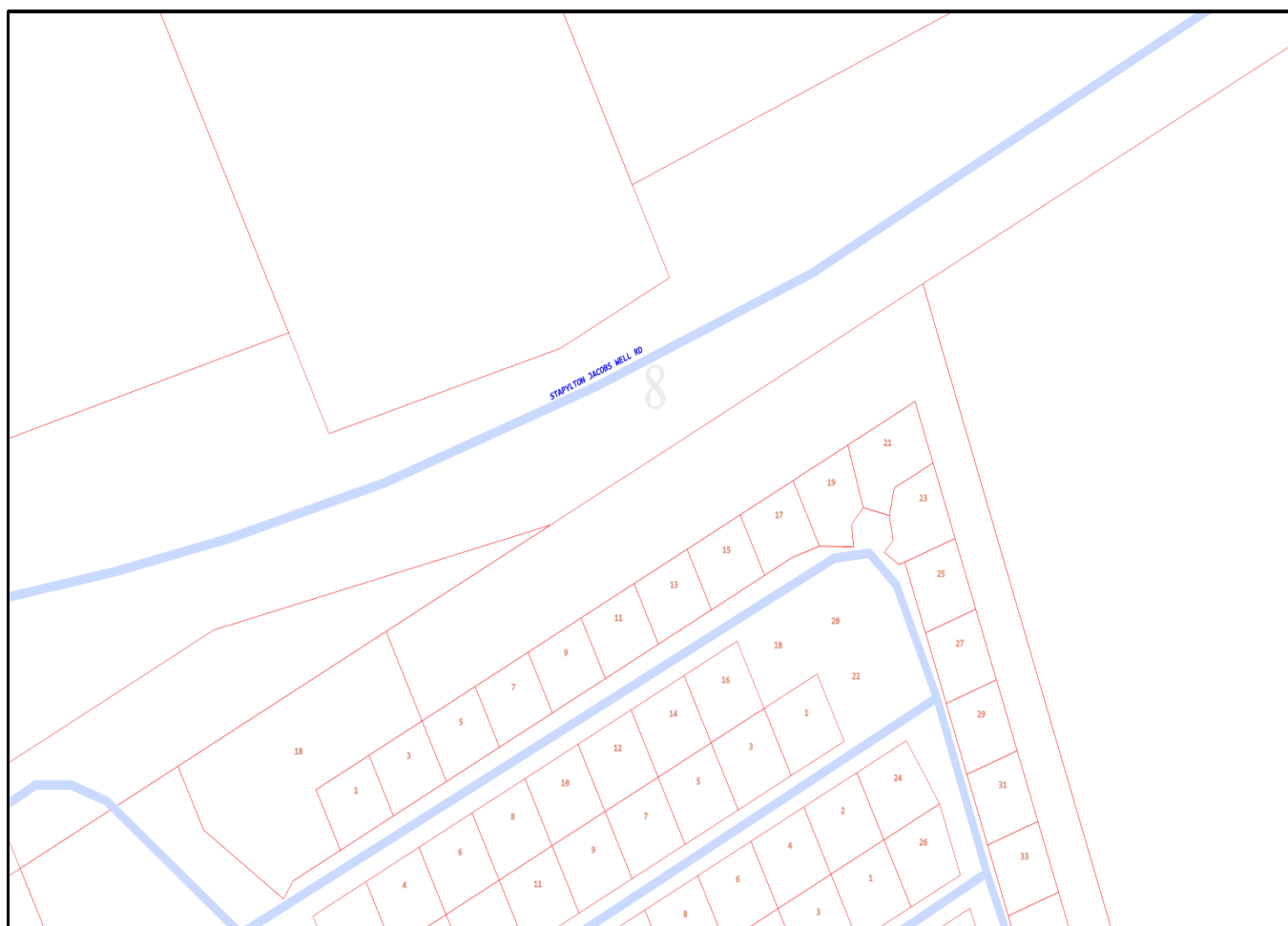


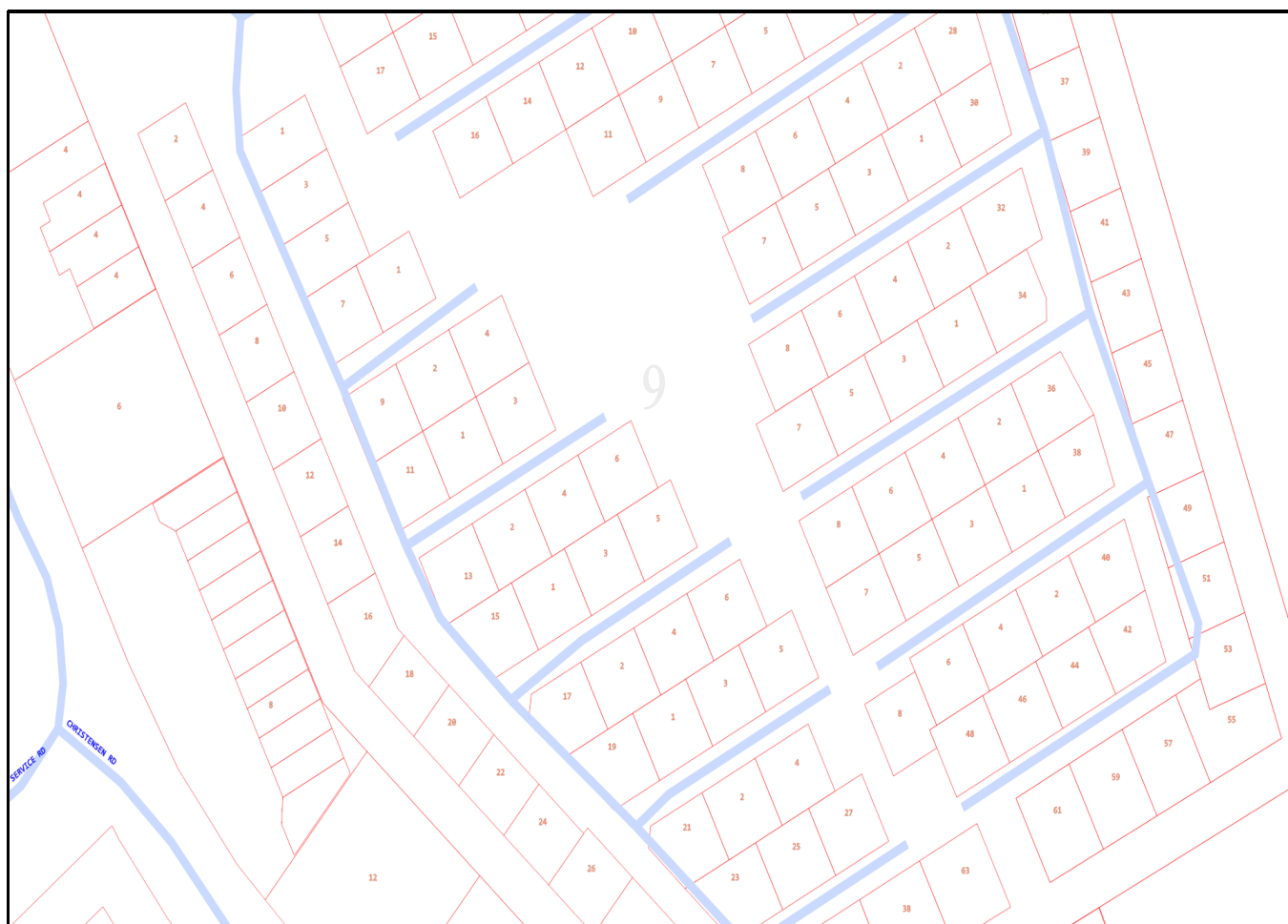


















12

Emergency Contacts

You must immediately report any damage to **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.



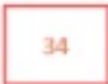
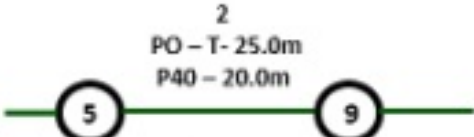
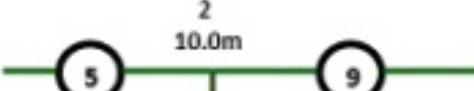
Indicative Plans

Issue Date:	20/08/2019	 DIAL BEFORE YOU DIG www.1100.com.au
Location:	Access Ave , Yatala , QLD , 4207	

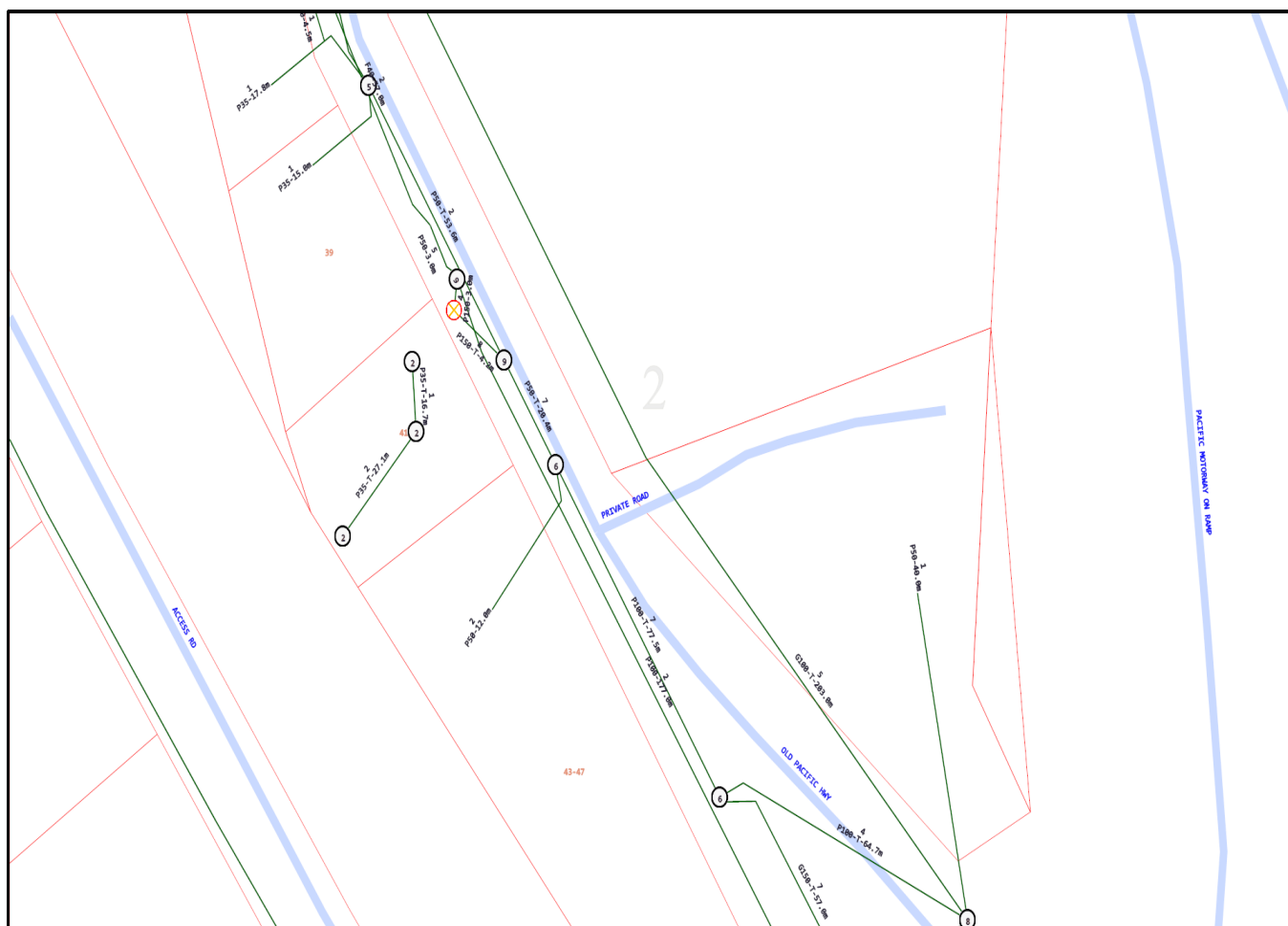
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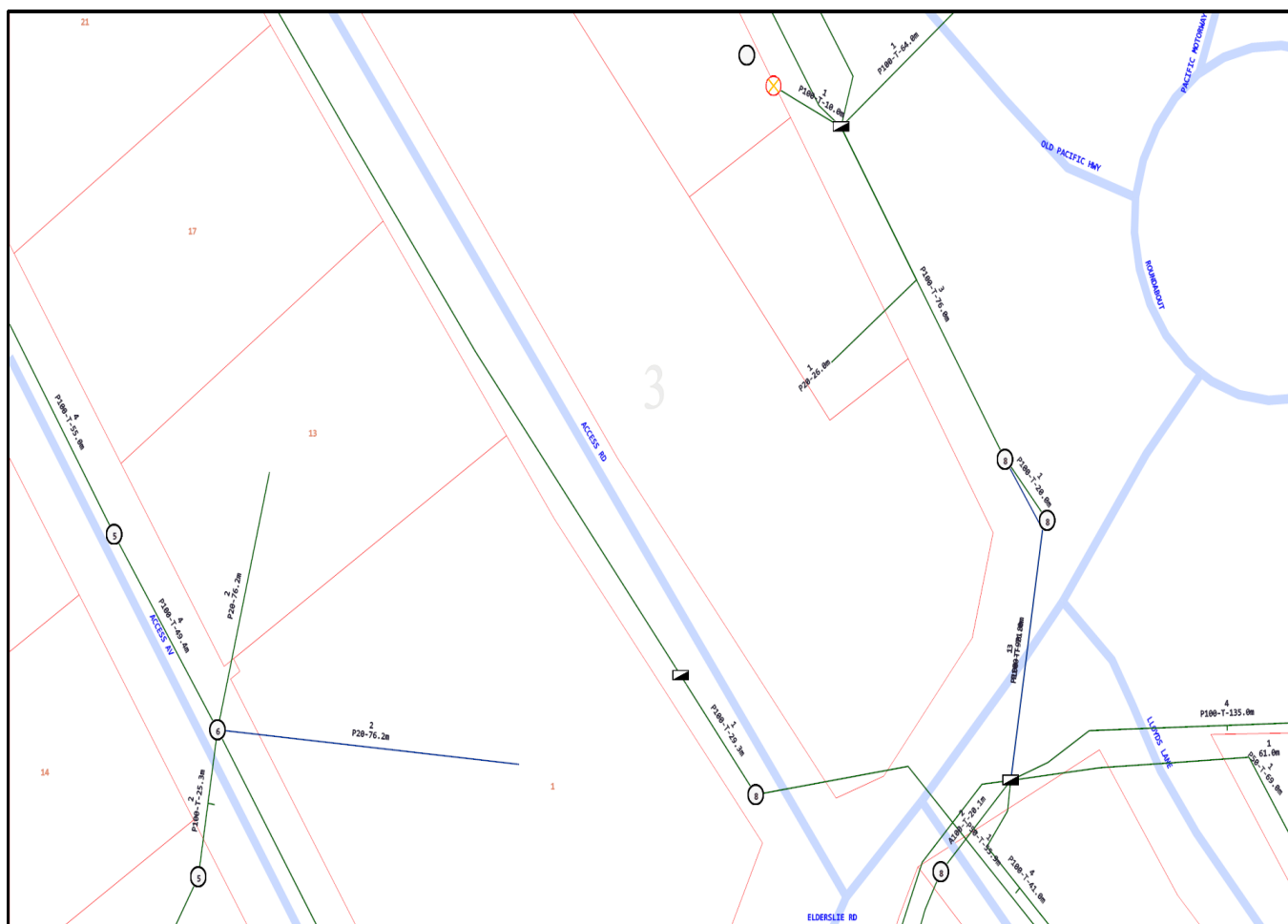


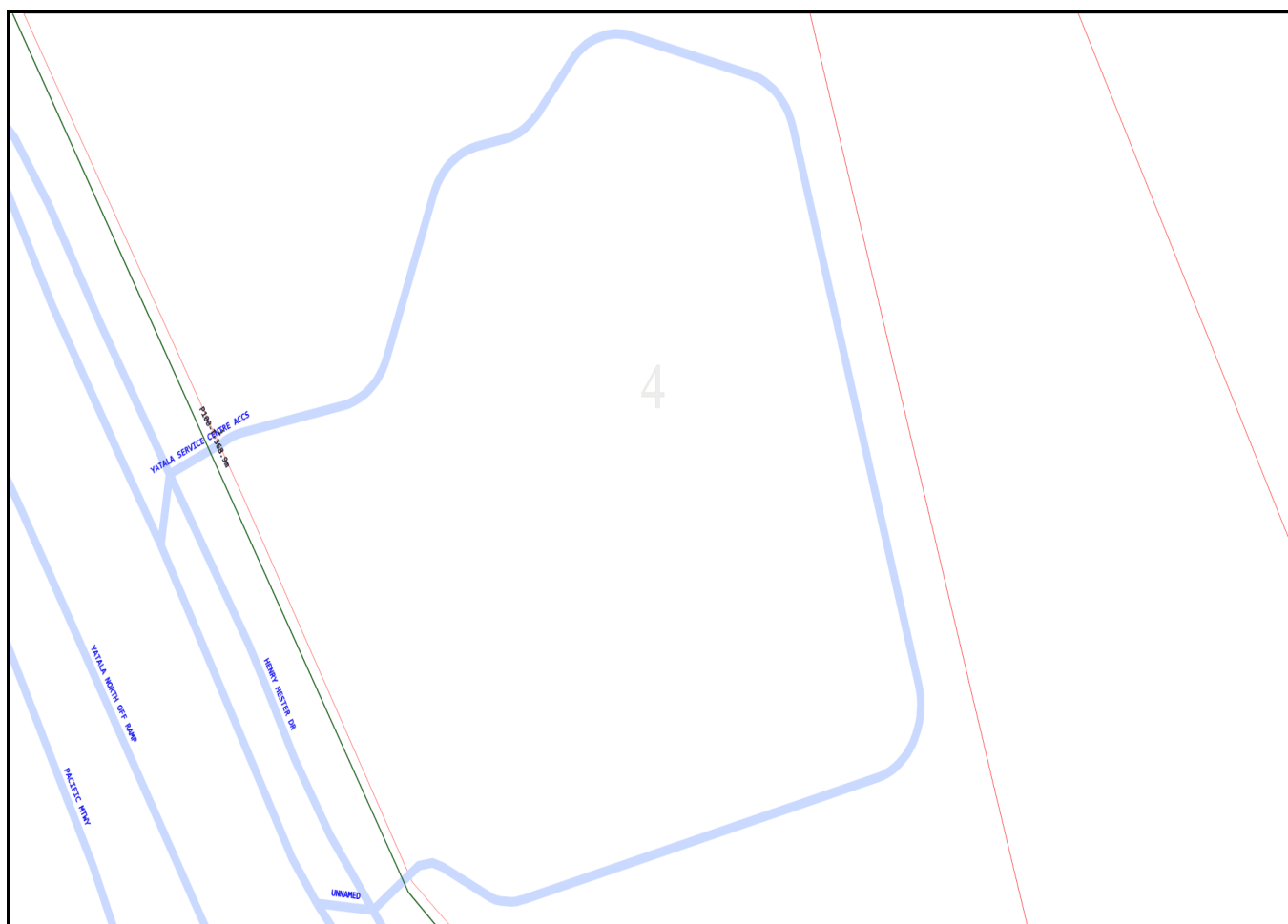
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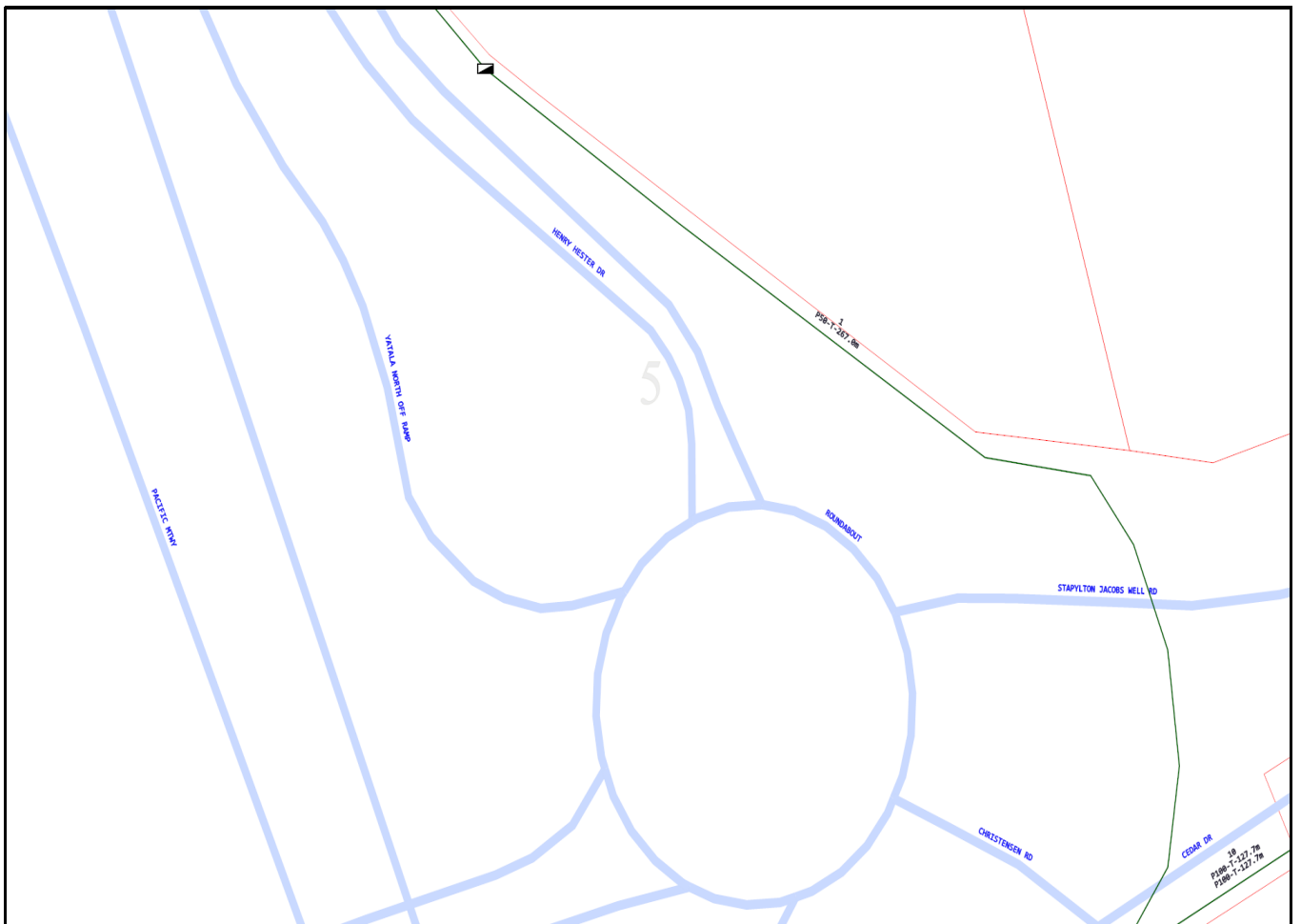
	Parcel and the location
	Pit with size "5"
	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
	2 Direct buried cables between pits of sizes, "5" and "9" are 10.0m apart.
	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
	Road and the street name "Broadway ST"
Scale	0 20 40 60 Meters 1:2000 1 cm equals 20 m 

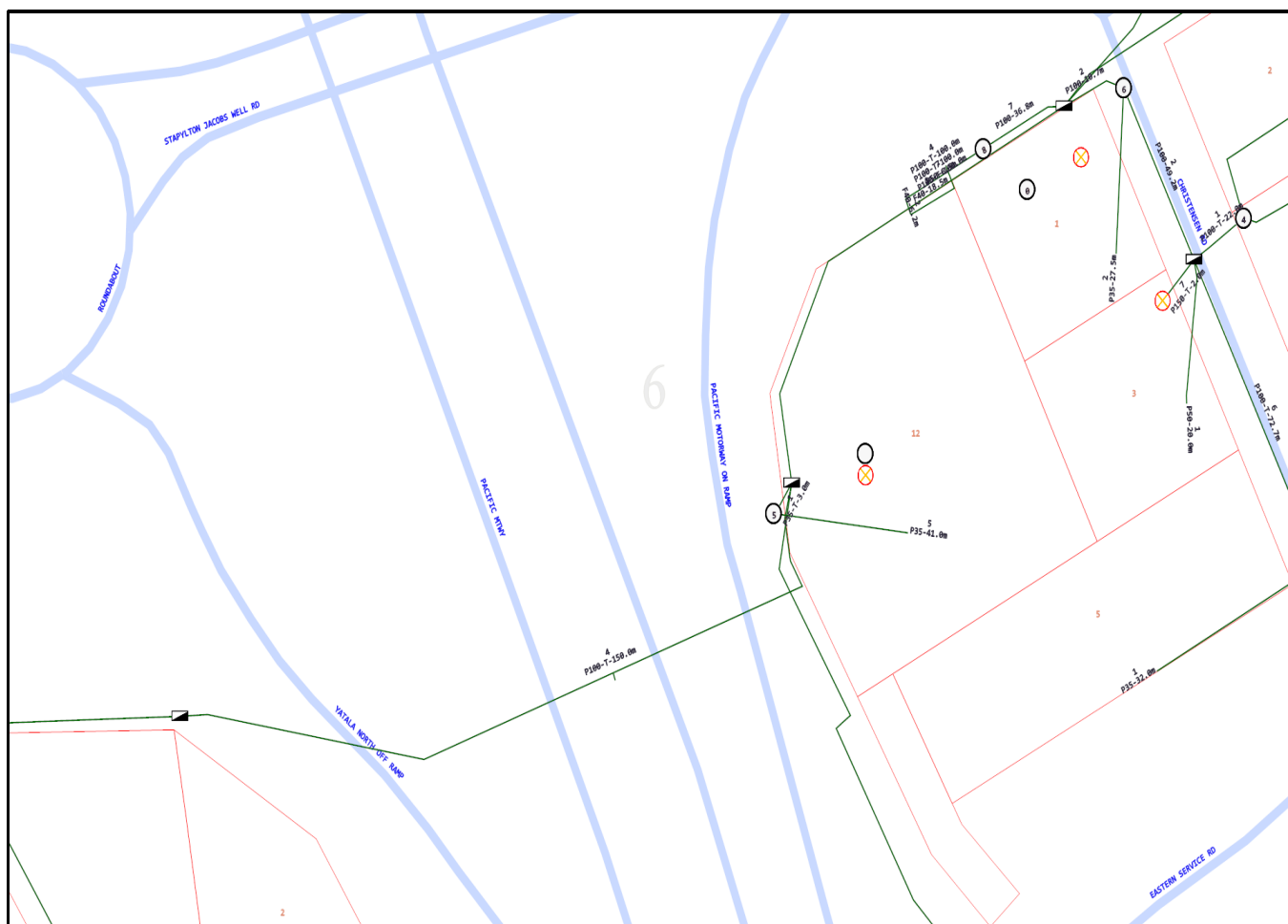


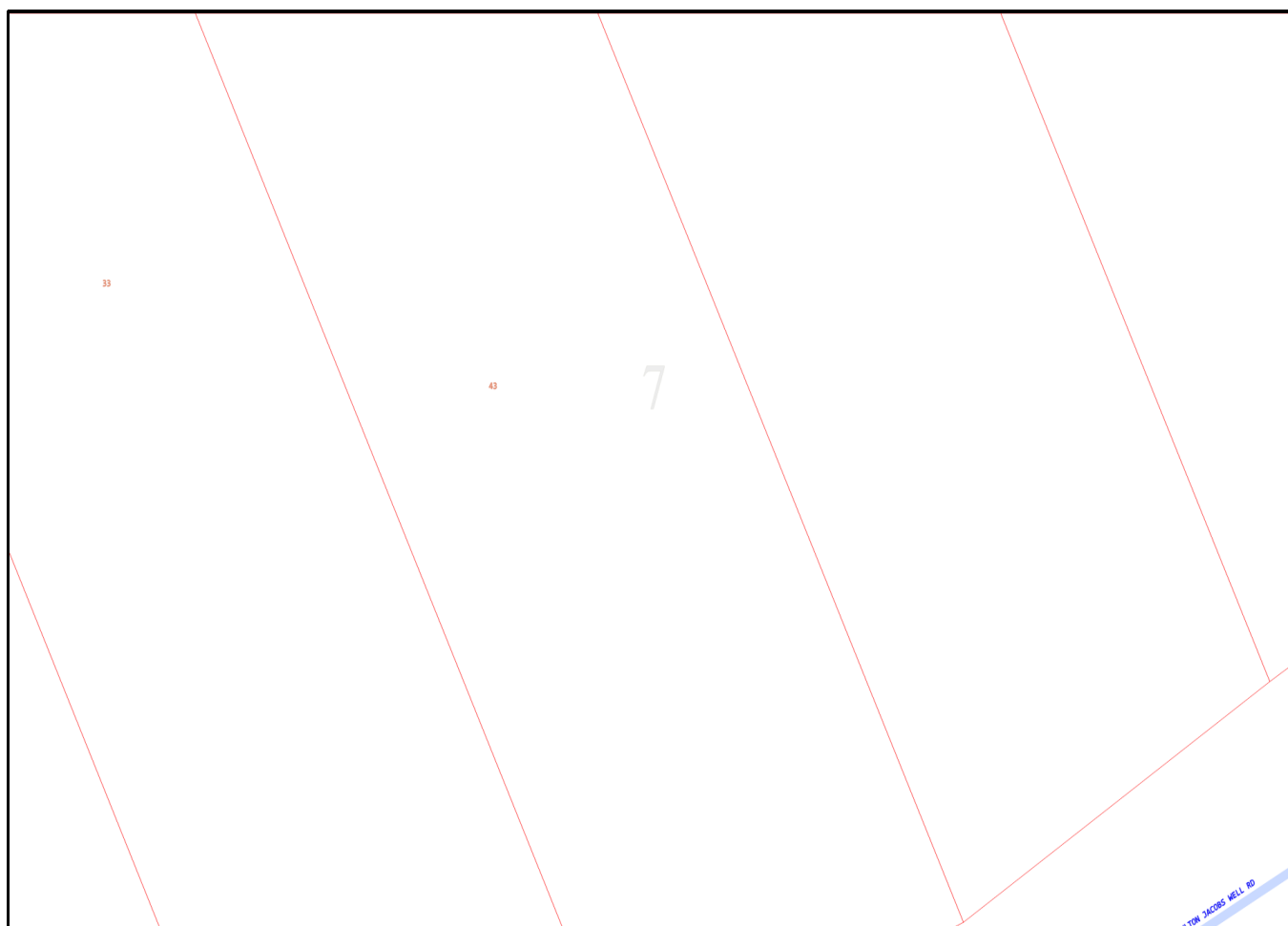


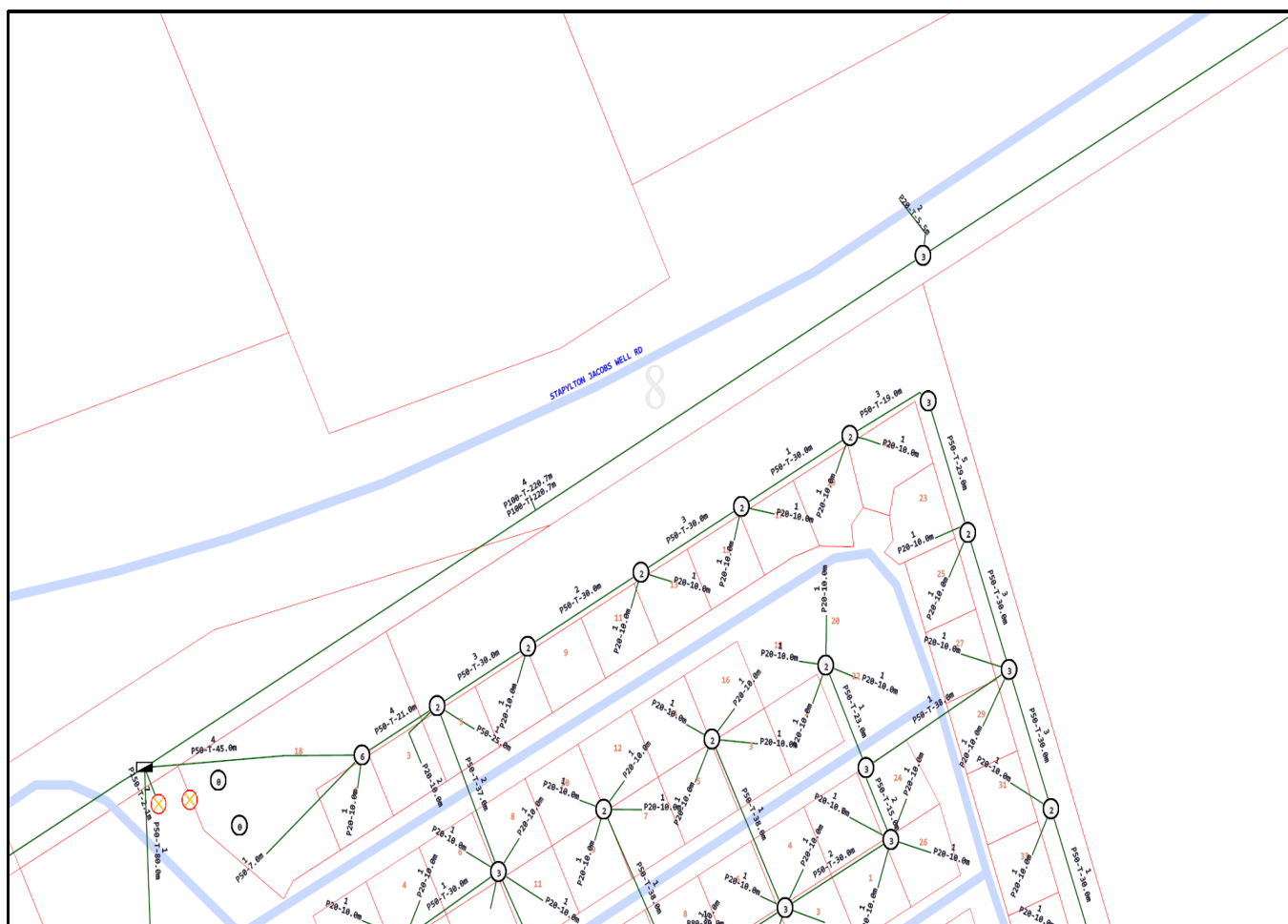


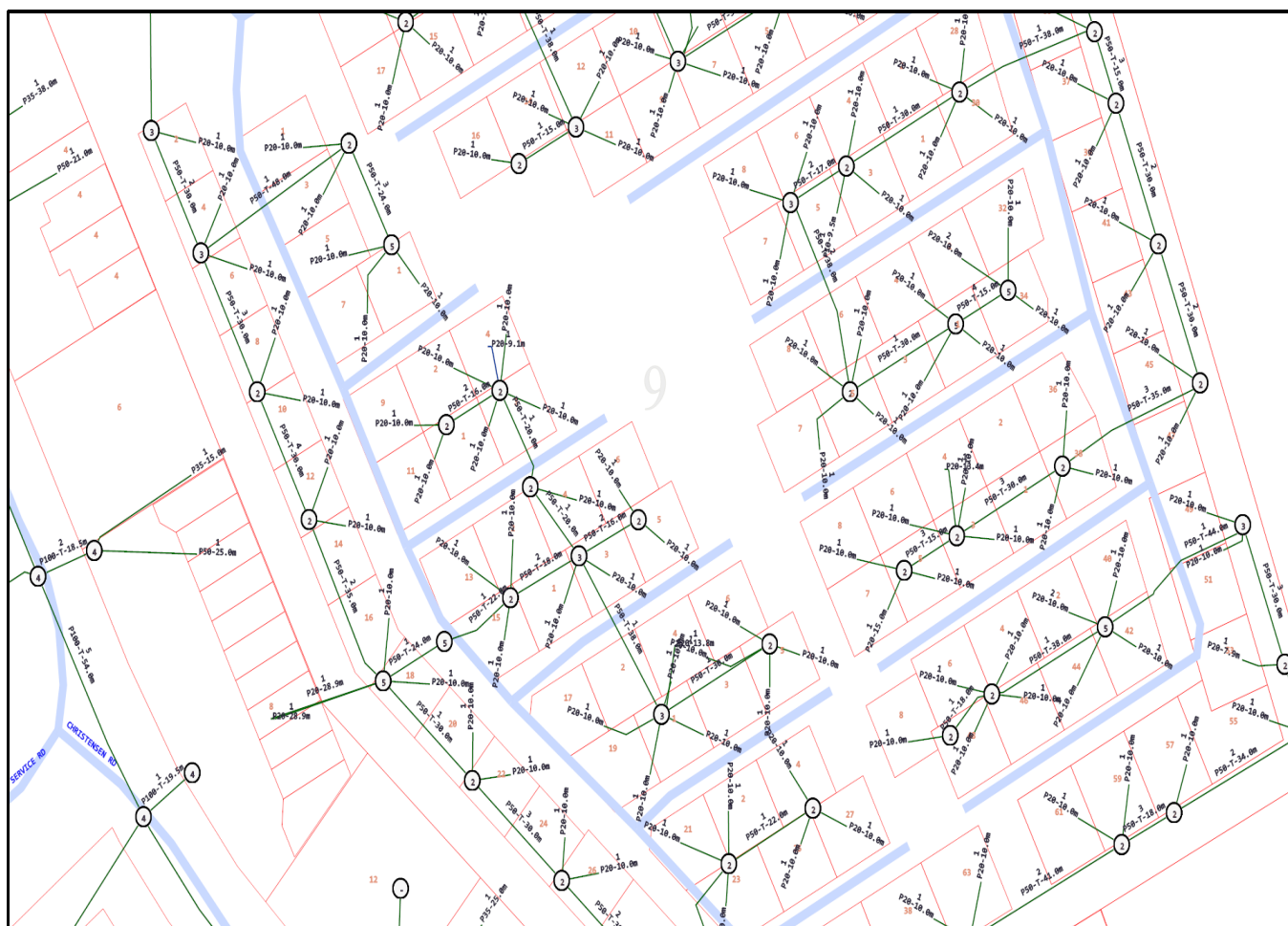


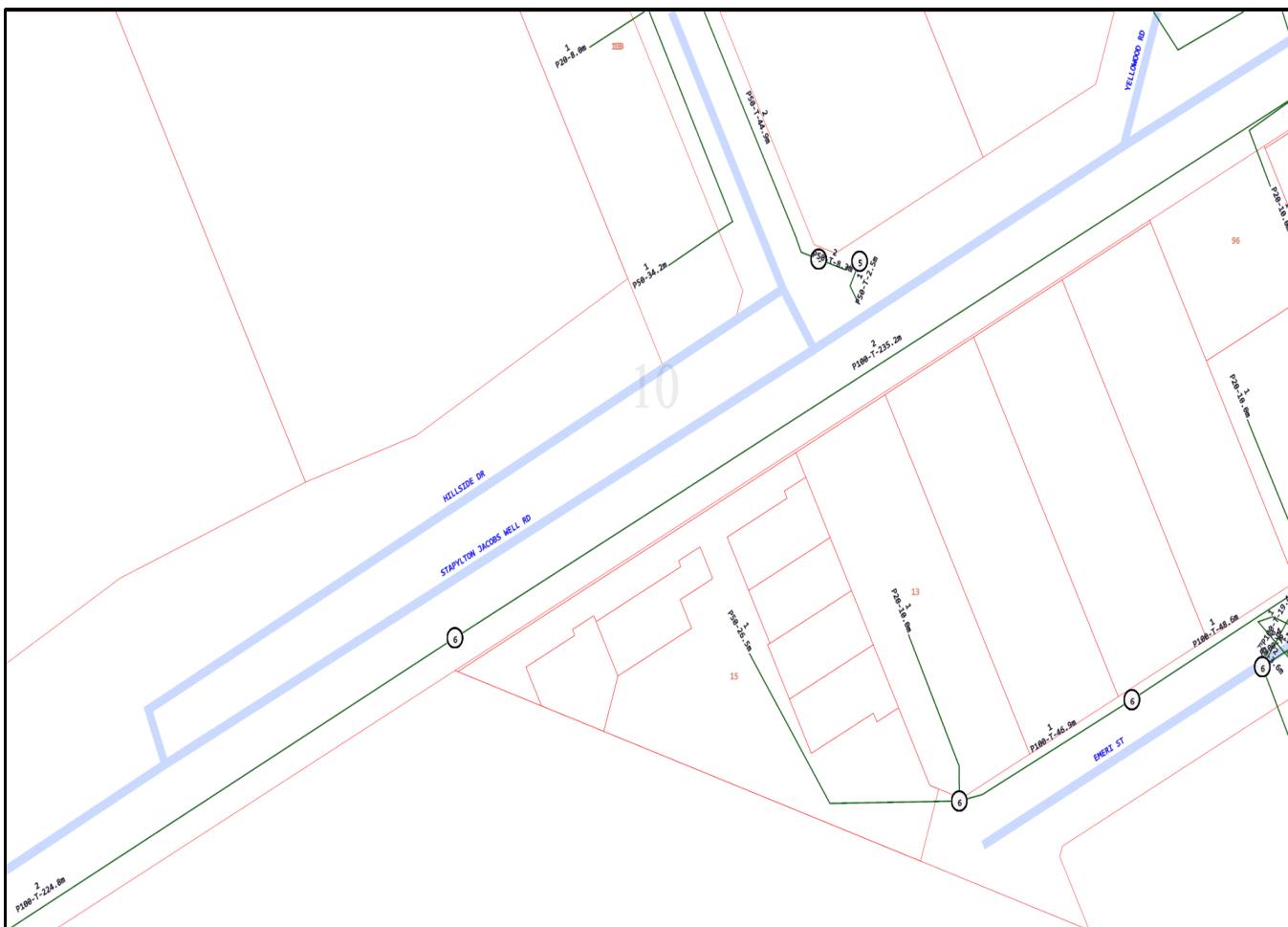




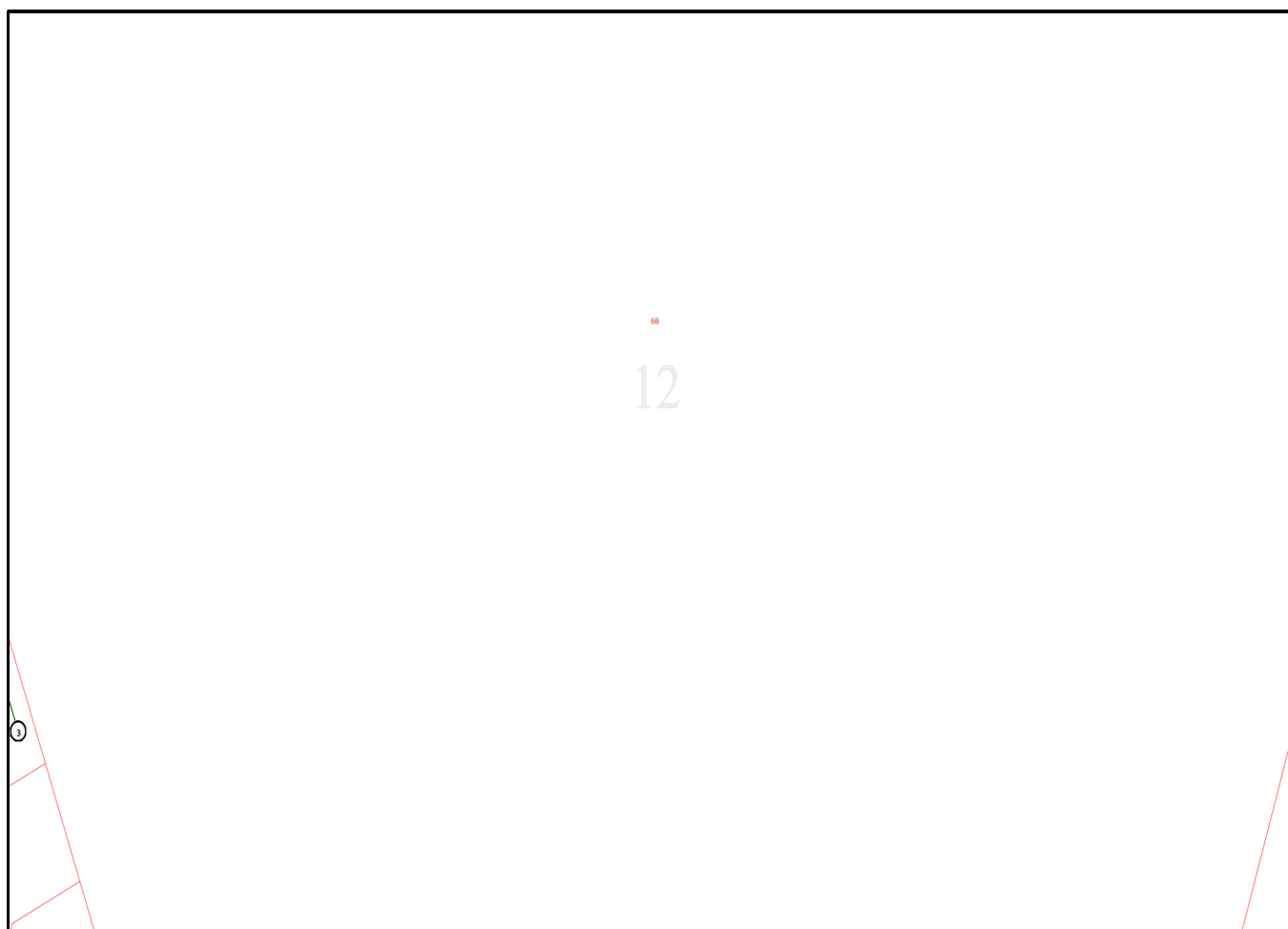






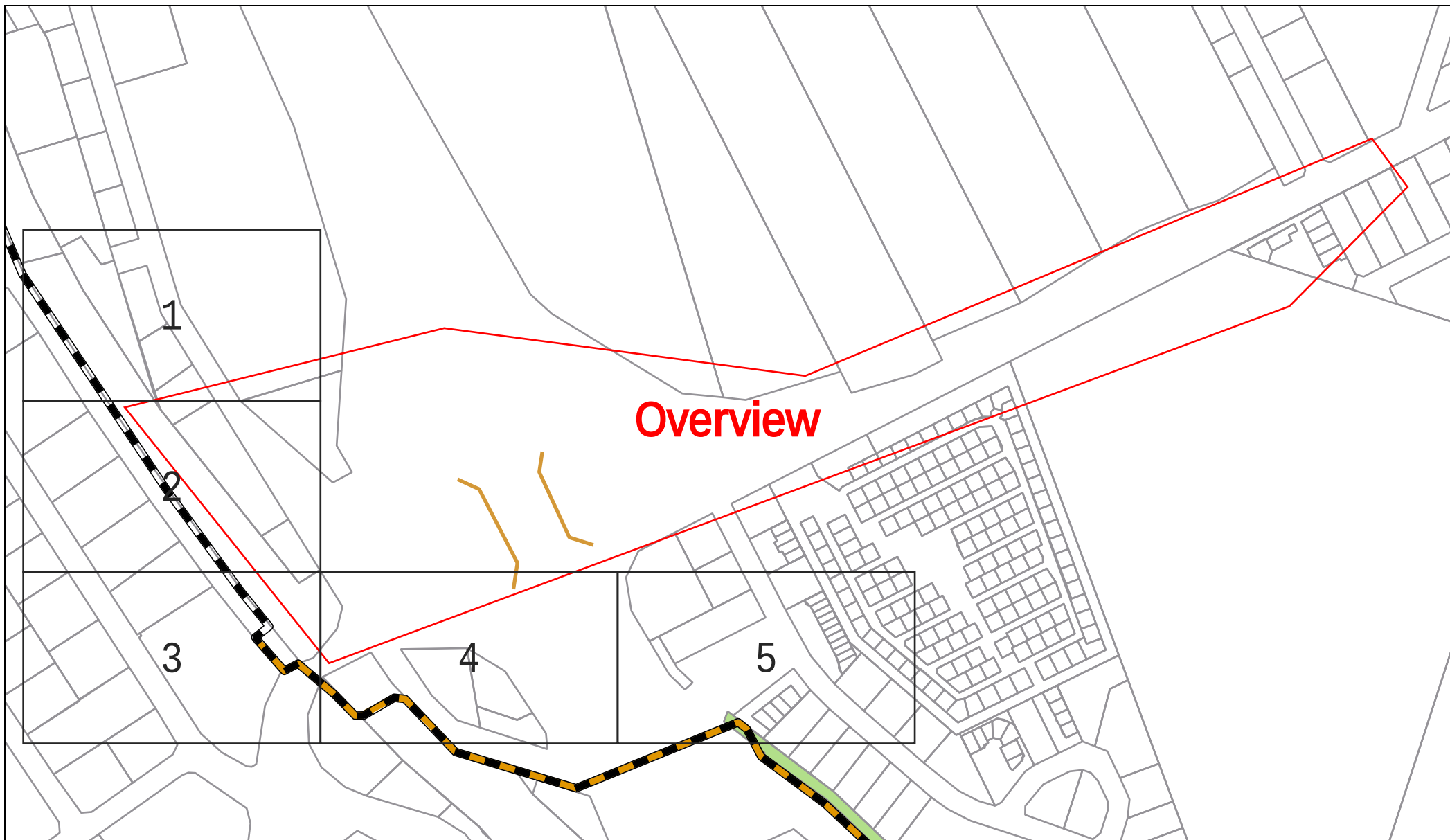






Emergency Contacts

You must immediately report any damage to **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.



Sequence Number: 88097340

Date: 20/08/2019

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LEGEND

Digsite



Area

Assets



Cable



3rd Party Duct



Marker Post



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LEGEND

Digsite



Area

Assets



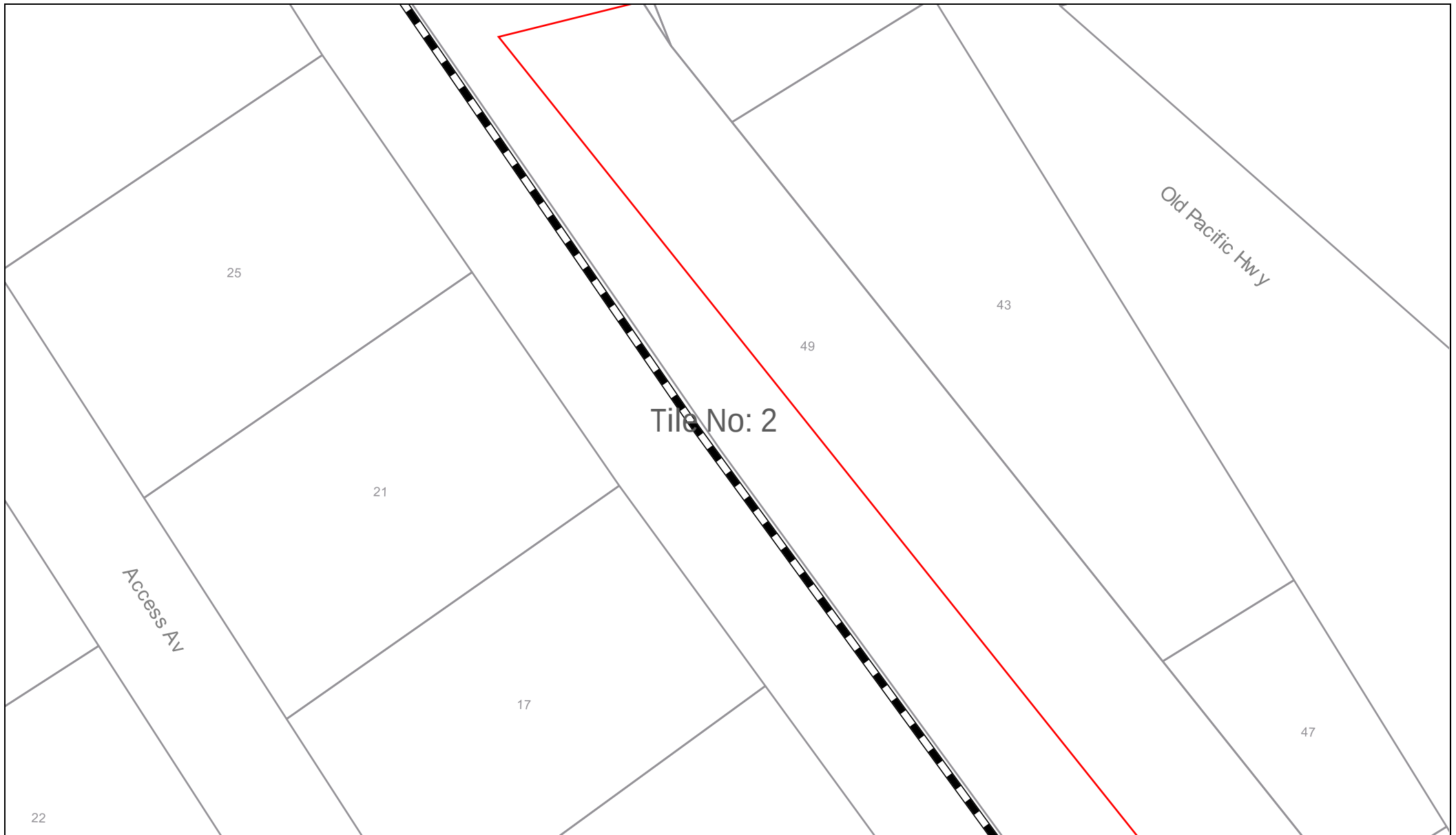
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3rd Party Duct



Marker Post



Sequence Number: 88097340

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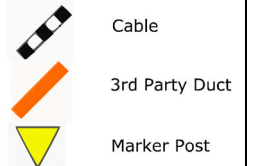


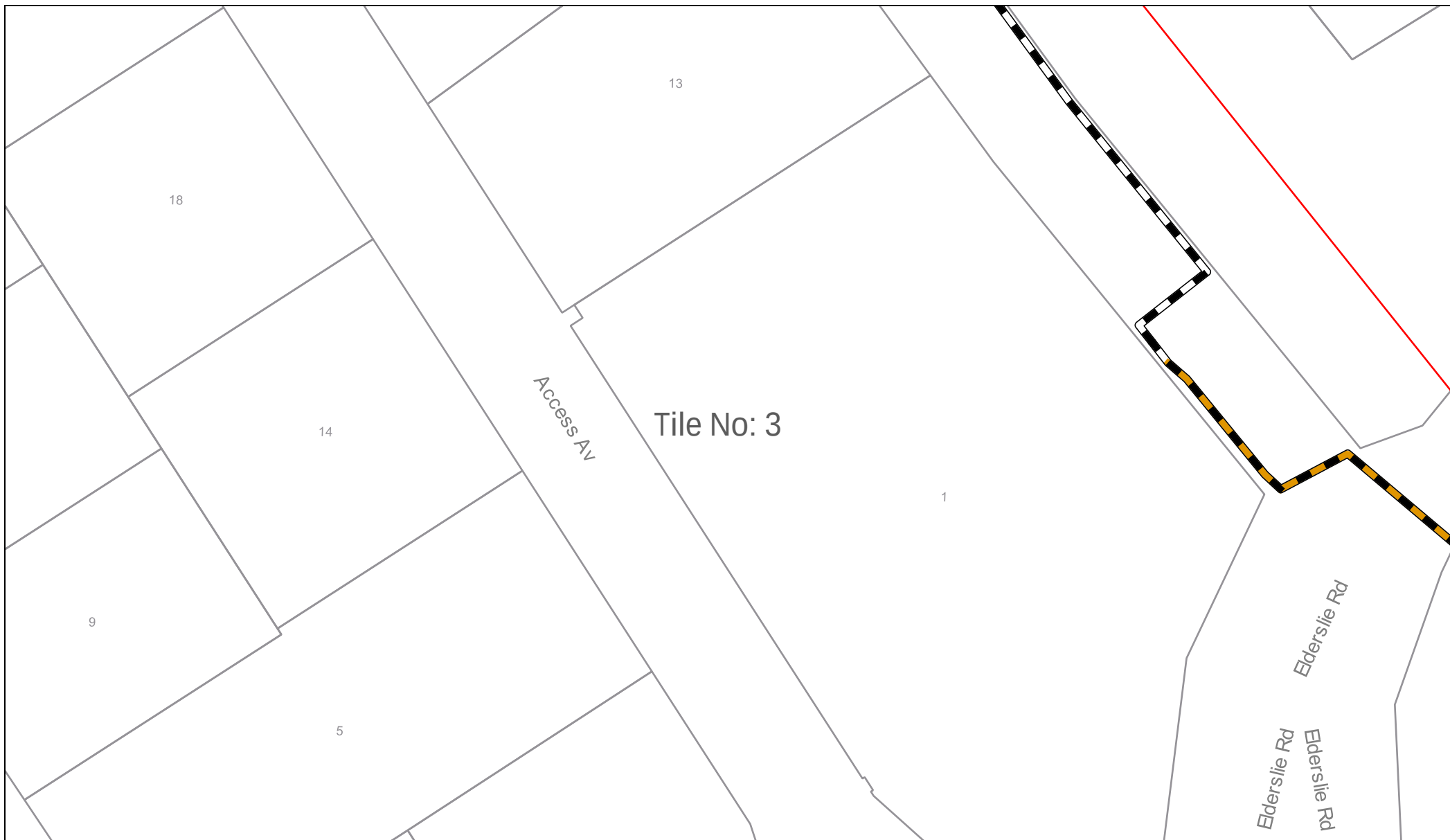
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Assets





Sequence Number: 88097340

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LEGEND

Digsite



Area

Assets



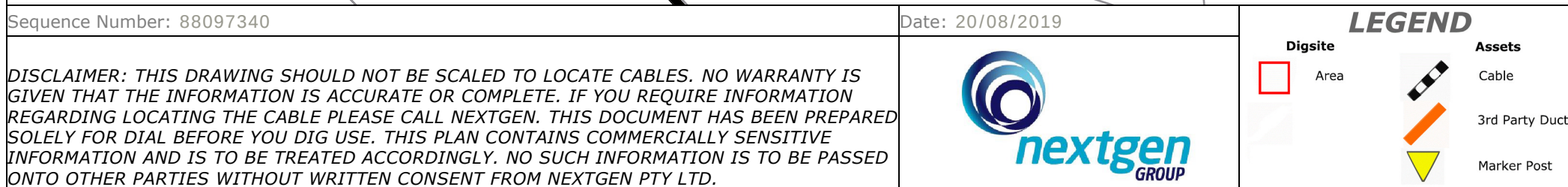
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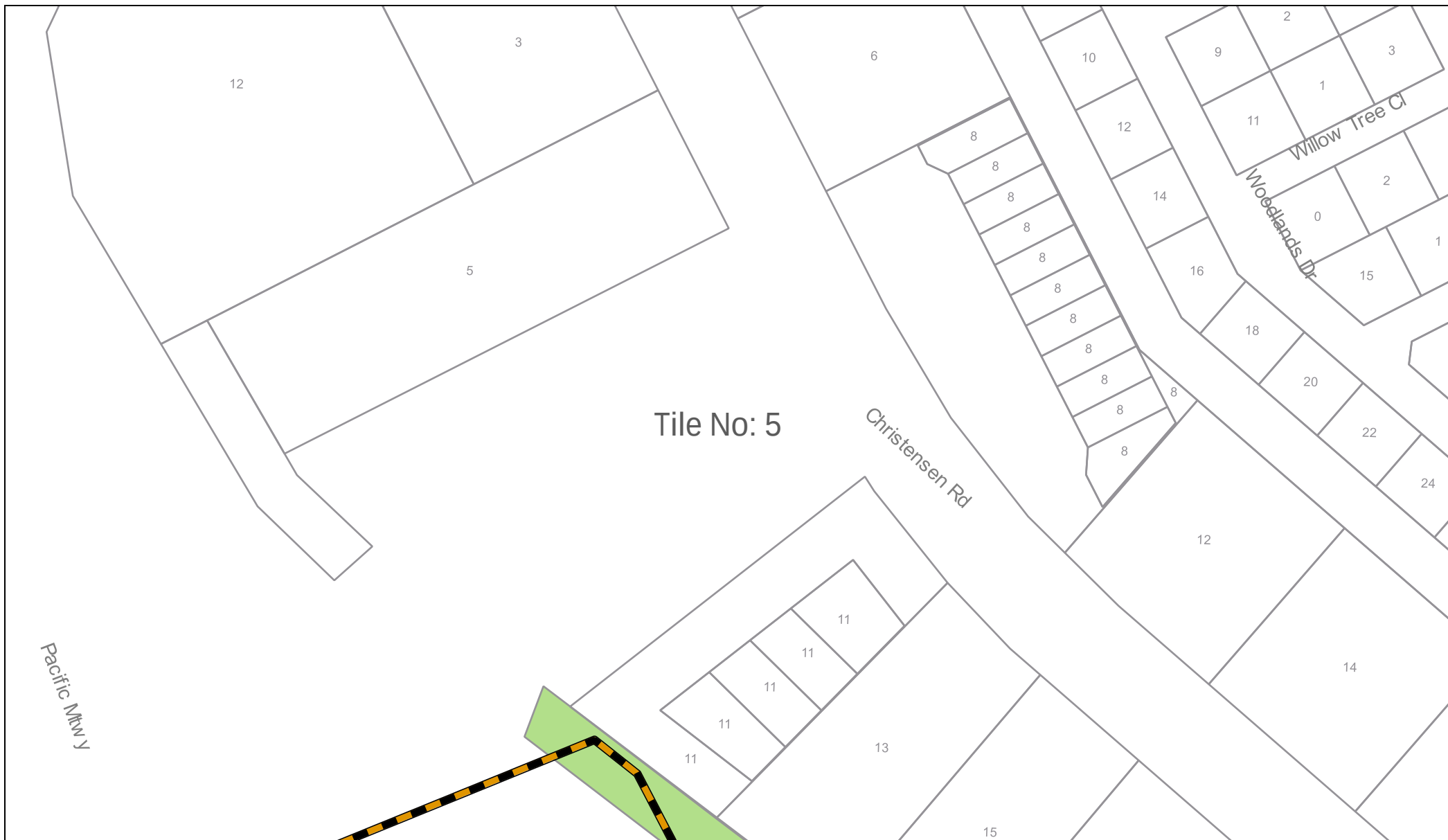


3rd Party Duct



Marker Post





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LEGEND

Digsite



Area



Assets

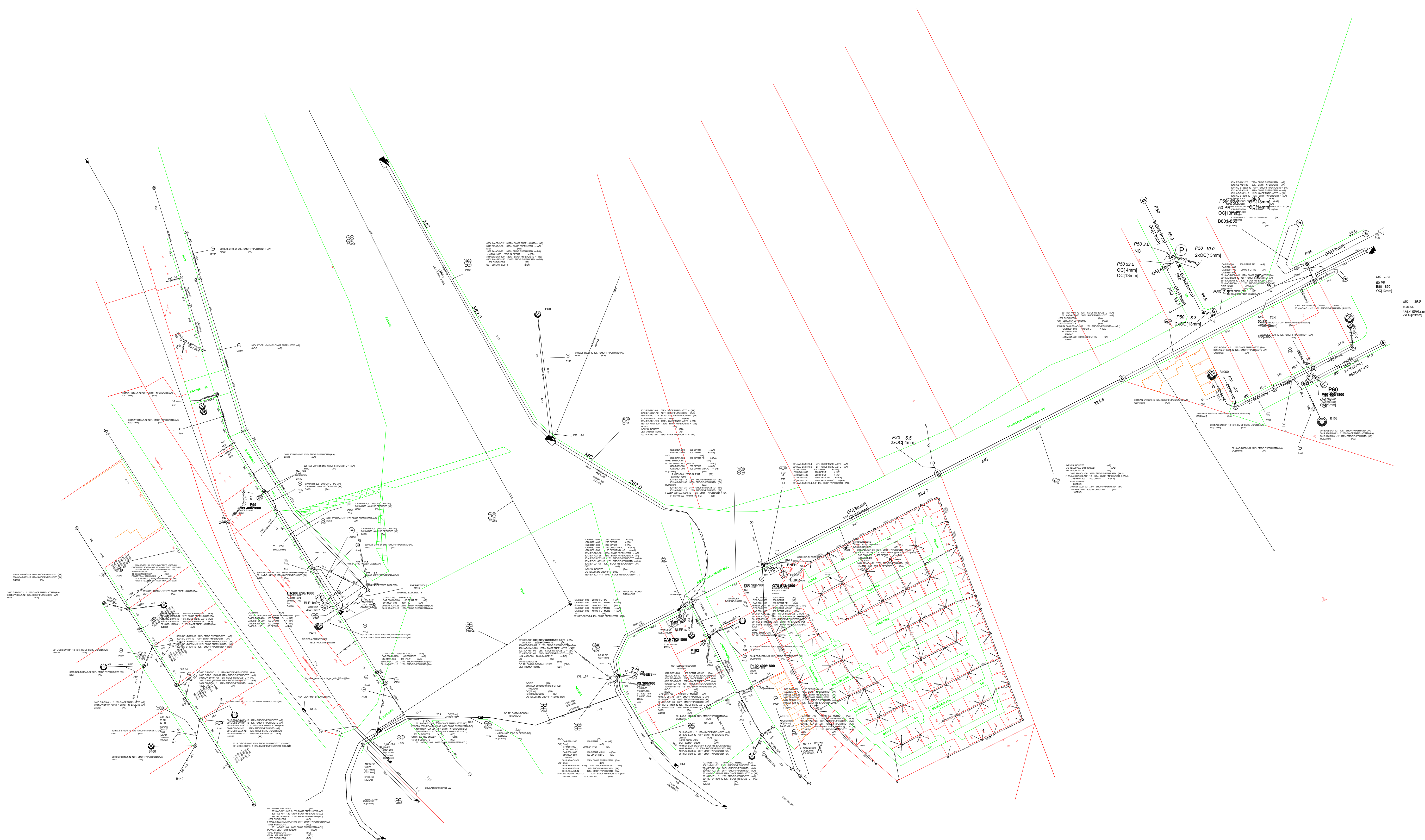
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Marker Post



APPENDIX H

LANDSCAPE INTENT PLAN



VANTAGE YATALA

LANDSCAPE INTENT PACKAGE (STAGE 3)

FPI Queensland

Lot 504 on SP329485
504 Homestead Drive, Stapylton

March 2023
Issue - For Approval
Revision - A

Prepared By -
Gassman Development Perspectives
Job No. 5941



CONTENTS

- 02** Site Characteristics & Development Proposal
- 03** Site Locality Plan
- 04** Landscape Strategy
- 05** Landscape Intent Plan
- 06** Streetscape & Industrial Lots (Sections)
- 07** Streetscape & Industrial Lots (Sections)
- 08** Wayfinding and legibility
- 09** Open Space and Rehabilitation
- 10** Common Property
- 11** Water Sensitive Urban Design
- 12** Hardscape & Furnishings
- 13** Planting Palette

SITE CHARACTERISTICS

The site is located within the Gold Coast suburb of Stapylton (4207). The subject has only recently been registered and sealed, and was formerly known as Lot 502 Homestead Drive, Stapylton - Lot 502 on SP316137.

The overall subject site is irregular in shape and is situated on the southern side of Homestead Drive and Fairway Street and on the eastern side of Christensen Road. The subject land is vacant; predominantly cleared; and resembles a civil construction site as it has been provisionally prepared to accommodate this industrial subdivision (and adjoining Stage 1 and 2 areas) through the undertaking of bulk earthworks and vegetation clearing.

DEVELOPMENT PROPOSAL

The proposal is to develop the subject land as Stage 3 of the approved industrial estate over the subject site (commonly referred to as 'Vantage'). The proposed industrial lots will range in allotment areas from 2,352m² to 95,930m², with landscaped buffers provided along new road frontages. The proposal is unique in that it proposes a Community Title Scheme over the industrial lots, specifically to deliver small scale park and amenity facilities for the immediate workforce. All core infrastructure, such as roads and stormwater basins are still to be designed to Council specifications and dedicated as public assets.

The proposed development will include the following development aspects:

- Development Permit for Reconfiguring a Lot for Community Title Subdivision and Common Property
- Development Permit for Operational Work – Change to Ground Level and Vegetation Clearing.

Supporting documentation to be read in conjunction with this landscape intent package, is as follows;

- Preliminary Approval Current Decision Notice MIN/2020/659- authored by GDP
- Proposed ROL Plan - authored by GDP
- Code Assessment - authored by GDP
- Change to Ground Level Drawings c
- Stormwater Management Plan - authored by GDP
- Engineering Services Report - authored by GDP
- Traffic Impact Assessment - authored by Rytensild Traffic Group
- Community Management Statement - authored by Frasers Property Australia

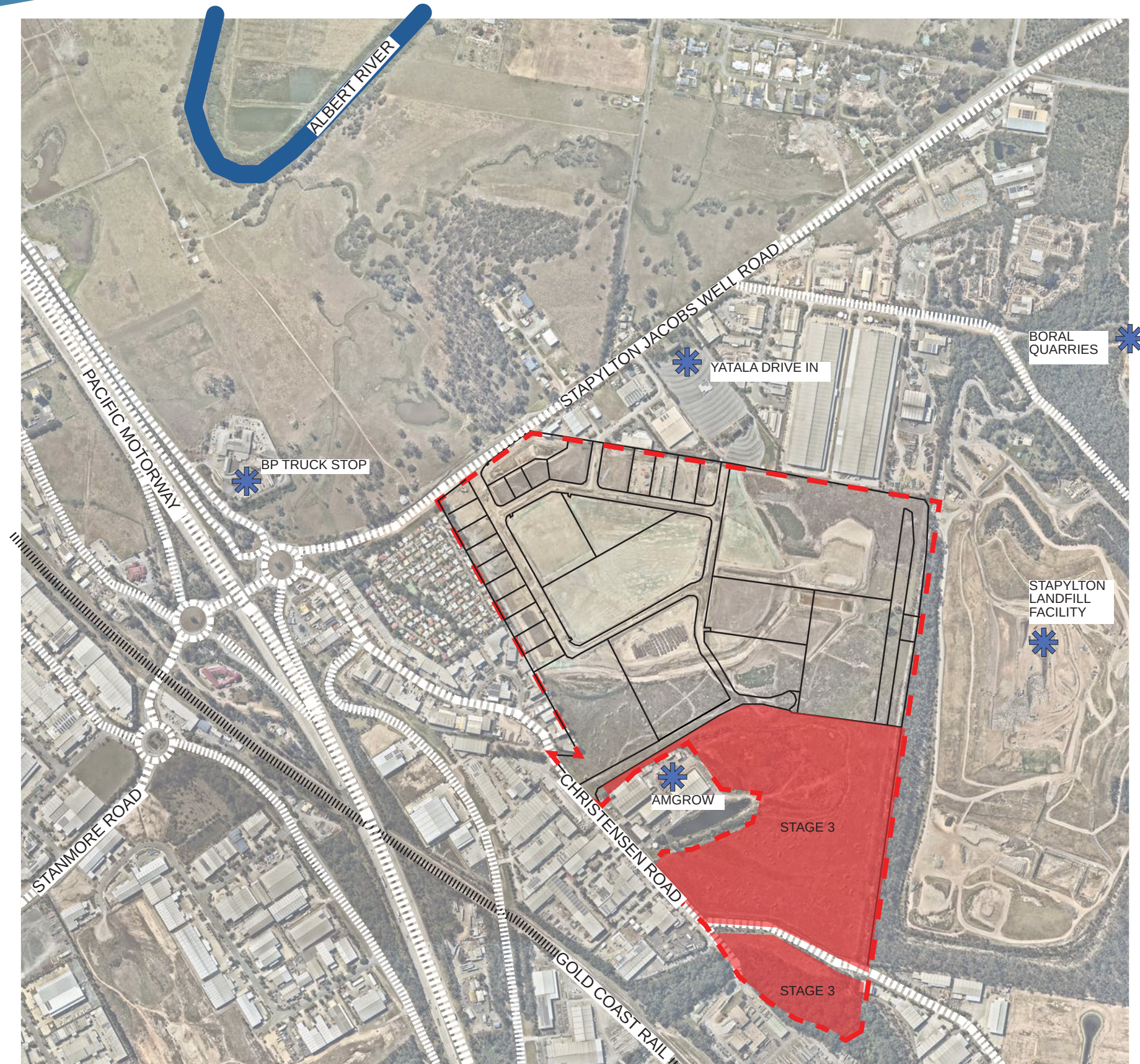


SITE LOCALITY PLAN

The site is located within the Gold Coast suburb of Stapylton (4207). The subject has only recently been registered and sealed, and was formerly known Lot 504 on SP329485 504 Homestead Drive, Stapylton.

In terms of location context, the overall subject site is located approximately:

- 500 metres from the Pacific Motorway, Yatala north interchange
- 5.5 kilometers from the Beenleigh CBD
- Five kilometers from Beenleigh Transit Centre
- 30 minutes from Southport CBD
- 30 minutes from Brisbane CBD



LANDSCAPE STRATEGY

The landscape design intent for Vantage Estate Yatala is underpinned by a number of overriding design principles that will promote legibility, create site scale and setting and respond to the environmentally values of the site.

The design will respect the environmental aspects of responsible design, planning and construction which will respond to issues of biodiversity, natural processes and impacts on local waterways.

The scale and nature of landscaping materials and selected plant species will be appropriately selected to compliment the size of proposed buildings and structures nominated for the site, whilst being sensitive to available space.

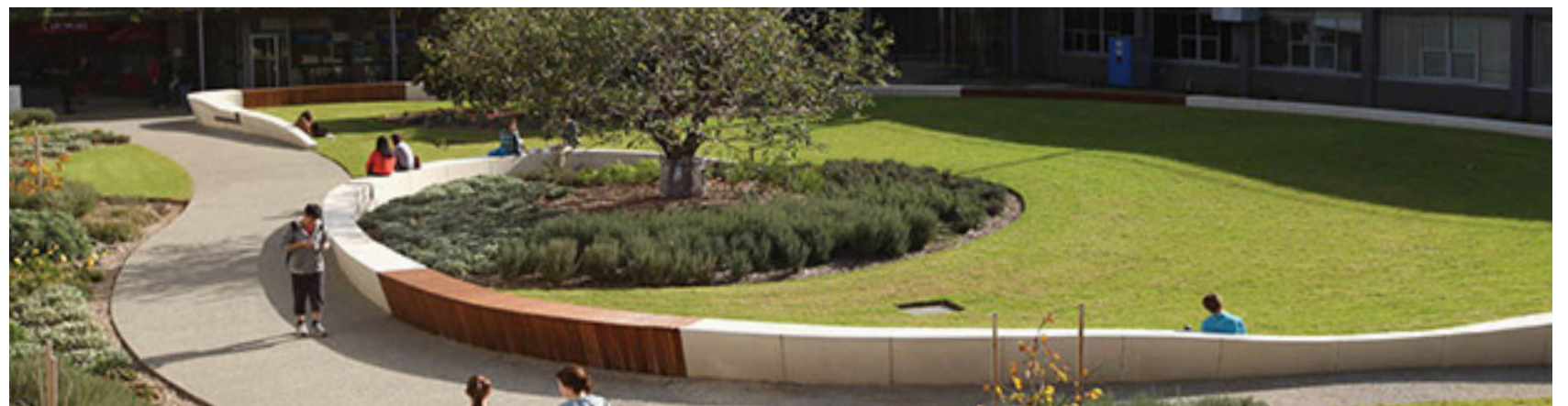
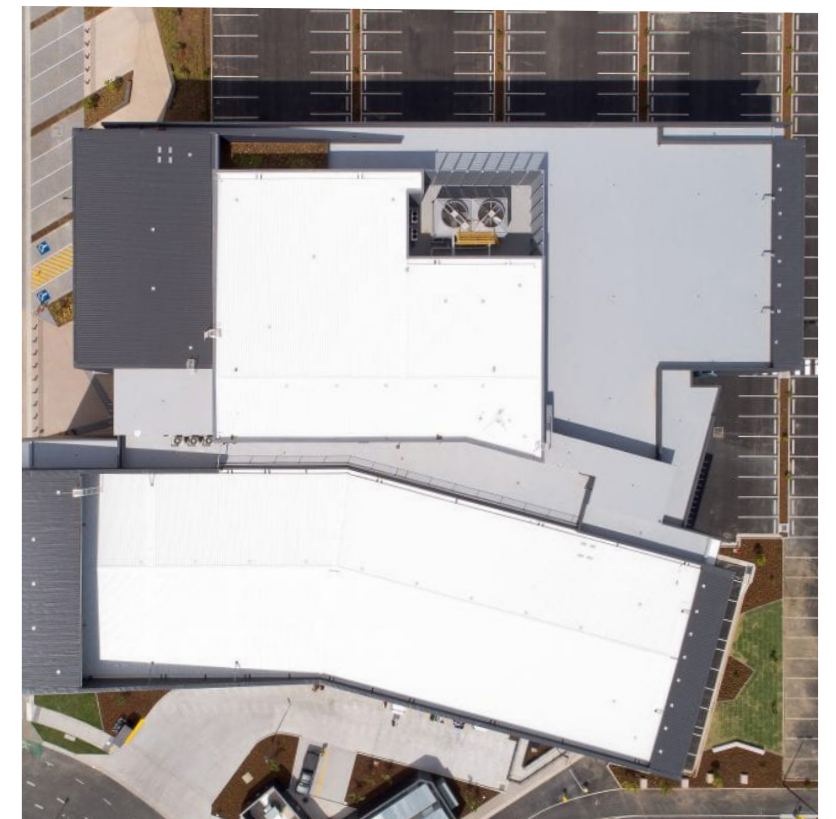
Principals of Crime Prevention Through Environmental Design (CPTED) will be adapted via the use of planting hierarchy throughout the development. The use of plant species with low heights and trees with clear trunk to base of tree canopy will allow for passive surveillance as well as recognition of traffic and pedestrian movements.

Way finding will be promoted by using nominated hardscape, furnishing and planting and palettes, that will be reflected through the site's entirety. Clear view lines and signage will further promote legibility. Whilst open spaces and furniture nominated in areas to create hold points at resting / passive use areas.

Water Sensitive Urban Design (WSUD) principals will be incorporated into open space areas allowing for water filtering and harvesting for the site. Local endemic flora will be used within these zones with the intention of filtering and cleaning collected water whilst also enhancing the sites natural features.

Community Title Scheme over the industrial lots has allowed for the facilitation of a recreational health precinct within the estate. The health precinct aims to promote health and well being, stainability and the environment, for the immediate workforce and visitors to the estate. The recreational health precinct, the first of its kind implemented within an industrial estate in Queensland, will contain park shelters, gym equipment and a basketball court, and is aimed to cater for the staff that work within the estate.

Planting will be selected for suitability and tolerance to the varying site conditions. The planting scheme used is predominantly native species which has been nominated to soften the built form, compliment the surrounding natural ecosystems, minimize water usage and limit maintenance.



LANDSCAPE INTENT PLAN

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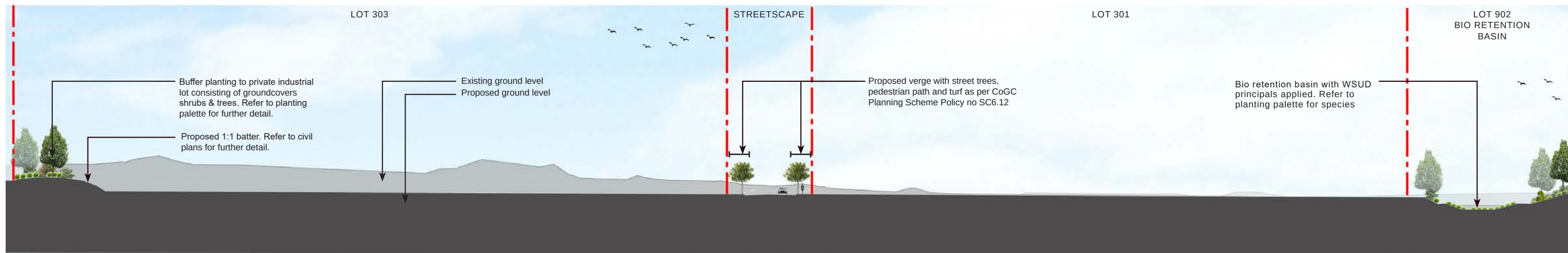
- | | | | | | |
|----|--|---|----|---|---|
| 01 |  | Road Corridor
Road Corridor and Existing Internal Road as per approval MIN/2022/245 | 09 |  | Streetscape Treatment
In accordance with Gold Coast City Plan 9.4.6 and SC.6.12. Street tree species to include Waterhousea floribunda, Lophostemon confertus, and Flindersia australis as to tie into previous stages. |
| 02 |  | Proposed Road
Refer to civil documents for further detail | 10 |  | Open Space / Reserve
Refer to open space management plan authored by GDP for further information |
| 03 |  | Existing Common Property Landscape Treatment
Landscape treatment newly constructed as per approval OPW2021/1370 | 11 |  | Bio Retention Basin
To be planted in accordance with WSUD principals. Lower batter and basin floor to be planted at 80% of construction completion |
| 04 |  | Proposed Industrial Allotments | 12 |  | Revegetated Buffer Strip
To create linkage between the north and south of the site. 1:2 batters are to be over excavated, micro benched and have 400mm topsoil over batter. Refer to planting palette for further detail. |
| 05 |  | Common Property Planting
To have landscape treatment of tree, shrub, and groundcover species planted. refer to planting palette within this package for further detail. | |  | Fencing
1.8m high chain wire fence as per |
| 06 |  | Common Property Health Precinct
Basketball court and outdoor gym equipment. | |  | Fencing
1.8m high black powder coated palisade fencing |
| 07 |  | Common Property Shelter & Facilities
Shelter, picnic tables, bbq, water bubblers and open areas for office functions. | |  | Fencing
1.2m post rail fence (safety) |
| 08 |  | Common Property Car Park
Carparking area with shade trees. | 1 |  | Section Marker
refer to page 05 and 06 |



STREETSCAPE & INDUSTRY LOTS



SECTION 1: COMMON PROPERTY, STREETSCAPE, PROPOSED INDUSTRY LOT



SECTION 2: PROPOSED INDUSTRY LOT, STREETSCAPE AND BIO RETENTION BASIN



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e: mail@gassman.com.au

VANTAGE INDUSTRIAL ESTATE

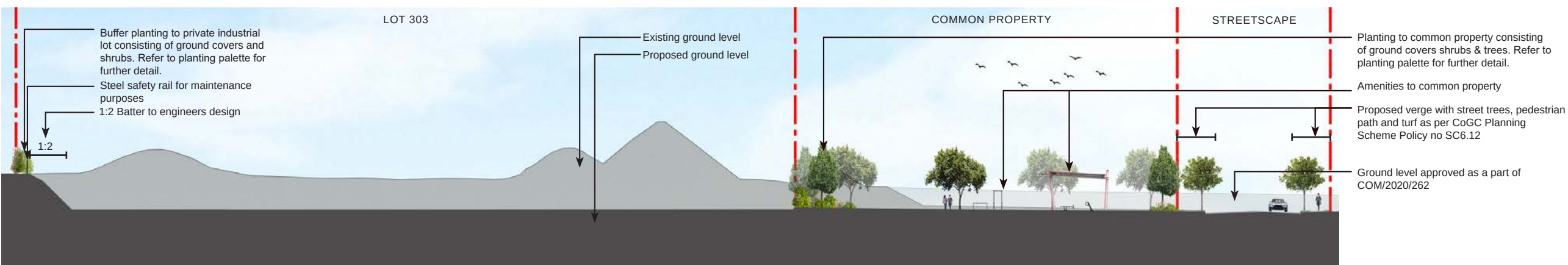
STREETSCAPE & INDUSTRY LOTS
SECTION ELEVATION DRAWINGS

Date: 23.03.23
Project no: 5941
Rev: A Dwn: JLS

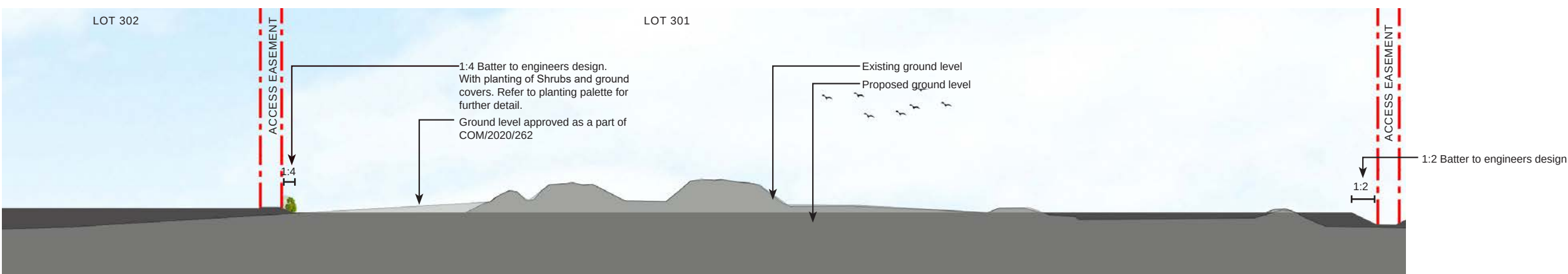
STREETSCAPE & INDUSTRY LOTS



SECTION 3 : PROPOSED INDUSTRY LOT, BIO RETENTION BASIN AND REHABILITATED BUFFER STRIP



SECTION 4 : PROPOSED INDUSTRY LOT, COMMON PROPERTY, STREETSCAPE



SECTION 5 : PROPOSED INDUSTRY LOTS AND ACCESS EASEMENT

WAY FINDING

The scale and nature of landscaping materials and selected plant species will be appropriately selected to compliment the size of proposed buildings and structures nominated for the site, whilst being sensitive to available space.

Way finding statement signage and totem poles will be implemented within the common property of Stage 3. The signage wall will be constructed from rendered block, crazy pave, whilst the totems will be made from powder coated steel. Both items will match previously approved signage and totems within Stage 1 and Stage 2 of the development (OPW/2020/960 and OPW/2021/1370) .

Way finding will be further promoted by using nominated hardscape, furnishing and planting and palettes, that will be reflected through the site's entirety. The use of "Fraser's Red" the Fraser Industrial Properties logo colour along with the use of stone and similar landscape planting palette, within the estate will create an adhesive bond between all areas.



OPEN SPACE & REHABILITATION

Management and protection of lot 904 within Stage 3 of the Vantage Yatala development is to be dedicated to Council as an Open Space Lot for the purposes of conservation.

Lot 904 approximately 60m wide, lies adjacent to Sandy Creek, and consists of riparian corridor of remnant vegetation.

An Ecological Assessment Report (EAR) prepared by GDP recorded details of ecological features and values within the subject area, including vegetation communities, the likelihood or presence of significant fauna and flora. The EAR identified two vegetation communities described as low open forest (consisting of *Melaleuca nodosa*, *E. crebra*, *C. citriodora*) and tall open forest (consisting of *Eucalyptus grandis*, *C. intermedia*, *E. major*).

Prior to council dedication Lot 904 will be rehabilitated in accordance with the Rehabilitation Management Plan (RPM) provided by GDP. The area is intended to act a functioning ecological community of core habitat for a range of native flora and fauna. Rehabilitation in the form of natural and assisted regeneration and small areas of reconstruction planting, ensuring the native vegetation communities have the capacity to thrive, maintain high levels of ecological function and ensure natural biodiversity values are protected.

Tree species: *Flindersia australis*, *Euroschinus falcatus*, *Diospyros fasciculosa*, *Hymenospermum flavum*, *Glochidion ferdinandi* and *Cupaniopsis anarcardioides* (at approximately 40 trees every 100m²).

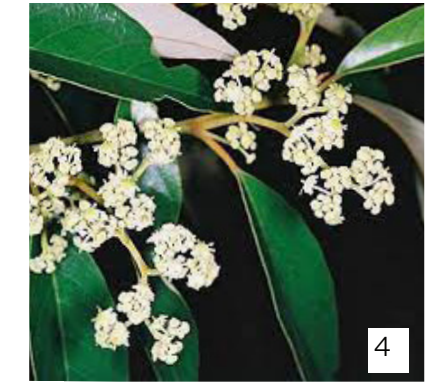
Shrub species; *Acmena smithii*, *Melaleuca bracteata*, *Melaleuca viminalis*, *Breynia oblongifolia*, *Alphitonia excelsa*, *Leptospermum polygalifolium*, *Macaranga tanarius*, *Sannantha similis*, *Hibiscus heterophyllus* (at approximately 30 shrubs every 100m²).

Groundcovers and tufting grasses: *Lomandra longifolia*, *Dianella caerulea*, *Carex apressa*, *Gahnia aspera*, *Juncus usitatus*, *Lepidosperma laterale* and *Lomandra hystrix* (at approximately 30 groundcovers per 100m²).



Above: Proposed Rehabilitation

- IMAGES RIGHT:
1. *Corymbia citriodora*, spotted gum
 2. *Lomandra longifolia*, mat rush
 3. *Lomandra hystrix*, creek matrush
 4. *Alphitonia excelsa*, red ash
 5. *Calistemon viminalis*, red bottlebrush
 6. *Gahnia aspera*, rough saw sedge
 7. *Themeda triandra*, kangaroo grass
 8. *Melaleuca linariifolia*, snow in summer
 9. Site photograph depicting existing nest box
 10. Site photograph depicting existing condition of Lot 904
 11. Typical treatment of a Rehabilitation area



COMMON PROPERTY

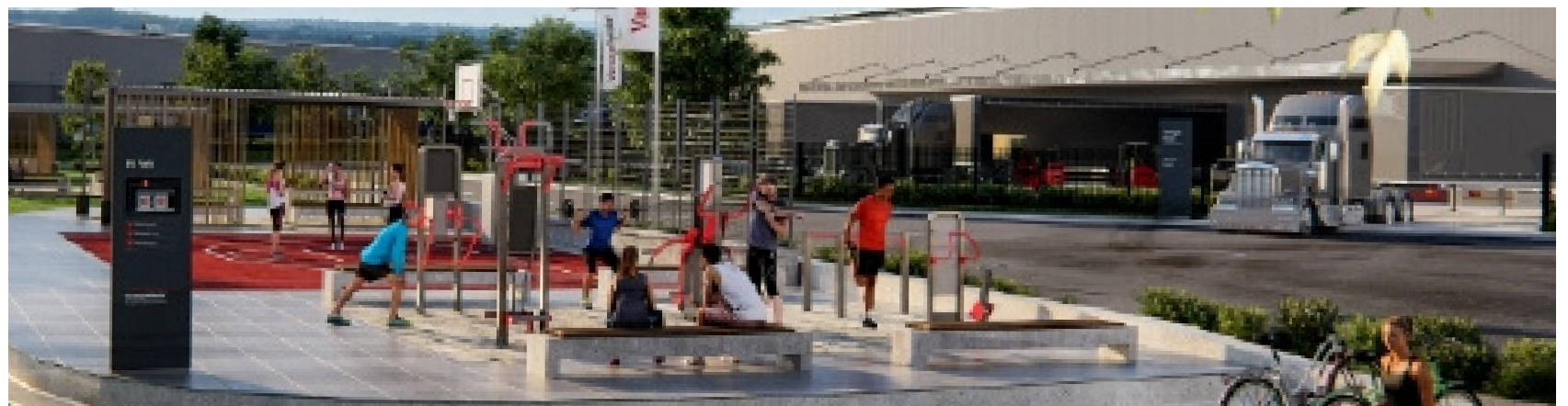
The proposed development includes a park and amenities lot to the north of Lot 303. The park lot and all park embellishments are to remain under the ownership and management of the future Body Corporate of the industrial estate, as per the approved Community Management Statement.

The recreational health precinct, the first of its kind implemented within an industrial estate in Queensland, will include embellishments and facilities to service the immediate industrial work force. Provision of such facilities are lacking in many industrial estates across the Yatala Enterprise Area (YEA), which do not allow workers to leave their workplace and disconnect during a break in an outdoor, well landscaped setting.

Furnishing and planting and palettes used within the common property park will continue a common theme of the use of "Fraser's Red" from the Fraser Industrial Properties logo colour, along with the use of stone and similar landscape planting palette, within the estate will create an adhesive bond between all areas.



Above: Common Property (park)



WATER SENSITIVE URBAN DESIGN

Water Sensitive Urban Design (WSUD) principles will be applied throughout the site to manage water in a sustainable way, and provide opportunities for the development industry to achieve a healthy outcome for the surrounding environment. The outcome will benefit water bodies located within the local catchment.

The principals followed, use the site's natural features and topography, integrate storm water, water supply and sewage management.

The Vantage industrial development Stage 3 proposes two bio retention basins. The bio retention basins will be planted with native water sensitive species ,that have qualities to draw out toxins from storm water, and help catch litter before it reaches storm water drains.

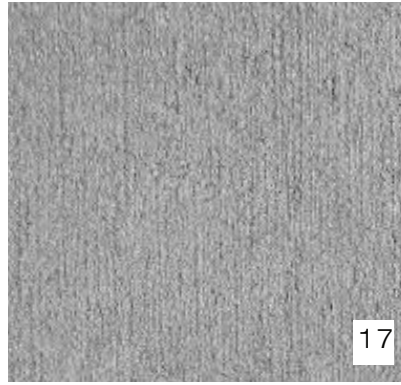
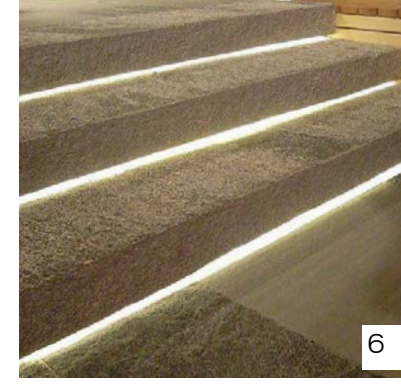
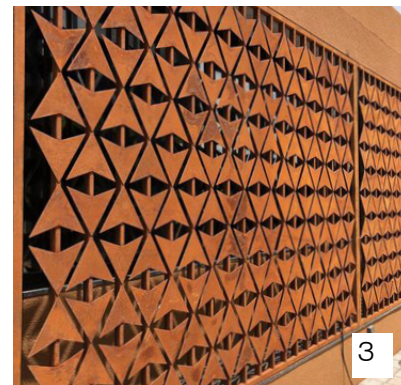
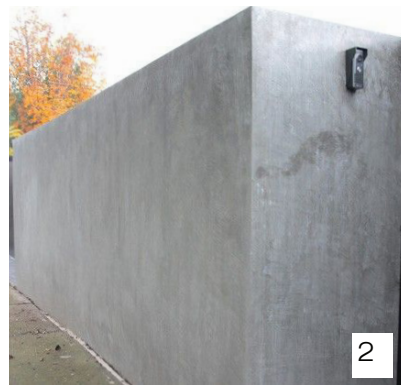
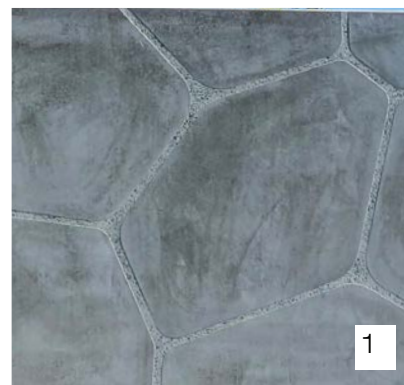
A number of native aquatic grass species and native shrub and tree species will be planted within the proposed bio retention basins and swales ,enhancing the area and attracting fauna and bird life.

Referral to GDP's water mapping and civil design, is suggested for further information with relation to catchment, bio retention treatments.



1. Poa labillarderie, tussock grass
2. Callistemon sieberi, river bottlebrush
3. Carex appressa, tall sedge
4. Cyperus reflectus, tall flat sedge
5. Dianella caerulea, blue flax lily
6. Lomandra hystrix, spiny mat rush
7. Melaleuca quinquenervia, broadleaved paperbark
8. Myoporum parvifolium, creeping boobialla
9. Example of a storm water drainage point
10. Example of a grassed swale to dry creek swale
11. Example of a bio retention basin

HARDSCAPE AND FURNISHINGS



1. Plain grey concrete with stencil
2. Rendered block work
3. Coreten sheet with laser cut stencil
4. Gabion wall
5. Bench seating
6. LED strip lighting
7. A Park Shelter
8. Single BBQ meeting GCC regulations
9. Drinking fountain with dog bowl
10. Gossi Park picnic table range
11. Exposed aggregate concrete band
12. Gym equipment
13. Basketball half court
14. Low Gabion wall as seating
15. Signage
16. Timber bollards as per GCCC guidelines
17. Broom finished plain grey concrete
18. Black powder coated palisade fence
19. Chain wire mesh fencing
20. Steel-rail fencing
21. Forest mulch
22. Sugarcane mulch
23. River rock gravel
24. Timber edge
25. Concrete edge



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VANTAGE INDUSTRIAL ESTATE

MATERIALS PALETTE

Date: 23.03.23
Project no: 5941
Rev: A Dwn: JLS

PLANTING PALETTE



1



2



3



4



5



6



7



8



9



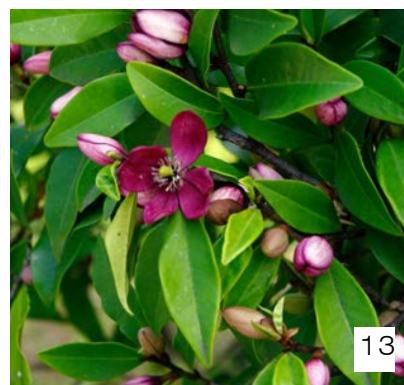
10



11



12



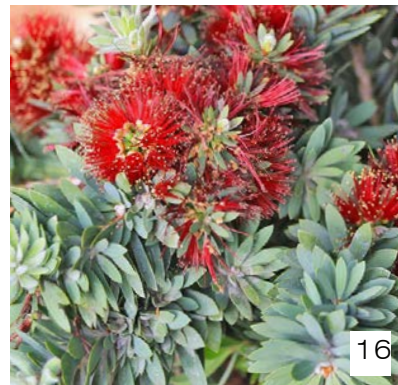
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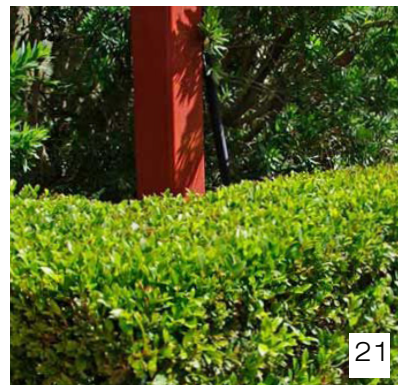
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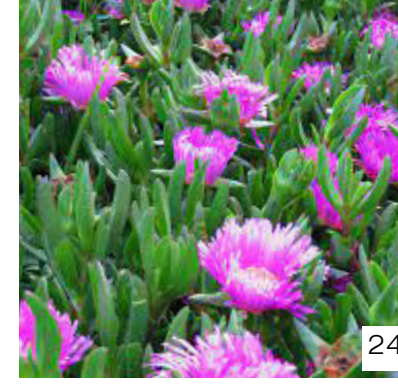
21



22



23



24

STREET TREES

1. Flindersia australis, crows ash
2. Harpalea pendula
3. Eucalyptus tereticornis, forest red gum
4. Lophostemon confertus, brush box

FEATURE SPECIES

5. Brachychiton acerifolius, flame tree
6. Grevillea 'moonlight'
7. Photinia 'red robyn'

SCREENING SHRUBS

8. Syzygium resilience
9. Elaeocarpus eumundii, eumundii
10. Elaeocarpus reticulatus, blueberry ash

SCREENING SHRUBS & FEATURE SHRUBS

11. Syzygium austalis, lily pily
12. Photinia robusta, photinia
13. Michelia figo, port wint magnolia
14. Grevillea 'firecracker'
15. Westringia fruticosa, coastal rosemary
16. Callistemon little john, little john
17. Melaleuca 'claret tops'
18. Westringia zena

GROUNDCOVERS & TUFTING GRASSES

19. Myoporum parvifolium, boobialla
20. Philodendron 'rojo congo'
21. Syzygium 'tiny trev'
22. Lomandra 'lime tough'
23. Trachelospermum jasminoides, star jasmine
24. Carpobrotus glaucescens, pig face



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VANTAGE INDUSTRIAL ESTATE

PLANTING PALETTE (general)

Date: 23.03.23
Project no: 5941
Rev: A Dwn: JLS

13



A low-angle photograph of a modern building's exterior. The building features large glass windows reflecting the sky and clouds, and a prominent red vertical panel on the right side. A small tree with green and yellowing leaves is in the foreground. The text 'APPENDIX I' is overlaid in the top right corner.

APPENDIX I

TRAFFIC IMPACT ASSESSMENT



TRANSPORT IMPACT ASSESSMENT

PROPOSED WELLBEING PRECINCT AND INDUSTRIAL
LOTS (VANTAGE STAGE 3)

LOT 301, 302, 303 AND 401, VANTAGE ESTATE, YATALA



Prepared for

FRASERS PROPERTY INDUSTRIAL

6 APRIL 2023



DOCUMENT REGISTER

RTE Reference 22301

Prepared by Luke Rytenskild, Dare Janzekovic

Document History

Version	Version date	Details	Reviewed and Authorised	
			Name / Position	Signature
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1.0 INTRODUCTION

Rytenskild Traffic Engineering (RTE) has been engaged by Frasers Property Industrial to prepare a Traffic Impact Assessment of Stage 3 of the proposed wellbeing precinct and industrial precinct (Vantage Estate) at Yatala.

This report forms part of a Development Application to be lodged with the Gold Coast City Council. The following issues have been assessed during the study:

- Access by service vehicles;
- Design of the Christensen Road / Highlands Street intersection;
- Compliance of internal road network design.

2.0 SUBJECT SITE

As shown in Figure 2.1, the subject site is for Stage 3 of the approved Vantage Industrial Estate.

The site is located within the low and medium impact industry zone.

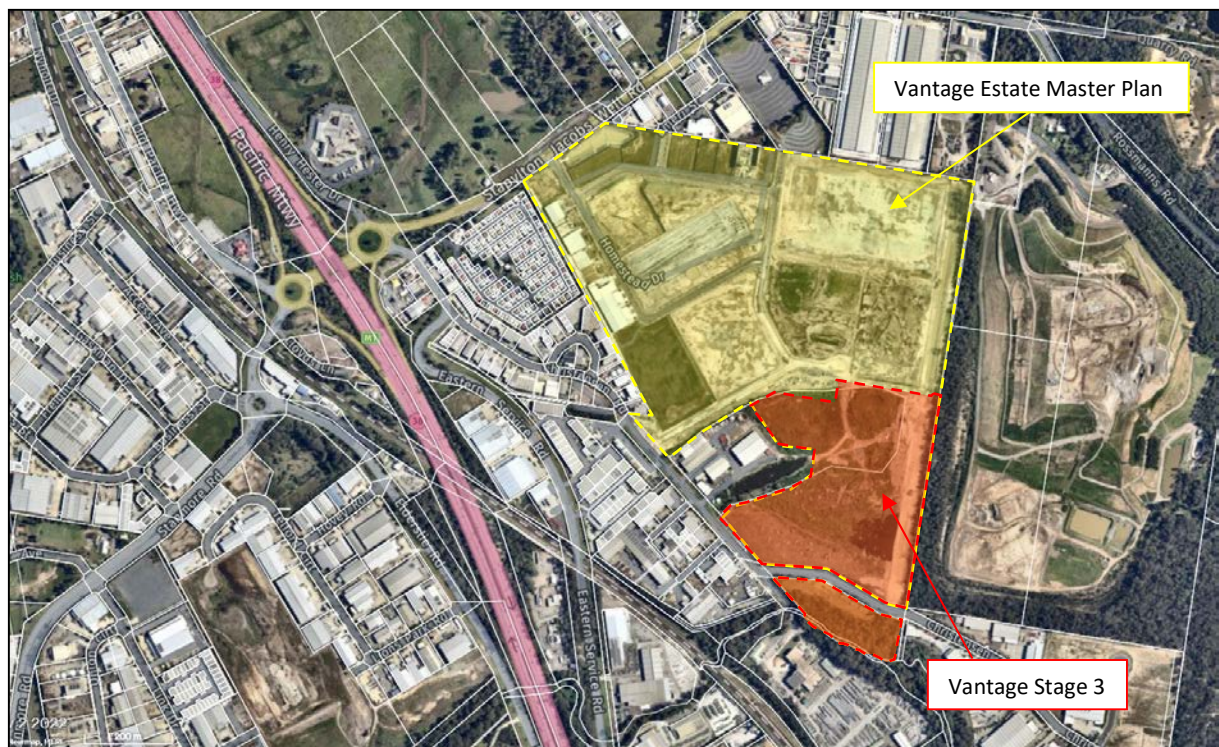


FIGURE 2.1 – LOCATION OF SUBJECT SITE

3.0 PROPOSED PLAN OF DEVELOPMENT

The proposed plan of development is for Stage 3 of the Vantage Industrial Estate. Stage 3 comprises of five lots (Lots 301, 302, 303 and 401), and a wellbeing precinct to be developed on common property.

It is proposed that each of the proposed lots along the northern side of Christensen Road will gain access via a new road which will intersect with Highlands Street.

The proposed plan of reconfiguration is shown in Figure 3.1.

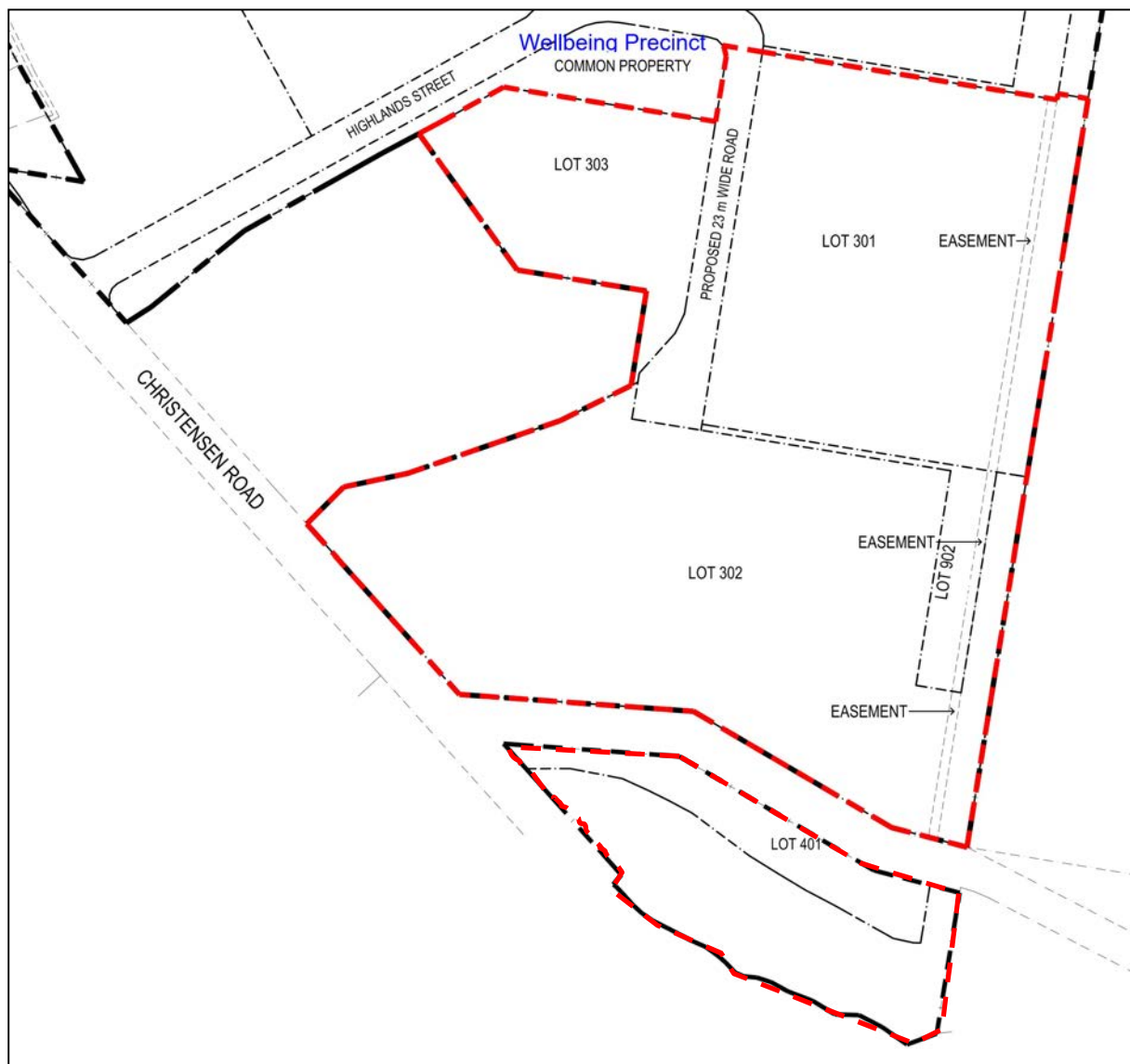
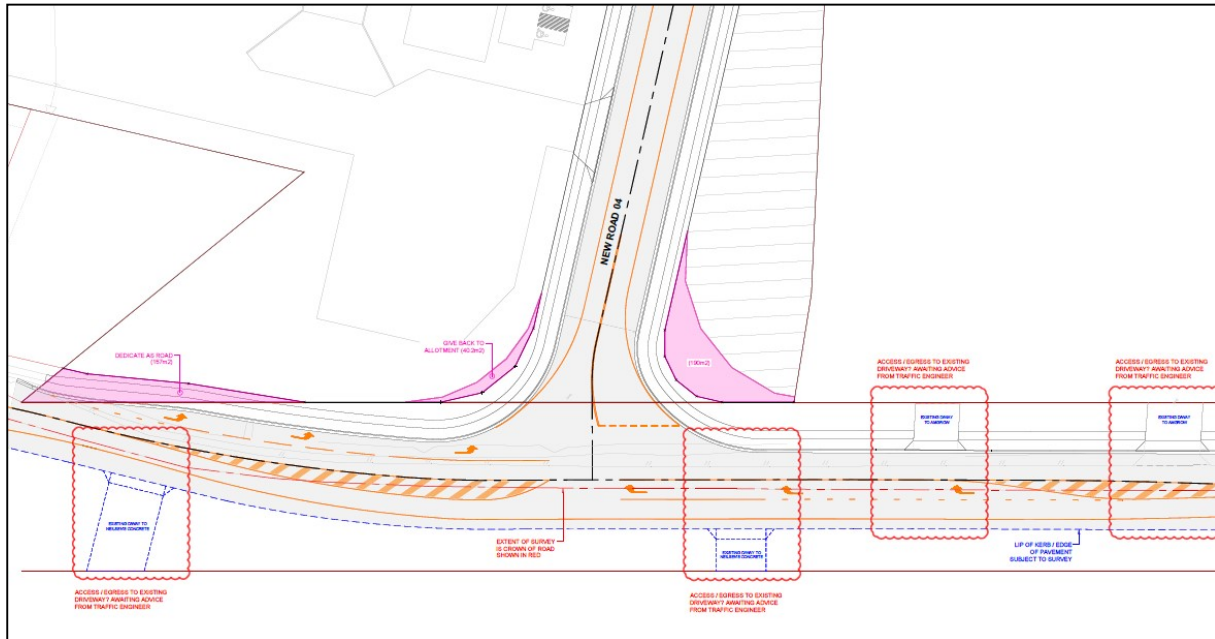


FIGURE 3.1 – PROPOSED STAGE 3 PLAN

4.0 CHRISTENSEN ROAD / HIGHLANDS STREET INTERSECTION

It is planned that the Christensen Road / Highlands Street intersection be constructed as a priority controlled junction with dedicated Type AUL and CHR left and right turn treatments. The planned intersection layout is provided in Figure 4.1.



**FIGURE 4.1 – CURRENTLY PLANNED LAYOUT FOR THE
CHRISTENSEN ROAD / HIGHLANDS STREET INTERSECTION**

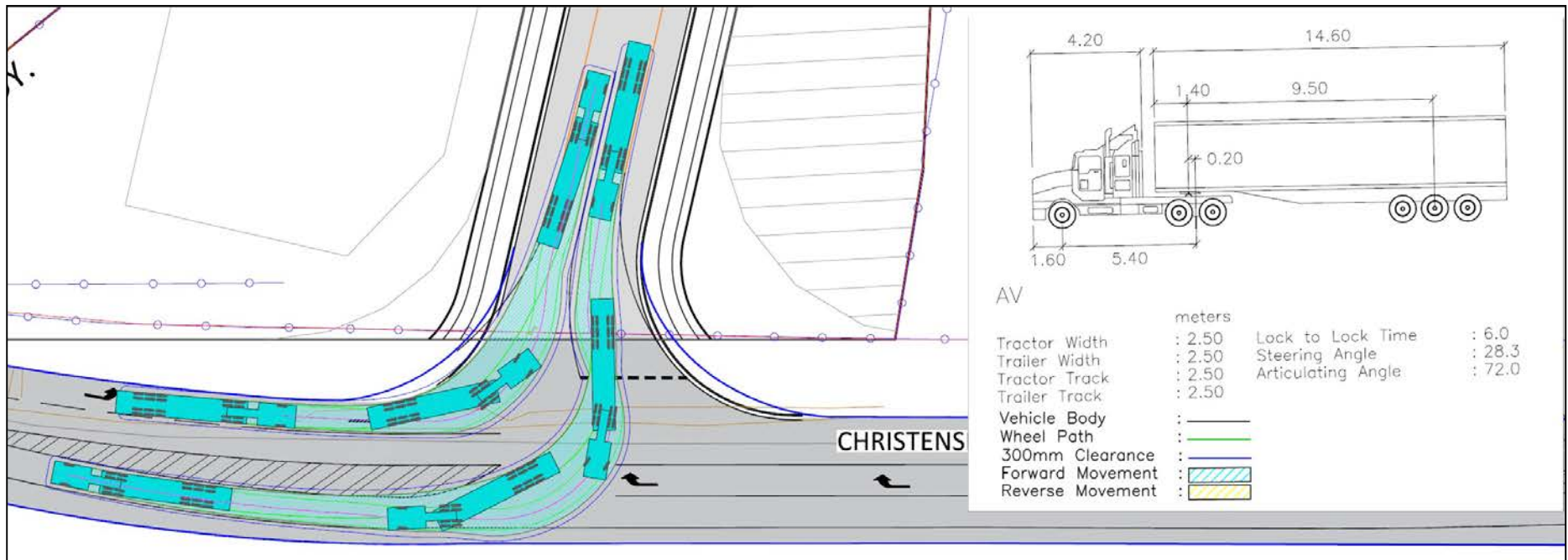


FIGURE 4.3 – SWEPT PATH OF ARTICULATED VEHICLE (AV) AT THE CHRISTENSEN ROAD / HIGHLANDS STREET INTERSECTION

5.0 ROAD NETWORK DESIGN

The proposed road profiles have been designed in accordance with the *Gold Coast City Council Infrastructure Planning Policy*. The new proposed 23 metre road extending from Highlands Street has been designed as an Industrial Collector Road. The proposed road profile and classification is shown in Figure 6.1, with a concept plan of the new road section connecting to Stage 3 shown in Figures 5.2 and 5.3.

A swept path analysis has been prepared for the proposed road layout in accordance with AS2890.2:2018. As shown in Figures 5.4 and 5.5, the design allows for a truck up to the size of an Articulated Vehicle (AV).

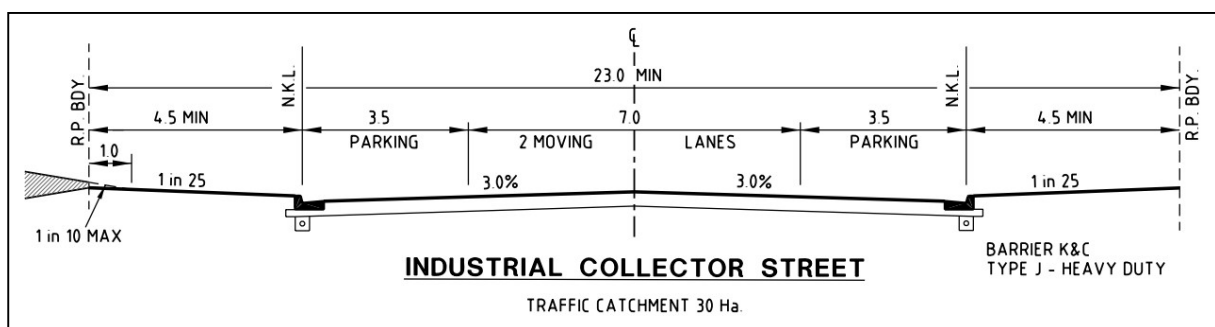


FIGURE 5.1 – PROPOSED NEW ROAD CROSS SECTION

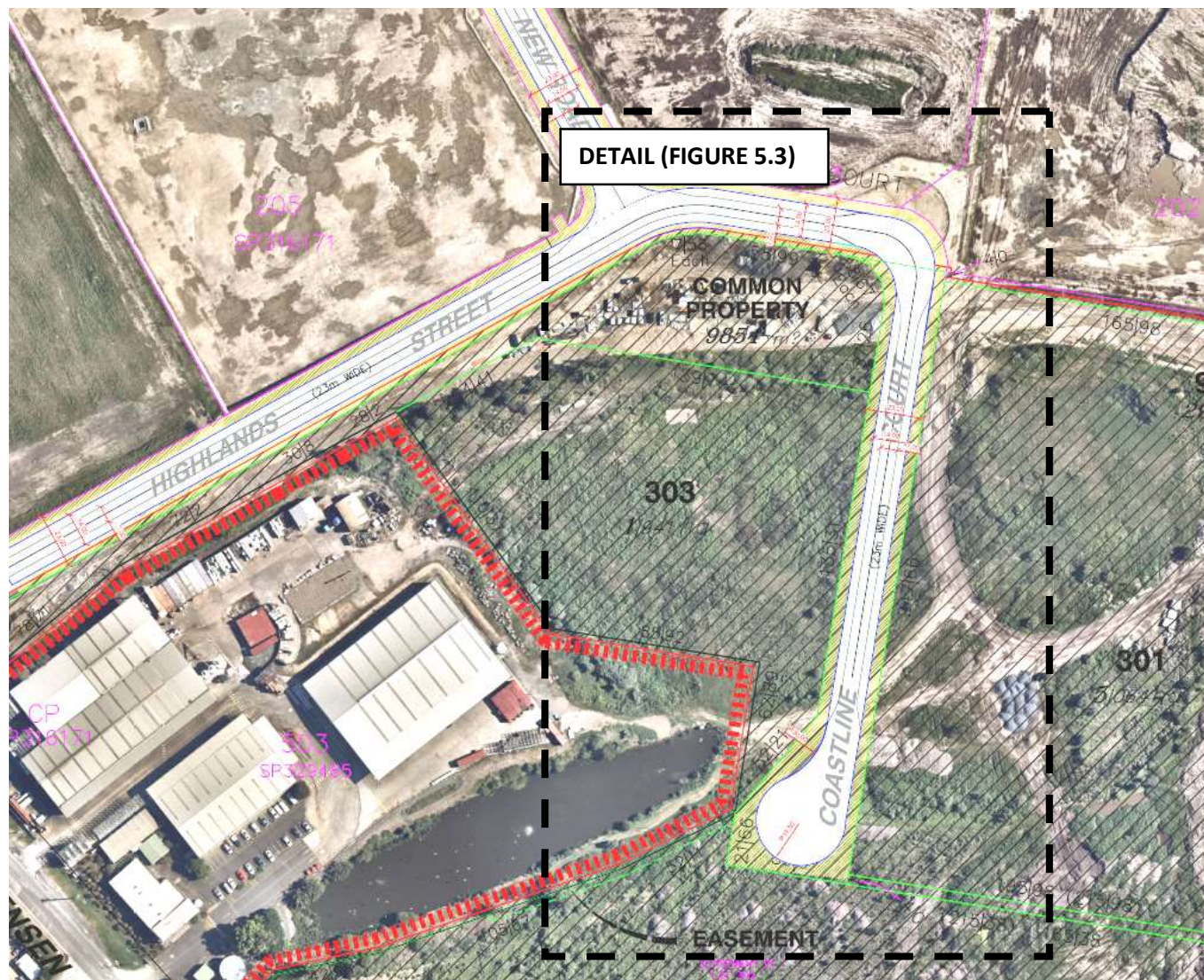


FIGURE 5.2 – INTERNAL ROAD LAYOUT (OVERALL PLAN)

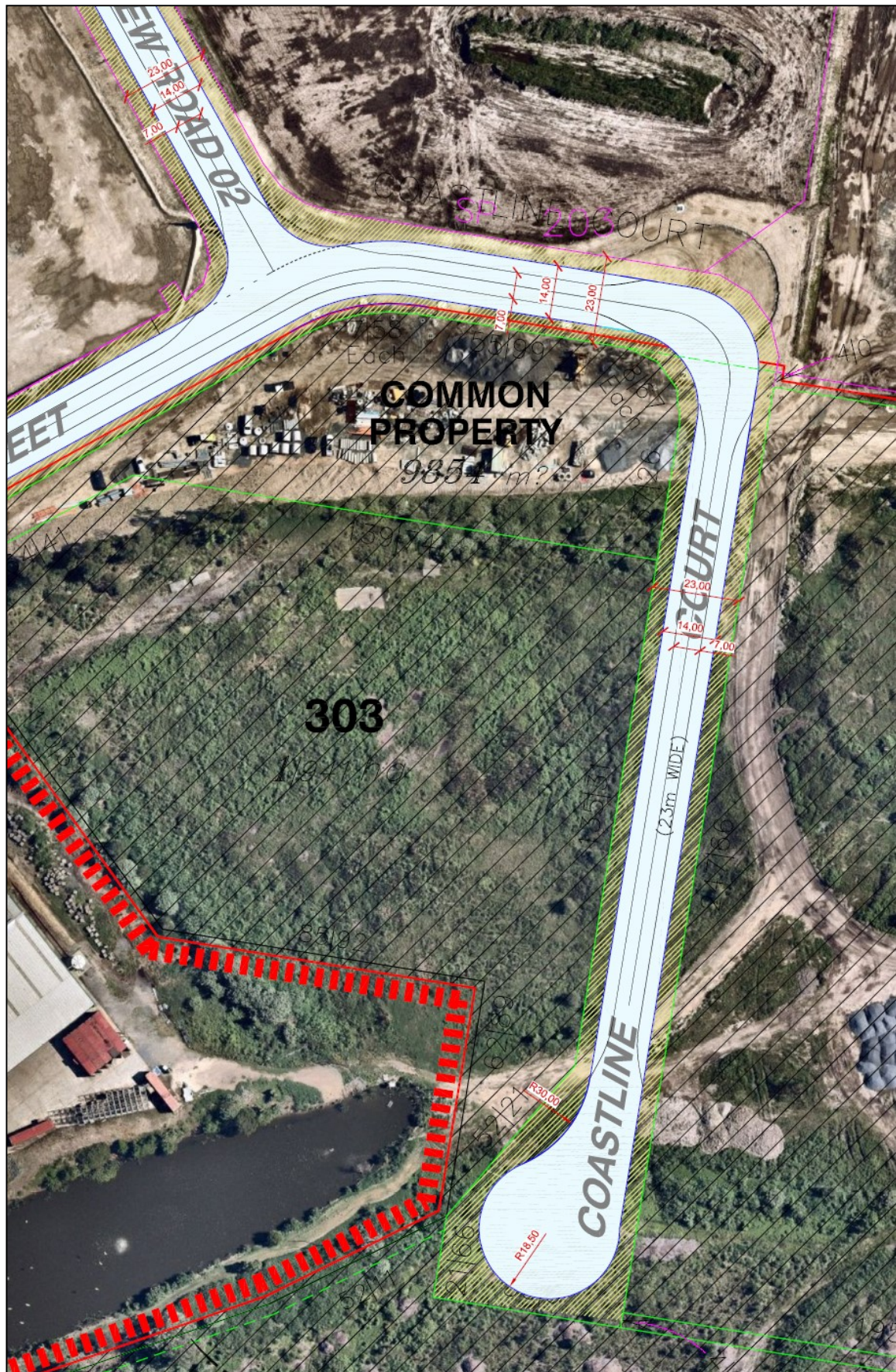
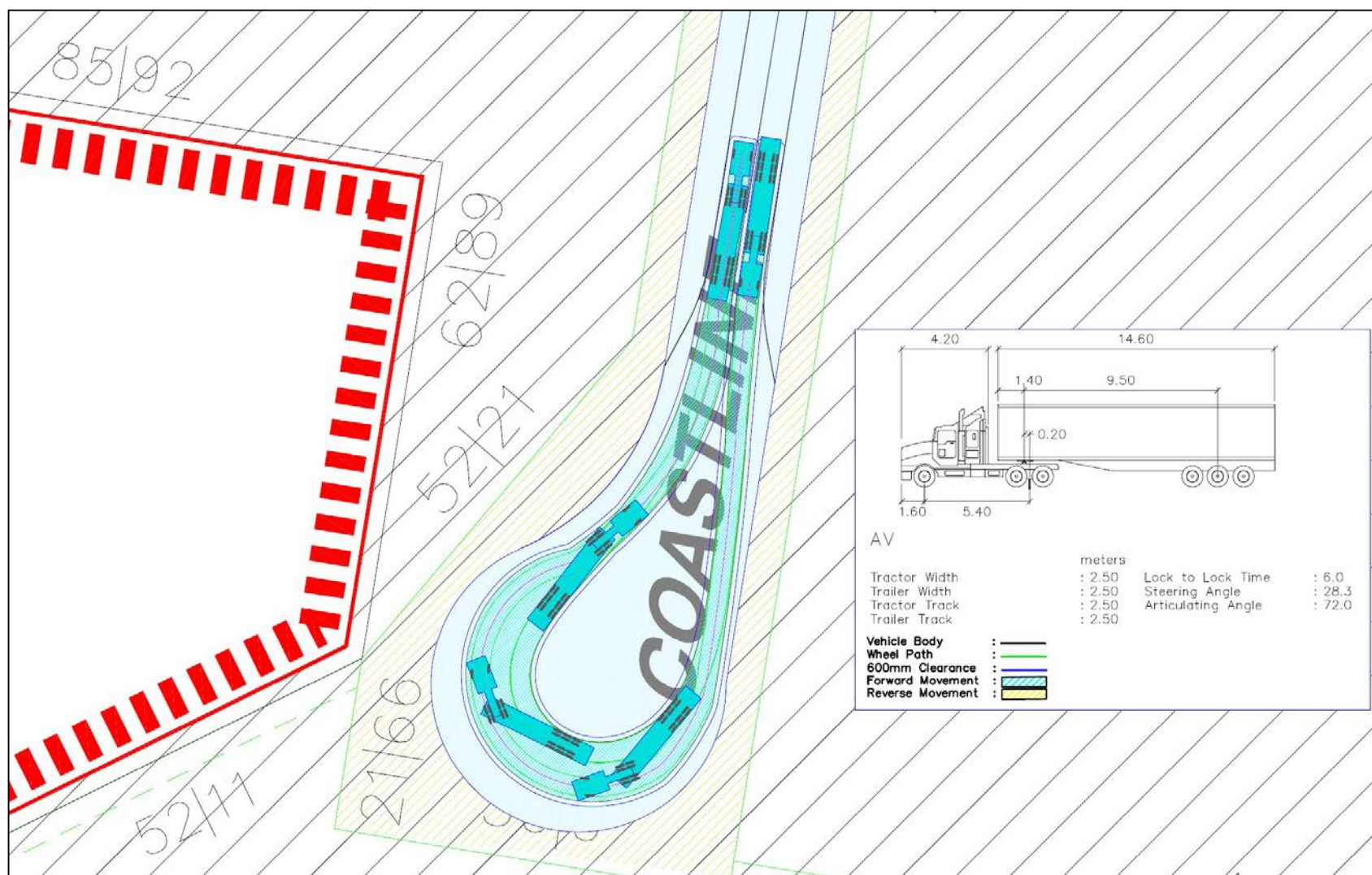


FIGURE 5.3 – INTERNAL ROAD LAYOUT (DETAIL)



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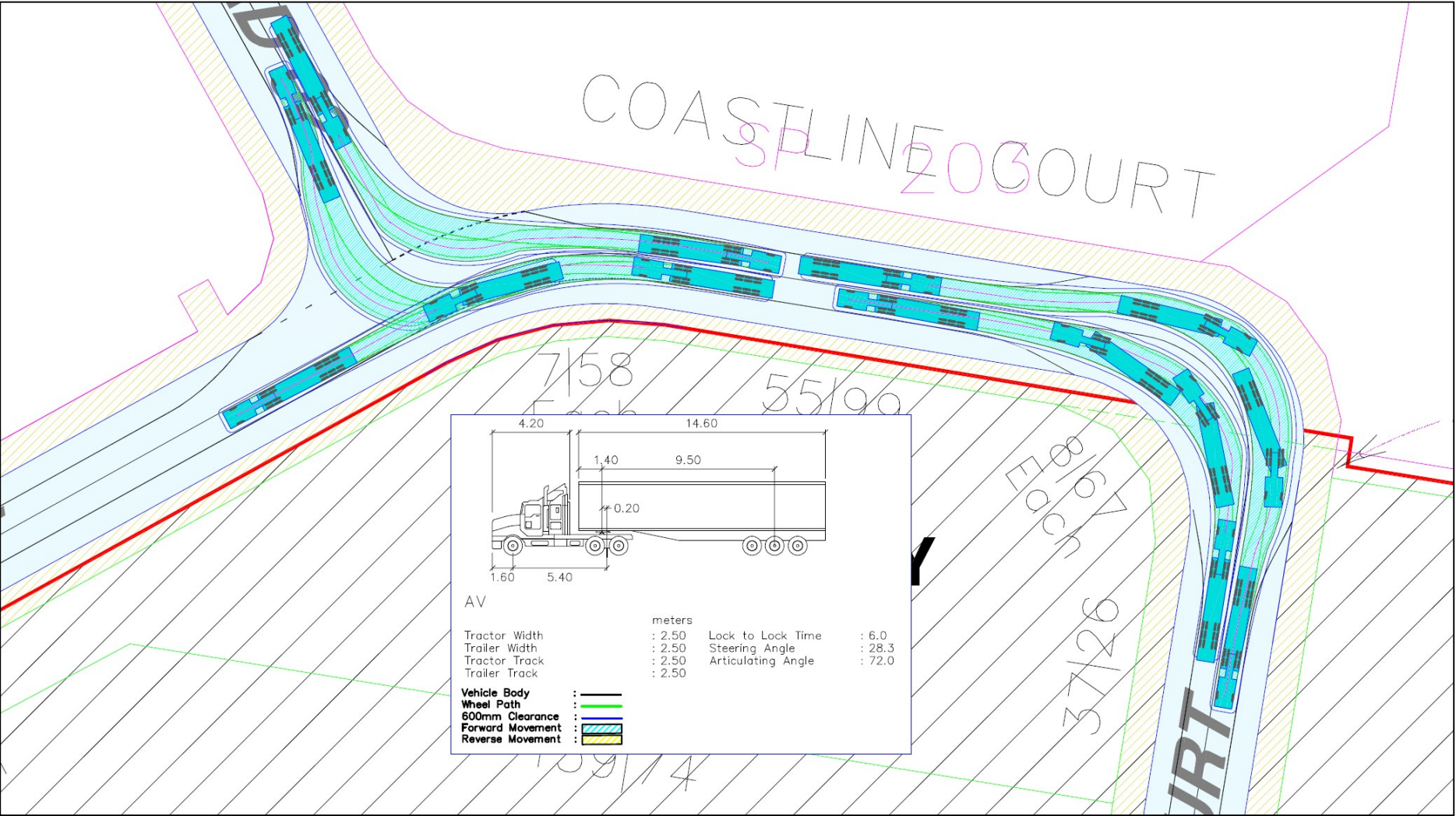


FIGURE 5.5 – SWEEP PATH OF A 20m ARTICULATED VEHICLE
(INTERSECTION MANOEUVRING)

6.0 ROAD NETWORK IMPACT

6.1 Background Traffic

As shown as Attachment A, Christensen Road has been surveyed to carry in the order of 3,000 vehicles per day near the proposed intersection location in 2018. Given that Christensen Road does not provide through connection to the wider network, it is considered that any increase in background demand is directly associated with the planned future connection across Sandy Creek.

6.2 Development Trip Generation

In accordance with the original traffic impact assessment, the following trip generation rates have been adopted for the analysis.

0.42 trips / 100m² GFA / peak hour, and 4 trips / 100m² GFA / day.

The above rate is considered to be reasonable for the proposal and is consistent with the rate adopted for Stages 1 and 2. Application of the above rate to the area associated with Stage 3 results in a peak hour demand of 331 trips during the morning and afternoon peak hour periods as shown in Table 6.1.

Table 6.1 - Estimated Peak Hour Development Traffic Generation (STAGE3 ONLY)

Stage	Lot Area (m2)	Est GFA (m2)	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
STAGE 3	175,245	78,860	215	116	331	67	264	331

- Assumes 45% site cover
- Peak Hour Distribution: AM Peak 65 / 35, PM Peak 20/80
- Potential floor areas have been estimated through application of a 45% site coverage.

6.3 Impact on Christensen Road / Highlands Street Intersection

The impacts of the overall estate upon the wider road network have previously been assessed as part of the preliminary approval. Therefore, only impacts on the Christensen Road / Highlands Street intersection have been assessed as part of the analysis. It is noted that the subject change results in a reduction in access points along the northern side of Christensen Road to a single point, with the access on the southern side of Christensen Road retained.

For the purposes of the analysis a sensitivity assessment has been prepared for the Christensen Road / Highlands Street intersection based on the background traffic generated by Stages 1 and 2 (Appendix B), and resultant estimate for Stage 3, including the Common Property lot and Lots 301, 302 and 303, as follows:

Stage	Lot Area (m2)	Est GFA (m2)	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
Common Property + Lots 301, 302 & 303.	156,245	70,310	191	104	295	59	236	295

- Assumes 45% site cover
- Peak Hour Distribution: AM Peak 65 / 35, PM Peak 20/80
- Potential floor areas have been estimated through application of a 45% site coverage.

As shown as Attachment C, the Christensen Road / Highlands Street intersection under priority control will operate within acceptable criteria with Stage 3 of the site in operation. It is therefore determined that the proposed change in the access arrangements along Christensen Road will not have adverse impact on the safety and efficiency of the frontage road and the intersection.

It is noted that the model assumes that Christensen Road is a 'NO THROUGH ROAD' and therefore does not generate a significant background traffic demand. Further investigation is required at future stages as the connection over Sandy Creek is established.

7.0 SUMMARY OF CONCLUSIONS & RECOMMENDATIONS

- The proposed plan of subdivision for Stage 3 of the Vantage Industrial Estate in Yatala. The new stage comprises of 4 industrial dwelling lots (301, 302, 303 & 401), and an additional wellbeing precinct.
- It is proposed that Lots 301, 302 and 303 will gain access via a new 23 metre road off Highlands Street. Lots 302 and 402 will gain access via Christensen Road.
- It is proposed planned that the Christensen Road / Highlands Street intersection be constructed as a priority controlled junction with dedicated Type AUL and CHR left and right turn treatments.
- Given the current status of road network planning and the sensitivity of the network to new connections and upgrades (due to congestion), traffic signals may not be warranted for some time.
- The proposed road profiles have been designed in accordance with the *Gold Coast City Council Infrastructure Planning Policy*.

APPENDIX

APPENDIX A –TRAFFIC SURVEY ON CHRISTENSEN ROAD

APPENDIX B – STAGE 1 & 2 DEVELOPMENT TRAFFIC ESTIMATES (APPROVED)

APPENDIX C – DETAILED SIDRA OUTPUT (CHRISTENSEN ROAD / HIGHLANDS STREET INTERSECTION

APPENDIX D - RESPONSE TO TRANSPORT CODE

APPENDIX E - STATE

APPENDIX A - TRAFFIC SURVEY ON CHRISTENSEN ROAD (2018)

Weekly Vehicle Counts

WeeklyVehicle-41

Site: Christensen Rd Yatala.0.1NS
Description: Christensen Rd, Yatala just south of Maiella St
Filter time: 20:21 Sunday, 11 March 2018 => 21:52 Thursday, 15 March 2018
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages	
	12 Mar	13 Mar	14 Mar	15 Mar	16 Mar	17 Mar	18 Mar	1 - 5	1 - 7
Hour									
0000-0100	3	4	7	12	*	*	*	6.5	6.5
0100-0200	6	10	10	18	*	*	*	11.0	11.0
0200-0300	6	7	6	10	*	*	*	7.3	7.3
0300-0400	17	22	20	22	*	*	*	20.3	20.3
0400-0500	77	74	85	82	*	*	*	79.5	79.5
0500-0600	243	242	249	230	*	*	*	241.0	241.0
0600-0700	196	226	208	180	*	*	*	202.5	202.5
0700-0800	214	236	241	217	*	*	*	227.0	227.0
0800-0900	225	234	200	235	*	*	*	223.5	223.5
0900-1000	198	235	218	219	*	*	*	217.5	217.5
1000-1100	220	230	216	188	*	*	*	213.5	213.5
1100-1200	209	216	192	216	*	*	*	208.3	208.3
1200-1300	217	198	227	232	*	*	*	218.5	218.5
1300-1400	207	237	241	234	*	*	*	229.8	229.8
1400-1500	258	244	284	267	*	*	*	263.3	263.3
1500-1600	244	239	245	243	*	*	*	242.8	242.8
1600-1700	222	222	233	234	*	*	*	227.8	227.8
1700-1800	107	94	103	108	*	*	*	103.0	103.0
1800-1900	32	38	46	35	*	*	*	37.8	37.8
1900-2000	15	14	19	0	*	*	*	12.0	12.0
2000-2100	7	5	14	0	*	*	*	6.5	6.5
2100-2200	9	11	10	0	*	*	*	7.5	7.5
2200-2300	19	16	23	*	*	*	*	19.3	19.3
2300-2400	0	4	3	*	*	*	*	2.3	2.3
Totals									
0700-1900	2353	2423	2446	2428	*	*	*	2412.5	2412.5
0600-2200	2580	2679	2697	2608	*	*	*	2641.0	2641.0
0600-0000	2599	2699	2723	*	*	*	*	2662.7	2662.7
0000-0000	2951	3058	3100	*	*	*	*	3028.2	3028.2

APPENDIX B - STAGE 1 & 2 DEVELOPMENT TRAFFIC ESTIMATES (APPROVED)

(RTE TRAFFIC REPORT DATED 10 MARCH 2022, REF20337)

- Development Traffic Estimates

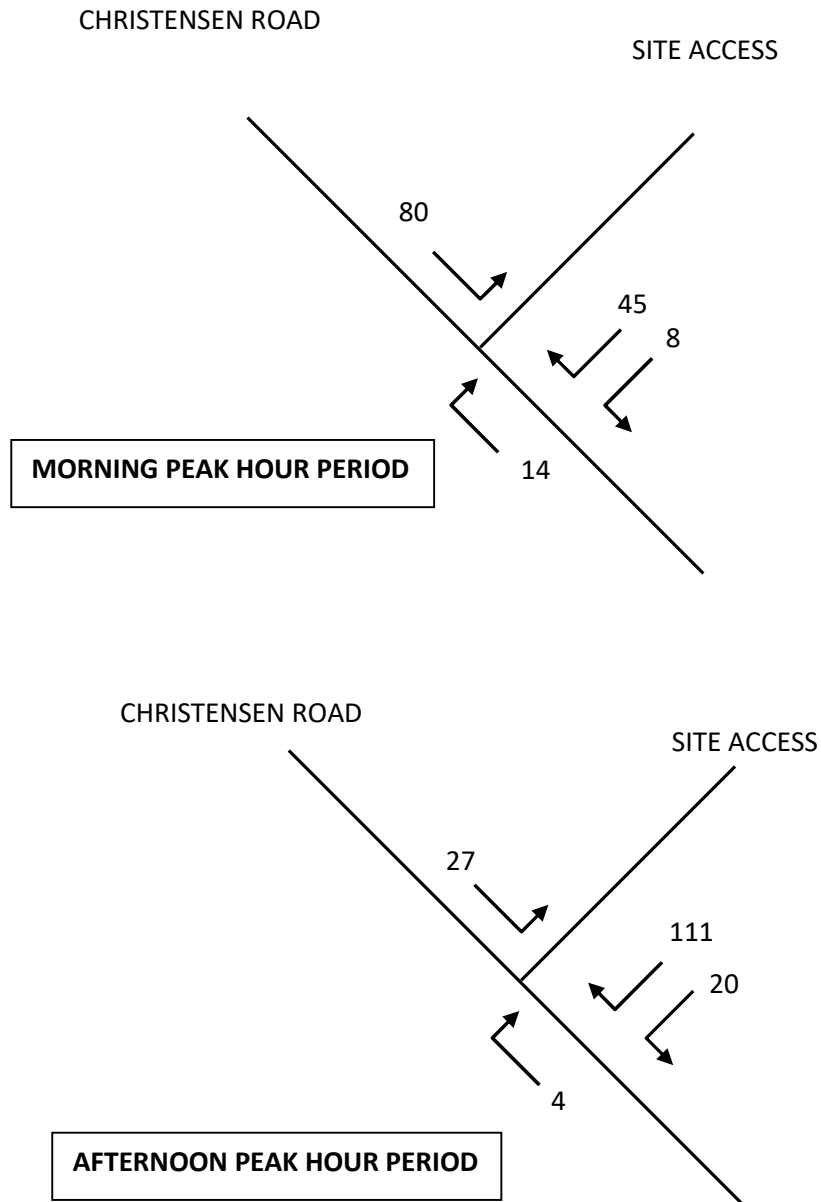
Table 4.1 - Estimated Peak Hour Development Traffic Generation (STAGES 1 & 2 ONLY)

Stage	Lot Area (m ²)	Est GFA (m ²)	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
STAGE 1	119833	53925	147	79	226	46	180	226
STAGE 2	276677	124505	340	183	523	105	427	523
TOTAL TRAFFIC			487	262	749	151	607	749

Assumes 45% site cover

Peak Hour Distribution: AM Peak 65 / 35, PM Peak 20/80

- Development Traffic Distribution



**FIGURE 4.2 – STAGES 1 & 2 DEVELOPMENT TRAFFIC ESTIMATES
AT THE CHRISTENSEN ROAD INTERSECTION**

APPENDIX C – DETAILED SIDRA OUTPUT (CHRISTENSEN ROAD / HIGHLANDS STREET INTERSECTION)

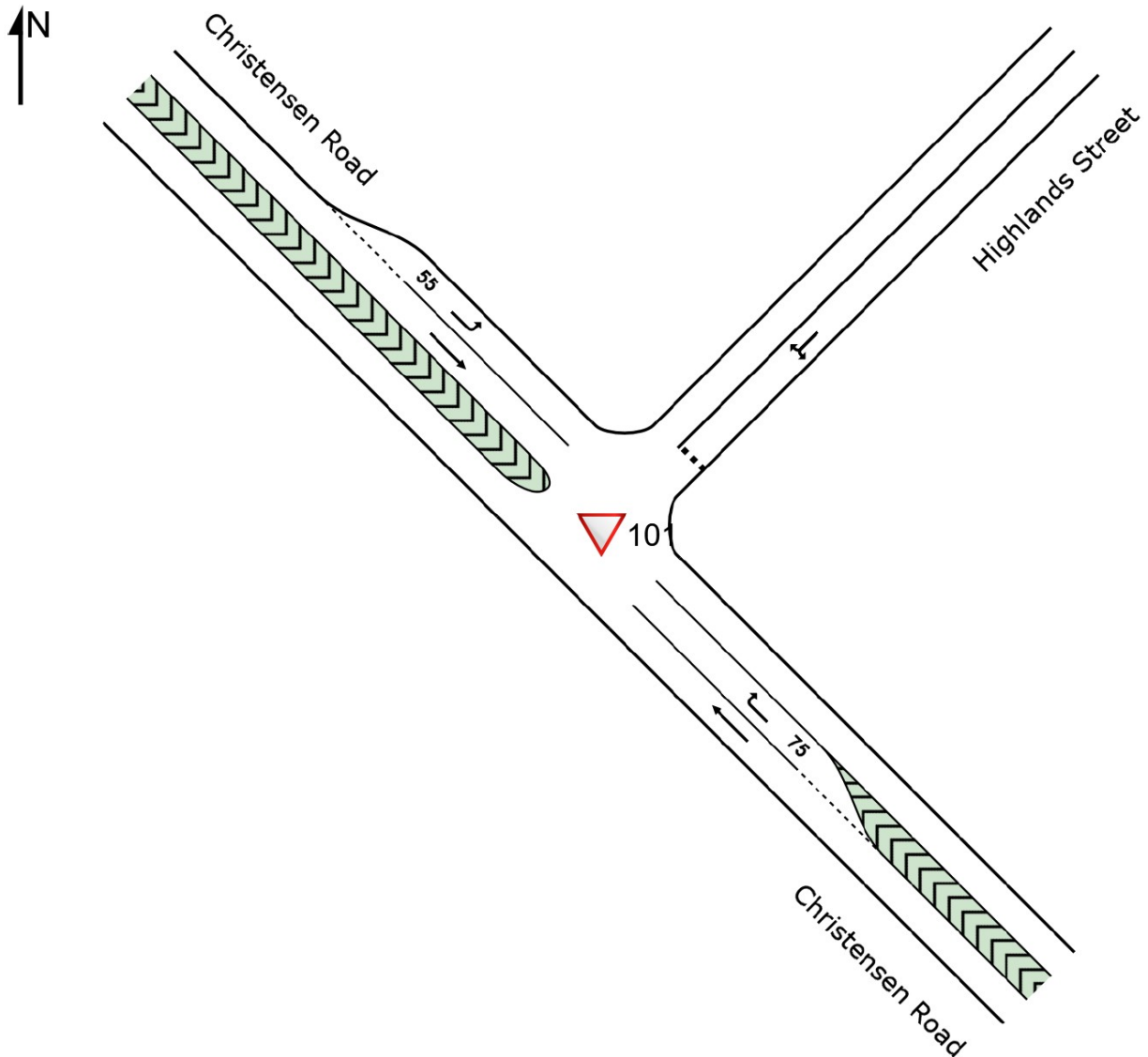
AM PEAK - BACKGROUND TRAFFIC (STAGES 1 & 2 + 2018 SURVEY)

PM PEAK - BACKGROUND TRAFFIC (STAGES 1 & 2 + 2018 SURVEY)

AM PEAK - DESIGN TRAFFIC (BACKGROUND + STAGE 3)

PM PEAK - DESIGN TRAFFIC (BACKGROUND + STAGE 3)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

▽ Site: 101 AM Peak (Christensen Rd - New Rd Int) -
Background (2018 + S1 + S2) (Site Folder: Stage 3 - Access via
Christensen Road)]

22301 - Christensen Road / Highlands Street (Site Access Intersection)
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
SouthEast: Christensen Road														
5	T1	125	15.0	125	15.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
6	R2	14	15.0	14	15.0	0.013	6.6	LOS A	0.1	0.4	0.32	0.57	0.32	51.6
Approach		139	15.0	139	15.0	0.070	0.7	NA	0.1	0.4	0.03	0.06	0.03	59.0
NorthEast: Highlands Street														
7	L2	8	15.0	8	15.0	0.076	6.3	LOS A	0.3	2.3	0.41	0.65	0.41	51.2
9	R2	45	15.0	45	15.0	0.076	8.5	LOS A	0.3	2.3	0.41	0.65	0.41	50.9
Approach		53	15.0	53	15.0	0.076	8.1	LOS A	0.3	2.3	0.41	0.65	0.41	51.0
NorthWest: Christensen Road														
10	L2	80	15.0	80	15.0	0.048	5.7	LOS A	0.0	0.0	0.00	0.57	0.00	53.0
11	T1	125	15.0	125	15.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach		205	15.0	205	15.0	0.070	2.2	NA	0.0	0.0	0.00	0.22	0.00	57.0
All Vehicles		397	15.0	397	15.0	0.076	2.5	NA	0.3	2.3	0.07	0.22	0.07	56.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▽ Site: 101 PM Peak (Christensen Rd - New Rd Int) -
Background (2018 + S1 + S2) (Site Folder: Stage 3 - Access via
Christensen Road)]

22301 - Christensen Road / Highlands Street (Site Access Intersection)
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
SouthEast: Christensen Road														
5	T1	142	15.0	142	15.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
6	R2	4	15.0	4	15.0	0.004	6.4	LOS A	0.0	0.1	0.29	0.55	0.29	51.7
Approach		146	15.0	146	15.0	0.080	0.2	NA	0.0	0.1	0.01	0.02	0.01	59.7
NorthEast: Highlands Street														
7	L2	20	15.0	20	15.0	0.188	6.5	LOS A	0.8	6.1	0.45	0.69	0.45	51.0
9	R2	111	15.0	111	15.0	0.188	8.8	LOS A	0.8	6.1	0.45	0.69	0.45	50.7
Approach		131	15.0	131	15.0	0.188	8.4	LOS A	0.8	6.1	0.45	0.69	0.45	50.8
NorthWest: Christensen Road														
10	L2	27	15.0	27	15.0	0.016	5.7	LOS A	0.0	0.0	0.00	0.57	0.00	53.0
11	T1	142	15.0	142	15.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach		169	15.0	169	15.0	0.080	0.9	NA	0.0	0.0	0.00	0.09	0.00	58.7
All Vehicles		446	15.0	446	15.0	0.188	2.9	NA	0.8	6.1	0.13	0.24	0.13	56.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▽ Site: 101 AM Peak (Christensen Rd - New Rd Int) -
 Design (Background + Stage 3) (Site Folder: Stage 3 - Access
 via Christensen Road)]

22301 - Christensen Road / Highlands Street (Site Access Intersection)
 Site Category: (None)
 Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist m				
						v/c	sec							km/h
SouthEast: Christensen Road														
5	T1	125	15.0	125	15.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
6	R2	14	15.0	14	15.0	0.017	7.8	LOS A	0.1	0.5	0.46	0.64	0.46	50.9
Approach		139	15.0	139	15.0	0.070	0.8	NA	0.1	0.5	0.05	0.06	0.05	58.9
NorthEast: Highlands Street														
7	L2	8	15.0	8	15.0	0.270	6.5	LOS A	1.2	9.3	0.55	0.79	0.57	49.7
9	R2	149	15.0	149	15.0	0.270	10.4	LOS B	1.2	9.3	0.55	0.79	0.57	49.5
Approach		157	15.0	157	15.0	0.270	10.2	LOS B	1.2	9.3	0.55	0.79	0.57	49.5
NorthWest: Christensen Road														
10	L2	271	15.0	271	15.0	0.162	5.8	LOS A	0.0	0.0	0.00	0.57	0.00	52.9
11	T1	125	15.0	125	15.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach		396	15.0	396	15.0	0.162	3.9	NA	0.0	0.0	0.00	0.39	0.00	55.0
All Vehicles		692	15.0	692	15.0	0.270	4.7	NA	1.2	9.3	0.13	0.42	0.14	54.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 101 PM Peak (Christensen Rd - New Rd Int) -
Design (Background + Stage 3) (Site Folder: Stage 3 - Access
via Christensen Road)]

22301 - Christensen Road / Highlands Street (Site Access Intersection)
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
SouthEast: Christensen Road														
5	T1	142	15.0	142	15.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
6	R2	4	15.0	4	15.0	0.004	6.7	LOS A	0.0	0.1	0.34	0.56	0.34	51.6
Approach		146	15.0	146	15.0	0.080	0.2	NA	0.0	0.1	0.01	0.02	0.01	59.7
NorthEast: Highlands Street														
7	L2	20	15.0	20	15.0	0.571	9.0	LOS A	4.8	37.6	0.65	0.98	1.02	48.1
9	R2	347	15.0	347	15.0	0.571	12.8	LOS B	4.8	37.6	0.65	0.98	1.02	47.9
Approach		367	15.0	367	15.0	0.571	12.6	LOS B	4.8	37.6	0.65	0.98	1.02	47.9
NorthWest: Christensen Road														
10	L2	86	15.0	86	15.0	0.051	5.7	LOS A	0.0	0.0	0.00	0.57	0.00	53.0
11	T1	142	15.0	142	15.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach		228	15.0	228	15.0	0.080	2.2	NA	0.0	0.0	0.00	0.22	0.00	57.1
All Vehicles		741	15.0	741	15.0	0.571	7.0	NA	4.8	37.6	0.33	0.55	0.51	52.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

APPENDIX D – RESPONSE TO CAR PARKING, ACCESS, AND TRANSPORT INTEGRATION CONSTRAINT CODE (2003)

Part 7 Codes

Division 3 Constraint Codes

Chapter 4 Car Parking, Access and Transport Integration

1.0 Purpose

To ensure that transport needs, including car parking and service vehicle requirements, associated with the development of land are met by:

- supply of car and bicycle parking facilities;
- provision of loading and service facilities; and
- integration of public transport with private and public development in the City.

Key objectives include:

- a) the availability of car park opportunities that are easy to locate and use, in close proximity to all major developments and uses within the City, with on-site provision available for occupants and on-street provision and/or public car parks available for visitors;
- b) the effective use of all car park infrastructure provided in the City; and
- c) streets that are pedestrian and cyclist friendly.

2.0 Application

- 2.1 This code applies to development indicated as self, code or impact assessable in the Table of Development in the domain or Local Area Plan (LAP) within which the development is proposed.
- 2.2 This code specifically applies to development (whether on private or public land) that requires one or more of the following:
 - private or public car parking;
 - bicycle parking and associated facilities;
 - goods loading and circulation in public or private places; and
 - integration of public transport with private or public development in the City.
- 2.3 This code also applies to any development that is proposed for sites identified on Domain Maps or the Priority Infrastructure Plan Maps as being affected by Future Road Requirements, including areas required for future road corridor development.
- 2.4 Where a domain or LAP Place Code contains car parking requirements that differ from this code, the LAP requirements take precedence.
- 2.5 Performance Criteria PC1-PC24 apply to all code and impact assessable development referred to in this code. For development identified as self assessable, in the relevant domain or LAP, only the acceptable solutions to Performance Criteria PC1-PC16 apply.

3.0 Development Requirements

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Development that is Self Assessable, Code Assessable or Impact Assessable			
Protection and Preservation of Areas Required for Road Widening, the Provision of Public Transport Facilities or New Transport Corridors			
PC1 Land affected by any proposed road realignment or widening must not have development constructed over that part of the land required for road realignment or road widening.	AS1 All sites that are affected by Future Road Requirement as shown on the Domain Maps, do not have buildings or structures erected forward of the indicated building setback line. This requirement does not apply to a fence with a height not exceeding 1.8 metres and a width not exceeding 0.5 metres.	NOT APPLICABLE, THE PROPOSED CHANGE DOES NOT IMPACT ON FUTURE ROAD REQUIREMENTS	
Port Cocheres			
PC2 Where provision is made for a <i>porte cochere</i> , it must be designed to enable vertical clearance, manoeuvring, access and queuing of vehicles. The capacity of the <i>porte cochere</i> and associated access and manoeuvring must accommodate vehicles entirely within the site, including the queuing of vehicles.	AS2 The <i>porte cochere</i> has a minimum vertical clearance of 4.5 metres.	NOT APPLICABLE, PROPOSAL DOES NOT PROVIDE A PORTE COCHERE.	
Design of Car Parking Areas and Car Park Spaces			
PC3 All car parking spaces must be constructed and line marked to the correct size and standard.	AS3.1 All car parking spaces and facilities are constructed, sealed, line marked and maintained in accordance with the layout requirements of AS2890.1 – Parking	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	Facilities Part 1: Off Street Car Parking and AS2890.2 – Off Street Parking Part 2: Commercial Vehicles. AS3.2 Where the development includes a combination of low turnover and high turnover car spaces, the parking spaces and aisles are designed to the high turnover or Class 3 requirements in AS2980.1 – Parking Facilities Part 1: Off Street Car Parking.		
PC4 Car parking areas must be landscaped to reduce visual impact and to provide opportunities for shade.	AS4 In car parking areas exceeding 300m ² in site area: a) at least 5% of the area is landscaped; b) a landscaped buffer, with a minimum height of 600mm and width of 1500mm, is provided along any public street frontage and the common boundary to the adjoining property; and c) one landscaped tree bay is to be provided for every 21 car parking spaces.	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	
Signs and Line Marking			
PC5 Signs and line marking must be provided to indicate the location of the car park and the position of the access points for all car parks used by the public where: a) a car park is located at the rear of the site;	AS5.1 Signs incorporate the standard Service Sign Series 'P' sign, as detailed under Guide Signs in the Manual of Uniform Traffic Control Devices, Queensland. (This does not apply to residential developments with less than 10 units)	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
b) access to the car park is not located in the main frontage road; c) there are a number of access points serving different parts of the site.	AS5.2 Signs are used to mark car parking bays which are provided for disabled drivers, motorcycles and special zones, such as bus zones.		
Tandem Car Spaces			
PC6 Tandem car parking must only be used in circumstances where no inconvenience arises from its use.	AS6.1 Tandem car parking spaces (ie. two car parking spaces, nose to tail) are counted as one space, except in the following cases: a) the development is for residential purposes; b) the tandem spaces are to be used by the occupants of the site, in one tenancy; c) the car park area is to be operated as a public car park with on-site management. In this case, a tandem car park may be counted as no more than 1.5 car spaces. AS6.2 The minimum length of the tandem car space is 10.4 metres. AS6.3 Tandem garages have a minimum internal length of 11 metres.	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	
Access to Car Park Areas			
PC7 Car parking areas must not cause vehicle	AS7.1 For developments in excess of 100	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
queues into the frontage road system or encourage drivers to reverse into the road system.	residential units with frontage to major roads, a turn round facility with a minimum diameter of 12.0m is provided between the gate and the road. AS7.2 All car parking facilities, except those associated with detached dwellings and duplex dwellings is designed so that all vehicles enter and exist the site in a forward gear. AS7.3 Provision is made for a defined queuing area, free of any parking manoeuvres or internal intersections in accordance with the provisions of the Table to Acceptable Solution AS7.3, for developments comprising of more than two dwelling units and where a security gate is proposed.	RECONFIGURATION OF A LOT.	

Table to Acceptable Solution AS7.3	
Car Park Capacity (Number of Spaces)	Minimum Queue Length (Vehicles) *
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6

201 to 250	7
More than 250	7 plus 1% of capacity over 250 spaces

*** Note: Each vehicle shall be taken to occupy 6.0 metres in length.**

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
PC8 Car parking areas providing more than 20 car parking spaces must allow for the separation of vehicles and pedestrians.	AS8 Sealed pedestrian footpaths, at a gradient not exceeding 1:12, are provided from the car parking area along the shortest possible route to the point of destination.	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	
PC9 Access to car parking spaces must be provided for employees and visitors.	AS9.1 Car park areas have no gateways, doors or similar devices which restrict vehicular access by employees or visitors.	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	
Driveways and Crossovers			
PC10 Driveways from car parks or developments into public roads must be minimised to reduce interference with public road traffic and pedestrians.	AS10.1 The maximum number of crossovers for residential developments is one for detached dwelling properties and two for multiple unit dwelling complexes. AS10.2 The maximum number of crossovers for non-residential developments is two crossovers per property. AS10.3 A vehicle crossover is separated from any other vehicle crossover by a minimum distance of three metres.	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	
PC11 All development must make provision for safe access to roads or streets adjacent to the site. Crossovers must be constructed to a standard consistent with	AS11.1 The geometric design of entry and exit driveways conforms with Standard Drawing No 59218 of Planning Scheme Policy 11 – Land Development	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
the vehicles using the site.	Guidelines. AS11.2 Access to roads or streets adjacent to the site is consistent with AS2890.1 – Parking Facilities Part 1: Off Street Car Parking and AS2890.2 – Off Street Parking Part 2: Commercial Vehicles. AS11.3 Where separate entry and exit driveways are used, the first driveway reached from the kerbside land is clearly delineated and sign-posted. AS11.4.1 Access to developments on dual carriageway roads is left in/left out. OR AS11.4.2 A new intersection is provided between the access way and the dual carriageway. AS11.5 Developments with traffic signal controlled or roundabout access to the frontage road dedicate land as public road to accommodate all intersection infrastructure, including traffic signal loops. AS11.6 The boundaries of the frontage road are modified to accommodate all intersection infrastructure within the public road.		

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	AS11.7 Developments with new traffic signal controlled access, within network traffic systems, provide the necessary infrastructure to integrate the new signals.		
Internal Circulation			
PC12 All developments must provide internal circulation to avoid use of the public road system for movement between different car parking and vehicle service areas in the development.	AS12.1 The internal layout of the site is consistent with AS2890.1 – Parking Facilities Part 1: Off Street Car Parking and AS2890.2 – Off Street Parking Part 2: Commercial Vehicles . AS12.2 Parking and circulation aisles have a maximum length of 100 metres. AS12.3 Dead end aisles do not exceed 20 metres in length. AS12.4 Aisle design does not include cross intersections. AS12.5 Car parking space/s is/are not located in areas used for manoeuvring of heavy vehicles. AS12.6 Car parks are designed so that vehicles do not reverse across pedestrian crossings.	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	AS12.7 Speed humps are not provided in entry or exit queuing areas.		
Loading Bay and Set Down Area Requirements			
PC13 Development must make provision for loading bays and set down areas for the: a) collection and set down of passengers; b) parking of trailers; c) service vehicle parking; and d) loading and unloading of goods.	AS13 Loading and set down areas are provided consistent with the AS2890.2 – Off Street Parking Part 2: Commercial Vehicles .	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	
Design Service Vehicle Requirements			
PC14 Development must provide for the required 'design service vehicle' to service the development.	AS14.1 Provision is made for service vehicles, in accordance with the Table to Acceptable Solution AS14.1 . AS14.2 Provision is made for service vehicles, in accordance with the Table to Acceptable Solution AS14.2 , for sites less than 4,000m ² in area that require access by service vehicles. AS14.3 Provision is made for height clearance of 4.5 metres for service station canopies and access clearance height associated with the appropriate design vehicle in other applicable developments. AS14.4 A driveway which caters for heavy	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	vehicles is designed in accordance with AS2890.2 – Off Street Parking Part 2: Commercial Vehicles and Standard Drawing No 59218 Section 7.4 of Planning Scheme Policy 11 – Land Development Guidelines .		

Table to Acceptable Solution AS14.1

Use or Development	Service Vehicle Provisions
Aged Persons Accommodation	HRV
Animal Husbandry	AV
Aquaculture	HRV
Bulk Garden Supplies	HRV
Cafe	SRV
Cinema	SRV
Commercial Services	SRV
Community Care Centre	SRV
Community Purposes	SRV
Convenience Shop	SRV
Educational Establishment	SRV
Fast Food Premises	HRV
Freight Depot	AV
Fuel Depot	AV
Funeral Parlour	SRV

Table to Acceptable Solution AS14.1	
Use or Development	Service Vehicle Provisions
Hospital	HRV
Industry	AV
Indoor Recreation including: a) squash court or any other court game; b) meeting place, public hall, pinball parlour, amusement arcade; c) theatre, cinema; d) licensed club; e) skating rink, swimming pool; f) gymnasium; and g) public library, public lecture hall, art gallery, museum, any other indoor recreation.	SRV
Kennel	SRV
Manufacturers Shop	HRV
Marina	AV
Marina Shop	SRV
Market	SRV
Medical Centre	SRV
Milk Depot	AV
Mini-Storage Warehousing	HRV
Minor Tourist Facility	SRV
Motel	SRV
Motor Vehicle Repairs	HRV
Night Club	SRV

Table to Acceptable Solution AS14.1	
Use or Development	Service Vehicle Provisions
Outdoor Sport and Recreation: a) tennis court or other court game (where not ancillary to other development); b) lawn bowls; c) skating rinks, swimming pools; d) golf course.	SRV
Office	SRV
Place of Worship	SRV
Reception Room	SRV
Resort Hotel	HRV
Restaurant	SRV
Restricted Club	HRV
Retail Plant Nursery	HRV
Rural Industry	AV
Salvage Yard	HRV
Service Industry	SRV
Service Station	AV
Shop	SRV
Shop with GFA of less than 400m ²	SRV
Shop with GFA 400m ² – 1500m ²	HRV
Shop with GFA larger than 1500m ²	AV
Shopping Centre Development	AV
Showroom	HRV
Storage	SRV
Take-Away Food Premises	SRV

Table to Acceptable Solution AS14.1

Use or Development	Service Vehicle Provisions
Tavern	HRV
Temporary Use	AV
Theatre	SRV
Tourist Shop	SRV
Transit Centre	HRV
Transport Terminal	AV
Vehicle Hire Premises	AV
Vehicle Sales Premises	AV
Warehouse	AV
Waterfront Industry	HRV

Note: SRV: Small Rigid Vehicle as defined in AS2890.2 – Off Street Parking Part 2: Commercial Vehicles.
HRV: Heavy Rigid Vehicle as defined in AS2890.2 – Off Street Parking Part 2: Commercial Vehicles.
AV: Articulated Vehicle as defined in AS2890.2 – Off Street Parking Part 2: Commercial Vehicles.

Table to Acceptable Solution AS14.2

HRV and AV Requirements

Site Area (m ²)	Requirement
Less than 1000m ²	Demonstrate that the development can accommodate the particular design vehicle but a separate service bay and associated manoeuvring are not required. Where it can be demonstrated that loading and unloading can take place within the road reserve, without impacting on the safe and efficient operation of traffic and with no detrimental impact on amenity, Council or its delegate may determine that HRV and AV access is not required.

Table to Acceptable Solution AS14.2

HRV and AV Requirements

1000m ² – 2000m ²	a) service bay for HRV is required. b) restricted manoeuvring on site for HRV or AV (as required). c) full on-site manoeuvring for other classes of service vehicle is required.
2000m ² – 4000m ²	a) service bay to be provided for HRV or AV (as required). b) restricted manoeuvring on site for AV (as required). c) full on-site manoeuvring for HRV and other classes of service vehicle is required.

APPENDIX E – STATE CODE 6 RESPONSE

State code 6: Protection of state transport networks

Table 6.2.2: All development

Performance outcomes	Acceptable outcomes	Response
Network impacts		
PO1 Development does not result in a worsening of the safety of a state-controlled road. Note: To demonstrate compliance with this performance outcome, it is recommended that a Registered Professional Engineer of Queensland (RPEQ) certified road safety audit or road safety assessment (as applicable) is provided. Further information on determining whether a road safety audit or road safety assessment is required is provided in section 9 of the Guide to Traffic Impact Assessment, Department of Transport and Main Roads, 2017.	No acceptable outcome is prescribed.	COMPLIES
PO2 Development does not result in a worsening of the infrastructure condition of a state-controlled road or road transport infrastructure. Note: To demonstrate compliance with this performance outcome, it is recommended that a RPEQ certified traffic impact assessment and pavement impact assessment are provided. Further information on how to prepare a traffic impact assessment and pavement impact assessment is provided in the Guide to Traffic Impact Assessment, Department of Transport and Main Roads, 2017.	No acceptable outcome is prescribed.	COMPLIES – THE PROPOSAL DOES NOT INTRODUCE ADDITIONAL AREA NOT PREVIOUSLY ADDRESSED AS PART OF THE PRELIMINARY APPROVAL
PO3 Development does not result in a worsening of operating conditions on a state-controlled road or the surrounding road network. Note: To demonstrate compliance with this performance outcome,	No acceptable outcome is prescribed.	COMPLIES – THE PROPOSAL DOES NOT INTRODUCE ADDITIONAL AREA NOT PREVIOUSLY ADDRESSED AS PART OF THE PRELIMINARY APPROVAL

Performance outcomes	Acceptable outcomes	Response
it is recommended that an RPEQ certified traffic impact assessment is provided. Further information on how to prepare a traffic impact assessment is provided in the Guide to Traffic Impact Assessment, Department of Transport and Main Roads, 2017.		
PO4 Development does not impose traffic loadings on a state-controlled road which could be accommodated on the local road network.	AO4.1 The layout and design of the development directs traffic generated by the development to the local road network.	COMPLIES
PO5 Upgrade works on, or associated with, a state-controlled road are built in accordance with relevant design standards.	AO5.1 Upgrade works on a state-controlled road are designed and constructed in accordance with the Road Planning and Design Manual, 2nd edition, Department of Transport and Main Roads, 2016.	NOT APPLICABLE, NO UPGRADE WORKS ARE PROPOSED ON THE STATE CONTROLLED NETWORK
PO6 Development involving the haulage of fill, extracted material or excavated spoil material exceeding 10,000 tonnes per year does not damage the pavement of a state-controlled road. Note: It is recommended that a transport infrastructure impact assessment and pavement impact assessment are provided. Further information on how to prepare a traffic impact assessment is provided in the Guide to Traffic Impact Assessment, Department of Transport and Main Roads, 2017.	AO6.1 Fill, extracted material and spoil material is not transported to or from the development site on a state-controlled road.	NOT APPLICABLE TO TRAFFIC IMPACT ASSESSMENT
PO7 Development does not adversely impact on the safety of a railway crossing. Note: It is recommended that a traffic impact assessment be prepared to demonstrate compliance with this performance outcome. An impact on a level crossing may require an Australian Level Crossing Assessment Model (ALCAM) assessment to be undertaken. Section 2.2 – Railway crossing safety of the Guide to Development in a Transport Environment: Rail, Department of Transport and Main Roads, 2015, provides guidance on how to comply with this	AO7.1 Development does not require a new railway crossing.	COMPLIES
	OR AO7.2 A new railway crossing is grade separated.	
	OR all of the following acceptable outcomes apply: AO7.3 Upgrades to a level crossing are designed and	

Performance outcomes	Acceptable outcomes	Response
performance outcome.	constructed in accordance with AS1742.7 – Manual of uniform traffic control devices, Part 7: Railway crossings and applicable rail manager standard drawings. Note: It is recommended a traffic impact assessment be prepared to demonstrate compliance with this acceptable outcome. An impact on a level crossing may require an Australian Level Crossing Assessment Model (ALCAM) assessment to be undertaken. Section 2.2 – Railway crossing safety of the Guide to Development in a Transport Environment: Rail, Department of Transport and Main Roads, 2015, provides guidance on how to comply with this acceptable outcome AND	
	A07.4 Access points achieve sufficient clearance from a level crossing in accordance with AS1742.7 – Manual of uniform traffic control devices, Part 7: Railway crossings by providing a minimum clearance of 5 metres from the edge running rail (outer rail) plus the length of the largest vehicle anticipated on-site. Note: Section 2.2 of the Guide to Development in a Transport Environment: Rail, Department of Transport and Main Roads, 2015, provides guidance on how to comply with this acceptable outcome. AND	
	A07.5 On-site vehicle circulation is designed to give priority to entering vehicles at all times.	
PO8 Development does not result in a worsening of the infrastructure condition of a railway or rail transport infrastructure.	No acceptable outcome is prescribed.	COMPLIES
PO9 Development does not result in a worsening of operating conditions of a railway	No acceptable outcome is prescribed.	COMPLIES
Stormwater and drainage		

Performance outcomes	Acceptable outcomes	Response
PO10 Development does not result in an actionable nuisance, or worsening of, stormwater, flooding or drainage impacts in a state transport corridor or state transport infrastructure.	No acceptable outcome is prescribed.	NOT APPLICABLE TO TRAFFIC IMPACT ASSESSMENT
PO11 Run-off from the development site is not unlawfully discharged to a state transport corridor or state transport infrastructure.	AO11.1 Development does not create any new points of discharge to a state transport corridor. AND	NOT APPLICABLE TO TRAFFIC IMPACT ASSESSMENT
	AO11.2 Stormwater run-off is discharged to a lawful point of discharge. Note: Section 3.49 of the Queensland Urban Drainage Manual, Institute of Public Works Engineering Australasia (Queensland Division) Fourth Edition, 2016, provides further information on lawful points of discharge. AND	
	AO11.3 Development does not worsen the condition of an existing lawful point of discharge to a state transport corridor.	
PO12 Run-off from the development site does not cause siltation of stormwater infrastructure affecting a state transport corridor or state transport infrastructure.	AO12.1 Run-off from the development site is not discharged to stormwater infrastructure for a state transport corridor.	NOT APPLICABLE TO TRAFFIC IMPACT ASSESSMENT
Planned upgrades		
PO13 Development does not impede delivery of planned upgrades of state transport infrastructure.	AO13.1 Development is not located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of state transport infrastructure. Note: Land required for the planned upgrade of state transport	COMPLIES

Performance outcomes	Acceptable outcomes	Response
	infrastructure is identified in the DA mapping system.	
	OR	
	AO13.2 Development is sited and designed so that permanent buildings, structures, infrastructure, services or utilities are not located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of state transport infrastructure.	
	OR all of the following acceptable outcomes apply: AO13.3 Structures and infrastructure located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of state transport infrastructure are able to be readily relocated or removed without materially affecting the viability or functionality of the development.	
	AND	
	AO13.4 Vehicular access for the development is consistent with the function and design of the planned upgrade of state transport infrastructure.	
	AND	
	AO13.5 Development does not involve filling and excavation of, or material changes to, land required for a planned upgrade to a state transport infrastructure.	
	AND	

Performance outcomes	Acceptable outcomes	Response
	AO13.6 Land is able to be reinstated to the predevelopment condition at the completion of the use.	

Table 6.2.3: Public passenger transport infrastructure

Performance outcomes	Acceptable outcomes	Response
Public passenger transport infrastructure		
PO14 Development does not damage or interfere with public passenger transport infrastructure, public passenger services or pedestrian or cycle access to public passenger transport infrastructure and public passenger services.	AO14.1 Vehicular access and associated road access works are not located within 5 metres of public passenger transport infrastructure. AND	COMPLIES
	AO14.2 Development does not necessitate the relocation of existing public passenger transport infrastructure. AND	COMPLIES
	AO14.3 Development does not obstruct pedestrian or cyclist access to public passenger transport infrastructure or public passenger services. AND	COMPLIES
	AO14.4 The normal operation of public passenger transport infrastructure or public passenger services is not interrupted during construction of the development.	COMPLIES
PO15 Upgraded or new public passenger transport infrastructure is provided to accommodate the demand for public passenger transport generated by the development.	No acceptable outcome is prescribed.	NOT APPLICABLE

Performance outcomes	Acceptable outcomes	Response
Note: To demonstrate compliance with this performance outcome, it is recommended a public transport impact assessment be prepared in accordance with appendix 1 of the State Development Assessment Provisions Supporting Information – Public Passenger Transport Infrastructure, Department of Transport and Main Roads, 2017. New or upgraded public passenger transport infrastructure provided should be in accordance with the Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015. Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.		
PO16 Development is designed to ensure the location of public passenger transport infrastructure prioritises and enables efficient public passenger services. Note: Chapters 2 and 5 of the Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015 provides guidance on how to comply with this performance outcome. Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.	No acceptable outcome is prescribed.	NOT APPLICABLE

Performance outcomes	Acceptable outcomes	Response
PO17 Development enables the provision or extension of public passenger services to the development and avoids creating indirect or inefficient routes for public passenger services. Note: Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.	No acceptable outcome is prescribed.	COMPLIES
PO18 New or modified road networks are designed to enable development to be serviced by public passenger services. Note: Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.	AO18.1 Roads catering for buses are arterial or sub-arterial roads, collector or their equivalent. AND	COMPLIES
	AO18.2 Roads intended to accommodate buses are designed and constructed in accordance with parts 3, 4-4C and 6 of the Road Planning and Design Manual 2nd edition, Volume 3: Guide to Road Design, Department of Transport and Main Roads, 2016 and Part 13 of the Manual of Uniform Traffic Control Devices, Department of Transport and Main Roads, 2018. Note: Parts 3, 4-4C and 6 of the Road Planning and Design Manual, Volume 3: Guide to Road Design, Department of Transport and Main Roads, 2016, must be read in conjunction with the following standards where specified in the Manual: 1. Supplement to Austroads Guide to Road Design (Parts 3,4-4C and 6), Department of Transport and Main Roads, 2014, and 2. Austroads Guide to Road Design (Parts 3,4-4C and 6).	COMPLIES

Page 48 of 50

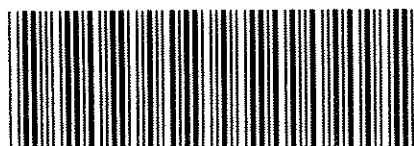
Performance outcomes	Acceptable outcomes	Response
	AND	
	AO20.3 Development does not result in public passenger services movements through car parking aisles.	COMPLIES
PO21 Taxi facilities are provided to accommodate the demand generated by the development. Note: Guidance on how to meet the performance outcome are available in chapter 7 of the Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015. Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.	No acceptable outcome is prescribed.	NOT APPLICABLE
PO22 Taxi facilities are located and designed to provide convenient, safe and equitable access for passengers. Note: Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.	AO22.1 A taxi facility is provided parallel to the kerb and adjacent to the main entrance. AND AO22.2 Taxi facilities are designed in accordance with: 1. AS2890.5–1993 Parking facilities – on-street parking and AS1428.1–2009 Design for access and mobility – general requirements for access – new building work 2. AS1742.11–1999 Parking controls – manual of uniform traffic control devices 3. AS/NZS 2890.6–2009 Parking facilities – offstreet parking for people with disabilities 4. Disability standards for accessible public transport 2002 made under section 31(1) of the	NOT APPLICABLE NOT APPLICABLE

Performance outcomes	Acceptable outcomes	Response
	<i>Disability Discrimination Act 1992</i> 5. AS/NZS 1158.3.1 – Lighting for roads and public spaces, Part 3.1: Pedestrian area (category P) lighting – Performance and design requirements.	
PO23 Educational establishments are designed to ensure the safe and efficient operation of public passenger services and pedestrian access. Note: Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.	AO23.1 Educational establishments are designed in accordance with the provisions of the Planning for Safe Transport Infrastructure at Schools, Department of Transport and Main Roads, 2011.	NOT APPLICABLE

A low-angle photograph of a modern building's exterior. The building features large glass windows reflecting the sky and clouds, and a prominent red vertical panel on the right side. In the foreground, a small tree with green and yellowing leaves is visible. The text "APPENDIX J" is overlaid in the top right corner.

APPENDIX J

COMMUNITY MANAGEMENT STATEMENT



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7
46**1. Nature of request**REQUEST TO RECORD FIRST COMMUNITY
MANAGEMENT STATEMENT FOR VANTAGE
YATALA COMMUNITY TITLES SCHEME**Lodger** (Name, address, E-mail & phone number)McInnes Wilson Lawyers
GPO Box 1089
Brisbane QLD 4001
titles@mcw.com.au**Lodger****Code**
234A**2. Lot on Plan Description**

LOT 501 ON SP295994

Title Reference

51164159

3. Registered Proprietor/State Lessee

AUSTRALAND INDUSTRIAL NO. 89 PTY LIMITED A.C.N. 107 355 715

4. Interest

NOT APPLICABLE

5. Applicant

AUSTRALAND INDUSTRIAL NO. 89 PTY LIMITED A.C.N. 107 355 715

6. Request

I hereby request that: the first CMS deposited herewith be recorded as the CMS for Vantage Yatala Community Titles Scheme and that C/- Frasers Property Australia Pty Ltd, Level 2, 1C Homebush Bay Drive, Rhodes NSW 2138 be recorded as address for service on the body corporate for the scheme.

7. Execution by applicant18/1/22
Execution Date

MATTHEW JAMES LYONS

SOLICITOR

Applicant's or Solicitor's Signature

Note: A Solicitor is required to print full name if signing on behalf of the Applicant

THIS CMS MUST BE DEPOSITED WITH:
A FORM 14 GENERAL REQUEST AND

This statement incorporates and must
include the following:

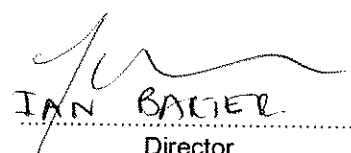
- Schedule A - Schedule of lot entitlements
- Schedule B - Explanation of development of scheme land
- Schedule C - By-laws
- Schedule D - Any other details
- Schedule E - Allocation of exclusive use areas

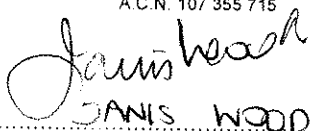
54957

1. Name of community titles scheme VANTAGE YATALA COMMUNITY TITLES SCHEME	2. Regulation module COMMERCIAL MODULE						
3. Name of body corporate BODY CORPORATE FOR VANTAGE YATALA COMMUNITY TITLES SCHEME							
4. Scheme land <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 60%;">Lot on Plan Description</th><th style="width: 40%;">Title Reference</th></tr></thead><tbody><tr><td>LOTS 101-122 ON SP 316137</td><td>TO ISSUE FROM 51164159</td></tr><tr><td>COMMON PROPERTY FOR VANTAGE YATALA COMMUNITY TITLES SCHEME ON SP 316137</td><td>TO ISSUE FROM 51164159</td></tr></tbody></table>		Lot on Plan Description	Title Reference	LOTS 101-122 ON SP 316137	TO ISSUE FROM 51164159	COMMON PROPERTY FOR VANTAGE YATALA COMMUNITY TITLES SCHEME ON SP 316137	TO ISSUE FROM 51164159
Lot on Plan Description	Title Reference						
LOTS 101-122 ON SP 316137	TO ISSUE FROM 51164159						
COMMON PROPERTY FOR VANTAGE YATALA COMMUNITY TITLES SCHEME ON SP 316137	TO ISSUE FROM 51164159						
5. Name and address of original owner AUSTRALAND INDUSTRIAL NO. 89 PTY LIMITED A.C.N. 107 355 715 C/- FRASERS PROPERTY AUSTRALIA PTY LTD, LEVEL 2, 1C HOMEBUSH BAY DRIVE, RHODES NSW 2138	6. Reference to plan lodged with this statement SP 316137						
7. New CMS exemption to planning body community management statement notation (if applicable*) Insert exemption clause (if no exemption – insert 'N/A' or 'not applicable') N/A							
8. Execution by original owner/Consent of body corporate							

AUSTRALAND INDUSTRIAL NO. 89 PTY LIMITED
A.C.N. 107 355 715

17/11/21
Execution Date


IAN BARKER
Director


JANIS WOOD
Director/Secretary
*Execution

*Original owner to execute for a first community management statement
*Body corporate to execute for a new community management statement

Privacy Statement

Collection of this information is authorised by the Body Corporate and Community Management Act 1997 and is used to maintain the publicly searchable registers in the land registry. For more information about privacy in NR&W see the Department's website.

PLANNING BODY COMMUNITY MANAGEMENT STATEMENT NOTATION

QUEENSLAND TITLES REGISTRY
Body Corporate and Community Management Act 1997

FORM 18C Version 1
Page 1 of 45
2

1. Name of community titles scheme

VANTAGE YATALA

2. Reference to survey plan to be lodged with statement (if applicable)

SP316137

3. Planning body community management statement notation

Authorising Officer - ~~Sam Hartley~~

COUNCIL OF THE CITY OF GOLD COAST

Blair Hartley



signed

name and designation

name of planning body

Planning Body Reference Number: SUR/2021/342

Privacy Statement

Collection of information from this form is authorised by legislation and is used to maintain publicly searchable records. For more information see the Department's website.

SCHEDULE A SCHEDULE OF LOT ENTITLEMENTS

Lot on Plan	Contribution	Interest
Lot 101 on SP 316137	171	106
Lot 102 on SP 316137	170	103
Lot 103 on SP316137	170	103
Lot 104 on SP 316137	170	103
Lot 105 on SP 316137	170	103
Lot 106 on SP 316137	170	103
Lot 107 on SP 316137	170	103
Lot 108 on SP 316137	170	103
Lot 109 on SP 316137	170	103
Lot 110 on SP 316137	170	103
Lot 111 on SP 316137	159	69
Lot 112 on SP 316137	159	68
Lot 113 on SP 316137	163	81
Lot 114 on SP 316137	205	211
Lot 115 on SP 316137	200	196
Lot 116 on SP 316137	182	138
Lot 117 on SP 316137	182	138
Lot 118 on SP 316137	184	145
Lot 119 on SP 316137	179	129
Lot 120 on SP 316137	612	754
Lot 121 on SP 316137	359	352
Lot 122 on SP 316137	354	345
TOTALS	4,639	3,659

1. Contribution Schedule Lot Entitlements (CSLE)

The Contribution Schedule Lot Entitlements (CSLE) for the scheme have been determined using the Relativity Principle. As required by Section 48 of the Body Corporate and Community Management Act 1997, the CSLE for the scheme have been allocated having regard to:

- (i) The structure of the scheme;

- (ii) The nature, features and characteristics of the Lots in the scheme;
- (iii) The area of the Lots.

On the basis of these factors it is just and equitable for there to be a variation in the CSLE for the Scheme. Each Lot starts with an entitlement of 10 and additional entitlements are added or deducted to recognise the above factors. The relative difference in Lot entitlements recognises that the factors stated above do not impact on how much each Lot should contribute to certain Body Corporate costs such as secretarial fees, audit fees, printing postage and outlays, but the structure of the scheme and the features and characteristics of the Lots result in a differential burden on the costs of the Body Corporate for repair and maintenance of the Common Property.

When allocating the Lot entitlements to be included in the CSLE, each of the above factors stated above impacts on the allocation in the following ways:

2. Structure of the Scheme

The scheme does not have mixed use lots and therefore the structure of the scheme does not affect the CSLE.

3. Nature, Feature and Characteristics of the Lots in the Scheme

The Lots are proposed to be used for a wide variety of industrial related uses and landscaped areas, signage and some services will form part of the Common Property. It is common for industrial lots to pay contributions towards outgoings on an area basis so as not to penalise individual owners with smaller Lots.

4. The Purpose for which the Lots are used

Each of the Lots in the scheme are used for industrial purposes and consequently this factor does not contribute to any differences in the Lot entitlements.

The Interest Schedule Lot Entitlements have been determined using the Market Value Principle.

SCHEDULE B EXPLANATION OF THE DEVELOPMENT OF SCHEME LAND**1. Dictionary and Interpretation*****Dictionary***

- (a) **"Act"** means the Body Corporate and Community Management Act 1997
- (b) **"Adjoining Land"** means any land adjoining the Scheme Land.
- (c) **"CMS"** means the Community Management Statement.
- (d) **"Common Property"** means the common property of the Scheme.
- (e) **"Concept Plan"** means the plan in Annexure "A".
- (f) **"Development"** means the development known as Vantage Yatala.
- (g) **"Local Government"** means Gold Coast City Council.
- (h) **"Lots"** means Lots in the Scheme.
- (i) **"Original Owner"** means the original owner as defined under the Act, and any person nominated by the Original Owner to the Body Corporate from time to time.
- (j) **"Scheme Land"** means the land described as the scheme land in Item 4 of this CMS.
- (k) **"Scheme"** means the CTS.
- (l) **"Utility Infrastructure"** means:
 - i. a device for measuring the reticulation or supply of a Utility Service.
 - ii. cables, wires, pipes, sewers, drains, ducts, plant and equipment by which Lots or Common Property are supplied with Utility Services; and
- (m) **"Utility Services"** means:
 - i. water reticulation or supply; or
 - ii. gas reticulation or supply; or
 - iii. electricity supply; or
 - iv. air conditioning; or
 - v. a telephone service; or
 - vi. a computer data or television service; or
 - vii. a sewer system; or
 - viii. drainage; or

- ix. a system or the removal or disposal of garbage or water; or
- x. another system or service designed to improve the amenity, or enhance the enjoyment, of Lots or Common Property.

Interpretation

This Schedule B is to be interpreted, so far as possible, in accordance with the interpretation provisions set out in Schedule C of this CMS. Terms not defined in this Schedule B but defined in Schedule C of this CMS have the meanings given to them in Schedule C of this CMS.

2. Staged Development

The Development is to be developed progressively in 3 stages.

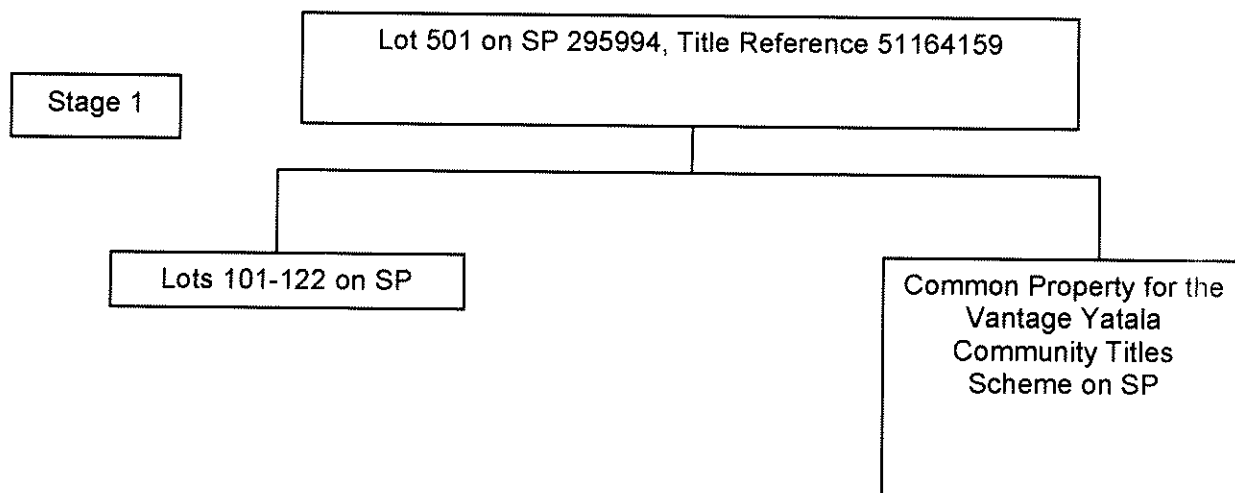
The first stage of the Development will create Lots 101-122 and Common Property on SP. The second stage of the Development will create Lots 201-206 and additional Common Property. The third stage of the Development will create Lots 301-304 and additional Common Property. The staging of the Development and the addition of Lots and Common Property in the second and third stages is shown in the Concept Plan.

The Concept Plan is illustrative only and does not fix the locations of buildings, improvements, Common Property or any other areas or the boundaries of any of them, all of which are subject to changes, including:

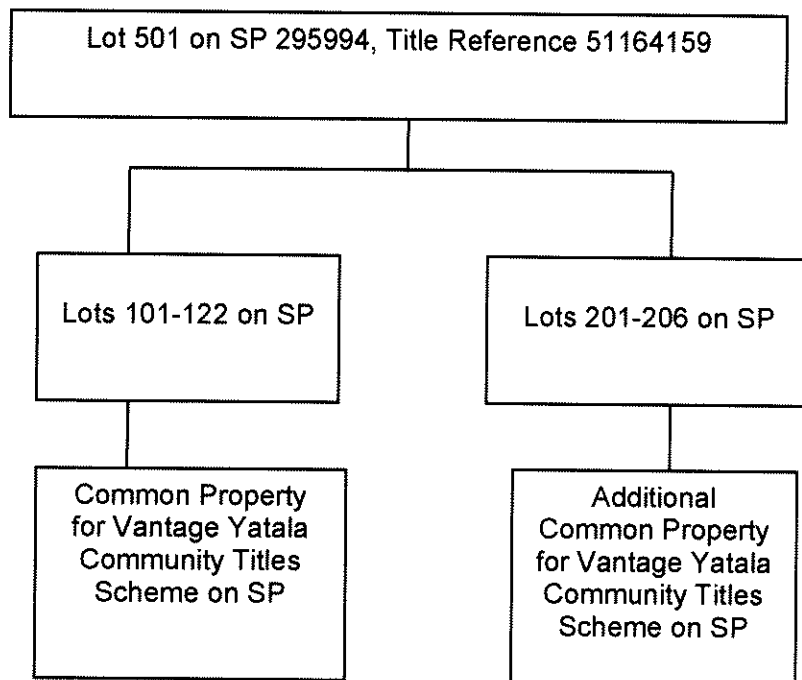
- (a) final surveys on completion of construction and/or placement of buildings, improvements and Utility Infrastructure on or within the Adjoining Land; and
- (b) completion of any other works, including landscaping, required to be undertaken under the terms of any relevant approval or the development issued by the Local Government or other relevant authority.

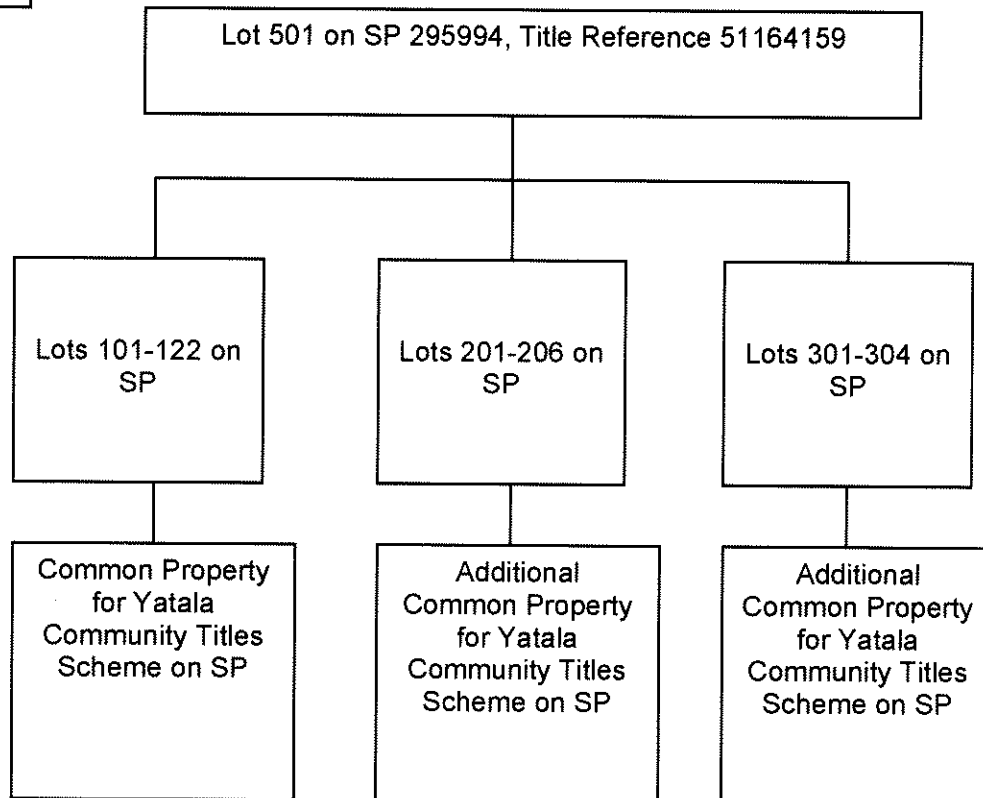
The Original Owner may from time to time update the Concept Plan to reflect changes referred to in this CMS.

A diagrammatical depiction of the proposed staging of the Development (and explanatory notes) is included below:



Stage 2



Stage 3**3. Changes to aspects of the Scheme**

Market, economic and site conditions (including the extent of further development and the need for additional Infrastructure and services as a result), the requirements of the Local Government and other relevant authorities, and the type, extent and conditions of approvals granted by the Local Government and other relevant authorities may mean that changes are made to:

- (a) the number of stages;
- (b) the size of each stage;
- (c) the configuration of Lots in each stage;
- (d) the timing of each stage;
- (e) the number of lots;
- (f) the size of Lots;
- (g) the position and size of roads;
- (h) the extent and location of the Common Property;
- (i) the extent and location of the public open space and roads;

- (j) this CMS; and
- (k) the proposed locations of the Utility Infrastructure.

4. Amalgamation of Lots

Lots may be amalgamated with other Lots or parts of Lots from time to time.

When Lots are amalgamated with other Lots or parts of Lots:-

- (a) the contribution schedule lot entitlement for the amalgamated Lot is equal to the total contribution schedule lot entitlements of the Lots which were amalgamated plus a proportionate part of the contribution schedule lot entitlements of any parts of Lots, rounded to the nearest whole numbers; and
- (b) the interest schedule lot entitlement for the amalgamated Lot is equal to the total interest schedule lot entitlements of the Lots which were amalgamated plus a proportionate part of the interest schedule lot entitlements of any parts of Lots, rounded to the nearest whole number.

5. Subdivision of Lots

The owner of a Lot in the Scheme (other than the Original Owner) must not subdivide the Lot unless the prior written consent of the Body Corporate is obtained.

SCHEDULE C	BY-LAWS
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1. DEFINITIONS**1.1 Dictionary**

- (a) **"Acoustic Report"** means the report labelled "Acoustic Report" for Proposed Warehouse/Industrial Development 60 Stapylton Jacobs Well Road, Stapylton prepared by Acousticworks dated 18 December 2019, a copy of which is set out in Annexure B.
- (b) **"Act"** means the *Body Corporate and Community Management Act 1997*.
- (c) **"Architectural and Landscaping Code"** means the development guidelines published by the Body Corporate from time to time and approved by the Committee.
- (d) **"Body Corporate"** has the same meaning as in the Act.
- (e) **"Committee"** has the same meaning as in the Act.
- (f) **"Commissioner"** has the same meaning as in the Act.
- (g) **"Common Property"** has the same meaning as in the Act.
- (h) **"Invitee"** any person on the Scheme Land with the permission of an Occupier.
- (i) **"Landscape Vegetation Maintenance Area"** means the area within Lots 101 – 110 as shown on the Landscape Detail Plan as densely planted low maintenance vegetation on the western side of the lots adjacent to residential and industrial properties outside the Scheme Land.
- (j) **"Landscape Detail Plan"** means the Landscape Detail Plan a copy of which is set out in Annexure A.
- (k) **"Lot"** has the same meaning as in the Act.
- (l) **"Occupier"** an Owner of a Lot, a tenant of a Lot, a licensee of a Lot, or any person resident in a Lot.
- (m) **"Original Owner"** means the person identified in Item 5 of the First Community Management Statement and includes successors or assigns.
- (n) **"Owner"** has the same meaning as in the Act.
- (o) **"Scheme Land"** the Scheme Land identified in Item 4 of the Community Management Statement and includes when the context permits or requires the Lots and the Common Property and all improvements thereon.
- (p) **"Utility Infrastructure"** has the same meaning as in the Act.

1.2 Rules of interpretation

In these By-Laws unless the context indicates a contrary intention:

- (a) words denoting any gender include all genders;

- (b) the singular number includes the plural and vice versa;
- (c) a person Includes their executors, administrators, successors, substitutes (for example, persons talking by novation) and assignors;
- (d) words importing persons will include all bodies, associations, trusts, partnerships, Instrumentalities and entitles corporate or unincorporated, and vice versa;
- (e) any obligation on the part of or for the benefit of two or more persons will be deemed to bind or benefit as the case may be, any two or more of them jointly and each of them severally;
- (f) references to any legislation includes any legislation which amends or replaces that legislation;
- (g) headings are included for convenience only and will not affect the Interpretation of these By-Laws;
- (h) a reference to anything Includes the whole or each part of it; and
- (i) in interpreting these By-Laws, no rules of construction will apply to the disadvantage of a party because that party was responsible for the drafting of these By-Laws or any part of them.

2. NOISE

- (a) Occupiers must not create any noise likely to interfere with the peaceful enjoyment of a person lawfully on another Lot or the Common Property, having regard to the nature and type of business being lawfully conducted on any Lot.
- (b) Occupiers must ensure that all buildings to be constructed on a Lot and the operation of any business conducted on a Lot comply with the requirements and recommendations of the Acoustic Report.

3. VEHICLES

Occupiers must not park any vehicle upon Common Property except:

- (a) with the consent of the Committee on those parts of the Common Property specifically identified for the purpose of car parking by an Occupier; or
- (b) where authorised by an exclusive use By-Law.

4. OBSTRUCTION/NUISANCE

- (a) Occupiers must not obstruct lawful use of Common Property (including any pathways and driveways) by any other person.
- (b) Occupiers must not cause a nuisance or act in such a way so as to interfere with the peaceful enjoyment of a person lawfully on another Lot or using the Common Property.

5. DEPOSITING RUBBISH, ETC ON COMMON PROPERTY

Occupiers must not deposit or throw upon the Common Property any rubbish, dirt, dust or other material likely to interfere with the peaceful enjoyment of a person lawfully on another Lot or using the Common Property.

6. GARBAGE DISPOSAL

- (b) Occupiers must keep a receptacle for garbage in a clean and dry condition and adequately covered on the Lot or on a part of the Common Property designated by the Body Corporate for that purpose, unless the Body Corporate provides for some other way of garbage disposal.
- (c) Occupiers must:
 - i. comply with all local government local laws about disposal of garbage; and
 - ii. ensure that In disposing garbage, the hygiene, health and comfort of other Occupiers is not adversely affected.

7. DAMAGE TO COMMON PROPERTY

Occupiers must not, except with the consent in writing of the Committee:

- (a) damage any Common Property lawn, garden, tree, shrub, plant, flower, walking track or other Body Corporate asset in Common Property; or
- (b) mark, paint, or drive nails or screws or the like into, or otherwise damage or deface a structure that forms part of the Common Property.

8. UTILITY INFRASTRUCTURE

- (a) An Occupier must use the Utility Infrastructure for the purpose for which it was designed and not for any other purpose.
- (b) An Occupier must report any damage or accident involving the Utility Infrastructure to the Committee.
- (c) An Occupier must not waste water and must ensure all water taps are promptly turned off after use.

9. RIGHT OF ENTRY

- 9.1 An Owner or Occupier, upon receiving reasonable notice from the Committee, shall allow the Body Corporate or any contractors, sub-contractors, workmen or other person authorised by it, the right of access to his lot for the purpose of carrying out works or effecting repairs on mains, pipes, wires or connections of any water, sewerage, drainage, gas, electricity, telephone or other system or service, whether to his lot or to an adjoining lot or for any other purpose permitted under these By-Laws, the Act or the Regulation Module.
- 9.2 If in the reasonable opinion of the Committee there is a matter of sufficient emergency no such aforesaid notice will be necessary. Such works or repairs shall be at the expense of the Owner or Occupier of the Lot in the case where the need for such works or repairs is due to any act or default of the owner or Occupier or their guests, servants or agents. Any entry pursuant to this By-Law shall not constitute trespass. The Committee in exercising its powers under this By-Law shall ensure that its servants, agents and employees cause as little inconvenience to the Owner or Occupier of the Lot as is reasonable in the circumstances.

10. MAINTENANCE OF LOTS

- (a) Each Owner must ensure that his Lot is kept and maintained so as not to allow infestation by vermin or insects or be offensive in appearance to other Occupiers.
- (b) Each owner is responsible for the interior maintenance and decoration of his Lot.
- (c) The Body Corporate is responsible for the landscaping, maintenance, pruning and care for the vegetation within the Landscape Vegetation Maintenance Area.
- (d) An Owner or Occupier, upon receiving reasonable notice from the Committee, shall allow the Body Corporate or any contractors, sub-contractors, workmen or other person authorised by it, the right of access to his lot for the purpose of carrying out works, maintenance, pruning or care for the vegetation within the Landscape Vegetation Maintenance Area.

11. INCREASE IN INSURANCE PREMIUM

- (a) Occupiers must not bring to, do or keep on a Lot anything which increases the rate of fire insurance on the Scheme Land, or which may conflict with any insurance policy upon the Scheme and, except with the consent in writing of the Committee.
- (b) The Committee will not unreasonably withhold its consent, having regard to the nature and type of business lawfully being conducted on a Lot.
- (c) Where an Occupier obtains the consent of the Committee under By-Law 11(a), then it is the Occupier's responsibility to pay any increase in the insurance premium because of the Occupier's use of the Lot.

12. BEHAVIOUR OF INVITEES

- (a) Occupiers must take all reasonable steps to ensure that their invitees abide by the By-Laws and do not behave in a manner likely to interfere with the peaceful enjoyment of a person lawfully on another Lot or the Common Property.
- (b) Owners will be liable to compensate the Body Corporate for all damage to the Common Property caused by their Occupiers and invitees.

13. AUCTION SALE

Occupiers must not conduct an auction on his Lot or the Common Property, except with the consent in writing of the Committee.

14. USE OF LOTS

- (a) Occupiers may only use a Lot for the purpose permitted by the town planning scheme of the local government and shall ensure that all necessary consents, permits and approvals are obtained before commencing such use.
- (b) Occupiers must not use a Lot for any illegal, unlawful or immoral purpose.

15. INFECTIOUS DISEASES

In the event of any infectious disease which may require notification by virtue of any statute, regulation or ordinance happening in any lot, the owner or occupier of such lot shall give written notice thereof

and any other Information which may be required relative thereto to the Committee and shall pay to the Body Corporate the expenses incurred by the Body Corporate for disinfecting the Lot and any part of the Common Property required to be disinfected and replacing any articles or things the destruction of which may be rendered necessary by such disease.

16. MAINTENANCE OF LOTS

An Occupier must:

- (a) keep its Lot (including without limitation) and the Improvements on its Lot clean, maintained in good order and condition and kept free of rubbish;
- (b) keep its landscaping (including without limitation vegetation and hard landscaping) in a neat and healthy state. Lawns must be cut regularly and gardens attended to so that they are in a neat, tidy and attractive state. Nothing in this By-Law requires an Occupier to irrigate its landscaping where doing so would be contrary to law. An occupier is only obliged to comply with this By-Law to the extent the Occupier is lawfully entitled to irrigate the landscaping on the Lot within any relevant water use restrictions;

If an Occupier is in breach of this By-Law the Body Corporate and its contractors may access the Lot at all reasonable times for the purpose of inspection and rectifying the breach provided that the Body Corporate gives the Occupier reasonable Notice of its intention to do so. Any costs of the Body Corporate from remedying a breach of the By-Laws (including legal costs) must be paid for by the Owner of the Lot and the Occupier of the Lot who shall be jointly and severally liable for the whole of the costs.

17. SECURITY

The Body Corporate is empowered to negotiate and to enter into an agreement with an individual or company for the exclusive provision of security services In respect of the Scheme Land if thought necessary or appropriate, and the Body Corporate is further empowered to regulate the provision of the services throughout the Scheme Land and contributions towards the Costs of the security services.

18. BODY CORPORATE EMPOWERED TO ENTER INTO AGREEMENTS

- 18.1 Without derogating from any powers, authorities, duties and functions conferred or imposed on it by or under the Act or elsewhere under these By-Laws, the Body Corporate shall be empowered to enter into with such person or persons or corporation or corporations as the Body Corporate in Its absolute discretion shall decide one or more of the following agreements:
- (a) an agreement or agreements for the purpose of better seeing to the proper functioning operation and management of the Scheme or for the purpose of ensuring the proper functioning of the duties and powers of the Body Corporate and of the Committee of the Body Corporate including any agreement with the Body Corporate;
 - (b) an agreement with an energy provider and/or an energy resources consultant in relation to the provision of utility services (including reticulated hot water and electricity) to the Scheme Land and Lots; and
 - (c) an agreement with the owner or body corporate of adjoining land for the provision of electricity, waste disposal, public toilets, reticulated hot water or other utility service.

18.2 The Body Corporate has the power to engage a service contractor for the Scheme on the basis that the service contractor will be the only service contractor that will be engaged by the Body Corporate to provide caretaking services to the Body Corporate for the benefit of the Common Property and Lots.

18.3 Any such agreements shall be upon such terms and conditions as the Body Corporate shall decide in its absolute discretion.

19. ARCHITECTURAL AND LANDSCAPING CODE

19.1 An Owner must observe and comply with the Architectural and Landscaping Code or building covenants in force from time to time in relation to the Scheme.

19.2 An Owner cannot commence any works that would require consent under the Architectural and Landscaping Code unless the requisite consent under that Code has been obtained.

19.3 The Body Corporate and Owners must act according to any lawful directions or recommendations made by the Architectural Review Committee under the Architectural and Landscaping Code.

19.4 The Body Corporate will take all reasonable and lawful steps to enforce the terms of the Architectural and Landscaping Code and the recommendations and directions issued by the Architectural Review Committee.

19.5 The Body Corporate is entitled to use any part of a bond, guarantee, submission fee or other money submitted under the Architectural and Landscaping Code to pay the costs of the process of approval under the Architectural and Landscaping Code and for any cost, loss or damage (including legal costs and professional consultants costs) incurred by the Body Corporate that result from a breach of this By-Law or the failure of the Owner to obey or implement directions, recommendations and terms of any approval from the Architectural Review Committee

19.6 Owners and Occupiers must ensure that their agents and consultants submit to and follow directions, recommendations and the conditions of any approvals issued by the Architectural Review Committee.

19.7 No person shall occupy any improvements on a Lot until:-

(a) All statutory inspections have been completed; and

(b) The Architectural Review Committee confirms that all works have been completed in accordance with the relevant approved proposal and that no damage has been caused to any other Lot, Common Property or public area.

19.8 Neither the Architectural Review Committee, any member of the Architectural Review Committee, the Body Corporate, any member of the Body Corporate, its Committee or the Original Owner will be liable to any applicant under the Architectural and Landscaping Code for any loss, damage or injury arising out of or in any way connected with any recommendation, approval (condition or unconditional) or disapproval given under these By-laws or the Architectural and Landscaping Code.

19.9 The Original Owner may undertake any development at any time notwithstanding any noncompliance or inconsistency with the Architectural and Landscaping Code.

19.10 If an Owner or Occupier does not rectify any noncompliance with any approval given by the Architectural Review Committee within the period set out in a notice from the Architectural Review Committee, the Body Corporate, members of the Architectural Review Committee and its contractors may enter the relevant Lot and remove the non-complying development or any part of it. All of the costs, expenses and liabilities incurred or payable by the Body Corporate in exercising its rights under

this By-law (including legal costs on a full indemnity basis) are payable on demand, by the Owner and the Occupier who will be jointly and severally liable.

- 19.11 If any works are carried out without relevant approval from the Architectural Review Committee, the Body Corporate, members of the Architectural Review Committee and their contractors may enter the relevant Lot and remove the non-complying works or any part of them. All the costs, expenses and liabilities incurred or payable by the Body Corporate in exercising its rights under this By-Law (including legal costs on a full indemnity basis) are payable, on demand, by the Owner and Occupier who are jointly and severally liable.
- 19.12 If any works are being carried out without approval or are not being carried out in accordance with a relevant approval from the Architectural Review Committee, the Body Corporate may refuse entry to the responsible builder and contractors to the Lot and the Body Corporate is authorised as agent for the Owner and Occupier to order, the builder and any contractors to immediately stop work on the Lot and remove the builder and contractors from the Lot and the Scheme Land.

20. RECOVERY OF COSTS

- 20.1 An Owner (which expression shall extend to a mortgagee in possession) shall pay on demand the whole of the Body Corporate's costs and expenses (including Solicitor and own client costs), such amount to be deemed a liquidated debt, incurred in:
- (a) recovering contributions or monies payable to the Body Corporate pursuant to the Act duly levied upon that Owner; and
 - (b) all proceedings including legal proceedings concluded in favour of the Body Corporate taken by or against the Owner or the lessee or Occupier of the Lot, including, but not limited to, applications for an Order by the Commissioner, appeals to the Tribunal and appeals to the Court.
- 20.2 In the event that the Owner (or his mortgagee in possession) fails to attend to the payment of such costs and expenses after demand is made for the payment of same, the Body Corporate may:
- (a) treat such costs and expenses as a liquidated debt and take action for the recovery of same in any Court of competent jurisdiction; and
 - (b) enter such costs and expenses against the levy account of such Owner in which case the amount of same shall be paid to the Body Corporate upon a subsequent sale or disposal of the Lot falling which the purchaser of such Lot shall be liable to the Body Corporate for the payment of same.

21. POWER OF COMMITTEE

- 21.1 The Committee may make rules relating to the Common Property not inconsistent with these By-Laws and the same shall be observed by the Owners or Occupiers of Lots unless and until they are disallowed or revoked by majority resolution at a general meeting of the Body Corporate.

22. MECHANICAL ITEMS

- 22.1 Any mechanical item or apparatus to be installed on the outside of a Lot or on the Common Property with approval of the Body Corporate and in accordance with these By-Laws must be designed and/or screened to limit noise emission to a level satisfactory to the Committee acting reasonably.

23. BULK SUPPLY OF ELECTRICITY AND RETICULATED HOT WATER

- 23.1 The Body Corporate may supply or obtain the supply of electricity, reticulated hot water or other utilities (which may be in bulk) for the Scheme ("utilities"). The utilities may be supplied by the Body Corporate or the Body Corporate may engage a third party provider to supply the utilities ("a Supplier"). The Body Corporate may enter into an agreement with a Supplier on terms decided by the Committee, or if the agreement is outside of the scope of the Committee's authority, on terms decided by the Body Corporate.
- 23.2 The Body Corporate may enter into an agreement with one or more utility managers who may facilitate the Body Corporate's purchase and administration of the utilities ("Utilities Manager").
- 23.3 The Body Corporate must install meters to monitor usage of the utilities supplied from the Supplier to Owners and Occupiers.
- 23.4 The Body Corporate may purchase, otherwise obtain or contract with an entity to provide an Energy Management System ("EMS") or services so as to allow for the bulk purchase of utilities and the efficient use of the utility services.
- 23.5 Owners and Occupiers must obtain their supply of utilities from or through the Body Corporate if the Body Corporate enters into a utility supply agreement with the Supplier or if the Body Corporate supplies the utilities. If requested by the Body Corporate, Owners must sign an agreement for the supply of the utilities on the terms of supply decided by the Body Corporate.
- 23.6 Owners or Occupiers who accept or use the utilities supplied by or through the Body Corporate ("Consumers") shall, in consideration of the supply of the utilities, comply with this By-Law and the terms and conditions of supply adopted by the Body Corporate ("the Terms of Supply"). A copy of the Terms of Supply adopted by the Body Corporate shall be made available by the Body Corporate to consumers.
- 23.7 Upon the acceptance or use of the utilities supplied by or through the Body Corporate, the Terms of Supply shall constitute an agreement between the consumer and the Body Corporate. The consideration for the agreement shall be the supply and continued supply of the utilities through the Body Corporate to the consumer. The Terms of Supply form an agreement separate to this By-Law.
- 23.8 Upon request by a consumer, the Body Corporate shall provide one copy of the Terms of Supply to a consumer.
- 23.9 When a consumer assigns or transfers the consumer's interest in a Lot, the assignee or transferee becomes joined as a party to the agreement constituted by the Terms of Supply. The assignor or transferor consumer is released from the obligations imposed under this By-Law and the Terms of Supply only when all obligations of the consumer are satisfied and up to date.
- 23.10 The Body Corporate may include the actual costs for the supply of the utilities (whether to an Owner or Occupier of a lot) in notices of contributions payable to the Body Corporate by the Owner of the Lot to which the utilities are supplied.
- 23.11 The terms of this By-Law and the Terms of Supply are subject to any agreement entered into between the Body Corporate and the Supplier. The Body Corporate will have no obligation to provide utilities to a consumer if:
- (a) the agreement with the Supplier is terminated;
 - (b) the Supplier does not provide utilities to the Body Corporate for any reason; or
 - (c) the consumer does not pay for the supply of utilities by the due date.

- 23.12 All enquiries regarding connection, disconnection and charges shall be directed to the Utilities Manager (or other person nominated by the Committee). Consumers shall follow the directions of the Utilities Manager (or other person nominated by the Committee) with respect to the supply and use of electricity provided that the directions must be consistent with the By-law and the Terms of Supply.
- 23.13 The Committee may make rules with respect to the supply of utilities provided they are consistent with this By-law and the Terms of Supply.
- 23.14 The Body Corporate will not, under any circumstances whatsoever, be responsible or liable for any loss, cost or damages that occur to any consumer or anyone who relies upon the utilities supplied because of failure of the supply of utilities due to breakdowns, repairs, maintenance, strikes, accidents or causes of any class or description.
- 23.15 All consumers shall ensure that any electrical installation (as defined in the *Electricity Act 1994*) is maintained free of any defect which is likely to cause a fire or electrical shock. Subject to Act, the Body Corporate or the Utilities Manager shall be entitled to enter a Lot to inspect any electrical installations.
- 23.16 For the purposes of ensuring the efficient and constant supply of electricity to the Lots during any limitation in the supply of electricity, the Body Corporate may impose restrictions in such a manner and to such an extent as it considers necessary, upon the use of electrical articles (as defined in the *Electricity Act 1994*), including the prohibition of the use of specified articles.
- 23.17 The Body Corporate is not responsible for the accuracy or correct operation of any utility meter for a Lot, other than its obligations under the Act. Consumers shall ensure that no person associated with the consumer or their Lot interferes with any meter or equipment used for the supply or measure of supply of utilities to a Lot.
- 23.18 An invoice or notice will have been validly given to a consumer if the invoice or notice is sent to the last known address for the consumer known to the Body Corporate.

SCHEDULE D	OTHER DETAILS REQUIRED/PERMITTED TO BE INCLUDED
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STATUTORY EASEMENTS AND SERVICES LOCATION DIAGRAM

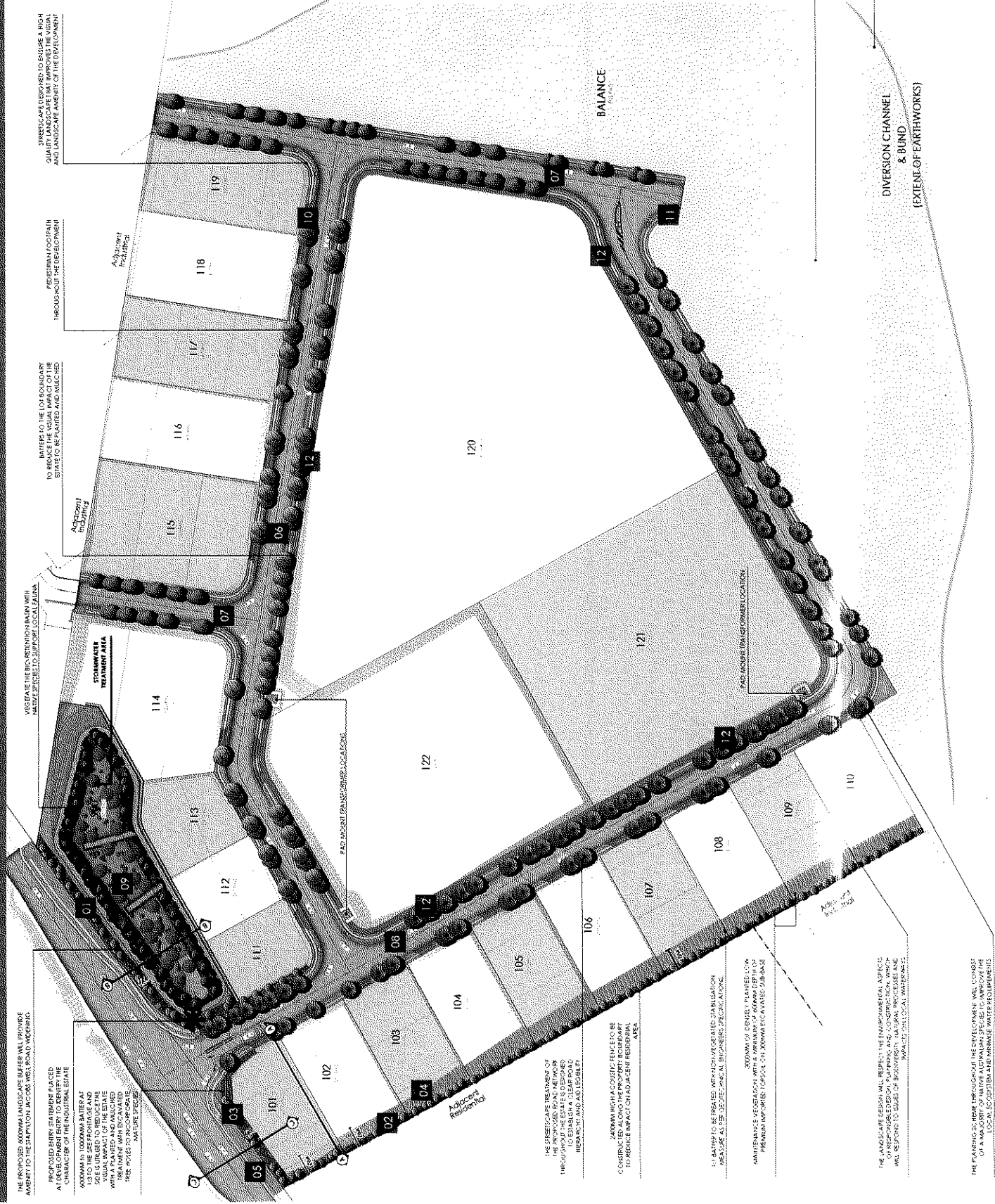
The following lots in the Scheme are affected by the following statutory easements:

Easement	Land Title Act 1994	Lots Affected
Easement for lateral and subjacent support	Section 115N	Lots 101 to 122 on SP 316137 and Common Property on SP 316137
Easement for utility services Utility infrastructure	Section 115O Section 115P	Lots 101 to 122 on SP 316137 and Common Property on SP 316137
Easement for shelter	Section 115Q	Lots 101 to 122 on SP 316137 and Common Property on SP 316137
Easement for projections	Section 115R	Lots 101 to 122 on SP 316137 and Common Property on SP 316137
Easement for maintenance of the building close to boundary	Section 115S	Lots 101 to 122 on SP 316137 and Common Property on SP 316137

The Services Location Diagram identified as "Services Location Diagram" is attached as Annexure C.

SCHEDULE E PROPERTY	DESCRIPTION OF LOTS ALLOCATED EXCLUSIVE USE AREAS OF COMMON
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Not applicable.





ATTACHMENT 7

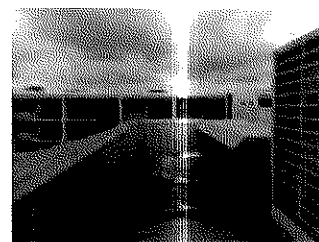
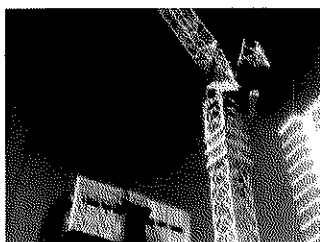
AMENDED ACOUSTIC REPORT



acousticworks)))

Proposed Warehouse/Industrial Development
60 Stapylton Jacobs Well Road
Stapylton

ACOUSTIC REPORT



Client:
Fraser's Property

Reference:
2019338 R01B 60 Stapylton Jacobs Well Road Stapylton ENV.docx

Date Issued:
18th December 2019

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Date	Revision	Author	Reviewer
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1. Introduction

The following report is in response to a request by Frasers Property for an environmental noise assessment of a proposed warehouse/industrial development at 60 Stapylton Jacobs Well Road, Stapylton. To facilitate the assessment, unattended noise monitoring was conducted in the vicinity of nearby residence to establish the criteria for onsite activities. Based on the data obtained, onsite activities were assessed to surrounding sensitive receivers with recommendations for acoustic treatments specified in this report.

2. Site Description

2.1 Site Location

The proposed site is described by the following:

60 Stapylton Jacobs Well Road, Stapylton
Lot 501 on SP295994

Refer to Figure 1 for site location.

Figure 1: Site Location (Not to Scale)



A comprehensive site survey was conducted on the 11th October 2019 and identified the following:

- a) The site is currently vacant.
- b) Industrial/commercial land uses are located to the north, east and southwest.
- c) Single storey and highset dwellings are located adjacent the western site boundary.
- d) Stapylton Jacobs Well Road bounds the site the northwest, separating the development from agricultural/rural residential land uses.
- e) The Pacific Motorway is located approximately 430m southwest of the site.

2.2 Proposal

The proposal is to construct a warehouse/industrial development as follows:

- Total site area of 642,310m².
- Stage 1:
 - Area of Stage 1: 193,365m².
 - 22 warehouse/industrial lots comprised of warehouses and vacant lots for future development.
 - Access via Stapylton Jacobs Well Road to the northwest and Christensen Road to the southwest.
 - Proposed 24 hour operation, 7 days a week with the exception of Lots 101-110 which will operate 7am to 8pm, Monday to Friday.
- Stage 2:
 - Area of Stage 2: 329,666m².
 - 6 warehouse/industrial lots comprised of warehouses.
 - Access via Stapylton Jacobs Well Road to the northwest and Christensen Road to the southwest.
 - Proposed 24 hour operation, 7 days a week.
- Stage 3:
 - Area of Stage 3: 119,359m²
 - 3 warehouse/industrial lots comprised of warehouses and 1 environmental lot.
 - Access via Christensen Road South to the southwest.
 - Proposed 24 hour operation, 7 days a week.

Refer to the Appendix for development plans.

2.3 Acoustic Environment

The surrounding area is primarily affected by existing industrial/commercial activities in the area and road traffic noise from Stapylton Jacobs Well Road and the Pacific Motorway.

3. Equipment

The following equipment was used to record noise levels:

- Rion NL42 Environmental Noise Monitor
- BSWA Technology Co. Ltd Sound Calibrator

The Environmental Noise Monitor holds current NATA Laboratory Certification and was field calibrated before and after the monitoring period, with no significant drift from the reference signal recorded.

4. Receivers and Noise Monitoring

4.1 Receiver Locations

The nearest residential receiver locations were identified as follows;

1. Single storey and highset dwellings fronting Cedar Drive to the west.
2. Highset dwelling at 33 Stapylton Jacobs Well Road to the northwest.
3. Residential land uses at Hillside Drive to the north.

These locations were chosen as being representative of the nearest residential receivers to the proposed development. Refer to Figure 2 for receiver locations.

Figure 2: Receivers and Noise Monitoring Location



4.2 Unattended Ambient Noise Monitoring

A Rion NL42 environmental noise monitor was placed onsite at 60 Stapylton Jacobs Well Road to measure existing ambient noise levels. The monitor was located in a free field position with the microphone approximately 1.4 metres above ground surface level. The noise monitor was set to record noise levels between the 11th and 24th October 2019.

The environmental noise monitor was set to record noise levels in "A" Weighting, Fast response using 15 minute statistical intervals. Ambient noise monitoring was conducted generally in accordance with Australian Standard AS1055:1997 *Acoustics – Description and measurement of environmental noise*. For the unattended noise monitoring location refer to Figure 2.

5. Measured Noise Levels

The following table presents the results from the unattended noise survey. Any periods of inclement weather or extraneous noise were omitted from the measurements prior to determining the results.

5.1 Ambient Noise Levels

The measured ambient noise levels measured at the monitoring location are as follows;

Table 1: Measured ambient noise levels – all time periods

Day	Date	L90 dB(A)		
		Day	Evening	Night
Saturday	12/10/19	53	50	45
Sunday	13/10/19	48	47	46
Monday	14/10/19	50	53	48
Tuesday	15/10/19	51	56	49
Wednesday	16/10/19	52	52	52
Thursday	17/10/19	53	55	52
Friday	18/10/19	48	50	50
Saturday	19/10/19	45	53	46
Sunday	20/10/19	49	47	46
Monday	21/10/19	49	48	46
Tuesday	22/10/19	48	49	49
Wednesday	23/10/19	47	47	49
Overall value		49	51	48

Refer to the appendix for graphical representation.

6. Noise Criteria

6.1 Environmental Noise Criteria

The noise criteria as applied by City of Gold Coast are as follows;

6.1.1 Acoustic Quality Objectives

Table 2 presents the acoustic quality objectives at noise sensitive receptors as detailed in Schedule 1 of the Environmental Protection Policy (Noise) 2008.

Table 2: Acoustic Quality Objectives at Noise Sensitive Properties

Sensitive Receptor	Time of Day	Acoustic Quality Objectives, dB(A)		
		$L_{Aeq,adj,1hr}$	$L_{A10,adj,1hr}$	$L_{A1,adj,1hr}$
Dwelling (outdoors)	Day and Evening (7am – 10pm)	50	55	65
Dwelling (Indoors)	Day and Evening (7am – 10pm)	35	40	45
	Night (10pm – 7am)	30	35	40

6.1.2 Background Creep

The Background Creep criteria are as follows;

Time-varying noise:

$$L_{Aeq,adj,T} \leq \text{Ambient } L_{A90,T} + 5\text{dB(A)}$$

Steady-state noise:

$$L_{A90,T} \leq \text{Ambient } L_{A90,T}$$

The time period (T) is a time interval of at least 15 minutes, or if the noise continues for less than 15 minutes, the duration of the noise source.

Based on the results of ambient noise monitoring, the project specific background creep noise limits are shown in Table 3.

Table 3: Background creep noise limits

Time Period	Noise Level Limits SPL dBA	
	$L_{Aeq,adj,T}$	$L_{A90,T}$
Day 7am – 6pm	54	49
Evening 6pm – 10pm	56	51
Night 10pm – 7am	53	48

7. Onsite Activities

7.1 Methodology

Noise predictions were determined with SoundPLAN 7.3 noise modelling software, which applied CONCAWE methodology. The CONCAWE algorithm takes into account distance, intervening terrain and buildings, screening features and meteorological conditions. For the purposes of this assessment, neutral wind conditions were applied in the noise model.

7.2 Source Sound Power Levels

Source sound power levels associated with normal operation was assessed based on previous measurements of similar activities and are presented in Table 4.

Table 4: Source sound power levels

Activity	Sound Power Level, dB(A)
Truck passbys	104
Truck air brakes	112
Truck reverse alarm	105
Car passby's	77
Car door closure	85
Forklifts	92
Power Tools	102

All activities include corrections for tonality and impulsiveness as per AS1055:2018, where applicable.

7.3 Predicted Noise Levels

7.3.1 Background Creep Criteria

Predicted noise levels for the site, utilising the data in Table 4, is presented in Table 5 and compared to the Background Creep criteria. A noise contour map for the site is presented in Section 7.4.

Table 5: Predicted noise levels - Background Creep LAeq 15min

Receiver	Predicted Noise Level, dB(A) Leq, 15min	Leq Compliance		
		Day	Evening	Night
Criteria		54	56	53
1. Cedar Drive (west)	48	Yes	Yes	Yes
2. 33 Stapylton Jacobs Well Rd (northwest)	41	Yes	Yes	Yes
3. Hillside Drive (northeast)	41	Yes	Yes	Yes

Compliance is predicted with the Background Creep criteria for the 24 hour operation of the site on the condition the recommendations in Section 8 are implemented.

7.3.2 Acoustic Quality Objectives

Predicted noise levels for the modelled scenario, compared to the Acoustic Quality Objectives, are presented in Table 6. A noise contour map for the site is presented in Section 7.4.

Table 6: Predicted noise levels - Acoustic Quality Objectives 1 hour

Receiver	Predicted Noise Level, dB(A) Leq, 1 hour		Predicted Noise Level, dB(A) L10, 1 hour		Predicted Noise Level, dB(A) L01, 1 hour		Leq Compliance			LA10 Compliance			LA01 Compliance		
							Day/Eve		Night	Day/Eve		Night	Day/Eve		Night
	External	Internal	External	Internal	External	Internal	External	Internal	Internal	External	Internal	Internal	External	Internal	Internal
Criteria							50	35	30	55	40	35	65	45	40
1. Cedar Drive (west)	48	38	52	42	56	46	Yes	n/a	n/a	Yes	n/a	n/a	Yes	n/a	n/a
2. 33 Stapylton Jacobs Well Rd (northwest)	41	31	45	35	49	39	Yes	n/a	n/a	Yes	n/a	n/a	Yes	n/a	n/a
3. Hillside Drive (northeast)	41	31	45	35	49	39	Yes	n/a	n/a	Yes	n/a	n/a	Yes	n/a	n/a

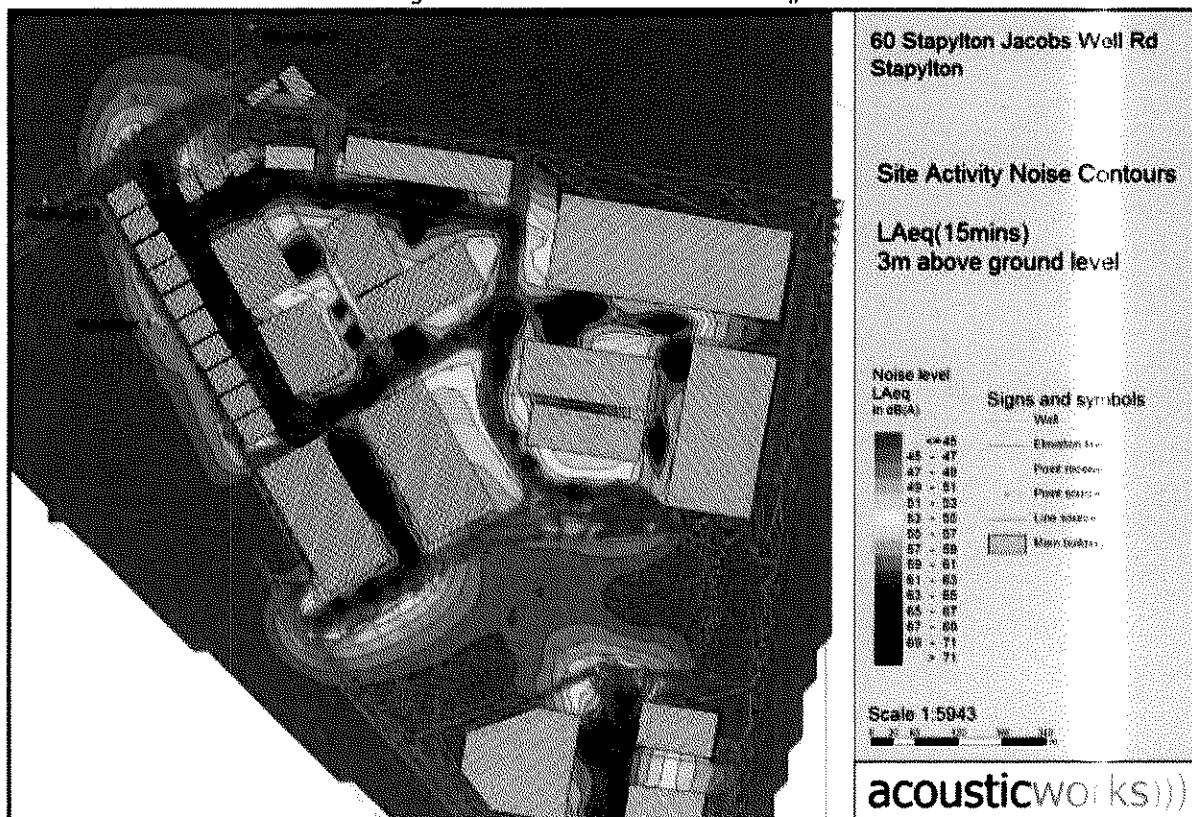
Compliance is predicted with the external Acoustic Quality Objectives for the 24 hour operation of the site on the condition the recommendations in Section 8 are implemented.

In regards to the internal Acoustic Quality Objectives, due to the surrounding environment (i.e. industry/local roads/Pacific Motorway) the existing background noise levels already exceed the internal Acoustic Quality Objectives for all time periods. Therefore, it is not possible to apply the internal Acoustic Quality Objectives for this development.

7.4 Noise Contour Maps

A noise contour map for the development, utilising the noise data in Table 4, is presented in Figure 3.

Figure 3: Predicted Noise Levels - LAeq, T

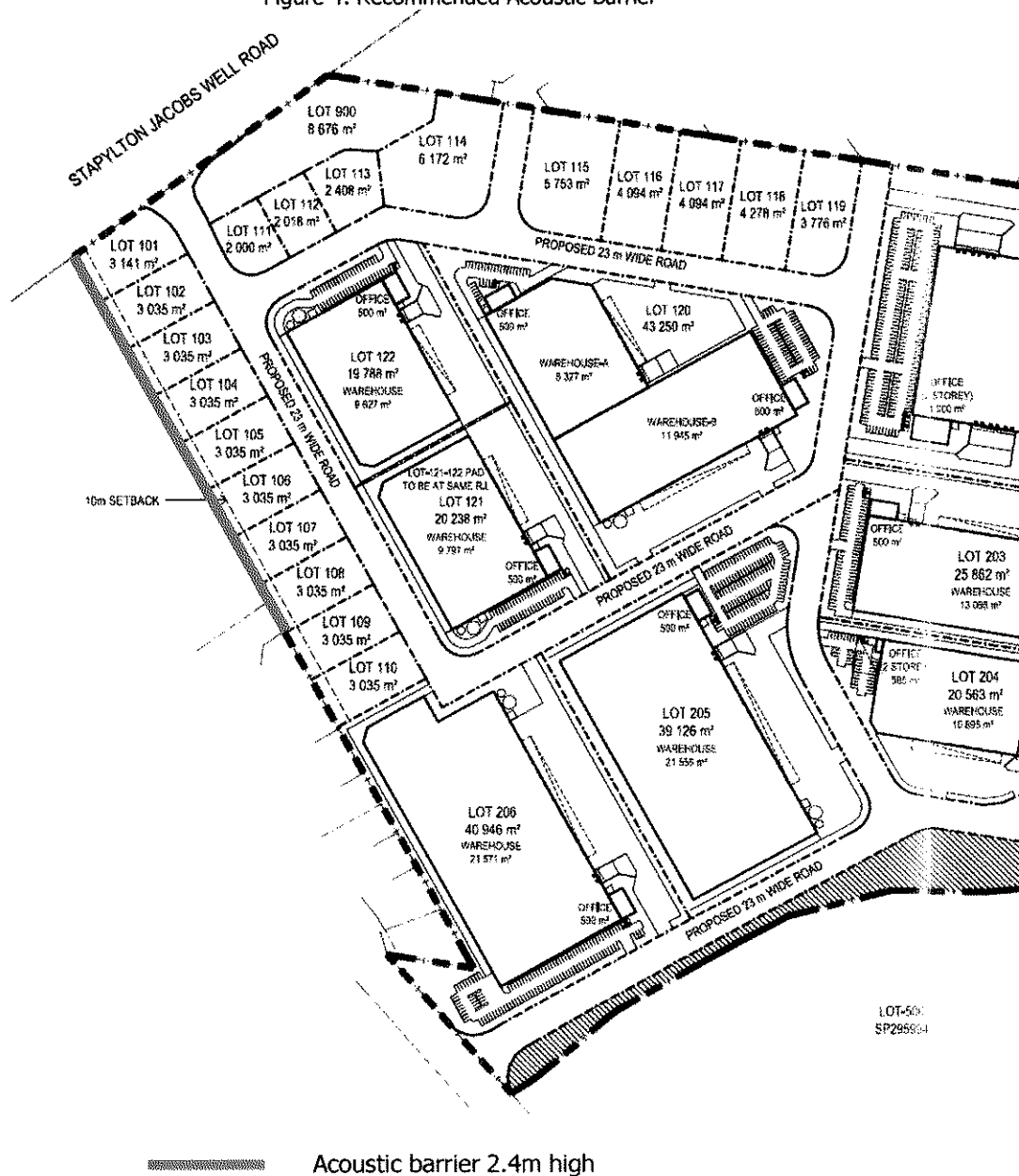


8. Recommendations

8.1 Acoustic Barriers

An acoustic barrier is recommended to be constructed along part of the western site boundary (adjacent the dwellings at Cedar Drive) as shown in Figure 4. The height of the barrier shall be 2.4m above the existing boundary level (i.e. on top of any proposed retaining walls/structures). The acoustic barrier shall be constructed using materials that achieve a minimum surface density of at least 12.5kg/m^2 . Suitable materials may include lapped 25mm thick pine palings with 40% overlap, 9mm fibre cement sheet, masonry, aerated concrete, 6.38mm laminate glass or other materials which satisfy the minimum surface density requirement. The barrier shall be free of gaps and holes.

Figure 4: Recommended Acoustic Barrier



8.2 Onsite Activities

Compliance is predicted for 24 hour operation of the site on the condition the following recommendations are implemented:

- Construction of acoustic barrier as detailed in Section 8.1.
- All buildings constructed on Lots 101-110 are recommended to be minimum 6m high and be constructed with minimal or no gaps between the buildings on each lot. We recommend that the western wall of the buildings is constructed using tilt concrete panels or masonry.
- No openings (other than emergency doors) on the western façade of Lots 101-110, except for fire exits. Any required doors on the western facade should be minimum 40mm thick solid core doors with full perimeter and base acoustic seals.
- All warehouses should incorporate a tilt concrete panel for all walls facing northwest, southwest and southeast to a minimum height of 3 metres.

8.2.1 Onsite Mechanical Plant

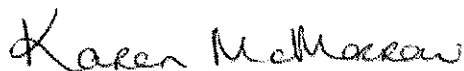
No information regarding any new mechanical services was available at the time of the assessment. We recommend that any new mechanical plant is designed to comply with the criteria stated in Section 6.1.2 with an assessment by qualified acoustic consultant to be conducted prior to installation.

9. Conclusion

An environmental noise assessment was conducted for the proposed warehouse/industrial development at 60 Stapylton Jacobs Well Road, Yatala. On the condition the recommendations detailed in Section 8 are implemented, compliance is predicted with City of Gold Coast assessment criteria.

If you should have any queries please do not hesitate to contact us.

Report Prepared By



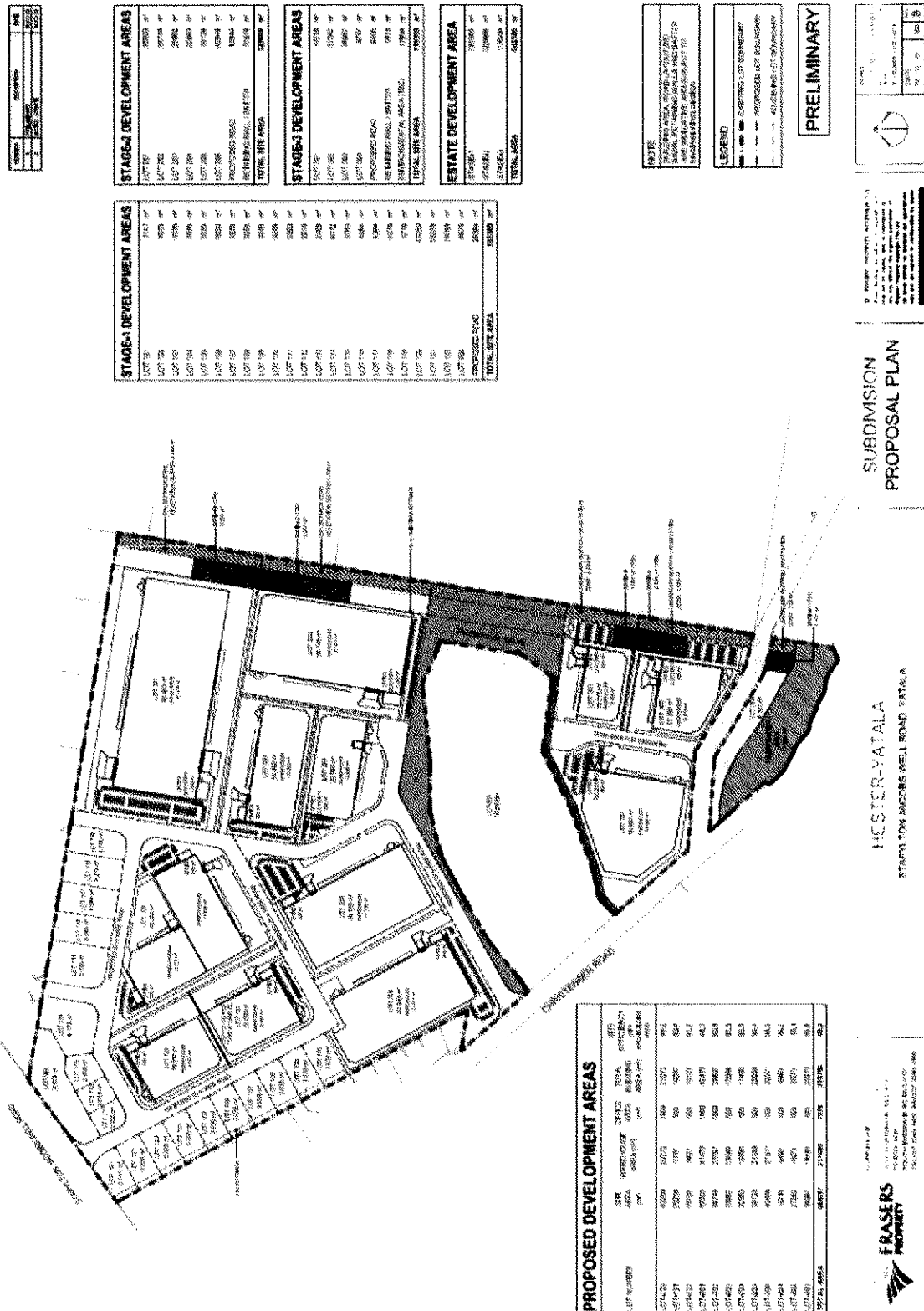
KAREN MCMORROW B.A.I

Acoustic Consultant

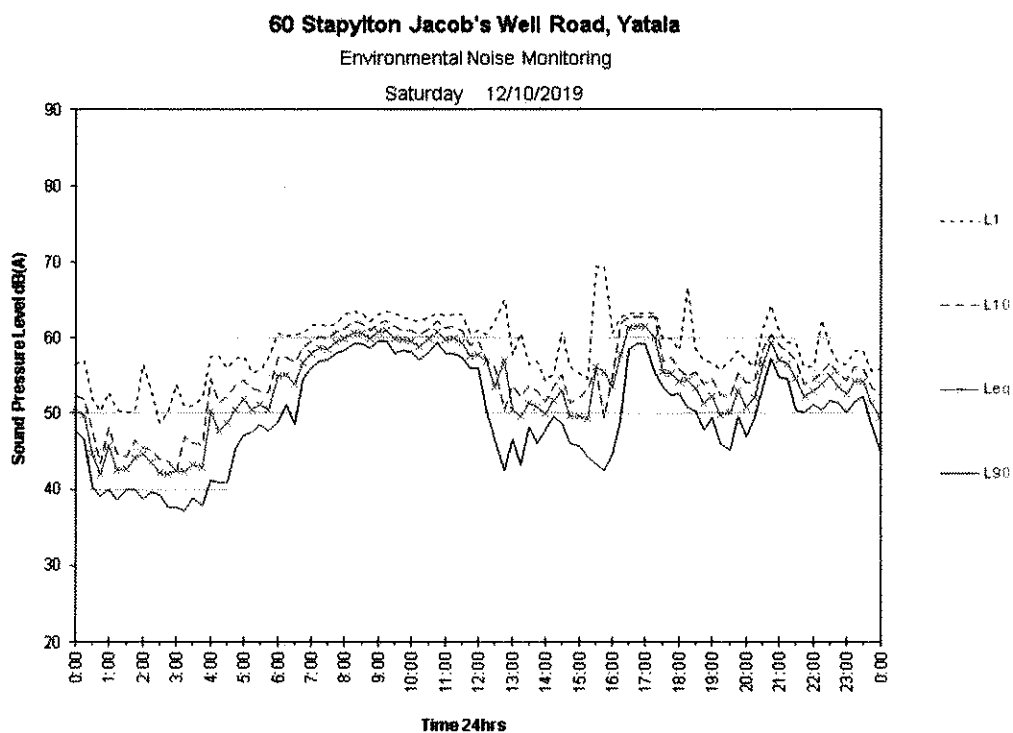
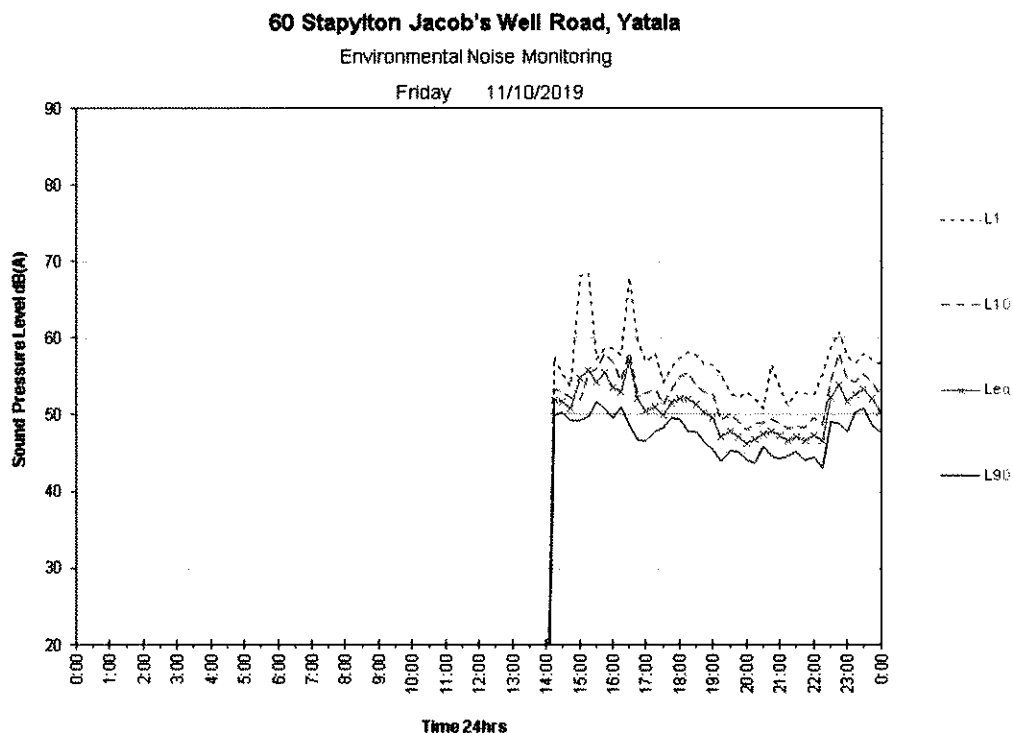
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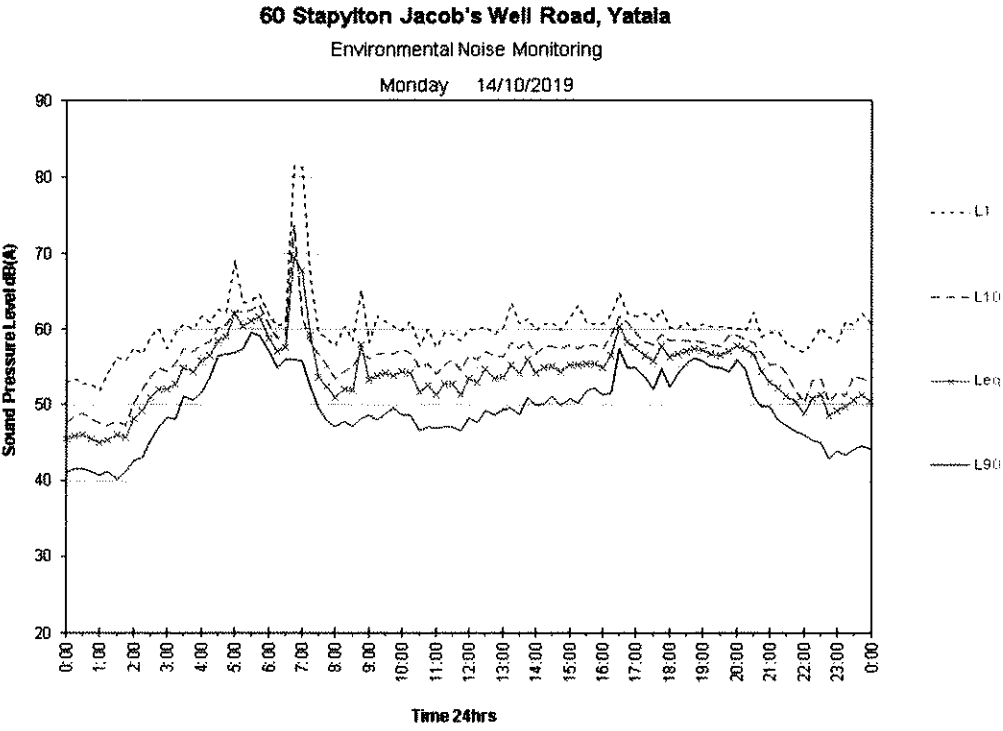
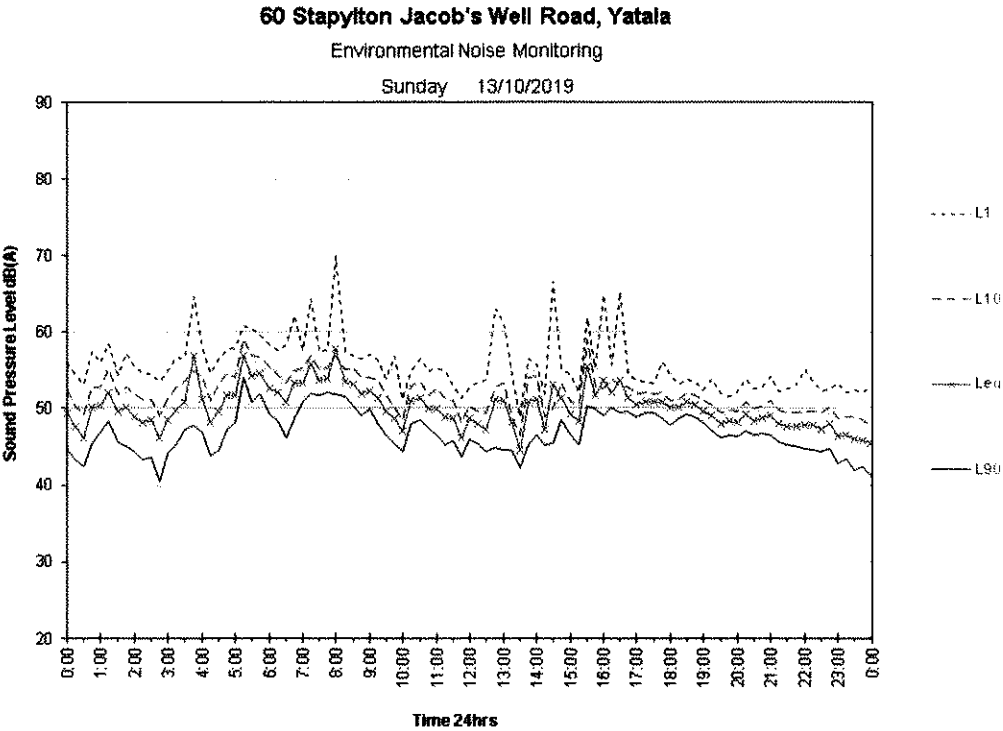
10. Appendices

10.1 Development Plans



10.2 Noise Monitoring Charts

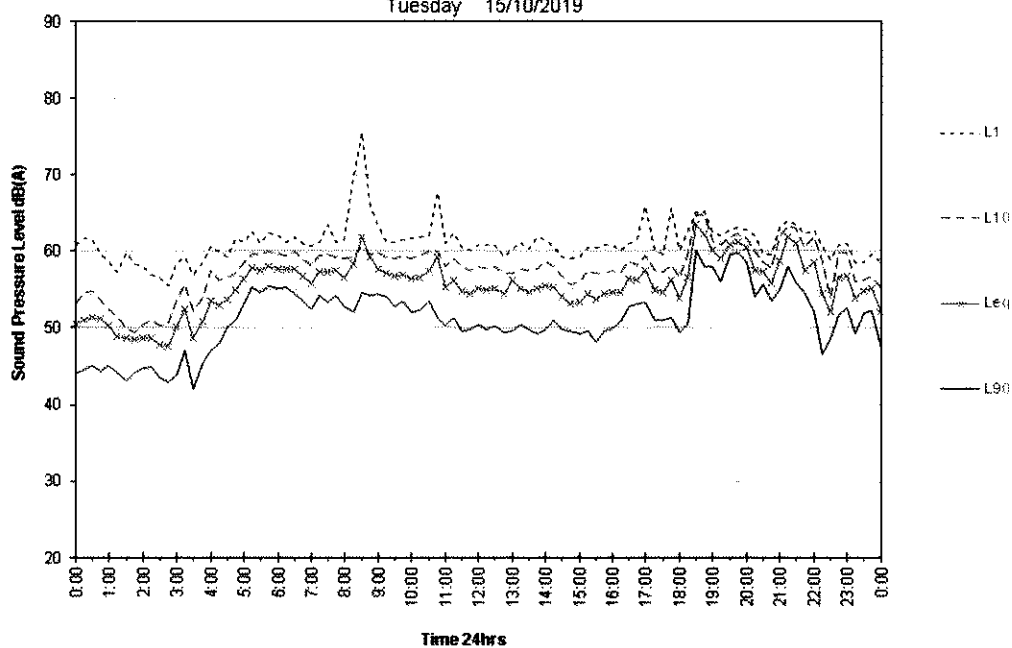




60 Stapylton Jacob's Well Road, Yatala

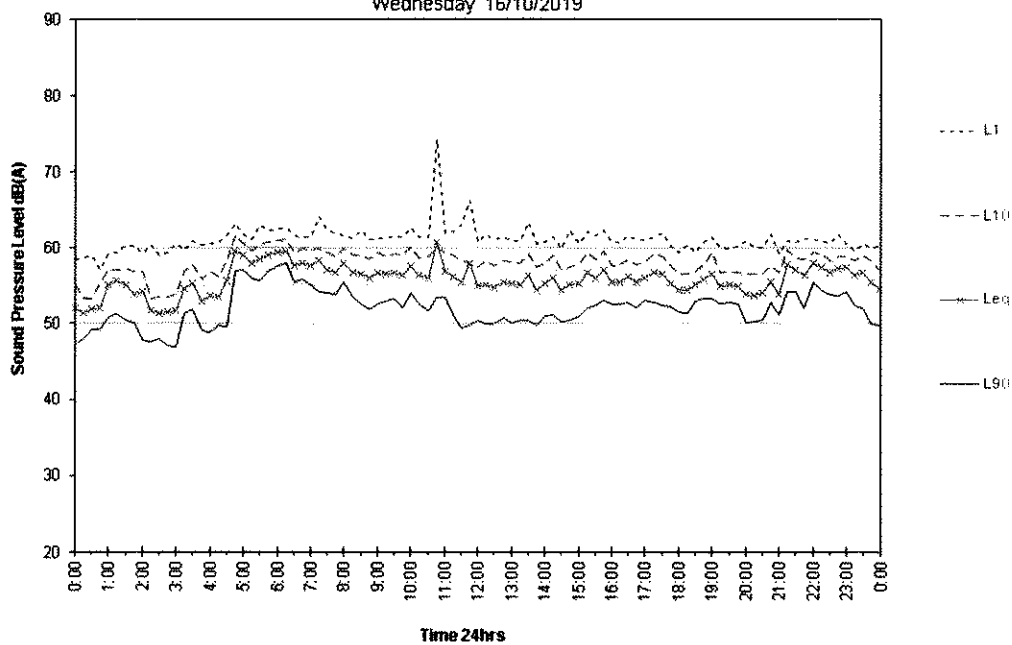
Environmental Noise Monitoring

Tuesday 15/10/2019

**60 Stapylton Jacob's Well Road, Yatala**

Environmental Noise Monitoring

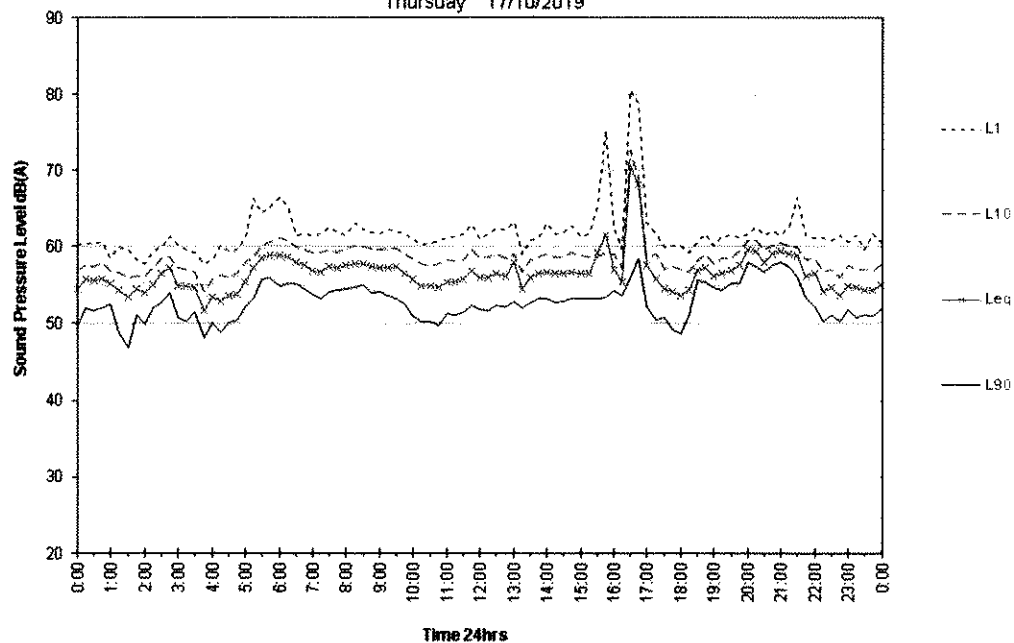
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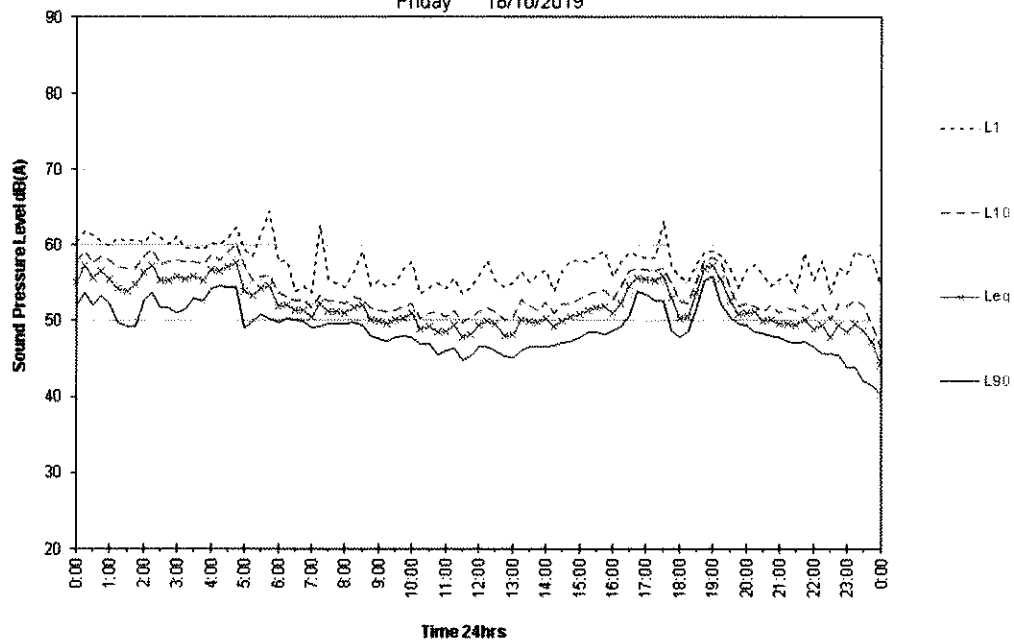
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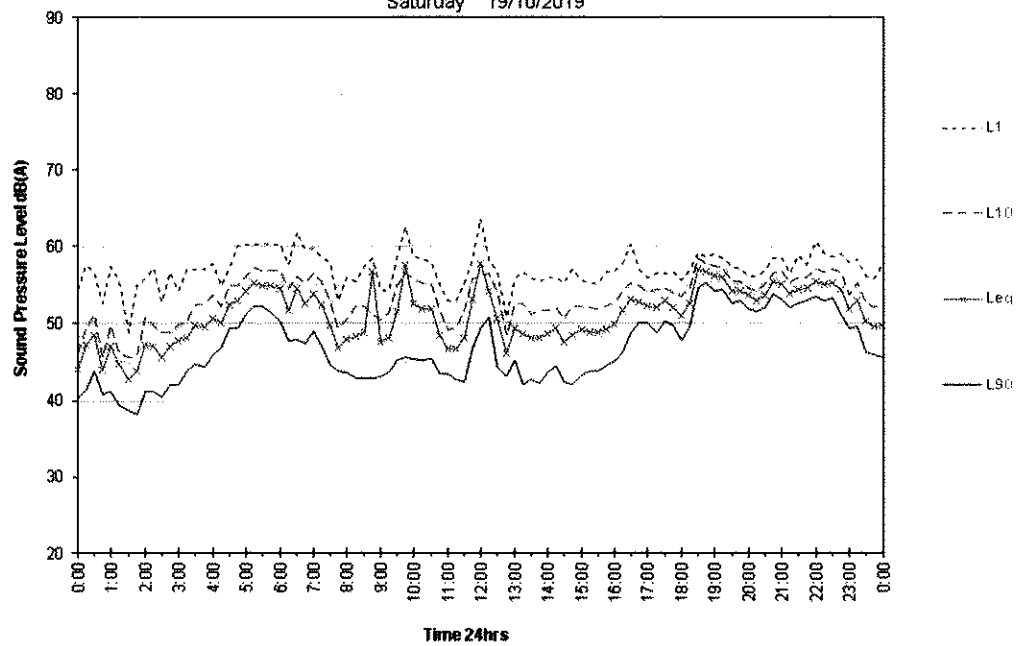
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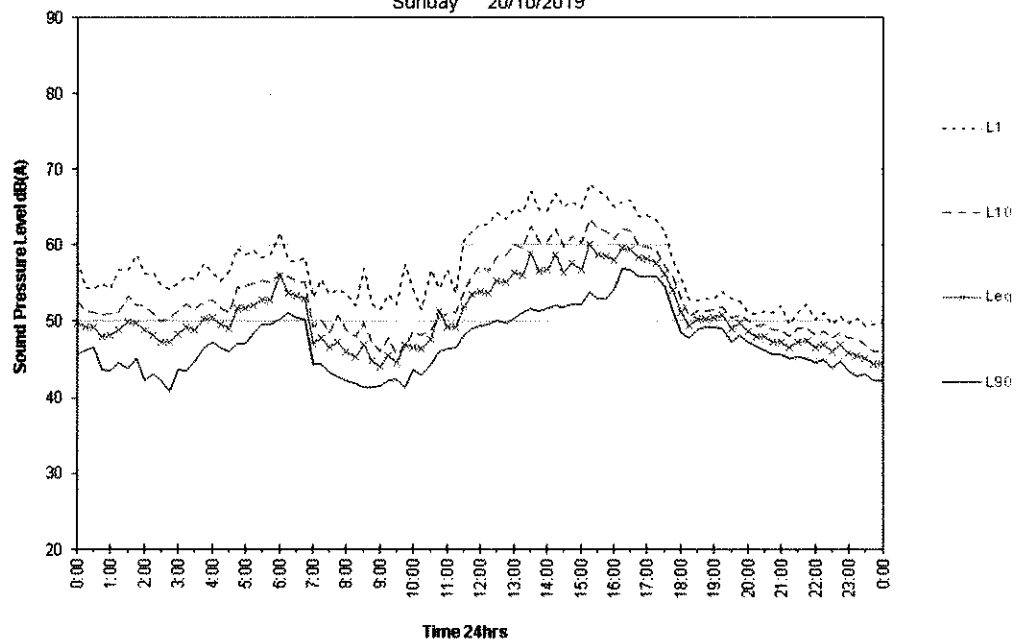
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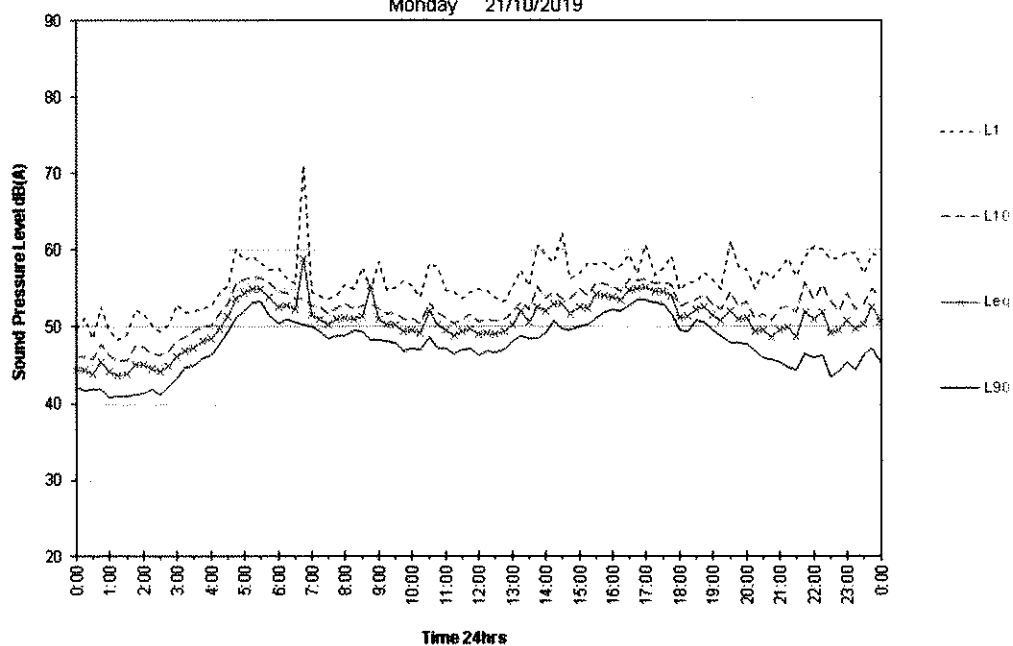
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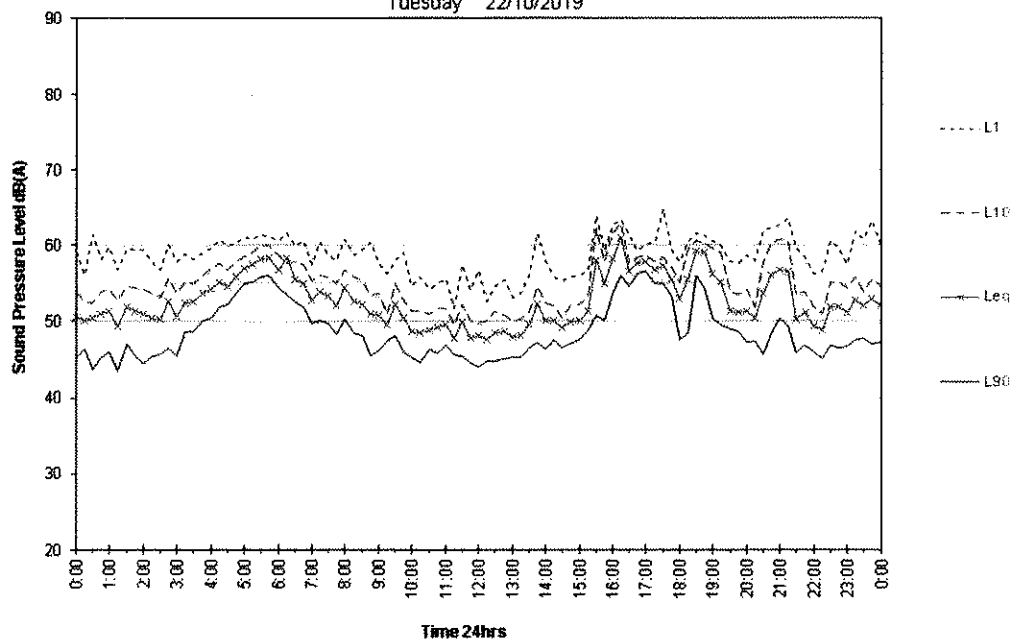
Environmental Noise Monitoring

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Environmental Noise Monitoring

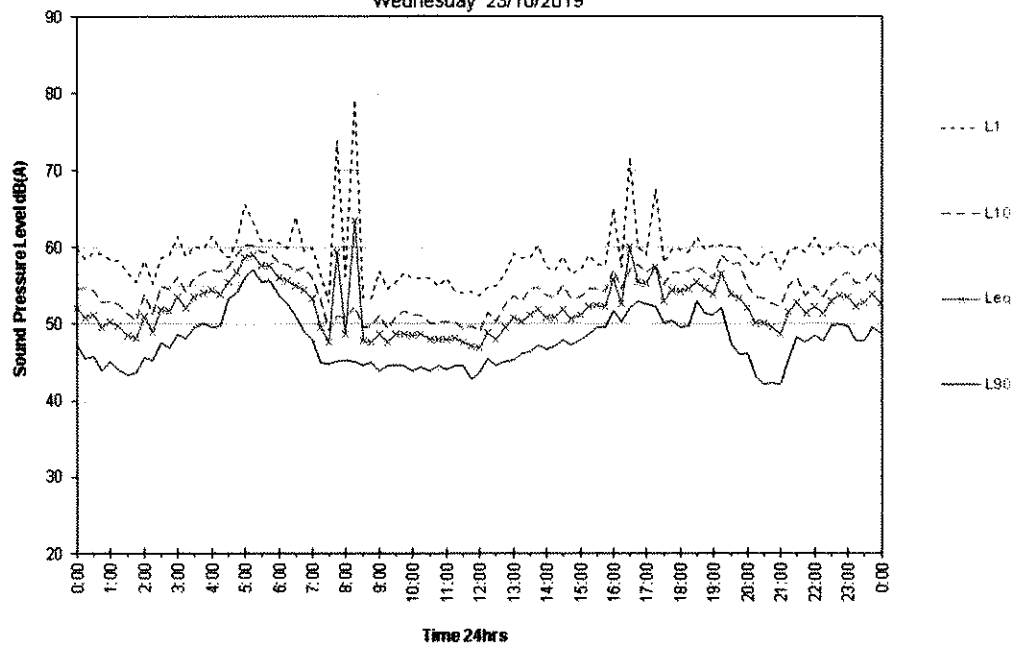
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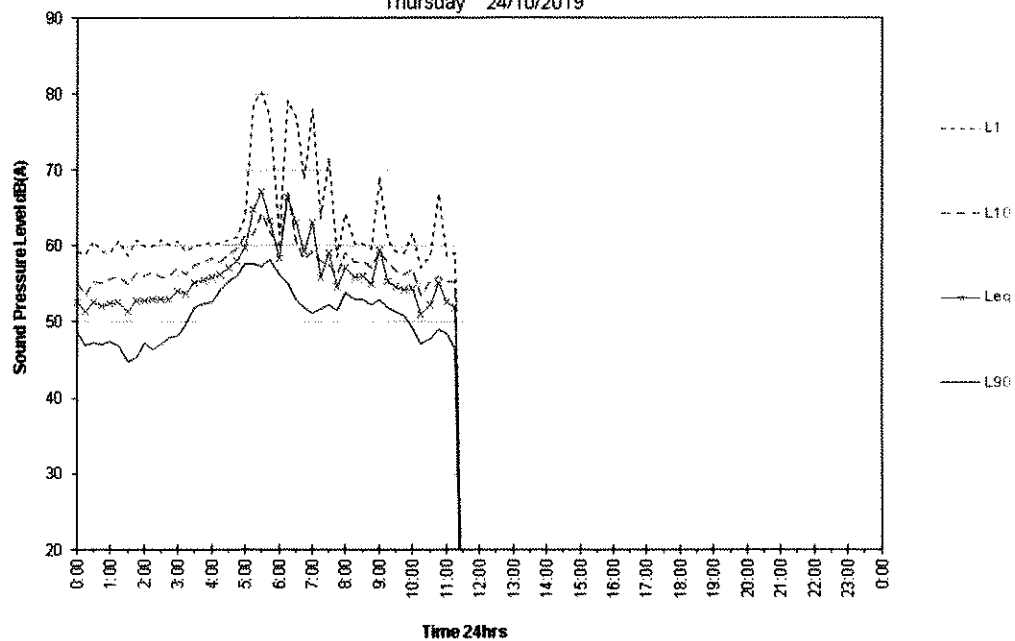
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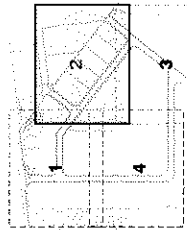


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SERVICES LEGEND

- PROPOSED SEWER
- PROPOSED RISING MAIN
- PROPOSED STORMWATER
- PROPOSED WATER
- PROPOSED UNDERGROUND ELECTRICITY BY OTHERS
- PROPOSED COMMUNICATIONS BY OTHERS



KEY PLAN
SCALE 1:500

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page 43 of 45
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FRASERS PROPERTY
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA
STAGE 1

Site Address:

60 STAPYLTON JACOBS WELL
ROAD, STAPYLTON QLD 4207

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RPD:

Lot: 301
Plan: 59280002
Local Authority: CITY OF GOLD COAST
Council: GOSNOL
Level Datum: AHD
Meridian:
Contour Interval: 0.5M
BSM:
RL:

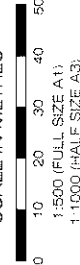
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SHEET 2 OF 4

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Approved	MG
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Date	09-02-2021
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SERVICES LOCATION DIAGRAM SHEET 2 OF 4



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Project: **VANTAGE YATALA
STAGE 1**

Site Address:
60 STAPYLTON JACOBS WELL,
ROAD, STAPYLTON QLD 4207

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Contour Interval	.
BSM	BSM
RL	RL

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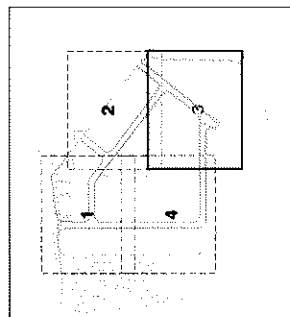
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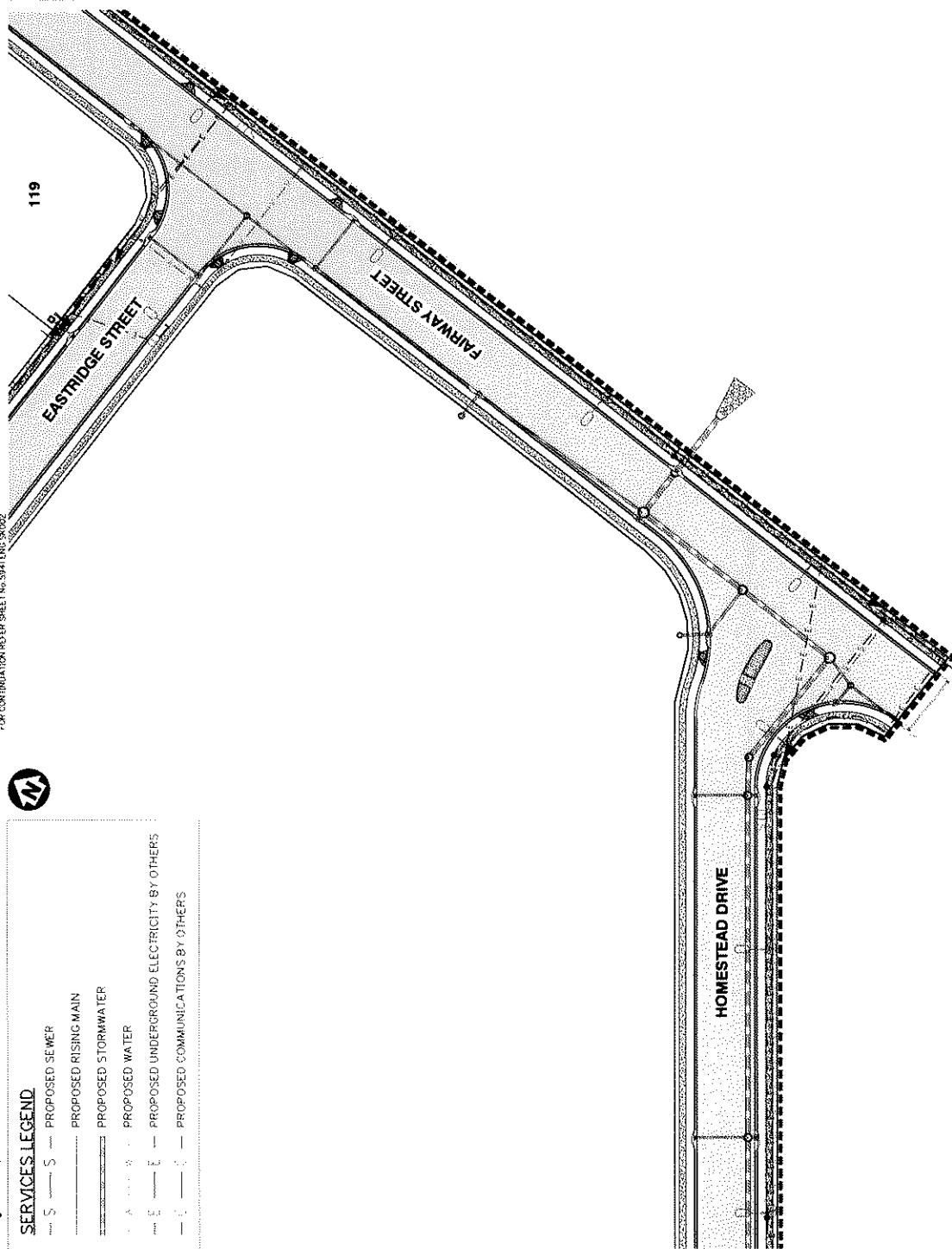
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Signed	<i>[Signature]</i>
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SERVICES LOCATION DIAGRAM SHEET 3 OF 4



KEY PLAN
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SERVICES LEGEND

- | PROPOSED SEWER | PROPOSED RISING MAIN | PROPOSED STORMWATER | PROPOSED WATER | PROPOSED UNDERGROUND ELECTRICITY BY OTHERS | PROPOSED COMMUNICATIONS BY OTHERS |
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FUTURE STAGES

A low-angle photograph of a modern building's exterior. The building features large glass windows reflecting the sky and clouds, and a prominent red vertical panel on the right side. A small tree with green and yellowing leaves is in the foreground. The text 'APPENDIX K' is overlaid in the top right corner.

APPENDIX K

OPEN SPACE MANAGEMENT PLAN

OPEN SPACE MANAGEMENT PLAN

Conservation Dedication

Lot 504 Homestead Drive

STAPYLTON QLD 4207

LOT 504 on SP329485

PREPARED FOR:

FPI Queensland Pty Ltd
Vantage Industrial Estate Stage
3

April 2023



gassman
development
perspectives

project coordination
urban + regional planning
landscape + urban design
environmental management
visualisation + spatial services
surveying services
advisory services

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Revision / Checking History

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1.0	Jacob Moran	Hugh Osborn/Fraser Gassman
1.1	Hugh Osborn	Erika Di Luigi

Approval for Issue

Version	Name	Position	Signature	Date
1.1	Brian Gassman	Director		21 st of April 2023

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1 Introduction

1.1 Purpose

This Open Space Management Plan (OSMP) details the location, management and protection of the area to be dedicated to Council as an Open Space Lot for the purposes of conservation, following the implementation of Stage 3 of the Vantage Industrial Estate development. The area for dedication as Open Space has been identified as such due to containing the most significant presence of natural values able to be retained within the development in accordance with the Gold Coast Planning Scheme and will be dedicated as a part of the Vantage Industrial Estate, specifically, the Stage 3 ROL. The OSMP seeks to retain and protect, through dedication as conservation, the area identified as having significant natural values.

The previously approved Preliminary Approval (MIN/2020/659) identifies an area for use as Open Space with the current Stage 3 of the development seeking to realise this land use designation via a dedication to Council of public Open Space.

The purpose of this OSMP is to provide the below information relating to the dedication of the proposed area, located along the southern boundary of Lot 504 on SP329485, south of Christensen Road South and adjacent to Sandy Creek. The relevant information provided within this OSMP is as follows:

- Summary of OSMP inclusions;
- Establishment and ongoing management outcomes; and
- Responses to relevant codes and conditions.

Figure 1 below provides an extract of the area subject to the OSMP in relation to the rest of the Vantage Industrial Estate, with Stage 3 identified. A detailed plan of the area subject to this Open Space Management Plan is attached in **APPENDIX A – Open Space Management Plan**.

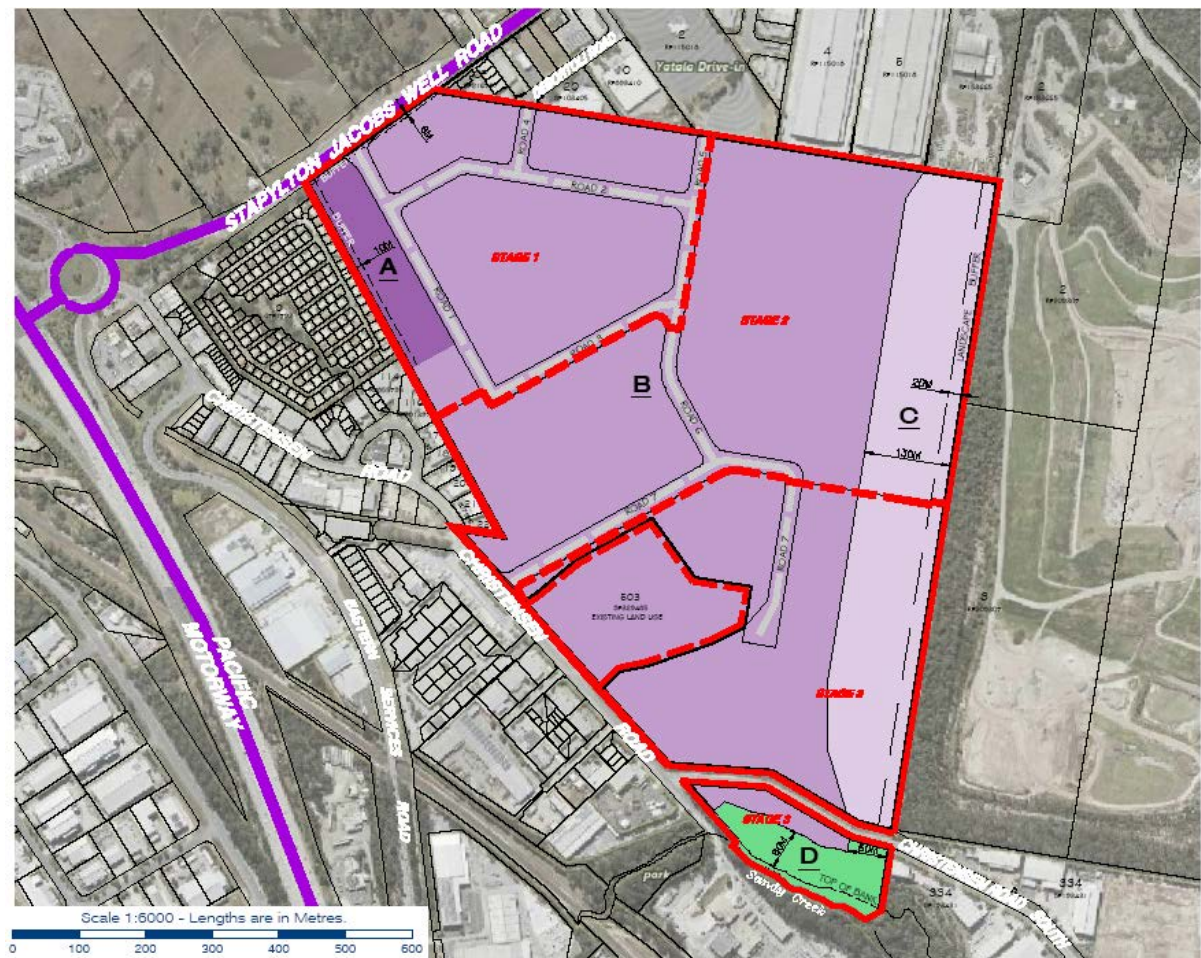


Figure 1 – OSMP indicative area in the context of the greater Vantage Industrial Estate. Extracted from Land Use Classification and Staging Plans (GDP Files, 5941 P LU 01 Revision C, prepared for Minor Change Application MIN/2023/64, 2023)

The broad aim of this OSMP is to provide Council Officers with context and information to guide the appropriate management of the conservation area to meet Council and State requirements for the area. The OSMP has been prepared in accordance with the Gold Coast City Council Open Space Management Guidelines: Guideline for the preparation of Reports and Plans Associated with the Dedication of Public Open Space (March 2007, Version 1).

1.2 Site Description and Proposal

Development Name	Vantage Industrial Estate
Site Owners	Australand Industrial No. 89 Pty Ltd
Location	Lot 504 Homestead Drive, Stapylton QLD 4207
Legal Description	Lot 504 on SP329485
Development Application	Industrial Subdivision

1.2.1 Site Characteristics

The Stage 3 area is currently the balance lot resulting from previous industrial subdivisions during earlier stages of the overall development of Vantage Industrial Estate (the subject area). The lot is formally described as Lot 504 on SP329485 and contains the proposed Open Space area (the subject site), an area for dedication to Council situated on the southernmost lot boundary, to the south of Christensen Road South, directly adjacent to Sandy Creek. The subject site includes a riparian corridor of remnant vegetation of approximately 60m wide from the high bank of Sandy Creek. The balance lot within the subject area has been previously cleared through earlier OPW approvals and currently resembles a civil construction site, apart from the southern side of Christensen Road South containing cleared area and a portion of remnant native vegetation. This portion of land to the south of Christensen Road South, adjoins the proposed Open Space area to the north, with the rest of the area uncleared and densely vegetated to a width of approximately 60m north along Sandy Creek and a small area to its south. The proposed Open Space area forms a connection to external areas of the Sandy Creek corridor to the east, and is surrounded by other industrial development to the south, west and further east.

An Ecological Assessment Report (EAR) was prepared in the early stages of the overall site's development to support clearing of future industrial development areas. This reporting recorded details of ecological features and values within the subject area, including vegetation communities, the likelihood or presence of significant fauna and flora, and further assessed environment considerations including relevant federal and state legislation, compliance requirements, potential impacts as well as amelioration strategies, thereby informing the proponent and Council to allow for these matters to be appropriately considered.

The EAR identifies two main vegetation communities located within the area proposed as Open Space described as low open forest (consisting of *Melaleuca nodosa* +/- *E. crebra*, *C. citriodora*) and tall open forest (consisting of *Eucalyptus grandis* +/- *C. intermedia*, *E. major*). It was concluded that these vegetation communities were analogous to Regional Ecosystems (RE) 12.11.5e or 12.3.11 respectively. The area retains its original Regional Ecosystem mapping which was shown to contain Regional Ecosystems (RE) 12.11.25, 12.3.11 and 12.11.5/12.11.24, all of which are either listed as Of concern or No Concern At Present Regional Ecosystems.

In addition, the EAR also identified an active wedge-tailed eagle (WTE) nest within the northern half of the overall development. This nest was located within an area proposed to be cleared. As such a Wedge-tailed Eagle Relocation Management Plan was developed by Ecosure discussing relevant WTE ecology including movement patterns and important considerations for the relocation of the WTE nest. The Wedge-tailed Eagle Relocation Management Plan determined the most suitable location for the nest relocation within the constraints of the project which resulted in the installation of an artificial nest into the area proposed as Open Space area for conservation. The nest was subsequently relocated to an artificial nest pole in the south-eastern corner of the subject site.

1.2.2 Proposed Development

The proposed development and dedication is a part of Stage 3 of the Vantage Industrial Estate. This stage consists of two aspects as follows:

- Development permit for ROL – One into Four Lot Subdivision (four industrial lots and common property, public stormwater lot, public open space conservation lot and new public road); and
- Development permit for OPW – Change to Ground Level and Vegetation Clearing.

As mentioned, the proposed development seeks to retain and protect the vegetation mapped within the Open Space area of the land use plan, via a dedication of the land to Council for conservation purposes.

1.2.3 Summary of Open Space Areas (Conservation Lot)

The proposed Open Space area (OSA) encompassed by this OSMP totals 1.91ha (19,100m²) of land adjoining the Sandy Creek riparian corridor on the southern boundary of the site. All vegetation within this area will be retained by the Stage 3 ROL and subsequent works, with adjacent clearing already lawfully undertaken as part of historical works. The land will then be rehabilitated in accordance with the Rehabilitation Management Plan provided with this application and will be subsequently dedicated to Council as a conservation lot for on-going management and protection. The area is intended to act as a functioning ecological community of core habitat for a range of native flora and fauna and seeks to maintain and enhance the current ecological corridor which exists along Sandy Creek. The land will therefore be subject to rehabilitation in the form of natural and assisted regeneration and small areas of reconstruction planting, ensuring the native vegetation communities have the capacity to thrive, maintain high levels of ecological function and ensure natural biodiversity values are protected.

1.2.4 Approvals for the Site

At the time of writing this OSMP, the subject area containing the Vantage Industrial Estate development has been subject to a number of development approvals, all part of the overarching Vantage Industrial Estate development history. A history of relevant previous approvals has been provided and summarised below in their relevant stages.

Preliminary Approval – MIN/2020/659

A Preliminary Approval for making a material Change of Use to override the *Gold Coast Planning Scheme 03* for Industry uses (in accordance with Section 242 of the *Sustainable Planning Act 2009*) was approved over the subject area on 4 March 2013 (MCU201100650). The Preliminary Approval varied the effect of the Planning Scheme with respect to changing the historical zoning and level of assessment for Material Change of Use (MCU), Reconfiguring a Lot (ROL), and Operational Work to realise the future industrial zoning applied over the subject area. This approval also saw the development of the land use classification plan, an extract of which has been provided below **Figure 2**. Since this time, a number of Minor Change applications have been approved making changes to the Preliminary Approval. MIN/2020/659 was the most recently approved package. Similarly to previous Minor Changes, this approval sought amendments to conditions to reflect updated plans (in this case, sewerage system).

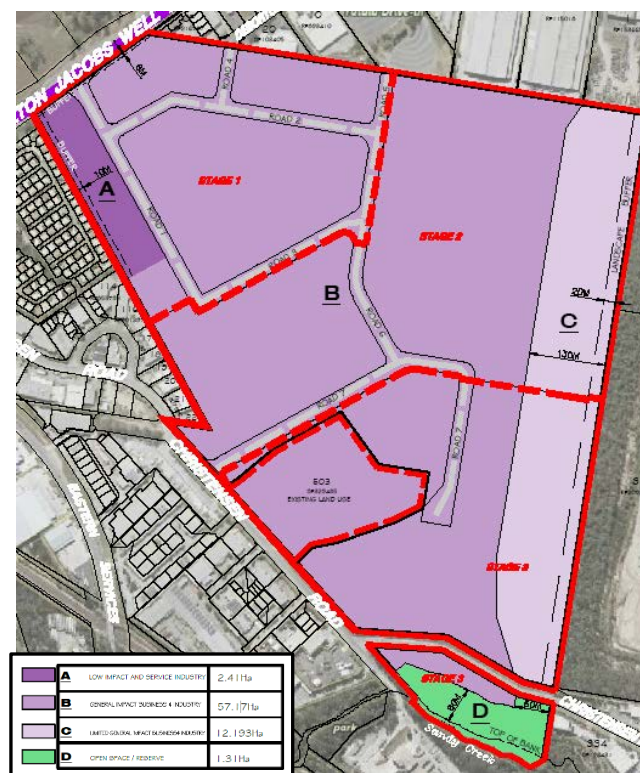


Figure 2 – Land Use Classification Plan (GDP Files, 2023)

Importantly, this Preliminary Approval established conditions relevant to the content and delivery of the future OSMP. These conditions have been addressed and reflected within this report.

A third Minor Change, MIN/2023/64, is currently undergoing assessment and is expected to result in amendment of the associated preliminary approval to provide consistency and ensure it reflects the

final staging and road layout of the subdivision.

The changes included in MIN/2023/64 include

- Amendment of the Land Use Classification Plan to reflect amended staging and road network layout;
- Removal of historical references to 'Stage 4' which has been absorbed into Stage 3; and
- Amendment of approved Acoustic Report to correct administrative error.

This OSMP will reflect the proposed amendments to the Staging and ROL intended as part of MIN/2023/64.

Stage 1 – ROL/2020/123

A development approval for Stage 1 of the overall subdivision of the subject area was granted by Gold Coast City Council on 9 February 2021. This approval includes Reconfiguring a Lot (Community Title Subdivision to create 1 into 22 Industrial lots, common property, balance lot, stormwater lot and new road). In addition, Stage 1 also included approvals for public and private Landscaping (OPW/2020/960), Civil works (OPW/2020/633) and Street naming. The Stage 1 ROL Plan is shown in **Figure 3**.

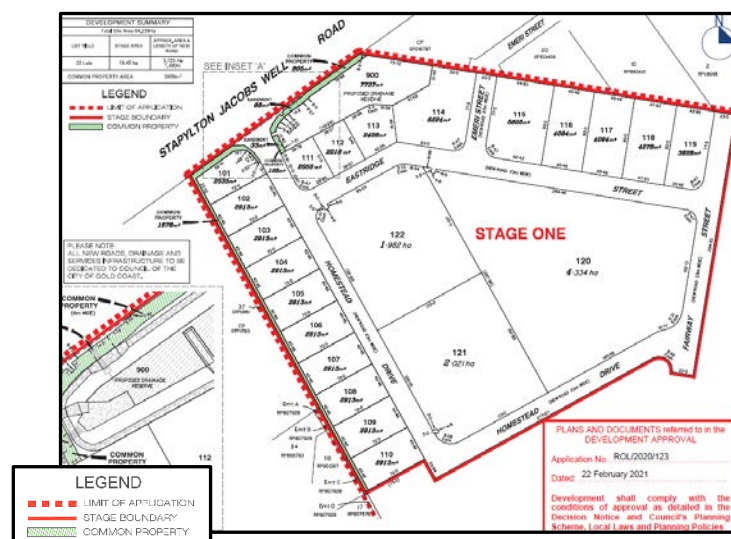


Figure 3 – Stage 1 ROL Plan (GDP Files, 2023)

Stage 2 – OPW201801218 & OPW201801219, OPW/2018/485

The Stage 2 OPW provided a development permit for Operational work - change to ground level & Tree Works and approved the Vegetation Clearing that removed all vegetation from the site. The final submission of amended Wedge-tail eagle nest relocation plan, final (revision 3), prepared by Ecosure dated December 2018, Vegetation Management Plan V3, and Balance of earthworks, prepared by Gassman Development Perspectives dated December 2018. The conditions of approval sought to

ensure the wedge-tailed eagle nest was not impacted within a 100m buffer and that relocation of the nest to a nest pole occurred.



Figure 4 – Vegetation Management Plan V3 extract of retained vegetation forming current OSA (GDP Files, 2018)

Stage 2 – COM/2020/262

A development approval for Stage 2 of the overall subdivision of the subject area was granted by Council on 27 April 2021. This approval includes Reconfiguring a Lot (Community Title Subdivision to create 1 into 7 Industrial Lots, Common Property, Balance Lot, Stormwater Lot, and New Road); and Operational Works (change to ground level). A number of minor change applications were subsequently approved, with the most recent minor change approval being MIN/2022/245. More recently, a third minor change application was lodged over Stage 2 and is currently undergoing assessment with Council (MIN/2023/142). An extract of the current approved plan of development is outlined **Figure 5** below.

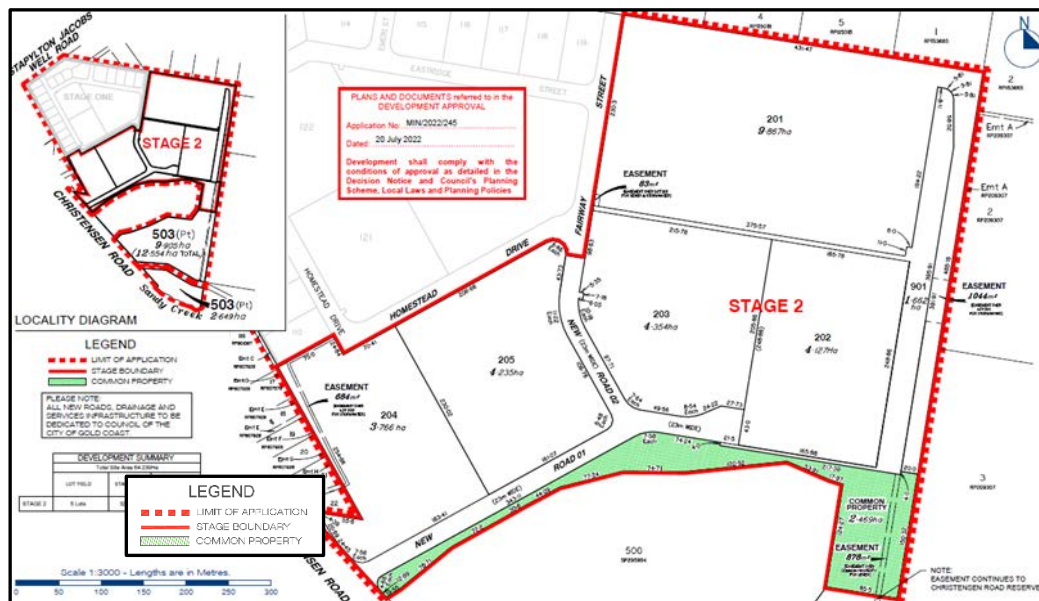


Figure 5 – Stage 2 of the Vantage Industrial Estate – MIN/2022/245 (GDP file, 2023)

Amgrow Boundary Realignment – ROL/2022/50

ROL/2022/50 refers to a boundary realignment that took place between the balance of Vantage Industrial Estate and the Amgrow Industrial land that was situated protruding into what then became part of the Vantage balance area. The ROL saw the rear portion of Lot 500 on SP295994 amalgamated into the Lot 502 on SP316137 (creating Lot 503 and 504 on SP329485 respectively). This rear portion of Lot 500 (now lot 504) was then included within future plans for the proposed Stage 3 of the Estate. The proposal plans have been provided within **Figure 5** below.

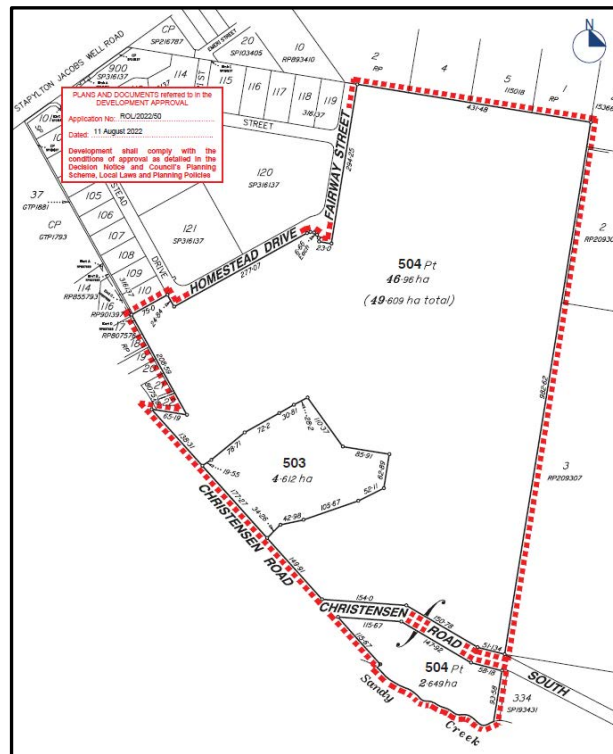


Figure 6 – Amgrow Boundary Realignment (GDP Files, 2023)

1.3 Relevant Development Constraints

Pursuant to the 2007 *Open Space Management Guidelines* the following possible areas of constraint have been assessed against possible constraints imposed upon it by Federal Government Departments, State Government Departments, Local Authorities and inherent physical constraints of the site.

1.3.1 Federal Government Constraints

The *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the Australian Government's primary article of environmental legislation. The EPBC Act provides a legal structure that aims to safeguard and administer nationally and internationally significant flora, fauna, habitat, and heritage places which are defined in the EPBC Act as 'matters of national environmental significance'.

The nine Matters of National Environmental Significance (MNES) to which the EPBC Act applies are:

- world heritage sites;
- national heritage places;
- wetlands of international importance (known as 'Ramsar' wetlands after the international treaty under which these wetlands are listed);
- listed threatened species and ecological communities;
- listed migratory species;

- Commonwealth marine areas;
- Great Barrier Reef Marine Park;
- nuclear actions; and
- water resources (that relate to coal seam gas development and large coal mining development).

The EPBC Act also protects the environment when actions are taken:

- on Commonwealth land or impact upon Commonwealth land
- by an Australian Government agency anywhere in the world
- that impact Commonwealth heritage places overseas.

The EPBC Act protects all these matters. Therefore, a person must refer any actions that may have a significant impact on any of these matters to the environment minister for assessment. The Australian Government: Department of Climate Change, Energy, the Environment and Water (DCCEEW) administers the EPBC Act and implements the Act, in part, via the Department's 'Protected Matters' environmental database tool.

The Protected Matters Database generates a report (based on a defined grid search area) that helps determine whether matters of National Environmental Significance or other matters protected by the EPBC Act are likely to occur in or around the subject site. The information provided in the report is indicative only, and corroboration with a ground-truthing investigation is required.

An indication of possible Protected Matters, as they relate to the site and surrounding area, include:

- 1 x Wetland of International Importance;
- 6 x Listed Threatened Ecological Communities
- 86 x Listed Threatened Species (being within the general area);
- 45 x Migratory Species (being within the general area).

A ground-truthing investigation conducted as part of the Ecological Assessment for the greater development area during an earlier stage of the development assessment did not detect any threatened fauna, flora or Threatened Ecological Communities protected under the EPBC Act.

It is considered that the site is not significantly, or onerously constrained by matters of national significance.

1.3.2 State Government Constraints

Desktop assessment of the whole subject area against the State Assessment and Referral Agency Mapping (SARA DA Mapping) show the subject site to contain regulated vegetation (**Figure 6**). The SARA DA Mapping at the time of this report shows the subject area mapped largely as Category X

pertaining to non-remnant vegetation, with large areas of Category B area, pertaining to regulated remnant vegetation classed as Of Concern and Least Concern Regional Ecosystems. The subject area has been completely cleared of this regulated vegetation, apart from the subject site which is the proposed Open Space area. This clearing was undertaken as part of historical approvals and this layer is no longer represents the current extent of regulated vegetation. The current extent of these areas is provided by Department of Resources (DoR) who administer the *Vegetation Management Act 1999* on their interactive mapping platform Queensland Globe. These areas of regulated native vegetation are now entirely restricted to the OSA as is shown in Figure 7.

The Open Space management area contains both Of Concern and Least Concern Regional Ecosystems, with the majority of the area consisting of the latter.

Further detail regarding Regional Ecosystem descriptions can be found in following the section.

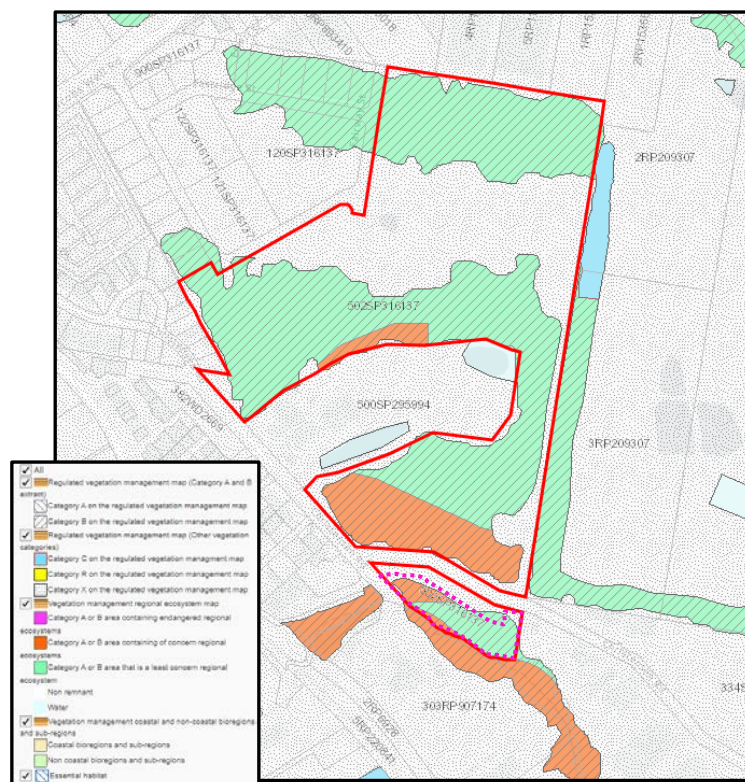


Figure 7 – Native Vegetation Clearing Mapping (SARA DA Mapping, 2023)

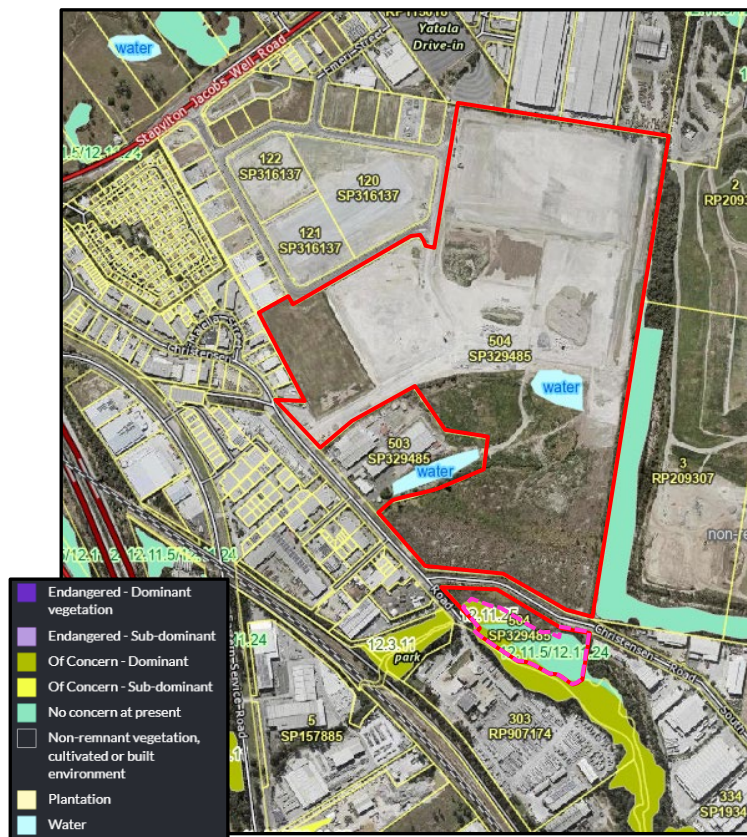


Figure 8 – Remnant Regional Ecosystem Mapping (QLD Globe, 2023)

1.3.2.1 Regional Ecosystems and Protected Wildlife

The subject site is mapped as having four areas of mapped remnant vegetation containing Of concern or No concern at present Regional Ecosystems, as per the Department of Resources (DoR) Queensland Globe representation in previous Figure 7. Although much of the extent of these areas in the subject area has now been cleared under historical approvals and will no longer apply. Previous Ecological Site Assessments have mapped the vegetation communities on site and discussed these in relation to their analogous Regional Ecosystem descriptions. The REs currently mapped on the subject site are REs 12.11.25, 12.11.24, 12.11.5 and 12.3.11 and these are described below:

RE 12.11.25 (Of Concern)

Corymbia henryi and/or *Eucalyptus fibrosa* subsp. *fibrosa* woodland on metamorphics;

Corymbia henryi and/or *Eucalyptus fibrosa* subsp. *fibrosa* woodland. Other frequently occurring canopy species may include *Eucalyptus crebra*, *E. carnea*, *E. tindaliae*, *E. siderophloia*, *C. citriodora* subsp. *variegata*, *Angophora leiocarpa*, *E. acmenoides*, *E. helidonica*, *E. propinqua*, *C. intermedia* and *E. seeana*. Rarely includes patches of *E. dura*. Usually occurs on low hills, hills and footslopes of mountains in near coastal areas on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics. (BVG1M: 10b)

RE 12.11.24 (No concern at present)

Eucalyptus carnea or *E. tindaliae*, *C. intermedia* woodland on metamorphics;

Eucalyptus carnea or *E. tindaliae*, *Corymbia intermedia* woodland +/- *E. crebra* or *E. siderophloia*, *Eucalyptus resinifera*, *Eucalyptus major*, *E. helidonica*, *Angophora woodsiana*, *C. trachyphloia*, *E. microcorys*, *Corymbia citriodora* subsp. *variegata*, *C. henryi*. Occurs on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics usually at altitudes <300 metres. (BVG1M: 9g)

RE 12.11.5 (No concern at present)

Corymbia citriodora subsp. *variegata* woodland to open forest on metamorphics;

Corymbia citriodora subsp. *variegata* open forest to woodland, usually including *Eucalyptus siderophloia*/*E. crebra* (sub coastal ranges), *E. propinqua* and *E. acmenoides* or *E. carnea*. Other species that may be present and abundant locally include *Corymbia intermedia*, *C. trachyphloia* subsp. *trachyphloia*, *Eucalyptus tereticornis*, *E. microcorys*, *E. portuensis*, *E. helidonica*, *E. major*, *E. longirostrata*, *E. biturbinata*, *E. moluccana* and *Angophora leiocarpa*. *Lophostemon confertus* often present in gullies and as a sub-canopy or understorey tree. Mixed understorey of grasses,

shrubs, and ferns. Occurs on hills and ranges of Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics. (BVG1M: 10b)

RE 12.3.11. (Of Concern)

Eucalyptus tereticornis open forest on alluvial plains usually near coast;

Eucalyptus tereticornis +/- *E. siderophloia* and *Corymbia intermedia* open forest to woodland. *Corymbia tessellaris*, *Lophostemon suaveolens* and *Melaleuca quinquenervia* frequently occur and often form a low tree layer. Other species present in scattered patches or low densities include *Angophora leiocarpa*, *E. exserta*, *E. grandis*, *E. latisinensis*, *E. tindaliae*, *E. racemosa* and *Melaleuca sieberi*. *Corymbia trachyphloia* and/or *C. citriodora* subsp. *variegata* may dominate on areas of Pleistocene alluvia. *Eucalyptus seeana* may be present south of Landsborough and *Livistona decora* may occur in scattered patches or low densities in the Glenbar SF and Wongi SF areas. Occurs on Quaternary alluvial plains and drainage lines along coastal lowlands. Rainfall usually exceeds 1000mm/y. (BVG1M: 16c)

Although the RE types were determined to be present during the Ecological Site Assessment, these surveys grouped like vegetation into vegetation communities and discusses these in relation to the analogous Regional Ecosystem types. The locations and compositions of these patches would require delineation through regional ecosystem ground-truthing mapping if this mapping were to be updated.

The proposed Open Space area contained two of eight vegetation communities identified across the entire Vantage Industrial Estate footprint prior to the commencement of the development. This Ecological Report referred to these as community four - low open forest (*Melaleuca nodosa* +/- *Eucalyptus crebra*, *Corymbia citriodora*) and community six - tall open forest (*Eucalyptus grandis* +/- *C. intermedia*, *E. major*).

In this it was noted that community four was analogous to RE12.11.5e, which broadly aligns with the RE mapping in the area.

Community six, was seen to be more consistent with 12.3.11, the RE type associated with the alluvial areas of riparian vegetation surrounding Sandy Creek. The vegetation community descriptions provided by the ground-truthing surveys provide insight into the dominant species and vegetation characteristics within the area. **Figure 8** depicts the mapping of these vegetation communities at the time they were surveyed.

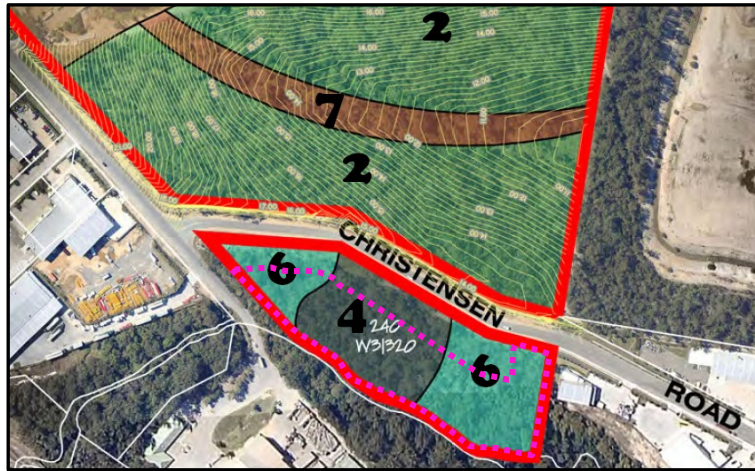


Figure 9 – Vegetation Communities Identified in EAR (Ecological Assessment - Lot 1 on RP6882 and Lot 240 on W31320, 2011)

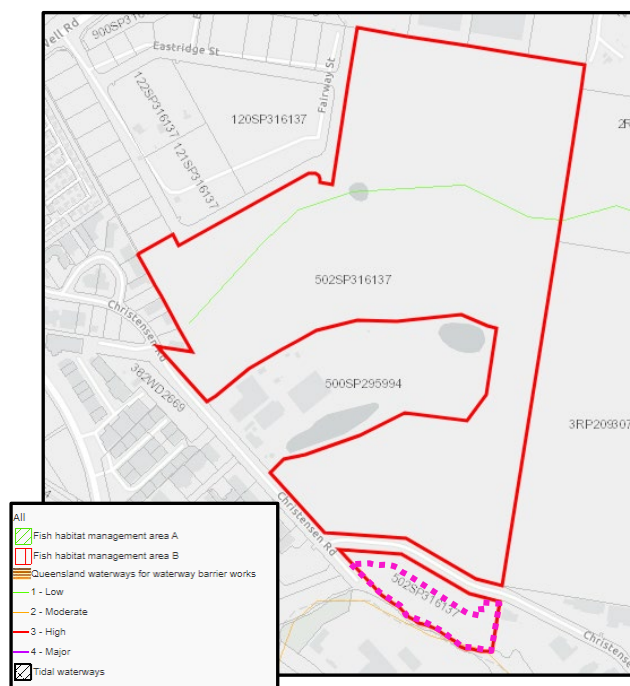
1.3.2.2 Koala Habitat Area

The subject site is mapped as containing areas designated as core koala habitat area as indicated by SARA's DA interactive map in Figure 9. This habitat maintains an ecological corridor to larger areas of mapped koala habitat area to the southeast and east, and importantly contributes to safe koala movement corridors within the local area. The koala habitat area is a state regulated designation designed to provide additional protection to koalas and their habitat and impacts to these areas would generally require referral and subsequent offset requirements when clearing is proposed. The surrounding areas of the balance lot outside the OSA have already been lawfully cleared during previous vegetation clearing works as part of Stage 1 and Stage 2 (OPW/2018/485), therefore this mapping overlay is not present in these areas and this matter is not considered. The remaining OSMP area is the only area within the subject area containing this mapped constraint and the implementation of the OSMP is considered to avoid impact to these mapped areas and appropriately address this State constraint.



1.3.2.3 Fish Habitat Areas

Fish Habitat Areas mapping has been identified as intersecting the site within the area designated for the OSA dedication. Although the intersecting mapping is considered a moderate level, the waterway it refers to is Sandy Creek, with any vegetation associated with Sandy Creek and its riparian corridor retained as a part of the OSA dedication indicated in **Figure 10** below. The Stage 2 Earthworks approval (OPW/2018/485) has effectively removed the low priority waterway also mapped within the subject area to the north.



Given the overall purpose of this OSMP, it is considered that the area subject to this OSMP is not significantly, or onerously constrained by the State Government constraints detailed above.

1.3.3 Local Government Constraints

The *Gold Coast Planning Scheme 03* has identified the following development constraints over the relevant OSA, as seen in **Figure 11, Figure 12, Figure 13, Figure 14, Figure 15, Figure 16, Figure 17**. The listed and mapped overlays affecting the subject site have been previously addressed as a part of historical approvals moreover and therefore the area subject to the OSMP is not significantly constrained by the listed overlays.

OM10-1 Potential Bushfire Hazard Overlay

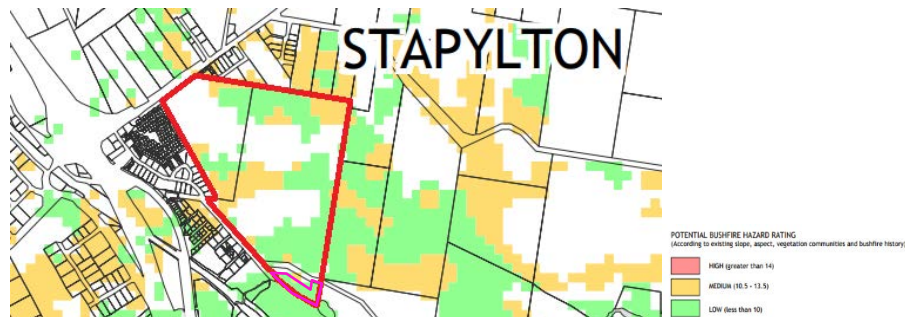


Figure 12 - Potential Bushfire Hazard Overlay Mapping (OM10-1) (Council mapping, 2003)

OM11-1 Natural Wetland and Waterway Areas Overlay



Figure 13 - Natural Wetland and Waterway Areas Overlay Mapping (OM11-1) (Council mapping, 2003)

OM14-1 Acid Sulphate Soil Hazard Areas Overlay



Figure 14 - Acid Sulphate Soil Hazard Areas Overlay Mapping (OM14-1) (Council mapping, 2003)

OM-17-5 Natural Hazard (Flood) Management Areas Overlay

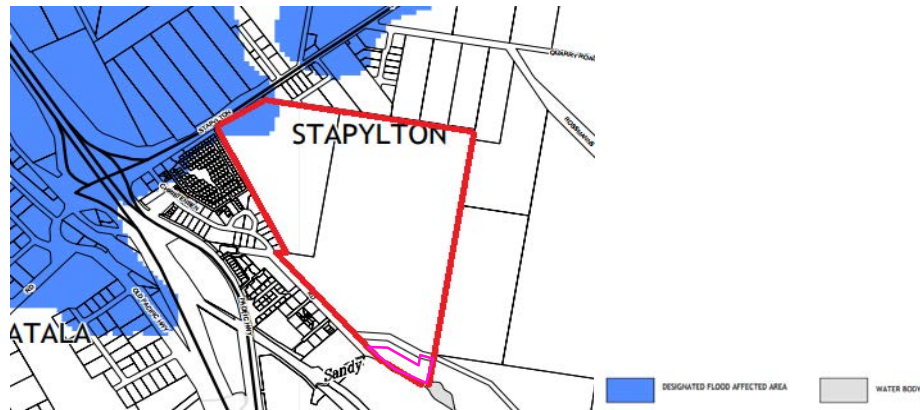


Figure 15 - Natural Hazard (Flood) Management Areas Overlay Mapping (OM17-5) (Council mapping, 2003)

OM20-1 Conservation Strategy Plan Overlay

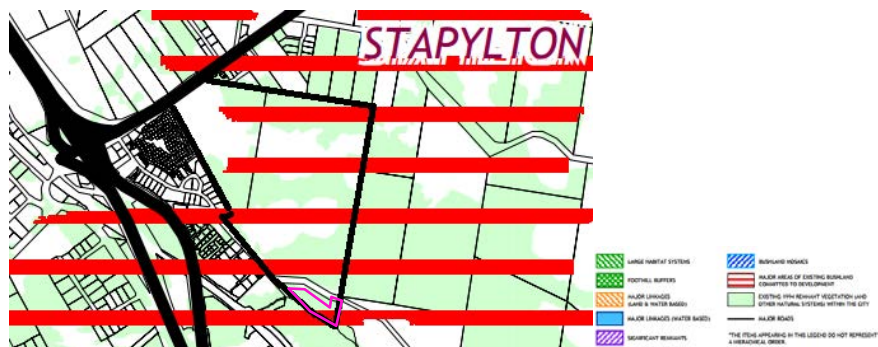


Figure 16 - Conservation Strategy Plan Overlay Mapping (OM20-1) (Council mapping, 2003)

OM22-1 Scenic Tourist Routes Overlay



Figure 17 - Scenic Tourist Routes Overlay Mapping (OM22-1) (Council mapping, 2003)

OM23-1 Extractive Resources Overlay Mapping

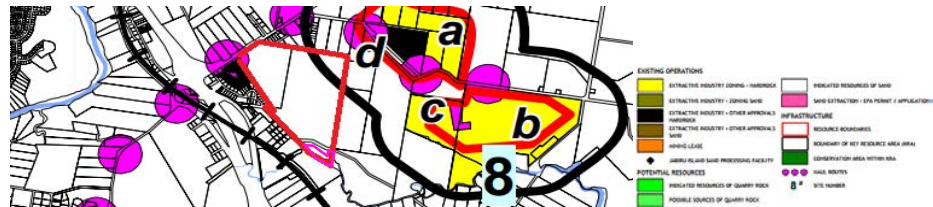


Figure 18 - Extractive Resources Overlay Mapping (OM23-1) (Council mapping, 2003)

1.3.4 Physical Constraints

As previously mentioned, the proposed OSA adjoins Sandy Creek and includes a portion of the northern riparian zone. This waterway forms a natural physical constraint as well as providing a distinct vegetation area where vegetation may differ from the rest of the sit given the proximity to a waterway. The north-eastern corner of the Open Space Area is burdened by an existing Council fire access trail. This trail is in the form of an unsealed dirt road, with access provided along the site's boundary from Christensen Road South. Adjacent to this cleared fire trail, a small area of cleared land exists resulting from the required works to safely relocate the wedge-tailed eagle nest, which is remains within this area.

2 Dedication Area and Design

2.1 Open Space Conservation Area

This section of this OSMP will provide details about the design and rehabilitation of the Conservation areas, describing any relevant features as well.

Conservation Area size, shape, and layout	The proposed open space area is comprised of a single area of land, adjoining Sandy Creek. The land is approximately 1.31ha, irregular in shape, following the creek extent on the southern boundary and maintaining a buffer from the creek of at least 60m to the north.
Function and Connectivity	The conservation area's primary function is the retention and conservation of natural areas designated through the development assessment process as open space with the intention to maintain green space in the city and has been chosen to be of high ecological value. A number of ancillary functions are prescribed to the area including: • Ecological significance and protection; • Provision of habitat for wildlife; • Rehabilitation and recruitment of native species; • Supporting environmental amenity; and • Aesthetic values. The area is being dedicated as open space to ensure the ecological functionality and viability of the Sandy Creek corridor is maintained as well as seeking to protect areas identified as Of Concern Regional Ecosystems. Notably, the OSA will also maintain the koala habitat area corridor that currently exists following Sandy Creek to the east, connecting the site to a larger area of mapped koala habitat area.
Relevant Infrastructure	The OSA will be delineated from the rest of the site via the use of koala-friendly fencing implemented to protect koala and other species from high-risk areas such as Industrial lots and allow movement in areas of acceptable risk. The fencing design will use koala exclusion fencing to prevent koalas from accessing the adjoining industrial lots and roads from the OSA. However, the design will ensure the external side of the fence (within

	the Industrial lot or road reserve) does not exclude koalas from exiting to the OSA from these high-risk areas in the event they find a way in. No fencing is proposed for the southern boundary area along Sandy Creek, if fencing is proposed however, it will not impede koala movement.
Context	The Open Space conservation land has been designed and allocated to protect remnant vegetation throughout the site. The exact boundaries of the lot were designated to ensure maximum protection of any relevant significant environmental values within the site. The boundaries of the conservation area also ensure compliance with the Preliminary Approval and provide a minimum 60m buffer from Sandy Creek.
Purposes	The overarching purpose of this conservation area is to ensure the protection of the identified areas of environmental significance appropriate rehabilitation, restoration and management protocols. This includes ensuring compliance with all relevant conditions and legislation. Specific detail surrounding relevant management systems and rehabilitation protocols have been provided within the Rehabilitation Management Plan submitted with this application.
Environmental Impact/Protection	The proposed conservation areas will not be negatively impacted by the surrounding development and further, will not negatively impact the surrounding development. Appropriate mitigation methods have been prescribed within the rehabilitation plan provided within the Rehabilitation Management Plan to ensure compliant and appropriate rehabilitation is undertaken within the area. The overall nature of the area also ensure environmental amenity is maintained, and negative impacts are minimised.
Access location	Any required access points or the like is described within Rehabilitation Management Plan. Notably, a cleared, gravel road exists and was created as a fire trail to access the eastern boundary of the site.
Community impact	The Open Space area will have beneficial effects on the local community, namely the Vantage Industrial Estate, among other

	neighbouring industrial developments. The rehabilitated conservation areas will provide an aesthetically pleasing outcome, bolstering the environmental amenity of the area. Further the rehabilitation and protection efforts encourage natural recruitment and long-term ecological sustainability and environmental health. The area seeks to further enhance ecological corridors, such as Sandy Creek, through the rehabilitation of these important natural areas to contribute to local habitat connectivity.
Embellishments	Given the nature of the proposal, no infrastructure or embellishments of any kind will be located within the OSA.
Safety	Vehicle access will be restricted to the Open Space area through the use of fencing appropriately constructed and maintained for relevant access. Koala-safe design should also be incorporated to exclude koalas from risks associated with the industrial development.

2.2 Design Rationale

The alignment and spatial elements of the Open Space Area (OSA)² have been designed to accommodate all relevant remnant vegetation within the subject area while simultaneously ensuring all Preliminary Approval requirements and conditions can be met. The OSA has been designed to allow for rehabilitation of the Sandy Creek corridor to meet the 60m buffer distance conditioned and incorporates all mapped and significant vegetation sought to be protected. However, the largest influence on design area has been the creek itself. The overall sought outcomes for this Open Space conservation area are to ensure an ecologically functional habitat corridor is maintained surrounding Sandy Creek and its connection to areas of surrounding habitat and vegetation are unimpeded, whilst also maintaining or improving its environmental value through revegetation work.

In consideration of the site's development constraints (identified earlier), the design of the Open Space park area has been influenced as follows:

- It conserves the most ecologically significant areas of the subject site;
- It creates a habitat corridor through the site and to link adjacent ecologically significant areas;
- Maintains ecological functionality within the wider environment;
- It provides a secure and suitable location for the relocated wedge-tailed eagle nest;
- Enhances ecological values via rehabilitation efforts outlined in ***Rehabilitation Management Plan***.
- Provide a green setting for future development and industry.

2.3 Open Space Considerations

Possible considerations that have been identified on site have been incorporated in the design of the open space area. The following section of the OSMP identifies further considerations and provides information on their mitigation or relevant matters.

2.3.1 Environmentally Significant Functions

As indicated within the associated Planning Assessment Report for the ROL, the land covered by this OSMP is to be dedicated to Council for conservation purposes. The purpose of this dedication is to ensure the long term and sustainable protection and appropriate management of the identified area, as during on ground surveys and desktop reviews alike, the area was found to be ecologically significant. The presence of Sandy Creek and designation of two Of Concern Regional Ecosystems within the OSA informed this importance. The protection and management of the area will ensure the enhanced ecological value and environmental significance of the area will not be compromised at any point. Further it will ensure the longevity and sound ecological functionality of Sandy Creek and its surrounding ecological corridor as a significant habitat.

2.3.2 Wedge Tailed-Eagle Relocation

The EAR associated with the original preliminary approval in 2015 found an active wedge-tailed eagle (*Aquila audax*) (WTE) nest within areas subject to approved clearing within the subject area. In accordance with the Stage 2 Decision notice (OPW201801218 & OPW201801219) issued by Council of the City of Gold Coast (Council), specifically condition 11, the wedge-tailed eagle nest that was located within the project area was to be relocated. Ecosure were contracted and submitted a Wedge-Tailed Eagle Nest Relocation Plan in December 2018 and began work to remove and relocate the nest to the preferred location south of Christensen Road, Stapylton near Sandy Creek in March 2019. The nest, with a diameter of approximately 1.7 m was removed from the tree by cutting the branches around the nest and then securing the three main lateral branches the nest was sitting on with a crane. The trunk of the tree supporting the nest was then cut and it was lowered to the ground into a pit dug to accommodate the structure. Strapping was then positioned around the nest which was carefully separated from the tree trunk and supporting branches with the crane.

A strong light-weight aluminium cradle structure, custom made to hold the nest was manufactured. A tree trunk with suitable height, diameter and strength to hold the cradle structure and nest was sourced from another tree that was scheduled to be removed from the property. The tree trunk was felled, stripped of its lateral branches and bark, transported to the relocation site and installed into a concrete foundation that had been previously prepared.

The wedge-tailed eagle nest relocation plan recommended two monitoring events to test the pole for structural integrity which were completed in 2019 and assessed as excellent. On both occasions the nest was inspected for evidence of occupation though no evidence was found at the time.

The nest pole structure still maintains suitable structure to provide a possible nesting location to this species, though it is unknown whether it has been in recent use. The maintenance of the habitat within the subject OSA will provide potential resources to this species should it persist in the area.

2.3.3 Rehabilitation

As conditioned within the Preliminary approval, rehabilitation works will be undertaken to ensure an enhanced environment and community in the OSA. More specifically, the OSA has been designed to ensure the 60m buffer is maintained from Sandy Creek and will be rehabilitated via assisted regeneration, in accordance with the **Rehabilitation Management Plan (RMP)** submitted as a part of this application (**APPENDIX C**). This width in conjunction with the mapped REs of the area had the largest influence on the design and shape of the conservation area.

2.3.4 Delineation of Open Space Park Area

Where the edges of the Open Space area adjoin road reserve (Christensen Road South) and the Industrial area, the Open Space area will be delineated through the use of koala-sensitive design maximising permeability through the landscape to koalas while ensuring their safe movement. These delineation treatments will be detailed following the endorsement of this Open Space Management Plan and will include the use of both koala-friendly fencing and koala-exclusion fencing based on an assessment of the available habitat corridors and an assessment of risks and impacts to koala and other fauna where applicable.

2.3.5 Embellishments and Fencing

As the intent for the Open Space area is principally to facilitate natural processes and conservation, no public facility embellishments or fencing are proposed within the park.

2.3.6 Access

Access for maintenance and fire management will be provided by direct access off Christensen Road South through the existing Fire/maintenance trail

2.3.7 Vegetation removal

No vegetation removal is proposed within the proposed Open Space area. Existing vegetation will be retained and rehabilitated, and additional trees planted within a 60 m wide band utilising local native species.

2.3.8 Linkages

Linkage values on the subject site will not be negatively affected by the implementation of this OSMP and will be embellished on the subject site by assisted natural regeneration, with a small area of active planting as detailed within the **Rehabilitation Management Plan**. This plan will detail any relevant, necessary, or conditioned rehabilitation required to ensure the ecological viability of the area is conserved. The primary form of revegetation undertaken will be assisted regeneration, predominantly in the form of weed control and management. This rehabilitation seeks to maintain and improve the quality of the habitat to ensure connections and quality of habitat are maintained, particularly to the larger areas of native remnant vegetation and similar habitat in the southeast and east. The main linkage corridor follows the Sandy Creek Corridor, with the maintenance, monitoring and management of this being an integral part of the rehabilitation proposed.

2.3.9 Stormwater and Hydraulic Management Provisions

The area under this OSMP has a gradual decline toward the south (Sandy Creek) and as no embellishments or changes to ground conditions are proposed within this area, the current stormwater conditions will remain un-altered. The area will maintain any provisions required within relevant Stormwater Management Plans, previously approved by Council. The area will also maintain existing natural drainage patterns.

2.3.10 Erosion and Sediment Control Plan

A detailed Erosion and Sediment Control Plan forms part of this development application within the Change to Ground Level drawings and will be adhered to at all times throughout the development.

3 Code, Condition and Development Compliance

The following sections demonstrate compliance through assessment or other means, specifically related to the OSA and OSMP. This section is included as conditioned within MIN/2020/659, in which the OSMP must be submitted and approved by the Chief Executive Officer prior to the approval of any development permit for operational works. A Council approved letter must be issued to confirm approval. References to 'Precinct D' and/or 'Stage 4' are historical and no longer included within the Preliminary Approval, however, have been maintained to ensure consistency with the conditions and provisions as they are drafted. Whilst terms have changed, the area and extent of the OSA have not differed.

The above intent has been purposefully created to align with the intent of the Precinct 6 – Open Space Land-use designation available within the Gold Coast Planning Scheme 03, and the proposed OSA complies with the above, as such, the scheme is therefore complied with for the matters relating to the OSMP.

3.1 Condition Compliance

The Preliminary Approval (MIN/2020/659), prescribes a number of conditions this Open Space Management Plan must be compliant with and abide by. Namely *Conditions 24 – 29* relate directly to the construction, implementation, and use of this OSMP and OSA.

3.1.1 Condition Response

As mentioned above, within the preliminary approval are several conditions requiring response and compliance. To explicitly show compliance to Council (specifically with *condition (25)(c)(iii)(B)*), a targeted response table to each of the relevant conditions has been provided below (**Table 1**).

Table 1. Targeted Open Space Condition Responses				
Condition No.	Condition		GDP Response	
Open Space				
24. Transfer of Open Space	a. The applicant must transfer to Council the areas of public open space listed below, as identified on the plans indicated (subject to any amendments required by these conditions):		COMPLIES – The proposed open space area to be dedicated to council includes the land zoned as Area D – Open Space/Recreation. The applicant notes that the Plan Reference to the Land Use Classification and Staging Plan, drawing 5941 P LU 01, Revision B, dated 18/06/2020 and prepared by GDP relates to the most recently approved Minor Change MIN/2020/659. The recently lodged Preliminary Approval Minor Change application MIN/2023/64, (lodged on the 21 February 2023)is currently undergoing assessment with Council. This Minor Change application includes an updated Land Use Classification and Staging Plan, drawing 5941 P LU 01, Revision C, dated 23/01/2023 and prepared by GDP, which includes Area D containing the Open Space Area which will be transferred to Council.	
	Purpose	Description on Plan		Plan Ref
	Conservation Area	Area D – Open Space/Reserve		Land Use Classification and Staging Plan, drawing 5941 P LU 01, Revision B, dated 18/06/2020 and prepared by GDP

		GDP understands Area D to be materially the same in both Revision B and Revision C of the Land Use Plan and notes that the area for transfer should be changed to reference Land Use Classification and Staging Plan 5941 P LU 01, Revision C, dated 23/01/2023 and prepared by GDP to provide the most consistency for the existing approvals at the site, following approval of MIN/2023/64 by Council.
	b. The land identified in paragraph (a) must be transferred in fee simple as 'Public open Space' to council of the City of Gold Coast as trustee.	GDP Acknowledges this condition and this dedication will occur as part of plan sealing for the reconfiguring a lot aspect.
	c. Council will hold the land in trust for community infrastructure and may use the land, or permit the land to be used, for purposes that do not compromise the purpose for which the land is dedicated.	GDP Acknowledges this condition.
	d. The applicant must lodge the transfer documents with Council at the same time as lodgement of the subdivision plans for Stage 4 or, if no subdivision plans are required, prior to the commencement of any use within Stage 4 of this development.	COMPLIES – The transfer will occur prior to commencement of any Stage 3 use. The most recently lodged preliminary approval (currently undergoing assessment) has been amended to Stage 3 (reference to Stage 4 is an error).
	e. Where subdivision plans are required, the applicant must provide Council with evidence of the transfer of the land identified in paragraph (a) within 30 days of the registration of the subdivision plan that shows the entirety of the land identified in paragraph (a).	COMPLIES – The transfer will occur prior to commencement of any Stage 3 use. The most recently lodged preliminary approval (currently undergoing assessment) has been amended to Stage 3 (reference to Stage 4 is an error).
	f. The transfer of the land to Council must be at no cost to Council.	GDP Acknowledges this condition.
Open Space Management Plan		
25. Preparation of open space management plan (OSMP) to be submitted for approval addressing all areas of land to be transferred to Council as public open space	a. An Open Space Management Plan ('OSMP') must be prepared, addressing all areas of land to be transferred to Council, specifically the area of land south of Christensen Road to be dedicated to Council as public open space.	COMPLIES – This OSMP has been prepared, addressing the land south of Christensen Road, identified as Area D on the Land Use Classification Plan.
	b. The OSMP must be submitted and approved by the Chief Executive Officer prior to the approval of any development permit for operational works (change to ground level, bulk earthworks, tree works, landscaping, whichever comes first) within Stage 4 of this development. The OSMP is not an approved report until a Council approved letter has been issued in respect of it.	COMPLIES - This OSMP has been submitted as a part of the Stage 3 ROL and OPW application. The most recently lodged preliminary approval (currently undergoing assessment) has been amended to Stage 3 (reference to Stage 4 is an error).
	c. The OSMP must be prepared by a suitably qualified professional and must be: ii. In accordance with Council's Open Space Management Guideline: Guideline for the preparation of Reports and Plans associated with the dedication of Public Open Space (November 2007, Version 1); and iii. Generally, in accordance with: A. The approved reconfiguration layout (including any amendments required by these conditions). B. Relevant conditions of approval.	COMPLIES – This OSMP was prepared by a suitably qualified person and has been written in accordance with the listed items.
	d. The submitted OSMP must demonstrate compliance with the Open Space requirements in Section 6 of the Planning Scheme Policy 11 – Land Development Guidelines, Standard Specifications and Drawings and must address the following site-specific issue: ii. Detail a rehabilitated sixty (60) metre buffer from the high bank of Sandy Creek.	COMPLIES – The <i>Rehabilitation Management Plan</i> provides the relevant drawings complying with the guidelines demonstrating rehabilitation areas, including the 60m buffer.
26. Compliance assessment of OSMP	The OSMP is a document requiring compliance assessment under the Sustainable Planning Act 2009. A request for compliance assessment must be made in accordance with the Sustainable Planning Act 2009 for a compliance certificate approving the document, in accordance with the following:	
	Matters or things against which the	The planning scheme's Landscape Works

	document must be assessed - Specific Development Code; - The planning scheme's Vegetation Management - Specific Development Code; - The planning scheme's Bushfire Management Areas Constraint Code; - The planning scheme's Canals and Waterways Constraint Code; - The planning scheme's Cultural Heritage (Indigenous) Constraint Code; - The planning scheme's Natural Wetland Areas and Natural Waterways Constraint Code; - The planning scheme's Nature Conservation Constraint Code; - Policy 10 – Guidelines for Preparing Management Plans and Plans of Development; - Planning Scheme Policy 11 – Land Development Guidelines; - Planning Scheme Policy 17 – Site Analysis; and - Council's Open Space Management Guideline: Guideline for the preparation of Reports and Plans associated with the dedication of Public Open Space (November 2007, Version 1). Compliance assessor Gold Coast City Council When the request for compliance assessment must be made Prior to the approval of any development applications for operational work (inclusive of change to ground level, works for infrastructure, vegetation clearing or landscape work) for Stage 3. The OSMP is not an approved report until a compliance certificate has been issued in respect of it.	
27. Compliance certificate with future operational work development applications	A copy of compliance certificate for the OSMP must be provided with any future operational work development applications for Stage 4.	GDP acknowledges this condition. The most recently lodged preliminary approval (currently undergoing assessment) has been amended to Stage 3 (reference to Stage 4 is an error).
28. Compliance with OSMP prior to acceptance of open space 'On Maintenance'	a. All works specified in the OSMP, and any conditions imposed on the compliance certificate must be carried out in accordance with the approved plan at no cost to Council and to the satisfaction of the Chief Executive Officer, prior to Council accepting the open space 'On Maintenance' in accordance with Planning Scheme Policy 11 – Land Development Guidelines, Standard Specifications and Drawings. b. The applicant must provide certification from a qualified professional that all works in the approved OSMP and associated design drawings have been implemented on-site in accordance with the OSMP and the conditions of approval as stated on the compliance certificate approving the OSMP. This certification must be provided to the Council prior to accepting the works 'On Maintenance'.	GDP acknowledges this condition. GDP acknowledges this condition.

29. Revegetation to use Local provenance Stock	a. All revegetation for the purposes of ecological rehabilitation and restoration must be undertaken using only local provenance plant stock in accordance with Appendix 1A of Open Space Management Guideline: Guideline for the preparation of Reports and Plans associated with the dedication of Public Open Space (November 2007, Version 1).	COMPLIES – Any rehabilitation related efforts or processes are managed and defined within the <i>Rehabilitation Management Plan</i> . However, if any revegetation or like planting is required, local stock will be used.
	b. Unless otherwise approved to the satisfaction of the Chief Executive Officer, local provenance plant stock is to be sourced from seed or vegetative material located no further than 10 kilometres from the subject site.	COMPLIES – Any rehabilitation related efforts or processes are managed and defined within the <i>Rehabilitation Management Plan</i> . However, if any revegetation or like planting is required, local stock will be used.

3.2 Other Matters and Code Compliance

Condition 26 relates to a compliance assessment for the OSMP Document. In this condition, assessment demonstrating compliance is required against the listed codes and matters. The below Code Applicability Table (**Table 2**), has been generated to assess each codes applicability to this particular instance.

Table 2. Code Applicability Table	
Code	Applicability Response
Landscape Works Development Code	Not Applicable – As this OSA and OSMP does not propose any landscape work, an assessment against this code is not applicable in this instance.
Vegetation Management Development Code	Not Applicable – As this OSMP seeks to retain and protect vegetation, habitat and ecological value of the area denoted as Area D on the Land Use Plan, no operational work for vegetation clearing is proposed. As such assessment against this code is not considered necessary in this instance.
Bushfire Management Areas Constraint Code	Applicable – A response to the Bushfire Management Areas Constraint Code is provided with this OSMP within Appendix B .
Canals and Waterways Constraint Code	Not Applicable – Although the subject site is adjacent to a body of water in the form of Sandy Creek, the site is not identified on Overlay Map OM13 – Building Setback Line from Canals and Waterways.
Cultural Heritage (Indigenous) Constraint Code	Not Applicable – There is no known Indigenous Cultural Heritage value aspect located within the area designated for dedication to Council. Further, the area is to be dedicated for conservation purposes regardless, so if any were to be present it would be conserved.
Natural Wetland Areas and Natural Waterways Constraint Code	Applicable – The OSA is immediately adjacent to Sandy Creek, and as such a detailed response to this code has been provided within Appendix B .
Nature Conservation Constraint Code	Not Applicable – Although the subject is mapped as having some conservational overlays within its boundary, the Open Space Area to be dedicated to Council does not exceed the 250m ² total use area prescribed for applicability, nor is any vegetation clearing involved. As such a response to this code was not considered necessary in this instance.

3.2.1 Condition Response

As per the above table, two codes required a response, they are:

- Natural Wetland Areas and Natural Waterways Constraint Code; and
- Nature Conservation Constrain Code.

In order to sufficiently demonstrate compliance with Condition 26, and as a response, a detailed assessment of the Open Space Area against these codes has been provided within **Appendix B** of this document.

3.2.2 Other Matters Response

Condition 26 also requires demonstration that the OSMP has been written in accordance with an/or assess against the following:

- *Policy 10 – Guidelines for Preparing Management plans and plans of Development;*
- *Planning Scheme Policy 11 – Land Development Guidelines (Council's Open Space Management Guideline: Guideline for the preparation of Reports and Plans associated with the dedication of Public Open Space (November 2007, Version 1); and*
- *Planning Scheme Policy 17 – Site Analysis.*

3.2.3 Planning Scheme Policy 10 Response

In response to *Planning Scheme Policy 10*, a targeted response table (**Table 3**) has been developed addressing chapter 6 of the Policy as this relates to Management Plan criteria. Section 1.1 will be assessed against as this section relates specifically to Environmental Management Plans, which includes an OSMP.

Table 3. Targeted Response Table to Policy 10, Chapter 6, Section 1.1	
Aspect	Response
1.1 Environmental	
Compliance with the statutory levels of emissions, with respect to noise, sediments, particulates, vibration, water, soil, and air pollutants;	Complies – Given the nature of the proposed, being for an open space lot for conservation purposes, the emission levels are not likely to be exceeded. All existing habitat and vegetation will be retained and protected under the dedication, with no release of harmful or potentially impactful emissions likely to occur.
The amount and duration of time that land is cleared of vegetation and the means to revegetate or rehabilitate the land;	Complies – A detailed Rehabilitation Management Plan has been provided externally to this document detailing all proposed rehabilitation works. This includes the management and rehabilitation of the 60m Sandy Creek buffer, as conditioned, within the dedicated land.
the means by which waters entering and leaving the site are collected, treated, and discharged;	Complies – Previously approved stormwater management plans exist over the subject site including the area proposed for dedication. Further the OSA is an un-developed and retained portion of habitat abutting a creek. The natural flow from stormwater events will not be disturbed as a result of the Open Space dedication.
the means by which important habitats or rare and endangered flora and fauna are to be protected;	Complies – The primary purpose of this OSMP is to realise the land use plan precinct over the area proposed to be OSA. The Area D is defined as the Open Space/Reserve area, and as such this area will be dedicated to Council as Open Space for conservational purposes. Further an RMP has been development seeking to rehabilitate the OSA via assisted regeneration. This will allow natural recruitment and regeneration to take place for native vegetation species, strengthening the habitat and overall ecological value of the area. Finally, the retention of the area ensures that connection to external habitat is maintained, especially to the southeast and east.
the means of disposing of waste products from the site;	Not Applicable – No waste products are produced within the subject site.
the means by which site constraints will be managed, as identified in the constraint codes in this Planning Scheme, or by separate site analysis.	Complies – A Code assessment was undertaken as per Condition 26 of MIN/2020/659 against the relevant listed codes demonstrating a general compliance with any constraint listed within the scheme.

3.2.3.1 Planning Scheme Policy 11 Response

In response to *Planning Scheme Policy 11*, Section 6 was analysed and a number of relevant criteria or aspects identified. The following, **Table 4. Targeted Response Table to Policy 11, Section 6 – Relevant Requirements**, is a targeted response table demonstrating the Open Space Area's

compliance with the relevant requirements. Any requirement listed within the Policy not mentioned below was deemed as *Not Applicable* in this instance given the nature of the proposed space.

Table 4. Targeted Response Table to Policy 11, Section 6 – Relevant Requirements	
Aspect	Response
6.2 Design Requirements – Open Space	
6.2.1 General Requirements (iii & v)	Compliant with (iii) – The designation of this space as Open Space for conservation bolsters the natural amenity of the area as well as simultaneously protecting the corridor and habitat surrounding and connected to Sandy Creek. Compliant with (v) – The dedication of this area as open space for conservation purposes ensures the protection and appropriate management of native vegetation and associated habitat. Of note the environmental values of the site will be improved through the implementation of the RMP. The RMP will seek to rehabilitate the Sandy Creek corridor via assisted natural regeneration, encouraging native recruitment and assisting the ecological function of the community to be maintained. Further, this area will retain a connection to other areas of remnant habitat, particularly along the Sandy Creek corridor and further to the east.
6.4 Vegetation	
6.4.2 Existing Vegetation	Complies – Given the nature of the proposed Open Space Area and the dedication purposes (Conservation), the area will retain and enhance all existing native vegetation. The rehabilitation process will involve encouragement of natural recruitment through assisted regeneration in the form of weed control and management seeking to maintain the natural values of the vegetated Sandy Creek buffer on its northern side as well as maintain and enhance existing ecological function and environmental values provided by the area.
6.4.3 Rehabilitation	Complies – A rehabilitation plan has been prepared for the full extent of the area to be dedicated to Council seeking to ensure the environmental values and ecological functionality of the site is maintained and enhanced throughout the whole area. All rehabilitation works will be in accordance with the provided Rehabilitation management plan.
6.6 Park Access	
6.6.6 Fencing and Barriers	Complies – Fauna-friendly and fauna-exclusion fencing will be used where fencing is required to designate the OSA. All fencing will be located on the common boundary of the OSA. More specifically Conservation Open Space Areas require fauna friendly fencing. Access will be available through the existing Council maintained fire access track.
6.17 'Establishment period'	
6.17 'Establishment Period'	Complies – The Establishment period will be undertaken in accordance with that provisioned within the provided Rehabilitation Management Plan. The provisions for this period align with those laid out within 6.17.
6.18 'On Maintenance'	
6.18.1 'On Maintenance' Inspections	Complies – All On-Maintenance requirements, inspection protocols and timings have been laid out within the Rehabilitation Management Plan. The provisions provided as part of this plan align with those stated (where relevant) within section 6.18.1. Notably, the on-maintenance requirements forming part of the associated RMP have been developed to align specifically with the sought outcomes and rehabilitation works of the site specifically.
6.19 'Off Maintenance'	
6.19.1 'Off Maintenance' Inspections	Complies – All Off-Maintenance requirements, inspection protocols and timings have been laid out within the Rehabilitation Management Plan. The provisions provided as a part of this plan align with those stated (where relevant) within section 6.19.1. Notably, the off-maintenance requirements apart of the associated RMP have been developed to align specifically with the sought outcomes and rehabilitation works of the site specifically.

3.2.3.2 Planning Scheme Policy 17 Response

In response to Planning Scheme Policy 17 – Site Analysis:

A Site Analysis was undertaken during the survey and desktop analysis portion of the preliminary approval. The general site analysis informed the overall design and layout of the site and the land use plan. The overall analysis included the preparation and submission of an Ecological Assessment Report. This report summarised and gave background information on all relevant environmental and

ecological aspects and constraints within the subject site, including the area now proposed for dedication to Council.

All plans and reports associated with this initial site survey and analysis are included and can be viewed within the original Preliminary Approval lodgement package, as well as all subsequent Minor Change to the approval packages (currently MIN/2020/659).

4 Conclusion

This Open Space Management Plan has addressed the objectives that are required to achieve a natural asset protected in perpetuity for conservation purposes.

By providing evidence and the rationale behind the creation of the open space area, this report provides the various strategies and responses to achieve Council objectives, whilst effectively managing environmentally sensitive areas.

In support of this Open Space Management Plan, a Rehabilitation Management Plan has been prepared encompassing the same area as to be dedicated to Council as Open Space for Conservation.

It is considered that the allocated open space area adheres to the Council's organisational requirements and produces a broad range of benefits to both potential user groups and the natural environment. These benefits have been identified primarily as addressing ecological issues through protected species and vegetation community conservation; habitat recovery efforts to limit threatening process and increase succession; and taking actions to promote the future recovery of biodiversity and vital ecosystem processes; each aspect in development and implemented in accordance with relevant Council Guidelines and the provided detailed Rehabilitation Management Plan.

APPENDIX A – Open Space Management Plan

APPENDIX B – Code Assessment



Part 7 Codes

Division 3 Constraint Codes

Chapter 2 Bushfire Management Areas

1.0 Purpose

This code seeks to regulate development occurring in Potential Bushfire Hazard Areas through land use and development practices that ensure appropriate fire mitigation measures are adopted to protect life and property from bushfires.

This code also seeks to ensure that water supply facilities, with fire fighting vehicle fittings and appropriate access arrangements, are provided in new developments.

The ecological role of fire is recognised in this code, and protecting and maintaining the biodiversity and health of ecological systems of the Gold Coast City is a priority.

Land identified on **Overlay Map OM10 – Potential Bushfire Hazard Areas**, and confirmed through site-based assessment as being in a Medium or High Potential Bushfire Hazard Area, should be considered as designated bushfire prone areas for the purposes of the **Building Code of Australia** and **AS3959-1999 Construction of Buildings in Bushfire-Prone Areas**, and all Building Work must be carried out in a manner consistent with this standard.

2.0 Application

- 2.1 This code applies to any development indicated as self, code or impact assessable in the Table of Development of the Domain or Local Area Plan (LAP) within which the development is proposed.
- 2.2 In particular, this code applies to land identified on **Overlay Map OM10 – Potential Bushfire Hazard Areas** as being of at least Medium Potential Bushfire Hazard. As the map has been prepared at a citywide scale, it should be used as a trigger for the consideration of bushfire hazard issues. In each case, detailed site specific assessment will be required as part of the development process to determine the level of potential bushfire hazard on the site and, therefore, actual development requirements.
- 2.3 Performance Criteria PC1-PC15 apply to all code and impact assessable development subject to this code. For development identified as self assessable, only the acceptable solutions to Performance Criteria PC1-PC3 apply.

3.0 Development Requirements

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Development that is Self Assessable, Code Assessable or Impact Assessable			
Bushfire Hazard			
PC1 The fire mitigation methods used at the	AS1.1.1 A Fire Management Plan has been	Complies AS1.1.1 – Future development on the subject site will require assessment	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
site must be adequate for the Potential Bushfire Hazard rating of the individual site, having regard to: a) vegetation type; b) slope; c) aspect; d) on-site and off-site fire hazard implications of the development; e) bushfire history; f) conservation values of the site; g) ongoing maintenance.	prepared in accordance with Planning Scheme Policy 9 – Guidelines for Preparing Fire Management Plans, and the development complies with the Fire Management Plan. OR AS1.1.2 The development is for a detached dwelling, located within a lot that has been created by a residential subdivision approval under one of the superseded Planning Schemes (ie. the lot is intended to be serviced by sewerage reticulation) and the development complies with the conditions of the subdivision approval. OR AS1.1.3. A written assessment by a competent person confirms that the subject site is of Low Potential Bushfire Hazard or has a lower rating; accordingly specific fire mitigation measures are not mandated for the development.	against this overlay code at the MCU stage.	

Development that is Code Assessable or Impact Assessable

Siting

PC2 Buildings must be sited to minimise the Potential Bushfire Hazard and maximise the protection of life and property from bushfire. Note: This does not apply to sites where a written assessment by a competent person confirms that the subject site is of Low Potential Bushfire Hazard or has a lower rating.	AS2.1 Houses are located away from the most likely direction of a fire front, or on a flat site at the base of the slope (refer Figure 2-1). AS2.2 The Fire Management Plan clearly identifies the preferred location of building sites, and the building is located within these areas.	Not Applicable – No structures or embellishments are proposed with this Open Space Area. Future development on the subject site will require assessment against this overlay code at the MCU stage.	
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Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
<i>Figure 2-1: Preferred House Site Location in High and Medium Potential Bushfire Hazard Areas.</i> Source: adapted from QDHLGP (1993) Bushfire Hazard Planning in Queensland. House sites are numbered in order of the degree of fire safety.			

Building Design and Construction

PC3 A building proposed in a designated Bushfire Prone Area (ie. in an area confirmed through site-based assessment to be subject to High or Medium Potential Bushfire Hazard) must be designed and constructed to maximise the protection of life and property from bushfire.	AS3 The building is constructed in accordance with the requirements of the Building Code of Australia and, where relevant, AS3959-1999 – Construction of Buildings in Bushfire-Prone Areas.	Not Applicable – This Open Space Area Dedication does not include proposals to establish any buildings or structures.	
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Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Development that is Code Assessable or Impact Assessable			
Private Water Supply – In Areas with No Water Reticulation			
PC4 The development proposed in a High and/or Medium Potential Bushfire Hazard Area must provide an adequate water supply for fire fighting purposes.	AS4.1.1 The property contains one dwelling, and the water supply has a volume of water not less than 5,000 litres, and is either: a) a separate tank; and/or b) a reserve section in the bottom part of the main water supply tank; and/or c) a swimming pool installed immediately upon construction of the dwelling OR AS4.1.2 The property contains more than one dwelling and the water supply is provided to protect each individual dwelling, and has a volume of water not less than 10,000 litres, and is: a) a separate tank; and/or b) a reserve section in the bottom part of the main water supply tank; and/or c) a swimming pool installed immediately upon construction of the home.	Not Applicable – The land under which the OSMP applies has access to potable water infrastructure from the Christensen Road South frontage.	
PC5 In areas of High and/or Medium Potential Bushfire Hazard, all on-site water supply tanks, including domestic water supply tanks, must be fitted with the standard rural fire brigade fittings for emergency fire fighting purposes.	AS5 The water supply is fitted with a 50mm male camlock (standard rural fire brigade fitting).	Not Applicable – The land under which the OSMP applies has access to potable water infrastructure from the Christensen Road South frontage.	
PC6 Water supply provided for fire fighting purposes must be safely located and freely accessible for fire fighting purposes at all times	AS6.1 The water supply outlet is located remote from any potential fire hazards, such as venting gas bottles, a burning house and burning sheds. AS6.2 The outlet pipe is 50mm in diameter and fitted	Not Applicable – The land under which the OSMP applies has access to potable water infrastructure from the Christensen Road South frontage.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	with a 50mm male camlock (standard rural fire brigade fitting) AS6.3 A hardstand area is provided no more than six metres from the water supply outlet or, where applicable, a swimming pool.		
Private Water Supply – In Areas with Water Reticulation			
PC7 The water supply must be reliable, and have sufficient flow and pressure requirements for fire fighting purposes at all times.	AS7 The development is proposed in a High and/or Medium Potential Bushfire Hazard Area, and reticulated water is supplied in accordance with Planning Scheme Policy 11 – Land Development Guidelines.	Complies with PC7 – A number of Council of City of Gold Coast water hydrants are located and mapped along Christensen Road South providing ample water for fire fighting purposes when necessary. As no structures or buildings are proposed, provision of private connections to water for fire fighting purposes is not considered necessary in this instance.	
Public Water Supply – In Areas with No Water Reticulation			
PC8 The development proposed in a high and/or medium potential bushfire hazard area must provide an adequate water supply which is readily accessible to fire brigades for fire fighting purposes.	AS8.1.1 Where public water supplies, fire hydrants, public water storage or permanent waterways do not exist, water tanks are provided on public land within the development. The water tanks: a) hold a volume of at least 22,500 litres; b) are of concrete construction; and c) fitted with a 50mm male camlock (standard rural fire brigade fitting). OR AS8.1.2 A hardstand area is provided not more than six meters from the water supply outlet.	Not Applicable – The land under which the OSMP applies has access to potable water infrastructure (Water Hydrants) from the Christensen Road South frontage.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Clearing and Landscaping			
PC9 The development proposed in a High and/or Medium Potential Bushfire Hazard Area must undertake appropriate vegetation clearing and landscaping to mitigate fire hazard.	AS9 The Fire Management Plan addresses appropriate vegetation clearing and landscaping. <i>Note: Part 7, Chapter 36 – Vegetation Management specifies the maximum area of clearing permitted by the Planning Scheme for bushfire hazard mitigation. The Fire Management Plan may recommend lesser clearing on the basis of the specific nature of the development and of the site and the use of alternative fire hazard mitigation measures such as landscaping with fire retardant species.</i>	Complies with AS9 – Given the purpose of this Open Space Area, being dedicated for Conservation purposes, no vegetation clearing will be undertaken within the Open Space Area. Future development on the subject site will require assessment against this overlay code at the MCU stage.	
Fire/Maintenance Trails			
PC10 Fire/maintenance trails must be provided to: a) enable access for fire fighters, residents and equipment; b) mitigate against fire hazard; and c) allow fuel reduction activity.	AS10.1 The development is proposed in a Medium Potential Bushfire Hazard Area, and the subdivision design incorporates fire/maintenance trails located as close as possible to the boundaries of the lots and the adjoining bushland. AS10.2 The fire/maintenance trail has: a) a minimum cleared width of six metres; b) a minimum formed width of four metres; and c) a maximum gradient of 16%, with adequate drainage to prevent soil erosion and minimise ongoing trail maintenance. AS10.3.1 Vehicular links are provided along the fire/maintenance trail either to existing fire/maintenance trails or roads, and these links are designed having regard to the topography of the site, fire fighter safety and the need to regularly access water supplies.	Complies with PC10 – An existing Fire/maintenance trail intersects with a section of the Open Space Area and meets the requirements of PC10.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	AND AS10.3.2 The fire/maintenance trail has vehicular access at each end, and links either to existing fire/maintenance trails or roads. OR AS10.3.3 Vehicular access at each end of fire/maintenance trails does not exist, and a turning circle is provided for turning of fire fighting vehicles. OR AS10.3.4 Vehicular access at each end of fire/maintenance trails does not exist, and a 'T' or 'Y' shaped turning bay is provided for turning of fire fighting vehicles. AS10.4 The fire/maintenance trail provides areas for vehicles to pass or turn at intervals of not more than 400 metres and with a maximum grade of 5% (1 in 20). AS10.5.1 Fire/maintenance trails are located on public land (including public open space areas) to facilitate access for fire brigades. OR AS10.5.2 Fire/maintenance trails are located on public land (including public open space areas) to		

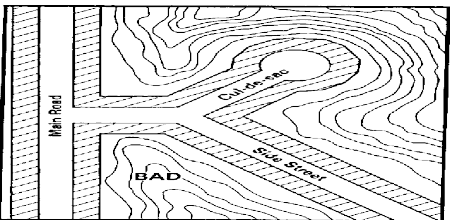
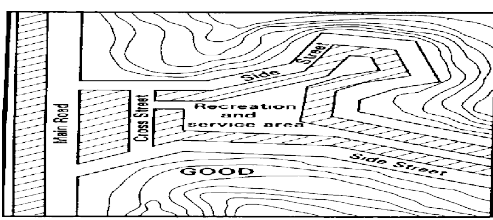


Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	facilitate access for fire brigades and other purposes, such as pedestrian and cycling access. OR AS10.5.3 Fire/maintenance trails are located on the site, and an access easement is granted in favour of Council and fire brigades.		



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Advice to new residents			
PC11 Reconfiguring a lot occurs in a high and/or medium potential bushfire hazard area and new residents must be informed about: a) The potential bushfire hazard on their site; b) Their responsibility for fire management; and c) The measures available for ongoing fire hazard mitigation.	AS11 A Copy of the fire management Plan is provided to each resident for the information of occupants.	Complies with AS11 – Future development on the subject site will require assessment against this overlay code at the MCU stage.	
Landscape Work			
PC12 The vehicular access (including internal roads) must be designed to mitigate against bushfire hazard by ensuring adequate access for: a) fire fighting and other emergency vehicles; and b) the evacuation of residents and emergency personnel, in the event of an emergency.	AS12 The development is proposed in a High Potential Bushfire Hazard Area, and the Reconfiguring a Lot design incorporates a perimeter road that: a) is located between the boundary of the lots and the adjacent bushland; b) has a minimum cleared width of 20 metres; c) has a constructed road width of six metres; and d) is constructed to an all weather standard (refer Figure 2-2). AS12.2 The road design is capable of providing access for fire fighting and other emergency vehicles, in accordance with Planning Scheme Policy 11 – Land Development Guidelines. AS12.3 Reconfiguring a Lot is proposed to occur in a	Complies with PC12 – An existing Fire/maintenance trail intersects with a section of the Open Space Area which is proposed to be retained. The existing Fire/maintenance trail within the OSA will require maintenance as part of the OSMP to ensure continued compliance with PC12. A response to Planning Scheme Policy 11, Section 6 is provided within the associated Open Space Management Plan and provides details on vehicular access. This response is contained in Table 4. Targeted Response Table to Policy 11, Section 6 – Relevant Requirements within the OSMP.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	High Potential Bushfire Hazard Area, and all roads are through roads and culs-de-sac are not utilised (refer Figure 2-2).		
<i>Figure 2-2: Preferred Road Layout in High Potential Bushfire Hazard Areas</i>  Unacceptable design with a High Risk – Hazardous ridge top development has no breaks and obstructs fire fighters.  Acceptable design – Ring road system provides a fire break and access for fire fighters.			
	AS12.4.1 Reconfiguring a Lot is proposed to occur in a medium potential bushfire hazard area and cul-de-sac are not more than 200m in length, and intersect or are met by a cross road or connecting road. OR AS12.4.2 Reconfiguring a Lot is proposed to occur in a Medium Potential Bushfire Hazard area, and cul-de-sac are utilised, and an alternative access links the cul-de-sac to other through roads.		
Lot Layout			
PC13	AS13	Not Applicable – No internal roads are proposed or required throughout the	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
In areas of High and/or Medium Potential Bushfire Hazard, access and internal roads must be constructed for the safe and effective operational use of the water supply and equipment on the fire fighting vehicles.	The development is proposed in a High and/or Medium Potential Bushfire Hazard Area, and roads are designed and constructed in accordance with Planning Scheme Policy 11 – Land Development Guidelines .	Open Space Area. Fire fighting vehicles and personnel have access to the OSA via the frontage at Christensen Road South and the internal Fire/maintenance trail.	
PC14 The lot layout of residential developments must be designed to mitigate any Potential Bushfire Hazard and provide safe sites for dwellings.	AS14 Residential lots are not located wholly within a High Potential Bushfire Hazard Area, and the building envelope is located in a lower Potential Bushfire Hazard Area of the site.	Not Applicable – The proposal does not include any aspect of residential development.	
Land Use			
PC15 Any Material Change of Use, other than a detached dwelling, must not result in a high concentration of people living or congregating in a High Potential Bushfire Hazard Area.	AS15 The following uses are inappropriate Potential Bushfire Hazard Area: a) educational establishment; b) hospital; c) in the High aged person accommodation; d) caravan park; e) child care centre; f) community care centre; g) corrective institution; h) ecotourism facility; i) minor tourist facility; j) or tourist cabins.	Complies with PC15 – The proposal does not include any of the listed aspects or uses. Further, the proposed use, being an Open Space Area for Conservation (to be dedicated to Council), will not result in a higher concentration of people living or congregating in the bushfire area. It is likely the use will result in no people living or congregating other than for maintenance purposes.	

4.0 Other Relevant Requirements

Planning Scheme Policy 9 – Guidelines for Preparing Fire Management Plans is directly relevant to the development of land within Potential Bushfire Hazard Areas.



Part 7 Codes

Division 3 Constraint Codes

Chapter 9 Natural Wetland Areas and Natural Waterways

1.0 Purpose

This code seeks to ensure the long term protection, enhancement and management of natural waterways and wetlands for their ecological, fishery, shore line and bank stabilisation, hydro- geological, open space, recreational, environmental, scientific and cultural value. This code supports and implements, at the local level, state and national policies (in particular, the **Moreton Bay Marine Park Strategic and Zoning Plans** and the **Draft State Coastal Management Plan**), legislation and strategies (eg. the **Wetlands Policy** of the Commonwealth Government of Australia and **Declared Fish Habitat Areas of Queensland**) and international agreements including:

- Convention of Wetlands of International Importance especially as Waterfowl Habitat (**RAMSAR, 1971**);
- **Agreement for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment**, between the Government of Australia and the Government of Japan, **1974, (JAMBA)**;
- **Agreement for the Protection of Migratory Birds and their Environment** between the governments of Australia and the People's Republic of China, **1976, (CAMBA)**.

This code provides for the maintenance of effective and functional buffers between development and natural waterways and wetland areas to ensure that ecological and hydrological conditions can be continued and protected and natural processes can occur, without impacting on the residential amenity of those areas. The code promotes the maintenance and creation, or enhancement, of viable linkages between wetlands and natural waterways, their associated ecosystems and other natural areas. It also provides for the maintenance of appropriate water regimes and water quality objectives, to ensure the protection of the ecological characteristics and environmental values of wetland areas and natural waterways and their associated ecosystems.

2.0 Application

- 2.1 This code applies to development indicated as code assessable or impact assessable by the Table of Development of the domain or Local Area Plan (LAP) within which the development is proposed.
- 2.2 In particular, this code applies to development on sites that include or are immediately adjacent to natural wetland areas or natural waterways, as identified on **Overlay Map OM11 – Natural Wetland and Waterways Areas**, or by an approved Ecological Site Assessment prepared in accordance with **Planning Scheme Policy 8 – Guidelines for Ecological Assessments**.
- 2.3 Performance Criteria PC1-PC11 apply to all development subject to this code.



1.0 Development Requirements

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Development that is Self Assessable, Code Assessable or Impact Assessable			
Ecological Assessment			
PC1 Prior to commencing the development design: a) the ecological features and functions located on and/or adjacent to the site must be identified and assessed; b) any ecologically significant areas, including any wetland, aquatic and riparian areas, or degraded areas suitable for rehabilitation to become ecologically significant, and located on and/or adjacent to the site, must be identified.	AS1 An ecological assessment is prepared by a suitably qualified and experienced person in accordance with Planning Scheme Policy 8 – Guidelines for Ecological Assessments.	Complies AS1 – An EAR was prepared and submitted over the whole site, now formally described as Lot 504 on SP329485, with the submission of the original preliminary approval (most recently: MIN/2020/659). The EAR was prepared by a suitably qualified person in accordance with the Planning Scheme Policy.	
Development that is Code Assessable or Impact Assessable			
Retention of Ecologically Significant Areas			
PC2 Ecologically significant areas must be protected and maintained.	AS2 Development does not occur within an ecologically significant area, including wetlands, aquatic and riparian communities.	Complies AS2 – The Open Space Area is considered ecologically significant and is to be completely retained as well as rehabilitated.	
PC3 Ecologically significant areas must not be negatively impacted upon, either directly or indirectly, by activity resulting from the establishment and operation of the development.	AS3 No acceptable solution provided.	Complies with PC3 – The development itself is for a dedication of land to Council for conservation purposes as public open space. As such the development of the area, for conservation purposes, appropriately addresses PC3.	
Setback			
PC4 All development (including structures, fill, infrastructure and services) must be set back from any ecologically significant	AS4 No acceptable solution provided.	Not Applicable – No development, including structures, cut, fill, infrastructure or services is proposed within the Open Space Area to be dedicated to Council.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
areas, including wetlands, aquatic and riparian communities, to enable: a) the continued ecological function of the area; and b) access to the area for maintenance and management purposes.		Access to the area will continue to be provided by the existing road, with no further changes proposed.	
Rehabilitation			
PC5 The degraded wetland and waterway areas, ecological corridors and buffer areas that are important to the viability of ecologically significant areas must be rehabilitated as near as is practical to the naturally occurring composition of plant species, and respond to the habitat requirements of fauna.	AS5.1 The degraded area identified in the approved Ecological Site Assessment as requiring rehabilitation is rehabilitated in accordance with an approved Rehabilitation Plan utilising local endemic species and stock that: a) reflects the species composition of native remnant vegetation on the site or surrounds; b) consolidates existing habitats on the site; c) does not displace native flora species or degrade fauna habitat. AS5.2 A detailed Landscape Plan, incorporating the rehabilitation, is prepared in accordance with Planning Scheme Policy 13 – Landscape Strategy Part 2 – Landscape Works Documentation Manual.	Complies PC5 – The land proposed to be dedicated to Council forms part of the Sandy Creek Corridor, an locally important ecological corridor buffering neighbouring industrial uses from Sandy Creek. The area of Open Space will be rehabilitated as per the Rehabilitation Management Plan, primarily through assisted natural regeneration and active planting as required. The RMP details the plants species composition most closely resembling the composition naturally occurring in the local area. This process of revegetation will ensure the native vegetation is retained, ecological function continues or is enhanced and the ecological corridor and buffer to Sandy Creek is maintained and enhanced.	
Water Management			
PC6 The natural hydrological regimes of wetlands and waterways, including natural water quality, quantity and groundwater conditions, must be maintained and	AS6 A Stormwater Management Plan which is prepared for the site in accordance with the Stormwater Management and Water Quality Guidelines demonstrates that:	Complies AS6 – A Stormwater Management Plan was prepared over the whole of the subject site, and was approved under previous applications.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
enhanced.	a) stormwater is treated prior to discharge into the wetland or waterway; b) stormwater is discharged at appropriate areas of the waterway; c) the velocity and quality of stormwater to be discharged into the wetland or waterway does not degrade the environmental values of the wetland or waterway; d) the development will not impact on the geo- hydrology affecting the wetland or waterway.	The current application is seeking to create an open space lot for conservation purposes and therefore no physical alterations are proposed which would alter the stormwater management of the greater site. No alterations to existing overland flow patterns, discharge areas or rates are expected and all other relevant stormwater and hydrological features will remain the same.	

Onsite Effluent Disposal

PC7 The ecologically significant areas must be buffered from effluent/ irrigation treatment plants/ disposal areas to ensure that suitable areas are provided for the treatment of wastewater, prior to entering into the existing groundwater system and adjoining waterway and wetland areas.	AS7 Where development is proposed to occur on unsewered land, any on-site wastewater disposal facility is to comply with the requirements of Part 7, Division 3 Constraint Codes, Chapter 17 – Unsewered Land.	Not Applicable – Given the nature of the proposal, provisioning effluent disposal or sewerage infrastructure is considered unnecessary in this instance.	
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Buffers and Setbacks to Natural Wetland and Waterway Areas

PC8 Buffers must be provided incorporating development setback/s of dimensions and characteristics that will ensure that the development does not result in a negative impact upon the long-term viability of the ecologically significant areas (including any wetland, aquatic and riparian communities) located on and/or adjacent to the site. Vegetated buffers should also include groundcover and shrubs, where the natural constraints of the site allow this.	AS8.1.1 Buffer/s of not less than 100 metres width, incorporating vegetated and degraded areas requiring rehabilitation, are provided between the development and a freshwater or tidal wetland and associated riparian communities, as identified on Overlay Map OM11 – Natural Wetland and Waterway Areas. OR AS8.1.2 Buffer/s are provided of dimensions and characteristics that will protect the long-term viability of any freshwater or tidal Wetlands	Complies with PC8 – As conditioned within the preliminary approval (MIN/2020/659), a 60m buffer from Sandy Creek will be maintained and rehabilitated as a part of the Open Space Area. This buffer ensures the vegetation corridor associated with the creek is maintained and enhanced through appropriate revegetation works and maintains relevant habitat connections to other surrounding habitat.	
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Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	and their associated riparian communities, as identified on Overlay Map OM11 – Natural Wetland and Waterway Areas, in accordance with expert ecological advice provided as part of the Ecological Site Assessment. OR AS8.1.3 Buffer/s of not less than 60 metres width, incorporating vegetated and degraded areas requiring rehabilitation, are provided between the development and a waterway identified as a Major Linkage (Water Based) and associated riparian communities, as identified on Overlay Map OM11 – Natural Wetland and Waterway Areas. OR AS8.1.4 Buffer/s are provided of dimensions and characteristics that will protect the long-term viability of Major Linkages (Water Based) and associated riparian communities as identified on Overlay Map OM11 – Natural Wetland and Waterway Areas, in accordance with expert ecological advice provided as part of the approved Ecological Site Assessment. OR AS8.1.5 Buffer/s are provided of 30 metres width, incorporating vegetated and degraded areas requiring rehabilitation, between the development and any waterways identified as an Other Natural Waterway and associated riparian communities, as identified on Overlay Map OM11 – Natural Wetland and Waterway Areas.		



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	OR AS8.1.6 Buffer/s, of dimensions and characteristics that will protect the long-term viability of any Other Natural Waterways and their associated riparian communities, as identified on Overlay Map OM11 – Natural Wetland and Waterway Areas, are in accordance with expert ecological advice provided as part of the approved Ecological Site Assessment. <i>Note: The buffer width for wetlands is measured from the outer, landward boundary of the mapped Freshwater or Tidal Wetland, as shown on Overlay Map OM11 – Natural Wetland and Waterway Areas, or as defined through an approved Ecological Assessment. The buffer width, on each side of the waterway, is measured from the top of the high bank or from the outer landward boundary of a mapped riparian community, as shown on Overlay Map OM11 – Natural Wetland and Waterway Areas, or as defined through an approved Ecological Assessment.</i>		
Ecological Corridors			
PC9 Ecological corridors must be provided of dimensions and characteristics that can be demonstrated will effectively link ecologically significant areas on and/or adjacent to the site, in order to facilitate the effective movement of flora and fauna using the site and surrounds.	AS9.1.1 Ecological corridors of not less than 100 metres are provided on-site and link ecologically significant areas either within or adjacent to the site. OR AS9.1.2 Ecological corridors of dimensions and characteristics that are sufficient to facilitate the movement of flora and fauna between ecologically	Complies with PC9 – The 60m buffer conditioned within the Preliminary approval (MIN/2020/659) provides opportunity to maintain and enhance a sufficient corridor that provides effective linkages to larger areas of retained and remnant habitat, especially to the east and southeast.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	significant areas located on and/or adjacent to the site are provided in accordance with expert ecological advice provided as part of the approved Ecological Site Assessment		
Management Arrangements			
PC10 Management arrangements must facilitate the conservation and protection of ecologically significant areas, ecological corridors and buffers.	AS10.1 Ecologically significant areas, buffers and ecological corridors are: a) dedicated as Public Open Space where required for public access or for use for some other public purpose, consistent with their ecological values and functions; b) incorporated within Private Open Space and included within a Voluntary Statutory Covenant or a Vegetation Protection Area. AS10.2 An Open Space Management Plan has been prepared in accordance with Part 7, Division 2 Specific Development Codes, Chapter 21 – Landscape Work.	Complies with AS10 – As conditioned within MIN/2020/659 a 60m rehabilitated buffer will be maintained within the OSA. An OSMP has been prepared and written in accordance with relevant guidelines, conditions and requirements, however the listed code is not applicable to this particular Open Space Area, as no landscape work is explicitly proposed, the Open Space Area however, will be rehabilitated in accordance with the associated Rehabilitation Management Plan.	
Vehicular and Pedestrian Crossing			
PC11 The number of vehicular and pedestrian crossings over or through ecologically significant areas on the site (in particular, the wetland, aquatic and riparian communities) must be minimised.	AS11.1.1 Vehicular and/or pedestrian accessways do not cross over or through ecologically significant areas (in particular, wetland, aquatic and riparian communities) on the site. OR AS11.1.2 Any vehicular and/or pedestrian accessways that cross over or through ecologically significant areas (in particular, wetland, aquatic and riparian communities) on the site are designed to:	Complies with AS11.1.1 – There are no proposed Pedestrian and vehicular crossings over or through the OSA. The existing access road, formed prior to and not part of this application, has minimised its extent and impact within the OSA while allowing necessary vehicle access for fire management and other services. Due to this, no further pedestrian or vehicle access crossings are anticipated or would be considered necessary.	



Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	a) minimise the area of disturbance; b) facilitate the unimpeded movement of fauna.		

APPENDIX C – Rehabilitation Management Plan

A low-angle photograph of a modern building's exterior. The building features large glass windows reflecting the sky and clouds, and a prominent red vertical panel on the right side. A small tree with green and yellowing leaves is in the foreground. The text 'APPENDIX L' is overlaid in the top right corner.

APPENDIX L

REHABILITATION MANAGEMENT PLAN

REHABILITATION MANAGEMENT PLAN

Prepared for: FPI Queensland Pty Ltd

Vantage Industrial Estate Stage 3

Lot 504 Homestead Drive STAPYLTON QLD
4207

LOT 504 on SP329485

ADDRESS: Christensen Road South, Stapylton QLD

REAL PROPERTY DESCRIPTION: LOT 504 on SP329485

PREPARED FOR: FPI Queensland Pty Ltd

DATE PREPARED: 21 April 2023



gassman
development
perspectives

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GDP Document Control

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Revision / Checking History

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V1.0	Brian Gassman	Director		21/04/2023

Approval for Issue

Final Distribution

FPI Queensland Pty Ltd	1 electronic copy
City of Gold Coast Council	1 electronic copy

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1 Introduction

1.1 Purpose

The purpose of this Rehabilitation Management Plan (RMP) is to provide details of vegetation restoration works to be undertaken within the Open Space (Conservation) area of Lot 504 on SP329485 in order to address requirements of the associated **Open Space Management Plan (OSMP) Conservation Dedication** and provides rehabilitation details to ensure vegetation restoration work can be undertaken that is compliant with Council requirements. It also provides Council with clear expectations of the scope of works and a means of ensuring works are completed according to the approved plan.

This RMP seeks to comply with development conditions for the industrial estate development at Vantage, at Stapylton Jacob Well Road, Yatala. As a development condition of Preliminary Approval (Decision Notice MIN/2020/659) an area of land is to be dedicated to Council as public Open Space. The associated Open Space Management Plan has been prepared to guide the management of the Open Space Area (OSA) and includes the provision of rehabilitation works. The purpose of this RMP is to guide the successful rehabilitation and management of the proposed public open space area which is to be dedicated to Council for conservation purposes to comply with development conditions of Preliminary Approval (Decision Notice MIN/2020/659).

Since this time, a number of Minor Change applications have been approved making changes to the Preliminary Approval with MIN/2020/659, at this time, the most recently approved package. A further Minor Change, MIN/2023/64, is currently undergoing assessment and is expected to result in an amendment of the associated Preliminary Approval, with no impacts anticipated to this Plan.

1.2 Scope

This RMP applies to areas within the proposed Lot 504 on SP329485 (Refer Figure 1.) which corresponds to an area to be created for dedication to Council as Public Open Space as discussed in the Open Space Management Plan (OSMP), following Stage 3 of the proposed development at Vantage, at Stapylton Jacob Well Road, Yatala.. The proposed rehabilitation area is between Sandy Creek and a sixty (60m) metre buffer from the high bank of Sandy Creek to its north, as directed by the decision notice MIN/2020/659. This area is predominantly composed of remnant native vegetation and some smaller disturbed or cleared areas which are thought to have been disturbed as a result of gaining access for the wedge-tailed eagle's nest relocation to an artificial support structure.

1.3 Aims and Objectives

This RMP aims to outline the details of work required to achieve restoration outcomes that adequately improve the quality of native vegetation and habitat and ensure its ecological functionality within the designated area of Lot 504 on SP329485 that is part of the development application. The proposed Rehabilitation Area will maintain and improve native vegetation and habitat linkages through Vantage Yatala Industrial precinct, and into the stream waterway corridor of Sandy Creek. It will also provide an ecological buffer and barrier which will assist in separating the man-made processes within the neighbouring industrial zoning from the Sandy Creek waterway.

The broad objectives of this RMP are to:

- Comply with conditions within MIN/2020/659 to detail a rehabilitated sixty (60) metre buffer from the high bank of Sandy Creek.
- Comply with current 'best practice' guidelines and Council guidelines and policies;
- Provide an overview of the environmental conditions in the riparian corridor;
- Ensure the long-term environmental integrity and ecological linkages within the riparian corridor;
- Provide a native vegetation corridor from the impacted area to the Albert River waterway corridor to the north; and
- Improve ecological function and fauna opportunities within the tributary stream riparian corridor.



Figure 1 Locality Plan

1.4 Intended Outcomes

The intended outcomes for successful restoration of the impacted area are:

- The Rehabilitation Area is free from declared weed species;
- The Rehabilitation Area demonstrates a reduction in abundance and diversity of weed species currently present on the site; and
- The Rehabilitation Area contains restored and improved native vegetation to provide enhanced habitat for native flora and fauna, provides and maintains an ecological buffer to Sandy Creek, and improves or maintains ecological processes.

2 Rehabilitation Approaches

There are four generally accepted approaches to rehabilitation as outlined in South-East Queensland (SEQ) Ecological Restoration Framework Manual (2012). These are:

- a. Natural regeneration;
- b. Assisted natural regeneration;
- c. Reconstruction; or
- d. Fabrication.

Of these approaches, assisted natural regeneration and reconstruction planting will be required to facilitate the proposed restoration works within the impacted area on proposed Lot 504 on SP329485 subject to this RMP. Assisted natural regeneration will be utilised in areas with established native vegetation, with some additional infill planting added where necessary to establish the required vegetation densities. In areas that have been subject to earthworks, or where no existing native vegetation is present or is degraded, reconstruction planting will be used to actively restore native vegetation.

3 Site Assessment

The site is located in the northern region of the City of Gold Coast local government area. The vegetation present within the proposed Open Space area consists of Tall and Low Open Forest vegetation and riparian vegetation associated with the waterways. There are some incursions of weed species present throughout the area, particularly *Lantana camara*. Biodiversity values are relatively high due to the existing native vegetation, the presence of large hollow bearing trees, diversity of vegetation and the presence of water habitats for various fauna and flora. Natural habitat features such as logs and instream vegetation are present throughout the stream channel. A small area cleared to accommodate the relocation of the wedge-tailed eagle's nest and construction of the nest pole remains in a degraded state. A Council fire trail is also present along the eastern boundary.

A description of the site constraints and relevant planning instruments is outlined in detail within the Open Space Management Plan associated with this document. The following shall describe the vegetation present on site in order to plan how the site is to be effectively rehabilitated.

3.1 Native Vegetation

The subject site is mapped as containing 'least concern' RE 12.11.5/12.11.24 across the majority of Open Space area, with RE 12.3.11 in a strip directly adjacent to Sandy Creek along the southern boundary of the lot, and RE 12.11.25 in the north west corner of the Open Space area. The surrounding vegetation outside of the Open Space area has been heavily modified through recent clearing in accordance with Vegetation Clearing OPW approvals. On ground observations identified the following predominant species;

Canopy Species

Eucalyptus siderophloia, *Eucalyptus crebra*, *Corymbia intermedia*, *Eucalyptus propinqua* *Angophora leiocarpa*, *Corymbia citriodora* subsp *variegata* and *Eucalyptus pilularis*.

Mid Storey Species

Alphitonia excelsa, *Melaleuca decora*, *Melaleuca nodosa*, *Melaleuca linariifolia*, *Allocasuarina litoralis*, *Acacia leiocalyx*, *Lophostemon sauveolens* and *Acacia* spp.

Groundcover / Shrub Layer Species

Lepidosperma laterale, *Ottochloa gracillima*, *Gahnia aspera*, *Cymbopogon refractus*, *Lomandra hystrix*, *Smilax australis*, *Lomandra longifolia*, *Pteridium esculentum*.

Generally, native vegetation in the Open Space area transitions from Eucalypt and Corymbia open forest across the majority of the area, down to a thin strip of more rainforest and riparian species along Sandy Creek along the southern border of the Open Space area. The area also contains some large mature *Eucalyptus tereticornis* and *E. pilularis* trees. Other species such as *Melaleuca nodosa*

and a variety of native vine forest understorey species, bracken fern understorey. and aquatic macrophytes also occur in abundance in specific areas, such as directly adjacent to the tributary stream.

Due to the established nature of vegetation currently present, this rehabilitation plan proposes primarily assisted natural regeneration through weed management in most of the Open Space area. However, planting specifications have been provided for a small area that was required to be disturbed to install the relocated wedge-tailed eagle nest.

3.2 Exotic Vegetation

The area covered by this RMP largely consists of existing remnant vegetation with small areas affected by clearing or access tracks. Some weed incursions exists in edge affected areas and will require weed management to assist with natural regeneration. Due to the proximity of the cleared areas and access track to existing remnant native vegetation, it is anticipated that revegetation can be adjusted in this area to facilitate natural regeneration occurring.

A number of exotic species were observed as occurring on the subject site. In particular, *Lantana camara* is present throughout the understorey in varying densities. *Passiflora subpeltata* and *Passiflora suberosa* are also frequently found within the area. Specific weed control techniques will be outlined in subsequent sections of this report.

3.3 Management objectives

Weed control activities throughout the Rehabilitation Area will aim to achieve the following objectives;

- To reduce the extent of weed species that are threatening or have future threats to diversity levels and ecological processes within the designated rehabilitation areas;
- To remove listed weed (and undesirable exotic) species from rehabilitation areas;
- Allow increased success and establishment of existing natives and rehabilitation plantings; and
- To reduce incidental weed invasion into plant communities within the surrounding areas.

3.4 Implementation

The weed management processes have been provided below sequentially so as to ensure the most successful and efficient method is undertaken. Weed management activities are expected to be required on an ongoing basis for a total of two years in accordance with 12-month establishment and 12-month maintenance periods.

3.5 Weed control methods

Weed control of the subject site will be limited to the Rehabilitation Area, and will focus on the treatment of declared weeds, and the treatment of other exotic species and grasses in order to encourage assisted natural regeneration and to prepare any areas that require reconstructive plantings.

All weed control undertaken on the subject site will be undertaken with the following considerations:

- All weed control methods will be in accordance with the South East Queensland Ecological Restoration Framework Guidelines 2012 (Appendix 2).
- Due consideration of the ecologically sensitive nature of the site must be made when selecting the appropriate weed removal and weed control methods.
- Only registered frog friendly aquatic herbicides such as "Biactive" glyphosate will be used due to the proximity of the Rehabilitation Area to the creek corridor and nearby Albert River.
- Weed control works must be undertaken in a manner which does not promote erosion and instability of soil, specifically in the areas around the impacted area that has been cleared.
- If evidence of excessive spraying or off target damage is observed, additional rehabilitation will be undertaken to ensure that public open space areas are stable and not at elevated risks of erosion due to off target damage.
- Dye mixed with chemical is to be used when treating all weeds within public open space.

- Weed control is to be undertaken under drip lines of existing native plants in a manner which promotes regeneration and reduces competition for native species and which limits the potential for off target damage.

3.5.1 Manual Removal

This method physically removes any existing or re-establishing weed species from around the existing plants, thus limiting competition and increasing health of native plants and allowing the new plantings to establish. Manual removal may include hand pulling, or the use of other tools such as a weed plough, or targeted brush cutting and chainsaw use as required to remove the target weed species with no damage to surrounding native vegetation.

3.5.2 Herbicide application

Herbicide should be applied by qualified personnel with experience in bush regeneration and native plant species identification. It is recommended that spray operators have undertaken accredited training through a nationally accredited program such as Chemcert. All weed control techniques will be in accordance with the South East Queensland Ecological Restoration Framework Guidelines 2012 (Appendix 2).

Power operated spray equipment must only be undertaken or supervised by ACDC accredited operators and must comply with the ACDC Act. This Act also specifies limitations of certain herbicides and applications in Queensland Districts.

Spray operators have a legal responsibility to themselves and the public. Employers and employees have obligations under the Work Place Health and Safety Act to provide a 'Duty of Care'.

In Queensland, the 'off-label' permit allows bush regenerators to apply herbicide on plant species that are not listed on the label under Permit 7485. The off-label permit is administered by the Australian Pesticides and Veterinary Medicines Authority (APVMA). This relates to the ground distribution control of weeds in Non-Agricultural Areas, Bushland, Forests and Wetlands.

It is a requirement of this permit, that all persons using the products covered by this off-label permit comply with the details and conditions listed in the permit. In addition, read the herbicide label carefully before use and always use the herbicide in accordance with the label directions. Chemical control of various weeds mentioned in this document will comply with permit 7485.

The operator is responsible to comply with environmental considerations, especially working in riparian areas. It is important to become familiar with the product MSDS, in particular aspects of soil residuality, translocation, breakdown in water, and impact on amphibians (for example, Glyphosate herbicides are chelated with salts which can build up in the soil, changing the Ph and soil conditions). To ameliorate the impact of salt and modified ph, fulvic acid can be used in conjunction with herbicide. As a microbial stimulant fulvic acid increases the plants uptake of the herbicide and reduces soil residues, therefore minimizing environmental harm.

Due to the proximity to Sandy Creek, only registered frog friendly aquatic herbicides such as "Biactive" glyphosate will be used.

4 Site Preparation

4.1 Removal of rubbish and debris

There are some piles of rubbish and old concrete material that have previously been disposed in the Open Space area and roadside rubbish entering the side where it adjoins the road reserve. All rubbish is required to be removed prior to rehabilitation works beginning in accordance with the Rehabilitation Management Plan.

This unwanted material will need to be removed from the site and disposed of appropriately. Material may need to be separated prior to disposal off-site by a suitably qualified waste management contractor.

4.2 Erosion and Sediment Control

Monitoring and maintenance of the construction phase sediment and erosion control measures implemented on the adjacent development site will be in accordance with IECA's Best Practice Guidelines, the City of Gold Coast Council's Schedule 6 City Plan Policy SC6.9.3.2 Design Objectives – SC6.9.3.2.2 Erosion and Sediment Control (Construction Phase), Relevant Healthy Waterways guidelines and documents, and the Urban Stormwater Planning Guideline (Queensland State Government).

4.3 Additional Topsoil and Mulch Treatment

Mulch is to be used on all active planting areas within the rehabilitation area. The mulch shall consist of 100mm of weed-free forest mulch spread in a 30cm radius around each plant to ensure that natural regeneration is not impeded. The application of blanket mulch to areas, as an alternative, to assist with weed suppression, plant growth and natural regeneration, should be applied where it is deemed appropriate to achieving the aims and objectives of this RMP such as within the active planting zone.

5 Planting Specifications

5.1 Summary of treatments

The primary rehabilitation management action in the Open Space area is to be weed management in order to support natural regeneration, with a small area of active reconstruction planting proposed around the area used to install the wedge-tailed eagle nest. The planting around this area will be done in a way that maintains an existing 4m wide access track to the relocated wedge-tailed eagle nest. Planting techniques and a planting schedule has been provided for the area requiring active planting in the following sections. The planting schedule can also be used to provide contingency planting species for the area subject to assisted natural regeneration if weed management activities do not result in sufficient native regeneration occurring.

Contingency plantings will only be enacted if agreement between the proponent and City of Gold Coast Council is made that natural regeneration has not been effective and direct plantings are required to ensure that rehabilitation in the open space park area is completed to the satisfaction of council.

The two (2) distinct rehabilitation zones are nominated and are individually outlined in the following sections.

5.2 Planting techniques

The Rehabilitation Management Plan in Appendix 2 depicts the section of the Open Space area that will require planting, after taking into account existing native vegetation.

Plants are to be supplied in 75mm native tube stock or equivalent, and are to be planted according to Figure 2 below.

Plant stock is to be sourced from local nurseries, using local provenance parent material. Stock is to be free of defects and pathogens and should show good root structure and vigour.

A survival rate of at least 90% is to occur within the rehabilitation area for the duration of the 12-month establishment and 12-month maintenance periods. Failure to achieve these targets will require plant replacement.

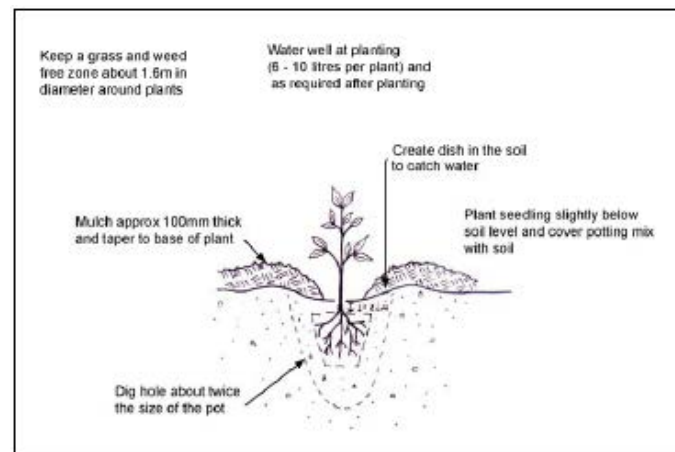


Figure 2 Planting Detail

5.3 Rehabilitation Zone 1 – Active Planting (435m²)

The location of this 'Rehabilitation Zone 1 - Active Planting' is shown in Appendix 2. This area was disturbed in order to allow the required machinery access to install the relocated wedge-tailed eagle nest. The area would contain significant seed bank, and would be expected to regenerate naturally, however some active reconstruction planting is proposed to help this area re-establish more rapidly. A 4m wide access track, which previously existed through the area, is intended to be maintained clear of vegetation, to allow ongoing access to the relocated wedge-tailed eagle nest.

The following planting specifications will be implemented within this rehabilitation zone. Planting densities have been specified; however the planting densities required may vary depending on the extent of existing vegetation on the ground, and any natural regeneration that occurs.

The species below have been selected from RE 12.11.5 which is the existing RE type occurring in the area, and from species observed on ground within the rehabilitation zone.

Table 1 Rehabilitation Zone 1 – Active Planting – 435m²

Type	Botanical Name	Common Name	Pot
Canopy	<i>Eucalyptus propinqua</i>	Small Fruited Grey Gum	Tube
	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	Spotted Gum	Tube
	<i>Eucalyptus crebra</i>	Narrow-leaved Ironbark	Tube
	<i>Eucalyptus siderophloia</i>	Grey ironbark	Tube
	<i>Eucalyptus fibrosa</i>	Broad-leaved Ironbark	Tube
	<i>Corymbia intermedia</i>	Pink bloodwood	Tube
	<i>Angophora leiocarpa</i>	Smooth Barked Apple	Tube
Mid-storey	<i>Melaleuca linariifolia</i>	Snow in Summer	Tube
	<i>Lophostemon suaveolens</i>	Swamp box	Tube
	<i>Lophostemon confertus</i>	Brush Box	Tube
	<i>Melaleuca decora</i>	Whitefeather Honeymyrtle	Tube
	<i>Alphitonia excelsa</i>	Red Ash	Tube
	<i>Breynia oblongifolia</i>	Coffee Bush	Tube
	<i>Callistemon viminalis</i>	Red Bottlebrush	Tube
Groundcover	<i>Cymbopogon refractus</i>	Barbwire Grass	Tube
	<i>Dianella caerulea</i>	Blue Flax Lily	Tube
	<i>Lomandra hystrix</i>	Creek matrush	Tube
	<i>Lomandra longifolia</i>	Spiny headed matrush	Tube
	<i>Gahnia aspera</i>	Rough Saw-Sedge	Tube
	<i>Themeda triandra</i>	Kangaroo Grass	Tube

Total area: 435m² (approx)

Density: 1 plant per 1m²

Ratio: 70% canopy, 20% Mid-storey, 10% Shrubs

70x Canopy Species per 100m²

20x Mid-storey Species per 100m²

10x Shrub Species per 100m²

Total = 100 plants per 100m² module

5.4 Rehabilitation Zone 2 – Weed Management (18,568m²)

The location of the 'Rehabilitation Zone 2 - Weed Management' is shown in Appendix 2 and includes most of the proposed Open Space area. This area was observed to contain some areas of weed infestation, particularly of *Lantana camara*. This area extends from the northern boundary of the Open Space area, all the way back to the southern boundary with Sandy Creek. Weed management activities in this area will occur in accordance with Section 4.3.1 and 4.3.2 of this report, and Appendix 3.

If, following weed removal, some areas struggle to regenerate, some active planting may be considered as a contingency measure. If required, contingency planting species can be drawn from the planting schedule prescribed for Rehabilitation Zone 1 (**Table 1**), or as determined by the suitably qualified rehabilitation contractor undertaking the works.

5.5 Planting requirements

Active revegetation planting within the Rehabilitation Zone will be in accordance with the following requirements:

- A suitably qualified rehabilitation contractor is to be engaged.
- Boundaries of the rehabilitation area must be temporarily fenced to exclude people and vehicle impacts during the initial rehabilitation weed control and planting.
- Plant stock is to be grown from local provenance, where possible.
- Plants are to be supplied in tube stock, 75mm native tube or equivalent;
- A survival rate of at least 90% for active planting is to occur within the rehabilitation areas for the duration of the 12-month establishment and 12-month maintenance periods. Failure to achieve these targets will require plant replacement.
- The plants species specified in Section 6.3 - 6.4 are to be used as a priority, however, if a plant species is not available at the time of planting, a suitable substitute can be made.
- Plant out areas and species locations should be located and clearly marked.
- Replanting areas should be monitored for exotic weed growth during plant out and spot treated accordingly.
- The boundaries of the planting areas will be located and marked or clearly visible.
- Temporary markings on existing native species can be removed during the plant out.
- The planting could include the addition of a long-term slow release fertilizer to increase establishment potentials and rates of the plant.
- Where possible plants should be planted the day they arrive on site, if this not feasible, they will require a shaded location with sufficient watering provided.

- All planted species should be immediately watered after planting. If this is between the hours of 9am and 4pm specific attention should be given to avoiding leaves during watering to limit epidermis burning.
- Planting is not to occur in extreme weather conditions i.e. strong winds, extremely high temperatures.
- The planting hole should be dished to maximise water catchment and retention
- A survival rate of at least 90% is to occur within the Rehabilitation Zone for the duration of the 12-month establishment and 12-month maintenance periods. Failure to achieve these targets will require plant replacement.

5.6 Watering

All plant stock is to be watered onsite prior to planting and as soon as practical after planting (within several hours). Water is to be sourced locally or is to be recycled non-potable water.

The watering regime for planted areas will consist of:

- Weekly for the first month following planting;
- As required for the remaining 12-month period (i.e. to finished the establishment period), bearing in mind performance criteria relating to plant survival and health.

6 Establishment Period

The rehabilitation works are to have an Establishment Period of 12-months, allowing 6 weeks for adequate preparation of planting areas if required. Rehabilitation works should be staged as follows:

Table 4 - Staging of works (Establishment Phase)

<i>Step</i>	<i>Activity</i>	<i>Timing</i>
1	Locate and delineate the rehabilitation area	Week1
2	Remove all rubbish and foreign debris from rehabilitation area	Week 1
3	Undertake initial weed treatment. Locate, mark out and prepare areas for planting.	Week 1
4	Undertake follow up weed control and plant the specified species according to the planting module	Week 7 – 10
5	Scheduled maintenance of planting areas during establishment period and follow up weed control.	6-weekly cycle: Week 16,22,28, 34 - 52

7 Maintenance

The Maintenance Period will be for 12 months, following the 12-month plant establishment phase, and shall consist of:

- Weed Management - hand weeding and spot spraying in rehabilitation areas.
- Watering of planted plants if required.
- Replacement and repair of jute matting if required.
- Replacement planting of individual plants which have died if required.

The performance of maintenance activities will be assessed as part of allocated monitoring inspections.

Table 5 – Measurement of Health

<i>Time scale</i>	<i>Growth and development processes</i>	<i>Key indicator for species health</i>	<i>Maintenance Issues that may arise</i>	<i>Description of maintenance period</i>
0 – 12 Months (establishment period)	Growth rate and establishment	Seedling heights, foliage growth and colour, weed presence.	Weed removal, water requirements, impacts from unforeseen destruction, attrition rates.	90% success in establishing the planted species. Minimal weeding required.
12 – 24 Months (Maintenance period)	Continued growth and establishment General health Minor habitat use	Increasing height and trunk diameter increasing, Canopy growth and density Weed presence, Canopy closure	Weed removal, possible impacts from past weed invasion measures.	Healthy foliage growth rates and characteristics corresponding with individual species.

8 Monitoring

The rehabilitation works are to be monitored by routine site inspections by a qualified professional. Refer to Appendix 3 for an example monitoring inspection form.

Photo Monitoring Points should be established in suitable locations of each rehabilitation zone, to monitor changes over time.

The following inspections are recommended:

Table 6 – Monitoring Schedule (Establishment and On Maintenance Phase)

<i>Inspection</i>	<i>Timing</i>	<i>Purpose</i>	<i>Evidence</i>
1	Weeks 1-2	Confirm location of rehabilitation area & planting areas. Install permanent photo monitoring points (N/E/W/S images to be taken). Take images of site prior to commencement of initial weed treatment.	Site visit and photographs
2	Weeks 6-7	Inspection following initial and follow up weed management treatments.	Site visit and photographs
3	Weeks 8	On Establishment Inspection: Complete inspection with Council following practical completion of reconstructive active plantings.	Site visit, photographs and On Establishment Inspection with Council
4 to 11	Each following month	Monthly inspection of planting areas. Replace any dead plants. Monthly inspection of weed control areas.	Inspection form & photographs
12	Week 52	On Maintenance inspection: assess ecological integrity of site; • Plant establishment and vigour • Effectiveness of weed control activities	Site visit, photographs and On Maintenance Inspection with Council

<i>Inspection</i>	<i>Timing</i>	<i>Purpose</i>	<i>Evidence</i>
13 to 22	Every 6 weeks following	Inspection of planting areas and of weed control areas.	Inspection form & photographs
23	Week 104 or 12 months following 'On Establishment'	Off Maintenance inspection to assess ecological integrity of site; • Plant establishment and vigour • Effectiveness of weed control activities	Site visit, photographs and On Maintenance Inspection with Council

9 Performance Criteria

1. All environmental weeds including woody weeds, vines and Declared Class 1 and 2 weeds (pursuant to the Land Protection (Pest and Stock Route Management) Act 2002) must be controlled on all lands proposed for transfer to Council.
2. No declared Class 1 or Class 2 weeds are to be present on site at the Off-Maintenance inspection.
3. Pasture grass weeds and other perennial weed species are managed and impacts are minimised as much as possible.
4. A survival rate of 90% of active plantings is to be achieved, with any replants displaying good growth and form.
5. Species diversity of the active planting area is reflective of the species detailed within Section 6, except where subject to stock availability or as agreed with the rehabilitation contractor and council.

10 Conclusion

This Rehabilitation Management Plan has addressed the objectives that are required to achieve a rehabilitated sixty (60) metre buffer from the high bank of Sandy Creek in accordance with MIN/2020/659 and in accordance with rehabilitation components of Council's Open Space Management Guideline: Guideline for the preparation of Reports and Plans associated with the dedication of Public Open Space (November 2007, Version 1);.

This report also provides the various strategies and responses required to achieve Council objectives by protecting important habitat, and effectively managing environmentally sensitive areas during the construction and operation of the proposed development. In particular, the proposed restoration works will involve assisted natural regeneration of the 60m Sandy Creek buffer area through weed management, and active reconstruction plantings. Specifications for weed management activities and reconstructive plantings have been provided as part of this Rehabilitation Management Plan.

The rehabilitation of the waterway buffer area will benefit council and the natural environment by enhancing a habitat corridor between the riparian vegetation on Sandy Creek and the adjoining habitat corridors surrounding the industrial estate. A vegetation restoration buffer in conjunction with proposed erosion and sediment management measures will allow the impacted area of the subject site to function as a buffer to Sandy Creek, while facilitating other benefits such as vegetation conservation, habitat enhancement, and waterway protection.

APPENDIX 1 REHABILITATION MANAGEMENT PLAN

Revision No:

APPENDIX 2 SOUTH EAST QUEENSLAND ECOLOGICAL RESTORATION FRAMEWORK WEED MANAGEMENT TECHNIQUES

DISCLOSURE

At the time of publication the following chemicals and techniques are registered for use and are commonly utilised. Other chemicals and techniques are used in the ecological restoration industry. Laws and best practice techniques change over time and as such it is best to check with your local government as to the current preferred approach.

Under label or off-label permits 11463 and 9868. Permit 9868 requires that persons who can use the product under the permit are "All persons who are trained in the use and handling of agricultural chemicals and who are performing weed control as part of a bush regeneration/restoration project". Operators are legally obliged to read the label before using any herbicides. If the species you wish to treat is not on the label it will be

necessary to read the off label permit. Always consult the ecological restoration plan for the projects.

Additional useful references include the Weeds of Southern Queensland (Dight et al., 2011) and PUBCRIS (<http://services.apvma.gov.au/PubcrisWebClient/welcome.do>).

HERBICIDE (+ E.G. TRADE NAME)	PRINCIPLE USES	ECOTOXICOLOGY	GROUP	SCHEDULE	UPTAKE AND RESIDUAL AFFECT
Glyphosate 360gl (Weedmaster® or Roundup Biactive®)	Non- selective weed control	Full Aquatic registration (in most formulations),	M	5	Absorbed through the leaf via spraying and through the cambium when applying techniques such as stem injection and cut, scrape and paint. Extremely short-lived and rapidly immobilised (both in soil and water). Degraded within hours in most environments
2,4-D 625 gl amine (Amicide 625)	Selective of broad-leaved weeds in native grasses (limited effect on deep rooted dicots, legumes etc.)	Aquatically registered formulations available	I	5	Mainly absorbed through leaves and stems. Fairly immobile and relatively short-lived in the soil. (degraded within days in most environments)
Fluroxypyr 333gl (Starane advance)	Selective broad-leaf control (particularly effective on undersown legumes weeds)	N (demonstrated toxicity to aquatic organisms)	I	NS	Absorbed through the leaves. Relatively short-lived in the soil though highly persistent in water
Metsulfuron Methyl (Brush-off, Ally, Associate)®	Selective of broad-leaved weeds but also able to control a variety of monocots when applied at higher rates especially Liliaceae and Commelinaceae. Lower rates do affect monocots.	N (demonstrated toxicity to aquatic organisms)	B (potential resistance rotate with other herbicides)	NS	Mainly leaf absorbed. May persist for 3-6 months in the soil profile.
Metsulfuron + Glyphosate	Non-selective weed control and used with particular weeds or combination of weeds.	N (demonstrated toxicity to aquatic organisms)	MB (potential resistance rotate with other herbicides)	5	Mainly leaf absorbed, may persist for 3-6 months in the soil profile.
2,2-DPA	Grass (monocot) selective herbicide suitable for targeting dense weedy grass infestations amongst desirable native vegetation.	Yes (limited)	J	NS	Leaf and root absorbed
*Aquatic reg indicates that formulations of this herbicide may carry and aquatic registration, some formulations do not and individuals should check PUBCRIS prior to assuming they have an aquatically registered formulation. Addition of non-aquatically re...					
Gly	Glyphosate	eg. Weedmaster Duo®, Roundup Biactive®			
MM	Metsulfuron methyl	eg. Brushoff®, Brushkiller®, Associate®			
S	Surfactant	eg. LI700®, Prosil®, Pulse®			
A	Spray Adjuvant	eg. Agral®, Protec®, Codacide®,			
D	Colour Marking Dye	eg. Herbi (red or blue) Liquid Dye®			

COMMON NAME	SCIENTIFIC NAME	APPLICATION METHOD	CHEMICAL	RATE	ADJUVANT	SURFACTANT	COMMENTS
TREES							
Chinese Celtis	<i>Celtis sinensis</i>	Stem Inject	Glyphosate	1:1.5 Gly:water			
		Cut, Scrape and Paint	Glyphosate	1:1.5 Gly:water			
		Basal Bark (saplings)	Fluroxypyr	210ml:10L diesel			
		spot-spray	Glyphosate	200ml:10L water + A + D			
			Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + S + A			
Camphor Laurel	<i>Cinnamomum camphora</i>	Stem Inject	Glyphosate	1:1.5 Gly:water			
		Cut, Scrape and Paint	Glyphosate	1:1.5 Gly:water			
		Basal Bark (saplings)	Fluroxypyr	210ml:10L diesel			
		Spot spray	Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + S + D			
			Glyphosate	200ml:10L water + A + D			
Cadaghi	<i>Corymbia torelliana</i>	Cut, Scrape and Paint	Glyphosate	1:1.5 Gly:water			
		Stem Inject	Glyphosate	1:1.5 Gly:water			
		Basal Bark (saplings)	Fluroxypyr	210ml:10L diesel			
		Spot spray	Glyphosate	100ml Gly: 10L water + A + D			
Loquat	<i>Eriobotrya japonica</i>	Basal Bark(sapling)	Fluroxypyr	210ml:10L diesel			
		Spot spray	Glyphosate	200ml Gly:10L water +			
		Cut Scrape and Paint	Glyphosate	1:1.5 Gly:water			
		Stem Inject	Glyphosate	1:1.5 Gly:water			
Cockscomb Coral Tree and Coral Tree	<i>Erythrina crista-galli</i> and <i>E. x sykesii</i>	Spot spray	Glyphosate	200ml Gly:10L water + S+ A			
		Basal Bark (sapling)	Fluroxypyr	210ml/10L diesel			
		Cut Scrape and Paint	Glyphosate	1:1.5 Gly:water			
		Stem Inject	Glyphosate	1:1.5 Gly:water			
Brazilian cherry	<i>Eugenia uniflora</i>	Cut Scrape and Paint	Glyphosate	neat (undiluted)			
		Stem Inject	Glyphosate + Metsulfuron Methyl	1g MM added to 1 Gly:1.5 water			
		Spot Spray	Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + S + D			
Golden Rain Tree	<i>Koelreuteria elegans; paniculata</i>	Cut Scrape and Paint	Glyphosate	1:1.5 Gly:water			
		Stem Inject	Glyphosate	1:1.5 Gly:water			
		Basal Bark (sapling)	Fluroxypyr	210ml:10L diesel			
		Spot spray	Glyphosate	100ml Gly:10L water + A + D			
Privet (Large and Small leaved)	<i>Ligustrum lucidum</i> and <i>L. sinense</i>	Spot Spray	Glyphosate	200ml Gly:10L water + S+ D			
			Metsulfuron methyl	1.5g MM:10L water + A + D			
			Fluroxypyr	30ml:10L water +			
		Cut Scrape and Paint	Glyphosate	1:1.5 Gly:water			
		Stem Inject	Glyphosate	1:1.5 Gly:water			
		Basal Bark (sapling)	Fluroxypyr	210ml:10L diesel			

Mulberry	<i>Morus spp.</i>	Spot Spray	Glyphosate	200ml Gly:10L water + S + D			
		Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
		Stem Inject	Glyphosate	1 Gly:1.5 water			
		Basal Bark (Juvenile)	Fluroxypyr	210ml:10L diesel			
Canary Island Date Palm	<i>Phoenix canariensis</i>	Spot Spray	Glyphosate	200ml Gly:10L water + S + D			
		Stem Inject	Glyphosate + Metsulfuron Methyl	1g MM added to 1 Gly:1.5 water			
Guava	<i>Psidium guajava</i>	Spot Spray	Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + S + D			
		Cut Scrape and Paint	Glyphosate + Metsulfuron Methyl	1g MM added to 1 Gly:1.5 water			
		Stem Inject	Glyphosate + Metsulfuron Methyl	1g MM added to 1 Gly:1.5 water			
		Spot Spray	Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + A + D			
Umbrella Tree	<i>Schefflera actinophylla</i>	Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
		Stem Inject	Glyphosate	1 Gly:1.5 water (do not stem inject when in flower)			
		Spot Spray	Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + A + D			
Broad-leaf Pepper Tree	<i>Schinus terebinthifolius</i>	Spot Spray	Glyphosate	200ml:10L water + S + A			
			Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + S + A			
			Fluroxypyr	30ml:10L water			
		Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
		Basal Bark (sapling)	Fluroxypyr	210ml:10L diesel			
		Stem Inject	Glyphosate	1 Gly:1.5 water			
Giant Devils Fig and Wild Tobacco	<i>Solanum chrysotrichum and S. mauritianum</i>	Spot Spray	Glyphosate	150ml Gly:10L water + A + D			
			Fluroxypyr	30ml:10L water			
		Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
		Basal Bark (Juvenile/ Mature)	Fluroxypyr	210ml:10L diesel			
		Stem Inject	Glyphosate	1 Gly:1.5 water			
African tulip tree	<i>Spathodea campanulata</i>	Spot Spray	Glyphosate	200ml Gly + 1.5g MM in 10L water + A + D			
		Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
		Stem Inject	Glyphosate	1 Gly:1.5 water			
Cocos palm	<i>Syagrus romanzoffiana</i>	Stem Inject	Glyphosate + Metsulfuron Methyl	1g MM added to 1 Gly:1.5 water			
		Spot Spray	Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + A + D			
Yellow Bells	<i>Tecoma stans</i>	Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
		Basal Bark	Fluroxypyr	210ml:10L diesel			
		Spot Spray	Glyphosate	150ml Gly: 10L water + A + D			
		Stem Inject	Glyphosate	1 Gly:1.5 water			
Tipuana	<i>Tipuana tipu</i>	Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
		Stem Inject	Glyphosate	1 Gly:1.5 water			

GRASSES							
Creeping Bamboo/ Clumping Bamboo	<i>Arundinaria spp./ Bambusa spp.</i>	Cut and spray (re- growth/seedling)	Glyphosate 2,2-DPA	100ml Gly: 10L water + D			
		Cut stump and fill segment	Glyphosate	150g:10L water 1 Gly:1.5 water			
Broad-leaved carpet grass, Narrow-leaved carpet grass, Para grass, Mosman River grass , Pangola grass, Guinea grass, Rhodes grass, Molasses grass, Sour grass, Paspalum, Bahia grass, Vasey grass, Broad-leaf paspalum, Kikuyu grass, Bana grass, Elephant grass	<i>Axonopus compressus, A. fissifolius, Brachiaria mutica, Cenchrus echinatus, Chloris gayana, Digitaria eriantha, Megathyrsus maximus, Melinis minutiflora, Paspalum conjugatum , P. dilatatum , P. notatum , P. urvillei, P. wetsteinii , Pennisetum clandest</i>	Spot Spray	Glyphosate	100ml Gly:10L water + D			
Herbs							
Agave/Century plant	<i>Agave americana</i>	Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
		Stern Inject	Glyphosate	1g MM added to 1 Gly:1.5 water			
Crofton weed	<i>Ageratina adenophora</i>	Spot Spray	Glyphosate	100ml Gly:10L water + D			
			Metsulfuron methyl	1/2 - 1g MM: 10L water + D			
Mistflower	<i>Ageratina riparia</i>	Spot Spray	Glyphosate	100ml Gly:10L water + D			
			Metsulfuron methyl	1/2 - 1g MM: 10L water + D			
Blue billy-goat weed	<i>Ageratum houstonianum</i>	Spot Spray	Glyphosate	100ml Gly:10L water + D			
			Metsulfuron methyl	1g MM: 10L water + D			
			Fluroxypyr	30ml/10L water			
			2-4,D	30ml/10L water			
Ragweed	<i>Ambrosia artemisiifolia</i>	Spot Spray	Glyphosate	100ml gly:10L water + A + D			
			Metsulfuron methyl	1.5g MM: 10L water + A + D			
Cobblers pegs	<i>Bidens pilosa var. pilosa</i>	Spot Spray	Fluroxypyr	30ml/10L water			
			2, 4-D	30ml/10L water			
			Glyphosate	100ml Gly: 10L water + A + D			
			Metsulfuron methyl	1g MM: 10L water + A + D			
Mother of Millions; Live Leaf Plant; Resurrection Plant	<i>Bryophyllum delagoense; Pinnatum</i>	Spot Spray	2, 4-D	50ml/10L water			
	<i>Bryophyllum delagoense</i>		Metsulfuron methyl	1.5g MM:10L water + S + D			
Purple/Green Succulent, Inch Plant	<i>Callisia fragran; repens</i>	Spot Spray	Fluroxypyr	90ml/10L water			
			Metsulfuron methyl	1.5g MM:10L water + S + D			
			Glyphosate	200ml Gly:10L water + A + D			
			Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + A + D			

Hairy Commelina; Trad (wandering Jew); Purple Succulent; Striped Trad	<i>Commelina benghalensis</i> ; <i>Tradescantia fluminensis</i> / <i>albiflora</i> ; <i>Tradescantia pillida</i> ; <i>Zebrina pendula</i> syn <i>Tradescantia zebrina</i>	Spot Spray	Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + A + D			
			Glyphosate	200ml Gly:10L water + A + D			
			Metsulfuron methyl	1.5g MM: 10L water + S + D			
			Fluroxypyr	90ml/10L water			
Glory lily	<i>Gloriosa superba</i>	Foliar Spray	Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + A + D			
Polka dot plant	<i>Hypoestes phyllostachya</i>	Spot Spray	Metsulfuron methyl	1.5g MM:10L water + S + D			
			Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + A + D			
Fish bone fern	<i>Nephrolepis cordifolia</i>	Spot Spray	Metsulfuron methyl	1g MM: 10L + A/S + D			
			Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + A + D			
Coral berry	<i>Rivinia humilis</i>	Spot Spray	Glyphosate	100ml Gly: 10L water + A + D			
			Glyphosate + Metsulfuron Methyl	100ml Gly + 1.5g MM in 10L water + A + D			
Mother-in-law's tongue	<i>Sansevieria trifasciata</i>	Spot Spray	Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + A + D			
Flannel Weed	<i>Sida cordifolia</i>	Spot Spray	Fluroxypyr	60ml/10L water			
Ground Asparagus	<i>Asparagus aethiopicus</i>	Spot Spray	Metsulfuron Methyl	1.5g MM : 10L water + A + D			
			Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + A/S + D			
Singapore Daisy	<i>Sphagneticola trilobata</i>	Spot Spray	Metsulfuron methyl	1.5g MM in 10L water + A + D			
			Glyphosate + Metsulfuron Methyl	100ml Gly + 1g MM in 10L water + A + D			
SHRUBS							
Groundsel bush	<i>Baccharis halimifolia</i>	Spot Spray	2,4-D	40ml/10L water			
		Spot Spray	Glyphosate	200ml Gly:10L water + A + D			
		Stern Inject	Glyphosate	1 Gly:1.5 water			
		Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
Green cestrum	<i>Cestrum parqui</i>	Spot Spray	Glyphosate	200ml Gly:10L water + A + D			
			Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + A + D			
Duranta	<i>Duranta erecta</i>	Overall Spray (re-growth/seedling)	Glyphosate	200ml Gly:10L water + A + D			
		Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
		Stern Inject	Glyphosate	1 Gly:1.5 water			
Lantana	<i>Lantana camara</i>	Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
		Spot Spray	Fluroxypyr	40ml/10L (spring, summer)-60ml/10L water (Autumn, Winter)			
		Spray (spot spray and overspray)	Glyphosate	100ml Gly:10L water + D			
		Spray Red Flowering species	Glyphosate	200ml Gly:10L water + A + D			
		Splatter Gun	Glvphosate	1 Gly:9 water			

Leucaena	<i>Leucaena leucocephala</i>	Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
		Spot Spray	Fluroxypyr	30ml/10L water			
HERBS							
Murraya	<i>Murraya paniculata</i>	Spot Spray	Glyphosate	200ml Gly:10L water + A + D			
		Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
		Stern Inject	Glyphosate	1 Gly:1.5 water			
Mickey mouse bush	<i>Ochna serrulata</i>	Basal Bark	Fluroxypyr	210ml/10L diesel			
		Spot Spray	Fluroxypyr	30ml/10L water			
		Spot Spray	Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + A/S + D			
		Scrape (lightly) and Paint - juvenile	Glyphosate	neat (undiluted)			
		Cut Drill and Fill - mature	Glyphosate + Metsulfuron Methyl	1g MM added to 1 Gly:1.5 water			
Prickly pear	<i>Opuntia Spp.</i>	Spot Spray	Glyphosate + Metsulfuron Methyl	100ml Gly + 1.5g MM in 10L water + A + D			
		Cut Scrape and Paint in horizontal cuts across flat stems	Glyphosate + Metsulfuron Methyl	1g MM added to 1 Gly:1.5 water			
Castor Oil Plant	<i>Ricinus communis</i>	Spot Spray	2, 4-D	45ml/10L water			
			Glyphosate	100ml/ 10L water			
		Cut Scrape and Paint	Glyphosate	1g MM added to 1 Gly:1.5 water			
		Stern Inject	Glyphosate	1g MM added to 1 Gly:1.5 water			
Easter Cassia/ Winter Senna	<i>Senna pendula var. glabrata</i>	Spot Spray	Glyphosate	200ml Gly:10L water + A + D			
		Cut and Paint		1 Gly:1.5 water			
		Stern Inject (Mature)	Glyphosate	1 Gly:1.5 water			
Smooth senna	<i>Senna septemtrionalis</i>	Spot Spray	Glyphosate	200ml Gly:10L water + A + D			
		Cut and Paint	Glyphosate	1 Gly:1.5 water			
		Stern Inject	Glyphosate	1 Gly:1.5 water			
Yellow Oleander	<i>Thevetia peruviana</i>	Basal Bark	Fluroxypyr	210ml/10L Diesel			
		Spot Spray	Glyphosate	200ml Gly:10L water + A + D			
		Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
		Stern Inject	Glyphosate	1 Gly:1.5 water			
VINES							
Madeira Vine	<i>Anredera cordifolia</i>	Spot Spray	Fluroxypyr	30ml/10L water			
		Spot Spray	Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + A/S + D			
		Scrape and Paint (mature vines)	Glyphosate	Scrape as much stem as possible in 1m lengths on alternate sides. Gouge and paint ground tubers. Scrape and paint roots			
Moth vine	<i>Araujia sericiflora</i>	Spot Spray	Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + A + D			
		Cut Scrape and Paint	Glyphosate (aerial)	1 Gly:1.5 water			

Dutchman's pipe	<i>Aristolochia elegans</i>	Spot Spray	Glyphosate + Metsulfuron Methyl	200ml Gly + 1.5g MM in 10L water + A + D			
		Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
Climbing Asparagus	<i>Asparagus africanus; plumosus</i>	Basal Bark	Fluroxypyr	210ml/ 10L diesel			
		Spot Spray	Glyphosate	200ml Gly:10L water + A + D			
Balloon Vine	<i>Cardiospermum grandiflorum</i>	Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
		Spot Spray	Glyphosate	100ml Gly:10L water + D			
Green/ Silver-leaf desmodium; Siratro; Horesgrain; Glycine	<i>Desmodium intortum; Macroptilium atropurpureum; Macrotyloma uniflorum; Neonotonia wightii</i>	Spot Spray	Glyphosate	200ml Gly:10L water + A + D			
			2,4-D	40ml/10L water			
			Glyphosate + Metsulfuron Methyl	100ml Gly + 1.5g MM in 10L water + A + D			
		Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
Moon flower; Mile-a-minute; Morning Glory; Blue Morning Glory	<i>Ipomoea alba; I. cairica; I. indica and I. purpurea</i>	Spot Spray	Glyphosate + Metsulfuron Methyl	100ml Gly + 1.5g MM in 10L water + A + D			
		Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
Creeping Lantana	<i>Lantana montevidensis</i>	Spot Spray	2,4-D	40ml/10L water			
			Glyphosate + Metsulfuron Methyl	100ml Gly + 1.5g MM in 10L water + A + D			
			Metsulfuron methyl	1.5g MM : 10L water + A + D			
Cat's Claw Creeper	<i>Macfadyena unguis-cati</i>	Spot Spray	Glyphosate	100ml Gly : 10L water + S + D			
			Glyphosate + Metsulfuron Methyl	100ml Gly + 1g MM:10L water + A + D			
		Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
Edible passionfruit; Stinking Passionflower; Corky Passionfruit; White Passionfruit	<i>Passiflora edulis; foetida; suberosa; subpeltata</i>	Spot Spray	Glyphosate + Metsulfuron Methyl	100ml Gly + 1g MM in 10L water + A + D			
			Glyphosate	200ml Gly:10L water + A + D			
			2,4-D	30ml/10L water			
		Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
Kudzu	<i>Pueraria lobata</i>	Spot Spray	Glyphosate + Metsulfuron Methyl	100ml Gly + 1.5g MM in 10L water + A + D			
			Fluroxypyr	30ml/10L water			
		Gouge and Paint tubers	Glyphosate	1 Gly:1.5 water			
		Stern Inject	Glyphosate + Metsulfuron Methyl	1/1 (g) + 1g (MM) Per Litre of water			
Climbing nightshade	<i>Solanum seaforthianum</i>	Spot Spray	Fluroxypyr	30ml/10L water			
			Glyphosate	100ml Gly : 10L water + A + D			
		Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			
Black eyed susan	<i>Thunbergia alata</i>	Spot Spray	2-4,D	30ml/10L water			
			Glyphosate	200mL in 10L water			
			Metsulfuron methyl	1.5g in 10L water			
		Basal Bark	Fluroxypyr	210ml/ 10L diesel			
		Cut Scrape and Paint	Glyphosate	1 Gly:1.5 water			

APPENDIX 3 EXAMPLE SITE MONITORING FORM

SITE VISIT DETAILS	
Location: Site Visit No. & Date: Site Visit By: Weather:	
Purpose of the site visit	Tick box
Allocated routine inspection	
Final Inspection	

Score of 1: <5%cover Score of 2: 5-20% cover **Score of 3: 20-50% cover** **Score of 4: 50-75% cover** **Score of 5: 75-100% cover**

Site visit	Date	Criteria					
		Habitat	Species Diversity Indicators	Indigenous cover (tree, shrub, moss)	Occurrence of natural regeneration	Condition of fences	General Observations (fire, flood, breeding, flowering etc.)
1							
2							
3							
4							
5							
6							
7							
8							

A low-angle photograph of a modern building's exterior. The building features large glass windows reflecting the sky and clouds, and a prominent red vertical panel on the right side. In the foreground, a young tree with green and yellowing leaves is visible. The text 'APPENDIX M' is overlaid in the top right corner.

APPENDIX M

VEGETATION MANAGEMENT PLAN



VEGETATION MANAGEMENT PLAN

Prepared for: FPI Queensland Pty Ltd
Lot 504 Homestead Drive, Stapylton
QLD 4207
Lot 504 on SP329485

ADDRESS: Lot 504 Homestead Drive, STAPYLTON QLD 4207

REAL PROPERTY DESCRIPTION: Lot 504 on SP329485

PREPARED FOR: FPI Queensland Pty Ltd

DATE PREPARED: 21 April 2023



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development
perspectives

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1. Introduction

1.1. Background

This Vegetation Management Plan (VMP) has been produced by Gassman Development Perspectives in support of proposed vegetation clearing works to facilitate Stage 3 of a large-scale industrial development commonly known as Vantage Industrial Estate. Stage 3 is comprised of two main aspects:

- Development permit for ROL – One into Four Lot Subdivision (four industrial lots and common property, public stormwater lot, public open space conservation lot and new public road.); and
- Development permit for OPW – Change to Ground Level and Vegetation Clearing.

This VMP focuses on land occurring over Lot 504 on SP329485, Stapylton, currently the balance remaining after the first two stages of the Vantage Industrial Estate. This VMP is seeking the removal of the remaining vegetation within the area designated for Stage 3 works at Vantage Industrial Estate, as well as the linear remnants of vegetation along the site's Christensen Road and Christensen Road South frontages, within the road reserves. This VMP also covers the remainder of the area which was cleared during the Stage 2 vegetation clearing and which now contains areas of predominantly consisting of pest vegetation and occasional regrowth vegetation.

Given the time elapsed since clearing has occurred, potential fauna use in cleared overgrown areas including those containing mulch stockpiles is considered possible, hence general fauna management guidance for clearing in these areas has been included within this report.

The general location of the subject site is displayed in **Figure 1**, below. An aerial image of the subject site is provided in **Figure 2**. The site is immediately adjoined by the first two stages of the Vantage Industrial Estate to the northwest and is predominantly surrounded by other industrial uses including the Stapylton Landfill to the east.

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For the purposes of this VMP, and the Vegetation Clearing Operational Works application, it has been assumed that all vegetation within the proposed 'Extent of Works' area(s) shown in **Appendix 1** – Vegetation Management Plan will be cleared in order facilitate the proposed development.

1.2. Survey Methods

Vegetation within the 'Extent of Works' area was surveyed, with individual trees located and recorded in the following instances;

- For any tree greater than 4 metres in height, or
- For any trees over 10cm DBH at 1.3m from the ground, or
- For any trees containing habitat features (irrespective of DBH size).

Details of individual trees recorded on the subject site include the species, trunk diameter, height, canopy spread and fauna use. Not all trees were individually surveyed and recorded, and some inaccessible areas containing safety hazards such as cliff edges, areas of dense exotic vegetation, or juvenile planted vegetation were surveyed into Vegetation Groups.

The above sampling method is considered to have accurately detailed the native vegetation values present on the site, and is consistent with City of Gold Coast Council's City Plan definition of assessable vegetation.

This information has been used for the best practice management strategies for managing clearing on the site. The records of these trees are included in **Appendix 1** of this report.

2. Purpose

The principle intention of this VMP is to appropriately reflect the current tree species on the site, their location, management and treatment in relation to removal, retention, protection, relocation, propagation or enhancement. In addition, it provides recommendation for earthworks or vegetation clearing activities in relation to potential fauna which may occur in areas of remnant or regrowth vegetation and within mulched vegetation stockpiles remaining from earlier clearing.

This VMP has been prepared to specifically identify which trees would be required for removal in order to facilitate the necessary earthworks and frontage works required as a part of the Stage 3 development. Although the site, and particularly the area designated for Stage 3 is predominantly cleared under previous approvals, a recent ROL saw some land amalgamated into Lot 504. This land, that used to make up the rear portion of Amgrow, formally described as Lot 503 on SP329485, contains remnants of vegetation adjacent its previous boundary. This area has been integrated into the Stage 3 proposal for Vantage, and as such will require the removal of the vegetation within. In addition to this, Stage 3 reaches the Christensen Road and Christensen Road South frontages, and as such required frontage works will be required to ensure the road reserve meets necessary standards and requirements. To facilitate these works, any trees remaining in the relevant road reserve areas will subsequently be removed, in accordance with this VMP.

A total of 290 trees were individually surveyed on site, and four additional vegetation groups identified. All of the surveyed trees and vegetation groups are to be removed as a part of this VMP. Of the individually surveyed trees, seven were identified as having fauna habitat values in the form of possible hollows or showed evidence of use for breeding by small birds, mammals or reptiles. Numerous mulch stockpiles were observed with the potential to be in-use by fauna, and these should be inspected by the fauna spotter catcher (FSC) for burrows containing fauna, prior to their relocation. Notes have been included in the Tree Survey Plan identifying habitat values associated with individually surveyed trees. Consequently, a qualified Fauna spotter catcher should be engaged to be present during all clearing operations.

3. VMP Provisions

This VMP has been structured in a manner to incorporate the following provisions:

- The location and extents of the proposed areas of vegetation that will be removed, and vegetation that will be protected;
- Particulars of the vegetation occurring on site (**Appendix 2**);
- A statement of the reasons for the vegetation removal and associated factors;
- Details of procedures relating to the following;
 - Vegetation protection
 - Vegetation to be removed
 - Corrective action
 - Reuse of felled Vegetation
 - Stockpiles
 - Habitat Trees
 - Ecological role of the vegetation to be removed
 - Invasive weed species
 - Summary of performance indicators

4. VMP Objectives

The primary objectives of this VMP are as follows:

- To identify type and location of the site's existing individual trees and vegetation groups (refer to the Tree Survey Table in **Appendix 1** and the Vegetation Management Plan in **Appendix 2**);
- Identify any existing tree species or vegetation communities adjacent to the proposed clearance area intended for retention and protection;
- Identify tree species that may contain fauna;
- To identify and locate existing tree species required for removal;
- To provide a specific method of tree clearance that will minimise impact on the ecology and surrounding vegetation;
- To provide information for the protection of existing vegetation to be retained;
- To provide sustainable reuse methods for the felled vegetation; and
- To limit any possible erosion from vegetation clearing practices.

5. Reasons for Vegetation Removal

The Operational Work application for Vegetation Clearing which this Vegetation Management Plan is associated is seeking to remove vegetation as indicated to enable and facilitate Stage 3 of the Vantage Industrial Estate and its associated earthworks and frontage works.

6. Guidelines for clearing

The vegetation shall be removed from the subject site with the following considerations:

- 1) All machine operators conducting the tree clearing process are to have a copy of the approved VMP;
- 2) No site sheds, parking areas or structures are to be located within proximity to vegetation outside the clearance area or under its drip line;
- 3) The area surrounding the tree for removal is clear of any hazards and maintains adequate room to safely conduct the removal;
- 4) The vegetation removal process has focused on providing environmentally sensitive and sustainable practices including:
 - Fauna removal if required, including the use of fauna spotter catchers to supervise all clearing activities;
 - Use of soft-felling techniques where fauna habitat may be present as guided by the fauna spotter catcher and retention of hollow-bearing trees for as long as possible (preferably a minimum of 24hrs) to allow fauna opportunity to relocate;
 - Inspection of ground-based fauna habitat such as burrows, rubbish/rubble piles, or dense vegetation for fauna and clearing under the guidance of a FSC.
 - Reuse of felled material for on-site use;
 - No damage to native vegetation or its understorey not approved within the Vegetation Management Plan;
 - Clearing should be undertaken in accordance with this plan to reduce impacts to fauna and include consideration of aspects such as seasonal timing of clearing, survey for and management of fauna, and avoidance and mitigation measures in relation to fauna; and
 - Weed management procedures should be implemented to prevent the spread of weeds on site including but not limited to those provided in the associated table in this report.
- 6) The following activities are prohibited to occur within the vegetation protection zones or drip-lines of trees marked for retention and for areas outside the scope of this plan:
 - Machinery or vehicle parking;
 - Disposal of liquids of any type;
 - Repairs or refuelling;
 - Earthworks;
 - Temporary sheds; and
 - Stockpiling (refer to section 7.3).
- 7) Clearing in proximity to waterways and drainage channels must take appropriate mitigation and management actions to ensure that adverse impacts to adjacent waterways do not occur as a result of erosion and sedimentation during, and following vegetation clearing.

6.1. Vegetation Protection

As the required vegetation clearing is for a staged industrial subdivision, all vegetation within the extent of clearing area is proposed to be removed. Of note, a large portion of land south of Christensen Road South is to be dedicated to Council as a part of this stage, as an Open Space conservation lot. The limit to the proposed clearing is identified in the Tree Survey Plans provided in Appendix 1, and includes all necessary clearing. Vegetation outside of the Clearing extent area illustrated will be identified and retained.

Due to the scale of the clearing, hard standing steel fence (Figure 3) as per Australian Standard AS 4970-2009 (Protection of Trees on Development Sites) is not a feasible option for protecting retained vegetation. Instead, orange mesh fencing between steel pickets and supported by a continuous wire should be used to clearly mark the extent of clearing associated with this VMP. As no vegetation is proposed to be retained within northern site of Lot 504, no individual tree protection measures are considered necessary. Orange mesh fencing will also be sufficient to delineate the extent of clearing to ensure the retained trees are not damaged.

The following measures will ensure vegetation outside of the Stage 3 extent is retained in accordance with this VMP:

- 1) The limit of vegetation clearing will be clearly demarcated with orange mesh fencing between steel pickets and supported by a continuous wire
- 2) All machine operators conducting the tree clearing process are to have a copy of the approved Tree Clearing Plan;
- 3) No site sheds, parking areas or buildings are located within the retained vegetation outside of the Stage 1 clearing extent, or under its drip line;
- 4) The area surrounding the trees for removal is clear of any hazards and maintains adequate room to safely conduct the removal;
- 5) The vegetation removal process has focused on providing environmentally sensitive and sustainable practices including:
 - Fauna spotting and removal if required;
 - Direction of clearance and felling; and
 - Reuse of felled material for on site use
- 6) The following activities are prohibited to occur within the vegetation protection zones or drip-lines of retained vegetation outside of the Stage 1 extent:
 - Machinery or vehicle parking;
 - Disposal of liquids of any type;
 - Repairs or refuelling;

- Earthworks;
- Temporary sheds; and
- Stockpiling.

6.2. Vegetation to be Removed

All vegetation within the identified Extent of Clearing is proposed to be removed. The vegetation communities and individual habitat bearing trees are clearly indicated in the plan contained within **Appendix 1**.

Small trees, re-growth, understorey or groundcover species that also occur within the allocated clearance areas have not been individually identified. Only individual trees in more open areas have been individually surveyed in Appendix 1, with the remaining vegetation proposed to be removed identified in vegetation groups.

7. Tree Clearing Process

The manner by which the vegetation should be removed from the subject site is outlined in the following section:

- 1) A pre-clearing survey will be conducted by a DES approved fauna spotter catcher (FSC) according to details within the Fauna Management Plan (FMP);
- 2) A pre-start meeting with an environmental officer from City of Gold Coast Council prior to commencement shall be undertaken;
- 3) The extent of clearing should be clearly marked using visible methods including survey stakes and GPS mapping should be available to clearing operators to reduce risk of unplanned clearing.
- 5) Direction of clearing should be guided by the fauna spotter catcher in conjunction with the direction of clearing information below.
 - Generally, the direction of clearing should always be toward areas of retained vegetation to provide dispersal opportunity for fauna and away from roads where practical, or in the direction specified by the spotter catcher supervising clearing.
 - The clearing should progress generally toward the least disturbed areas, encouraging fauna movement towards the vegetation corridors on the western and southern boundaries.
- 6) Tree-felling grab attachment for the controlled felling of habitat trees, matressing or decelerated felling should be used for trees containing habitat or potential habitat for fauna. Due to the size and accessibility of the site, the specific technique employed is to be determined on site but must follow best practise to reduce injury or mortality to fauna.
- 7) Woodchip the felled vegetation on site which cannot be resold or reused as logs or relocated to provide fauna habitat for displaced fauna.
- 8) If necessary, felled vegetation to be chipped, will be stockpiled temporarily on site, away from any retained vegetation, in accordance with section 7.3.
- 9) Stump grind remains or remove from ground with excavator.

7.1. Corrective Actions

If a retained tree shows signs of ill health, then the causes are to be identified and amelioration methods are to be discussed with council.

7.2. Reuse of Felled Vegetation

The reuse of felled vegetation should prioritise environmental outcomes. A number of recommendations for re-use are included in the FMP. These include:

- logs and hollow limbs will be placed in adjacent or nearby vegetation, so they can be used for habitat
- stags and any large logs designated for removal will be retained as timber logs to be placed on the ground outside the vegetation clearing area, to be used as fauna habitat.
- an FSC will be present during sheering or mulching of cleared vegetation if left longer than 24 hours
- previously mulched vegetation from Stages 1 and Stages 2 will be inspected by a FSC prior to relocation.
- provision of nest boxes

Large trees which produce usable logs should be sold or reused on site as part of rehabilitation or landscaping works where feasible. Any wood chipped vegetation should be reused on the site in any future landscape, and site stabilisation where appropriate. If a surplus of mulch is produced, it may be transported off site for alternative uses elsewhere.

7.3. Stockpiles

Stockpiles of felled vegetation or mulched vegetation, will be managed with the following considerations:

- Stockpiles are not to be located within 30 meters from significant stands of vegetation.
- Stockpiles are not to be located in areas allocated for road constructions.
- Stockpiles are not to be located in areas with difficult access or on steep slopes.
- Stockpiles are not to exceed 1000mm in height.
- Stockpiles are to be covered with appropriate plastic and fixed securely.
- Stockpiles left for longer than 8 hours should be inspected by a spotter catcher immediately prior to mulching and the spotter catcher must be present for works

8. Fauna Inspection

Individual trees observed to contain fauna values or observed to potentially contain fauna values are identified in **Appendix 1**. Stockpiles of woodchipped vegetation, left over from earlier clearing activities under OPW approvals should be inspected for fauna, particularly the presence of burrows if clearing or earthworks are to occur within these areas. During this survey, likely goanna burrows were observed within these mulch stockpiles.

A fauna spotter catcher is required to be present prior to works commencing and inspect the site to ensure identification of any wildlife or habitat features (e.g. nest, tree hollows, mulch stockpiles) prior to clearing. Clearing is not to commence until the fauna spotter has certified that the site has been fully inspected and any necessary fauna protection measures or relocation procedures implemented. Due to the presence of potential fauna habitat features, a fauna spotter catcher (FSC) will be present on site during the clearing works.

The fauna spotter catcher should hold a current permit with the Department of Environment and Science (DES). Captured fauna should be relocated to nearby areas deemed appropriate by the fauna spotter catcher.

A pre-start meeting is to be arranged prior to the commencement of vegetation clearing. The fauna spotter catcher shall be present during the pre-start meeting. The FSC will be present for all clearing works. Clearing of vegetation will follow the direction of the FSC at all times.

The fauna spotter catcher will submit a letter or report to Council following the clearing reporting on the details of any fauna rescued, relocated or otherwise.

9. Sediment Control

Sediment control onsite once the clearing process begins should include sediment fencing around the clearance area to reduce the risks of erosion and subsequent sediment entrainment resulting from rain events which may impact upon the adjacent retained vegetation. These measures should be installed once clearing and reshaping of the site begin, and until completion of works once the site is re-stabilised.

Sediment fencing will be installed prior to ground disturbance and 'grubbing' immediately following the initial felling and clearing of the vegetation.

Sediment and erosion control measures will be put in place in accordance with the approved Sediment and Erosion Control Plan.

10. Summary of Performance Indicators

1. Tree removal was restricted to allocated and approved areas and sequential clearing conditions were adhered to.
2. Trees that remain in retained areas are in a healthy condition
3. A pre-clear fauna assessment and report were completed and provided within 2 weeks of clearing. The site was inspected within 48 hours of clearing.
4. Clearing of vegetation was undertaken in the presence of a suitably qualified and experienced fauna spotter catcher (FSC). The vegetation was inspected for fauna immediately prior to clearing.
5. Hollow-bearing trees were left in situ as long as possible to allow fauna to relocate on their own
6. Soft-felling technique were used for trees containing fauna habitat or fauna (if directed by the fauna spotter)
7. Fauna was relocated to suitable recommended locations
8. No increased erosion or sediment loss occurred from site as a result of the tree clearing
9. Felled vegetation has been wood-chipped and stockpiled or logs transported off site within indicated timeframes where appropriate. Suitable hollow logs were retained and relocated for use as habitat in retained areas if applicable.

10. Conclusion

A total of 290 trees were individually surveyed on site, of which four were identified as vegetation groups. Of the individually surveyed trees, seven trees contained habitat values. All trees identified as being for removal will be removed. The boundary will be delineated via orange mesh fencing, clearing separating retained vegetation from removed. No vegetation outside the area of works is to be removed, cleared or damaged. Individual trees and their locations have been identified, and their retention or removal status clearly stated.

Due to the structure of the vegetation to be removed and its current habitat values, a suitably qualified fauna spotter catcher will need to be present during all clearing operations.

Specific methodologies have been prescribed which are to be adhered to at all times during the clearing process to ensure that best practice is achieved at all times, and the direct ecological impacts of the proposed works are minimised as far as practicable.

The above specifications and management actions, in conjunction with the tree survey plans in **Appendix 1**, will provide the necessary information for the proposed clearing actions. This report has outlined procedures in relation to the vegetation management and clearing procedures to be undertaken as part of the Operational Works – Tree Clearing component of the proposed development.

Appendix 1 – Tree Survey Table



Table 2. Tree Survey Data

Tree no	Species	DBH (cm)	Height (m)	Canopy (m)	Notes
001	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	6	4	3	
002	<i>Eucalyptus carnea</i>	9	6	3	
003	<i>Eucalyptus carnea</i>	5.5	4	1	
004	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	14	5	4	
005	<i>Acacia leiocalyx</i>	9	6	5	
006	<i>Allocasuarina littoralis</i>	5	6	2	
007	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	7	7	1	
008	<i>Acacia leiocalyx</i>	10.5	3	4	
009	<i>Corymbia intermedia</i>	7	5	1	
010	<i>Angophora woodsiana</i>	12.5	14	4	
011	<i>Eucalypt fibrosa</i>	11	10	4	
012	<i>Eucalyptus fibrosa</i>	7.5	7	1	
013	<i>Eucalypt fibrosa</i>	14	10	4	
014	<i>Acacia leiocalyx</i>	13	8	2	
015	<i>Allocasuarina littoralis</i>	7.5	4	2	
016	<i>Eucalypt fibrosa</i>	9	6	2	
017	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	21.5	11	5	
018	<i>Allocasuarina littoralis</i>	11	4	4	
019	<i>Eucalypt fibrosa</i>	7.5	6	2	
020	<i>Eucalypt fibrosa</i>	8	6	1	
021	<i>Corymbia intermedia</i>	9	7	4	
022	<i>Eucalypt fibrosa</i>	11	4	4	
023	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	13.5	6	6	
024	<i>Acacia leiocalyx</i>	12	6	6	
025	<i>Acacia concurrens</i>	12.5	8	6	
026	<i>Acacia leiocalyx</i>	5	4	3	
027	<i>Allocasuarina littoralis</i>	7	5	2	
028	<i>Alphitonia excelsa</i>	8	6	5	
029	<i>Eucalyptus siderophloia</i>	9	8	1	
030	<i>Eucalypt fibrosa</i>	13	9	3	
031	<i>Eucalypt fibrosa</i>	12	10	3	
032	<i>Eucalypt fibrosa</i>	10	9	2	
033	<i>Alphitonia excelsa</i>	9	9	6	
034	<i>Acacia leiocalyx</i>	10.5	7	4	
035	<i>Eucalyptus siderophloia</i>	14	9	3	
036	<i>Acacia concurrens</i>	19	12	7	
037	<i>Eucalyptus siderophloia</i>	16	12	5	
038	<i>Eucalypt fibrosa</i>	10.5	9	2	
039	<i>Eucalyptus carnea</i>	12	8	2	
040	<i>Eucalyptus siderophloia</i>	12	10	3	
041	<i>Acacia leiocalyx</i>	12.5	9	7	
042	<i>Corymbia intermedia</i>	10	4	2	
043	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	12.5	8	5	
044	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	9	8	2	
045	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	9.5	8	4	
046	<i>Eucalypt fibrosa</i>	9	5	2	
047	<i>Acacia leiocalyx</i>	7	5	3	
048	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	10	9	5	
049	<i>Allocasuarina littoralis</i>	7	6	3	
050	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	6.5	7	2	
051	<i>Angophora woodsiana</i>	8	5	2	
052	<i>Eucalypt fibrosa</i>	11	8	1	
053	<i>Eucalypt fibrosa</i>	10	5	2	
054	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	14	11	4	
055	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	17	11	10	
056	<i>Acacia leiocalyx</i>	11	8	5	



057	<i>Allocasuarina littoralis</i>	8	4	2	
058	<i>Acacia leiocalyx</i>	5	5	2	
059	<i>Acacia leiocalyx</i>	11	8	4	
060	<i>Eucalypt fibrosa</i>	11.5	9	2	
061	<i>Allocasuarina littoralis</i>	8	5	1	
062	<i>Acacia leiocalyx</i>	8	4	2	
063	<i>Acacia leiocalyx</i>	4	4	1	
064	<i>Eucalypt fibrosa</i>	8	4	1	
065	<i>Acacia leiocalyx</i>	11	7	5	
066	<i>Acacia leiocalyx</i>	9	4	3	
067	<i>Corymbia intermedia</i>	19	14	5	
068	<i>Corymbia intermedia</i>	8	4	1	
069	<i>Eucalypt fibrosa</i>	10	7	2	
070	<i>Allocasuarina littoralis</i>	8	6	4	
071	<i>Allocasuarina littoralis</i>	6.5	4	2	
072	<i>Eucalypt fibrosa</i>	6.5	4	1	
073	<i>Corymbia intermedia</i>	10	8	2	
074	<i>Allocasuarina littoralis</i>	10	5	3	
075	<i>Acacia leiocalyx</i>	7	6	4	
076	<i>Acacia leiocalyx</i>	15.5	6	3	
077	<i>Eucalyptus siderophloia</i>	18.5	10	4	
078	<i>Acacia leiocalyx</i>	7.5	4	3	
079	<i>Corymbia intermedia</i>	15	12	4	
080	<i>Corymbia intermedia</i>	14.5	12	6	
081	<i>Eucalypt fibrosa</i>	11.5	5	2	
082	<i>Allocasuarina littoralis</i>	7	4	3	
083	<i>Eucalypt fibrosa</i>	9	5	3	
084	<i>Corymbia intermedia</i>	9	5	3	
085	<i>Acacia leiocalyx</i>	17	7	5	
086	<i>Angophora woodsiana</i>	14.5	9	3	
087	<i>Eucalypt fibrosa</i>	6.5	5	3	
088	<i>Corymbia intermedia</i>	13.5	8	3	
089	<i>Acacia leiocalyx</i>	11.5	9	5	
090	<i>Eucalypt fibrosa</i>	18	8	3	
091	<i>Acacia leiocalyx</i>	9	4	3	
092	<i>Eucalyptus fibrosa</i>	9.5	7	3	
093	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	11	9	2	
094	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	11.5	10	2	
095	<i>Eucalyptus siderophloia</i>	19	12	5	
096	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	9	7	3	
097	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	13	12	3	
098	<i>Corymbia intermedia</i>	9.5	8	2	
099	<i>Eucalypt fibrosa</i>	14.5	12	5	
100	<i>Acacia leiocalyx</i>	6	5	3	
101	<i>Acacia leiocalyx</i>	24	8	5	
102	<i>Allocasuarina littoralis</i>	13	7	4	
103	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	5	8	2	
104	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	9	11	2	
105	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	9	8	2	
106	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	14.5	12	3	
107	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	7.5	5	1	
108	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	8.5	8	2	
109	<i>Eucalyptus siderophloia</i>	11.5	9	6	
110	<i>Eucalyptus siderophloia</i>	19.5	11	6	
111	<i>Eucalyptus siderophloia</i>	8.5	7	3	
112	<i>Eucalyptus siderophloia</i>	8	4	2	
113	<i>Eucalyptus siderophloia</i>	6.5	6	2	
114	<i>Eucalypt fibrosa</i>	7	9	3	
115	<i>Eucalyptus siderophloia</i>	6	7	2	



116	<i>Eucalyptus siderophloia</i>	15.5	10	3	
117	<i>Eucalyptus siderophloia</i>	9	8	3	
118	<i>Eucalyptus siderophloia</i>	9	8	3	
119	<i>Eucalyptus siderophloia</i>	7.5	11	2	
120	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	18	12	4	
121	<i>Eucalyptus siderophloia</i>	11	10	3	
122	<i>Eucalyptus siderophloia</i>	9.5	10	3	
123	<i>Eucalyptus siderophloia</i>	11	8	2	
124	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	14	11	4	
125	<i>Eucalyptus siderophloia</i>	18	12	6	
126	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	6	8	2	
127	<i>Acacia leiocalyx</i>	15.5	5	5	
128	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	15.5	12	6	
129	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	3.5	4	2	
130	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	11.5	13	3	
131	<i>Allocasuarina littoralis</i>	6	6	3	
132	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	6	7	2	
133	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	17	7	6	
134	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	4	5	2	
135	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	8.5	6	3	
136	<i>Eucalyptus siderophloia</i>	5.5	4	2	
137	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	20.5	18	8	
138	<i>Allocasuarina littoralis</i>	1.5	7	3	
139	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	16.5	11	5	
140	<i>Eucalyptus carnea</i>	9.5	7	4	
141	<i>Allocasuarina littoralis</i>	10	8	4	
142	<i>Lophostemon confertus</i>	6.5	6	3	
143	<i>Lophostemon confertus</i>	7	5	3	
144	<i>Eucalyptus carnea</i>	11	7	4	
145	<i>Allocasuarina littoralis</i>	16	9	7	
146	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	7.5	7	5	
147	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	5	4	1	
148	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	8	8	4	
149	<i>Allocasuarina littoralis</i>	4	4	2	
150	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	10	9	3	
151	<i>Allocasuarina littoralis</i>	6	5	2	
152	<i>Eucalyptus carnea</i>	5.5	4	2	
153	<i>Allocasuarina littoralis</i>	4.5	4	2	
154	<i>Allocasuarina littoralis</i>	7.5	7	3	
155	<i>Allocasuarina littoralis</i>	8.5	8	3	
156	<i>Allocasuarina littoralis</i>	16	10	5	
157	<i>Allocasuarina littoralis</i>	9.5	10	4	
158	<i>Eucalyptus carnea</i>	10	9	5	
159	<i>Allocasuarina littoralis</i>	14	9	4	
160	<i>Allocasuarina littoralis</i>	7.5	7	3	
161	<i>Allocasuarina littoralis</i>	8	8	4	
162	<i>Allocasuarina littoralis</i>	7	8	2	
163	<i>Lophostemon confertus</i>	20	14	8	
164	<i>Allocasuarina littoralis</i>	10	9	3	
165	<i>Allocasuarina littoralis</i>	6	8	1	
166	<i>Allocasuarina littoralis</i>	6.5	8	2	
167	<i>Allocasuarina littoralis</i>	4	5	1	
168	<i>Allocasuarina littoralis</i>	6	6	3	
169	<i>Allocasuarina littoralis</i>	7	8	3	
170	<i>Acacia leiocalyx</i>	6.5	7	5	
171	<i>Allocasuarina littoralis</i>	7	5	3	
172	<i>Allocasuarina littoralis</i>	5	6	3	
173	<i>Allocasuarina littoralis</i>	8	8	3	
174	<i>Acacia leiocalyx</i>	5	7	4	



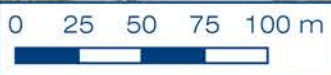
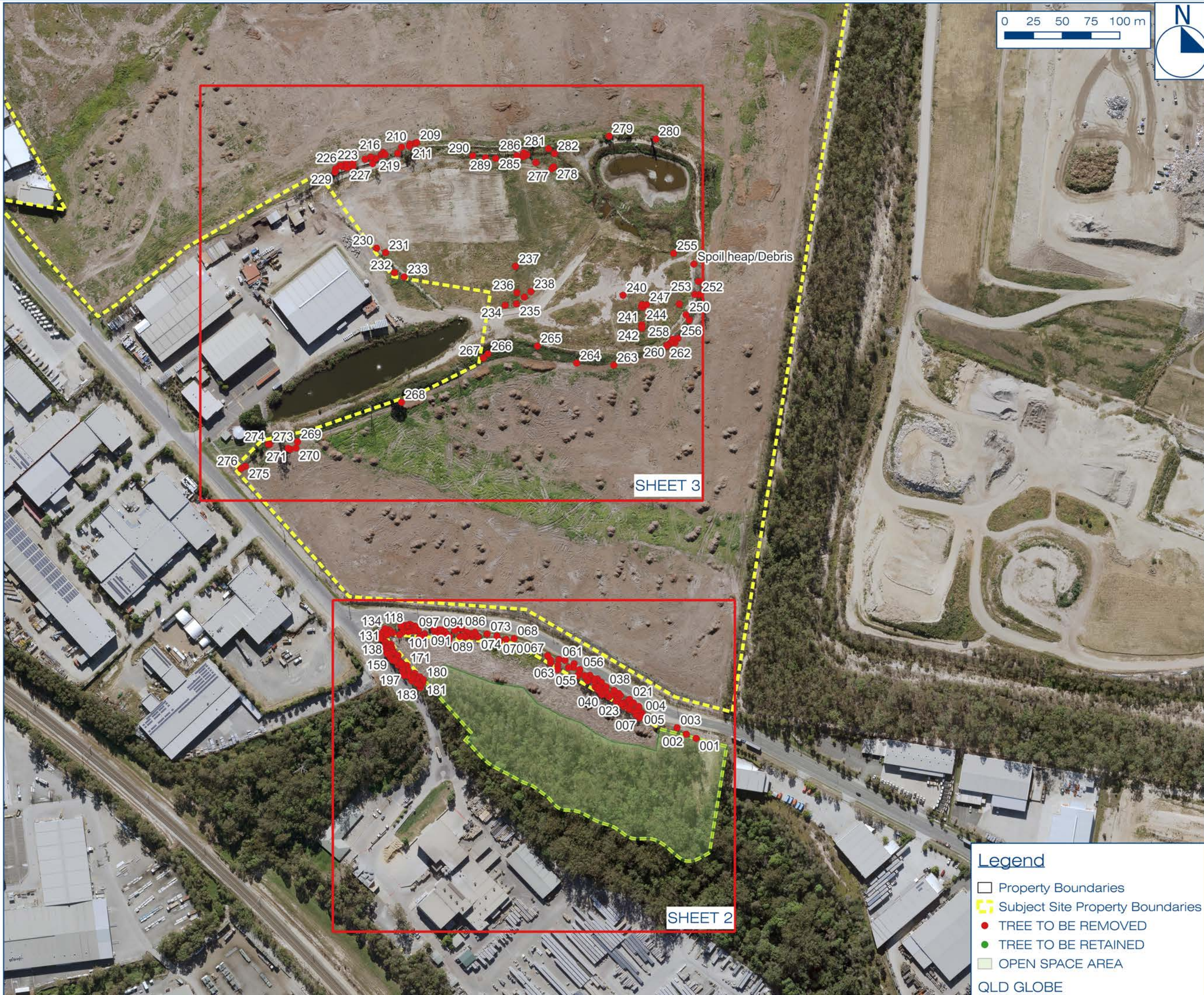
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178	<i>Acacia leiocalyx</i>	4	6	2	
179	<i>Acacia leiocalyx</i>	4	6	2	
180	<i>Acacia leiocalyx</i>	4	4	2	
181	<i>Acacia leiocalyx</i>	6	5	2	
182	<i>Allocasuarina littoralis</i>	4	4	1	
183	<i>Allocasuarina littoralis</i>	13	13	4	
184	<i>Allocasuarina littoralis</i>	5	6	3	
185	<i>Allocasuarina littoralis</i>	11	7	6	
186	<i>Eucalyptus tereticornis</i>	16	17	6	
187	<i>Allocasuarina littoralis</i>	11	8	3	
188	<i>Melaleuca quinquenervia</i>	12	9	5	
189	<i>Allocasuarina littoralis</i>	11	10	4	
190	<i>Allocasuarina littoralis</i>	5.5	6	2	
191	<i>Eucalypt fibrosa</i>	8	10	4	
192	<i>Allocasuarina littoralis</i>	6	7	1	
193	<i>Allocasuarina littoralis</i>	5.5	6	2	
194	<i>Allocasuarina littoralis</i>	15	12	4	
195	<i>Melaleuca quinquenervia</i>	4	6	3	
196	<i>Melaleuca nodosa</i>	5	5	3	
197	<i>Eucalypt fibrosa</i>	10	11	4	
198	<i>Allocasuarina littoralis</i>	12	13	3	
199	<i>Eucalypt fibrosa</i>	14	13	5	
200	<i>Allocasuarina littoralis</i>	6.5	6	3	
201	<i>Allocasuarina littoralis</i>	4	6	2	
202	<i>Allocasuarina littoralis</i>	4	4	2	
203	<i>Allocasuarina littoralis</i>	4	6	1	
204	<i>Allocasuarina littoralis</i>	12	9	4	
205	<i>Allocasuarina littoralis</i>	4	4	2	
206	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	9.5	11	3	
207	<i>Allocasuarina littoralis</i>	9	6	3	
208	<i>Melaleuca linariifolia</i>	14.5	8	4	
209	<i>Acacia leiocalyx</i>	14.5	7	4	
210	<i>Acacia disparrima</i>	28	12	5	
211	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	28	14	7	
212	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	16	7	5	
213	<i>Acacia leiocalyx</i>	4.5	4	3	
214	<i>Acacia leiocalyx</i>	24.5	12	6	
215	<i>Eucalypt fibrosa</i>	14	8	3	
216	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	19	8	7	
217	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	26	13	7	
218	<i>Acacia leiocalyx</i>	21.5	9	7	
219	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	29	16	8	
220	<i>Acacia leiocalyx</i>	11	8	3	
221	Pest Species	8	5	6	
222	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	40	13	9	
223	<i>Alphitonia excelsa</i>	18	13	4	
224	<i>Acacia leiocalyx</i>	10	6	3	
225	<i>Schefflera aboricola</i>	7	5	3	
226	Dead Stag	50	18	0	Possible hollows
227	Pest Species	0	5	7	
228	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	14	8	3	
229	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	25	11	6	
230	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	18	8	5	
231	<i>Allocasuarina littoralis</i>	12	7	3	
232	<i>Allocasuarina torellosa</i>	16	7	4	
233	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	15	8	6	



234	<i>Allocasuarina littoralis</i>	10	6	3	Overgrown with weed/vine – Small bird sightings (Wren)
235	<i>Allocasuarina littoralis</i>	14	6	4	Overgrown with weed/vine – Small bird sightings (Wren)
236	<i>Allocasuarina littoralis</i>	15	5	3	Overgrown with weed/vine – Small bird sightings (Wren)
237	<i>Allocasuarina littoralis</i>	15	6	4	Overgrown with weed/vine – Small bird sightings (Wren)
238	<i>Allocasuarina littoralis</i>	14	6	3	Overgrown with weed/vine – Small bird sightings (Wren)
239	<i>Allocasuarina littoralis</i>	17	8	5	Overgrown with weed/vine – Small bird sightings (Wren)
240	<i>Acacia leiocalyx</i>	13	5	3	
241	<i>Acacia leiocalyx</i>	13	5	2	
242	<i>Acacia leiocalyx</i>	10.5	4	2	
243	<i>Acacia leiocalyx</i>	10	6	2	
244	<i>Acacia leiocalyx</i>	11	7	2	
245	<i>Acacia leiocalyx</i>	9.5	7	3	
246	<i>Acacia leiocalyx</i>	10.5	6	2	
247	<i>Acacia leiocalyx</i>	15	6	3	
248	<i>Acacia leiocalyx</i>	10.5	4	2	
249	<i>Melaleuca quinquenervia</i>	9.5	4	2	
250	<i>Acacia leiocalyx</i>	14.5	6	3	
251	<i>Acacia leiocalyx</i>	8	4	3	
252	<i>Acacia leiocalyx</i>	6	5	2	
253	<i>Acacia leiocalyx</i>	14	7	3	
254	<i>Acacia leiocalyx</i>	7.5	4	1	
255	Vegetation Group - Native & Pest Species	12	5	4	
256	<i>Acacia leiocalyx</i>	15	6	3	
257	<i>Acacia leiocalyx</i>	14.5	7	3	
258	<i>Acacia leiocalyx</i>	7	5	2	
259	<i>Eucalypt fibrosa</i>	10	6	2	
260	<i>Eucalypt fibrosa</i>	4	5	2	
261	<i>Alphitonia excelsa</i>	4	5	2	
262	<i>Corymbia citriodora</i> subsp. <i>variegata</i>	11	9	4	
263	Vegetation Group - Pest Species	-	9	9	
264	Vegetation Group - Pest Species	-	7	7	
265	<i>Acacia leiocalyx</i>	10.5	7	3	
266	Vegetation Group - Pest Species	0	0	0	
267	Vegetation Group - Pest Species	0	0	0	
268	<i>Corymbia torelliana</i>	30	17	8	
269	<i>Acacia leiocalyx</i>	6	4	2	
270	<i>Acacia leiocalyx</i>	4	6	2	
271	<i>Acacia leiocalyx</i>	7	4	2	
272	<i>Acacia leiocalyx</i>	8.5	7	3	
273	<i>Schefflera actinophyllum</i>	0	8	8	
274	<i>Lantana camara</i> *	0	0	0	
275	<i>Eucalyptus acmenoides</i>	9.5	4	2	
276	<i>Acacia leiocalyx</i>	15.5	6	4	
277	<i>Allocasuarina littoralis</i>	8	5	3	
278	<i>Allocasuarina littoralis</i>	12	6	3	
279	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	10	6	4	
280	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	15	7	4	
281	<i>Acacia leiocalyx</i>	8	7	2	
282	Vegetation Group - Pest Species	0	0	0	
283	<i>Allocasuarina littoralis</i>	10.5	7	3	
284	<i>Alphitonia excelsa</i>	7.5	5	2	
285	Vegetation Group - Pest Species	0	0	0	
286	<i>Acacia leiocalyx</i>	11	6	4	

287	<i>Melaleuca quinquenervia</i>	9	4	2	
288	Vegetation Group - Pest Species	0	0	0	
289	<i>Eucalypt fibrosa</i>	8	4	3	
290	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	10	4	3	

Appendix 2 – Vegetation Management Plan



Client:
FPI Queensland Pty Ltd

Site Address:
**Stapylton Jacobs Well
Road, Yatala**

RPD:
Lot:
Plan:
Local Authority: Council of City of Gold Coast
Level Datum: MGA2020
Meridian:
Contour Interval:
PSM:
RL:

Assisted Consultants:
-

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Scale at A3: 1:3,000
Date: 21-04-2023
Design: HO
Drawn: -
Checked: FG
Our Ref: 5941

Drawing Title:
**Vegetation
Management Plan
(STAGE 3)**

SHEET 1 OF 3 (OVERVIEW)
Drawing No: 5941 Stage 3 VMP 002
Revision No: 002

Legend

- Property Boundaries
- Subject Site Property Boundaries
- TREE TO BE REMOVED
- TREE TO BE RETAINED
- OPEN SPACE AREA

QLD GLOBE





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T: 3807 3333 | F: 3287 5461 | www.gassman.com.au
Gold Coast | 76 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

Client:
FPI Queensland Pty Ltd

Site Address:
Stapylton Jacobs Well
Road, Yatala

RPD:
Lot:
Plan:
Local Authority: Council of City of Gold Coast
Level Datum: MGA2020
Meridian:
Contour Interval:
PSM:
RL:

Assisted Consultants:
-

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Scale at A3: 1:1,000

Date: 21-04-2023

Design: HO

Drawn: -

Checked: FG

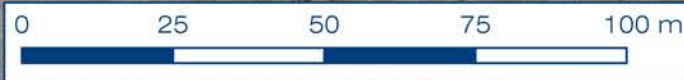
Our Ref: 5941

Drawing Title:
Vegetation
Management Plan
(STAGE 3)

SHEET 2 OF 3

Drawing No:
5941 Stage 3 VMP 002

Revision No:
002



Client:
FPI Queensland Pty Ltd

Site Address:
**Stapylton Jacobs Well
Road, Yatala**

RPD:
Lot:
Plan:
Local Authority: Council of City of Gold Coast
Level Datum: MGA2020
Meridian:
Contour Interval:
PSM:
RL:

Assisted Consultants:
-

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Scale at A3: 1:1,250

Date: 21-04-2023

Design: HO

Drawn: -

Checked: FG

Our Ref: 5941

Drawing Title:
**Vegetation
Management Plan
(STAGE 3)**

SHEET 3 OF 3

Drawing No:
5941 Stage 3 VMP 002

Revision No:
002

- Legend**
- Property Boundaries
 - Subject Site Property Boundaries
 - TREE TO BE REMOVED
 - TREE TO BE RETAINED
 - OPEN SPACE AREA
- QLD GLOBE