

From: "Ben Battist" <ben.battist@i-plan.com.au>
Sent: 23/01/2018 16:09:15
To: "City of Gold Coast mail" <mail@goldcoast.qld.gov.au>
Cc: "MORRIS Acyuta" <AMORRIS@goldcoast.qld.gov.au>
Subject: Response to Information Request for 84-160 CHRISTENSEN ROAD SOUTH STAPYLTON (Ref: ROL201700424)
Attachments: Supporting Document - Response to Information Request.pdf, Plans.pdf, Specialist Reports.pdf
Importance: High

Attention: Adam Morris

Please find attached the response to Council's Information Request for the proposed reconfiguration of a lot at 84-160 Christensen Road South, Stapylton (Council File Reference: ROL201700424).

Ben Battist
Director
iPlan Town Planning Pty Ltd
PO Box 687 Stones Corner Qld 4120
[p/f: 07 3892 1431](tel:0738921431) [m: 0407 291 104](tel:0407291104) [i: www.i-plan.com.au](http://www.i-plan.com.au)

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From: City Development <citydevelopment@goldcoast.qld.gov.au>
Date: Thursday, 7 December 2017 at 5:34 pm
To: ""BEN.BATTIST@I-PLAN.COM.AU"" <BEN.BATTIST@I-PLAN.COM.AU>
Subject: Council of the City of Gold Coast (Council) - Copy of Correspondence for 84-160 CHRISTENSEN ROAD SOUTH STAPYLTON



Copy of correspondence

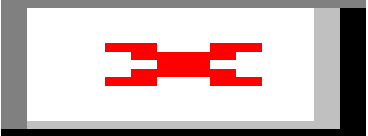
Please find attached an electronic copy of Council's correspondence for the following application:-

Application number:	ROL201700424
Address:	84-160 CHRISTENSEN ROAD SOUTH STAPYLTON
Copy of Information Request:	
<i>Day(s) to issue Information Request</i>	<i>4 Day(s)</i>

If you have any further enquiries regarding the application please do not hesitate to contact Planning Assessment on (07) 5582 8866.
OTE: Applicants are advised not to send correspondence to this email address. This address is unmonitored and replies cannot be read or responded to. Please direct any future correspondence regarding this application to mail@goldcoast.qld.gov.au



City Development
Council of the City of Gold Coast
T: (07) 5582 8866
PO Box 5042 Gold Coast Mail Centre Qld 9729
mail@goldcoast.qld.gov.au
cityofgoldcoast.com.au



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This Email originates from outside the City of Gold Coast

22 January 2018

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

Attention: Adam Morris

Dear Sir / Madam

RE: RESPONSE TO INFORMATION REQUEST IN RELATION TO THE PROPOSED RECONFIGURATION OF A LOT ON LAND AT 84-160 CHRISTENSEN ROAD SOUTH, STAPYLTON (COUNCIL REF: ROL201700424)

Further to Council's information request dated 7 December 2017 regarding the above-mentioned application, we hereby submit the following amended plans and/or documents:

Drawing / Document Title	Number and Date
Layout Plan & Road Cross Section	17-209 DA01 Revision D dated 10 January 2018
Hydraulic & Stormwater Response Letter prepared by iCubed Consulting	20150827 13-201 RFI Response dated 11 January 2018
Detention Basin Survey prepared by AJS Surveys	S0204 dated 12 January 2018
Previous Hydraulic Advice prepared by iCubed Consulting	16 January 2018

The following points highlight amendments to the proposed development, where necessary, in response to Council's letter:

Item 1: Road Licence

It is intended to lodge an application with the Department of Natural Resources and Mines to relinquish the existing road licence no. 8115. The surrender of the road as part of Stage 1 is neither reasonable nor relevant given no new road is proposed as part of this stage. All new road construction will be carried out as part of Stage 2 at which time a condition of approval can require the reopening of the road licence prior to the endorsement of the survey plan by Gold Coast City Council.

It is important to note that proposed subdivision layout for Stage 1 is limited to the creation of separate Standard Format Lots for existing lawful industrial buildings hence there is no change to the existing access, parking and servicing arrangements within the estate.

Items 2 & 3: Typical Cross Section & Amended Reconfiguring a Lot Plan

As requested, please find attached drawing no. DA01 Revision D prepared by iCubed Consulting Pty Ltd which shows the typical cross section for the new road construction as part of Stage 2. In accordance with the original proposal plan prepared by AJS Survey, the road reserve is a minimum of 23m in accordance with Standard Drawing no. 02-001.

No further changes are proposed to the original subdivision layout prepared by AJS Surveys.

Item 4: Stormwater Management Plan

In reference to the request for an amended Stormwater Management Plan, please refer to the accompanying letter prepared by iCubed Consulting Pty Ltd. This includes the modelling data files for the original report.

It is important highlight that the existing detention basin was constructed in accordance with the previous report prepared by KBR Consulting for which the total quantity of stormwater detention covers a 95% of impervious surface area over the entire total site area (both Stages 1 and 2). The accompanying correspondence including detailed survey information concludes that whilst the capacity of the detention basin has been reduced to 87%, the minor shortfall of 8% is attributed to sediment accumulating in the basin. It is intended that this sediment will be removed as part of the subsequent civil construction works with its on-going maintenance to be the responsibility of the body corporate for the estate.

In relation to the treatment of stormwater runoff, all developed lots along the southern alignment of Christensen Road South incorporate site based stormwater quality devices which have been constructed in accordance with previous development and building approvals. To address the creation of additional industrial lots to the north of Christensen Road South as part of stage 2, where the number of new lots exceeds six (6), the original stormwater management report prepared by iCubed Consulting proposed the establishment of a wetland within the basin to address the treatment of stormwater runoff for this stage. Based on the accompanying correspondence and having regard to the fact that the existing basin has been constructed in accordance with previous development approvals for the site, it is reasonable for the detailed design of the wetland to be conditioned accordingly and form part of the subsequent operational works application for Stage 2.

Through the inclusion of this basin within common property, it is expected that any Community Title Scheme Statement which accompanies the proposed survey plan will include by-laws to address the maintenance of this area. It is important to reiterate that the proposed subdivision involves the creation of Standard Format Lots with common property hence Item 4(c) is incorrect in its assumption that the subdivision is for freehold subdivision where the basin would contained within a separate lot.

Item 5: Open Space Management Statement

The original development application included the previously endorsed open space management plan for the estate. Whilst the submission of such a plan as part of the development application would be reasonable where new works included disturbance to protected vegetation and works adjoining a waterway and wetlands, all significant ecological areas along the southern boundary of the estate which will be dedicated to Council as open space, will not require any further works given the established and approved industrial development to the south of Christensen Road South.

As detailed in the original planning report and supporting documentation, the southern alignment of Christensen Road South contains developed industrial land uses where the interface to the adjoining waterway corridor has been addressed as part of the previous development approvals. In this instance, the proposed works are limited to the creation of a new access track along the western alignment of the detention basin, with any rehabilitation works limited to the removal of noxious weeds as well as the of a wetland within the basin. Consequently, given the minor works required to accommodate the proposed subdivision which does not require any further bulk-earthworks or disturbance of significant vegetation, it is requested that any further requirements associated with the preparation and implementation of an open space management strategy by conditioned accordingly.

Item 6: Vegetation Protection

As shown in the accompanying site photographs in Attachment 'A', the existing mapped vegetation to the east and north of Lots 10-16 is contained wholly within the adjoining property which contains an existing fire access track along the common boundary. Where the extent of cut and fill is greater than 1m (primarily on the eastern boundary), all existing vegetation in the adjoining property is to the east of this track therefore it is evident that the tree canopy of this vegetation is setback from the boundary.

Any works along the eastern boundary of proposed Stage 2 already achieves significant setbacks from this vegetation therefore mitigating the necessity for any removal or works to protected vegetation. Consequently, as part of the subsequent operational works application for bulk earthworks, a condition of approval can include certification for a qualified arborist that the proposed earthworks within the boundaries of Lots 10-16 will not impact on the tree protection zone of the adjacent vegetation.

For details regarding the extent of proposed fill along the eastern boundary of Stage 2, please refer to the previous civil design drawing no. 16-283 C201 Revision B prepared by iCubed Consulting.

Items 7 & 8: High Bank of Sandy Creek & Detention Basin

As mentioned in the response to Item 5 above, the southern alignment of Christensen Road South including the existing detention basin will remain unchanged. The extent of works within the basin is limited to the removal of sediment within this area to ensure its storage capacity of 95% impervious surface area across the entire estate is maintained. In addition, it is intended to construct a wetland within this basin to provide natural treatment system for the proposed lots as part of Stage 2.

Given the limited works proposed within the stormwater basin as well as no further works to the rear of the proposed lots in Stage 1, the existing conservation area set out in the previous approvals will remain unchanged. In addition, no works are proposed within close proximity to Sandy Creek for which no changes are proposed to existing lawful works within this area. It is important to note again that the extent of works is limited to the removal of sediment build up in the basin as well as the establishment of a wetland in this area which through the inclusion of this basin within common property, can be maintained by the future body corporate for the estate.

We have now responded in full to Council's information request. Should you have any questions regarding the attached development application, please do not hesitate to contact the undersigned on 0407-291-104.

Yours faithfully

iPLAN TOWN PLANNING PTY LTD

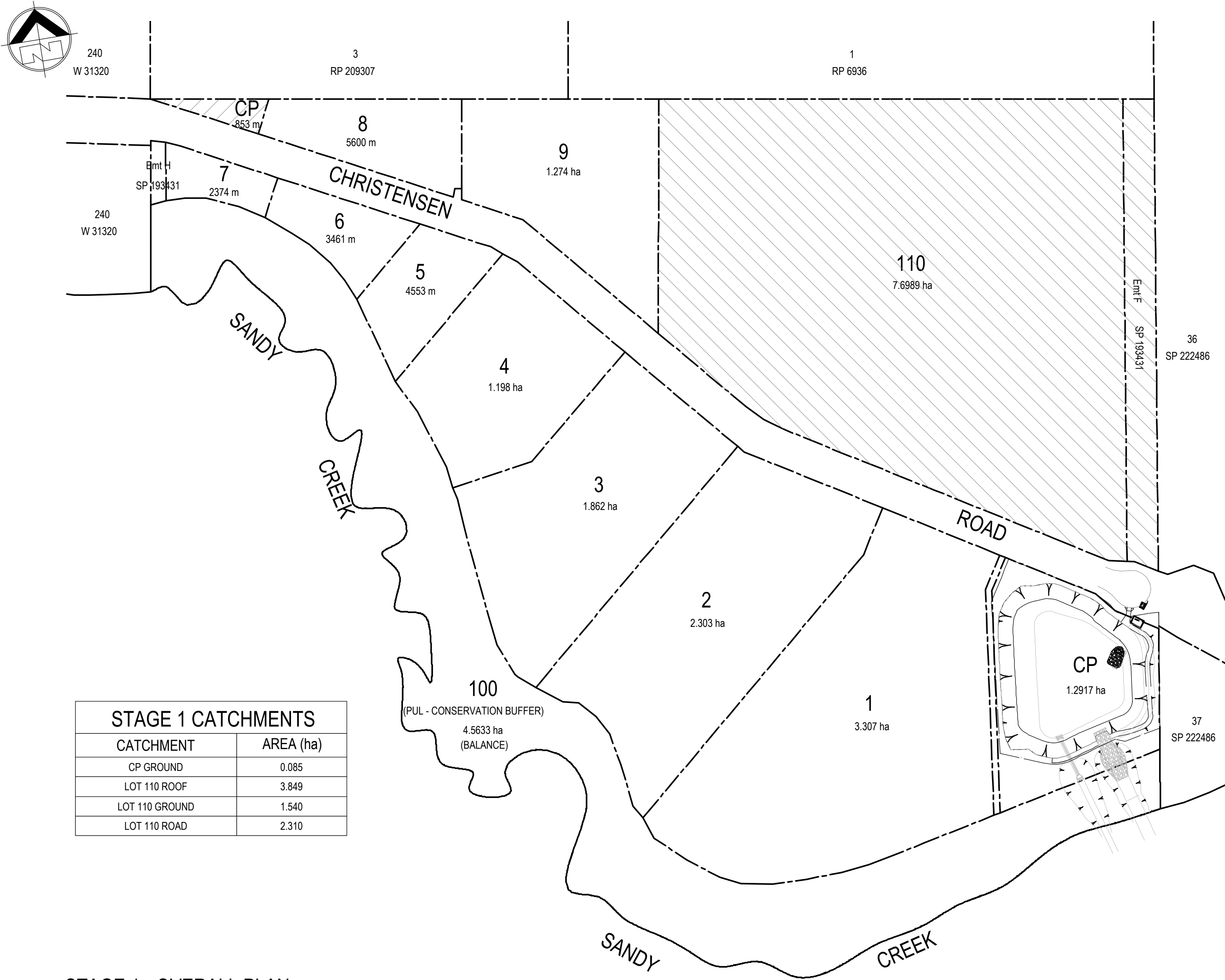


**Ben Battist
DIRECTOR**

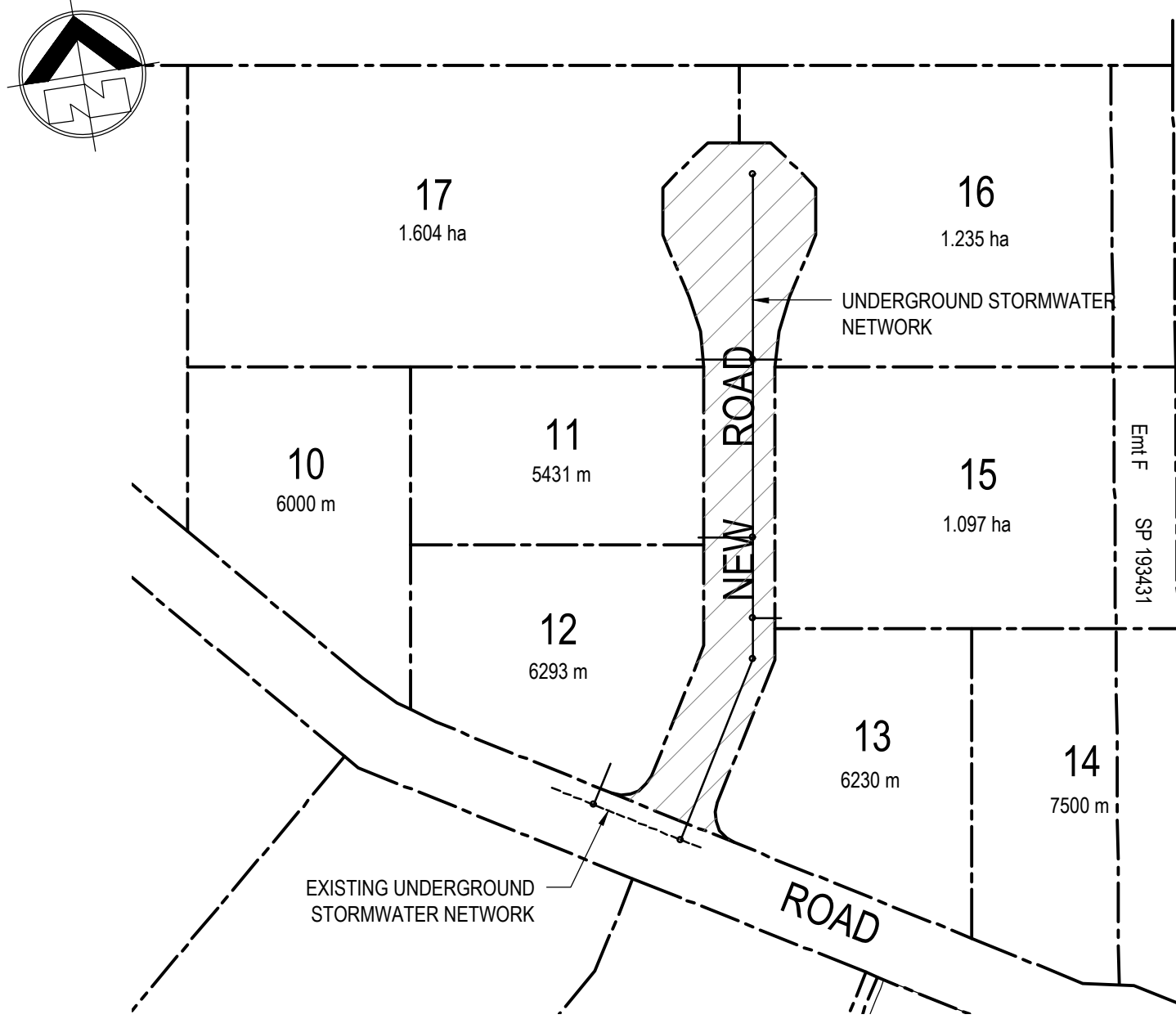
Enc

**ATTACHMENT 'A':
Site Photographs of existing protected vegetation on adjoining property**





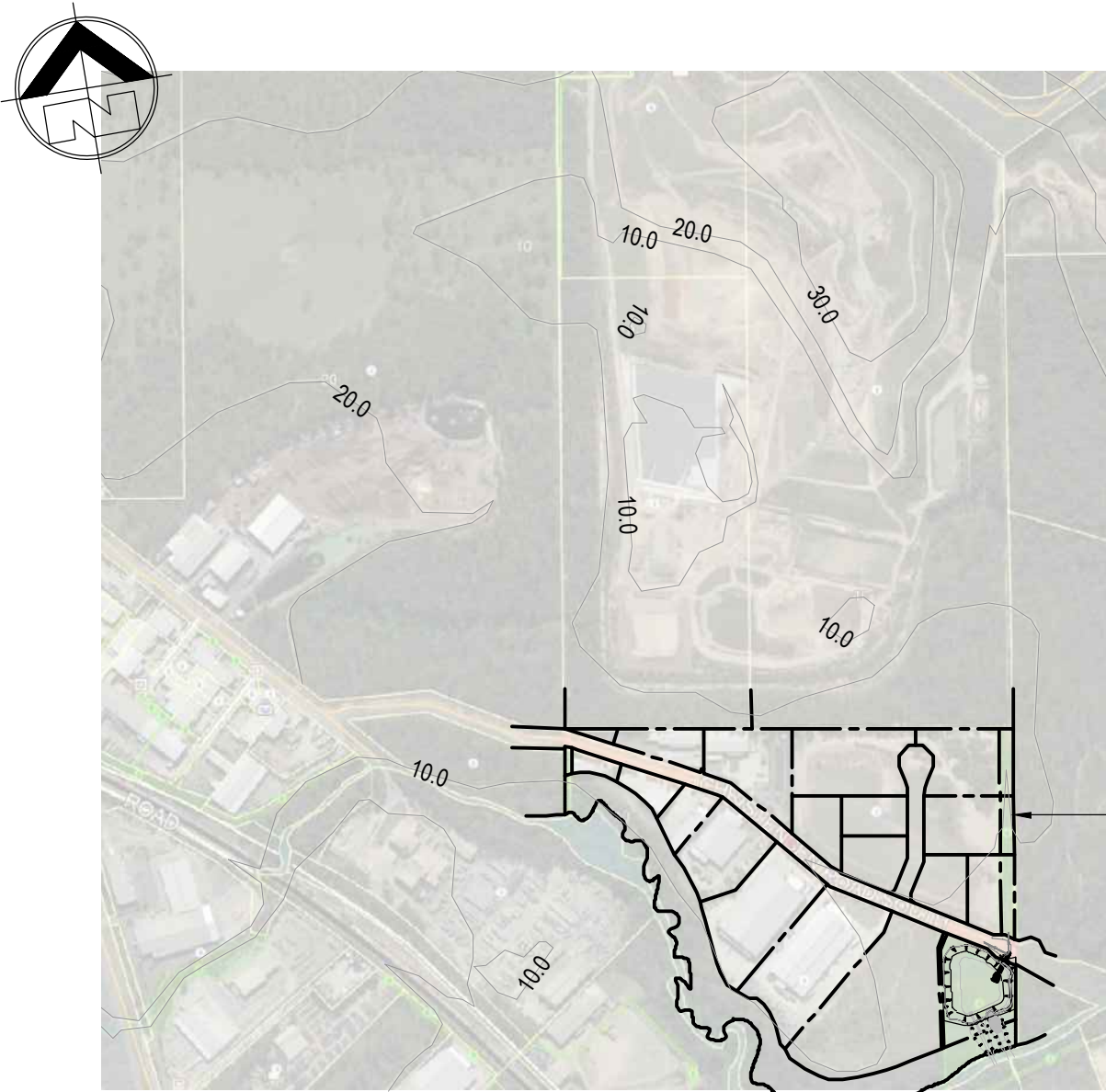
STAGE 1 - OVERALL PLAN
SCALE 1:1000 (A1)



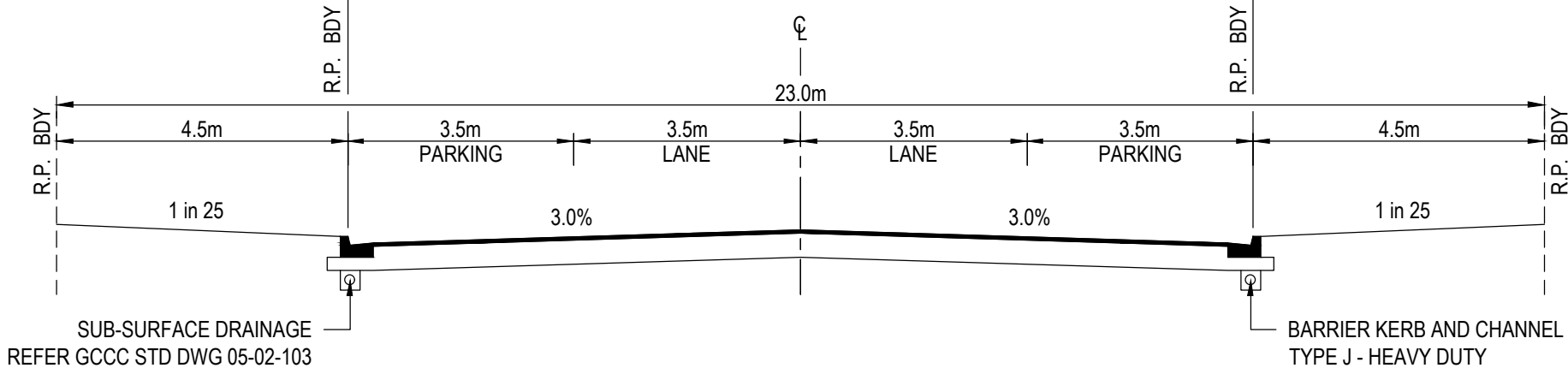
STAGE 2 - LOT 110 SUBDIVISION PLAN
SCALE 1:500 (A1)

STAGE 2 CATCHMENTS	
CATCHMENT	AREA (ha)
CP GROUND*	0.085
LOT 110 ROOF	3.540
LOT 110 GROUND	3.540
LOT 110 ROAD	0.618

* REFER STAGE 1 PLAN FOR CP GROUND LOCATION



EXISTING UPSTREAM CONTOURS DETAIL
SCALE 1:10000 (A1)



STAGE 2 - ACCESS ROAD TYPICAL SECTION
SCALE 1:10 (A1)

PROJECT TEAM

Consulting Engineer:

3

i

i³ consulting pty ltd

engineering consultants

innovation, ingenuity, inspiration

LV2, 39 Sherwood Rd Toowong, Qld 4066
www.icubed.com.au
ABN 89 106 675 156
p 07 3870 8888

PO Box 878 Toowong, Qld 4066
mail@icubed.com.au
ACN 106 675 156

Engineers Certification:

Travis Smith MIE Aust. CPEng.
RPEQ 16400

Signature:

Date:/...../.....

D	STORMWATER NETWORK ADDED	10/01/2018	T.J.S.
C	TYPICAL ROAD SECTION AMENDED	22/12/2017	T.J.S.
B	TYPICAL ROAD SECTION ADDED	19/12/2017	T.J.S.
A	FOR APPROVAL	19/09/2017	K.J.L.
REV	DESCRIPTION	DATE	BY

Status

FOR APPROVAL

Project
84-160 CHRISTENSEN ROAD
STAPYLTON

for
MS PROJECTS

Title
LAYOUT PLAN

Drawn K.J.L.	Date 15/09/17	Chkd T.J.S.	Date 15/09/17
Design K.J.L.	Date 15/09/17	Scale AS INDICATED	A1
Project No. 17-209	Dwg. No. DA01	Rev D	

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19 January 2018

City of Gold Coast
PO Box 5042
GOLD COAST MC 9729

ATTENTION: Adam Morris

RE: L334 SP193431 84 - 160 CHRISTENSEN ROAD SOUTH STAPYLTON QLD 4207
PN307555/02/DA9 – DEVELOPMENT APPROVAL
REQUEST FOR INFORMATION RESPONSE

icubed consulting
innovation ingenuity inspiration
ABN 89 106 675 156

Dear Sir,

Please find below the engineering response to the information requests received by email on the 07/12/2017.

HYDRAULIC AND STORMWATER ASSESSMENT

4 Stormwater management plan to be amended

The submitted stormwater management plan (icubed consulting, 26 October 2017) is required to be amended addressing the following issues:

a. Hydraulics/stormwater quantity management

- i. The report did not address the stormwater quantity management issues of the proposed subdivision. It appears from Council's records that a four lots subdivision (Ref. PN184435/02/da1) was approved in the past; however lots are not yet created through sealing of the survey plan. It also appears that a flood and stormwater report (KBR Pty Ltd, 1 March 2015) was part of that subdivision application, which proposed a wetland/detention systems for stormwater treatment and detention purpose.

Recent site visit reveals that a basin exists at the south-east corner of the site, which appears to be only a detention system. However, the capacity of the basin to function for the whole site is unknown, and no site based treatment facility was identified during the site visit.

The basin is currently only a detention basin. As part of the stormwater quality works it is proposed that a wetland be constructed within the basin to deal with stage 2 stormwater quality as stage 1 lots already have stormwater quality within each lot / developed area.

- ii. Therefore the report needs to be amended to include stormwater quantity management issues for the site. If the applicant claims that the existing basin will be functioning for the whole site, a capacity assessment is required to be undertaken to justify that the basin size is adequate to ensure no worsening of stormwater runoff from the whole site for all events up to the 1 in 100 year storm. The report will also include all necessary engineering details of the basin on scaled maps and drawings showing how runoff from the whole site will be directed to the basin. Please also include basin inlet/outlet details, cross sections, etc.

Based on a review of the existing stormwater report (KBR Pty Ltd, 1 March 2015), the detention basin has been modelled for a catchment of 23.86 ha (page 5) with 95% impervious area (page 6). The size of the proposed site is only 21.04 ha and therefore is less than the area modelled and the impervious area is not expected to be 95%, as such the modelled basin is in excess of that required and no further modelling or design is required for stormwater quantity.

In order to confirm the detention basin has been constructed as per the report, a survey has been carried out and the volume calculated. The survey showed that the basin had been constructed in accordance with the design (drawing BEV417-C-DWG-014 & -015). The inlet and outlet pipes are at the correct heights however there has been some sediment buildup within the base since construction, resulting in a reduction of the capacity to 87% of the initial capacity. This relates to an issue with maintenance and not the design of the basin.

Given that the site is approx. 50% developed the current detention basin capacity is more than adequate to detain the Runoff til maintenance is carried out.

- iii. In case, the existing basin is not adequate, alternative detention system needs to be proposed to ensure site's stormwater runoff are maintained within the existing flow regime and no external property will be impacted as result of this development. All supporting hydraulic calculations and design drawings are to be included in the report.

The basin has been adequately sized, refer point ii.

- iv. A drainage layout plan to be included in the report to identify how minor runoff will be connected to lawful point of discharge from each lot and how major flow will be conveyed safely, satisfying QUDM's public safety criteria, to a downstream drainage system.

For Stage 1 the existing underground network will adequately service the development as there is no intended works. For Stage 2 the proposed lots fronting the new road will be serviced via an underground network running along the new road and connection to the existing network within Christensen Road South. The existing network has been designed to cater for the fully developed catchment. Refer drawing 17-209-DA01 for conceptual layout of the proposed network.

- v. Since the subject site is larger than 25 ha in size, the design of the detention and drainage system is required to undertaken using an appropriate hydrologic / hydraulic modelling tool.

As no further modelling is required, this is no longer relevant, however it is worth noting that the since the conservation buffer has been removed from the development area, the resulting area is only 21.04 ha (22.8ha including the basin), and as such the higher level modelling is not required.

b. Stormwater quality management

- i. The submitted report mentions that Stage 1 of the development (proposed lots 1 to 10) has lot specific stormwater quality devices. As such, the report only addresses quality management issues of Stage 2 and proposes that the existing wetland system located at the south-east corner of the site will be modified. However, it is not clear from the recent site visit, whether the existing basin was constructed as a proper wetland system. Therefore, the report is required to ensure, based on site survey information, that the existing system has proper wetland configuration to function as a treatment system. Also submit details of the existing (if justified being a constructed wetland) and modified wetland system on a scaled plan (planform / layout, permanent pool volume, inlet zone, macrophyte zone, long and cross sections, high flow bypass, inlet / outlet arrangements, maintenance access, etc) and demonstrate via MUSIC model that the wetland system achieves Council's pollutant reduction targets.

The wetland is proposed to be constructed within the base of the existing detention basin to deal with stage 2 stormwater quality as stage 1 lots already have stormwater quality within each lot / developed area. As per the submitted stormwater management report, the wetland will achieve council's pollutant reduction targets. It is proposed that the detailed design of the wetland system be conditioned and carried out at the operational works stage of the development.

- ii. In case no constructed wetland exists on the site, appropriate natural treatment system in accordance with Council's land development guidelines to be provided meeting the wetland design requirements outlined in the Water by Design guidelines;

Refer response to point i.

- iii. Please include a drainage layout plan identifying location and extent of all treatment systems, both proposed and existing (on lots within Stage 1) and their stormwater connections from contributing catchments. In case, any lot of stage 1 discharge into the existing / proposed wetland system that needs to be included in the MUSIC modelling as source nodes. It is also important to note that the section of Christensen Road South between two parts of the site is required to be considered to provide stormwater treatment. As such, MUSIC model need to be amended to include total contributing catchment to demonstrate achievement of water quality objectives.



The stormwater management plan currently only includes area within the catchment that doesn't currently have onsite treatment or have an approval for onsite treatment. Based on that fact that each of the developments that currently have treatment will either meet or exceed councils pollutant reduction targets, their inclusion would only improve the achieved pollutant reductions of the model and are therefore deemed unnecessary.

c. Modelling data files

Submit all the modelling data files (e.g. MUSIC) in CD/DVD for Council's review and record keeping purposes.

See attached MUSIC model.

Should you require any further information regarding this matter, please do not hesitate to contact me on 07 3870 8888 or 0414662454.

Regards

Travis Smith
Civil Engineer

Enc.

Our Ref: 20180116 17-209 RFI Response ROL

16 January 2018

**City of Gold Coast
PO Box 5042
GOLD COAST MC 9729**

ATTENTION: Adam Morris

**RE: L334 SP193431 84 - 160 CHRISTENSEN ROAD SOUTH STAPYLTON QLD 4207
PN307555/02/DA9 – DEVELOPMENT APPROVAL
DETENTION BASIN REVIEW**

icubed consulting
innovation ingenuity inspiration
ABN 89 106 675 156

Dear Sir,

A survey has been carried out on the existing basin (Easement G SP193431) at Christensen Road South (Dwg No. S0204-BioBasin).

The survey was then compared to the design drawing for the subdivision (Dwg No. BEV417-C-DWG-014 & -015).

The levels for the inlet pipe, outlet pipes and overflow spillway were found to be inline with the design drawings.

The grading of the basin was also inline with the design drawings, however there has been some sediment buildup since construction resulting on a reduction of the basin capacity to 87%. This relates to an issue with maintenance and not the design of the basin.

In summary, as detailed above, the construction of the basin is inline with the design drawings and the stormwater report (Kellogg Brown & Root Pty Ltd, 1 March 2015; iSpot#16980108) for the development. The only issue identified as part of the review was that of sediment build up, which can be addressed through maintenance.

The survey and design drawings have been attached for review.

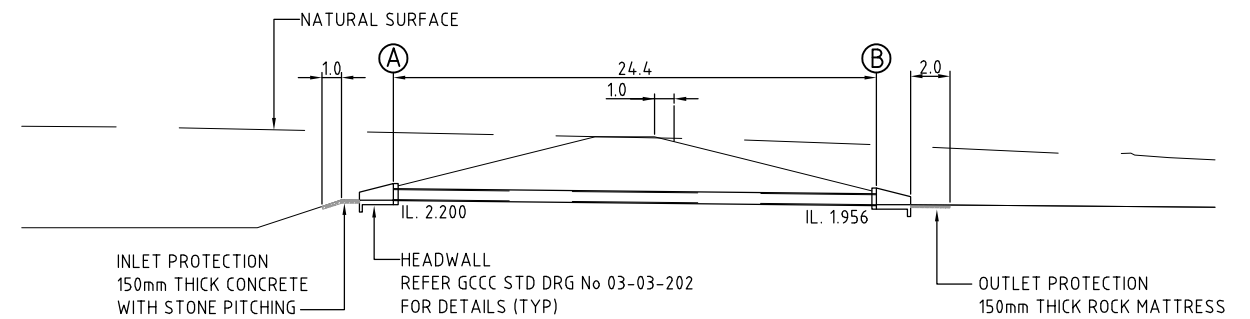
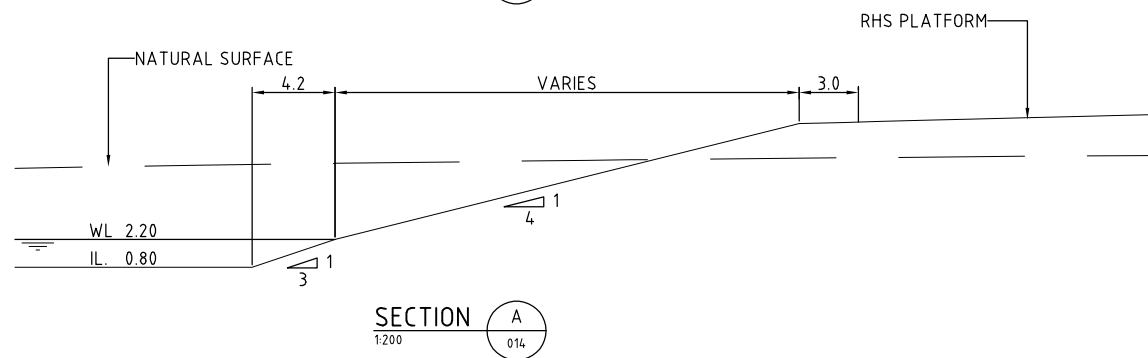
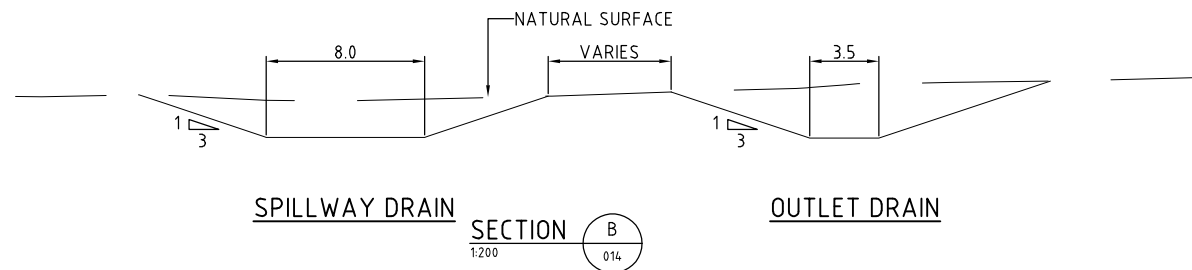
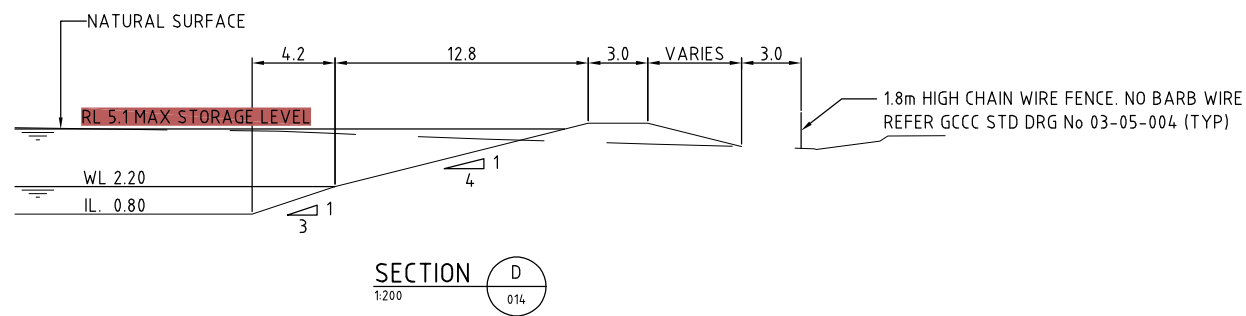
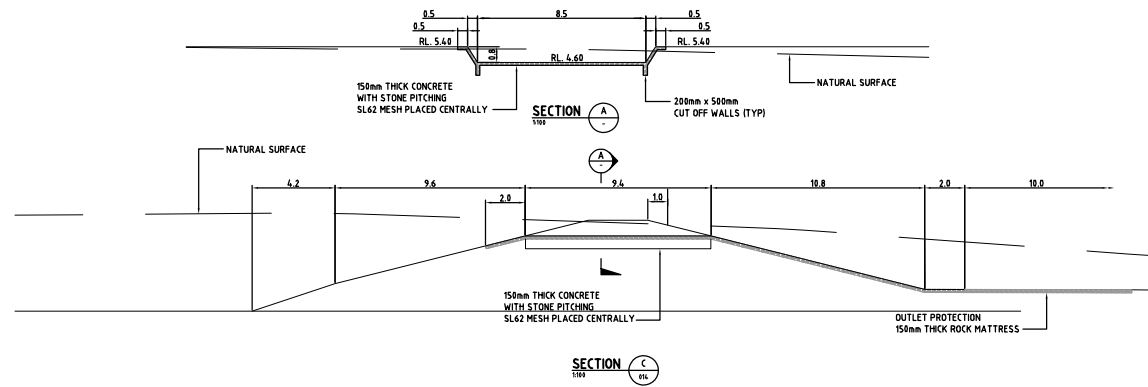
Should you require any further information regarding this matter, please do not hesitate to contact me on 07 3870 8888 or 0414662454.

Regards

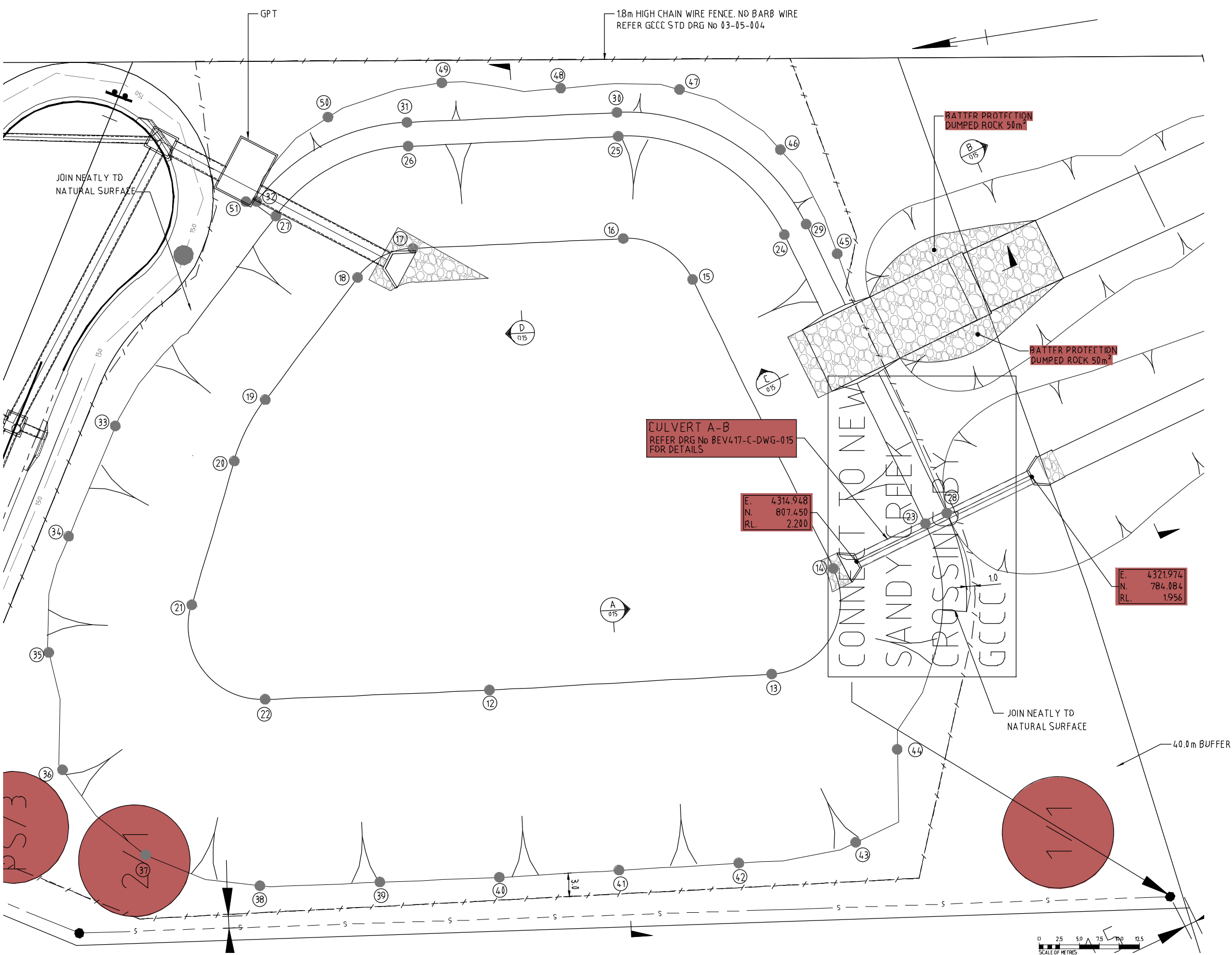


**Travis Smith
Civil Engineer**





CULVERT A-B
2/600 RCP, RRJ, CLASS 2, 24.4m (10x2.44m)
SCALE 1:200



BASIN SETOUT			
PTNo	EASTING	NORTHING	LEVEL
12	4306.333	866.346	2.200
13	4302.740	820.154	2.200
14	4314.567	810.417	2.200
15	4353.037	822.104	2.200
16	4369.606	829.882	2.200
17	4362.441	856.063	2.200
18	4369.932	863.462	2.200
19	4346.644	877.293	2.200
20	4339.669	882.342	2.200
21	4322.748	890.467	2.200
22	4309.629	883.253	2.200
23	4318.287	799.170	5.400
24	4366.768	808.866	5.400
25	4372.236	828.456	5.400
26	4375.161	854.637	5.400
27	4369.163	872.330	5.400
28	4319.159	795.299	5.400
29	4357.630	806.986	5.400
30	4375.208	829.121	5.400
31	4378.142	854.303	5.400
32	4371.326	874.408	5.400
33	4346.402	886.363	6.088
34	4333.648	904.297	6.496
35	4319.693	909.085	6.651
36	4304.924	908.694	7.624
37	4292.795	901.110	7.936
38	4286.704	887.565	8.060
39	4284.762	872.704	8.064
40	4283.005	857.807	8.065
41	4281.504	842.882	8.059
42	4280.009	827.957	8.051
43	4280.274	813.074	8.002
44	4290.931	806.107	6.119
45	4353.389	808.722	4.929
46	4367.346	808.700	4.607
47	4376.792	819.967	4.448
48	4379.308	834.627	4.562
49	4382.333	849.217	4.217
50	4380.347	863.933	4.629
51	4371.500	875.782	5.131

XREFS:Address_block/NEW_A1_APAC_STD_xr_bk/Control Lines /Design Road /Survey Base /Design Platform /Design Basin /BEV417-C-DWG-204 /Design SEW /Christensen Road /1396 Christensen Road Alignment

BURNSIDE DEVELOPMENTS PTY LTD
99 ANNERLEY ROAD
WOOLLOONGABBA QLD 4102

FOR CONSTRUCTION

10.08.05

J PDMROY
J PDMROY
D NEUHOLD
GC LOVELL

Xref D:\Common\Templates\AutoCAD_2000\Sheets\Address_block.dwg

1:1000 (A1)
AM FRANGIDSA

BEV417
BEV417-C-DWG-014.dwg

INDUSTRIAL ESTATE
CHRISTENSEN ROAD, YATALA
DETENTION \ WATER QUALITY BASIN
SETOUT SHEET 1 OF 1

BEV417-C-DWG-014

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