PROVIDE HARPULIA PENDULA 100L AT 8 METER CENTRES WITHIN ROAD RESERVE IN ACCORDANCE WITH STREET TREE SET OUT GUIDELINES REFER SHEET 05-103

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: OPW20191217

Dated: 24 January 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

1.0 PROJECT DESCRIPTION

MS Projects Pty Ltd is developing the properties at 84-160 Christensen Road South, Stapylton within the City of Gold Coast, for an industrial subdivision. A public open space has been approved along Sandy Creek to provide a buffer to adjacent industrial developments. Rehabilitation is required with proposed public open space as well as a detention basin based in the south-eastern corner. The detention basin was previously constructed to detain stormwater runoff; however, this asset requires re-design and rehabilitation to provide effective stormwater management and treatment services.

This Rehabilitation Management Plan (RMP) has been developed to guide the rehabilitation effort of the disturbed areas of public open space and the re-design construction works of the detention basin and surrounding batter. This RMP is to be read in conjunction with the following documents:

- Vegetation Management Plan (i3 consulting Pty Ltd, 2019)
- Conceptual Open Space Management Statement (OSMS) Schematic (Gassman Development Perspectives, 14/11/2014)
- Amended Decision Notice for reconfiguring a lot (ROL) application (ROL201800026) dated 2/11/2018.

2.0 AIM AND OBJECTIVES

- The detention basin will be constructed in accordance with the supplied drawings (17-209-C103-01-B). A permanent wetland system with a rock-lined inlet sediment pond will be created at the end of Christensen Road South and will be designed for high velocity flows (scour protection). The water will enter the wetland through an inlet pipe and go through a series of pools, marshes and macrophyte zones before discharging into Sandy Creek.
- The public open space will be managed for conservation purposes and will be dedicated to Council
- The aim of the RMP is to guide the revegetation of the proposed wetland and public open space areas to complement the existing ecosystem values of Sandy Creek.
- The site conditions have been irreversibly changed through historical clearing along portions of Sandy Creek and creation of a detention basin. Therefore, the objectives for the site will be to:
  - fabricate an aquatic ecological system to function as a stormwater treatment basin
  - fabricate a surrounding terrestrial ecosystem that will complement adjacent areas (Sandy Creek and public open space)
  - the public open space will be managed to provide access to the rear of industrial lots and provide a buffer to Sandy Creek.
- The performance of the rehabilitation management plan will be assessed during the establishment and on maintenance periods with an aim to dedicate the site to the Council of the City of Gold Coast. Performance objectives are provided in Table 1.

Table 1: Performance requirements for the Rehabilitation Management Plan

Performance Indicator	Completion of establishment period	Completion of on maintenance period
Plant survival	>90% survival rate of planted tubestock within each vegetation layer required density of ≥ 1 plant per m^2achieved	>90% survival rate of planted tubestock required density of ≥ 1 plant per m^2achieved
Plant survival - supplementary plantings	Additional 3 month establishment period required for supplementary plantings.	>90% survival rate of supplementary planted tubestock
Environmental weeds	Environmental weeds cover <10%	Environmental weeds cover <10%
Restricted or prohibited weeds	All restricted and prohibited weeds treated and removed.	All restricted and prohibited weeds removed.
Rubbish	All rubbish removed	No large pieces of rubbish present (eg. car bodies, garden waste)
Mulching	Mulch layer present throughout MZ1 and no bare soil present	Mulch layer remains around planted tubestock
Erosion and sedimentation	Batters do not show active erosion occurring. Planted ground covers supplemented with matting where required.	Batters stabilised by ground covers present

3.0 SITE DESCRIPTION

- The detention basin area was cleared in 2009 when the initial detention basin was created. The vegetation on the banks was re-cleared in or around 2011-2012. Regrowth is evident from 2014 onwards on aerial photography (Google Earth).
- Some areas adjacent to Sandy Creek have been previously cleared while areas immediately adjacent to the creek comprise intact vegetation mapped as remnant regional ecosystem (RE):
  - 12.3.11 - Queensland blue gum *Eucalyptus tereticornis* +/- grey ironbark *E. siderophloia*, pink bloodwood *Corymbia intermedia* open forest on alluvial plains usually near coast
  - 12.3.6 - broad-leaved paperbark *Melaleuca quinquenervia* +/- Queensland blue gum, swamp box *Lophostemon suaveolens*, pink bloodwood open forest on coastal alluvial plains
  - 12.11.5/12.11.24 - lemon-scented gum *Corymbia citriodora* subsp. *variegata* woodland to open forest +/- grey ironbark / narrow-leaved ironbark *Eucalyptus crebra*, white mahogany *E. carnea*, white stringybark *E. acmenoides*, small-fruited grey gum *E. propinqua* on metamorphics +/- interbedded volcanics & white mahogany, Tindale's stringybark *Eucalyptus tindaliae*, pink bloodwood +/- grey ironbark or narrow-leaved ironbark woodland on metamorphics +/- interbedded volcanics.
- The existing cleared areas along Sandy Creek have been invaded by exotic grasses. Rubbish, including car bodies and tyres, have been dumped within the open space area.
- Regrowth within the detention basin is comprised of wattles *Acacia* species regrowth with weeping bottlebrush *Melaleuca viminalis*, brush box *Lophostemon confertus*, lemon-scented gum *Corymbia citriodora* subsp. *variegata* and smooth-barked apple *Angophora leiocarpa* (Plate 1). The ground cover is sparse with occasional mat rush *Lomandra* spp and exotic grasses.
- The detention basin itself currently contains a wetland community comprising predominantly water primrose *Ludwigia peploides* with other species including bulrush *Typha orientalis*, water chestnut *Eleocharis dulcis*, woolly frogmouth *Philydrum lanuginosum* and other sedges and rushes. Some areas have been invaded by the exotic groundsel bush *Baccharis halimifolia*, blue billy goat weed *Ageratum houstonianum*, whiskey grass *Andropogon virginicus* and vasey grass *Paspalum urvillei*. Occasional standing trees include broad-leaved paperbark *Melaleuca quinquenervia* and cheese tree *Glochidion ferdinandi*
- Weed species present include camphor laurel *Cinnamomum camphora*, whiskey grass, groundsel and vasey grass.

3.1 ECOLOGICAL VALUES

- Ecological values of areas surrounding the site include:
  1. Vegetation to the north-east of the site (outside the RMP boundaries) is mapped as remnant least concern RE vegetation containing essential habitat for koala under the *Vegetation Management Act 1999* (VM Act).
  2. Sandy Creek is mapped as remnant vegetation containing of concern and least concern REs under the VM Act. The vegetation is mapped as essential habitat for koala and wallum froglet
  3. Sandy Creek downstream of the site is mapped as a high ecological significance (HES) wetland under the *Environmental Protection Act 1994*
  4. Vegetation along Sandy Creek and to the east of the site is mapped as koala habitat areas (GHD 2009)
- Matters of local environmental significance (MLES) values under the Gold Coast City Plan 2016
  1. Sandy Creek is mapped as a waterway and includes an intrusion to the southern portion of the existing proposed wetland (basin outlet)(Figure 1).
  2. Areas of Sandy Creek within the HES wetland, but not covered by the waterway mapping are mapped as a local significant wetland.
  3. Vegetation to the east of the detention basin (outside of the RMP boundaries) is mapped as habitat for local significant species.
  4. Non-remnant vegetation within Sandy Creek and to the east of the detention basin is mapped as general priority vegetation (Figure 2).

4.0 MANAGEMENT ZONES

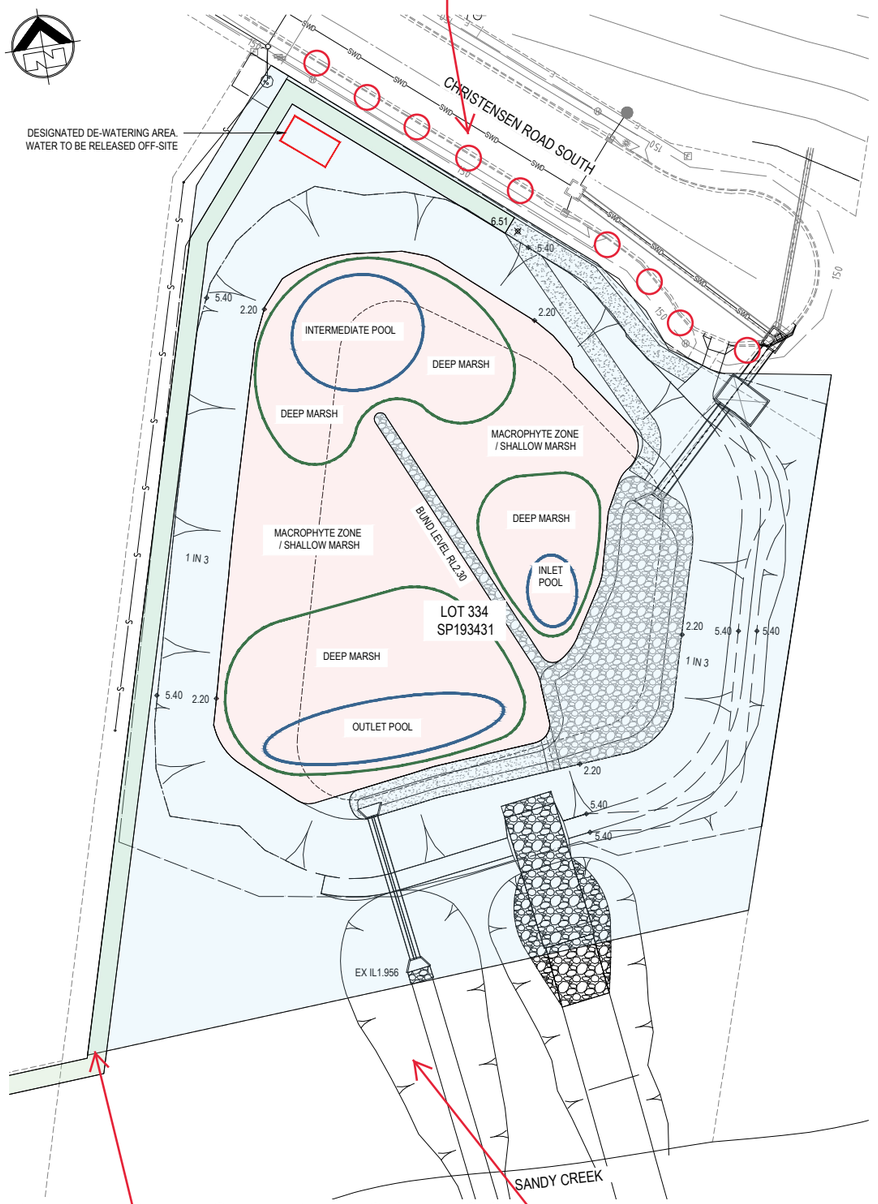
- Management zones within the site have been defined based primarily on their ecological function.
- Several management zones have been identified including:
  1. Detention basin
     a) Pool zone - permanently inundated areas that comprise an inlet pool, intermediate pool and outlet pool.
     b) Macrophyte zone - shallow heavily vegetated area to remove fine particulates and update soluble pollutants
     c) Deep marsh zone - heavily vegetated area connecting the pool and shallow marsh zones
  2. Regional ecosystem (RE) zones - re-establish a similar ecological community to surrounding bushland areas and managed for conservation purposes
  3. Maintenance tracks - maintaining access for vehicles along public open space
  4. Balance public open space areas - managed for natural regeneration and conservation purposes.

4.1 MANAGEMENT ZONE 1 (MGZ1) - SEE PLANS V100 AND V101

- Management zone 1 (MGZ1) is proposed to be re-engineered for a bio-retention basin and aims to treat stormwater prior to discharge to Sandy Creek.
- The total area is 0.4483 ha.
- The zone is currently mapped as non-remnant vegetation and a constructed wetland system will be fabricated to achieve the stormwater treatment objectives required for stormwater discharge.

4.1.1 PLANTING SCHEDULE

- The planting schedule in Table 2 provides an indicative list of species to be completed within MGZ1. Substitute species may be used as recommended by the revegetation contractor. This list has been developed from the *Wetland Technical Design Guidelines* (Water by Design, 2017) and species occurring within the site.



REHABILITATION MANAGEMENT PLAN - MGZ1 AND MGZ2

SCALE 1:500 (A1)

PROVIDE TUBESTOCK PLANTING TO DISTURBED GROUND FROM CIVIL WORKS MINIMUM DENSITY 1 PLANT PER SQ/M

NO TREE PLANTING WITHIN 3 METERS OF SEWER LINE. PROVIDE MULCH TO ADJACENT MAINTENANCE TRACK

Table 2: Proposed planting densities for MGZ1

Detention basin zone	Common name	Specific name	
Pool	robust water milfoil curled pondweed ribbonweed	*Myriophyllum papillosum* *Potamogeton crispus* *Vallisneria nana*	
Macrophyte zone / shallow marsh	#woolly frogmouth tassel sedge star club-rush	*Philydrum lanuginosum* *Carex fascicularis* *Schoenoplectus mucronatus*	
Deep marsh	jointed twigrush marsh club-rush shore club-rush	*Baumea articulata* *Bolboschoenus fluviatilis* *Schoenoplectus litoralis*	6-8

present within the existing wetland area.

4.1.2 WEED MANAGEMENT

- Aquatic weed seed may be introduced into the bio-retention basin through introduction from the upstream catchment, flooding of Sandy Creek and introduction from waterfowl.
- Aquatic weeds that germinate within the bio-retention basin are to be manually removed or sprayed with a herbicide that is rated for aquatic weed control.

4.2 MANAGEMENT ZONE 2 (MGZ2) - SEE PLAN V100

- Management zone (MGZ2) will aim to establish a similar ecological community type that previously existed on the detention basin, using the pre-clear RE mapping and adjacent areas as a reference site.
- The total area is 1.3695 ha.
- The site is currently mapped as non-remnant vegetation, however inspection of the pre-clear RE mapping (Queensland Herbarium 2018) showed that the site previously contained:
  1. RE 12.11.5 (85%) and is described as lemon-scented gum open forest to woodland, usually including grey ironbark / narrow-leaved ironbark (sub coastal ranges), small-fruited grey gum , white mahogany or white stringybark. Other species that may be present and abundant locally include pink bloodwood, brown bloodwood *Corymbia trachyphloia* subsp. *trachyphloia*, Queensland blue gum, tallowwood *Eucalyptus microcorys*, *E. portuensis*, Helidon ironbark *E. helidonica*, grey gum *E. major*, *E. longirostrata, E. biturbinata*, gum-topped box *E. moluccana* and spotted gum *Angophora leiocarpa*. Brush box *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)
  2. 12.11.24 (previously 12.11.5a) (15%) and is described as white mahogany *Eucalyptus carnea*, Tindale's stringybark, pink bloodwood woodland +/- narrow-leaved ironbark or grey ironbark, red mahogany *Eucalyptus resinifera*, grey gum, Helidon ironbark, smudgee apple *Angophora woodsiana*, brown bloodwood *C. trachyphloia*, tallowwood, lemon-scented gum, large-fruited spotted gum *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 / 12.11.24 are naturally diverse communities and the Queensland Herbarium notes that between 10-12 canopy species can be found in 0.1 ha plots. However, to enable a reasonable number of tubestock to be planted for each species, only the dominant canopy species across both REs was used (Appendix 1) and based on the adjacent reference site. Due to the close proximity of remnant vegetation to the site, other species will be naturally introduced over time.
- Planting areas within the balance of the public open space are identified in the Conceptual OSMS Schematic (Gassman Development Perspectives 2014). These planting areas are identified as pre-clearing RE 12.11.5/12.11.24 and therefore will require a similar planting palette to restore these communities.
- Weed management will occur on an as needed basis in order to achieve the performance objectives in Table 1. This will involve initial treatment and removal of all weed material combined with followup treatments for regrowth or new infestations.

4.3 Management Zone 3 (MGZ3) - SEE PLAN V101

- Management Zone 3 (MGZ3) aims to maintain an accessible vehicular track (3 m in width) to allow for maintenance activities within the public open space areas.
- The total area is 0.3 ha.
- Management activities will include track maintenance and weed control.

4.4 Management Zone 4 (MGZ4) - SEE PLAN V101

- Management Zone 4 (MGZ4) aims to maintain conservation values within the balance open space area through natural regeneration of native species from the soil seedbank and weed control
- Where weed control results in a plant density of less than 1 plant per m^2, additional planting is required to be completed to achieve a 1 plant per $1m^2$ density.
- All rubbish items will be removed from the zone, including large items such as car bodies
- Weed management will occur on an as needed basis in order to achieve the performance objectives in Table 1. This will involve initial treatment and removal of all weed material combined with followup treatments for regrowth or new infestations.
- Replanting to occur in any canopy gaps larger than $5.0m^2$ within the natural regeneration zones.

4.4.1 PLANTING SCHEDULE

- Proposed species mix has been developed from the RE description database for each component RE. To gain an appreciation of the shrub and ground cover species present, the RE technical descriptions (only RE 12.11.24 available) and BioCondition benchmarks (only RE 12.11.5 available) were reviewed. Due to the small size of the site, the dominant species in each stratum (canopy, shrubs, ground) was chosen.

Canopy	Sub-canopy	Shrub	Ground cover
◦ lemon-scented gum *Corymbia citriodora* subsp. *variegata* ◦ grey ironbark *Eucalyptus siderophloia* ◦ narrow-leaved ironbark *Eucalyptus crebra* ◦ Queensland blue gum *Eucalyptus tereticornis* ◦ Tindale's stringybark *Eucalyptus tindaliae*	◦ brush box *Lophostemon confertus* ◦ red ash *Alphitonia excelsa* ◦ early black wattle *Acacia leiocalyx* ◦ small-leaved paperbark *Melaleuca sieberi* ◦ coastal she-oak *Allocasuarina littoralis* ◦ black wattle *Acacia disparrima*	◦ dogwood *Jacksonia scoparia* ◦ poison peach *Trema tomentosa* ◦ sago flower *Ozothamnus diosmifolius* ◦ hopbush *Dodonaea triquetra* ◦ grey bush-pea *Pultenaea spinosa* ◦ twiggy myrtle *Sannantha (Babingtonia) similis*	◦ kangaroo grass *Themeda triandra* ◦ barbed wire grass *Cymbopogon refractus* ◦ blady grass *Imperata cylindrica* ◦ poverty grass *Eremochloa bimaculata*

- Planting densities are to be as per Table 3, however substitutions may be acceptable depending upon the revegetation contractor and local nursery supply. The management zone area is approximately 1.3695 ha and the planting density has been calculated to ensure at least 1 plant per m^2..
- Tubestock
  1. Tubestock must be sourced from local nursery suppliers and from local provenance.
  2. Tubestock must be healthy and containing signs of active growth. Tubestock must be rejected if plants display any signs of disease (eg. yellowing of leaves, root bound) or contain weed growth. Tubestock are to be at least 20 cm tall for trees and shrubs and must be sun-hardened.
- Timing
  1. Planting is ideally be completed during the active growing season to ensure that plants become established quickly and to minimise the amount of supplementary watering required. The months of January to March provide the highest likelihood for rainfall at the site.
  2. The plantings will have an establishment period of 12 months, followed by an on maintenance period of 12 months. Any supplementary plants (eg. where plantings have failed to reach the required density of 1 plant per m^2 density), there will be an additional 3 month on maintenance period.

Table 3: Proposed planting densities for MGZ2

Common name Species name	Proposed planting density (no. per m^2)	Proposed no. of plants	Including 10% loss factor
lemon-scented gum *Corymbia citriodora*	1 plant per 36m2	63	69
narrow-leaved ironbark *Eucalyptus crebra*		63	69
Tindale's stringybark *Eucalyptus tindaliae*		63	69
black wattle *Acacia disparrima*	1 plant per 6 m2	750	825
early black wattle *Acacia leiocalyx*		750	825
red ash *Alphitonia excelsa*		750	825
dogwood *Jacksonia scoparia*	1 plant per 6 m2	550	605
sago flower *Ozothamnus diosmifolius*		550	605
hopbush *Dodonaea triquetra*		550	605
grey bush-pea *Pultenaea spinosa*		550	605
kangaroo grass *Themeda triandra*	1 plant per 1-2 m2	4550	5005
barbed wire grass *Cymbopogon refractus*		4550	5005
TOTAL	at least 1 plant per 1 m2	13775	15153

GCCC REF: OPW/2019/160

DIAL BEFORE YOU DIG www.1100.com.au

REV	DESCRIPTION	DATE	BY
E	COUNCIL RFI RESPONSE	30.09.2019	K.J.L.
D	REVISED NOTE	20.08.2019	N.G.
C	FOR TENDER	03.06.2019	K.J.L.
B	FOR APPROVAL	08.05.2019	K.J.L.
A	FOR CLIENT REVIEW	16.04.2019	K.J.L.

File Location P:\17-209 - Christensen Road Development\D
Plotted by Katherine Leggett
Plot date 8:41 AM

Consulting Engineer:

i³ consulting pty ltd
engineering consultants
innovation, ingenuity, inspiration
L2 39 Sherwood Rd, Toowong, Qld 4066
PO Box 878, Toowong, Qld 4066
www.icubed.com.au
mail@icubed.com.au
ABN 89 106 675 156
ACN 106 675 156
p 07 3870 8888

LEGEND

- PROPOSED LOT BOUNDARY
- EXISTING PROPERTY BOUNDARY
- MANAGEMENT ZONE 1 (MGZ1) - AREA = 0.4483ha
- MANAGEMENT ZONE 2 (MGZ2) - AREA = 1.369ha (DEPENDING ON EXTENT OF DISTURBANCE)
- MANAGEMENT ZONE 3 (MGZ3) - AREA = 0.3ha

Engineers Certification:

Travis Smith MIE Aust. CPEng.
RPEQ 16400

Signature: .....

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

Project
PROPOSED SUBDIVISION AT 86-160 CHRISTENSEN ROAD SOUTH, STAPYLTON
for
BURNSIDE DEVELOPMENTS P/L & YELLOWSTONE INVESTMENTS P/L

Title
REHABILITATION MANAGEMENT PLAN - SHEET 1

Status: FOR APPROVAL

Drawn: K.J.L.	Date: 05.04.19	Chkd: D.F.	Date: 05.04.19
Design: D.F.	Date: 05.04.19	Apprd:	Date:
Scale: AS SHOWN A1		Certif:	Date:
Project No.: 17-209		Dwg. No.: V100	Rev.: E

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5.0 REHABILITATION PROGRAM

5.1 SITE PREPARATION

1. The site will be cleared to enable construction of the bio-retention basin and associated works.
2. All vegetation will be cleared and disposed of in accordance with the Vegetation Management Plan.
3. The site will be graded and shaped in accordance with the design drawings.
4. The stockpiled topsoil is to be spread evenly over the site. A layer of mulch is then to be spread over the topsoil within MGZ1 only
5. Rubbish will be removed from MGZ4.

5.2 TUBESTOCK PLANTING

1. Within MGZ2, mulch is to be scraped back and suitable tubestock holes dug with machinery or by hand.
2. A small amount (10g) of slow release fertilizer is to be added upslope of the hole and 4 cm below the soil and mulch layers. Tubestock holes should be deep enough so that the root mass sits just below the soil surface. Once planted, the mulch can be respread around the tubestock
3. Tree guards are to be used for tree and shrub species to protect from herbivory. Several tree guards designs are available and are to be recommended by the revegetation contractor.
4. Each tubestock is to be watered immediately with between 5-10 L of water. Followup watering will be completed during the establishment and on maintenance periods.
5. The establishment phase shall be for 12 months from the completion of rehabilitation plantings

5.3 ESTABLISHMENT PHASE

1. The establishment phase shall be for 12 months from the completion of the rehabilitation program.
2. Supplementary plantings to replace unsuccessful plantings shall require an additional establishment phase of three months to ensure plant establishment.

5.3.1 WEED MANAGEMENT

1. The intent of weed management within the MGZ2 area is to establish a native vegetation community that naturally suppresses invasive weeds by creating conditions that are unsuitable for weed germination and growth (eg. position in full sun, disturbed soils).
2. The intent of weed management within MGZ4 is to treat and remove infestations and to treat regrowth and re-infestations on an as needed basis.
3. The layer of mulch within MGZ2 will act to suppress weed seed present within the soil seed bank. However, weed seed may be brought on the site from adjacent areas (windblown seed), by flooding of Sandy Creek or movement of fauna onto the site.
4. During the establishment and on maintenance phases, spot spraying or hand pulling of germinating weeds shall be completed during regular monitoring events. This will ensure that weed material does not become unmanageable.
5. Appropriate weed treatment methods are provided in Table 4.
6. All weed material must be collected and placed in a bag for disposal at a waste management facility. Weed propagative material shall not be disposed of within the site.

5.3.2 SUPPLEMENTARY WATERING

1. Watering shall be required to supplement natural rainfall.
2. Generally, watering shall be required in accordance with the following schedule:
   a. daily for the first week
   b. twice per week to week 6
   c. weekly watering to week 12
3. Watering shall be delivered from a water truck or pumped from Sandy Creek, only if the necessary permits can be acquired.

5.4 MAINTENANCE PHASE

1. The maintenance phase shall be for 12 months from the completion of the establishment phase.
2. The revegetation contractor shall provide a compliance certificate at the completion of the maintenance phase
3. The off maintenance phase shall be achieved by compliance with the performance requirements in Table 1 and confirmation by Council.
4. Supplementary watering shall be provided on an as needed basis to ensure the performance objectives are met with respect to plant retention.
5. Weed management shall be provided as per the establishment phase.

6.0 ROLES AND RESPONSIBILITIES

1. This RMP will be kept onsite during the rehabilitation program.
2. All site contractors involved in the rehabilitation program or accessing the site during rehabilitation activities shall complete a site induction which includes relevant aspects of the RMP
3. Project Manager - responsible for engaging a suitably qualified and experienced revegetation contractor to undertake the rehabilitation program
4. Site Supervisor - responsible for demarcation of rehabilitation areas and ensuring that the RMP measures are implemented on site
5. Revegetation contractor - responsible for rehabilitating the site in accordance with this RMP and noting amendments or deviations where necessary
6. All other contractors and visitors - responsible for observing rehabilitation areas and not impacting on rehabilitation activities.

7.0 MONITORING

1. A monitoring program shall be implemented to track the progress of the rehabilitation program
2. The aim of the monitoring program is to track the establishment of tubestock and weed presence/coverage.
3. Permanent photo monitoring points shall be established, 1 point within MGZ1 and 5 points within MGZ2 (1 within the detention basin batters, 1 within the small planting areas and 2 within the larger planting area). The photo monitoring points shall be chosen prior to the rehabilitation program commencing

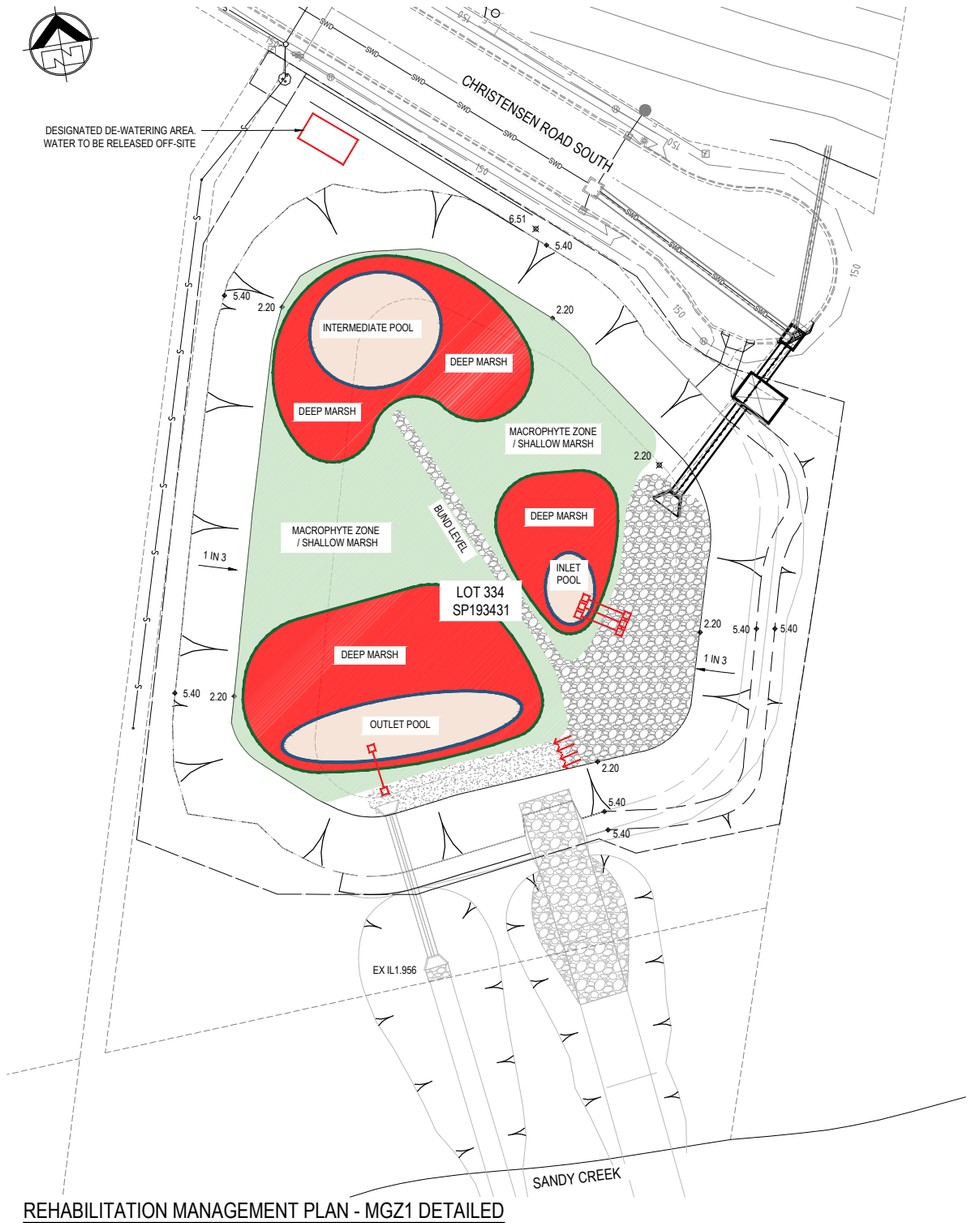
Table 4: Example weed treatment methods

Life form	Example species from surrounding area	Treatment method
Woody plants (trees, shrubs)	lantana *Lantana camara* camphor laurel *Cinnamomum camphora* groundsel bush *Baccharis halimifolia*	Manual removal of seedling by hand pulling or chipping if adjacent to native plants Chipping out underground growing buds (groundsel bush) Spot spray
Grasses	green panic *Megathyrsus maximus* whiskey grass *Andropogon virginicus* vasey grass *Paspalum urvillei*	Manual removal of tussock by hand pulling. If seed heads present, place in plastic bag first to prevent shaking seed loose. Spot spray
Herbs	blue billygoat weed *Ageratum houstonianum*	Manual removal of plant by hand pulling Spot spray
Vines	passionfruit vine *Passiflora* spp.	Scrape and paint stem Hand pull if able to remove the tuber as well
Aquatic	blue water lily *Nymphaea caerulea*	Hand gun of 2,4-D acid at 50 ml / 500 L water

8.0 REFERENCES

Water by Design (2017). Draft Wetland Technical Design Guidelines (Version 1). Healthy Land and Water Ltd, Brisbane

Gassman Development Perspectives (2014). Conceptual OSMS Schematic, drawing 1396 E OSMP 01)



REHABILITATION MANAGEMENT PLAN - MGZ1 DETAILED

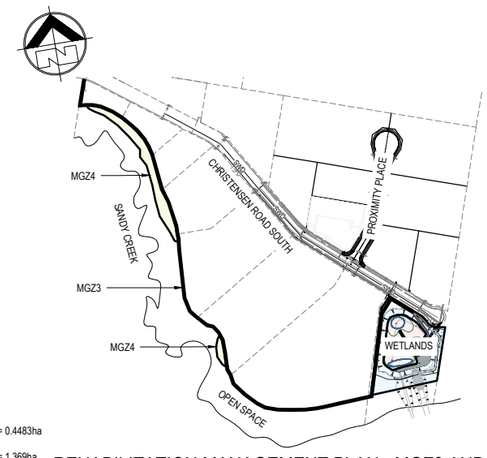
SCALE 1:500 (A1)

APPENDIX 1 COMPARISON OF SPECIES WITHIN RE 12.11.5 AND 12.11.24

Species	Stratum	RE 12.11.5	12.11.24
Corymbia citriodora subsp. variegata	T1	D	Y
C. henryi	T1		Y
Eucalyptus siderophloia	T1	D	Y
E. propinqua	T1	D	
E. acmenoides	T1	D	
E. carnea	T1	D	D
Corymbia intermedia	T1	Y	D
C. trachyphloia subsp. trachyphloia	T1	Y	Y
Eucalyptus tereticornis	T1	Y	
E. microcorys	T1	Y	Y
E. portuensis	T1	Y	
E. helidonica	T1	Y	Y
E. major	T1	Y	Y
E. longirostrata	T1	Y	
E. biturbinata	T1	Y	
E. moluccana	T1	Y	
E. tindaliae	T1		D
Eucalyptus resinifera	T1		Y
Angophora leiocarpa	T1	Y	Y
Angophora woodsiana	T1		Y
Lophostemon confertus	T2	Y	D
Allocasuarina torulosa / Allocasuarina littoralis	T2	D	D
Acacia disparrima	T2	D	D
Acacia leiocalyx	T2	D	
Acacia concurrens	T2		Y
Acacia fimbriata	T2/S1		Y
Jagera pseudorhus	T2		Y

Species	Stratum	RE 12.11.5	12.11.24
Leptospermum polygalifolium	T2/S1		Y
Melaleuca saligna	T2		Y
Alphitonia excelsa	T2	D	Y
Acacia maidenii	T2	D	Y
Jacksonia scoparia	S1		Y
Babingtonia similis	S1		Y
Dodonaea triquetra	S1		Y
Euroschinus falcatus var. angustifolius	S1		Y
Hodgkinsonia ovatiflora	S1		Y
Ozothamnus diosmifolius	S1		Y
Polyscias elegans	S1		Y
Psychotria loniceroides	S1		Y
Pultenaea spinosa	S1		Y
Solanum stelligerum	S1		Y
Trema tomentosa	S1		Y
Trochocarpa laurina	S1		Y
Themeda triandra	G		D
Imperata cylindrica	G		D
Cymbopogon refractus	G		D
Eremochloa bimaculata	G		D
Cheilanthes sieberi subsp. sieberi	G	D	
Crotalaria montana	G	D	
Glycine clandestina	G	D	
Lobelia purpurascens	G	D	

Key:
D = dominant
Y = present



REHABILITATION MANAGEMENT PLAN - MGZ3 AND MGZ4

SCALE 1:5000 (A1)

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: OPW20191217

Dated: 24 January 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

LEGEND

- PROPOSED LOT BOUNDARY
- EXISTING PROPERTY BOUNDARY
- MANAGEMENT ZONE 1 (MGZ1) - AREA = 0.4483ha
- MANAGEMENT ZONE 2 (MGZ2) - AREA = 1.369ha (DEPENDING ON EXTENT OF DISTURBANCE)
- MANAGEMENT ZONE 3 (MGZ3) - AREA = 0.3ha
- MANAGEMENT ZONE 4 (MGZ4)

GCCC REF: OPW/2019/160

DIAL BEFORE YOU DIG www.1100.com.au

REV	DESCRIPTION	DATE	BY
C	COUNCIL RFI RESPONSE	30.09.2019	K.J.L.
B	FOR TENDER	03.06.2019	K.J.L.
A	FOR CLIENT REVIEW	16.04.2019	K.J.L.

Consulting Engineer:

i³ consulting pty ltd
engineering consultants
innovation, ingenuity, inspiration
L2 39 Sherwood Rd, Toowong, Qld 4066
PO Box 878, Toowong, Qld 4066
www.icubed.com.au
mail@icubed.com.au
ABN 89 106 675 156
ACN 106 675 156
p 07 3870 8888

LEGEND

- PROPOSED LOT BOUNDARY
- EXISTING PROPERTY BOUNDARY
- MANAGEMENT ZONE 1 (MGZ1) - POOL
- MANAGEMENT ZONE 1 (MGZ1) - MACROPHYTE / SHALLOW MARSH
- MANAGEMENT ZONE 1 (MGZ1) -DEEP MARSH

Engineers Certification:

Travis Smith MIE Aust. CPEng.
RPEQ 16400

Signature: .....

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

Project
PROPOSED SUBDIVISION AT 86-160 CHRISTENSEN ROAD SOUTH, STAPYLTON
for
BURNSIDE DEVELOPMENTS P/L & YELLOWSTONE INVESTMENTS P/L

Title
REHABILITATION MANAGEMENT PLAN - SHEET 2

Status: FOR APPROVAL

Drawn: K.J.L.	Date: 05.04.19	Chkd: D.F.	Date: 05.04.19
Design: D.F.	Date: 05.04.19	Apprd:	Date:
Scale: AS SHOWN	A1	Certif:	Date:
Project No.: 17-209		Dwg. No.: V101	Rev.: C

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File Location P:\17-209 - Christensen Road Development\D
Plotted by Katherine Leggett
Plot date 8:41 AM

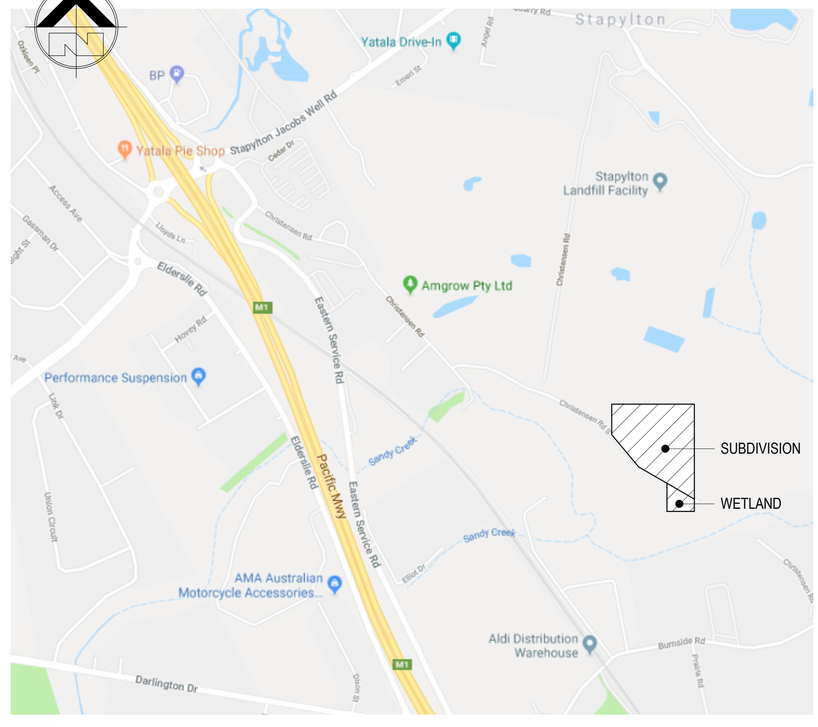
1 LANDSCAPE OVERALL SUBDIVISION PLAN

1 : 1000

THE ENTIRE SITE SHOWN IN THE DETAIL IS CURRENTLY PRIVATE LAND. THE AREA DENOTED BY THE HATCH WILL BECOME PUBLIC LAND ONCE SUBDIVISION STAGES HAVE BEEN SEALED.

3 LAND USAGE DETAIL

1 : 2500



2 LANDSCAPE LOCALITY PLAN

NTS

10/12/2019 9:55:06 AM

PROJECT TEAM

Consulting Engineer:

i³ consulting pty ltd
engineering consultants
innovation, ingenuity, inspiration
LV 2, 39 Sherwood Rd
Toowong, Qld 4066
www.icubed.com.au
ABN 89 106 675 156
PO Box 878
Toowong, Qld 4066
mail@icubed.com.au
ACN 106 675 156
p 07 3870 8888
f 07 3870 8988

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: OPW20191217

Dated: 24 January 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

REV	DESCRIPTION	DATE	BY
B	COUNCIL RFI RESPONSE	10.12.2019	K.J.L.
A	COUNCIL APPROVAL	13.08.2019	N.G.

Status

FOR TENDER

Project

PROPOSED SUBDIVISION AT 86-160 CHRISTENSEN ROAD SOUTH, STAPYLTON
for
BURNSIDE DEVELOPMENT P/L & YELLOWSTONE INVESTMENTS P/L

Title

LANDSCAPE SITE & LOCALITY PLAN

Drawn	Date	Chkd	Date
N.G.	13.08.2019	R.J.	
Design	Date	Apprd	Date
C.J.C.			
Scale	A1	Certif	Date
As indicated			
Project No.		Dwg. No.	Rev
17-209		L00	B

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LANDSCAPE SPECIFICATION

SCOPE
THE SCOPE OF THE LANDSCAPE WORKS TO BE COMPLETED BY THE APPOINTED CONTRACTOR IN ORDER TO SATISFY THE REQUIREMENTS OF THIS CONSTRUCTION SPECIFICATION INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING TASKS:

- SITE PREPARATION (INC. MINOR GRADING, SUB-GRADE CULTIVATION AND MECHANICAL RIPPING)
- PLANT SET OUT AS SHOWN ON PLANS IS INDICATIVE ONLY. ALL PLANTS ARE TO BE DISTRIBUTED IN EVEN GROUPING TO PROVIDE A VARIETY IN GROUP ARRANGEMENT WHILST KEEPING TO THE REQUIRED SET OUT OF PLANT SPACINGS.
- SUPPLY AND INSTALLATION OF ADVANCED TREES
- SUPPLY AND INSTALLATION OF TOPSOIL, ORGANIC MULCH AND ROCK MULCH (AS SPECIFIED)
- SUPPLY AND INSTALLATION OF BASALT BOULDERS
- LANDSCAPE ESTABLISHMENT AND MAINTENANCE
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACCURACY OF ALL WORKS DURING THEIR PROGRESS AND MAKE GOOD ANY ERRORS CAUSED BY A FAILURE TO COMPLY WITH THE APPROVED DOCUMENTATION, OR OTHERWISE NEGLIGENCE AND POOR WORKMANSHIP ON THEIR PART

1.0 INDUSTRY STANDARDS
ALL WORKS ADDRESSED WITHIN THIS SPECIFICATION MUST BE IMPLEMENTED IN ACCORDANCE WITH THE FOLLOWING AUSTRALIAN LANDSCAPE STANDARDS
- AS 1289 METHODS OF TESTING SOILS FOR ENGINEERING PURPOSES
- AS 4419-1998 SOILS FOR LANDSCAPING AND GARDEN USE
- AS 4454-1999 COMPOSTS, SOIL CONDITIONERS AND MULCHES

2.0 SITE LEVELS
- CONFIRM SITE LEVELS BEFORE COMMENCING LANDSCAPING WORK
- UNLESS OTHERWISE SHOWN ON DRAWINGS ALL FINISHED SURFACE LANDSCAPE LEVELS ARE TO FINISH FLUSH WITH SURROUNDING CONCRETE PATHS, KERBS, FIELD INLETS, INSPECTION CHAMBERS ETC.
- TURF AND PLANTING AREAS ARE TO FALL AT A MINIMUM GRADIENT OF 1:50 AWAY FROM THE BASE OF EXISTING AND PROPOSED BUILDINGS.
- ENSURE POSITIVE DRAINAGE OFF LANDSCAPE AREAS AND GARDEN BEDS

3.0 DRAINAGE AND SERVICES
REFER TO ENGINEER'S DRAWINGS FOR GRADING, DRAINAGE AND SERVICES INFORMATION

4.0 FIRE ANTS
- ALL IMPORTED MATERIALS TO BE CERTIFIED AND RECORDED AS FREE OF FIRE ANTS.

5.0 EROSION
- ALL NECESSARY PRECAUTIONS ARE TO BE IMPLEMENTED TO PREVENT EROSION AND SEDIMENT DISPERSAL FROM SITE.
- ENSURE COMPLIANCE WITH ALL RELEVANT LOCAL COUNCIL ENVIRONMENTAL CONDITIONS AND STANDARDS .

6.0 CULTIVATION
- CULTIVATE EXISTING SUBGRADE TO ALL GARDEN AND TURF AREAS TO A MINIMUM 300mm DEPTH BY MECHANICAL RIPPING AND DIGGING
- REMOVE ANY ROCK, STONES, EXTRANEOUS VEGETATION OR BUILDING REFUSE GREATER THAN 100mm BROUGHT TO THE SURFACE
- DO NOT DISTURB SERVICES OR EXISTING TREE ROOTS
- GRADE CULTIVATED SURFACE IN PREPARATION FOR TOPSOIL SPREADING

7.0 TOPSOIL
- IMPORTED TOPSOIL TO BE A HIGH GRADE FERTILE MIX OF 'SOIL BLEND', AS PER AUSTRALIAN STANDARDS AS4419 - 1998' (SOILS FOR LANDSCAPE AND GARDEN USE). SIMILAR TO ULTRAGROW PREMIUM ORGANIC GARDEN BLEND (CLS-UG1) INCORPORATING 'HYDROCELL' AS PER MANUFACTURER'S INSTRUCTIONS TO REQUIRED DEPTHS.
- SOIL TO BE GENERALLY DESCRIBED AS MEDIUM SANDY LOAM AND SHALL NOT SET AND BECOME DIFFICULT TO WORK AS A CONSEQUENCE OF SATURATION OR DESICCATION;
- IMPORTED TOPSOIL IS CLEAN AND FREE OF EXTRANEOUS MATTER INCLUDING STONES (>25mm DIA.) WEEDS, ROOTS, RUBBISH AND ANY OTHER MATERIAL POTENTIALLY TOXIC TO PLANT GROWTH
- IMPORTED SOIL TO BE MIN. 2% ORGANIC, PH 5.5 -7, SALT < 0.06%
- APPLY GYPSUM OVER CULTIVATED SITE SURFACE AT 0.25KG/M² PRIOR TO SPREADING TOPSOIL
- SPREAD TOPSOIL TO AN EVEN 100mm DEPTH TO ALL PLANTING AREAS AND 50mm TO TURF AREAS.

8.0 ORGANIC MULCH AND ROCK BEDS
- ALL MULCH TO BE AN ORGANIC MEDIUM GRADE ULTRAGROW 'EARTHGROW MULCH' OR OTHER SIMILAR TO COMPLY WITH AS 4454, APPLIED EVENLY TO A MIN. 100mm DEPTH AND RAKED SMOOTH TO FEATHER AWAY FROM SURROUNDING FINISHED LANDSCAPE LEVELS.
- ALL MULCH TO BE SET BACK AWAY MIN. 50mm FROM PLANT STEMS/FLARES
- CREEK STONES TO BE WASHED 'RIVER ROCK' OR EQUAL APPROVED (100-300mm MAX. DIA.)

9.0 FERTILISER
- AN APPROVED 10GM SLOW RELEASE FERTILISER TABLET SUCH AS SIERRA CHEMICAL COMPANY 'AGRIFORM' PLANTING TABLETS, USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
- A SURFACE DRESSING OF 'BLOOD AND BONE' FERTILISER SHALL BE PLACED ON THE SOIL WITHIN 300mm DIA. OF EACH PLANT AT MANUFACTURER'S RECOMMENDED RATE

10.0 PLANTS
- ALL SOURCED PLANTS AS SPECIFIED BY THE PLANT SCHEDULE SHALL BE HEALTHY AND VIGOROUS AND TRUE TO THEIR SPECIES, TYPE AND FORM
- ALL PLANTS ARE TO BE VIGOROUS AND WELL ESTABLISHED, SUN HARDENED AND HAVE NO EVIDENCE OF ROOT CURL, RESTRICTION OR DAMAGE
- NO SUBSTITUTIONS SHALL BE MADE WITHOUT PRIOR APPROVAL FROM THE LANDSCAPE DESIGNER
- PLANTS TO BE COMPLETELY FREE OF PESTS, DISEASES AND FUNGAL CONTAMINATION (INC. ROOTS)
- DO NOT VARY LOCATION OF PLANTS, UNLESS NECESSARY TO AVOID SERVICE LINES, PIPES ETC
- DO NOT SET ROOT BALL BELOW SOIL SURFACE THAT IT REMAINS FLUSH WITH SURROUNDING LEVELS
- BACKFILL PITS WITH IMPORTED TOPSOIL AND SITE SOIL MIX, INCLUDING 3x SLOW RELEASE FERTILISER TABLETS FOR NATIVE PLANTS (I.E. AGRIFORM OR EQUIVALENT) TO MANUFACTURER'S SPECIFICATION
- APPLY 5 LITRES OF WATER TO EACH PLANT IMMEDIATELY AFTER PLANTING

11.0 ADVANCED TREES AND STAKES
- INSTALL ADVANCED TREES AS PER LANDSCAPE PLANS IN PITS TWICE THE WIDTH OF THE ROOT-BALL, WITH SCARIFIED SIDES TO PREVENT ROOT CONSTRICTION
- FILL HOLE WITH WATER AND LET DRAIN THOROUGHLY PRIOR TO PLANTING: NOTIFY LANDSCAPE DESIGNER IF DRAINAGE PROBLEMS FROM THE HOLES EXIST
- DUE TO EXISTING ROCK CONDITIONS DRAINAGE MAY BE REQUIRED FROM TREE PITS
- CULTIVATE BASE OF HOLE TO A FURTHER DEPTH OF 100mm
- APPLY 0.5KG OF GYPSUM AND PIKE THE HOLE BASE BEFORE PLANT INSTALLATION TO PREVENT WATER WELLING
- WHERE POSSIBLE POSITION THE TREE SO THAT THE BRANCHES DO NOT RUB AGAINST STAKES OR WILL IN FUTURE, CONFLICT WITH BUILDINGS OR OVERHEAD WIRES
- POSITION THE TREE SO THAT THE TOPSOIL LEVEL OF THE ROOT-BALL IS LEVEL WITH THE SURROUNDING FINISHED SURFACE
- ALL TREES TO BE SUPPORTED WITH UNTREATED HARDWOOD TIMBER STAKES, DRIVEN 600mm INTO GROUND OUTSIDE THE PERIMETER OF THE TREE ROOT-BALL TO PREVENT DAMAGE TO ROOTS (SEE DETAIL)
- TREES TO BE SUPPORTED BY A LOOSE HESSIAN TIE SET IN FIGURE-EIGHT PATTERN AT A THIRD OF THE STEM HEIGHT WHICH IS NAILED (FLATHEAD) OR STAPLED TO THE STAKES
- TREES SHOULD STAND PLUMB AND IN THE CENTRE OF THE HOLE AFTER STAKING
- STAKES SHOULD BE REMOVED 6 MONTHS AFTER INSTALLATION
- BACKFILL BY HAND WITH AN EVEN MIXTURE OF SITE SOIL AND IMPORTED TOPSOIL
- PLACE 3x SLOW RELEASE FERTILISER TABLETS AT QUARTER THE DEPTH OF THE ROOT BALL
- DO NOT ALLOW TABLETS TO COME INTO CONTACT WITH ROOTS
- DO NOT STAMP SOIL ABOUT TREE BASE
- TAMP BACKFILL LIGHTLY AND FORM A TEMPORARY WATERING RING
- WATER TREE THOROUGHLY TO ELIMINATE AIR POCKETS
- TREATMENT WITH 100mm DEPTH OF 25-50mm FOREST BARK MULCH

12.0 WATERING
- WATER IMMEDIATELY AFTER LAYING UNTIL THE TOPSOIL IS MOISTENED TO ITS FULL DEPTH
- CONTINUE WATERING TO MAINTAIN MOISTURE TO THIS DEPTH
- BATTER PLANTS MUST BE REGULARLY IRRIGATED DURING THE ESTABLISHMENT PHASE. REFER IRRIGATION NOTES FOR FURTHER DETAILED REQUIREMENTS

13.0 IRRIGATION
THE FOLLOWING PERFORMANCE SPECIFICATION OUTLINES THE RESPONSIBILITIES AND COMMITMENTS WHICH NEED TO BE ADDRESSED BY THE APPOINTED IRRIGATION CONTRACTOR IN ORDER TO COMPLETE THE TERMS OF THEIR ENGAGEMENT.

- ALL UNESTABLISHED AND UNSUCCESSFUL PLANTS ARE TO BE REPLACED ACCORDINGLY AND BE SUBJECT TO MAINTENANCE PERIOD REQUIREMENTS, IN ACCORDANCE WITH THE ASSOCIATED COUNCIL APPROVAL FOR A RECONFIGURING A LOT.

- THE WETLAND VEGETATION IS CONSIDERED 'ESTABLISHED' WHEN THE PLANTS HAVE REACHED REPRODUCTIVE MATURITY AND SUFFICIENT VEGETATION COVER HAS BEEN ESTABLISHED ACROSS THE WETLAND.

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE WATERING FOR ESTABLISHMENT TO ENSURE THE SUSTAINABILITY OF ALL PLANTS.

- TERRESTRIAL AND EPHERMAL BATTER PLANTS MUST BE REGULARLY IRRIGATED DURING THE ESTABLISHMENT PERIOD. THE FOLLOWING PROGRAM OUTLINED BELOW MUST BE FOLLOWED UNLESS A VARIATION IS AGREED BY THE SUPERINTENDENT.
  WEEK 1-6 FIVE IRRIGATION DAYS PER WEEK
  WEEK 6-10 THREE IRRIGATION DAYS PER WEEK
  WEEK 11-15 TWO IRRIGATION DAYS PER WEEK

- IN THE ABSENCE OF RAIN IT IS RECOMMENDED THAT EACH PLANT RECEIVES 2.5-5L OF WATER PER WEEK DURING THE FIRST SIX WEEKS (APPROXIMATELY 40mm OF WATERING PER WEEK DURING ESTABLISHMENT).

- AFTER AN INITIAL FOUR MONTH PERIOD, IRRIGATION MAY STILL BE REQUIRED, PARTICULARLY DURING THE FIRST WINTER OR DRY PERIOD. WATERING REQUIREMENTS FOR HEALTHY VEGETATION CAN BE DETERMINED BY ONGOING INSPECTIONS.

- POOLS ARE REQUIRED TO BE FILLED BY CIVIL CONTRACTOR WITH WATER PRIOR TO COMMENCEMENT OF PLANTING DEEP MARSH AND POOL PLANTS.

14.0 MAINTENANCE/ WEED CONTROL
- REGULAR WEED CONTROL IS REQUIRED TO ENSURE THAT WEEDS DO NOT OUT COMPETE THE BENEFICIAL WETLAND PLANTS.
- WEEDS ARE TO BE MANAGED THROUGH THE LANDSCAPE ESTABLISHMENT PERIOD THROUGH REGULAR INSPECTION AND REMOVAL OF WEEDS.
- REGULAR WEEDING MUST BE UNDERTAKEN TO MINIMISE THE ESTABLISHMENT OF WEED COVER IN THE WETLAND. REGULAR WEED REMOVAL ENSURES THE WEEDS ARE UNABLE TO ESTABLISH LARGE POPULATIONS AND PROPOGATE.

15.0 ESTABLISHMENT AND COMPLETION
- THROUGHOUT THE PLANTING ESTABLISHMENT PERIOD, THE CONTRACTOR IS TO CONTINUE TO CARRY OUT ALL RECURRENT WORKS OF A MAINTENANCE NATURE, INCLUDING BUT NOT LIMITED TO, THE WATERING IN OF INSTALLED PLANTS IN ACCORDANCE WITH COUNCIL REGULATION, WEEDING, RUBBISH REMOVAL, FERTILISING, PEST AND DISEASE CONTROL, RETURFING, STAKING AND TYING, PLANT REPLACEMENT, MULCH TOPPING UP, SOIL CULTIVATION PRUNING, AERATING, RENOVATING, TOP DRESSING, ADJUSTMENT OF JUTE MAT AND KEEPING THE SITE NEAT AND TIDY - ALL TO THE EXTENT REQUIRED TO ENSURE THAT THE PLANTS AND GRASSED AREAS ARE IN THE BEST POSSIBLE CONDITION AT THE END OF THE PLANTING ESTABLISHMENT PERIOD
- REGULARLY REMOVE, BY HAND, RUBBISH AND WEED GROWTH THAT MAY OCCUR OR RECUR THROUGHOUT TURFED, PLANTED AND MULCHED AREAS.

16.0 BATTER TREATMENT
- BATTERS AND EMBANKMENTS ARE TO BE DENSELY VEGETATED AND MULCHED TO MANAGE WEED INGRESS.
- MULCH IS TO BE APPLIED TO BATTER PLANTING DOWN TO TED UNTIL PLANTS ESTABLISH TO HELP INSULATE AND RETAIN MOISTURE WITHIN THE TOPSOIL AND TO SUPPRESS WEEDS.
- MULCH LAYERS TO BE 50-75mm DEEP TO ENSURE THAT PLANTS ARE NOT HINDERED.
- MULCH TO BE KEPT CLEAR OF PLANT STEMS BY AT LEAST 50mm.
- MULCH PLACED FROM THE NORMAL WATER LEVEL TO TOP OF EXTENDED DETENTION BASIN SHOULD BE PINNED DOWN WITH JUTEMAT.

PROVIDE ANNUAL MAINTENANCE COSTINGS FOR ALL LANDSCAPE ITEMS RELEVANT TO THE DEVELOPMENT FOR THE DURATION OF THE `ESTABLISHMENT' AND `ON MAINTENANCE' PERIODS ON THIS SHEET.
REFER CONDITION 11, a,iv OF ROL201800026

10/12/2019 10:13:27 AM

PROJECT TEAM

Consulting Engineer:

i³ consulting pty ltd
engineering consultants
innovation, ingenuity, inspiration
LV 2, 39 Sherwood Rd, Toowong, Qld 4066
PO Box 878, Toowong, Qld 4066
www.icubed.com.au
mail@icubed.com.au
ABN 89 106 675 156
ACN 106 675 156
p 07 3870 8888
f 07 3870 8988

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL
Application No: OPW20191217
Dated: 24 January 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

REV	DESCRIPTION	DATE	BY
D	COUNCIL RFI RESPONSE	10.12.2019	N.G.
C	COUNCIL APPROVAL	13.08.2019	N.G.
B	FOR TENDER	03.06.2019	N.G.
A	FOR APPROVAL	08.05.2019	N.G.

Status
FOR TENDER

Project
PROPOSED SUBDIVISION AT 86-160 CHRISTENSEN ROAD SOUTH, STAPYLTON
for
BURNSIDE DEVELOPMENT P/L &
YELLOWSTONE INVESTMENTS P/L

Title
LANDSCAPING DETAILS

Drawn: N.G.	Date: 13.08.2019	Chkd: C.J.C.	Date:
Design: C.J.C	Date:	Apprd	Date:
Scale: 1 : 1	A1	Certif	Date:
Project No.: 17-209		Dwg. No.: L06	Rev: D

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Stage Two

i3 markup 9/10/19

FAUNA EXCLUSION FENCING SPECIFICATIONS:
DEPARTMENT OF TRANSPORT AND MAIN ROADS' STANDARD DRAWINGS ROADS MANUAL - STANDARD DRAWING 1603: FAUNA EXCLUSION FENCING
https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Standard-drawings-roads/Roadworks-drainage-culverts-and-geotechnical#FencingAndNoiseBarriers

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL
Application No: OPW20191217
Dated: 24 January 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

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL
Application No: ROL201800026
Dated: 15 August 2018
Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

Fauna exclusion fence only.

Boundary extents

Existing fencing fronting Sandy Creek.

Denotes conservation buffer zone.

This plan has been prepared as a proposed subdivision and should not be used for any other purpose. The dimensions, areas and total number of lots shown hereon are subject to field survey and are also to the requirements of council and any other authority which may have requirements under any relevant legislation. Certificate of Title for this site has not been obtained. Therefore, no reliance should be placed on the information on this plan for any financial dealings involving the land.

Number of new lots	8
Lot sizes	5431 sqm - 1.604 Ha
Area of New Road	6179 sqm
Total Site Area	7.698 Ha

Proposed Lots 10-17
Cancelling Lot 99

Scale 1:2500 – Lengths are in Metres.
20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380

AJS SURVEYS SURVEYING · PLANNING · DEVELOPMENT

SUBDIVISION PROPOSAL PLAN

REVISIONS		
19-07-18	Remove common property and easement and add to Lot 100	B
30-10-17	Add easement A, detention basin & buffer lot size	A

ASSOCIATED CONSULTANTS:

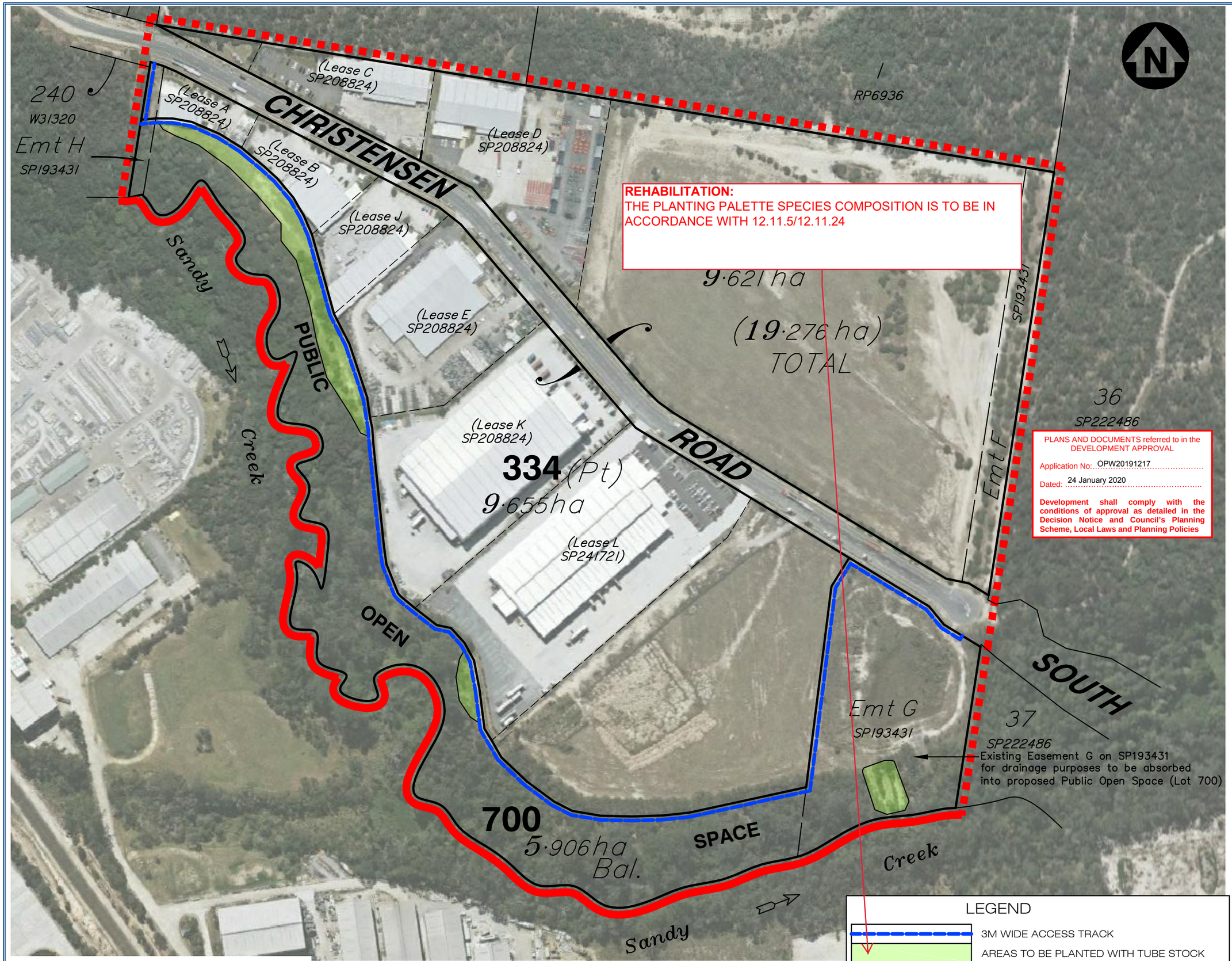
SURVEYOR
DRAWN PDR
DATE 15/08/2017
CHECKED AJS

LEVEL DATUM: N/A

CLIENT: King and Co Property Consultants

SITE: 81-161 Christensen Road, Stapylton

SCALE 1:2500 (A3)
PLAN REF: S0204-P5(B)



gassman development perspectives
planning design environment surveying
Brisbane Office
Level 8
97 Creek Street Brisbane Q. 4000
t: (07) 32216732
f: (07) 32217308
e: mail@gassman.com.au
Gold Coast and Logan Office
Access Business Park
76 Business Street Yatala Q. 4207
t: (07) 38073333
f: (07) 32875461
w: www.gassman.com.au

Client:
Burnside Developments Pty Ltd & Yellowstone Investments Pty Ltd

Site Address:
Christensen Road South, Yatala

RPD:

Lot:	334
Plan:	SP193431
Parish:	Albert
County:	Ward
Local Authority:	Gold Coast City Council
Level Datum:	AHD Der
Meridian:	SP196431
Contour Interval:	.
PSM:	.
RL:	.

Associated Consultants:

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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.

Property boundaries have not been defined by this survey and have been compiled from SP193431.

All dimensions are approximate only and subject to survey.

This plan may not be photocopied unless these notes are included.

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Issue	Date	Description	DRN	CHK
-	14/11/14	ORIGINAL ISSUE	SJH	MDS

Scale at A3: 1:2500
Date: 14-11-14
Design: .
Drawn: SJH
Checked:

Drawing Title:
Conceptual OSMS Schematic

Drawing No: 1396 E OSMP 01
Rev. No: