

22 October 2021

Planit Consulting
Attn: Ben Gohl
By email

Dear Ben,

RE: EXPECTED GROUNDWATER IMPACTS OF REDUCING THE NUMBER OF CONSTRUCTION STAGES AT THE HARVEST ESTATE DEVELOPMENT, WEST BYRON.

In accordance with your request, we have reviewed the revised construction staging plan for the Harvest Estate development at West Byron. We understand that the revised staging is to reduce the number of stages from 7 to 6, including stages 1B, 2, 3, 4, 5, 6 and 7, noting that stages 1B and 2 will be completed initially as one stage.

It is Martens' view that the changed staging regime described above will not adversely impact the local groundwater conditions. Modelling of the impacts of the total development, which was based on existing groundwater monitoring through the seasons, has shown that the development as a whole will not have adverse groundwater impacts. It is therefore anticipated that individual stages will similarly have no adverse impacts, noting that the majority of stormwater infrastructure servicing the development will be modelled, designed and installed at stage 1.

If you require any further information, please contact our offices.

**For and on behalf of
MARTENS & ASSOCIATES PTY LTD**



DR DANIEL MARTENS

LLB(Hons1) BSc(Hons1), MEngSc, PhD, MAWA, FIEAust, CPEng, NER
Principal Scientist and Engineer

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Head Office

Suite 201, 20 George St
Hornsby NSW 2077, Australia
Ph 02 9476 9999 Fax 02 9476 8767

> mail@martens.com.au

www.martens.com.au

MARTENS & ASSOCIATES P/L
ABN 85 070 240 890 ACN 070 240 890

Anthony Aiossa

Tower Holdings

Via email: aaiossa@towerholdings.com.au

22nd October 2021

AWC Reference: 1-201243_11b_Harvest_Staging_20211022

Dear Antony,

RE: Harvest Estate Staging and Environmental Implications

There are considerable environmental management and restoration works associated with the Harvest Estate which are crucial to the protection of environmental values on the site. AWC have contributed to the assessment and preparation of management plans for:

- Belongil Creek
- Groundwater Dependent Ecosystems and
- Acid Frogs – populations and habitat

As outlined in the plans, various management actions will be undertaken including:

- Baseline water quality, water level and ecological monitoring in the pre-construction phase
- Construction of compensatory frog habitats in response to construction staging
- Rehabilitation of wetland and wallum habitats
- Ongoing monitoring and reporting in the construction and occupation phases
- Rectification works in the event that performance objectives have not been met or unforeseen issues arise.

Water | Ecology | Management

8 George St
Bangalow NSW 2479

p. (02) 6687 1550
e. info@awconsult.com.au
w. awconsult.com.au





These actions are documented within the Belongil Creek Plan of Management, Harvest Estate Groundwater Management Plan and Harvest Estate Acid Frog Management Plan, all prepared by AWC in support of the development application and in response to conditions of the Court Order issues 20th December 2020.

We understand the proponent has sought to reduce the staging number and development duration of the project, and in particular is now seeking to combine the delivery of Stage 1B and Stage 2. We are supportive of this outcome as it will bring forward the implementation of actions detailed within these plans commence as soon as possible since many are long term responses while others are compensatory actions for impacts associated within the early stages of the development. Our concern is that prolonging the staging, and therefore the management actions for each stage, will lead to poorer environmental outcomes.

Environmental monitoring will ensure that performance outcomes are achieved, with 20 years of monitoring from the occupation phase committed to within the management plans listed above. Such a long period of monitoring negates any risk to Council that environmental impacts are not appropriately managed by the applicant and therefore makes the requirement of seven development stages unnecessary from an environmental perspective.

Yours sincerely

A handwritten signature in black ink, appearing to read "Damian", is positioned above the printed name.

Damian McCann

Director

damian@awconsult.com.au

0408 471 077



22 October 2021
Our Reference: J7092

The General Manager
Byron Shire Council
PO Box 219
MULLUMBIMBY NSW 2482
Attention: Gene Mason

RESPONSE TO COUNCIL'S ECOLOGICAL CONCERNS REGARDING HARVEST ESTATE @ WEST BYRON

Dear Gene,

Reference is made to your comments associated with modifying the approved staging plan for Harvest Estate development (Development Number: 10.2017.201.2).

As you advised, your assessment of the modification application was made on the basis that there would be a three (3) month monitoring / delay between each stage of the development. It is noted that this is incorrect. Discussions with Ivan Holland from Byron Shire Council dated 3 August 2021 agreed to keep the twelve month monitoring / delay between each stage, in aid of getting Council's support for the three stages.

Following discussions with Council in recent days, we wish to clarify that the only development change being sought in the modification application is simply to allow Stage 1B and Stage 2 to be undertaken at the same time. All other stages and monitoring periods are to remain in accordance with the current approval conditions.

Potential environmental impacts associated with Stages 1B and 2 works are discussed below.

The following clearing rates are required for Stages 1B and 2 works:

Stage 1B Clearing Rates

Vegetation Community	Removal (ha)
Community 1 – Mid-high to Tall Open Forest (Broad-leaved Paperbark)	1.1763
Community 7 – Paperbark Swamp Forest of the Coastal Lowlands	0.3886
Community 8 – Freshwater Wetland	0.3405
Community 9 – Grassed Paddocks with Scattered Trees and Regrowth	6.3453
Total	8.2507

Stage 2 Clearing Rates

Vegetation Community	Removal (ha)
Community 1 – Mid-high to Tall Open Forest (Broad-leaved Paperbark)	0.1806
Community 9 – Grassed Paddocks with Scattered Trees and Regrowth	1.8378
Total	2.184

Descriptions of the abovementioned vegetation community types can be found within the *Terrestrial Fauna and Fauna Assessment* (Planit Consulting, 2020) prepared for the site.

It is noted that the vast majority of these areas (78%) is Community 9, which is predominantly grassed paddocks with copses/individual trees.

A total of ~2.2516ha of mapped 'native vegetation' will be required to be removed in order to facilitate necessary works for Stages 1B and 2. Whilst considered to be mature vegetation, the majority of these areas are highly fragmented and subject to existing edge effect impacts. All proposed works are contained within the existing overall approved works footprint (Development Consent: 10.2017.201.1).

Potential secondary impacts during construction and operation stages of the development are proposed to be avoided or minimised through a suite of approved management plans prepared for the development.

To help compensate the loss of these vegetation communities and associated fauna habitat, restoration works are proposed throughout the site. This includes significant revegetation works resulting in additional habitat, improving the condition of retained areas of bushland (i.e. via weed control), as well as improving connectivity values. Details regarding the proposed restoration strategy is contained within the approved Vegetation Management Plan (Planit, 2020).

A detailed Rehabilitation Plan has been prepared for the proposal (refer to Attachment 1). The rehabilitation zones aim to revegetate over 10ha of wetland and swamp sclerophyll type forests throughout the site in order to compensate the loss of habitat from the development. This ensures that there's no 'net loss' in habitat within the site.

The rehabilitation works will commence for all rehabilitation zones in association with Stage 1A works. This will ensure that over 10ha of potential habitat will be created prior to clearing works commencing. This is in addition to >37ha of 'E' zoned land subject to restoration works (i.e. weed control). Strenuous monitoring and management measures are proposed for these areas over a minimum of twenty years.

It is further noted that twelve nestboxes (as per the approved Biodiversity Conservation Management Plan) will be installed within the retained areas of the site, providing nesting opportunities for arboreal fauna which is currently limited within the site due to a lack of hollow bearing trees. These are proposed to be installed within the next week, well before clearing activities occur.

These restoration works aim to offset development impacts by providing additional habitat, enhancing connectivity values throughout the site by filling in 'gaps' between bushland, as well as providing a natural buffer between the development footprint and high value ecological communities (i.e. SEPP Coastal Wetlands).

It is considered that a reduction in construction stages will aid the surrounding environment. Nearby habitats, including the acidic frog habitat, will benefit from a reduction in the construction phase timeframe as these sensitive areas will be less susceptible to potential impacts associated with construction activities (i.e. noise, vibration, dust etc.). Nevertheless, the site Construction Environment Management Plan (CEMP), as well as a suite of other approved management plans will ensure potential impacts associated with construction activities are avoided and minimised as much as possible, with ongoing monitoring requirements to be frequently conducted.

Reviewing the above, it is considered unlikely that proposed works associated with delivering Stages 1b and 2 will have a detrimental environmental impact, or exacerbate potential impacts from what has already been approved. Rather, it is considered that the proposal will have a net benefit to the surrounding environment by reducing the construction timeframe and delivering the outcomes of the various management plans.

Should you wish to discuss any matter in relation to this proposal, please contact the undersigned on 07 55261500.



Tomy Rados
Environmental Planner / Ecologist
BAAS18025

Attachments

Attachment 1 – Rehabilitation Plan

Attachment 1

Rehabilitation Plan

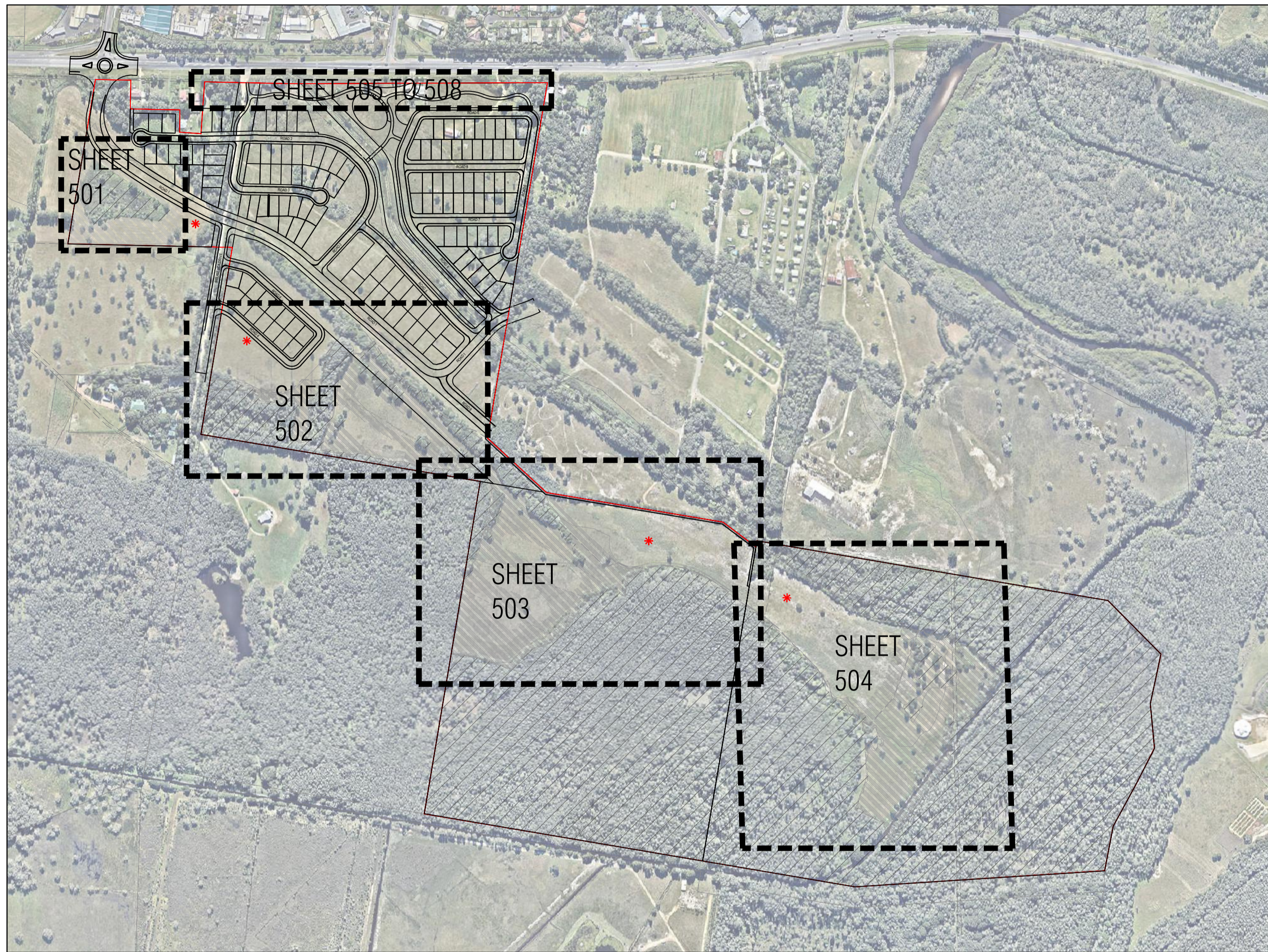
WEST BYRON URBAN RELEASE AREA

REHABILITATION PLAN

Prepared by Planit Consulting Pty

DRAWING SCHEDULE

SHEET 500	TITLE PAGE
SHEET 501	ZONE 1
SHEET 502	ZONE 2
SHEET 503	ZONE 3
SHEET 504	ZONE 4
SHEET 505	ZONE 5
SHEET 506	ZONE 5 - DETAIL PLANTING
SHEET 507	ZONE 5 - DETAIL PLANTING
SHEET 508	ZONE 5 - DETAIL PLANTING
SHEET 509	TYPICAL DETAILS
SHEET 510	SPECIFICATION



KEY PLAN

WARNING

BEWARE OF UNDERGROUND SERVICES

Note that the location shown of existing underground services is indicative only and may not be accurate at the time of landscape works. No guarantee is given that all existing services are shown. Determination of the exact position and extent of underground services is the responsibility of the Contractor and is to be confirmed on site prior to commencement of work.

GENERAL NOTES:

1. Before commencement of works it is the responsibility of the Landscape Contractor to contact dial before you dig (ph: 1100 or web 1100.com.au) for information on services in the area shown on the plan.
2. The Contractor shall verify the location and depth of all services prior to commencing on site.
3. The Contractor shall be liable for any damage to services during landscape works.
4. The Contractor shall verify the location of any existing trees shown to be retained and protect them during works.
5. All trees shall be planted in locations shown on the plan.
6. Any change to plant species must have the approval of the Landscape Architect.
7. Construction certification for all structural elements is to be provided prior to practical completion being granted.

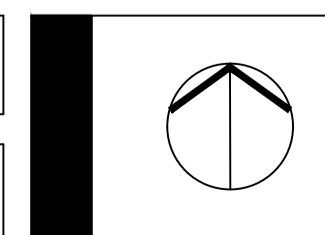
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DRAWING TITLE:	TITLE PAGE

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02	LANDSCAPE OPW FOR INFORMATION	16.06.20	AH	AH	LT
03	FOR APPROVAL	06.07.21	AH	AH	LT
04	FOR APPROVAL	19.07.21	AH	AH	LT

JOB NO:	J7148	DWG NO:	J7148_500
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SCALE: NTS

CLIENT: NSPT Pty Ltd

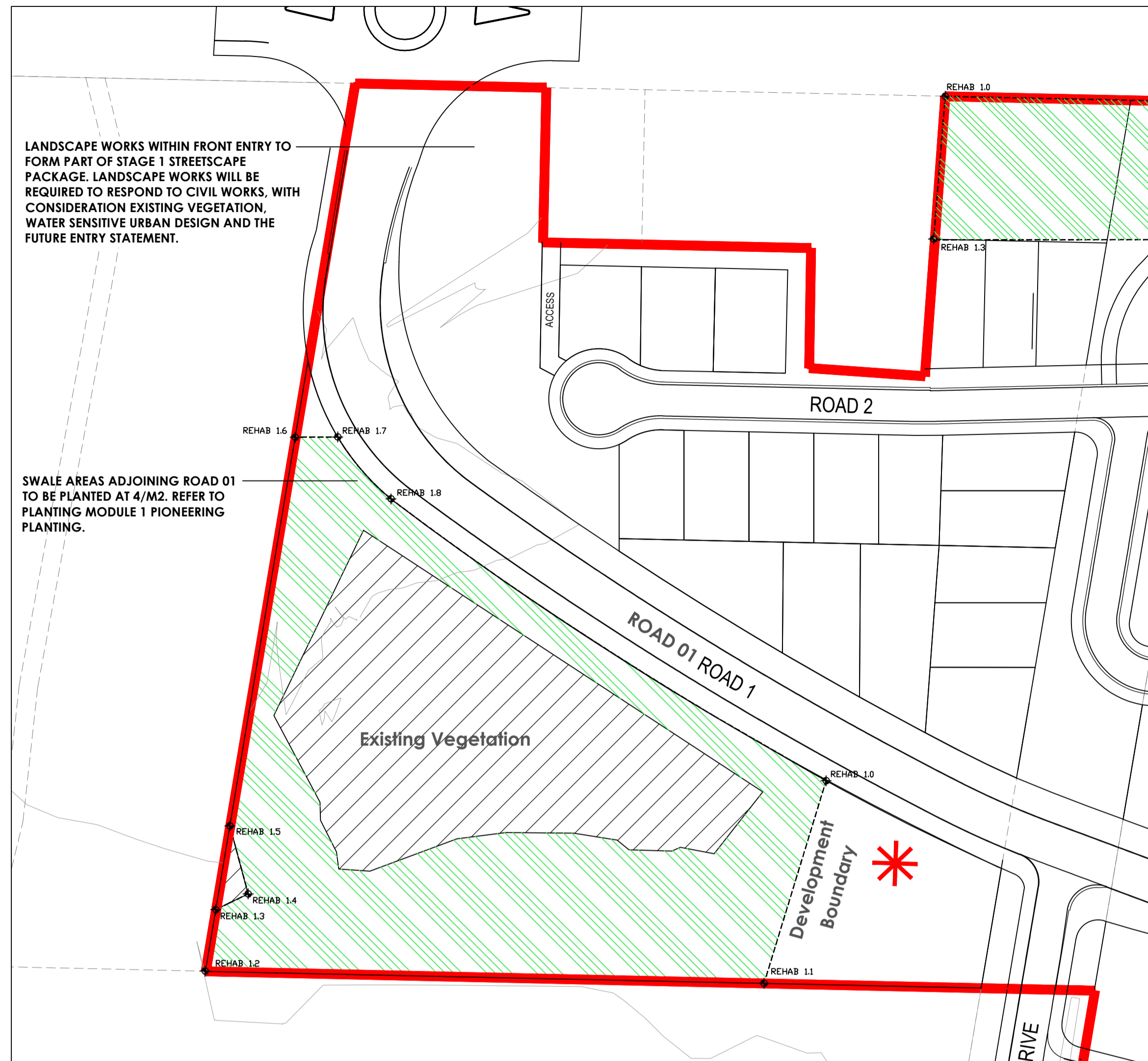


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Level 1 2247 Gold Coast Hwy
PO Box 206
Nobby Beach QLD 4218
Telephone: 07 5526 1500
ABN: 20 099 261 711
Email: admin@planitconsulting.com.au

WEST BYRON - Rehabilitation Plan (ZONE 1)



LANDSCAPE WORKS WITHIN FRONT ENTRY TO FORM PART OF STAGE 1 STREETScape PACKAGE. LANDSCAPE WORKS WILL BE REQUIRED TO RESPOND TO CIVIL WORKS, WITH CONSIDERATION EXISTING VEGETATION, WATER SENSITIVE URBAN DESIGN AND THE FUTURE ENTRY STATEMENT.

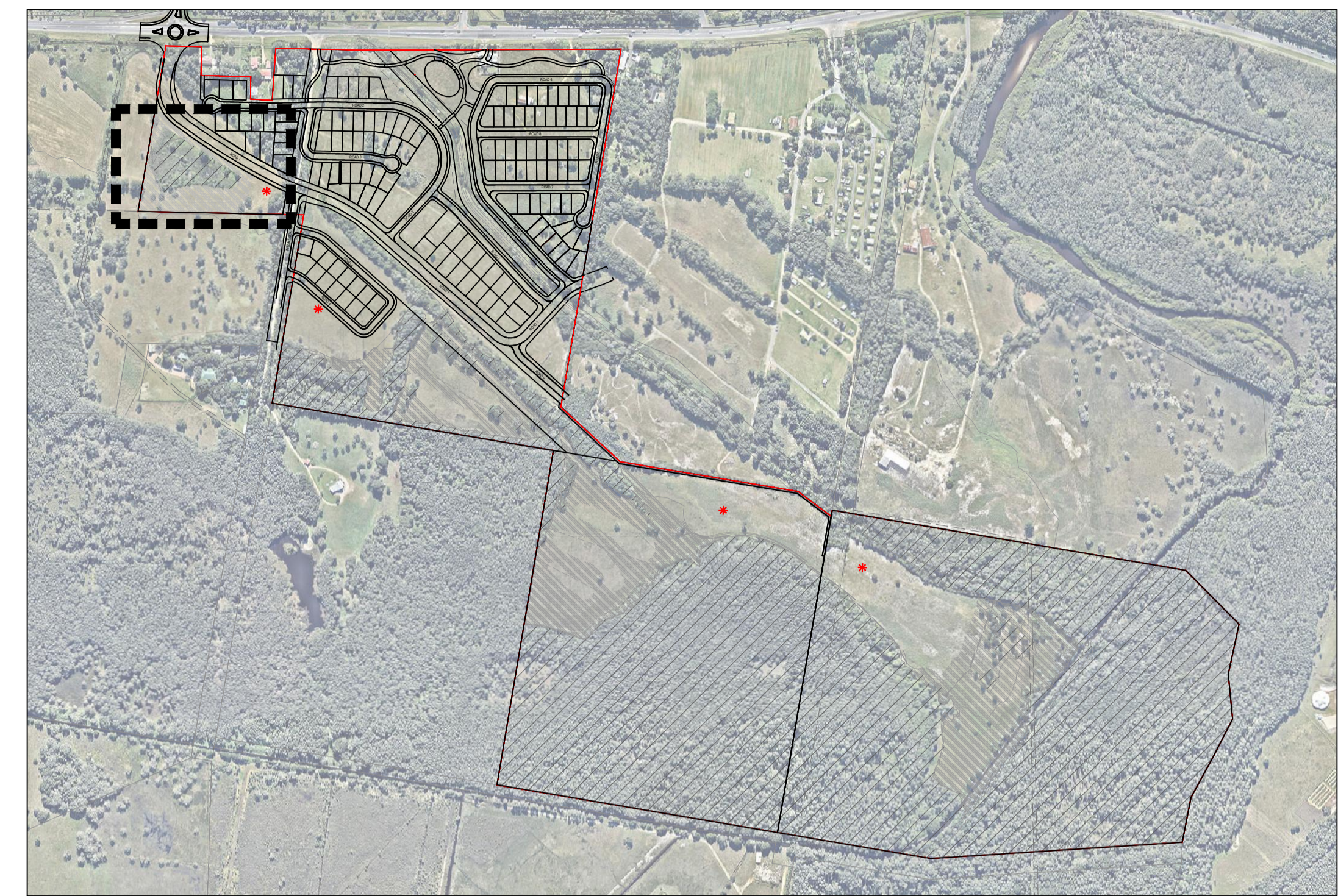
SWALE AREAS ADJOINING ROAD 01 TO BE PLANTED AT 4/M2. REFER TO PLANTING MODULE 1 PIONEERING PLANTING.

Legend

- LANDSCAPE REHABILITATION AREAS.** Refer to relevant species lists and typical planting modules on this sheet.
- EXISTING VEGETATION COMMUNITY TO BE RETAINED.** Refer to Vegetation Management Plan prepared by Plantit Consulting for further information.
- BOUNDARY PEGS** Boundary of rehabilitation areas to be pegged out by surveyor prior to commencement of works. Pegs to be star pickets / galv pipe to minimum 1 meter above ground painted yellow with notation to match as noted on these plans. Existing vegetation line to form all other boundaries as indicated this sheet.

Rehabilitation Zone 1
Total Area: 0.89Ha
Vegetation Type: Fresh-water Wetland

Scale: 1:1000 at full size A1



Location Plan

NTS

REHABILITATION ZONE 1 (89 MODULES)

TREES - module 1, 2

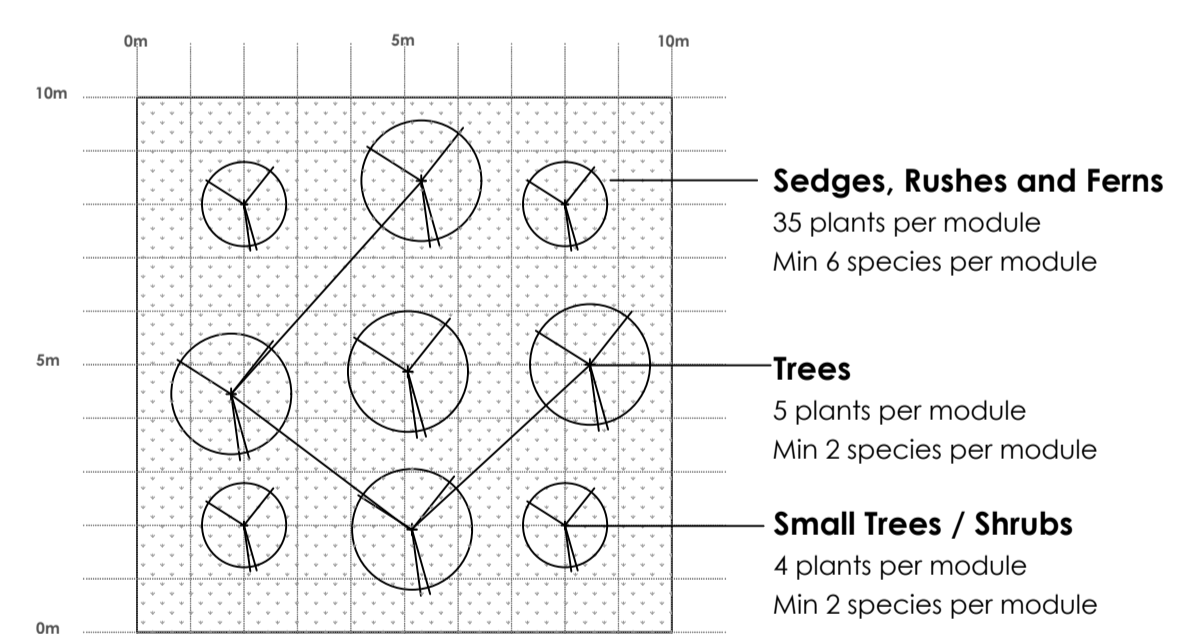
CODE	PLANT SPECIES	COMMON NAME	NO PER MODULE	SIZE	QTY
cas gla	Casuarina glauca	Swamp Oak	5	140MM	445
cal sal	Callistemon salignus	Willow Bottlebrush			
lop sau	Lophostemon suaveolens	Swampbox			
mel qui	Melaleuca quinquenervia	Paperbark			
euc rob	Eucalyptus robusta	Swamp Mahogany			
euc ter	Eucalyptus tereticornis	Forest Red Gum			

SMALL TREES / SHRUBS - module 1, 2

CODE	PLANT SPECIES	COMMON NAME	NO PER MODULE	SIZE	QTY
bre obl	Breynia oblongifolia	Breynia	4	140MM	356
hav aff	Hovea acutifolia	Pointed-Leaf Hovea			
mel aff	Melastoma affine	Blue Tongue			
lep pol	Leptospermum polygalifolium	Yellow Tea Tree			
bae fru	Baeckea frutescens	Weeping Baeckea			
cal pac	Callistemon pachyphyllus	Wallum bottlebrush			
ban rob	Banksia robur	Swamp Banksia			

SEDGES, RUSHES + FERNS - module 1, 2

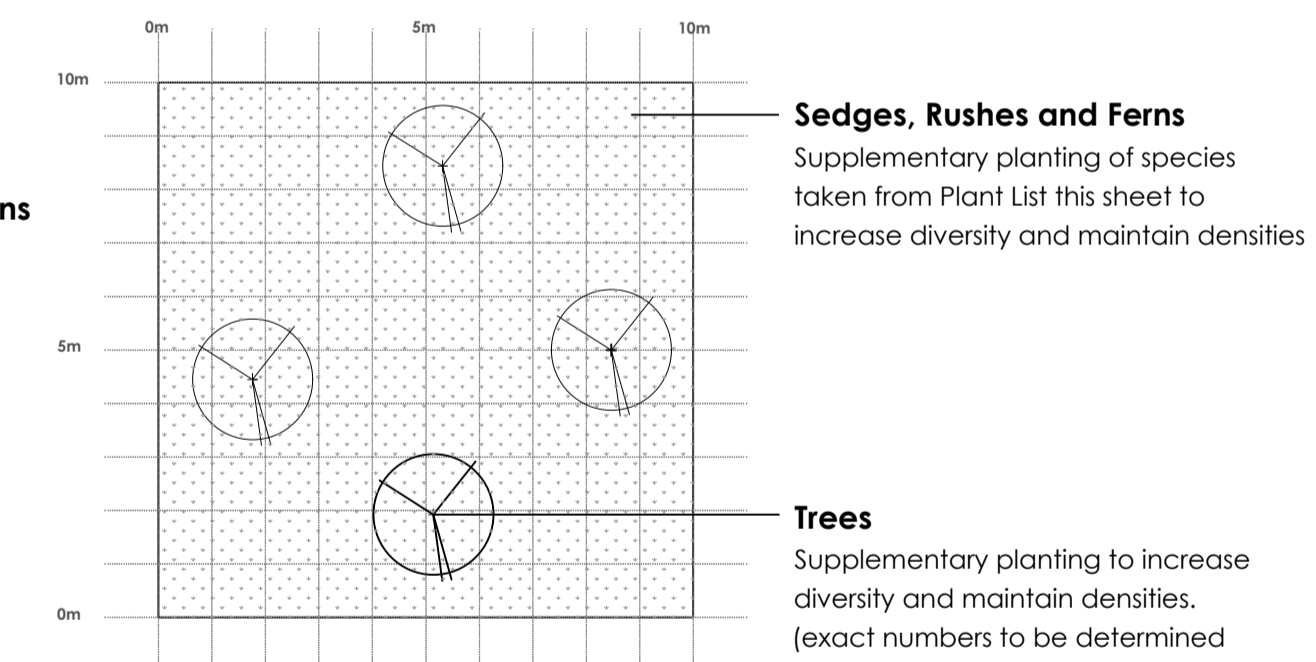
CODE	PLANT SPECIES	COMMON NAME	NO PER MODULE	SIZE	QTY
bau jun	Baumea juncea	Bare Twigrush	35 min 6 species per mod	75MM TUBE	3115
bau ter	Baumea teretifolia	Twigrush			
ble ind	Blechnum indicum	Bungwall Fern			
cen asi	Centella asiatica	Pennywort			
cyp pol	Cyperus polystachyos	Bunchy Sedge			
jun usi	Juncus usitatus	Common Rush			
phi lan	Philydrum lanuginosum	Frogsmouth			
gah cla	Gahnia clarkii	Saw Sedge			
bau rub	Baumea rubiginosa	Twig Rush			



Planting Module 1 - Freshwater Wetland

PIONEER SPECIES PLANTING 10 x 10 meter module

NTS



Planting Module 2 - Freshwater Wetland

SUPPLEMENTARY SPECIES PLANTING 10 x 10 meter module

NTS

Rehabilitation Zone 1 Schedule

Stage	Year 1	Year 2	Year 3	Year 4	Year 5+
Stage 1 Total Area: 0.89Ha	PLANTING MODULE 1 PIONEER SPECIES PLANTING: Trees and Small Trees selected from Rehabilitation Area 1 species list this sheet. Exact numbers to achieve densities as stated dependent on natural regeneration (determined onsite by Regeneration expert)	PLANTING MODULE 2 SUPPLEMENTARY SPECIES PLANTING: Supplementary planting to increase diversity.	Natural Regeneration Weed Management Monitoring and maintenance as per VMP - prepared by Plantit	Natural Regeneration Weed Management Monitoring and maintenance as per VMP - prepared by Plantit	Natural Regeneration Weed Management Monitoring and maintenance as per VMP - prepared by Plantit
▶▶▶▶ On-going monitoring and maintenance as per VMP					

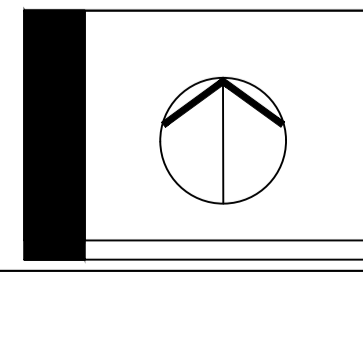
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DRAWING TITLE: ZONE 1

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02	LANDSCAPE OPW FOR INFORMATION	16.06.20	AH	AH	LT
03	FOR APPROVAL	06.07.21	AH	AH	LT
04	FOR APPROVAL	19.07.21	AH	AH	LT

JOB NO: J7148 DWG NO: J7148_501

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CLIENT: NSPT Pty Ltd

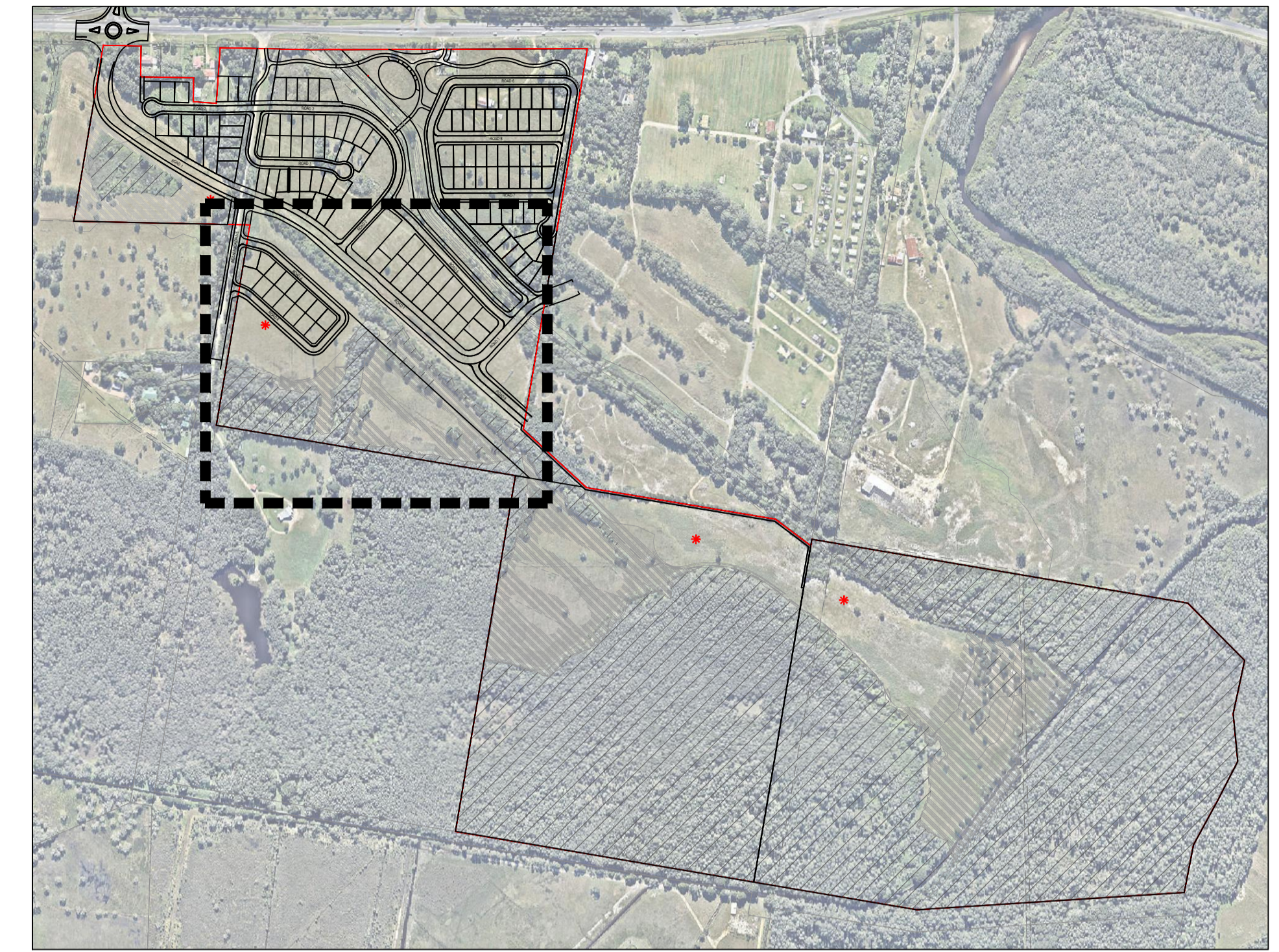


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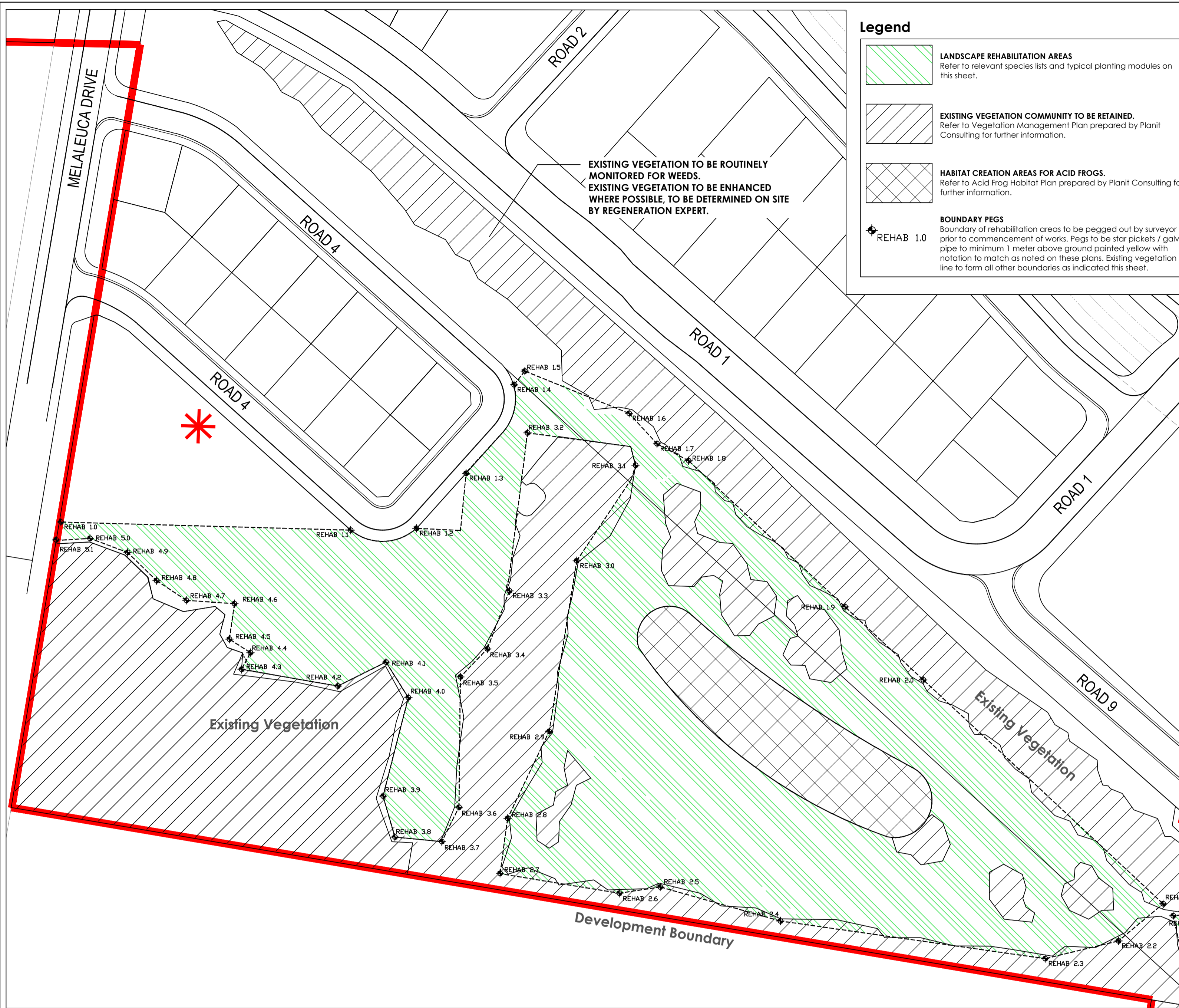
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Email: admin@planticonsulting.com.au

WEST BYRON - Rehabilitation Plan (ZONE 2)



Location Plan

NTS



Legend

- LANDSCAPE REHABILITATION AREAS**
Refer to relevant species lists and typical planting modules on this sheet.
- EXISTING VEGETATION COMMUNITY TO BE RETAINED.**
Refer to Vegetation Management Plan prepared by Plant Consulting for further information.
- HABITAT CREATION AREAS FOR ACID FROGS.**
Refer to Acid Frog Habitat Plan prepared by Plant Consulting for further information.
- BOUNDARY PEGS**
REHAB 1.0
Boundary of rehabilitation areas to be pegged out by surveyor prior to commencement of works. Pegs to be star pickets / galv pipe to minimum 1 meter above ground painted yellow with notation to match as noted on these plans. Existing vegetation line to form all other boundaries as indicated this sheet.

EXISTING VEGETATION TO BE ROUTINELY MONITORED FOR WEEDS. EXISTING VEGETATION TO BE ENHANCED WHERE POSSIBLE, TO BE DETERMINED ON SITE BY REGENERATION EXPERT.

Scale: 1:1000 at full size A1

Rehabilitation Zone 2
Total Area: 3.9Ha
Vegetation Type: Fresh-water Wetland

REHABILITATION ZONE 2 (390 MODULES)

TREES - module 1, 2

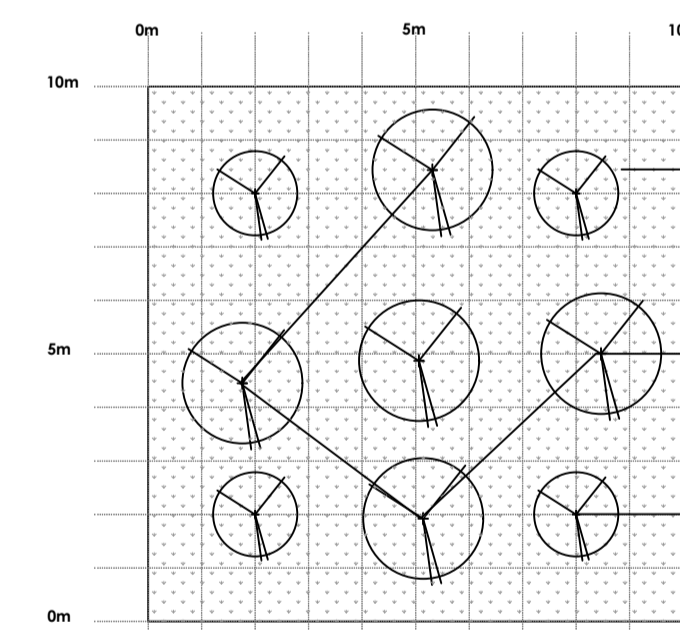
CODE	PLANT SPECIES	COMMON NAME	NO PER MODULE	SIZE	QTY
cas gla	Casuarina glauca	Swamp Oak	5	140MM	1950
cal sal	Callistemon salignus	Willow Bottlebrush			
lop sau	Lophostemon sauveolens	Swampbox			
mel qui	Melaleuca quinquenervia	Paperbark			
euc rob	Eucalyptus robusta	Swamp Mahogany			
euc ter	Eucalyptus tereticornis	Forest Red Gum			

SMALL TREES / SHRUBS - module 1, 2

CODE	PLANT SPECIES	COMMON NAME	NO PER MODULE	SIZE	QTY
bre obl	Breynia oblongifolia	Breynia	4	75MM	1560
hav off	Havea acutifolia	Pointed-Leaf Hovea			
mel aff	Melastoma affine	Blue Tongue			
lep pol	Lepidospermum polygalifolium	Yellow Tea Tree			
bae fru	Baekkea frutescens	Weeping Baekkea			
cal pac	Callistemon pachyphyllus	Wallum bottlebrush			
ban rob	Banksia robur	Swamp Banksia			

SEDGES, RUSHES + FERNS - module 1, 2

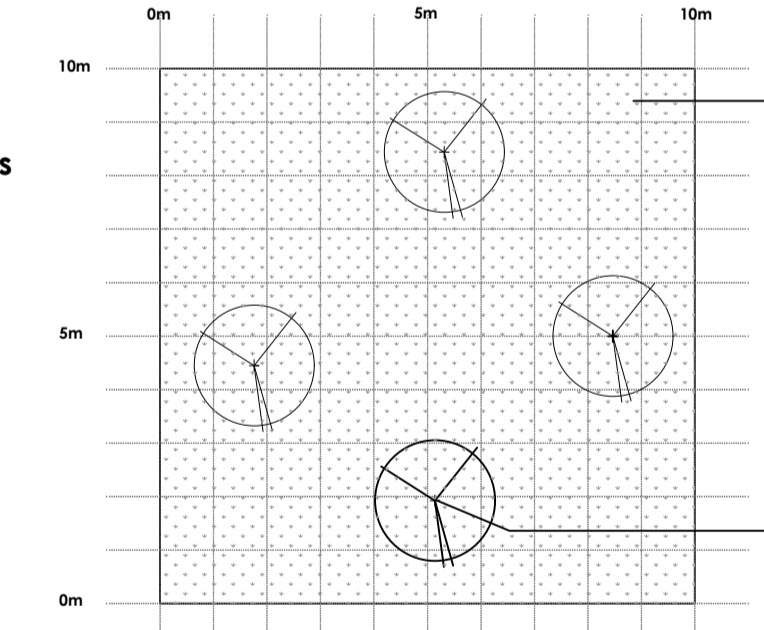
CODE	PLANT SPECIES	COMMON NAME	NO PER MODULE	SIZE	QTY
bae jun	Baumea juncea	Bare Twigrush	35 min 4 species per mod	75MM TUBE	13,650
bae ter	Baumea teretifolia	Twigrush			
ble ind	Blechnum indicum	Bungwall Fern			
cen asi	Centella asiatica	Pennywort			
cyp pol	Cyperus polystachyos	Bunchy Sedge			
jun usi	Juncus usitatus	Common Rush			
phi lan	Philydram lanuginosum	Frogsmouth			
gah cla	Gahnia clarkii	Saw Sedge			
bae rub	Baumea rubiginosa	Twig Rush			



Planting Module 1 - Freshwater Wetland

PIONEER SPECIES PLANTING 10 x 10 meter module

NTS



Planting Module 2 - Freshwater Wetland

SUPPLEMENTARY SPECIES PLANTING 10 x 10 meter module

NTS

Rehabilitation Zone 2 Schedule

Stage	Year 1	Year 2	Year 3	Year 4	Year 5+
Stage 1 Total Area: 3.9Ha	PLANTING MODULE 1 Species selected from Rehabilitation Area 2 species list this sheet. Exact numbers to achieve densities as stated dependent on natural regeneration (determined onsite by Regeneration expert)	PLANTING MODULE 2 SUPPLEMENTARY SPECIES PLANTING Supplementary planting to increase diversity.	Natural Regeneration Weed Management Monitoring and maintenance as per VMP - prepared by Plantit	Natural Regeneration Weed Management Monitoring and maintenance as per VMP - prepared by Plantit	Natural Regeneration Weed Management Monitoring and maintenance as per VMP - prepared by Plantit
▶▶▶▶▶ On-going monitoring and maintenance as per VMP ▶▶▶▶▶					

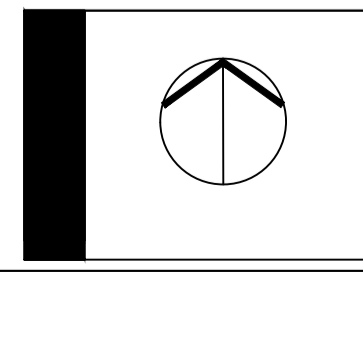
PROJECT: REHABILITATION PLAN
DRAWING TITLE: ZONE 2

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03	FOR APPROVAL	06.07.21	AH	AH	LT
04	FOR APPROVAL	19.07.21	AH	AH	LT

JOB NO: J7148 DWG NO: J7148_502

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CLIENT: NSPT Pty Ltd

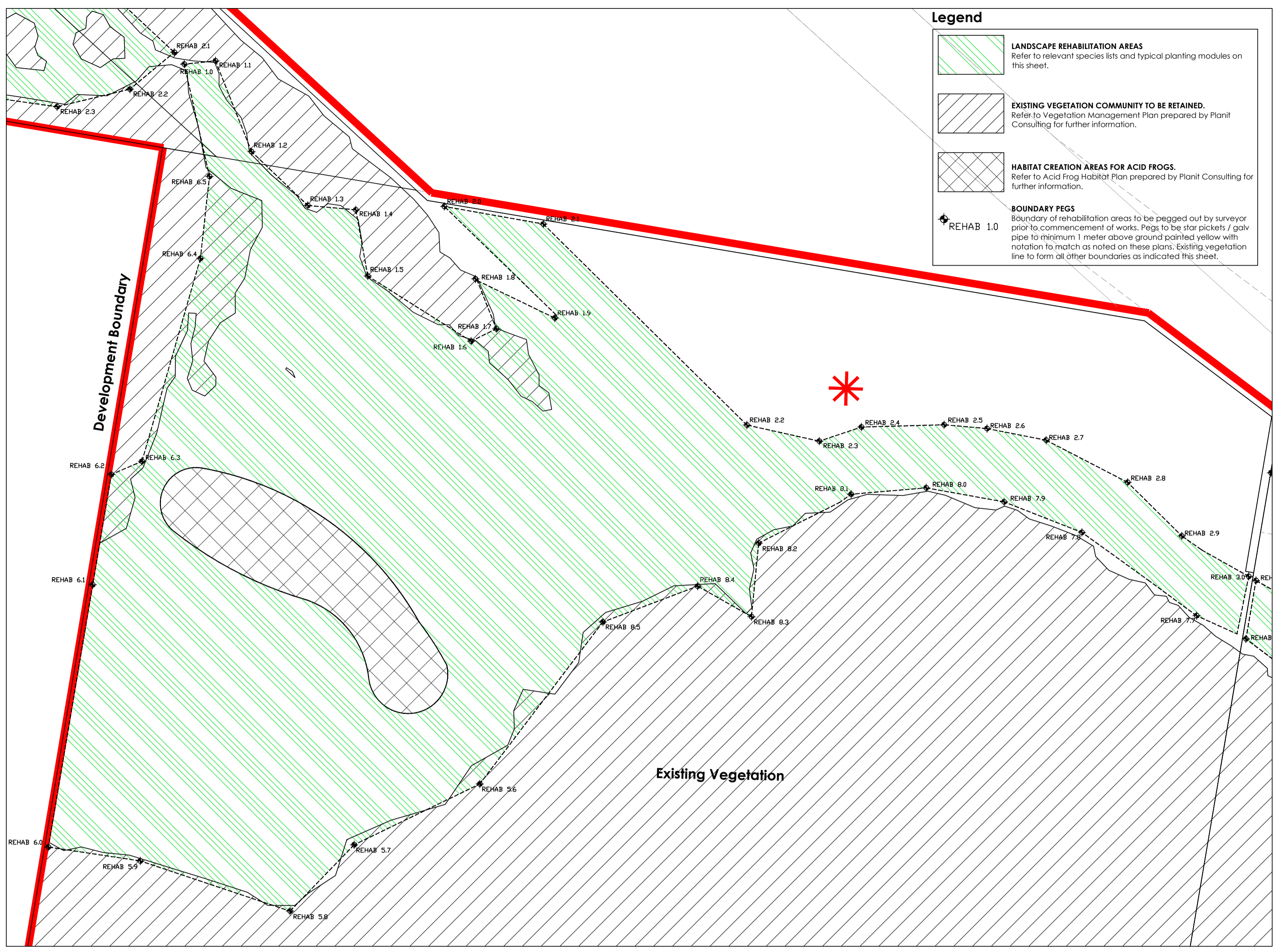


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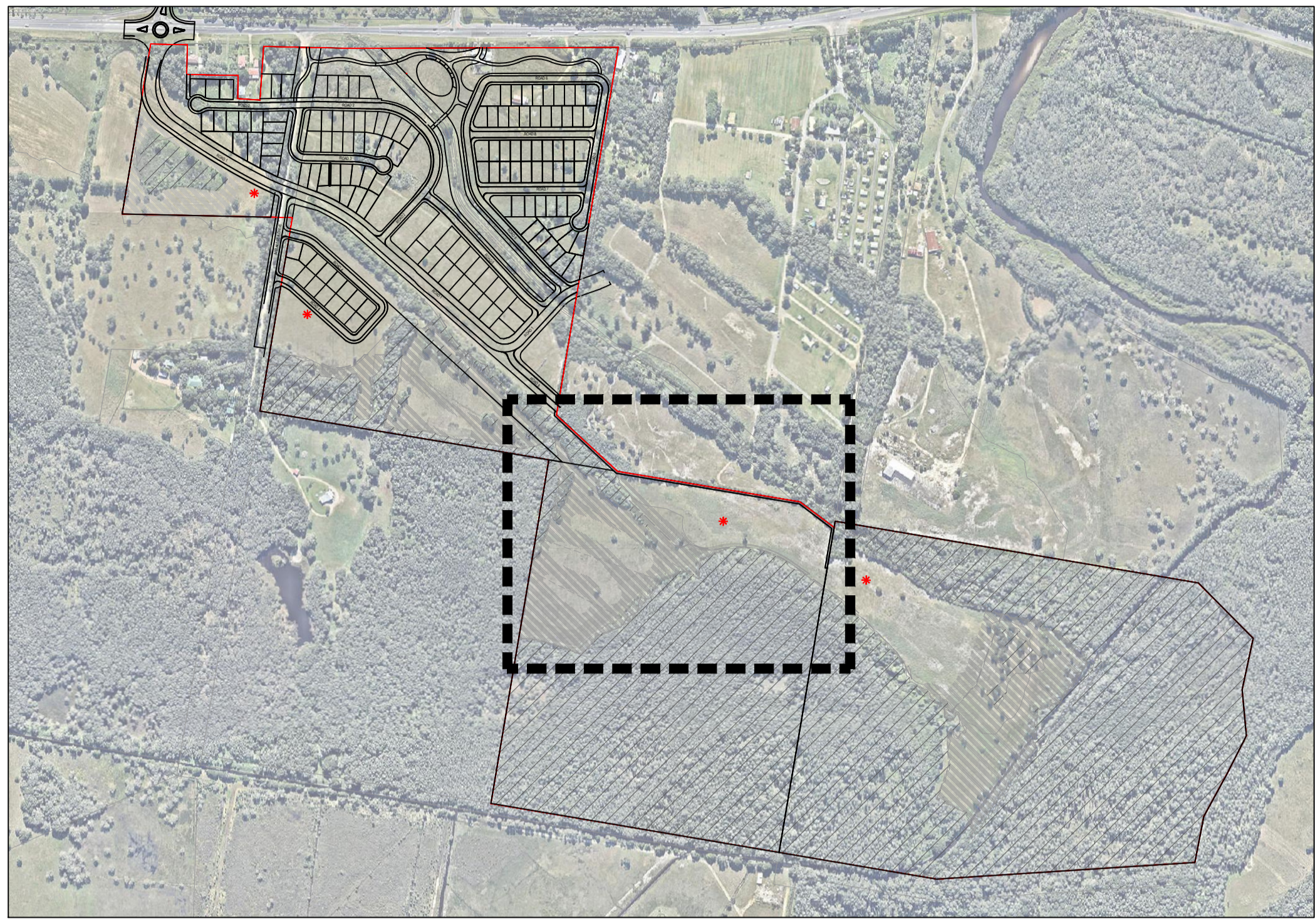
Level 1 2247 Gold Coast Hwy
PO Box 206
Nobby Beach QLD 4218
Telephone: 07 5526 1500
ABN: 20 099 261 711
Email: admin@plantconsulting.com.au

WEST BYRON - Rehabilitation Plan (ZONE 3)



Legend

- LANDSCAPE REHABILITATION AREAS**
Refer to relevant species lists and typical planting modules on this sheet.
- EXISTING VEGETATION COMMUNITY TO BE RETAINED.**
Refer to Vegetation Management Plan prepared by Planit Consulting for further information.
- HABITAT CREATION AREAS FOR ACID FROGS.**
Refer to Acid Frog Habitat Plan prepared by Planit Consulting for further information.
- BOUNDARY PEGS**
Boundary of rehabilitation areas to be pegged out by surveyor prior to commencement of works. Pegs to be star pickets / galv pipe to minimum 1 meter above ground pointed yellow with notation to match as noted on these plans. Existing vegetation line to form all other boundaries as indicated this sheet.



Location Plan

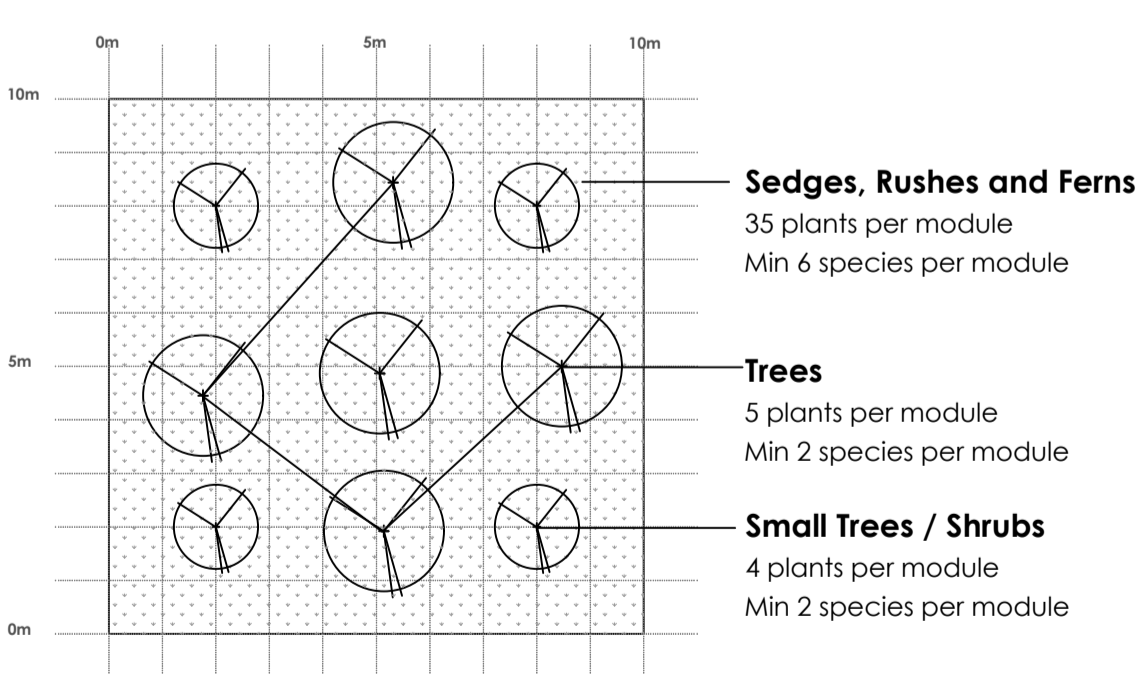
NTS

Rehabilitation Zone 3
Total Area: 4.6Ha
Vegetation Type: Fresh-water Wetland

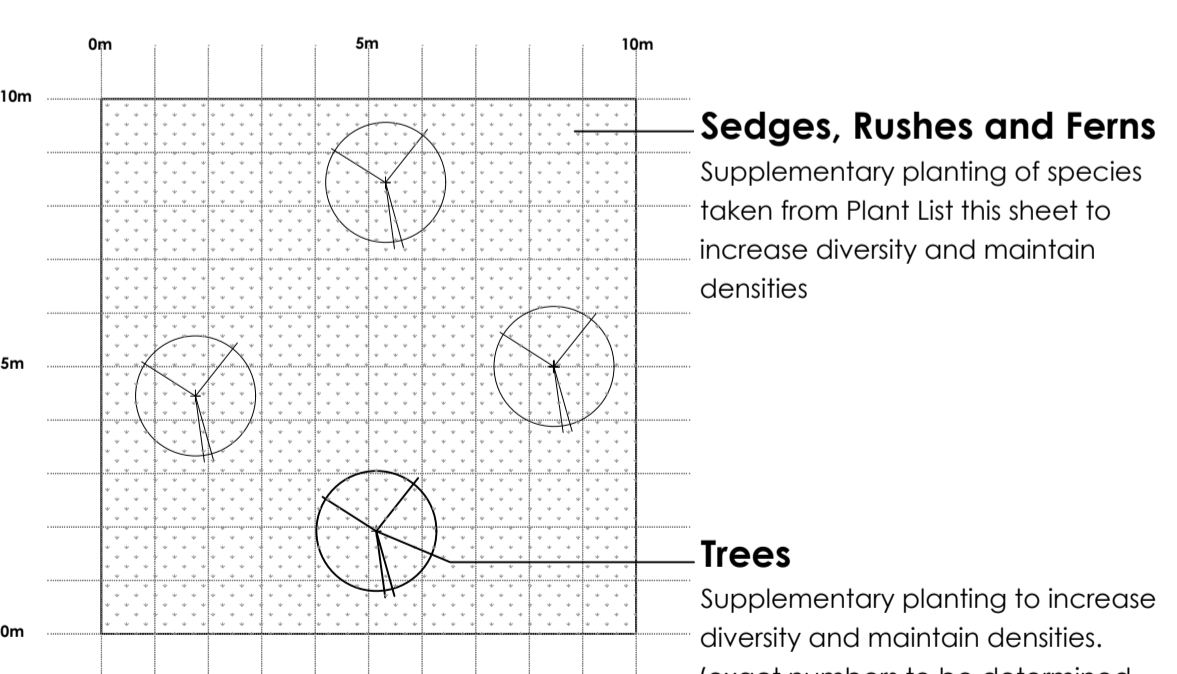
Scale: 1:1000 at full size A1

Rehabilitation Zone 3 Schedule

Stage	Year 1	Year 2	Year 3	Year 4	Year 5
Stage 1 Total Area: 4.6Ha	PLANTING MODULE 1 Species selected from Rehabilitation Area 3 species list this sheet. Exact numbers to achieve densities as stated dependent on natural regeneration (determined onsite by Regeneration expert)	PLANTING MODULE 2 SUPPLEMENTARY SPECIES PLANTING Supplementary planting to increase diversity.	Natural Regeneration Weed Management Monitoring and maintenance as per VMP - prepared by Planit	Natural Regeneration Weed Management Monitoring and maintenance as per VMP - prepared by Planit	Natural Regeneration Weed Management Monitoring and maintenance as per VMP - prepared by Planit
▶▶▶▶▶ On-going monitoring and maintenance as per VMP ▶▶▶▶▶					



Planting Module 1 - Freshwater Wetland
PIONEER SPECIES PLANTING 10 x 10 meter module NTS



Planting Module 2 - Freshwater Wetland
SUPPLEMENTARY SPECIES PLANTING 10 x 10 meter module NTS

REHABILITATION ZONE 3 (460 MODULES)

TREES - module 1, 2

CODE	PLANT SPECIES	COMMON NAME	NO PER MODULE	SIZE	QTY
cas gla	Casuarina glauca	Swamp Oak	5	140MM	2300
cal sal	Callistemon salignus	Willow Bottlebrush			
lop sau	Lophostemon sauevolens	Swampbox			
mel qui	Melaleuca quinquenervia	Paperbark			
euc rob	Eucalyptus robusta	Swamp Mahogany			
euc ter	Eucalyptus tereticornis	Forest Red Gum			

SMALL TREES / SHRUBS - module 1, 2

CODE	PLANT SPECIES	COMMON NAME	NO PER MODULE	SIZE	QTY
bre obl	Breynia oblongifolia	Breynia	4	75MM	1840
hov off	Hovea acutifolia	Pointed-Leaf Hovea			
mel aff	Melastoma affine	Blue Tongue			
lep pol	Leptospermum polygallifolium	Yellow Tea Tree			
bae fru	Baeckea frutescens	Weeping Baeckea			
cal pac	Callistemon pachyphyllus	Wallum bottlebrush			
ban rob	Banksia robur	Swamp Banksia			

SEDGES, RUSHES + FERNS - module 1, 2

CODE	PLANT SPECIES	COMMON NAME	NO PER MODULE	SIZE	QTY
bae jun	Baumea juncea	Bare Twigrush	35 min 6 species per mod	75MM TUBE	3115
bae ter	Baumea teretifolia	Twigrush			
ble ind	Blechnum indicum	Bungwall Fern			
cen asi	Centella asiatica	Pennywort			
cyp pol	Cyperus polystachyos	Bunchy Sedge			
jun usi	Juncus usitatus	Common Rush			
phi lan	Philydrum lanuginosum	Frogmouth			
gah cla	Gahnia clarkei	Saw Sedge			
bae rub	Baumea rubiginosa	Twig Rush			

PROJECT: REHABILITATION PLAN

DRAWING TITLE: ZONE 3

REV	DESCRIPTION	DATE	DRAWN	DESIGN	CHECKED
01	LANDSCAPE OPW FOR INFORMATION	18.04.18	AH	AH	JA
02	LANDSCAPE OPW FOR INFORMATION	16.06.20	AH	AH	LT
03	FOR APPROVAL	06.07.21	AH	AH	LT
04	FOR APPROVAL	19.07.21	AH	AH	LT

JOB NO: J7148 DWG NO: J7148_503

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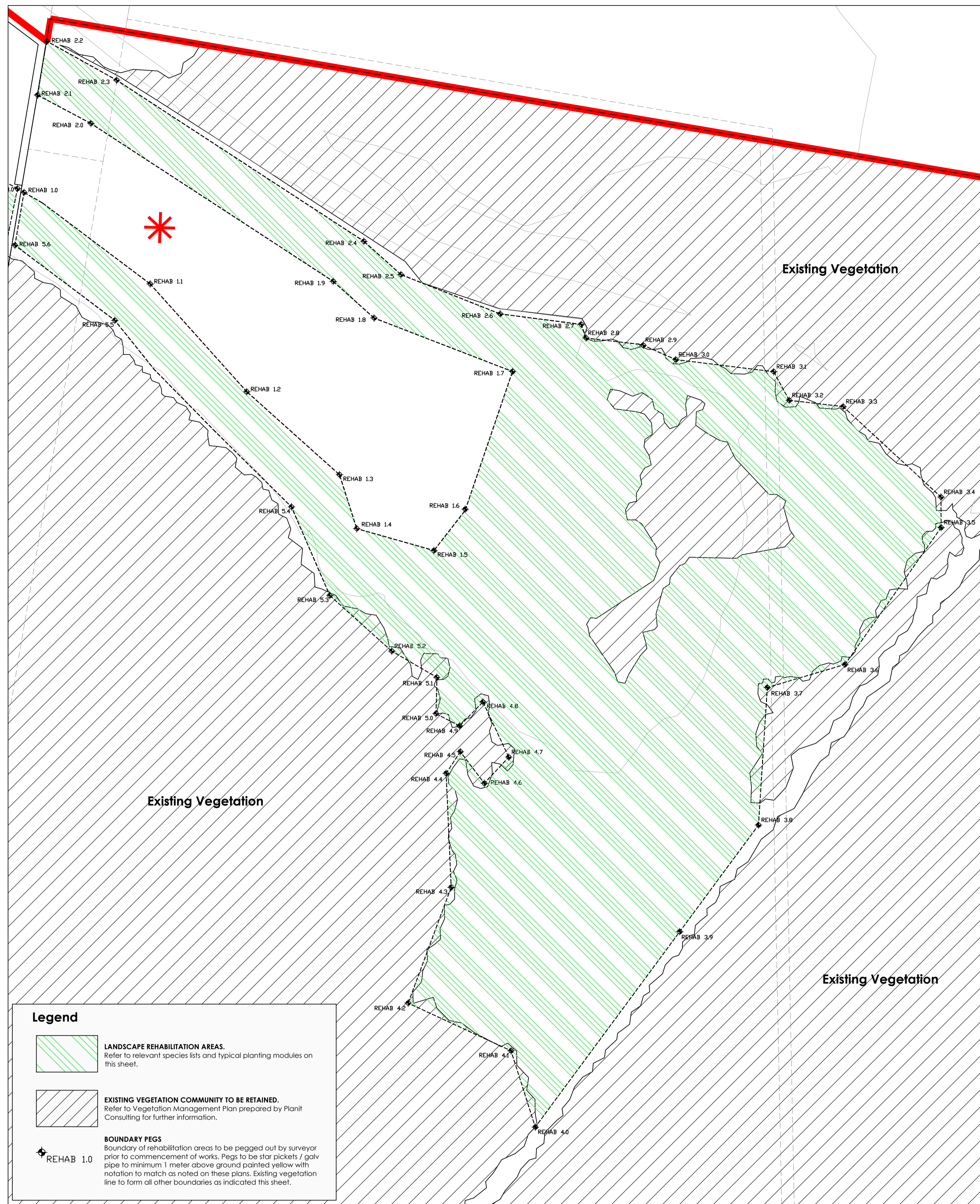
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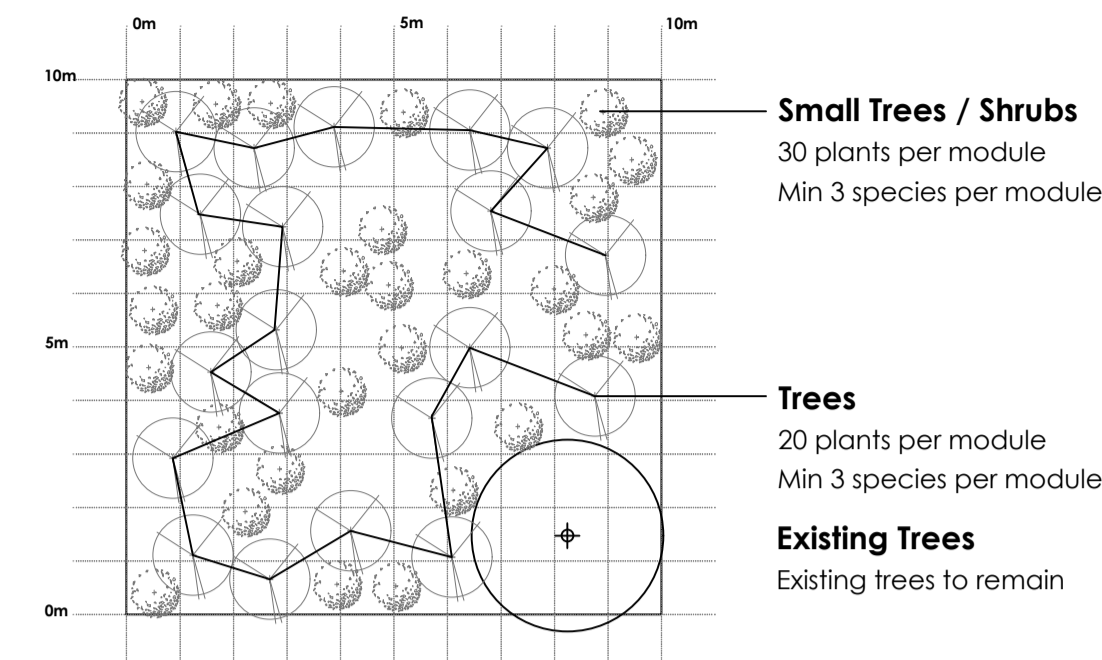
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Email: admin@planitconsulting.com.au

WEST BYRON - Rehabilitation Plan (ZONE 4)

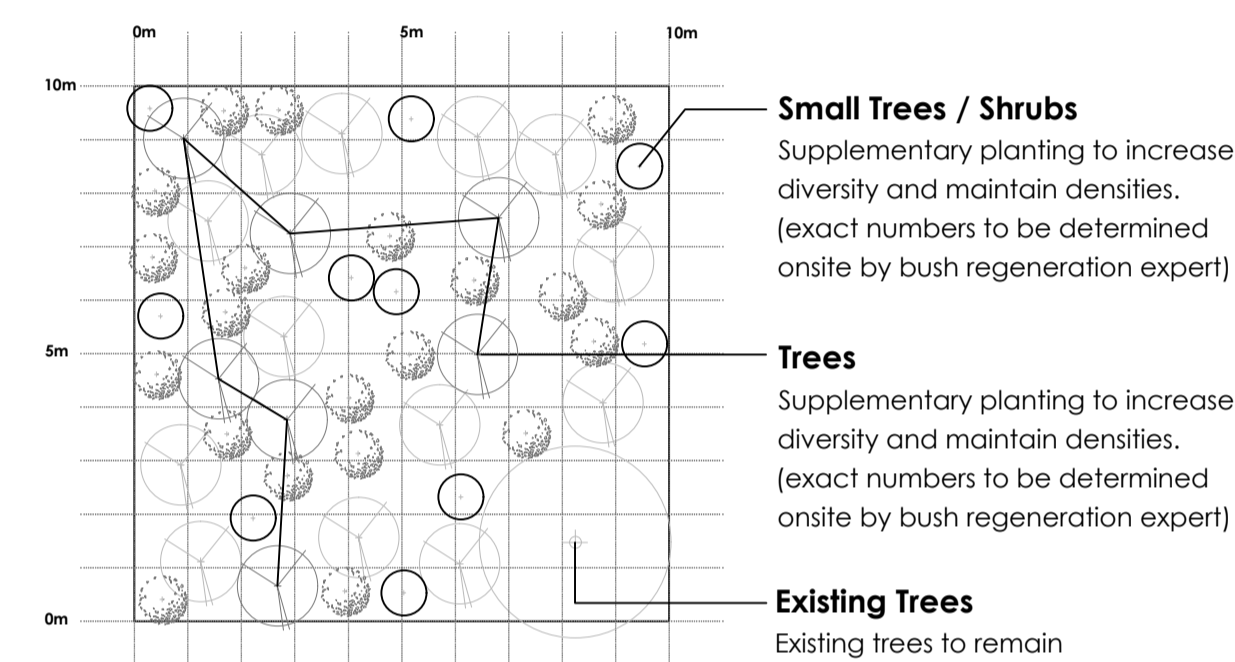


Rehabilitation Zone 4
 Total Area: 4.38Ha
 Vegetation Type: Swamp Sclerophyll

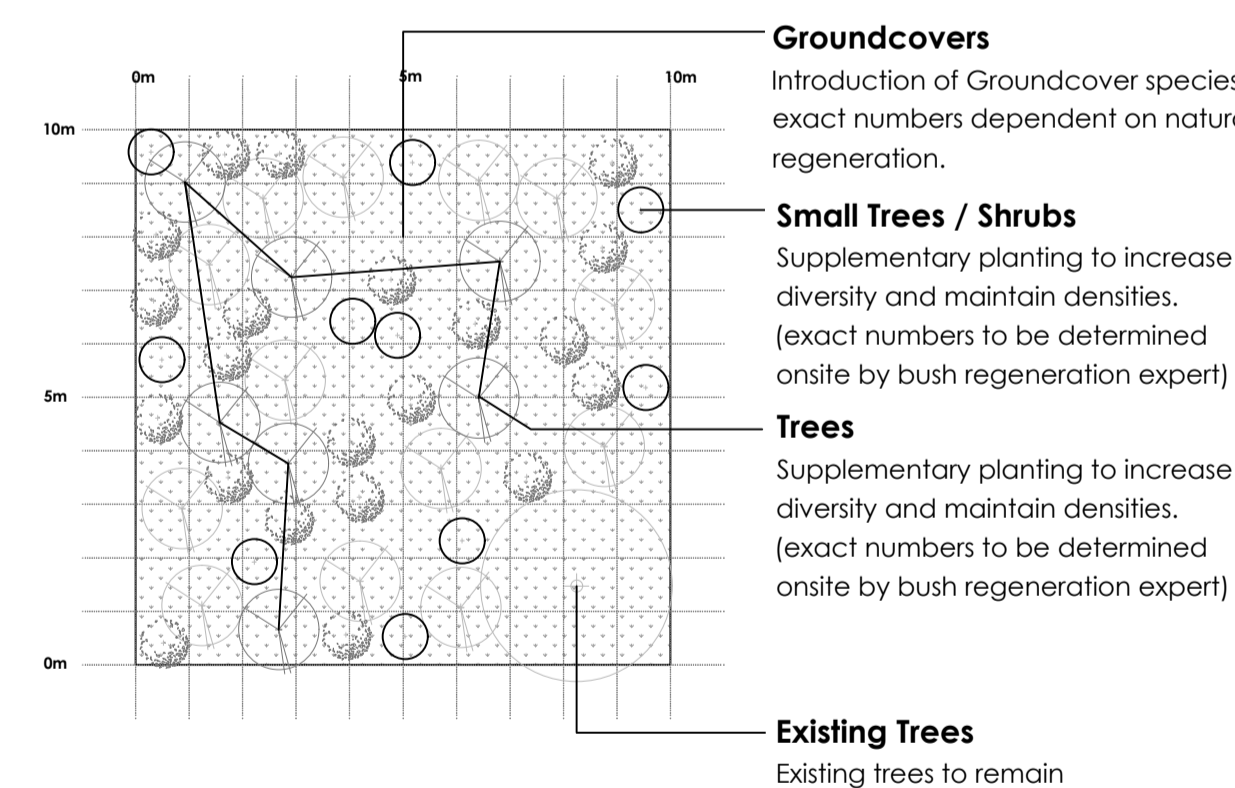
Scale: 1:1000 at full size A1



Planting Module 1 - Swamp Sclerophyll
 PIONEER SPECIES PLANTING 10 x 10 meter module NTS



Planting Module 2 - Swamp Sclerophyll
 SUPPLEMENTARY SPECIES PLANTING 10 x 10 meter module NTS



Planting Module 3 - Swamp Sclerophyll
 SUPPLEMENTARY SPECIES PLANTING TO INCLUDE GROUNDCOVERS 10 x 10 meter module NTS



REHABILITATION ZONE 4 (438 MODULES)

CODE	PLANT SPECIES	COMMON NAME	NO PER MODULE	SIZE	QTY
cal sal	Callistemon salignus	White Bottlebrush	20	75MM TUBE	8760
cor int	Corymbia intermedia	Pink Bloodwood			
euc ter	Eucalyptus tereticornis	Forest Red Gum			
euc rob	Eucalyptus robusta	Swamp Mahogany			
mel qui	Melaleuca quinquenervia	Paperbark			
lap sau	Lophostemon sauveolens	Swamp Box			
lap con	Lophostemon confertus	Brush Box	Minimum 3 species selected per module		

SMALL TREES / SHRUBS - module 1, 2 and 3

CODE	PLANT SPECIES	COMMON NAME	NO PER MODULE	SIZE	QTY
all for	Allocasuarina torulosa	Forest Oak	30	75MM TUBE	13140
acr imp	Acronychia imperforata	Beach Acronychia			
ban int	Banksia integrifolia	Coastal Banksia			
lep pol	Leptospermum polygallifolium	Yellow Tea Tree			
ban rob	Banksia robur	Swamp Banksia			
hov acu	Hovea acutifolia	Hovea			
not lon	Notolaea longifolia	Long-leaved Mock-olive			
bae fru	Baeckea frutescens	Weeping Baeckea			
syz ole	Syzygium oleosum	Blue Lillypill			
cal pac	Callistemon pachyphyllus	Wallum bottlebrush			

GROUNDCOVERS - module 3 only

CODE	PLANT SPECIES	COMMON NAME	NO PER MODULE	SIZE	QTY
aus dul	Austromyrtus dulcis	Midyim	50	75MM TUBE	To be determined onsite by bush regeneration expert
ble ind	Blechnum indicum	Bungwall Fern			
cen asi	Centella asiatica	Pennywort			
cyp pol	Cyperus polystachyos	Flat Sedge			
dia cae	Dianella caerulea	Blue Flax Lily			
gah asp	Gahnia aspera	Saw Sedge			
hib sca	Hibbertia scandens	Snake Vine			
har vio	Hardenbergia violacea	Native sarsaparilla			
lom lan	Lomandra longifolia	Matrush			
lom hys	Lomandra hystrix	Creek Matrush			
pte esc	Pteridium esculentum	Braken Fern			
sch val	Schoenoplectus validus	Clubrush			
xyl com	Xyris complanata	Yelloweyed Grass			

Rehabilitation Zone 4 Schedule

Stage	Year 1	Year 2	Year 3	Year 4	Year 5
Stage 1 Total Area: 4.38Ha	PLANTING MODULE 1 PIONEER SPECIES PLANTING 'trees' and 'small trees' selected from Rehabilitation Area 4 species list this sheet. Exact numbers to achieve densities as stated dependent on natural regeneration (as determined onsite by regeneration expert)	PLANTING MODULE 2 SUPPLEMENTARY SPECIES PLANTING Supplementary planting to increase diversity. Pioneer species - 'trees' and 'small trees' selected from Rehabilitation Area 4 species list this sheet.	PLANTING MODULE 3 SUPPLEMENTARY SPECIES PLANTING TO INCLUDE GROUNDCOVERS Supplementary planting to increase diversity. 'trees' and 'small trees' selected from Rehabilitation Area 4 species list this sheet. Introduction of Groundcover species, dependent on natural regeneration.	Natural Regeneration Weed Management Monitoring and maintenance as per VWP - prepared by Plantit	Natural Regeneration Weed Management Monitoring and maintenance as per VWP - prepared by Plantit
	▶▶▶▶▶ On-going monitoring and maintenance as per VWP		▶▶▶▶▶		

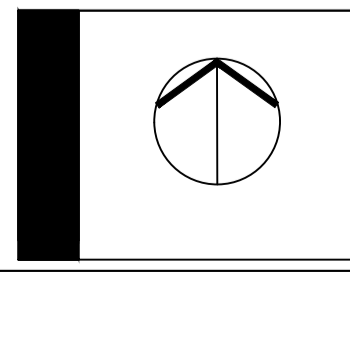
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DRAWING TITLE:	ZONE 4

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03	FOR APPROVAL	06.07.21	AH	AH	LT
04	FOR APPROVAL	19.07.21	AH	AH	LT

JOB NO: J7148 DWG NO: J7148_504

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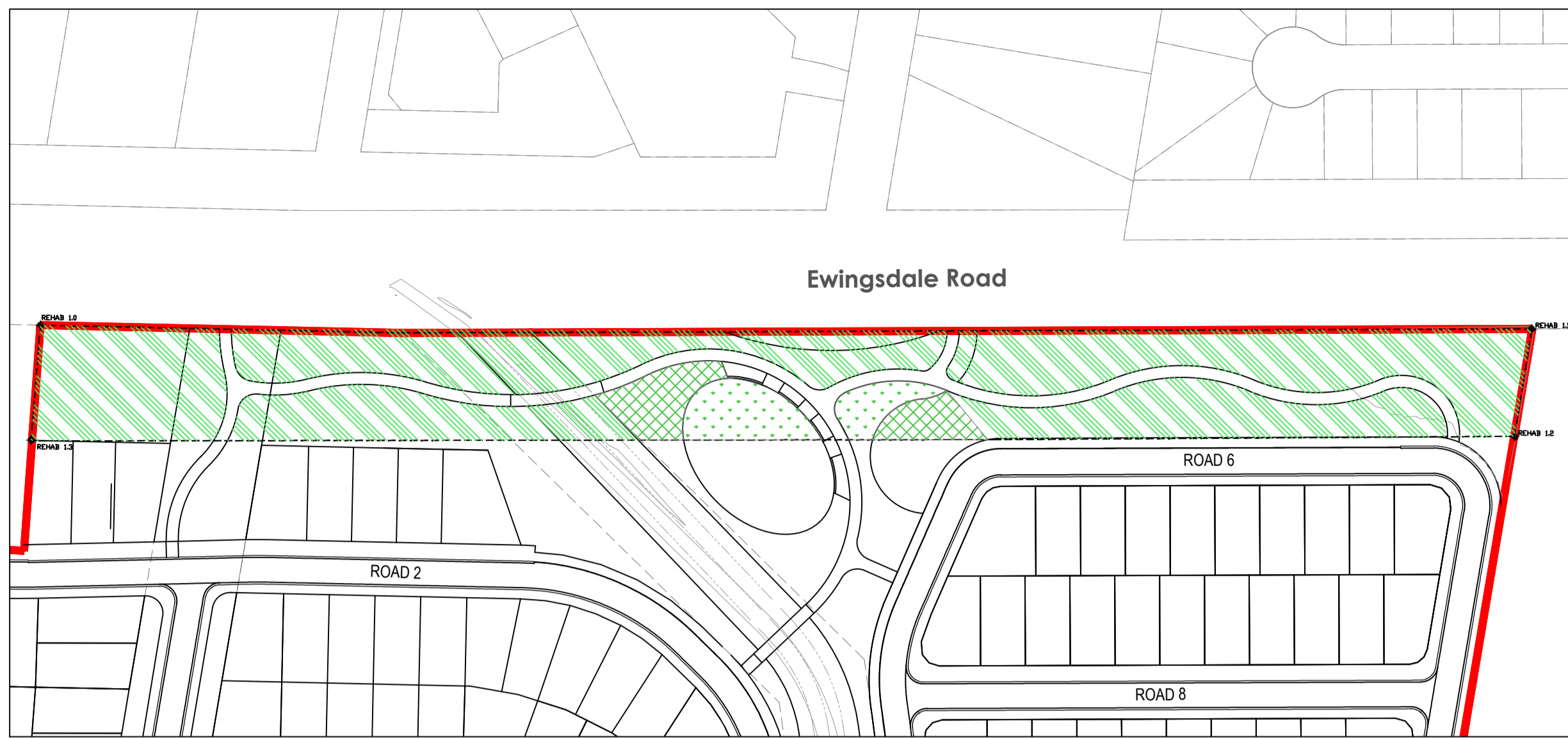


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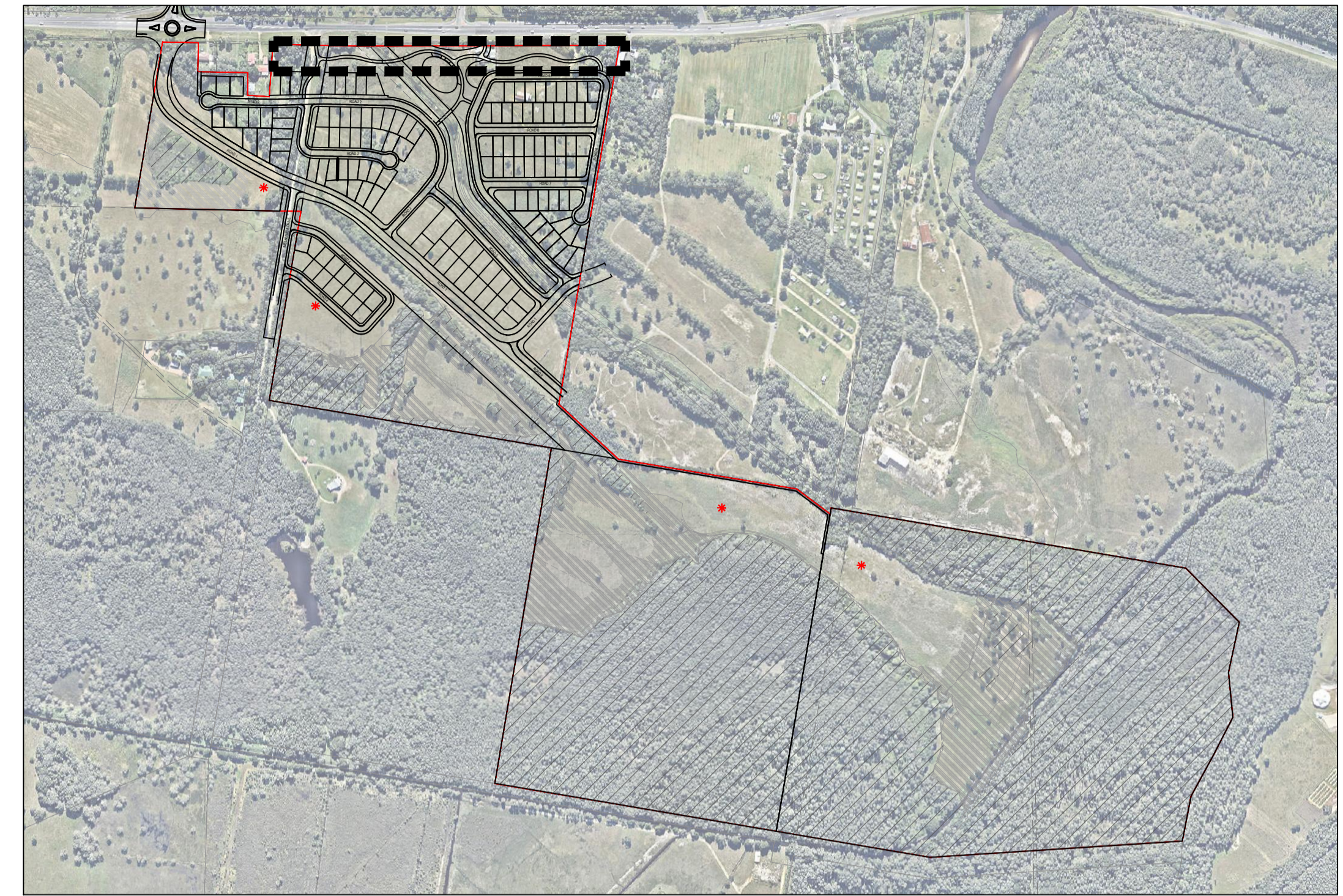
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WEST BYRON - Rehabilitation Plan (ZONE 5)



Legend

- LANDSCAPE REHABILITATION AREAS.**
Refer to relevant species lists and typical planting modules on this sheet.
- EXISTING VEGETATION COMMUNITY TO BE RETAINED.**
Refer to Vegetation Management Plan prepared by Planit Consulting for further information.
- BOUNDARY PEGS**
Boundary of rehabilitation areas to be pegged out by surveyor prior to commencement of works. Pegs to be star pickets / galv pipe to minimum 1 meter above ground painted yellow with notation to match as noted on these plans. Existing vegetation line to form all other boundaries as indicated this sheet.



Location Plan

NTS

Landscape Buffer Rehabilitation Zone 5

Total Area: 0.89Ha Scale: 1:1000 at full size A1

Vegetation Type: Swamp Sclerophyll.

Note: Refer to detailed planting setout (Sheet 506 - 508) for detailed planting works.

Planting areas to exclude proposed pathways and recreation / open space areas. Planting areas affected by future earthworks are to be temporarily turfed, refer to Sheet 506 - 508.

FAUNA NEUTRAL PLANT LIST

ADVANCED TREE STOCK (Refer sheet 507 - 509)

CODE	PLANT SPECIES	COMMON NAME	SIZE	HEIGHT	CLEAR TRUNK	SPREAD	SPACING	QUANTITY
LIV aus	Livistona australis	Cabbage Tree Palm	Exg	NA	3m	2.5m	As per plan	12
ELA ret	Elaeocarpus reticulatus	Blueberry Ash	100Ltr	2.4-2.6m	NA	2m	As per plan	10
MEL qui	Melaleuca quinquenervia	Broad leaf paperbark	100Ltr	2.4-2.6m	NA	2m	As per plan	19
LOP sau	Lophostemon sauveolens	Swamp Box	100Ltr	2.4-2.6m	NA	2m	As per plan	9
LOP con	Lophostemon confertus	Brush Box	100Ltr	2.4-2.6m	NA	2m	As per plan	13

REHABILITATION ZONE 5 (89.6 MODULES)

TREES - module 1 and 2

PLANT SPECIES	COMMON NAME	NO PER MODULE	NO PER MODULE	SIZE	QTY
Acacia disparima subsp. 'disparima'	Hickory Wattle	Quantity within first 10m of Ewingsdale Road buffer: 20 Minimum 3 species selected per module	Quantity beyond the first 10m of Ewingsdale Road buffer: 15 Minimum 3 species selected per module	75MM TUBE	3115
Acacia melanoxylon	Blackwood				
Elaeocarpus reticulatus	Blueberry Ash				
Melicope elleryana	Pink Dogwood				
Lophostemon sauveolens	Swamp Box				
Lophostemon confertus	Brush Box				

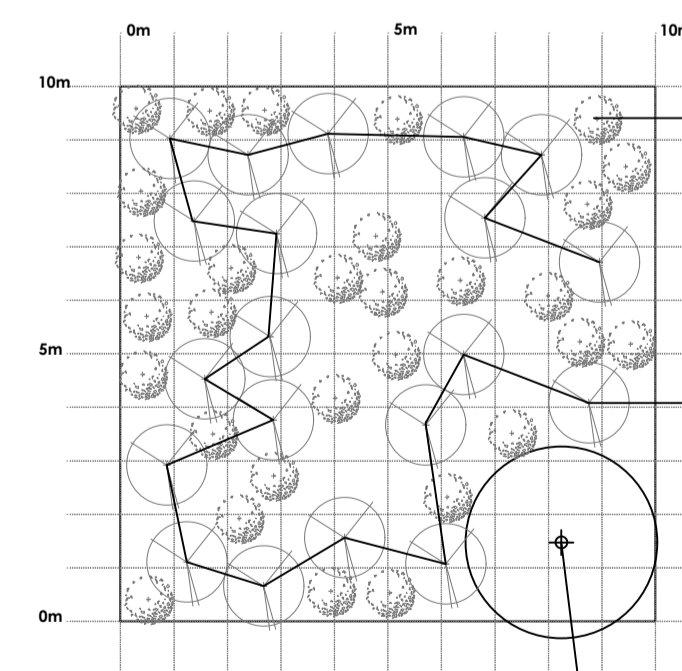
SMALL TREES / SHRUBS - module 1 and 2

PLANT SPECIES	COMMON NAME	NO PER MODULE	NO PER MODULE	SIZE	QTY
Allocasuarina torulosa	Forest Oak	Quantity within first 10m of Ewingsdale Road buffer: 30 Minimum 3 species selected per module	Quantity beyond the first 10m of Ewingsdale Road buffer: 20 Minimum 3 species selected per module	75MM TUBE	4450
Cardyline stricta	Narrow-leaved palm lily				
Duboisia myoporoides	Corkwood				
Hibiscus diversifolius	Swamp hibiscus				
Hovea acutifolia	Hovea				
Leptospermum juniperinum	Prickly Tea-tree				
Leptospermum polygalloilium	Tantoon				
Leptospermum trinervium	Black Tea-tree				
Callistemon pachyphyllus	Wallum bottlebrush				
Tracocarpa laurina	Tree Heath				

GROUNDCOVERS - module 3 only

PLANT SPECIES	COMMON NAME	NO PER MODULE	NO PER MODULE	SIZE	QTY
Blechnum indicum	Bungwall Fern	Quantity within first 10m of Ewingsdale Road buffer: 50 Minimum 5 species selected per module	Quantity beyond the first 10m of Ewingsdale Road buffer: 50 Minimum 5 species selected per module	75MM TUBE	To be determined on-site by bush regeneration expert
Cenillea asiatica	Pennywort				
Cyperus polystachyos	Rat Sedge				
Dianella caerulea	Blue Flax Lilly				
Gahnia aspera	Saw Sedge				
Hibbertia scandens	Snake Vine				
Hardenbergia violacea	Native sarsaparilla				
Lomandra longifolia	Matrush				
Lomandra hystrix	Creek Matrush				
Pteridium esculentum	Broken Fern				
Schoenoplectus validus	Clubrush				
Xyris complanata	Yellowweyed Grass				

FOREST MULCH TO 50MM DEPTH, COVERING 0.89HA
TOTAL: 4.450M3



Small Trees / Shrubs

30 plants per module
Min 3 species per module
Note: minimum 20 plants per module beyond first 10m of Ewingsdale Road.

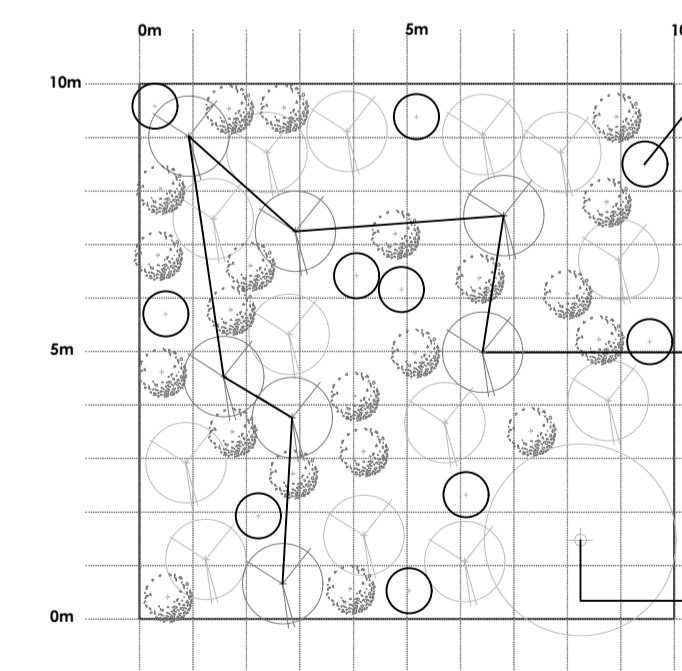
Trees

20 plants per module
Min 3 species per module.
Note: minimum 15 plants per module beyond first 10m of Ewingsdale Road.

Advanced trees as shown on sheet 506-508.
Forest mulch required to entire planting area.

Planting Module 1 - Swamp Sclerophyll

NTS



Small Trees / Shrubs

Supplementary planting to increase diversity and maintain densities.
(exact numbers to be determined onsite by bush regeneration expert)

Trees

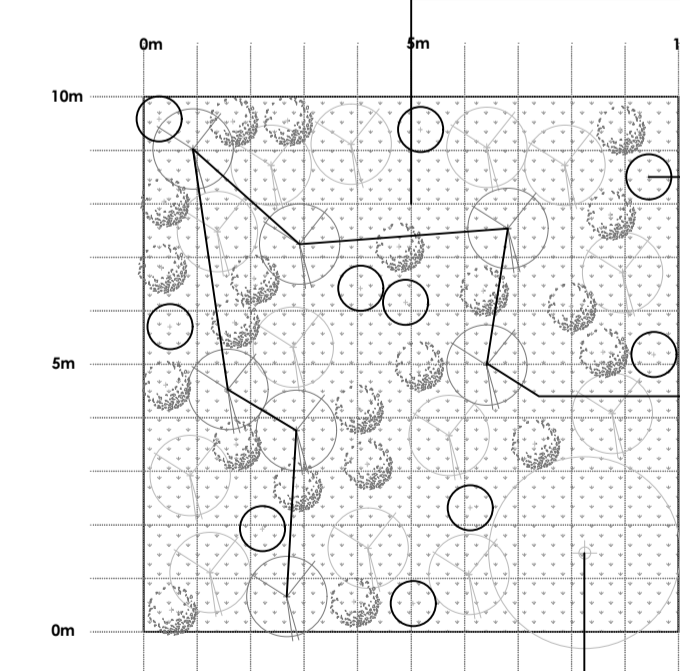
Supplementary planting to increase diversity and maintain densities.
(exact numbers to be determined onsite by bush regeneration expert)

Existing Trees

Existing trees to remain

Planting Module 2 - Swamp Sclerophyll

NTS



Groundcovers

Introduction of Groundcover species, exact numbers dependent on natural regeneration.

Small Trees / Shrubs

Supplementary planting to increase diversity and maintain densities.
(exact numbers to be determined onsite by bush regeneration expert)

Trees

Supplementary planting to increase diversity and maintain densities.
(exact numbers to be determined onsite by bush regeneration expert)

Existing Trees

Existing trees to remain

Planting Module 3 - Swamp Sclerophyll

NTS

SUPPLEMENTARY SPECIES PLANTING TO INCLUDE GROUNDCOVERS 10 x 10 meter module

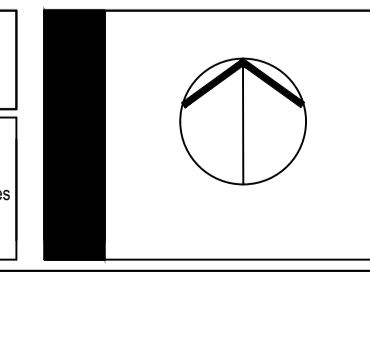
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DRAWING TITLE: ZONE 5

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02	LANDSCAPE OPW FOR INFORMATION	16.06.20	AH	AH	LT
03	FOR APPROVAL	06.07.21	AH	AH	LT
04	FOR APPROVAL	19.07.21	AH	AH	LT

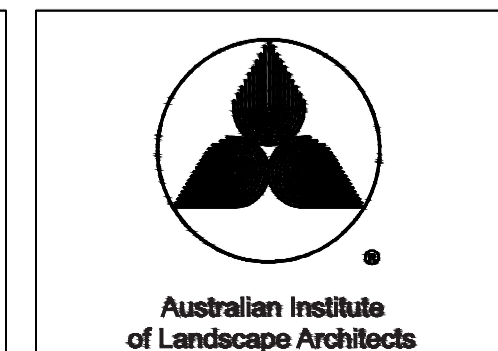
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CLIENT: NSPT Pty Ltd

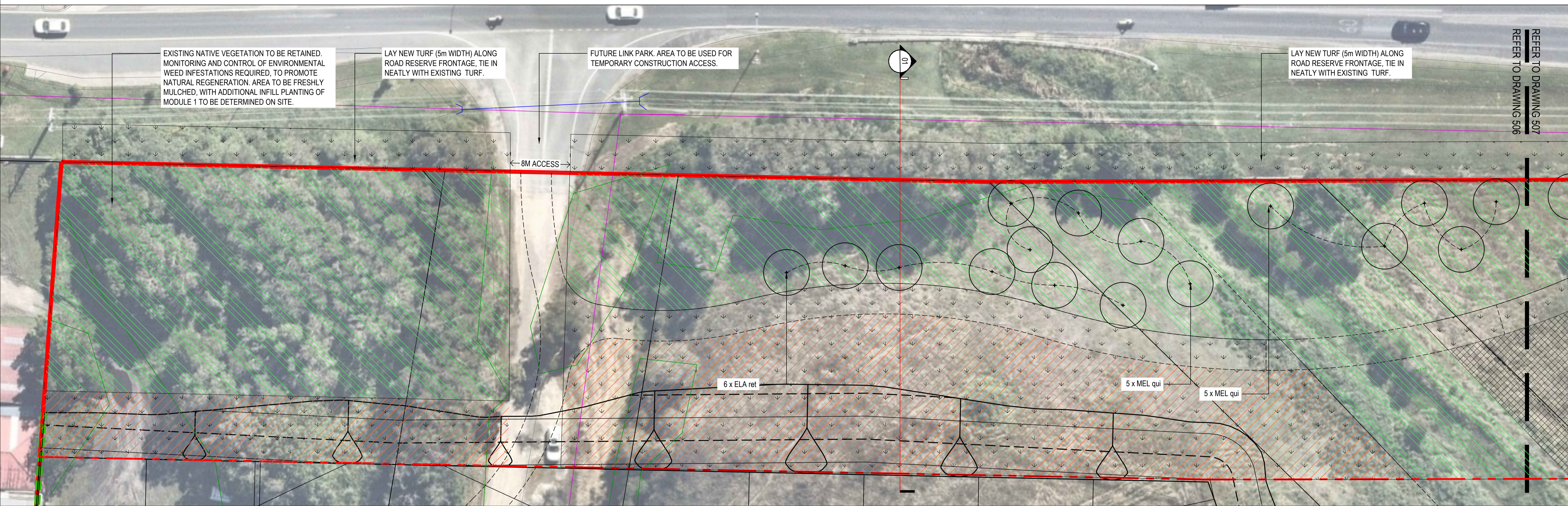


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REFER TO DRAWING 507
REFER TO DRAWING 506



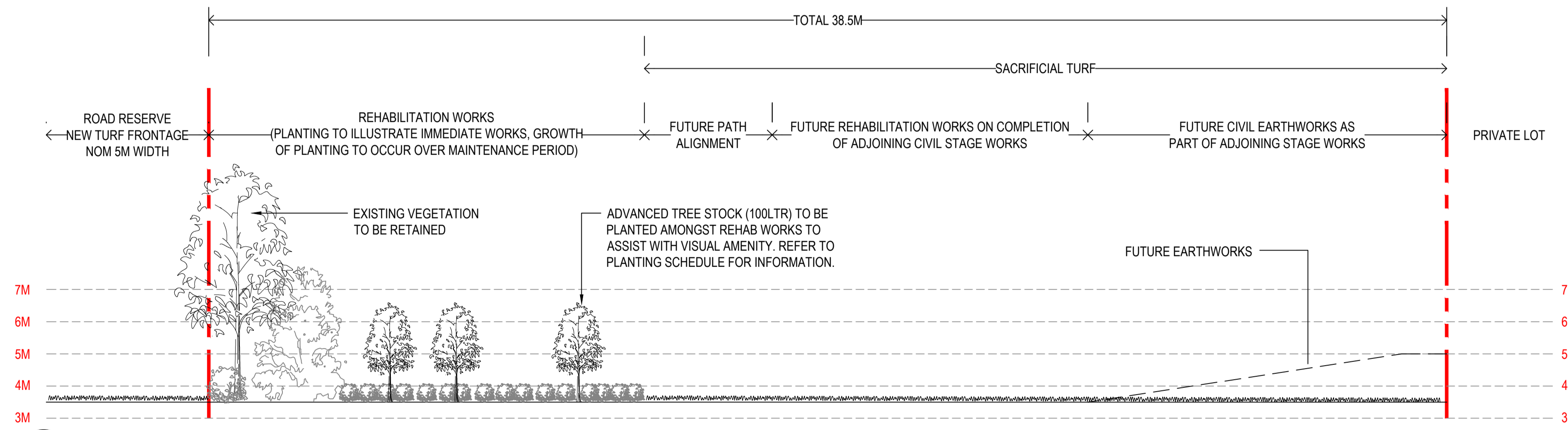
NOTE: FUTURE PLANTING WITHIN 5M FROM PRIVATE LOTS TO BE GROUNDCOVER SPECIES ONLY, TO ASSIST WITH BUSH FIRE REQUIREMENTS.

LEGEND

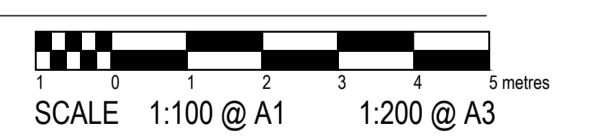
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- STAGE BOUNDARY (REHABILITATION WORKS)
- PROPOSED PALM
REFER TO PLANTING SCHEDULE SHEET 505
- PROPOSED TREE
REFER TO PLANTING SCHEDULE SHEET 505
- LANDSCAPE REHABILITATION AREAS
REFER TO RELEVANT SPECIES LIST AND TYPICAL PLANTING MODULES SHEET 505.
- MULCH ONLY (TO FUTURE RECREATION & OPEN SPACE GARDENS)
REFER TO SPECIFICATION
- TURF TYPE 1
REFER TO SPECIFICATION
- SACRIFICIAL TURF TYPE 2 (GRASS SEEDING)
AREAS TO BE PLANTED AND REHABILITATED FOLLOWING COMPLETION OF ADJOINING EARTHWORKS
- FUTURE PATH ALIGNMENT (GRASS ONLY)
PATH TO BE INSTALLED AS PART OF FUTURE STAGE 1 & 2 LANDSCAPE RECREATION & OPEN SPACE PACKAGES.

NOTE: PROTECTIVE FENCING TO BE INSTALLED AS REQUIRED, TO PROTECT LANDSCAPE WORKS FROM ADJOINING CONSTRUCTION WORKS.



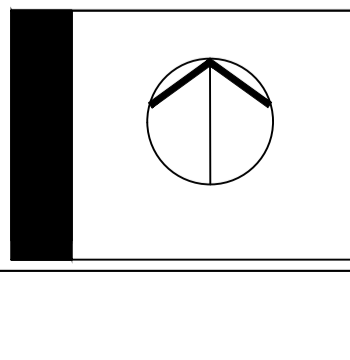
01 SECTION 1
SCALE 1:100



PROJECT:	REHABILITATION PLAN
DRAWING TITLE:	ZONE 5 DETAIL PLANTING

REV	DESCRIPTION	DATE	DRAWN	DESIGN	CHECKED
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02	FOR APPROVAL	19.07.21	AH	AH	LT

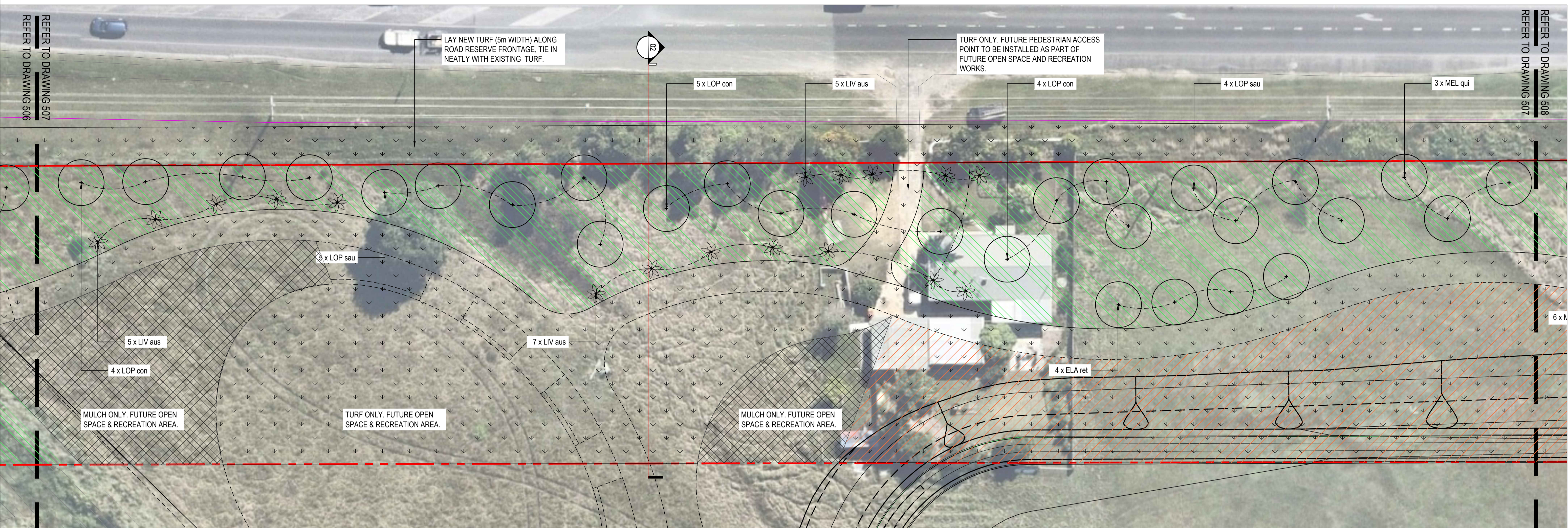
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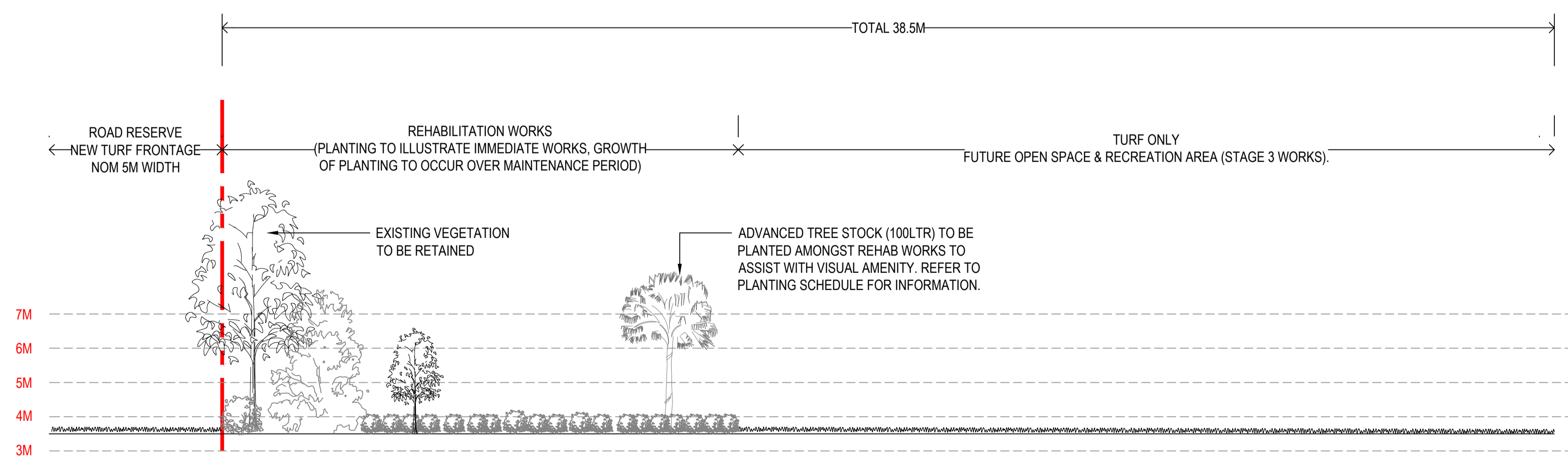


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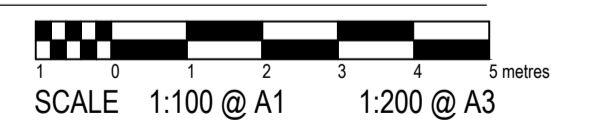


LEGEND

- REFER DETAIL
- STAGE BOUNDARY (REHABILITATION WORKS)
 - PROPOSED PALM
REFER TO PLANTING SCHEDULE SHEET 505
 - PROPOSED TREE
REFER TO PLANTING SCHEDULE SHEET 505
 - LANDSCAPE REHABILITATION AREAS
REFER TO RELEVANT SPECIES LIST AND TYPICAL PLANTING MODULES SHEET 505.
 - MULCH ONLY (TO FUTURE RECREATION & OPEN SPACE GARDENS)
REFER TO SPECIFICATION
 - TURF TYPE 1
REFER TO SPECIFICATION
 - SACRIFICIAL TURF TYPE 2 (GRASS SEEDING)
AREAS TO BE PLANTED AND REHABILITATED FOLLOWING COMPLETION OF ADJOINING EARTHWORKS
 - FUTURE PATH ALIGNMENT (GRASS ONLY)
PATH TO BE INSTALLED AS PART OF FUTURE STAGE 1 & 2 LANDSCAPE RECREATION & OPEN SPACE PACKAGES.
- NOTE: PROTECTIVE FENCING TO BE INSTALLED AS REQUIRED, TO PROTECT LANDSCAPE WORKS FROM ADJOINING CONSTRUCTION WORKS.



02 SECTION 2
SCALE 1:100



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DRAWING TITLE:	ZONE 5 DETAIL PLANTING

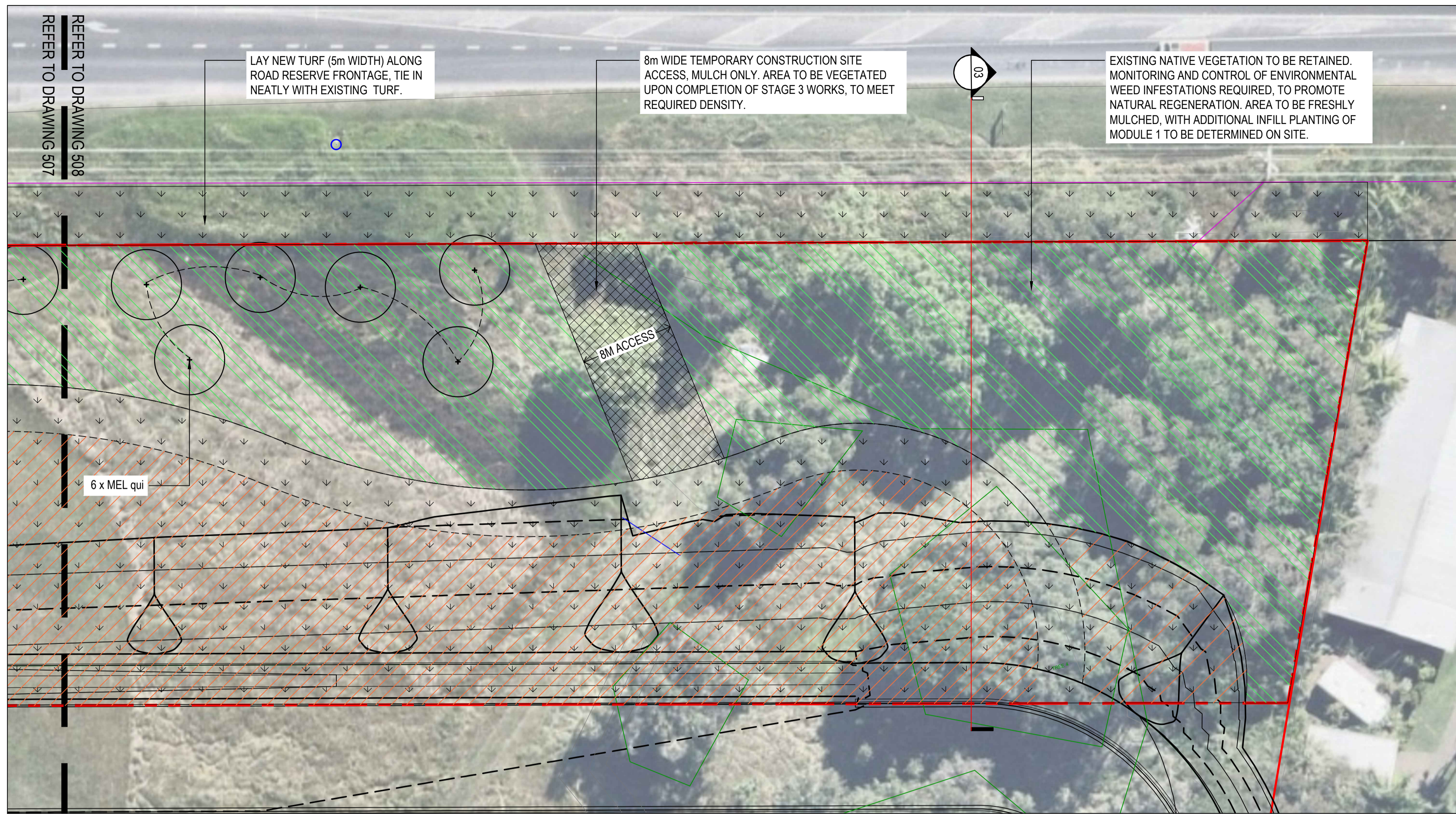
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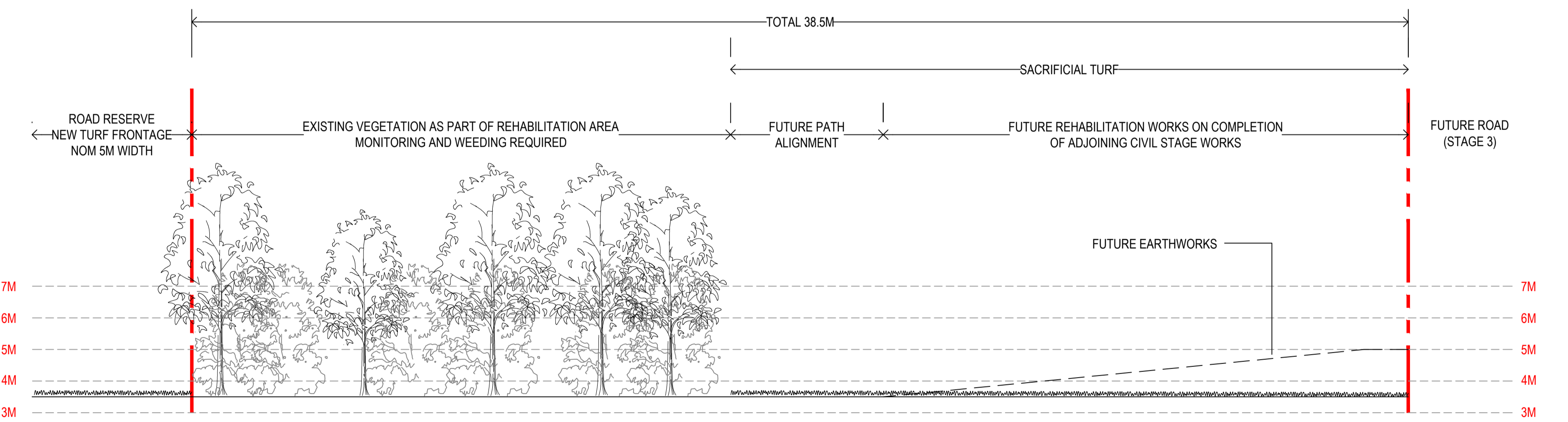


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Nobby Beach QLD 4218
Telephone: 07 5526 1500
ABN: 20 099 261 711
Email: admin@planitconsulting.com.au



LEGEND

- REFER DETAIL
- STAGE BOUNDARY (REHABILITATION WORKS)
 - PROPOSED PALM
REFER TO PLANTING SCHEDULE SHEET 505
 - + PROPOSED TREE
REFER TO PLANTING SCHEDULE SHEET 505
 - LANDSCAPE REHABILITATION AREAS
REFER TO RELEVANT SPECIES LIST AND TYPICAL PLANTING MODULES SHEET 505.
 - MULCH ONLY (TO FUTURE RECREATION & OPEN SPACE GARDENS)
REFER TO SPECIFICATION
 - TURF TYPE 1
REFER TO SPECIFICATION
 - SACRIFICIAL TURF TYPE 2 (GRASS SEEDING)
AREAS TO BE PLANTED AND REHABILITATED FOLLOWING COMPLETION OF ADJOINING EARTHWORKS
 - FUTURE PATH ALIGNMENT (GRASS ONLY)
PATH TO BE INSTALLED AS PART OF FUTURE STAGE 1 & 2 LANDSCAPE RECREATION & OPEN SPACE PACKAGES.
- NOTE: PROTECTIVE FENCING TO BE INSTALLED AS REQUIRED, TO PROTECT LANDSCAPE WORKS FROM ADJOINING CONSTRUCTION WORKS.



03 SECTION 3
SCALE 1:100



PROJECT: REHABILITATION PLAN	DRAWING TITLE: ZONE 5 DETAIL PLANTING
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02	FOR APPROVAL	19.07.21	AH	AH	LT

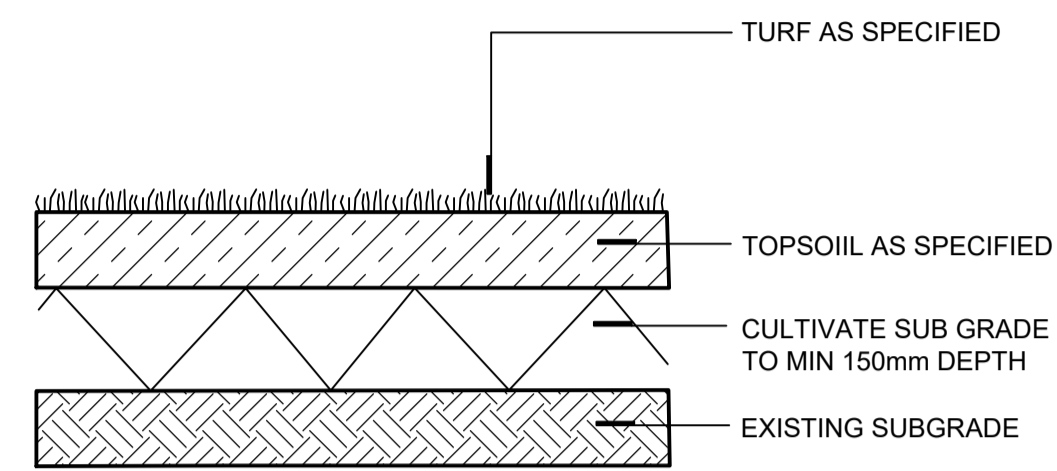
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CLIENT: NSPT Pty Ltd

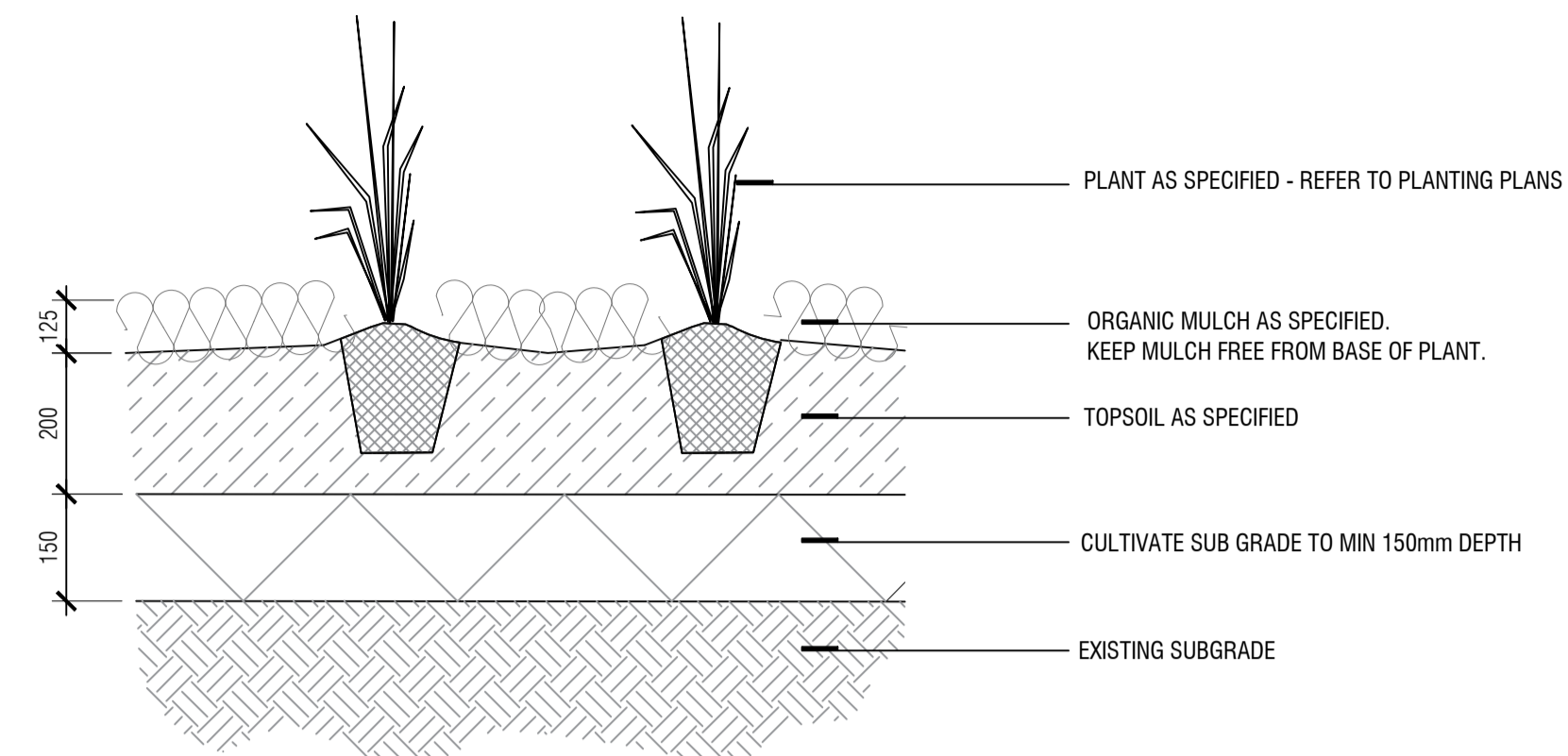
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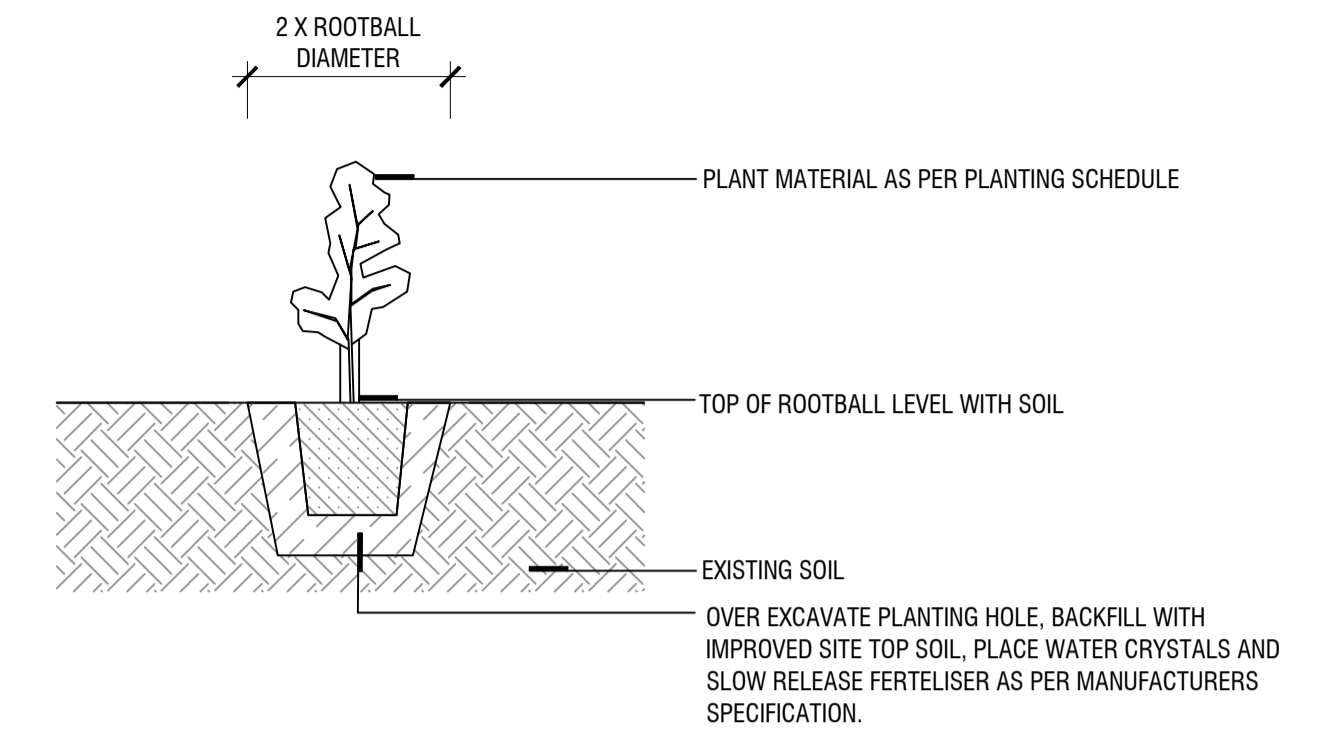
Level 1 2247 Gold Coast Hwy
PO Box 206
Nobby Beach QLD 4218
Telephone: 07 5526 1500
ABN: 20 099 261 711
Email: admin@planitconsulting.com.au



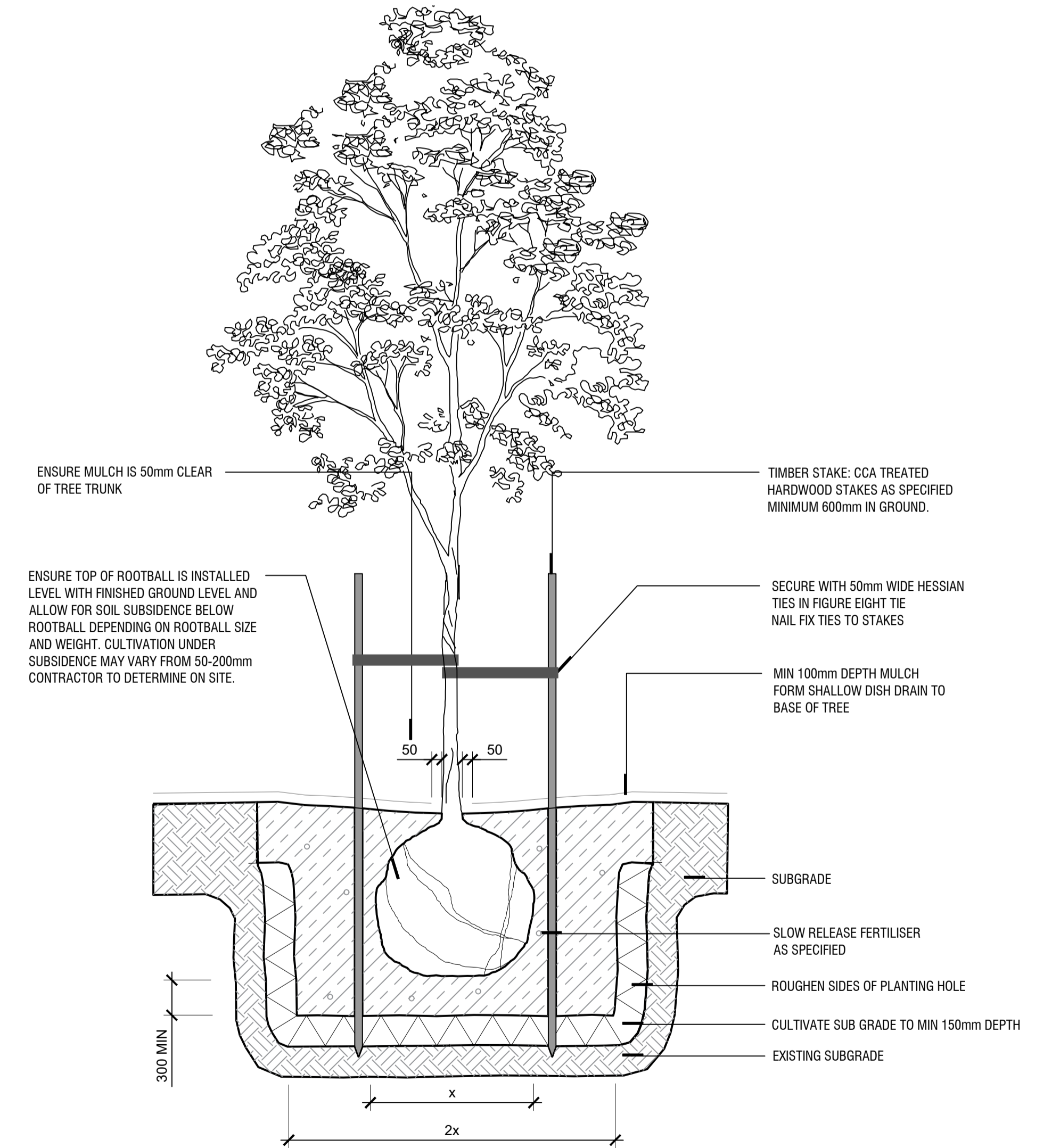
01 TURF - TYPICAL DETAIL
1:10 @ A1



02 BUFFER PLANTING - TYPICAL DETAIL
1:20 @ A1



03 REHABILITATION PLANTING - TYPICAL DETAIL
1:20 @ A1



04 ADVANCED TREE - TYPICAL DETAIL
1:20 @ A1

PROJECT: REHABILITATION PLAN
DRAWING TITLE: TYPICAL DETAILS

REV	DESCRIPTION	DATE	DRAWN	DESIGN	CHECKED
01	FOR APPROVAL	06.07.21	AH	AH	JA
02	FOR APPROVAL	19.07.21	AH	AH	LT

JOB NO: J7148	DWG NO: J7148_509
CLIENT: NSPT Pty Ltd	

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Level 1 2247 Gold Coast Hwy
PO Box 206
Nobby Beach QLD 4218
Telephone: 07 5526 1500
ABN: 20 099 261 711
Email: admin@planticonsulting.com.au

SPECIFICATIONS

GENERAL NOTES:

ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL STANDARDS AND RELEVANT AUSTRALIAN STANDARDS.

A COPY OF THE COUNCIL DECISION NOTICE FOR THE APPROVED PLANS IS TO BE KEPT AT ALL TIMES WITH THE APPROVED LANDSCAPE PLANS.

VERIFY LOCATION OF ALL SERVICES PRIOR TO COMMENCEMENT OF WORKS.

1.0 SITE PREPARATION

1.1 EARTHWORKS

EARTHWORKS SHALL COMPRISE

- TOPSOIL CULTIVATION
- TOPSOIL MIXING AND INSTALLATION

1.2 SOIL CULTIVATION

CULTIVATE BY RIPPING TO THE DEPTHS SPECIFIED THIS SHEET TO LOOSEN AND AERATE GROUND. DO NOT DISTURB EXISTING SERVICES. REMOVE UNWANTED MATTER INCLUDING STONES, RUBBISH AND RUBBLE EXCEEDING 20MM IN DIAMETER AND STICKS AND WEEDS BROUGHT TO THE SURFACE DURING CULTIVATION. FINELY CULTIVATE THE SURFACE AND RAKE FREE OF CLOUDS.

TREE PLANTING AREAS: CULTIVATE TO THE DEPTH OF ROOT BALL PLUS A FURTHER DEPTH OF 300MM.

1.3 TOPSOIL - TREE PLANTING AREAS

IMPORTED TOPSOIL/SUPLIMENTED SITE SOIL SHALL BE TO THE AUSTRALIAN STANDARD 4419 AND CERTIFIED FIRE ANT FREE IF REQUIRED.

1.4 COMPOST

COMPOST SHALL BE SPENT MUSHROOM COMPOST OR MILLED COW MANURE. IT SHALL HAVE A NEUTRAL pH VALUE AND BE FREE OF WEEDS, SEEDS AND DISEASE.

1.5 TOPSOIL MIXTURE

TOPSOIL MIXTURE SHALL BE A 3:1 MIX OF TOPSOIL/COMPOST.

1.6 TOPSOIL MIXTURE INSTALLATION

AS PER PLANTING DETAIL, INSTALL TOPSOIL BACKFILL TO TREE PLANTING AREAS BOTH BENEATH TO 300MM AND AROUND ROOT BALL.

2.00 PLANTING

2. 1 THE WORKS

PLANTING WORK COMPRISES:

- SUPPLY AND INSTALLATION OF ALL PLANTS AND TREES
- MULCHING OF ALL TREE PLANTING AREAS
- STAKING OF ALL TREES
-

2. 2 PLANTS

PLANTS SHALL BE VIGOROUS, WELL ESTABLISHED, OF GOOD FORM, NOT SOFT OR FORCED, HARDENED OFF, FREE FROM DISEASE AND PESTS WITH LARGE HEALTHY ROOT SYSTEMS AND NOT POT BOUND. THE ROOT SYSTEM SHALL BE WELL BALANCED IN RELATION TO THE SIZE OF THE PLANT.

TREES SHALL HAVE A SINGLE LEADING SHOOT.

PLANT CONTAINERS SHALL BE OF AN APPROPRIATE SIZE AND FREE FROM WEEDS. PLANTS SHALL NOT EXHIBIT SIGNS OF BEING STRESSED AT ANY STAGE DURING THEIR DEVELOPMENT DUE TO INADEQUATE WATERING, EXCESSIVE SUNLIGHT, PHYSICAL DAMAGE OR HAVE RESTRICTED GROWTH DUE TO NURSERY ROWS. NO SUBSTITUTIONS SHALL BE MADE UNLESS APPROVED BY THE LANDSCAPE ARCHITECT.

KEEP PLANTS IN GOOD CONDITION DURING STORAGE. PREVENT DRYING OUT OR DAMAGE FROM ANY CAUSE INCLUDING FROST, WIND, SUN, THEFT, VERMIN ETC.

2. 3 PLANTING

IF PLANTING IS TO BE EXECUTED DURING **COUNCIL WATER RESTRICTION PERIODS** ENSURE PLANTS CAN BE WATERED IN AT TIME OF PLANTING. DO NOT ALLOW PLANTS TO BE INSTALLED ON A DAY THEY CAN'T BE WATERED.

PLANTING TO BE EXECUTED IN ACCORDANCE WITH THE PLANTING DETAIL. DO NOT PLANT INTO DRY OR MUDDY SOIL OR IN EXTREME WEATHER CONDITIONS. ENSURE PLANT ROOT SYSTEMS ARE MOIST WHEN REMOVED FROM CONTAINER AND NOT ALLOWED TO DRY OUT AND PLANTING AREA HAS BEEN THOROUGHLY WATERED. PLANT OUT WITH MINIMUM DISTURBANCE TO ROOT BALL ENSURING FINISHED COMPACTED SOIL LEVELS COINCIDE WITH THE NATURAL SOIL LEVEL OF THE PLANT. PLANT, STAKE, TIE AND MULCH ACCORDING TO DETAIL DRAWINGS AND THEN DEEP SOAK THE WHOLE OF THE PLANTING AREA.

2. 4 DEPTH OF PLANTING

2.41 CULTIVATION

CULTIVATE SUBGRADE TO MIN 200MM DEPTH SUPPLY AND PLACE MIN 300MM DEPTH IMPORTED SOIL MIX TO BEDS IN GENERAL.

2.5 WATER SAVING GRANULES

SUPPLY AND IMPLEMENT FYOTGREEN HYDROCELL OR APPROVED EQUIVALENT.

BACKFILLING SOIL MIX TO TREE PLANTING AND BED PLANTING WILL BE AS FOLLOWS:

- 30% IMPORTED TOPSOIL
- 60% COARSE SAND
- 10% ORGANIC MATTER

PLUS AMENDMENTS AS DETERMINED BY SOIL CHEMICAL ANALYSIS TO ACHIEVE PH AND FERTILITY SUITABLE TO PROMOTE VIGOROUS GROWTH AND ESTABLISHMENT

ONCE THE BACK FILLING SOIL MIX HAD BEEN CREATED, MIX IN HYDROCELL OR APPROVED EQUIVALENT AT THE RATE OF HALF THE VOLUME OF THE ROOT BALL (IE 22.5L FOR A 45L ROOT BALL) AND PROCEED TO BACKFILL AROUND THE ROOT BALL.

WHEN THE PLANT IS IN ITS FINAL POSITION IN ITS HOLE THE TOP SOIL LEVEL OF THE PLANT ROOT BALL SHALL BE LEVEL WITH THE FINISHED SURFACE OF THE SOIL SURROUNDING THE HOLE. TEST THE DEPTH BY MEASURING THE SIDES OF CONTAINERS. IF BACKFILLING IS REQUIRED TO CORRECT THE DEPTH USE TOPSOIL MIX.

2. 6 PLANTING FERTILIZER

'OSMOCOTE' SUSTAINED RELEASE FERTILISER IN GRANULE FORM OR APPROVED EQUIVALENT SHALL BE ADDED TO THE TOPSOIL AS PER MANUFACTURERS DIRECTION.

'BIOPTIVATE GRANULE' SOIL ADDITIVE FOR REHABILITATION PLANTING AREA SHALL BE ADDED AT THE RATE OF:
1 TEASPOON PER PLANTING HOLE FOR TUBESTOCK.
10 TABLESPOONS PER PLANTING HOLE FOR 100 LTR TREE

2. 7 MULCHING

MULCH TO BE 'FOREST MULCH' AS DETAILED, FREE OF WEEDS, TERMITES AND OTHER FOREIGN MATTER. SPREAD MULCHES EVENLY TO A DEPTH OF 50MM TO ALL PLANTING AREAS WITHIN REHABILITATION ZONE 5. TAPER MULCH AT EDGES TO MAINTAIN FINISHED LEVEL WITH ADJACENT SURFACES.

3.0 DRAINAGE

ALL PLANTING AREAS AT GRADE TO DRAIN THROUGH NATURAL GROUND. PERFORATED AGRICULTURAL DRAIN TO BE INSTALLED WHERE ROCK IS AFFECTING DRAINAGE OF BED AREAS / SPECIMEN PLANTING AND GRADED TO PROVIDE ADEQUATE (MIN 1 IN 100 FALLS) DRAINAGE IN NATURAL GROUND.

4.00 TURFING

4.1 THE WORKS

TURFING WORK COMPRISES

- SUPPLY OF TURF AND FERTILIZER
- INSTALLATION OF PROPOSED TURF AREAS

4.2 TURF SPECIES

TURF SHALL BE A GRADE GREEN COUCH WITH AN EVEN THICKNESS TO NOT LESS THAN 30MM.

TURF SHALL BE OBTAINED FROM AN APPROVED GROWER OF CULTIVATED TURF. TURF TO BE DELIVERED ON SITE WITHIN 24 HOURS OF BEING CUT AND LAID WITHIN 36 HOURS OF BEING CUT. PREVENT TURF FROM DRYING OUT BETWEEN CUTTING AND LAYING.

4.3 TURF UNDERLAY

UNDERLAY SHALL BE CLEAN WASHED COURSE RIVER SAND AND LOAM MIX FREE OF CLAY LUMPS, CLOUDS, WEEDS, TREE ROOTS, STICKS, ORGANIC MATTER, RUBBISH AND MATERIAL TOXIC TO PLAN GROWTH.

4.4 LAYING

PREPARE THE AREA TO BE TURFED AS SPECIFIED. INSTALL 75M SANDY LOAM AND CULTIVATE INTO THE PREPARED SUB-GRADE. FERTILIZE USING 'TURF STARTER' OR APPROVED EQUIVALENT PER MANUFACTURERS DIRECTIONS.

LAY TURF IN STRETCHED BOND PATTERN WITH THE JOINTS STAGGERED AND CLOSE BUTTED. TURF TO BE PARALLEL WITH THE LONG SIDE OF LEVEL AREAS AND WITH THE CONTOURS OF SLOPES. TURF TO FINISH FLUSH AND LEVEL WITH ADJACENT FINISHED SURFACES WHEN ROLLED.

ELIMINATE AIR POCKETS AND WATER IMMEDIATELY TO MOISTEN THE SOIL TO IT'S FULL DEPTH. CONTINUE WATERING TO MAINTAIN MOISTURE TO THIS DEPTH.

5.0 GRASS SEED MIX

BROAD ACRE SEED

MIN 25MM IMPORTED / SITE SOIL IMPROVED TO ACCOMMODATE GROWTH. PROPOSED GRASS SEED SPECIFICATIONS REFER TO THE TABLE BELOW. ENSURE INCLUSION OF SEED MIX TO MATCH GRADE A COUCH.

(October - March)		
Botanical Name	Common Name	Surface Density
Echinochloa esculenta	Japanese Millet	8kg / ha
Paspalum nicorae	Blue Dawn	5kg / ha
Bothriochloa pertusa	Indian Blue Grass	2kg / ha

(April - September)		
Botanical Name	Common Name	Surface Density
Lolium perenne	Perennial ryegrass	5kg / ha
Paspalum nicorae	Blue Dawn	2kg / ha
Bothriochloa pertusa	Indian Blue Grass	2kg / ha

6. 0 GENERAL

THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHMENT MAINTENANCE AND DEFECTS LIABILITY CLAUSES FOR FOLLOWING COMPLETION OF THE LANDSCAPE CONSTRUCTION.

7.0 INSPECTIONS

THE FOLLOWING INSPECTIONS ARE REQUIRED THROUGH THE CONSTRUCTION PROCESS. PROVIDE AT LEAST 48 HOURS NOTICE:

- COMPLETION OF PRIMARY WEED TREATMENT
- COMPLETION OF SECONDARY WEED TREATMENT
- COMPLETION OF PLANTING SETOUT
- COMMENCEMENT OF PLANTING.

PROJECT: REHABILITATION PLAN
DRAWING TITLE: SPECIFICATION

REV	DESCRIPTION	DATE	DRAWN	DESIGN	CHECKED
01	FOR APPROVAL	06.07.21	AH	AH	JA
02	FOR APPROVAL	19.07.21	AH	AH	LT

JOB NO: J7148	DWG NO: J7148_510
CLIENT: NSPT Pty Ltd	

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Level 1 2247 Gold Coast Hwy
PO Box 206
Nobby Beach QLD 4218
Telephone: 07 5526 1500
ABN: 20 099 261 711
Email: admin@planitconsulting.com.au