

BUSH FIRE ASSESSMENT REPORT

**-East Maitland Land 62 Pty Ltd-
Proposed residential subdivision
Part Lot 141 & 142, Lot 8 Mt Vincent Rd & Wilton Drive
East Maitland**



PREPARED BY:



JULY 2024



PEAK LAND MANAGEMENT

Land management consulting services:

-Bush Fire-

-Ecological-

-Environmental-

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Cover Photo: View of subject site.

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Document History

Document Id.	Prep. Date	Version	Submitted to:
Bush Fire Assessment Report	14.5.24	1	Tibor Kovats, Brad Everett, Hunter Land
Bush Fire Assessment Report	17.7.24	2	Tibor Kovats, Brad Everett, Hunter Land
Bush Fire Assessment Report	25.7.24	3	Tibor Kovats, Brad Everett, Hunter Land

AUTHOR DETAILS

Ted Smith is the director of PEAK LAND MANAGEMENT. He is a qualified Land Management Consultant with a Bachelor of Science Honours Degree in Physical Geography. He has over 25 years experience commercially consulting with PEAK LAND MANAGEMENT PTY LTD and working within state government.

Ted has completed a Graduate Diploma in Design for Bush Fire Prone Areas from the University of Western Sydney and is a member of the Fire Protection Association of Australia (FPA of Australia), being a BPAD Accredited Bush Fire Practitioner Level 3.

CERTIFICATION

Ted Smith of PEAK LAND MANAGEMENT has carried out a Bush Fire Assessment including a site inspection on the subject property. A detailed Bush Fire Assessment Report is attached which includes the submission requirements set out in *Planning for Bush Fire Protection 2019* together with recommendations as to how the relevant specifications and requirements are to be achieved.

I hereby certify, in accordance with Section 4.14 of the *Environmental Planning and Assessment Act 1979 No 203*:

1. That I am a person recognised by the *NSW Rural Fire Service* as a qualified consultant in Bush Fire Risk Assessment; and
2. That subject to the recommendations contained in the attached Bush Fire Assessment Report the proposed development conforms to the **relevant specifications and requirements** being the document entitled *Planning for Bush Fire Protection* prepared by the NSW Rural Fire Service in co-operation with the Department of Planning and any other document as prescribed by Section 4.14 of the *Environmental Planning and Assessment Act 1979 No 203*.



24th July, 2024

Signature

Date



1.0 INTRODUCTION

PEAK LAND MANAGEMENT has been engaged by East Maitland Land 62 Pty Ltd to prepare a Bush Fire Assessment Report for a proposed residential subdivision over land located part Lots 141 & 142 DP 1225076/ 62 Mount Vincent Road & Lot 8 DP 855275/ 6 Wilton Drive, East Maitland (referred to hereafter as “subject site”).

Figures 1-4 & 6 show the subject site location, topographic map, and proposed development site plans, and Appendix 1 shows photos of the subject site.

Under the *Environmental Planning and Assessment Act, 1979* (and its regulations), and the *Rural Fires Act 1997* (and its regulations), councils are required to assess and control new developments in Bush Fire prone areas. This land has been assessed as being part of a Bush Fire Prone Area as mapped by Council (Figure 10).

This subdivision development falls under Section 100B of the *Rural Fires Act 1997* (and its regulations) for the subdivision which requires integrated development approval/ Bush Fire Safety Authority from the Rural Fire Service. PBP 2019 states that a residential subdivision falls under Section 100B of the Rural Fires Act. It should have required Asset Protection Zones, adequate access, water, and services as stated under the Act.

This report has been prepared in accordance with “*Planning for Bush Fire Protection (PBP) 2019*” guidelines. Clause 46 of the *Rural Fires Regulation 2002* sets out these requirements, which are addressed in this report. A Bush Fire Assessment Report is required showing the current situation and recommending how the risk may be ameliorated, so consideration may be shown by Council and Rural Fire Service regarding the approval of the proposed subdivision.

A performance based solution is shown regarding secondary access.




Figure 1a: Aerial photo showing subject site (imagery from Lands Department). North to top of all images.

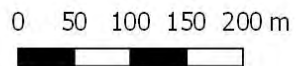


Figure 1b: Aerial photo showing subject site & proposed subdivision (imagery from Nearmap). North to top of all images.



Legend

-  Subject site
-  Lot layout 16th July 2024
-  Creek line



North



Imagery from nearmap, 23rd Jan, 2023
Projection: GDA 94/MGA zone 56



Note: Cadastre & GPS may be subject to inaccuracy

Figure 2: Topographic map showing subject site (imagery from Lands Department)

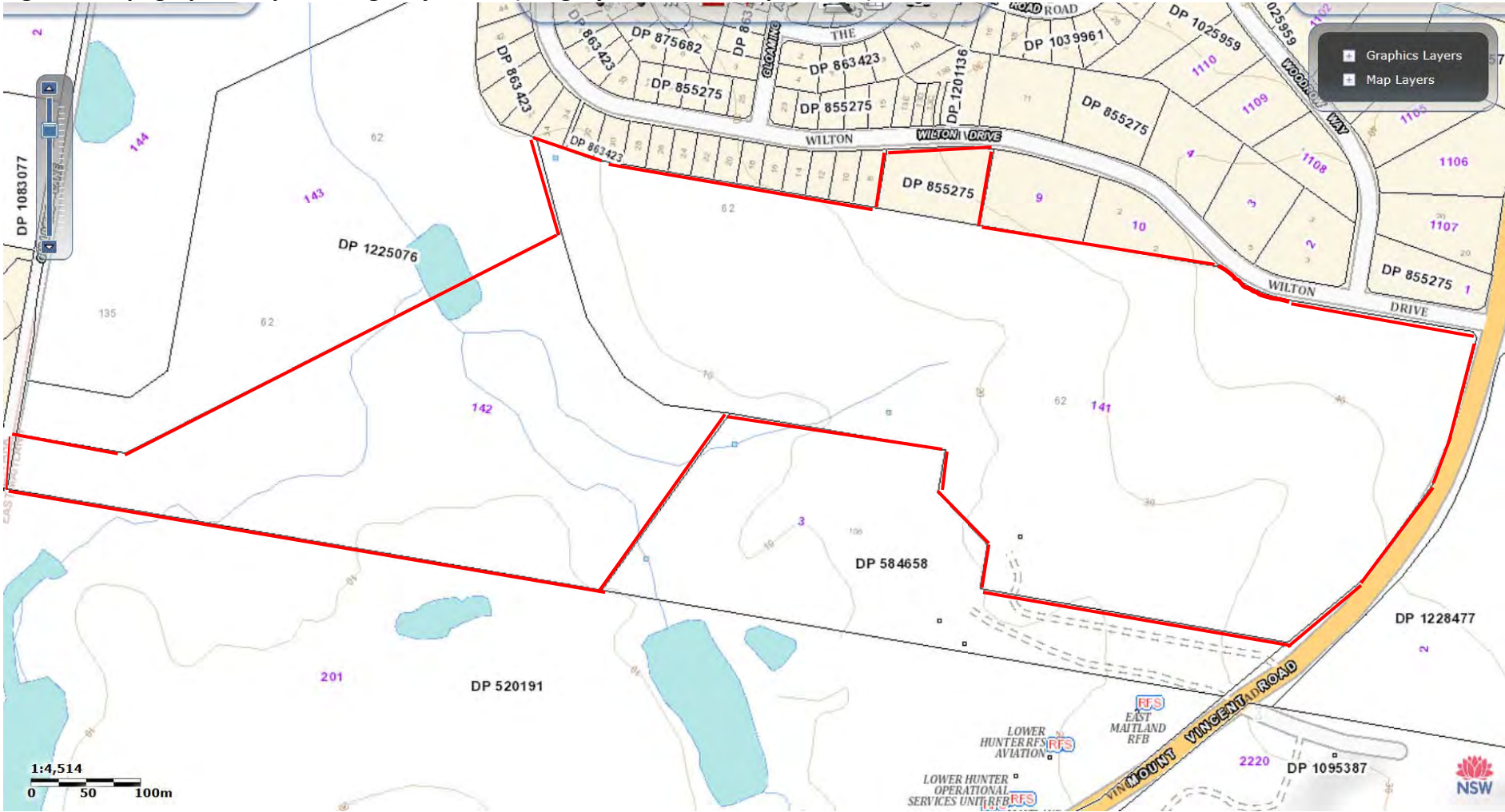


Figure 3a: Proposed residential subdivision (from High Definition Design, dated 16.7.24)



Figure 3b: Proposed residential subdivision (from High Definition Design, dated 16.7.24) enlarged to see detail.

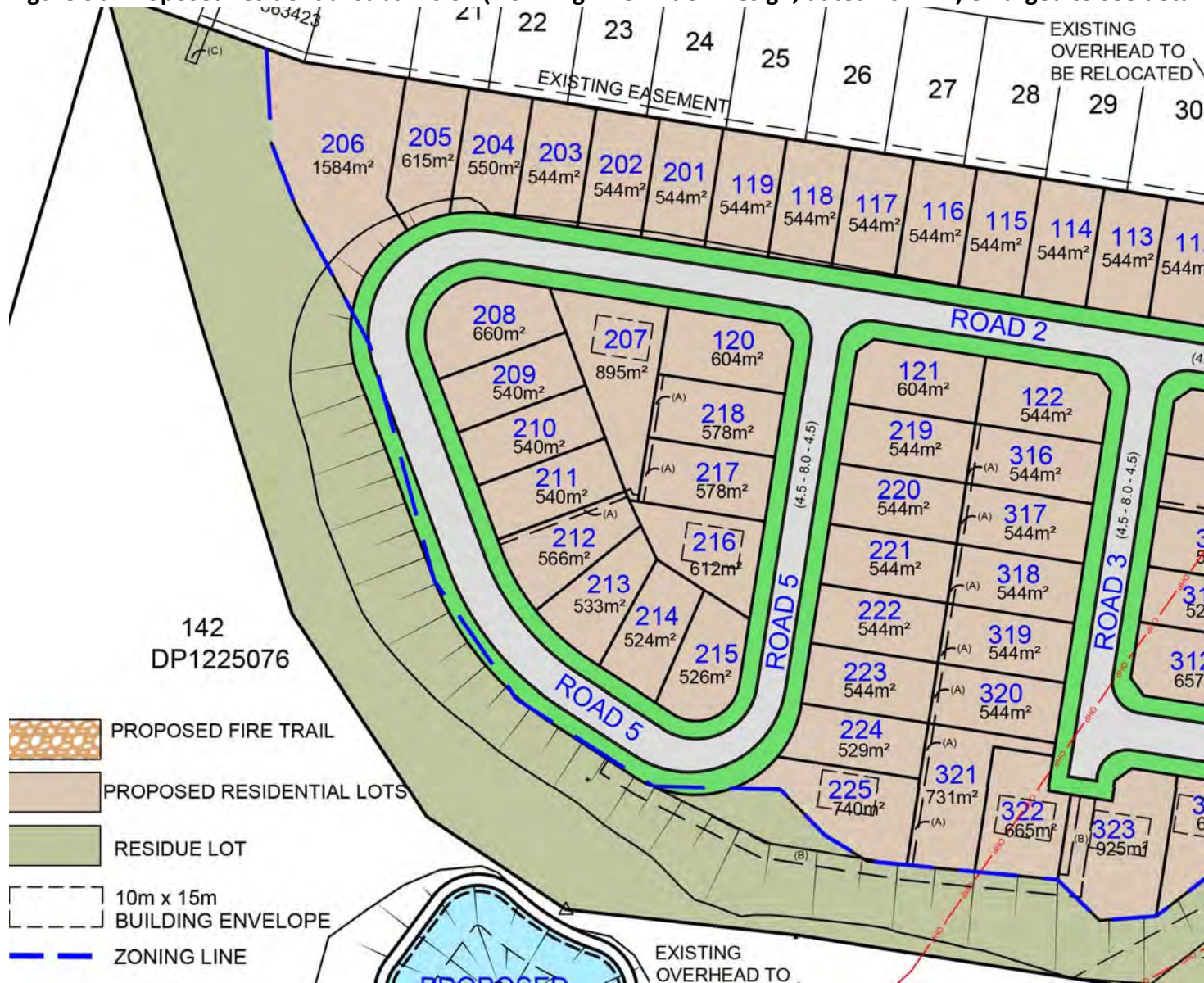


Figure 3c: Proposed residential subdivision (from High Definition Design, dated 16.7.24) enlarged to see detail.

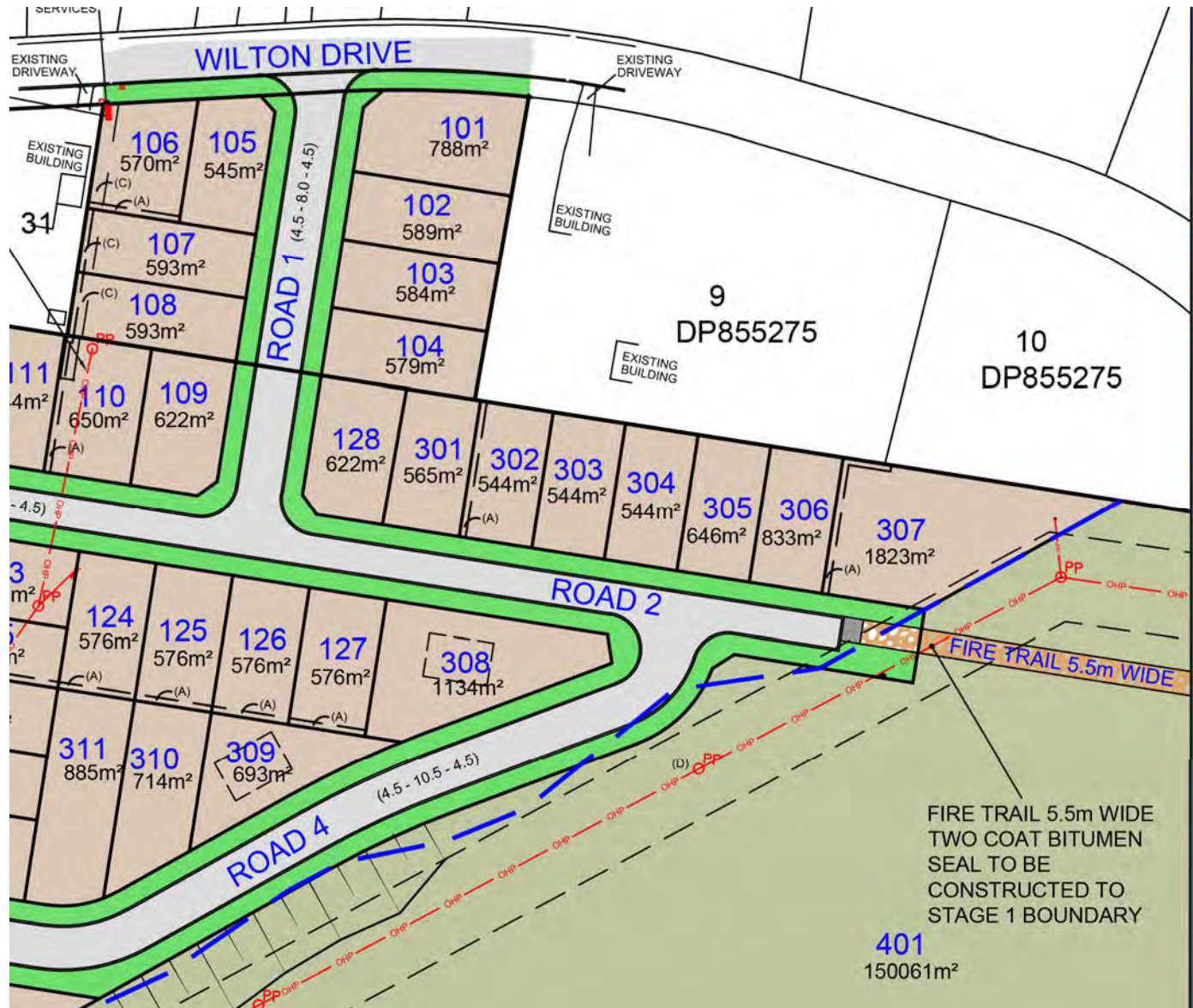


Figure 3d: Proposed residential subdivision (from High Definition Design, dated 16.7.24) enlarged to see detail.

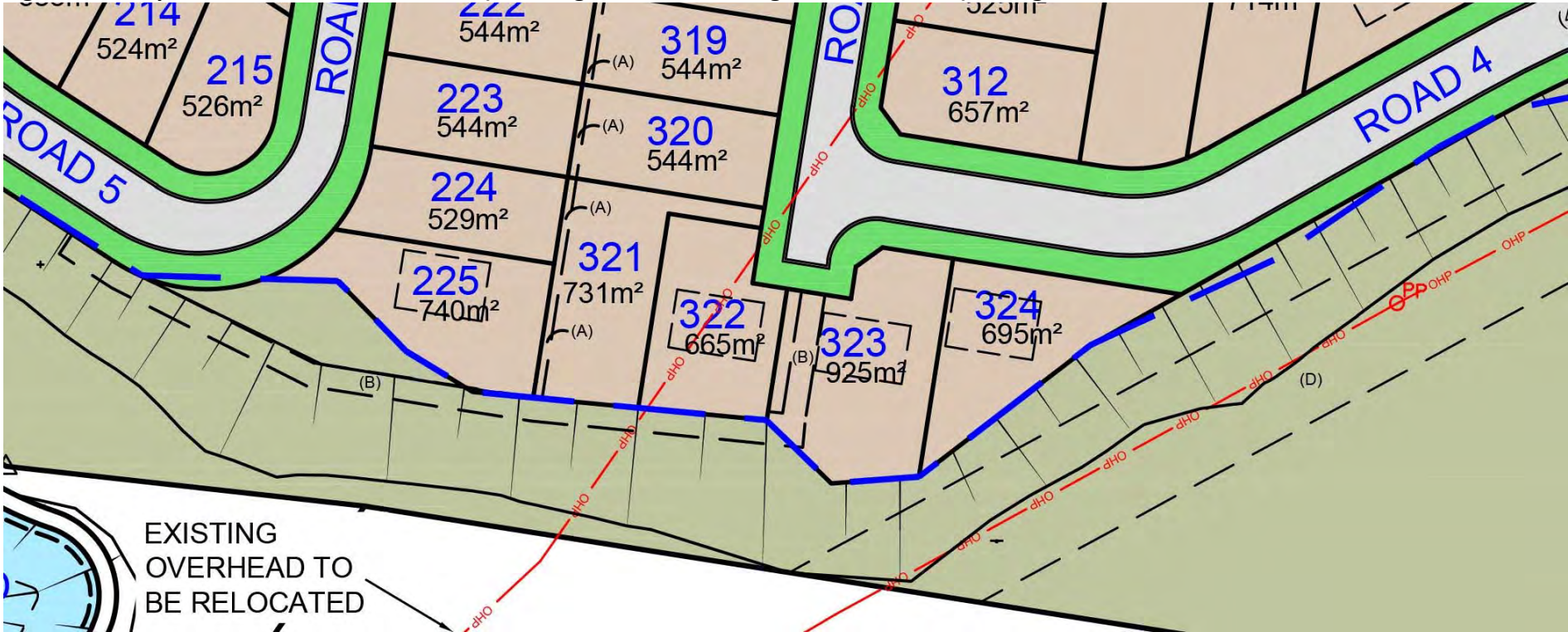


Figure 3e: Proposed residential subdivision (from High Definition Design, dated 16.7.24) showing PBP, 2019 road classification.



Figure 4: Proposed residential subdivision (lot layout from HDD, dated 16.7.24)

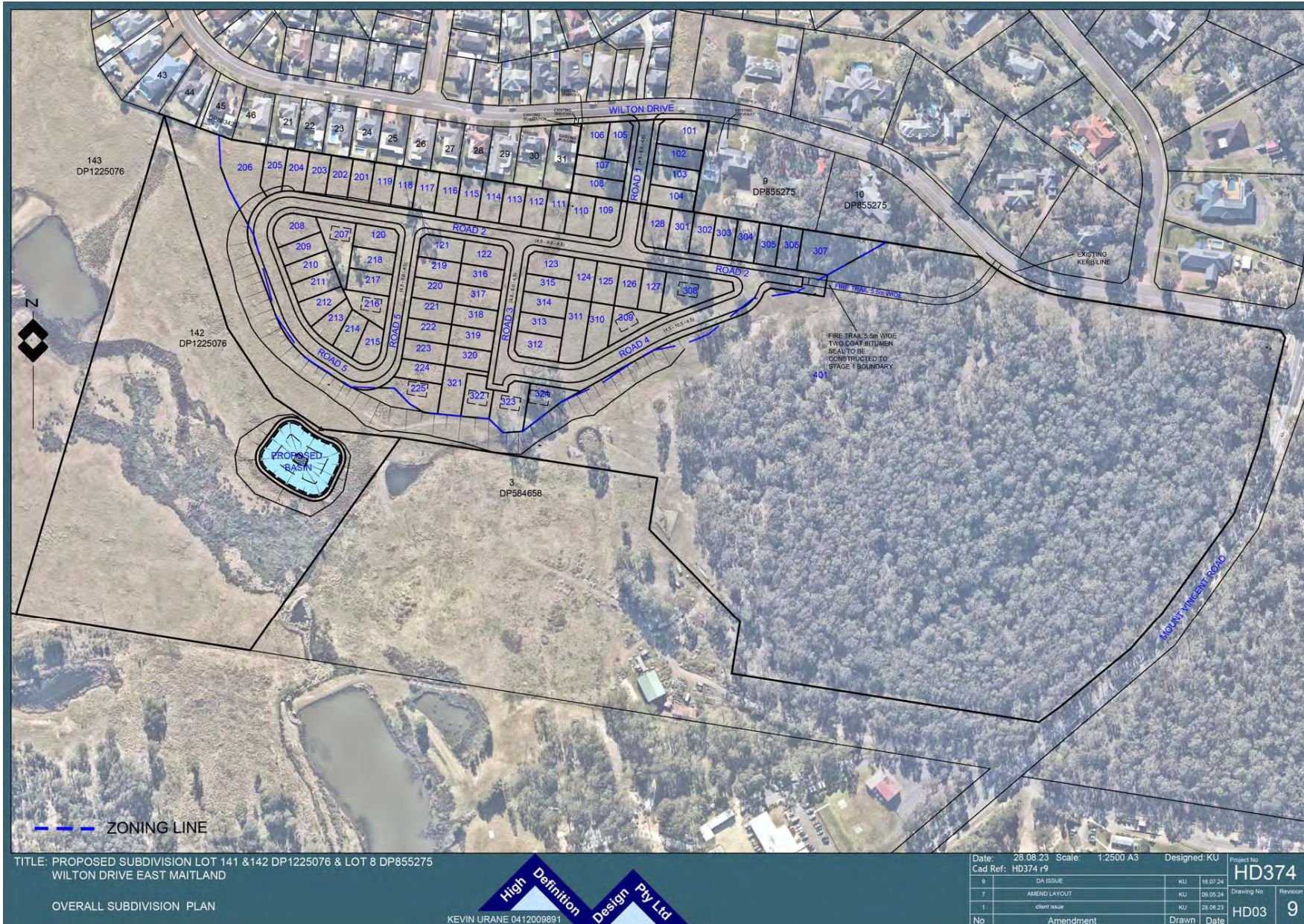


Figure 5: Subdivision staging plan (from HDD, dated 16.7.24)

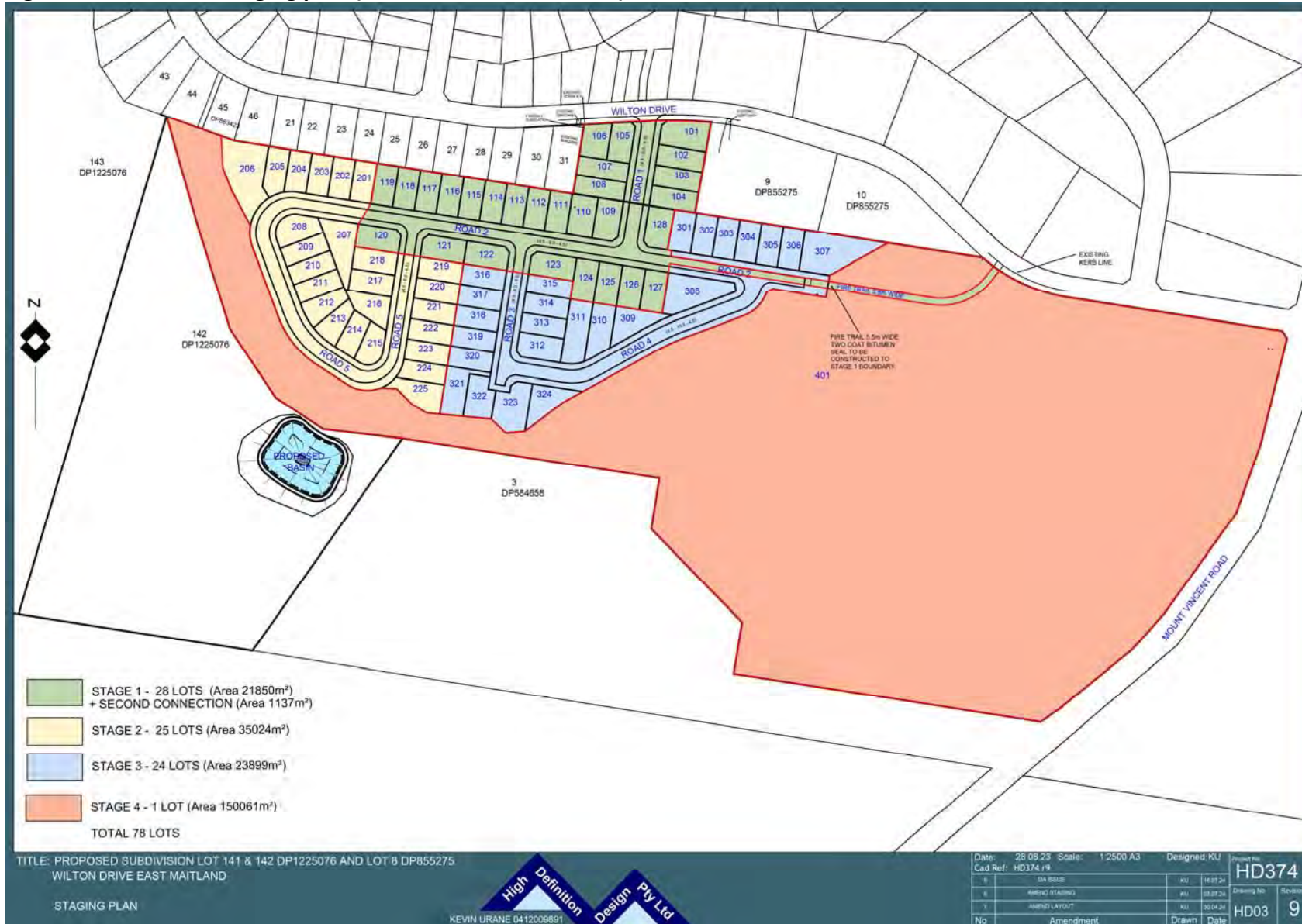


Figure 6: Zoning map (from NSW Planning Portal Spatial Viewer, 2024)

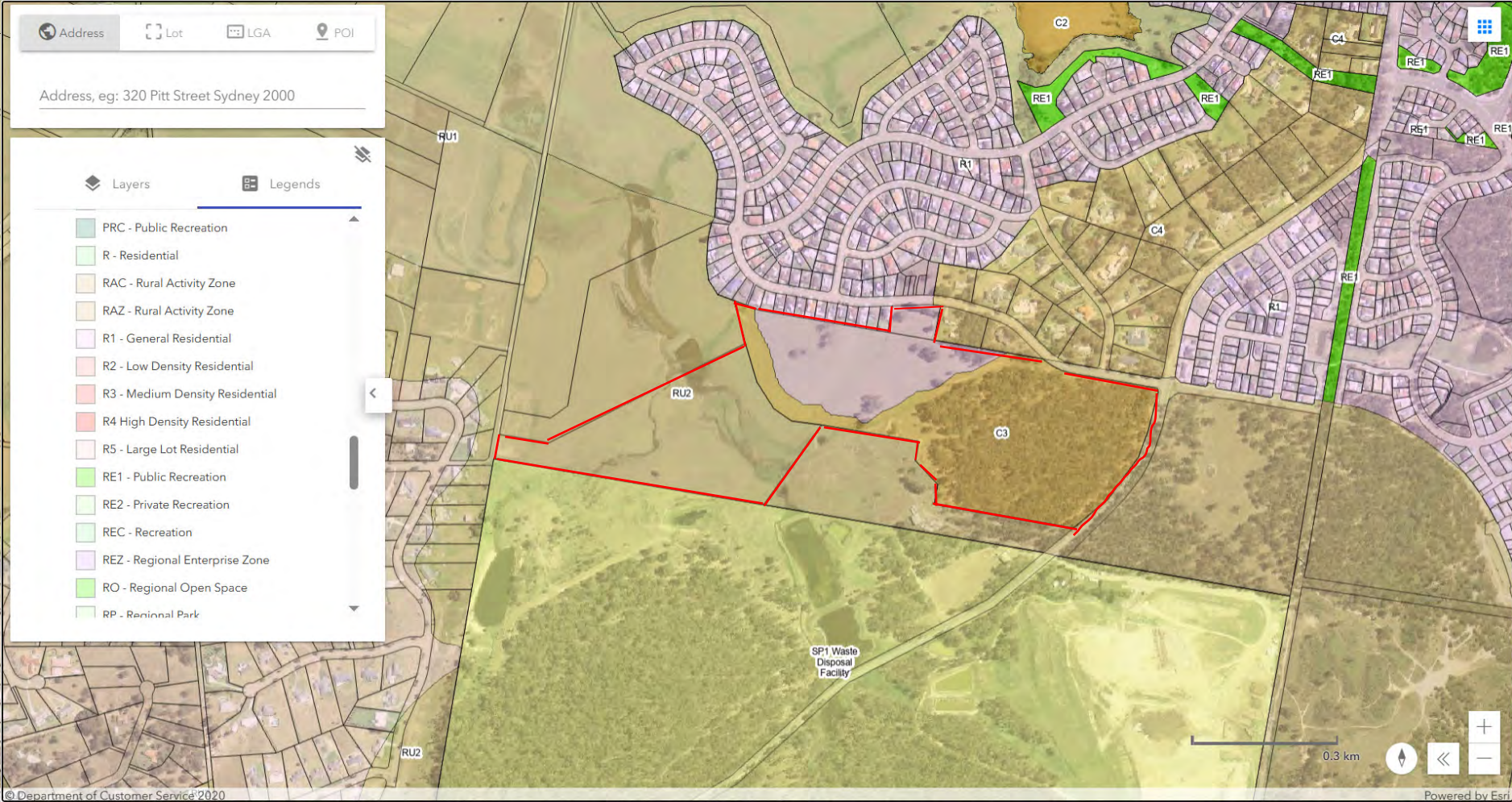
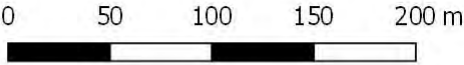


Figure 7: Slope (1m & 10m contours) over site & within 100m



Legend

-  Subject site
-  Creek line
-  Lot layout 16th July 2024
-  Contour- 10m CI
-  Contours - 1m CI



Imagery from nearmap, 23rd Jan, 2023
Projection: GDA 94/MGA zone 56



Note: Cadastre & GPS may be subject to innaccuracy

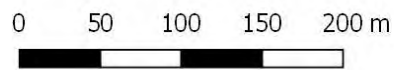


Figure 8: Vegetation assessment within 140m



Legend

- Subject site
- Creek line
- Lot layout 16th July 2024
- BTA 140m
- BTA-Grassland
- BTA Freshwater Wetland
- BTA- Category 3 Vegetation
- Managed Land
- BTA-Forest



North



Imagery from nearmap, 16th June 2024
Projection: GDA 94/MGA zone 56



Note: Cadastre & GPS may be subject to innaccuracy

Figure 9: Proposed subdivision with Asset Protection Zone



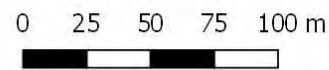
Legend

- Subject site
- Lot layout 16th July 2024
- BTA Freshwater Wetland
- BTA-Forest
- BTA- Category 3 Vegetation
- BTA Grassland
- Asset Protection Zone
- Creek line
- ↔ Asset Protection Zone width

North



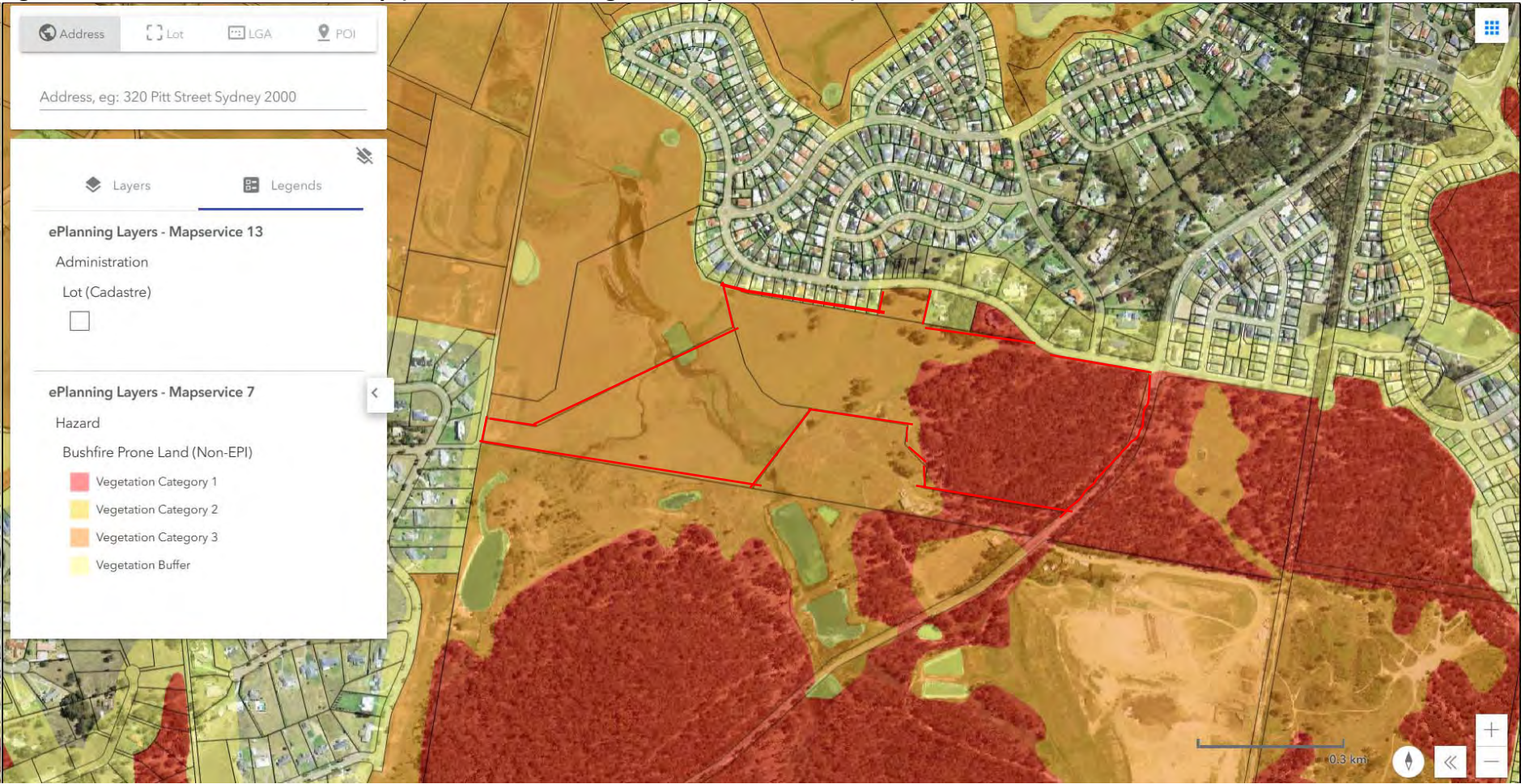
Imagery from nearmap, 16th June 2024
Projection: GDA 94/MGA zone 56



Note: Cadastre & GPS may be subject to inaccuracy



Figure 10: Bush Fire Prone Land Map (from NSW Planning Portal Spatial Viewer)



2.0 SITE DESCRIPTION AND SURROUNDING LANDUSE

The proposed residential subdivision development concept development is shown in Figures 5a & 5b. The subject development site is predominantly cleared, and used for cattle grazing.

The site is located in a rural area, on the edge of East Maitland residential area. It is around 8.5Ha in extent. A rural residential subdivision is located to the north. Forest occurs to the east, and the Lower Hunter Rural Fire Service Control Centre to the south-east. Rural land occurs to the south and west is grazed.

The subject site is located in a residential infill area, zoned R1 (Fig 6) accessed from sealed public roads, with an internal two way through road system, and a secondary access fire trail.

The development is proposed to be staged, with stages 1-3 the subject of this report. Stage 4 is subject to rezoning, and all vegetation where not managed is assessed as a hazard over Stage 4 for the purposes of this DA/BF Report.

An electricity easement occurs over the subject site which will be retained and comprises regularly slashed managed land. It is included within the Asset Protection Zone. It maintains grass cover <100mm in height at all times.

3.0 VEGETATION

The predominant vegetation type within 140m is Forest, Freshwater Wetland Grassland and Category 3 Vegetation as per PBP 2019 (Figure 8, Appendix 1 - photos).

Dry sclerophyll forest occurs over the eastern part of the subject site. Trees are up to 25m in height, with a shrub understorey.

Land to the west and south of the proposed subdivision is grassed and grazed, with Grass >100mm in height and assessed as Grassland in accordance with RFS policy/PBP, 2019.

Land to the north of the subject site is private residential land & managed curtilage, and not assessed as a hazard.

Freshwater wetland occurs over permanently inundated/or predominantly inundated lands to the south, including a proposed detention basin. It is dominated by wetland sedges and grasses.

Category 3 Vegetation being a mix of scattered trees with shrub/part slashed managed electricity easement occurs to the east of Lot 307. It is disconnected from the main Forest to the south by a proposed fire trail (to be cleared), and electricity easement 15m wide which is regularly slashed and managed.

4.0 SLOPE

Slope assessment has been carried out around the subject site under hazardous vegetation out to 100 metres as specified under the Guidelines Assessment Procedure. The angles have been measured in the field by an inclinometer.

PBP, 2019 states: - *“The effective slope is considered to be the slope under the vegetation which will most significantly influence the bush fire behaviour for each aspect. This is usually the steepest slope. In situations where this is not the case, the proposed approach must be fully justified. Vegetation located closest to an asset may not necessarily be located on the effective slope”.*

Figure 7 shows 1m & 10m contour interval.

5.0 ENVIRONMENTAL FEATURES

All forest/woodland/scattered trees with native understorey over the subject site, is considered to be an Endangered Ecological Community – *Lower Hunter Spotted Gum Ironbark Forest*.

An ecological assessment /BDAR has been undertaken by Wildthing Pty Ltd which was not available at time of writing. Hollow bearing habitat trees are located over the site, proposed for removal.

6.0 ABORIGINAL FEATURES

ACM Landmark (2019) state: *“An Aboriginal Heritage Information Management System (AHIMS) Search has been conducted which has revealed that no Aboriginal sites or places have been declared/recorded within or near the site”.* The site is located in a rural area with a history of rural land use, and is almost completely cleared where the development is proposed.

7.0 BUSH FIRE ASSESSMENT

The legislation as it relates to this site calls for asset protection zones (APZ) to be established around the proposed development, provision of adequate access, design staging and citing of the development and provision of appropriate water supply for bush fire fighting purposes.

7.1 Setbacks including asset protection zones

Table 1 shows the Bush Fire site assessment for the subject site. The Asset Protection Zone is shown in Fig 9.

An Asset Protection Zone is required over the subject land under PBP 2019 (Table A1.12.2), to provide protection from possible bush fire attack from the wetland for the proposed residential dwellings. The Asset Protection Zone over the subject site will include recreational communal mown grassland, perimeter roads (sealed), managed electricity easement, & gardens/managed backyards, and other residential curtilage (Fig 11 example).

Note: A 24m Asset Protection Zone is provided to the south-east in excess of that required for Grassland as this area has adjoining Forest, and unknown future vegetation management.

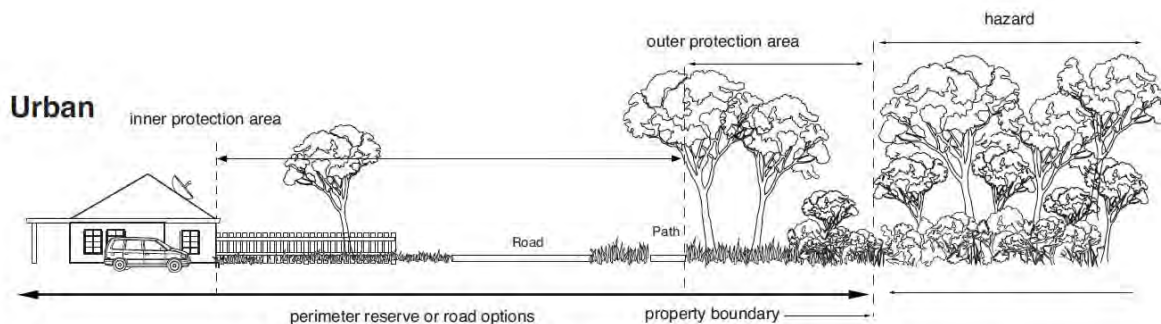
Table 1: Bush Fire Site Assessment- FDI 100

DIRECTION TO BUSH FIRE HAZARD	EFFECTIVE SLOPE	PREDOMINANT VEGETATION TYPE WITHIN 140m as per PBP 2019	Distance to hazard (from nearest proposed dwellings over subdivision)	Required minimum Asset Protection Zone (Table A1.12.2 PBP,2019)
South	0-5 ⁰ downslope	Grassland	Variable - 17m min	12m ✓
		Freshwater Wetland	66m	6m ✓
West	0-5 ⁰ downslope	Grassland	Variable - 32m min	12m ✓
South-east	Upslope	Forest	Variable - 54m	24m ✓
	0-5 ⁰ downslope	Grassland	24m	12m ✓
South-east (of Lot 307)	0-5 ⁰ downslope	Forest	29m	29m- ✓
East (of Lot 307)	Upslope	Category 3 Vegetation	11m	11m ✓

Note: BAL refers to the maximum Bush Fire attack level expressed in kW/m² radiant heat flux exposure for the given slope, distance to hazard, and type of hazard (ie vegetation type and fuel load).

A lowering of one BAL is supported by PBP 2019 where the building/other buildings/landforms, is set back sufficiently to achieve the next lower BAL as described in PBP, 2019. This is not applicable in this case.

Figure 11: Asset Protection Zone example (from PBP, 2006)



7.2 Water supplies and utilities

The subject site will be serviced by reticulated town water supplies, and fire hydrants. There are currently water mains and hydrants located over Mt Vincent Road and Wilton Drive.

The proposal will provide adequate reticulated water supply, and fire hydrants to be provided in accordance with PBP 2019 & AS 2419.1-2005, including blue cats eyes markers and signage.

The development will be serviced by underground electricity, in accordance with PBP 2019.

7.3 Access

Wilton Drive is a public two way sealed crown road. It joins with Mt Vincent Rd, a major sealed two way through regional road.

The proposed development would be accessed from Wilton Drive, by a primary access road, located over & surrounded by managed residential land. The main access road is regarded as a perimeter road, and will be an 8m wide sealed carriageway (with no parking allowed on road). This allows two way access/egress and conformation with PBP, 2019 requirements.

All roads will conform to PBP 2019. Figure 3e shows the PBP 2019 road classification /designation. Perimeter road widths shall be a minimum 8m wide carriageway, with additional width for parking if required in accordance with Table 5.3b, PBP 2019 (Perimeter Roads), or if not provided “No Parking” stipulated on these perimeter roads to ensure 8m wide clear carriageway at all times in conformance with PBP, 2019. This allows two way access/egress amongst other requirements. Note Road 5 is 10.5m carriageway width.

Other internal roads are through roads, sealed, minimum 5.5m wide clear carriageway, and meet other requirements as per Table 5.3b, PBP 2019 (Internal Roads).

As there are more than three allotments proposed, secondary access is required under Table 5.3b PBP, 2019. PBP states “ *subdivisions of three or more allotments have more than one access in and out of the development*”. PBP also states “ *where access/egress can only be achieved through forest, woodland and heath vegetation, secondary access shall be provided to an alternate point on the existing public road system*”.

A secondary fire trail access road is proposed which is considered a performance or alternate solution, as not considered to comply with PBP, 2019 requirements, although PBP, 2019 is unclear in this instance and does not specify type/specifications of road. It is addressed in Table 1. Consultation has occurred with NSW RFS about this proposed access arrangement on the 16th July, 2024.

In this case an alternate solution is presented to justify the secondary access fire trail (Table 2). It has been increased in width, and sealed, over that stated within PBP, 2019 for a property access road. It will be constructed as part of Stage 1 works.

Table 5.3b PBP, 2019 states in regard to access: *Intent of measures: to provide safe operational access to structures and water supply for emergency services, while residents are seeking to evacuate from an area.*

Table 2: Performance based solution - access

PERFORMANCE CRITERIA (Table 5.3b PBP, 2019)	ACCEPTABLE SOLUTIONS (Table 5.3b PBP, 2019)	PERFORMANCE BASED SOLUTION
Firefighting vehicles are provided with safe, all-weather access to structures.	property access roads are two-wheel drive, all-weather roads;	✓ Fire trail shall be sealed bitumen, 5.5m carriageway, two-wheel drive, all-weather road.
	perimeter roads are provided for residential subdivisions of three or more allotments;	✓ Perimeter road provided. Some limited lots have no perimeter road, however adjoining Grassland which is also grazed in this area & have an Asset Protection Zone present that provides <29kw radiant heat exposure for proposed future dwellings.
	subdivisions of three or more allotments have more than one access in and out of the development;	✓ A secondary fire trail access road provided, to be constructed at Stage 1.
	traffic management devices are constructed to not prohibit access by emergency services vehicles;	✓ A locked gate will be present near Wilton Drive over the secondary access fire trail. Keys are to be retained by the local RFS.
	maximum grades for sealed roads do not exceed 15 degrees and an average grade of not more than 10 degrees or other gradient specified by road design standards, whichever is the lesser gradient;	✓ Maximum grade is 9.6 degrees.
	all roads are through roads;	✓
	dead end roads are not recommended, but if unavoidable, are not more than 200 metres in length, incorporate a minimum 12 metres outer radius turning circle, and are clearly sign posted as a dead end;	✓
	where kerb and guttering is provided on perimeter roads, roll top kerbing should be used to the hazard side of the road;	✓
	where access/egress can only be achieved through forest, woodland and heath vegetation, secondary access shall be provided to an alternate point on the existing public road system; and	✓ Primary access is over managed land. In confirmation with RFS consultation advice a secondary access is provided.
	one way only public access roads are no less than 3.5 metres wide and have designated	N/A

	parking bays with hydrants located outside of these areas to ensure accessibility to reticulated water for fire suppression.	
The capacity of access roads is adequate for firefighting vehicles.	the capacity of perimeter and non-perimeter road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes); bridges/causeways are to clearly indicate load rating.	✓ Sealed roads, no bridges or causeways proposed.
There is appropriate access to water supply.	hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression;	✓
	hydrants are provided in accordance with the relevant clauses of AS 2419.1:2005 - Fire hydrant installations System design, installation and commissioning; and	✓
	there is suitable access for a Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available.	✓

7.4 Construction standards

The proposed dwellings would be constructed to the relevant BAL's dependant on their location and setback to hazard, as shown in Table 2. In this case dwellings >50m from the Grassland hazard, and > 100m from the Forest hazard, will be BAL LOW.

The Asset Protection Zones have been designed to ensure all dwellings are BAL 29 or lower, in accordance with PBP 2019 (Table A1.12.5).

7.5 Other fire protection measures

Recommendations are made below to address further non compulsory bush fire protection measures.

8.0 BUSH FIRE RECOMMENDATIONS

The development complies with PBP, 2019:

- ❑ Serviced by reticulated water supplies- complies with PBP, 2019.
- ❑ Serviced by above & underground electricity power- complies with PBP, 2019
- ❑ Serviced by public road, and internal primary access road, and secondary access fire trail - Alternate solution presented, subject to NSW RFS approval.
- ❑ Asset Protection Zone - An Asset Protection Zone is provided over the subject site and surrounding curtilage - complies with PBP, 2019.
- ❑ Future dwellings shall comply with AS 3959 & PBP, 2019 - complies with PBP, 2019.
- ❑ Landscaping- The Landscape Plan (Appendix 2) is considered to comply with the principles of Appendix 4 Asset Protection Zone requirements of 'Planning for Bush Fire Protection 2019'.

The following recommendations are made:

- **Design and Construction:** - The intent of measures is that buildings are designed and constructed to withstand the potential impacts of bush fire attack. To achieve this, the following conditions are recommended:
 - A separate Bush Fire Report/BAL Certificate shall be prepared for each lot/dwelling once sold & new owner has prepared a DA /site plan. Lots located >50m from Grassland and >100m from Forest will be BAL LOW.
 - The requirements of AS 3959-2018 apply in regards to construction, in accordance with the National Construction Code (NCC), except as modified by Section 7.5 of PBP, 2019.

- **Asset Protection Zone:** - The intent of measures is to provide sufficient space and maintain reduced fuel loads to ensure radiant heat levels at the buildings are below critical limits and prevent direct flame contact. To achieve this, the following conditions are recommended:
 - At the commencement of building works and in perpetuity a variable width Asset Protection Zone should be provided/maintained to the required distances as shown in Figure 9 and Table 1. The APZ shall be managed to an Inner Protection Area Asset Protection Zone as outlined within Appendix 4 of Planning for Bushfire, 2019 (example in Fig 11). The Asset Protection Zone should be delineated on all plans, and a covenant or similar legal encumbrance placed over the land clearly showing its location and restriction upon title of land.

PBP 2006 states the APZ *“should consist of mown grass, concrete, pavers, pebbles, small clumps of vegetation, isolated trees, etc. Lawns and garden should be maintained so that they do not become overgrown, vegetation does not grow over or touch the dwelling, and canopy of trees do not touch or become continuous with the surrounding bushland (at least 2-5 metres between tree canopies & 15% canopy cover).*

- **Access:-** The intent of measures is to provide safe operational access to structures and water supply for emergency services, while residents are seeking to evacuate from an area. To achieve this, the following conditions should apply:
 - All perimeter, internal & secondary access roads shall comply with Table 5.3b, PBP 2019 requirements.
 - In this case the proposed secondary access fire trail exceeds these requirements (for a property access road) and shall be sealed, with a 5.5m wide carriageway. As road <200m long a passing bay not required.
- **Water and Utilities:** - The intent of measures is to provide adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building. To achieve this, the following conditions should apply:
 - Water, electricity and gas shall comply with Table 5.3c of ‘Planning for Bush Fire Protection 2019’, and fire hydrants provided that comply with AS 2419.1-2005.

- **Landscaping:** - Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions.
 - All new fencing if within 6m of any proposed dwelling shall be non-combustible.
 - The Landscape Plan (Appendix 2) is considered to comply with the principles of Appendix 4 Asset Protection Zone requirements of 'Planning for Bush Fire Protection 2019'.

The bush fire risk is considered to be adequately managed through the recommendations made above, and meets PBP 2019, subject to assessment & approval conditions from the NSW Rural Fire Service/ Council.

Report prepared by:



Ted Smith BSc (Hons) BPAD-A Certified Bush Fire Practitioner -17671
PEAK LAND MANAGEMENT PTY LTD



DISCLAIMER: Whilst every effort is made to present clear and factual information based on fieldwork and current legislation no guarantee is made that the development or its occupants are safe from bush fire, or development will be approved, or to stated BAL, as this is in the hands of the approving statutory authorities/certifier. No warranty or guarantee, whether expressed or implied, is made with respect to the observations, information, findings and inclusions expressed within this report. No liability is accepted for losses, expenses or damages occurring as a result of information presented in this document.

9.0 REFERENCES

Auld, BA & Medd, RW 1987, *Weeds*. Inkata Press.

Brooker, MIH and Kleineg, DA. 2019. *Field Guide to Eucalypts – South Eastern Australia, Volume 1*. Blooming Books.

Building Code of Australia.

Fairley, A and Moore, P. 2000. *Native Plants of the Sydney District*. Kangaroo Press

Keith, D., 2012. *Ocean shores to desert dunes: the native vegetation of NSW and the ACT*. NSW Department of Environment and Conservation.

NSW Rural Fire Service, 2014. *10/50 Vegetation Clearing Code of Practice*. State of NSW.

NSW Rural Fire Service, 2019. *SHORT FIRE RUN Methodology for Assessing Bush Fire Risk for Low Risk Vegetation*.

NSW Rural Fire Service, 2019. *Planning for Bush Fire Protection Guidelines*.

Robinson, L. 2003 (3rd ed). *Field guide to the Plants of Sydney*. Kangaroo Press.

Standards Australia AS 3959-2018. *Construction of buildings in Bush Fire prone area*.

Websites

www.rfs.nsw.gov.au
Lands Department- SIX Maps
Maitland City Council
Nearmap

APPENDIX 1: PHOTOS OF SITE AND SURROUNDS

Wilton Drive to north of subject site.



Forested hazard to east predominantly upslope of proposal & secondary access road location



Subject site



Grassland & freshwater wetland to south of subject site



Grassland & freshwater wetland to south-west –grazed by cattle



Looking north from subject site towards Wilton Drive. These trees over proposed Site to be cleared STCA for access road & proposed lots



APPENDIX 2: LANDSCAPE PLAN (from Paul Scrivener, July 2024)



	Concrete		Couch turf (See detail sheet 2)		Planting symbols. Refer to schedule sheet 2
	Concrete footpath to Civil Engineer's details		Proposed Evergreen tree planting (See detail sheet 2)		Extent of work

Note : Identify all underground services prior to installation. Notify Project Manager prior to excavation or installation if any conflicts identified.

AMENDMENTS	
C	15.7.24
B	9.7.24 FOR DA
A	9.7.24 FOR REVIEW



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 PROJECT: PROPOSED RESIDENTIAL SUBDIVISION
 MOUNT VINCENT ROAD, EAST MAITLAND
 DWG: LANDSCAPE SITE PLAN

DATE: 15.7.24 SCALE: 1:750 @A1
 JOB REF: 24/2689

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Planting schedule (for sheet 1 layout)

Symbol	Botanical name	Common name	Cont. size	Staking	Mature height	No req.
Canopy trees						
CUP	<i>Cupaniopsis anacardioides</i>	Tuckeroo (small to medium native tree, Hardy street tree)	45Lt	2x50x50x1800	5-7.0M	39
FAA	<i>Fraxinus angustifolia</i>	Narrow Leaved Ash (Hardy deciduous street tree)	45Lt	2x50x50x1800	6-8.0M	43
TLL	<i>Tristania lusciosa</i>	Water Gum cultivar (indigenous small-med tree)	45Lt	2x50x50x1800	6-8.0M	42

Notes

All trees to be provided with written confirmation from the supplier for compliance to Natspec guidelines in compliance with A.S. 2003:2018. Planting schedule species to be sourced from local nurseries supplying plants of local provenance wherever possible.
 Landscape contractor is to check plant numbers on plan against the schedule prior to submitting tender price. Contact landscape architect if any number discrepancies are found.
 Council compliance controls require that any substitution of species variety or container size MUST be confirmed with landscape architect to ensure a compliance certificate can be issued that meets the specific development consent conditions of the approved development Species selected for their suitability to their specific locations and have demonstrated long term viability in the local region.

Indicative Images.

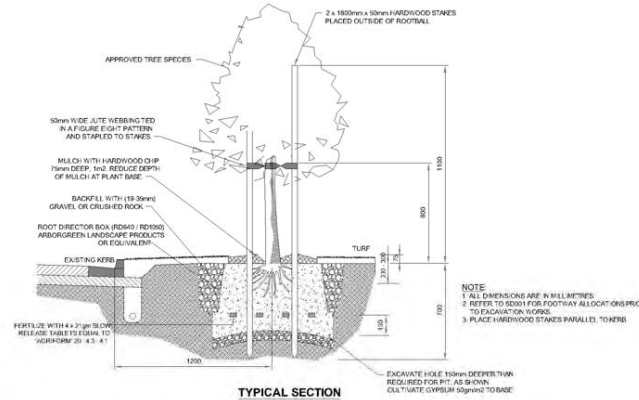


Detail 1. STREET TREE PLANTING DETAIL nts

Street tree planting notes

The street tree planting implementation is to apply the following maintenance specifications:

- No timber or steel edging is permissible
- Install root directors to manufacturer's specifications to protect assets, structures and/or underground services.
- Tree trunk to be a minimum 750mm from street kerb and guttering
- All imported soil to achieve the requirements of AS4119-Soils for landscaping. All tree planting holes are a minimum 1.5 times diameter & twice depth of the root ball. All mulch is to be free of deleterious material such as rock, soil, weeds & sticks.
- Mulch to be 75mm pine bark mulch
- All soft edges (mulch, turf, grassed) to be finished to appropriate falls and flush with adjacent surface treatment.
- Install Couch turf. Kikuyu is not accepted. Turf to consist of 25mm depth of dense, well rooted, vigorous grass growth with minimum 15mm on an average 100mm depth of top soil
- Tree staking to be 2x38x38x1800 mm hardwood stake 600mm into the ground. Secure the stem of the tree firmly with 2 x hessian ties fitted to the stem separately in opposite directions.

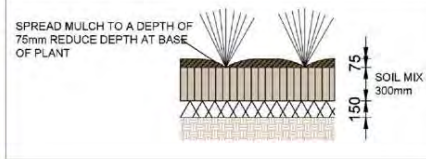


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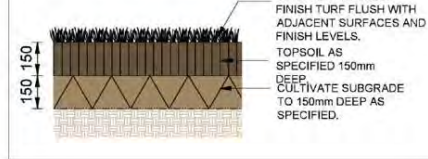
**STREET TREE PLANTING
 TYPICAL TREATMENT**
 MANUAL OF ENGINEERING STANDARDS - STANDARD DRAWINGS

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SD049
 SHEET 01 of 01

Detail 2. MASS PLANTING DETAIL



Detail 3. TYPICAL DETAIL - COUCH TURF



AMENDMENTS	DATE	FOR
C	15.7.24	
B	9.7.24	FOR DA
A	9.7.24	FOR REVIEW



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 DWG: DETAILS

DATE: 15.7.24 SCALE: 2 of 3
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Typical Basin Plan Species



Detention basin plan 1:300 @ A1

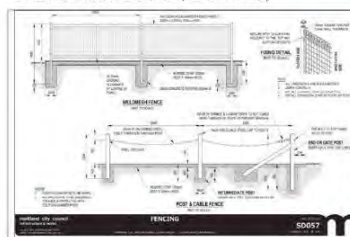


Bio detention area species list. (Plant as per detail 4)

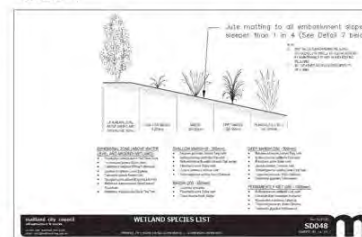
Symbol	Botanical name	Common name	Cont. size	Staking	Mature height	No req.
Ornamental grasses/strappy leaved plants						
DIC	Dianella caerulea	Blue Flax Lily (native grass like plant)	tubestock	nil	0.4M	400
ISN	Isoplepis (Fimicia) nodosa	Knobby Club Rush (native wet area ornamental grass)	140mm	nil	0.6M	250
JUN	Juncus usitatus	Common Rush (we are bog grass)	140mm	nil	1.0M	250
LOM	Lomandra longifolia	Spiny Mat Rush (Tall hardy grass like clumping plant)	140mm	nil	1-1.2M	40
MIC	Microlema stipoides	Weeping Meadow Grass (Mass planted external. Can be mowed)	seeded	nil	0.25M	1200
THE	Themeda australis	Kangaroo Grass (Native grass within detention basin)	seeded	nil	0.2M	1200
VH	Viola hederacea	Native Violets (native low groundcover)	tubes	nil	0.1M	600

Planting schedule species to be sourced from local nurseries supplying plants of local provenance wherever possible. Landscape contractor is to check plant numbers on plan against the schedule prior to submitting tender price. Contact landscape architect if any number discrepancies are found. Council compliance controls require that any substitution of species variety or container size MUST be confirmed with landscape architect to ensure a compliance certificate can be issued that meets the specific development consent conditions of the project.

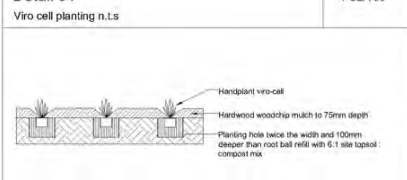
Detail 6: Fence & Gate Detail (Maitland Council)



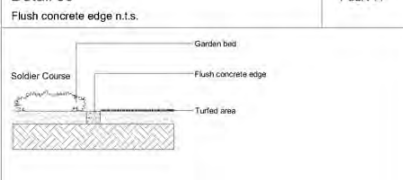
Detail 7:



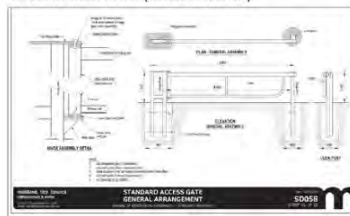
Detail 04



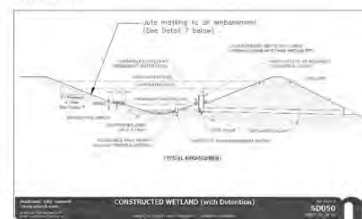
Detail 00



Detail 8: Gate detail (Maitland council).



Detail 9:



Concrete

Couch turf (See detail sheet 3)

Planting symbols

Proposed Evergreen tree planting (See detail sheet 2)

Detail # Sheet 2 & 3

Batter plants

AMENDMENTS

C	15.7.24	
B	9.7.24	FOR DA
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DWG: DETAILS

DATE: 15.7.24 SCALE: AS SHOWN

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