

# Bushfire Assessment Report

## *Proposed:* Concept Plan Approval Modification

*At:*  
Bevian Road,  
Rosedale

*Reference Number:* 231061B

**23 April 2025**



*Prepared By:*  
**Building Code & Bushfire  
Hazard Solutions Pty Limited**

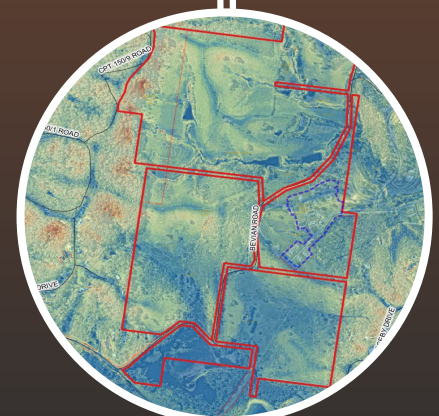
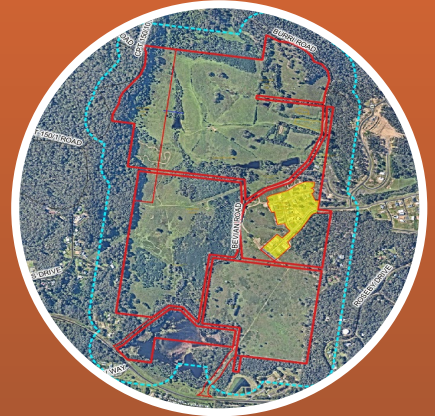
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Version Control				
Version	Date	Author	Reviewed by	Details
1	10/04/2024	Andrew Muirhead	Stuart McMonnies	Draft Report
2	08/05/2024	Andrew Muirhead	Stuart McMonnies	Final Draft
3	05/06/2024	Andrew Muirhead	Stuart McMonnies	Final Report
4	05/07/2024	Andrew Muirhead		Ecological Figure Update
5	23/04/2025	Andrew Muirhead	Stuart McMonnies	Concept Update / Response RFS Comments

## List of Abbreviations:

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APZ	Asset Protection Zone
AS3959	Australian Standard 3959 – 2018 as amended
BAL	Bushfire Attack Level
BPMs	Bushfire Protection Measures
BPLM	Bushfire Prone Land Map
Council	Eurobodalla Shire Council
DA	Development Application
EP&A Act	<i>Environmental Planning and Assessment Act - 1979</i>
ESD	Ecologically Sustainable Development
FRNSW	Fire and Rescue NSW
IPA	Inner Protection Area
NCC	National Construction Code
NP	National Park
NSP	Neighbourhood Safer Place
OPA	Outer Protection Area
PBP	<i>Planning for Bush Fire Protection – 2019</i>
ROW	Right of Way
RF Act	<i>Rural Fires Act - 1997</i>
RFS	NSW Rural Fire Service
SEPP	State Environmental Planning Policy
SFPP	Special Fire Protection Purpose
SWS	Static Water Supply

## Executive Summary:

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Building Code and Bushfire Hazard Solutions P/L has been commissioned to prepare an independent Bushfire Assessment Report to accompany a request seeking modification of a Concept Approval at Bevia Road, Rosedale.

The modification sought is from the Part 3A Concept Approval for a Community Title Subdivision for residential development and ancillary commercial and community facilities, ecological stewardship, public roads and open space areas yielding a total of 792 residential lots (reference number 05\_0199), to a Torrens title development that includes residential development and ancillary commercial facilities, public roads, public open areas and residual rural lot yielding a total of 792 residential lots inclusive of the 51 Torrens title residential lots recently constructed and registered as part of stage 1 (DA305/18).

Stage 1 of the Concept Approval for 51 Torrens title residential lots has received local development consent (DA305/18), with the infrastructure, including roads, recently constructed and subdivision now registered as DP1293369. **For the purposes of the modification stage 1 is excluded from further consideration**

The subject site is located within Eurobodalla Shire Council's local government area and zoned RU1: Primary Production, C2: Environmental Conservation, R2: Low Density Residential and C4: Environmental Living pursuant to *Eurobodalla Local Environment Plan 2012*.

The overall site comprises of ten (10) existing allotments, zoned RU1: Primary Production, C2: Environmental Conservation, R2: Low Density Residential and C4: Environmental Living pursuant to *Eurobodalla Local Environment Plan 2012*.

Properties considered to be affected by possible bushfire impact are determined from the local Bushfire Prone Land Map as prepared by Council and or the Rural Fire Service. Eurobodalla Shire Council's Bushfire Prone Land Map identifies the subject property as containing Category 1, 2 and 3 Vegetation and the Vegetation Buffer, therefore the subject site is considered 'bushfire prone'.

The subdivision of bushfire prone land which can be used for residential purposes is captured under section 100B of the *Rural Fires Act 1997*.

In this instance the minimum required APZ was determined from Table A1.12.2 of PBP and are shown in Attachment 1 of this report. The proposed allotments provide building envelopes with Asset Protection Zones achieving or exceeding the minimum requirements under PBP.

This report also responds to the NSW RFS referral comments to the Request for Secretary's Environmental Assessment Requirements for this matter (Ref DA20230825003757-SEARS-1, dated 20/9/23 and Ref: DA20230825003757-EIS & DA Exhibition-1, dated 29 October 2024).

The proposed modifications provide a better bushfire safety outcome when compared to the previous approved subdivision layout, by way of improved vehicles access and compliance with all relevant Bushfire Protection Measures set out in Planning for Bush Fire Protection 2019.

## 1.0 Introduction

Building Code and Bushfire Hazard Solutions P/L has been commissioned to prepare an independent Bushfire Assessment Report to accompany a request seeking modification of a Concept Approval at Bevia Road, Rosedale.

The modification sought is from the Part 3A Concept Approval for a Community Title Subdivision for residential development and ancillary commercial and community facilities, ecological stewardship, public roads and open space areas yielding a total of 792 residential lots (reference number 05\_0199), to a Torrens title development that includes residential development and ancillary commercial facilities, public roads, public open areas and residual rural lot yielding a total of 792 residential lots inclusive of the 51 residential lots recently constructed and registered as part of stage 1 (DA305/18).

The subject site comprises of ten (10) existing allotments that is legally identified as Lots 11, 29, 32, 72, 102, 119 and 213 DP 755902, Lot 2 DP 623340, Lot 52 DP 1293369 and Lot 2 DP 627034. The land is zoned RU1: Primary Production, C2: Environmental Conservation, R2: Low Density Residential and C4: Environmental Living and is located within Eurobodalla Shire Council local government area.

Properties considered to be affected by possible bushfire impact are determined from the local Bushfire Prone Land Map as prepared by Council and or the Rural Fire Service. Eurobodalla Shire Council's Bushfire Prone Land Map identifies the subject property as containing Category 1, 2 and 3 Vegetation and the Vegetation Buffer, therefore the subject site is considered 'bushfire prone'.

The subdivision of bushfire prone land which can be lawfully used for residential purposes is captured under section 100B of the *Rural Fires Act 1997*.

This report also responds to the NSW RFS referral comments to the Request for Secretary's Environmental Assessment Requirements for this matter (Ref DA20230825003757-SEARS-1, dated 20/9/23 and Ref: DA20230825003757-EIS & DA Exhibition-1, dated 29 October 2024).

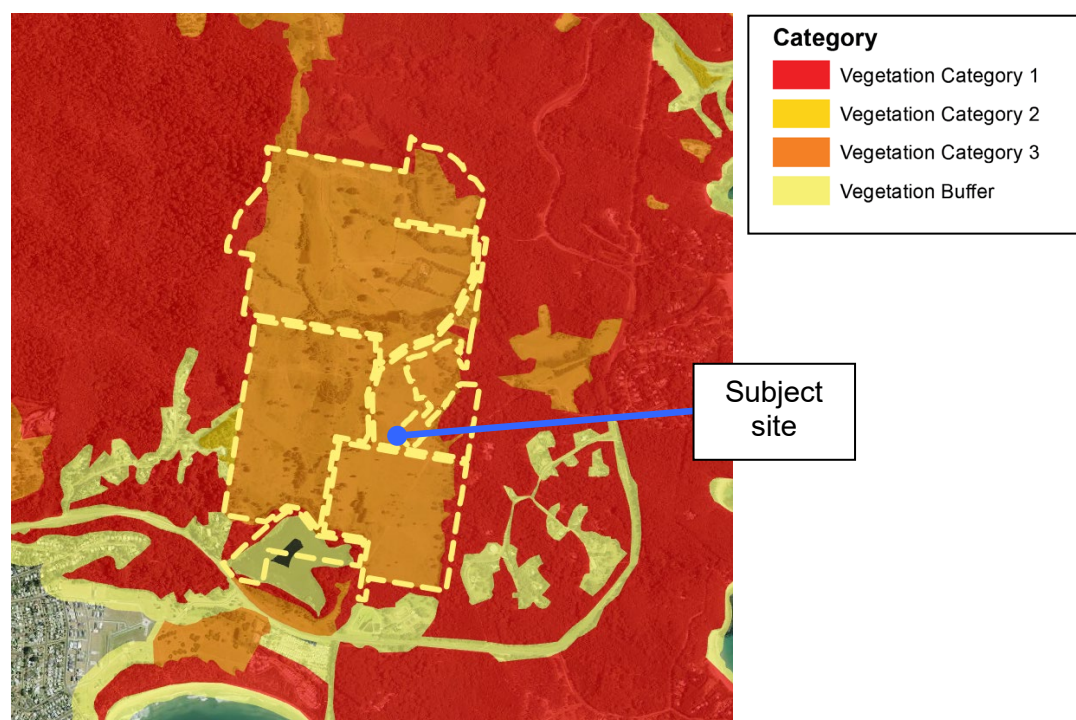


Figure 01: Extract from Eurobodalla Shire Council's Bushfire Prone Land Map

## 2.0 Legislative Requirements

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The site is subject to the following legislative provisions as it relates to bushfire planning and protection:

- *Environmental Planning & Assessment Act 1979*
- *Rural Fires Act 1997*
- *Rural Fires Regulation 2022*
- *Planning for Bush Fire Protection*

### 2.1 Rural Fires Act 1997

The subdivision of bushfire prone land which can be lawfully used for rural residential purposes is captured by section 100b of the *Rural Fires Act 1997*.

The future stages which seek consent to subdivide the land must obtain a Bush Fire Safety Authority from the Commissioner of the NSW Rural Fire Service (RFS).

### 2.2 Environmental Planning & Assessment Act 1979

Section 10.3 requires councils, where a Bush Fire Risk Management Plan applies, to record a bush fire prone land map after consulting with the Commissioner of the NSW Rural Fire Service (NSW RFS). The Commissioner will designate lands to be bush fire prone within an area and, when satisfied that the lands have been recorded on a map, certify the map as the Bush Fire Prone Land map.

As the proposal is subject to s.100B of the *Rural Fires Act 1997*, it is integrated development in accordance with s.4.46. This means that the proposed development requires authorization in respect of bush fire safety because of the subdivision of the land that is proposed to be lawfully used for residential purposes.

### 2.3 Rural Fires Regulation 2022

Section 45 sets out the relevant matters that must be considered when assessing a bushfire safety authority and includes an assessment of the proposal against Planning for Bush Fire Protection.

### 2.4 Planning for Bush Fire Protection

As the subject site is identified as being bushfire prone and the proposed development involves a residential subdivision the proposal is subject to the application of the relevant specifications and requirements of Planning for Bush Fire Protection.

The proposal is required to demonstrate that it achieves compliance with the following elements of PBP:

- Chapter 1 - Aim and Objectives
- Chapter 5 – Residential and Rural Residential Subdivisions

### 3.0 Purpose of Report

The purpose of this Bushfire Assessment Report is to provide the Rural Fire Service and Council with an independent bushfire assessment together with appropriate recommendations for both new building construction and bushfire mitigation measures considered necessary having regard to construction within a designated 'bushfire prone' area.

The recommendations contained within this report may assist in forming the basis of any specific construction conditions and/or bushfire mitigation measures that Council and/or the NSW Rural Fire Service may elect to place within any consent conditions issued for the subject Development Application.

### 4.0 Scope of this Report

The scope of this report is limited to providing a bushfire assessment and recommendations for the subject property. Where reference has been made to the surrounding lands, this report does not purport to directly assess those lands; rather it may discuss bushfire impact and/or progression through those lands and possible bushfire impact to the subject property.

### 5.0 Aerial view & Subdivision Plan

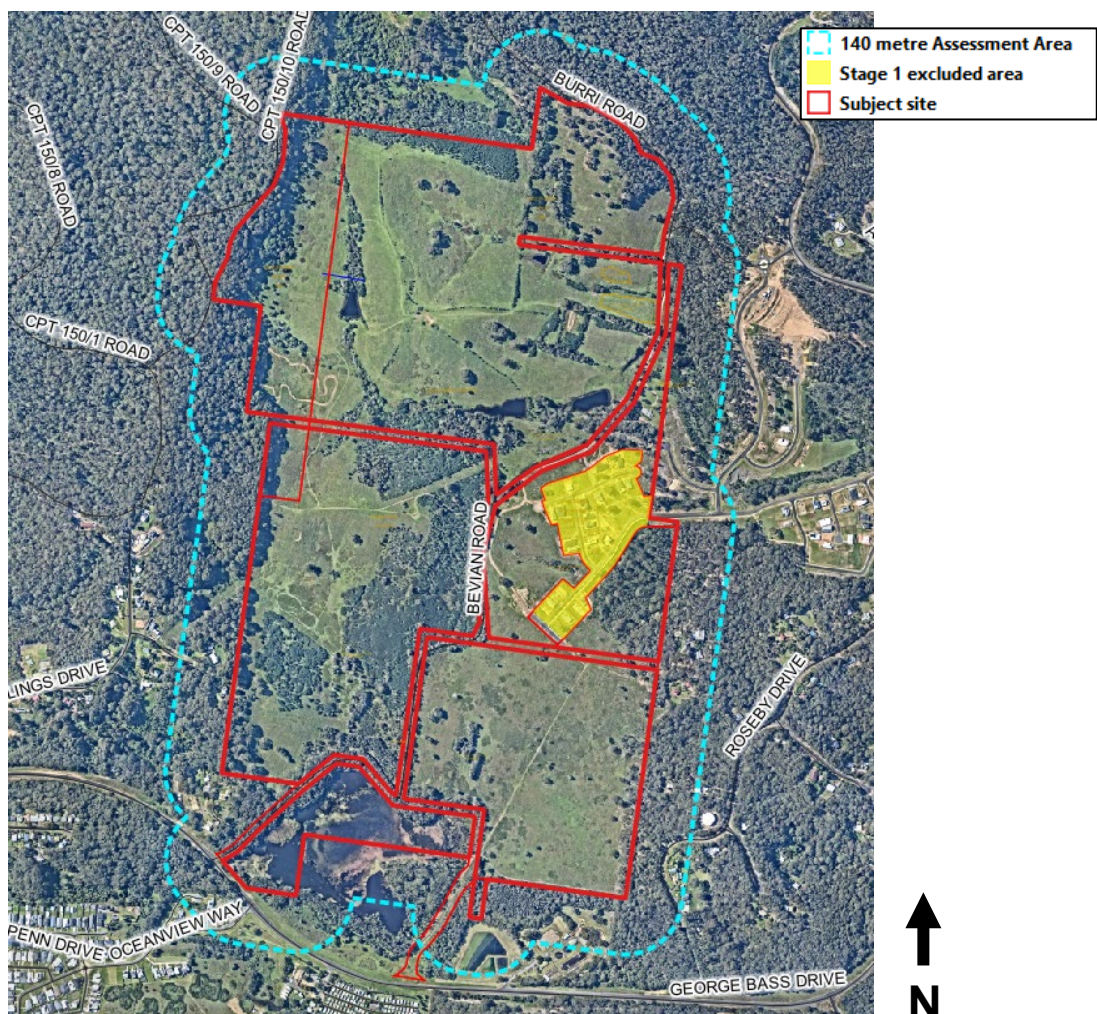


Figure 02: Aerial view of the subject area C/- Nearmap



Figure 03: Extract of the proposed Context Staging Plan

## 6.0 Background

The subject site has the benefit of an existing Concept Approval (ref 05\_0199, dated 2.10.2008) pursuant to section 75O of the *Environmental Planning and Assessment Act* 1979 for a community title subdivision for residential development an ancillary commercial and community facilities, comprising of six (6) Ecological Protection lots, one (1) Community lot and thirteen (13) Neighbourhood Precincts (which will yield a total of 792 residential allotments).

Stage 1 of the Concept Approval for 51 Torrens title residential lots has received local development consent (DA305/18), with the infrastructure, including roads, recently constructed and subdivision now registered as DP1293369. **For the purposes of the modification stage 1 is excluded from further consideration**

The proposed modifications provide a better bushfire safety outcome when compared to the previous approved subdivision layout, by way of improved vehicles access and compliance with all relevant Bushfire Protection Measures set out in Planning for Bush Fire Protection 2019.



Figure 04: 2008 Approved Concept Plan

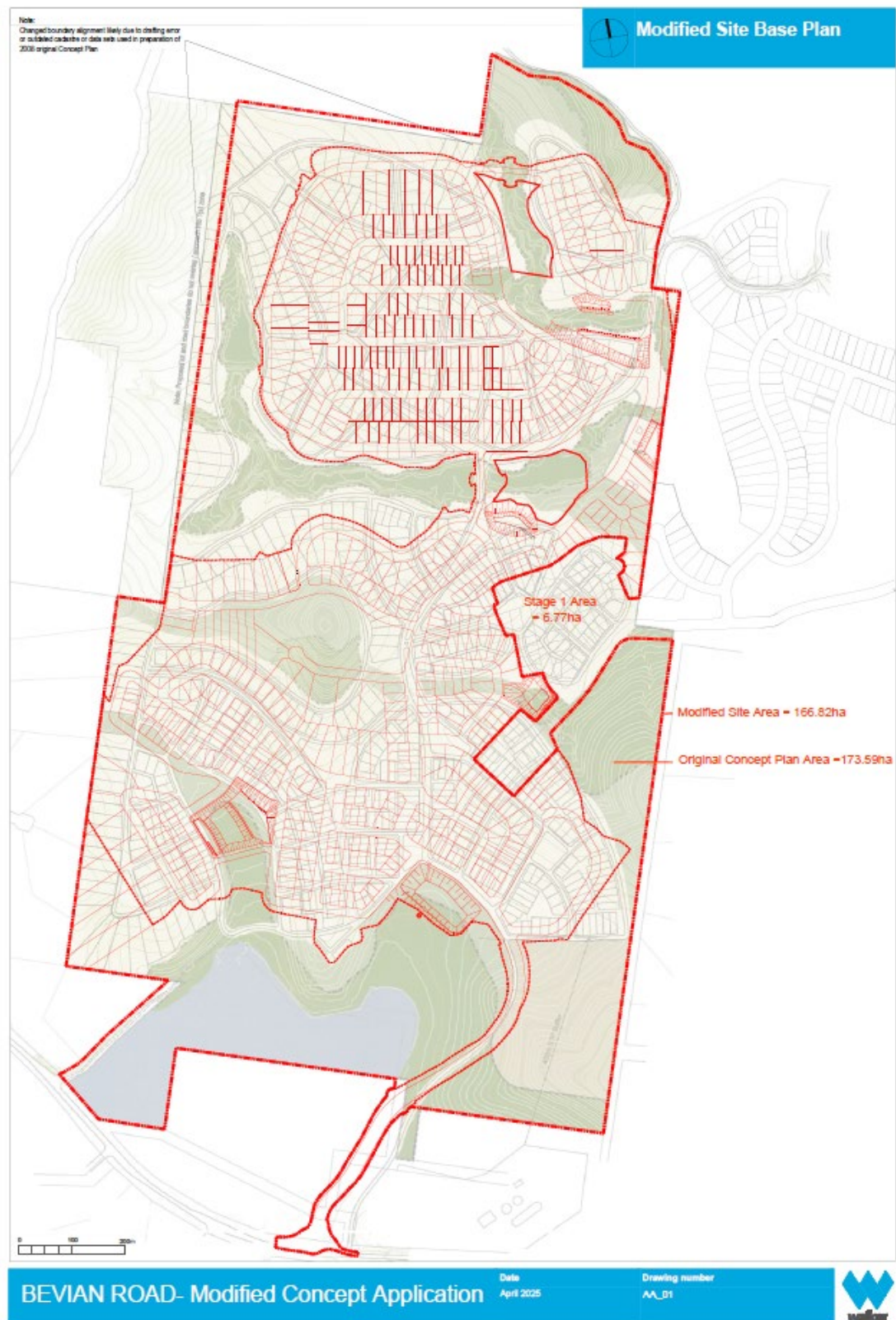


Figure 05: Modified Site Base Plan, with Proposed Plan overlayed onto Approved Concept Plan

## 7.0 Site Assessment

Representatives of Building Code & Bushfire Hazard Solutions completed multiple site inspection of the subject site and surrounding area on 12<sup>th</sup> May 2023.

In addition, the following external data sources have been relied upon for the site assessment:

- Aerial imagery of the subject area (NSW Spatial Services & Nearmap);
- 1 metre contour mapping of the subject area (Elevation and Depth Foundation Spatial Data – Geoscience Australia)
- NSW Planning Portal Spatial Viewer
- Vegetation mapping (NSW Vegetation)
- NSW Bush Fire Prone Land (NSW Rural Fire Service)

### 7.01 Location

The subject site comprises of ten (10) existing allotments legally identified as:

Lot 11 in DP 755902	Lot 102 in DP 755902	Lot 2 in DP 623340
Lot 29 in DP 755902	Lot 119 in DP 755902	Lot 52 in DP 1293369
Lot 32 in DP 755902	Lot 213 in DP 755902	Lot 2 in DP 627034
Lot 72 in DP 755902		

The subject site is located within Eurobodalla Shire Council's local government area and zoned RU1: Primary Production, C2: Environmental Conservation, R2: Low Density Residential and C4: Environmental Living pursuant to *Eurobodalla Local Environment Plan 2012*.

The site is located to the west of the township of Rosedale and northeast to the township of Tomakin.

The site has street frontage to Burri Road to the northeast, Saltwood Drive to the east, George Bass Drive to the southwest and is bisected by Bevia Road.

A new small lot residential development is located to the east, larger established residential allotments (zoned C4: Environmental Living) to the southeast and southwest, the Tomakin Sewer Treatment Plant to the south, Mogo State Forest to the northwest and a large private allotment (zoned RU1: Primary Production) to the north.

The overall site is approximately 180 hectares in size.

The site is located within the Eurobodalla Council local government area and is captured by the Eurobodalla Bush Fire Risk Management Committee.

## 7.02 Vegetation

In accordance with Appendix 1 'Site Assessment Methodology' of PBP we have undertaken an assessment of all vegetation formations within 140 metres of the development for each aspect as per Keith (2004).

Historically the use of the site has been for agricultural purposes, including the cultivation of arable crops and breeding and raising of livestock. These farming practices have resulted in significantly modified vegetation.

The subject site contains numerous watercourses and subsequently we have considered the associated vegetated riparian zones that will be retained / rehabilitated as required under the *Water Management Act 2000*. In this regard we relied on the 'Riparian Corridors' figure prepared by Ecological Australia (2023) to inform the location of the vegetated riparian zones.

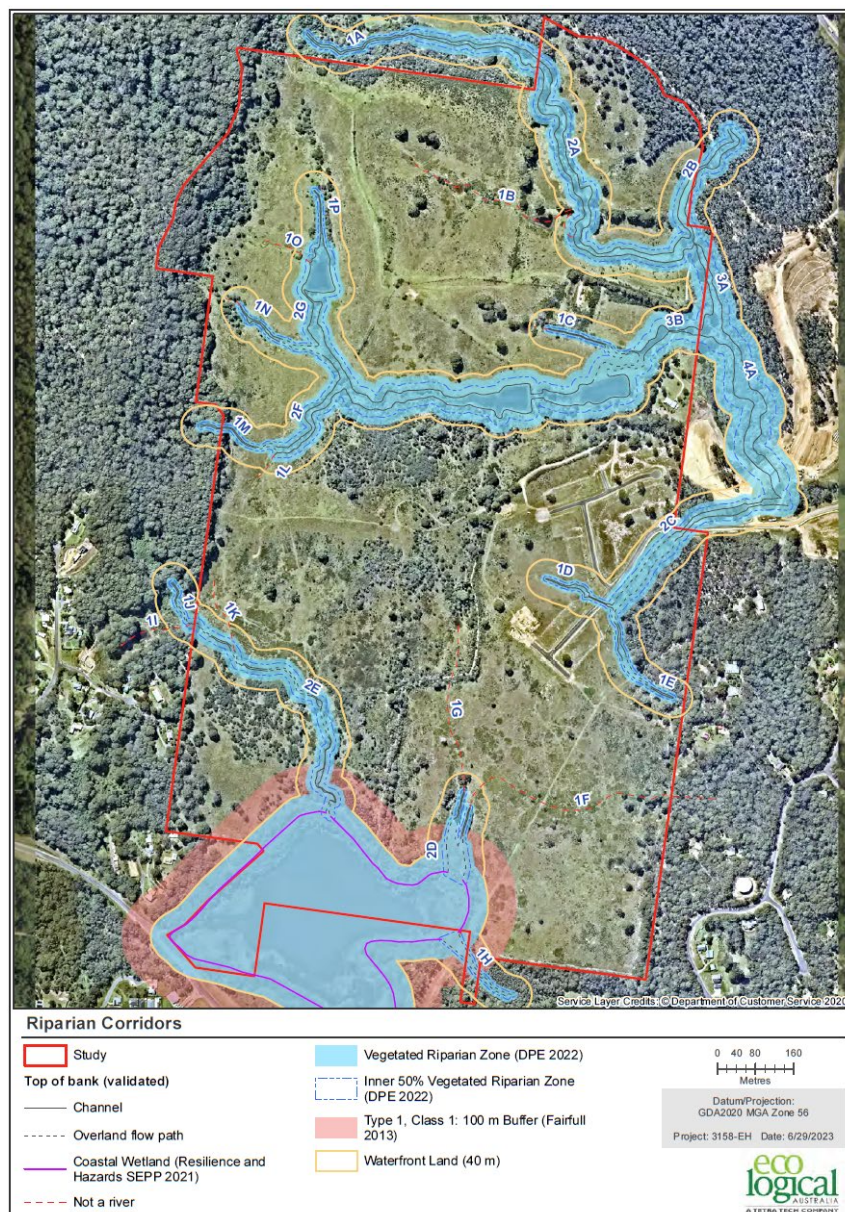


Figure 06: Riparian Corridors figure prepared by Ecological Australia

For the purpose of this assessment, it has been assumed that all residential allotments will be maintained to the standard of an Asset Protection Zone.

The existing vegetation within the subject site are mapped (Ecological Australia 2023) as being Southern Warm Temperate Rainforests, South Coast Sands Dry Sclerophyll Forests, Coastal Swamp Forests and Southern Lowland Wet Sclerophyll Forests (refer to Figure 06).

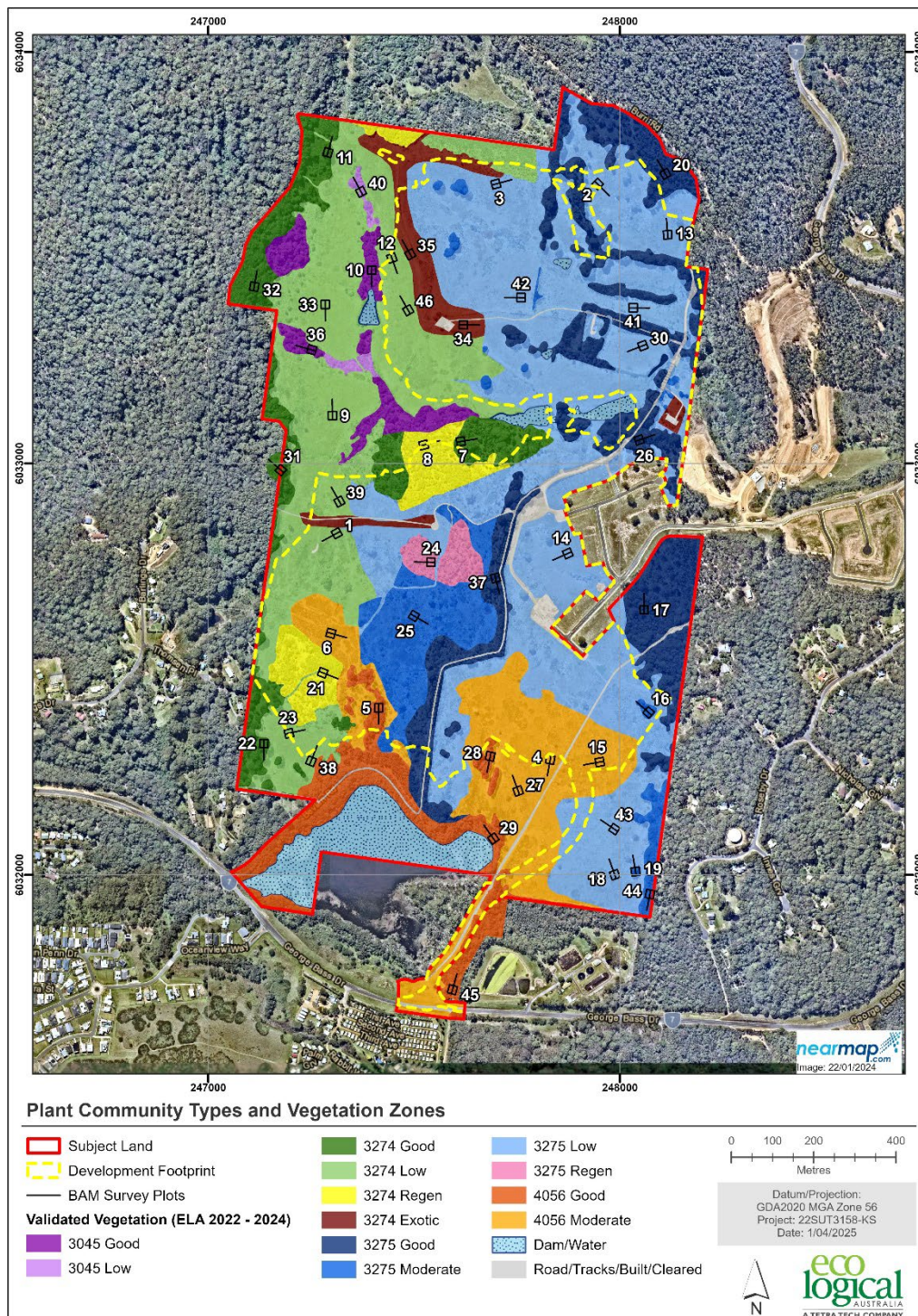


Figure 07: Extract of vegetation mapping prepared by Ecological Australia

## 7.03 Slope and Topography

The slope of the land under the classified vegetation has a direct influence on the forward rate of spread, fire intensity and radiant heat exposure. The effective slope is considered to be the slope under the classified vegetation which will most significantly influence bushfire behaviour toward the development site.

In accordance with A1.4 'Determine slope' of PBP the slope assessment is to be derived from the most detailed contour data available.

The slope that would most significantly influence bushfire behaviour was determined onsite using an inclinometer and verified from topographic mapping.



Figure 08: 1 metre contours of the subject area

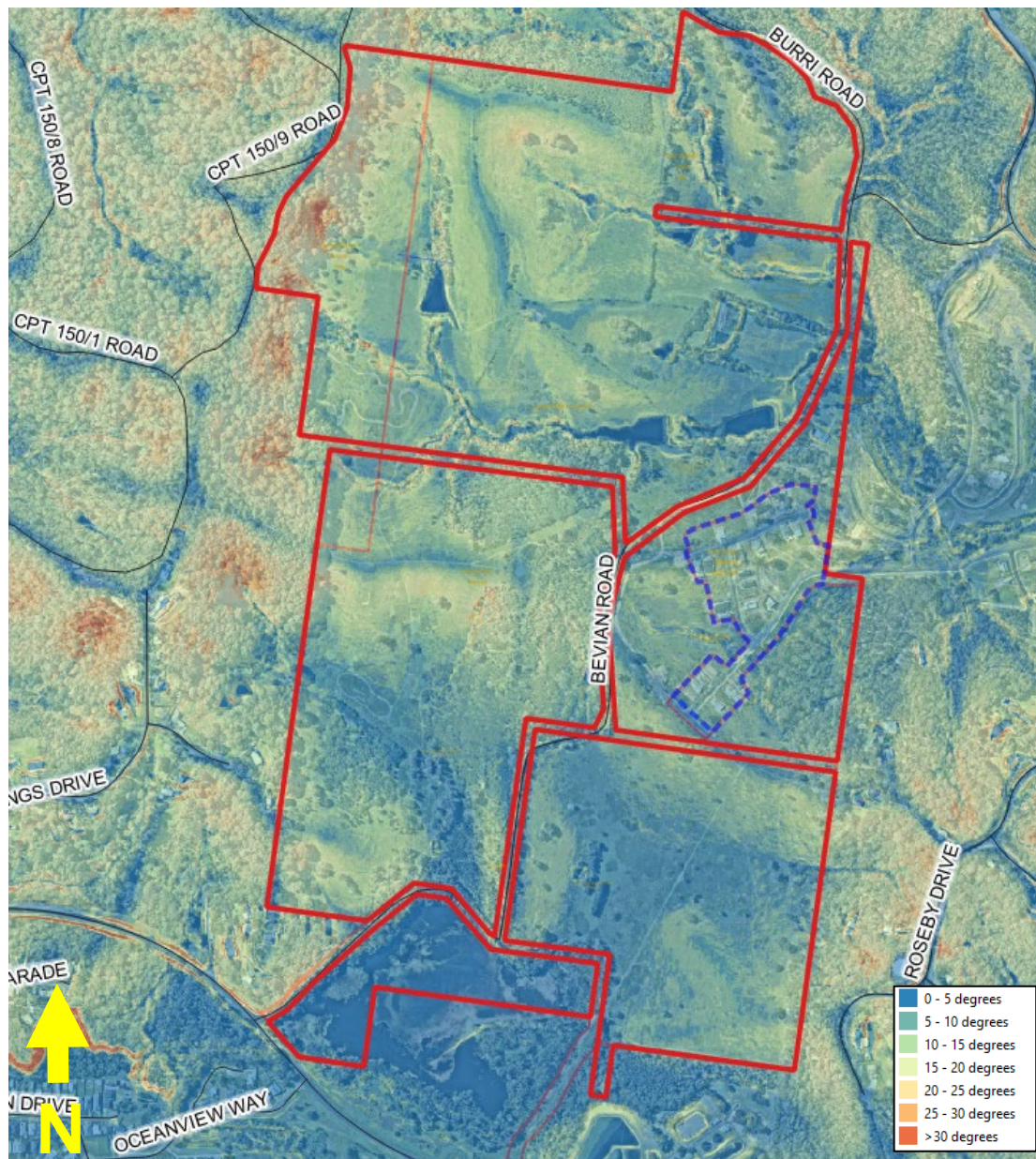


Figure 09: Extract from ELVIS – Geoscience Australia

## 7.04 Fire Weather

All development which attracts an Asset Protection Zone under PBP requires the identification of the relevant Fire Danger Index (FDI). The FDI required to be used for development assessment purposes is based on the local government boundaries, being Eurobodalla Shire Council in this instance.

In accordance with the NSW Rural Fire Service publication 'NSW Local Government Areas FDI' (2017) Eurobodalla Shire Council forms part of the Far South Coast Fire Weather District and attracts an FFDI of 100.

## 8.0 Bushfire Protection Measures

### 8.01 Planning for Bush Fire Protection - 2019

*Planning for Bush Fire Protection – 2019* (PBP) is applicable to development located on land determined as being 'bushfire prone' in accordance with the local Bushfire Prone Land Map.

*Bushfire prone land are defined as those areas;*

- *containing or within 100m of Category 1 Vegetation; or*
- *containing or within 30m of Category 2 or 3 Vegetation.*

Eurobodalla Shire Council's Bushfire Prone Land Map identifies the subject property as containing Category 1, 2 and 3 Vegetation and the Vegetation Buffer therefore PBP must apply in this instance.

The application of Planning for Bush Fire Protection requires satisfactory demonstration of the aim and objectives and the following bushfire protection measures (BPMs):

- Asset Protection Zones
- Access arrangements
- Water supply & utilities
- Landscaping

The development proposal will facilitate the future subdivision of residential land which will be captured under section 100B of the *Rural Fires Act 1997*.

### 8.02 Specific Objectives

The following table lists the specific objectives for residential and rural residential subdivisions with a dwelling entitlement in accordance with section 5.2 of PBP and our comments of the proposal compliance or otherwise.

Specific Objective	Comment
<i>minimise perimeters of the subdivision exposed to the bush fire hazard (hourglass shapes, which maximise perimeters and create bottlenecks should be avoided);</i>	The subdivision design improves on the approved design and does not increase the exposure to bushfire hazards.
<i>minimise vegetated corridors that permit the passage of bush fire towards buildings;</i>	<p>All proposed allotments will have a compliant footprint meeting or exceeding the minimum APZs.</p> <p>The extent of the vegetated corridors has been minimised and primarily comprise of riparian corridors.</p>

Specific Objective	Comment
<i>provide for the siting of future dwellings away from ridge-tops and steep slopes, within saddles and narrow ridge crests;</i>	The proposed residential allotments are not located on a ridge-tops or steep slopes.
<i>ensure that APZs between a bush fire hazard and future dwellings are effectively designed to address the relevant bush fire attack mechanisms;</i>	<p>The proposal achieves and, in most instances, exceed the minimum required APZs of PBP.</p> <p>The available APZs are located within the subject site and include manage land within the subject site, rock batters, managed pocket parks and roads.</p> <p>These landscaped areas to be considered managed land and form part of the APZ. These areas will be designed to comply with the requirements of an IPA and designed to have reduced maintenance obligations.</p>
<i>ensure the ongoing maintenance of APZs;</i>	<p>It is expected that the property management within the proposed allotments will be enforced by way of a condition of consent, similar to recommendation 1 of this report, as part of this development process.</p> <p>The available APZs will also include 'Low Threat Vegetation' as described in A1.10 of PBP, including future roads, rock batters and managed pocket parks.</p> <p>This will ensure ongoing management of the APZs within the site.</p>
<i>provide adequate access from all properties to the wider road network for residents and emergency services;</i>	<p>The existing and proposed road network provides adequate access and evacuation for occupants and emergency services.</p> <p>The existing road network provides occupants egress away from the bushfire hazard.</p>
<i>provide access to hazard vegetation to facilitate bush fire mitigation works and fire suppression;</i>	Attending fire services will have comprehensive access to the identified hazards via roads within the subject development, neighbouring allotments and existing public roads and trails for hazard reduction and / or fire suppression activities.
<i>ensure the provision of an adequate supply of water and other services to facilitate effective firefighting.</i>	Given the scale of the proposal the future development will be serviced by a hydrant system. This hydrant network will comply with the requirements of AS2419-2021.

## 8.03 Bushfire Protection Measures

Section 5.3 'Bush fire protection measures' of PBP outlines the specific Bushfire Protection Measures (BPMs) applicable to residential and rural residential subdivisions, including APZs, Access and Services.

The following section addresses each BPM and the proposals compliance or otherwise.

### Asset Protection Zones & Landscaping

An Asset Protection Zone (APZ) is an area between the development (in this instance building envelopes) and the identified bushfire hazards. It is also an area where the fuels are maintained to a minimum to prevent the spread of fire between a hazard and an asset.

The width of the APZs is determined by the vegetation structure of the identified hazard, Fire Danger Index, effective slope and the type of development (residential development or Special Fire Protection Purpose).

APZs for new residential subdivisions are determined from Table A1.12.2 of PBP or bushfire design modelling achieving a radiant heat impact of no more than  $29\text{kW/m}^2$  at the closest point of the indicative building envelope.

In this instance the minimum required APZs were determined from Table A1.12.2 of PBP and are shown in Attachment 1 of this report.

The proposed allotments provide building envelopes with Asset Protection Zones achieving or exceeding the minimum requirements under PBP.

It is expected that the property management within the proposed allotments will be enforced by way of a condition of consent, similar to recommendation 1 of this report, as part of this development process.

### Access

The subject development will have vehicle access from the south, east and north. All proposed allotments will have access via the future internal roads.

The proposed perimeter roads will meet the requirements for Perimeter Roads as detailed in section 5.3.2 of PBP, while the non-perimeter roads will meet the requirements for non-perimeter roads.

One of the general principles underlying Planning for Bush Fire Protection is that protection measures are governed by the degree of threat posed to a development.

As the proposed road carriageways achieve or exceed the minimum carriageway requirements for Public Roads as detailed in section 5.3.2 of PBP it is requested that the sections of road which are >100 from any hazard be excluded from the parking restrictions described in section 5.3.2 of PBP.

This request, while not being common does present itself on large scale subdivisions and has been approved by the NSW Rural Fire Service in the past. The scale of the proposal and overall development in our opinion warrants this request.

All temporary dead ends and dead end roads will provide suitable turning for a Medium Rigid vehicle either in accordance with Appendix 3 of PBP or swept path modelling.

In consideration of the risk posed to the subject stage the proposed access arrangements in conjunction with that already approved are considered adequate.

It is acknowledged that the NSW RFS have provided comment on the previous version of the concept plan. The main points raised by the NSW RFS were in regard to the access design, being:

*A preliminary review of this modification to the Concept Plan continues to show several areas where a perimeter road is not provided between residential lots and the bush fire hazard interface. A perimeter road not only encompasses required asset protection zones but also provides space to conduct firefighting operations and hazard reduction activities. It is noted that some areas not previously provided with perimeter roads have been amended to show compliance, however, some areas of the modified plans have omitted perimeter roads. The RFS does not support the removal of Bushfire Protection Measures from the approved Concept Plan.*

*The Bushfire Assessment Report prepared by Building Code & Bushfire Hazard Solutions (dated 05/06/2024, ref 230468B) requests that "sections of road which are >100 from any hazard be excluded from the parking restrictions described in section 5.3.2 of PBP". As the intent of this measure relates to safe access/egress for firefighting vehicles while residents are evacuating a reduction in the width of the trafficable corridor is not supported. Please note that Table 5.3b of Planning for Bushfire Protection 2019 does not in itself restrict parking, it stipulates that any parking must be provided outside the minimum carriageway width.*

*The report references a "new road connection to George Bass Drive to the south". A comparison of the approved plan and the modified plan suggests that the modified plan has only one access to George Bass Drive in the south (no new road) and that a fire trail connection has been removed. Any subsequent submissions should provide greater clarity on this matter.*

As acknowledged in the RFS comments the original approval had areas which did not have perimeter roads, and this has now been further reduced from 65 allotments (without perimeter access) to 23 allotments.

The proposal subsequently demonstrates a substantial improvement for interface access than the current approval.

Setting aside the vast reduction of allotments which did not have interface access under the original approval, it should also be acknowledged that the majority of the allotments which do not have perimeter access are large residential allotments which have the ability to provide larger Asset Protection Zones.

Importantly, it should be noted that all of the proposed roads have an 8 metre wide travel lane meeting the perimeter road widths and exceeding that of non-perimeter roads.

It is acknowledged that there are two dead end roads, however these roads do have an 8 metre wide carriageway and provide suitable turning for a Medium Rigid vehicle either in accordance with Appendix 3 of PBP or swept path modelling

The proposal still includes two access roads to the north and south and provides an additional access to the northern linear park area. One access road is 8 metres wide with parking outside and the second access is 5.5 metres wide with no parking, however, is noted there is a 3.7 metre verge in which includes a cycleway. Therefore, these two roads meet the perimeter and non-perimeter road requirements respectively.

Therefore, it is our opinion that the proposed roads provide greater accessibility around the site, more opportunity for interface access and greater egress opportunities for the residents. It is our opinion that the proposed road meets the access requirements within Table 5.3b of PBP.

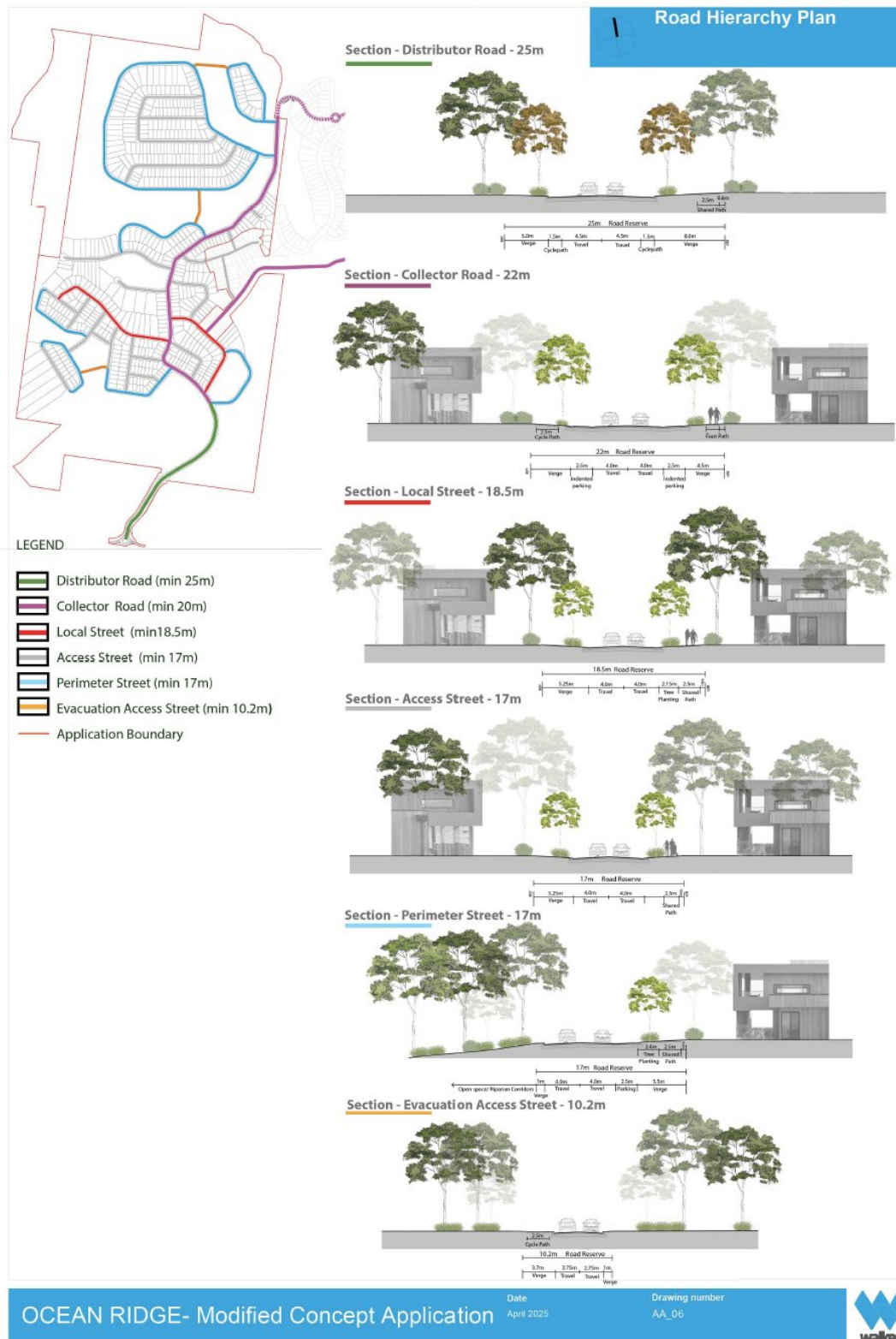


Figure 10: Extract from the Road Hierarchy Plan

## Services – Water, electricity & gas

Hydrants will be extended along the future road network which will be available for the replenishment of fire service vehicles.

The most distant external point for the future allotments will be <70 metres from an operational hydrant and therefore a Static Water Supply are not required in consideration of AS2419.1 – 2021 and Chapter 7 of PBP.

Any future dwelling will be connected to the electrical network which will comply with PBP.

Any new gas connections must comply with Table 7.4a of PBP.

Recommendations will be included to ensure compliance with the electricity and gas services requirements.

## Building Construction

There are no new dwellings being proposed as part of this development.

An independent assessment will be required under s4.14 of the *Environmental Planning and Assessment Act* 1979 at the time of any future application for the construction of a new dwelling within the proposed new allotments.

## 8.04 Aim & Objectives of PBP

The following table details the aim and objectives of *Planning for Bush Fire Protection 2019* and the proposal's ability to comply.

Aim / Objective	Comment
<p><b>The aim of PBP is to provide for the protection of human life and minimise impacts on property from the threat of bush fire, while having due regard to development potential, site characteristics and protection of the environment.</b></p>	<p>With the inclusion of the recommendations made herein it is of our opinion that the aim of PBP has been satisfied.</p>
<p><b>(i) afford buildings and their occupants protection from exposure to a bush fire;</b></p>	<p>The proposed allotments provide building envelopes with Asset Protection Zones achieving or exceeding the minimum requirements under PBP.</p> <p>The future dwellings will also be constructed to the Bushfire Attack Level to ensure the buildings will afford occupants protection from the exposure to a bushfire.</p>
<p><b>(ii) provide for a defensible space to be located around buildings;</b></p>	<p>The proposed allotments provide a building envelope with Asset Protection Zones achieving or exceeding the minimum requirements under PBP.</p> <p>The available APZs provide an ample defensible space around the building envelopes.</p>
<p><b>(iii) provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;</b></p>	<p>The proposed allotments provide building envelopes with Asset Protection Zones achieving or exceeding the minimum requirements under PBP.</p>

Objective	Comment
(iv) ensure that appropriate operational access and egress for emergency service personnel and occupants is available;	We are of the opinion that appropriate operational access and egress for emergency service personnel and occupants will be available.
(v) provide for ongoing management and maintenance of bush fire protection measures, (BPMs); and	<p>The APZs will be maintained in accordance with the NSW Rural Fire Service's document 'Standards for Asset Protection Zones' and Appendix 4 of <i>Planning for Bush Fire Protection</i> 2019.</p> <p>Any new landscaping within the APZs is to comply with the provisions of Appendix 4 of PBP.</p>
(vi) ensure that utility services are adequate to meet the needs of firefighters.	The proposed water supply is adequate for attending firefighters.

It is therefore of our opinion that the proposal can satisfactorily comply with the aim and objectives of *Planning for Bush Fire Protection* 2019.

## 8.05 Submission Detail

Section 45 of the *Rural Fires Regulation* 2022 identifies various items which must be addressed and included within an application for a Bush Fire Safety Authority. The following table outlines these items and includes a corresponding response.

Submission Detail	Response
(a) a description (including the address) of the property on which the development the subject of the application is proposed to be carried out,	See section 7.01
(b) a classification of the vegetation on and surrounding the property (out to a distance of 140 metres from the boundaries of the property) in accordance with the system for classification of vegetation contained in <i>Planning for Bush Fire Protection</i> ,	See section 7.02
(c) an assessment of the slope of the land on and surrounding the property (out to a distance of 100 metres from the boundaries of the property),	See section 7.03
(d) identification of any significant environmental features on the property,	Refer to Flora and Fauna Assessment
(e) the details of any threatened species or threatened ecological community under the Biodiversity Conservation Act 2016 that is known to the applicant to exist on the property,	Refer to Flora and Fauna Assessment
(f) the details and location of any Aboriginal object (within the meaning of the National Parks and Wildlife Act 1974) or Aboriginal place (within the meaning of that Act) that is known to the applicant to be situated on the property,	Refer to Aboriginal Cultural Heritage Assessment Report

Submission Detail	Response
<i>(g) a bush fire assessment for the proposed development (including the methodology used in the assessment) that addresses the following matters—</i>	See section 8.0
<i>(i) the extent to which the development is to provide for setbacks, including asset protection zones,</i>	See section 8.03
<i>(ii) the siting and adequacy of water supplies for fire fighting,</i>	See section 8.03
<i>(iii) the capacity of public roads in the vicinity to handle increased volumes of traffic in the event of a bush fire emergency,</i>	Surrounding roads were found to generally have a carriageway of 7-8 metres achieving the non-perimeter and perimeter road requirements detailed in PBP.
<i>(iv) whether or not public roads in the vicinity that link with the fire trail network have two-way access,</i>	All future roads are two way.
<i>(v) the adequacy of arrangements for access to and egress from the development site for the purposes of an emergency response,</i>	See section 8.03
<i>(vi) the adequacy of bush fire maintenance plans and fire emergency procedures for the development site,</i>	There are currently no bush fire maintenance plans or emergency procedures for the development site.  It is encouraged that the future residents complete a Bushfire Survival Plan.
<i>(vii) the construction standards to be used for building elements in the development,</i>	See section 8.03
<i>(viii) the adequacy of sprinkler systems and other fire protection measures to be incorporated into the development,</i>	There is no existing bushfire sprinkler system, nor is one proposed.  See section 8.03 for all bushfire protection measures
<i>(ix) any registered fire trails on the property,</i>	There are no registered fire trails within the subject site.

## 8.06 NSW RFS Response

The NSW RFS issued referral comments to the Request for Secretary's Environmental Assessment Requirements for this matter on 20 September 2023 (Ref DA20230825003757-SEARS-1). The table below outlines these comments and our comment on compliance or otherwise.

NSW RFS Item	Response
<i>The New South Wales Rural Fire Service (NSW RFS) has reviewed the information provided and advises that a bush fire assessment report shall be prepared which identifies the extent to which the proposed development conforms with or deviates from the relevant provisions of Planning for Bush Fire Protection 2019.</i>	<p>This Bush Fire Assessment Report has been prepared to identify the extent to which the proposed development conforms with or deviates from the relevant provisions of Planning for Bush Fire Protection 2019.</p> <p>The proposed modifications provide a better bushfire safety outcome when compared to the previous approved subdivision layout, by way of improved vehicles access and compliance with all relevant Bushfire Protection Measures set out in Planning for Bush Fire Protection 2019.</p>
<i>The NSW Rural Fire Service (RFS) understands the intent of the modification to the approved Concept Plan is to update compliance with key standards, improve feasibilities and improve development layout with the aim to provide a compliant and efficient approval pathway for future stages of the development.</i>	<p>The proposed modifications provide a better bushfire safety outcome when compared to the previous approved subdivision layout and update the design to respond to current standard (PBP 19).</p>
<i>A preliminary review of the modified Concept Plan shows several areas where a perimeter road is not provided between residential lots and the bush fire hazard interface (assumed to be future Stewardship sites). A perimeter road not only encompasses required asset protection zones but also provides space to conduct firefighting operations and hazard reduction activities. RFS recommend that prior to further environmental studies being commissioned the Concept Plan be revised to include a perimeter road network to separate bush land from all residential lots.</i>	<p>The modified design includes Perimeter Roads around the vast majority of the residential allotments.</p> <p>The relatively few Lots without the benefit of a Perimeter Road comprise of larger lifestyle sized allotments which will provide suitable onsite vehicle access.</p> <p>The modified design results in more allotments having the benefit of a Perimeter Road.</p>

NSW RFS Item	Response
<i>RFS request that consultants engaged to carry out environmental studies, in particular Flora &amp; Fauna Assessment; Ecological &amp; Conservation Assessment; Traffic &amp; Transport Assessment, work in unison with Bush Fire Protection Assessment to ensure consistent assessment between reports. Bush Fire Protection Assessment is to consider the final vegetation fuel loads, where applicable, within Stewardship sites following the completion of revegetation measures required by any future Vegetation Management Plan.</i>	This report has considered the final vegetation fuel loads relevant to the assessed vegetation communities by Ecological Australia.
<p>The additional comments are made in relation to the submitted concept plan;</p> <ul style="list-style-type: none"> <li>any future development of the site that may be defined as a Special Fire Protection Purpose facility will be required to comply with Tables 6.8a and 6.8b of PBP 2019.</li> <li>the capacity for the proposed, and existing, road network to deal with evacuating residents and responding emergency services, based on the existing and proposed community profile should be addressed.</li> <li>Servicing and infrastructure delivery for the proposal should include the consideration of operational response for emergency services. In considering future operational fire fighting infrastructure, the proponents should; <ul style="list-style-type: none"> <li>identify what proposed servicing arrangements are required for the future development;</li> <li>identify whether proposed servicing arrangements for the development are practical; and</li> <li>discuss any issues that may result from the interplay of service delivery options.</li> </ul> </li> </ul>	<p>The subject development is accessed from the east via a development, including its roads, which was assessed and approved under Planning for Bush Fire Protection.</p> <p>In addition, the modified design includes a new road connection to George Bass Drive to the south. This road will also be constructed to comply with the requirements of PBP.</p> <p>The respective stages will include roads and water supply consistent with PBP 19.</p>

The NSW RFS issued additional referral comments to the Request for Secretary's Environmental Assessment Requirements for this matter on 29 October 2024 (Ref DA20230825003757-EIS & DA Exhibition-1). The table below outlines these comments and our comment on compliance or otherwise.

NSW RFS Item	Response
<i>A preliminary review of this modification to the Concept Plan continues to shows several areas where a perimeter road is not provided between residential lots and the bush fire hazard interface. A perimeter road not only encompasses required asset protection zones but also provides space to conduct firefighting operations and hazard reduction activities. It is noted that some areas not previously provided with perimeter roads have been amended to show compliance, however, some areas of the modified plans have omitted perimeter roads. The RFS does not support the removal of Bushfire Protection Measures from the approved Concept Plan.</i>	<p>Refer to Access in section 8.03 of this report.</p> <p>Notably the interface allotments without a perimeter road have been further reduced from 65 allotments (without perimeter access) to 23 allotments.</p>

NSW RFS Item	Response
<p><i>The Bushfire Assessment Report prepared by Building Code &amp; Bushfire Hazard Solutions (dated 05/06/2024, ref 230468B) requests that "sections of road which are &gt;100 from any hazard be excluded from the parking restrictions described in section 5.3.2 of PBP". As the intent of this measure relates to safe access/egress for firefighting vehicles while residents are evacuating a reduction in the width of the trafficable corridor is not supported. Please note that Table 5.3b of Planning for Bushfire Protection 2019 does not in itself restrict parking, it stipulates that any parking must be provided outside the minimum carriageway width.</i></p>	<p>The road widths provide a minimum 8 metre carriageway.</p> <p>The roads which are located &gt;100 metres from an identified bushfire hazard are less likely to be utilised by RFS appliances with their efforts concentrated at the hazard interfaces and dwellings which may experience direct forms of impact.</p>
<p><i>The report references a "new road connection to George Bass Drive to the south". A comparison of the approved plan and the modified plan suggests that the modified plan has only one access to George Bass Drive in the south (no new road) and that a fire trail connection has been removed. Any subsequent submissions should provide greater clarity on this matter.</i></p>	<p>Refer to Access in section 8.03 of this report.</p> <p>The proposal includes the retention of the existing trail (Bevia Road) as a shared trailed connecting to George Bass Drive. This trail will provide a minimum 4m carriageway – Refer to Landscape Masterplan Plan.</p> <p>It is also important to note that the road connecting to George Bass Drive is now a 'Distributor Road' – 25m road reserve, providing a clear 9m carriageway and additional 3m cycleways.</p> <p>The original approval nominated this road as 'Type 2' – 15m road reserve.</p> <p>The proposal therefore provides improved access arrangements.</p>

NSW RFS Item	Response
<p>These additional comments from our previous advice relating to the first modification (dated 20th September 2023) are still considered to be relevant;</p> <ul style="list-style-type: none"><li>● any future development of the site that may be defined as a Special Fire Protection Purpose facility will be required to comply with Tables 6.8a and 6.8b of PBP 2019.</li><li>● Servicing and infrastructure delivery for the proposal should include the consideration of operational response for emergency services. In considering future operational fire fighting infrastructure, the proponents should;<ul style="list-style-type: none"><li>○ identify what proposed servicing arrangements are required for the future development;</li><li>○ identify whether proposed servicing arrangements for the development are practical; and</li><li>○ discuss any issues that may result from the interplay of service delivery options.</li></ul></li></ul>	<p>There is currently no SFPP development proposed as part of this application.</p> <p>Ongoing management will be in accordance with the consent and recommendations within this report.</p> <p>Hydrants will be installed in accordance with AS2419 along the new roads to cater for the operational needs of fire fighters.</p>

## 9.0 Recommendations

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The following recommendations are provided as the minimum necessary for compliance with *Planning for Bush Fire Protection* – 2019. Additional recommendations are provided to supplement these minimum requirements where considered necessary.

While this is a modification to the Concept Plan Approval to help facilitate future stages it is expected that the future stages will have the following recommendations:

### Asset Protection Zones

1. That all grounds shown on the APZ Overlay (Attachment 01) are to be maintained in accordance with an Asset Protection Zone (Inner Protection Area) as detailed in the NSW Rural Fire Service's document '*Standards for Asset Protection Zones*' and Appendix 4 of *Planning for Bush Fire Protection* 2019.

### Access

2. That the new internal roads shall comply with the requirements for Non-Perimeter Roads as detailed in Table 5.3b of PBP, specifically:
  - property access roads are two-wheel drive, all-weather roads;
  - traffic management devices are constructed to not prohibit access by emergency services vehicles;
  - 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;
  - 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.
  - 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;
  - minimum 5.5m carriageway width kerb to kerb;
  - parking is provided outside of the carriageway width;
  - curves of roads have a minimum inner radius of 6m;
  - the road crossfall does not exceed 3 degrees; and
  - a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.

Note: The parking restrictions shall not apply to the sections of roads that is not located on 'bushfire prone' land (i.e. within 100m of a bushfire hazard as per Attachment 01 of this report).

3. That proposed Perimeter Roads shall comply with the requirements for Perimeter Roads as detailed in Table 5.3b of PBP, specifically:
  - are two-way sealed roads;
  - minimum 8m carriageway width kerb to kerb;
  - parking is provided outside of the carriageway width; hydrants are located clear of parking areas;
  - curves of roads have a minimum inner radius of 6m;
  - the maximum grade road is 15 degrees and average grade of not more than 10 degrees;
  - the road crossfall does not exceed 3 degrees; and
  - a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.
4. Temporary dead ends between stages shall provide turning in accordance with Appendix 3 of PBP.

## Services (where applicable)

### Water:

5. That the new hydrant system is to comply with the requirements detailed in Table 5.3c of *Planning for Bush Fire Protection* 2019, specifically:
  - fire hydrant spacing, design and sizing comply with the relevant clauses of AS 2419.1:2021;
  - hydrants are not located within any road carriageway;
  - fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2021.
  - all above-ground water service pipes external to the building are metal, including and up to any taps.
  - fire hose reels are constructed in accordance with AS/NZS 1221:1997 Fire hose reels, and installed in accordance with the relevant clauses of AS 2441:2005 Installation of fire hose reels.

### Electricity:

6. Any new electrical services must comply with section 5.3.3 of *Planning for Bush Fire Protection* 2019, specifically:
  - where practicable, electrical transmission lines are underground.
  - where overhead electrical transmission lines are proposed:
    - lines are installed with short pole spacing (30 metres), unless crossing gullies, gorges or riparian areas; and
    - no part of a tree is closer to a power line than the distance set out in *ISSC3 Guideline for Management Vegetation Near Power Lines*.

Gas:

7. Any new gas services must comply with section 5.3.3 of *Planning for Bush Fire Protection* 2019, specifically:
  - reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 - *The storage and handling of LP Gas*, the requirements of relevant authorities, and metal piping is used;
  - all fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side;
  - connections to and from gas cylinders are metal;
  - polymer-sheathed flexible gas supply lines are not used; and
  - above-ground gas service pipes are metal, including and up to any outlets.

## 10.0 Conclusion

The independent Bushfire Assessment Report has been prepared to accompany a Development Application seeking approval for a modification to the Part 3A Concept Approval for a Community Title Subdivision for residential development and ancillary commercial and community facilities, ecological stewardship, public roads and open space areas yielding a total of 792 residential lots, to a Torrens title development that includes residential development and ancillary commercial facilities, public roads, public open areas and residual rural lot yielding a total of 792 residential lots.

Stage 1 of the Concept Approval comprising the subdivision of a portion of the site into 51 Torrens title residential lots has received local development consent (DA305/18), with the infrastructure, including roads, recently constructed and the lots registered as DP1293369.

The subdivision is captured under section 100B of the *Rural Fires Act 1997*.

In accordance with the submission requirements for a Bush Fire Safety Authority as detailed in section 45 of the *Rural Fires Regulation 2022* an assessment of the extent to which the proposed development conforms with or deviates from *Planning for Bush Fire Protection (PBP)* is required.

The proposed modifications provide a better bushfire safety outcome when compared to the previous approved subdivision layout, by way of improved vehicles access and compliance with all relevant Bushfire Protection Measures set out in *Planning for Bush Fire Protection 2019*.

In accordance with the bushfire safety measures contained in this report, and consideration of the site specific bushfire risk assessment it is our opinion that when combined, they will provide a reasonable and satisfactory level of bushfire protection to the subject development.

We are therefore in support of the application.

Should you have any enquiries regarding this project please contact me at our office.

Prepared by  
Building Code & Bushfire Hazard Solutions



### Andrew Muirhead

Senior Bushfire Consultant  
Graduate Diploma in Bushfire Protection WSU  
Bachelor of Engineering Technology Major in Civil UniSQ  
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BPAD Accreditation No. BPAD46966



Reviewed by  
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### Stuart McMonnies

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BPAD Accreditation No. BPAD9400



## 11.0 Annexure 01

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### List of Referenced Documents

Australian Building Codes Board (2022). *National Construction Code Volume Two - Building Code of Australia*. ABCB

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*Rural Fires Act 1997*

*Rural Fires Regulations 2022*

Rural Fire Service NSW (2005). *Standards for Asset Protection Zones*

Rural Fire Service NSW (2017). *NSW Local Government Areas FDI*

Standards Australia (2018). *AS3959 Construction of buildings in bushfire-prone areas*.

Standards Australia (2014). *AS/NZS 1596 The storage and handling of LP Gas*

Digital Control File Plan prepared by Walker, Reference 210039-C-C01.01, Revision 17, Dated 12/04/2023

Acknowledgements to:

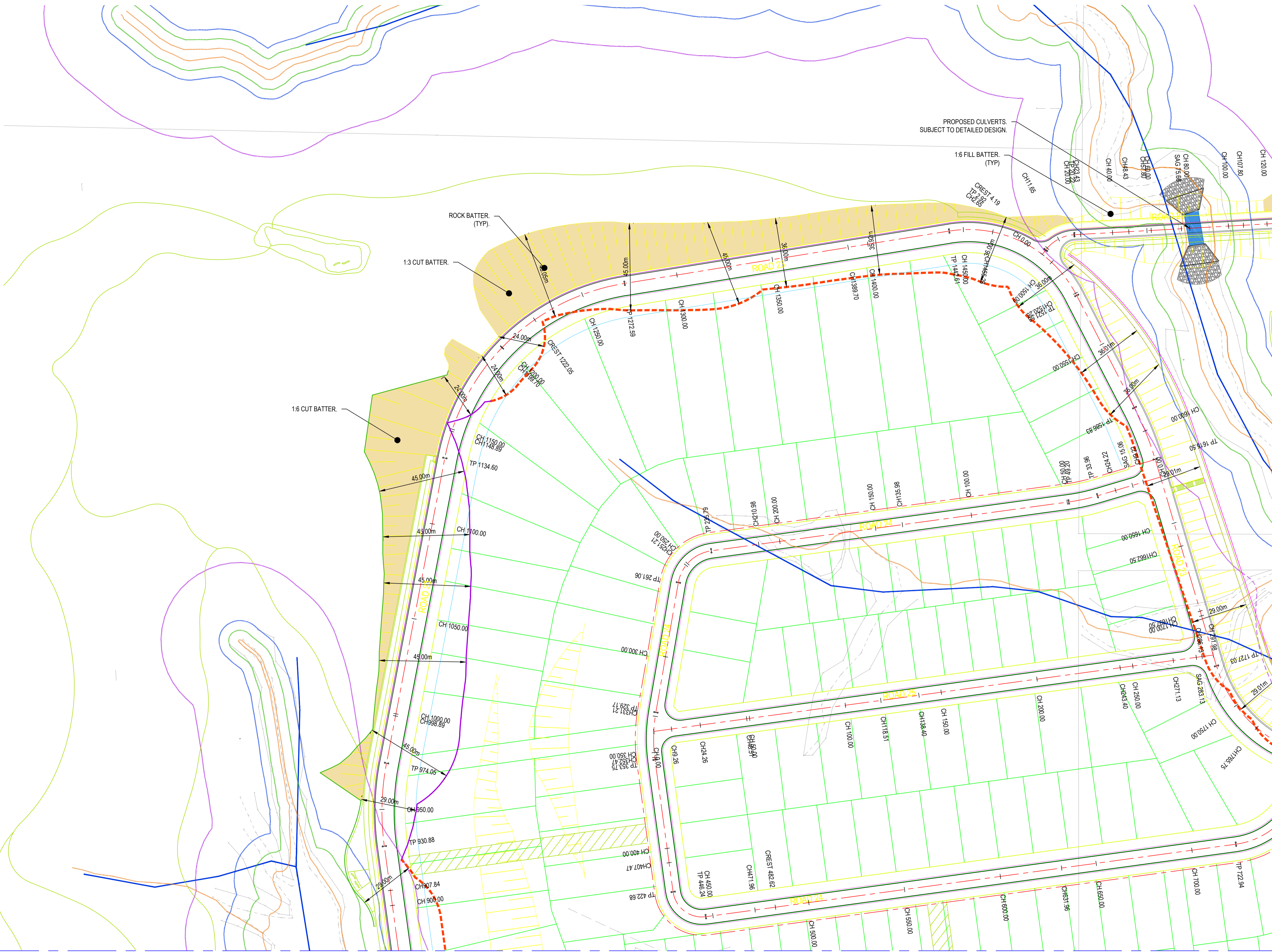
Geoscience Australia  
Nearmap  
[Street-directory.com.au](http://Street-directory.com.au)

### Attachments

Attachment 01: APZ Overlay

LEGEND

- BATTER
- TEMPORARY DRAINAGE CHANEL
- OVERLAND FLOW
- SURFACE FALL
- STORMWATER TRUNK LINE
- VEGETATED RIPARIAN ZONE
- INNER 50% VRZ
- TOP OF BANK
- 100m WETLAND BUFFER
- WATERFRONT LAND (40m)
- HERITAGE PAD AREAS
- 5.5m BUILDING SETBACK 10\_04\_25 BCBHS
- APZ CONSTRAINT
- APZ FROM BUILDING SETBACK BCBHS
- APZ EXTERNAL 10\_04\_25 BCBHS
- VEGETATION HAZARD 10\_04\_25 BCBHS
- VEGETATION HAZARD
- 400m ODOUR BUFFER
- WATER EASEMENT
- ELECTRICAL EASEMENT
- PROPOSED RIPARIAN REALIGNMENT
- ROCK BATTER

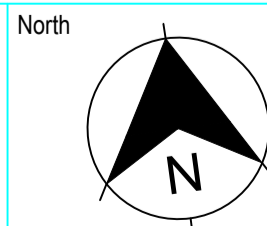
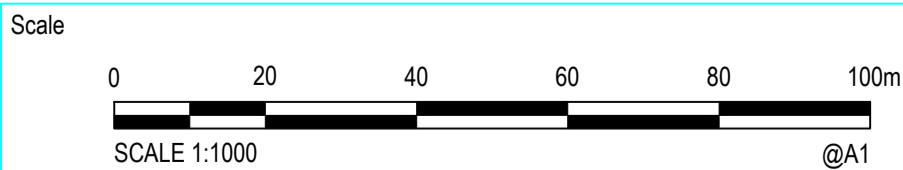


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1	14/06/2024	ISSUE FOR APPROVAL	CB	EZ		MTL

Client



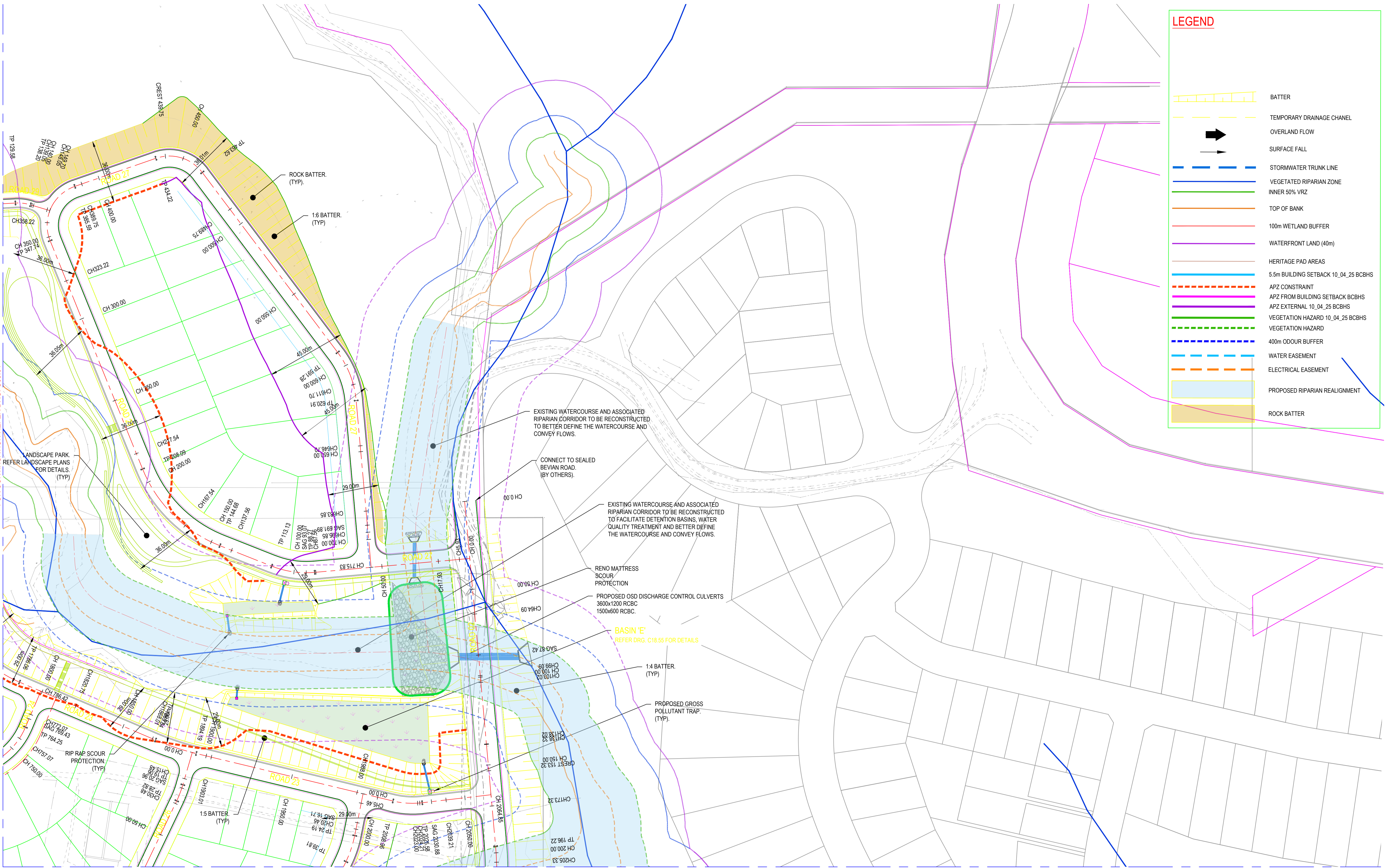
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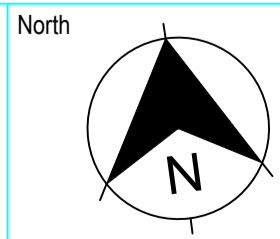
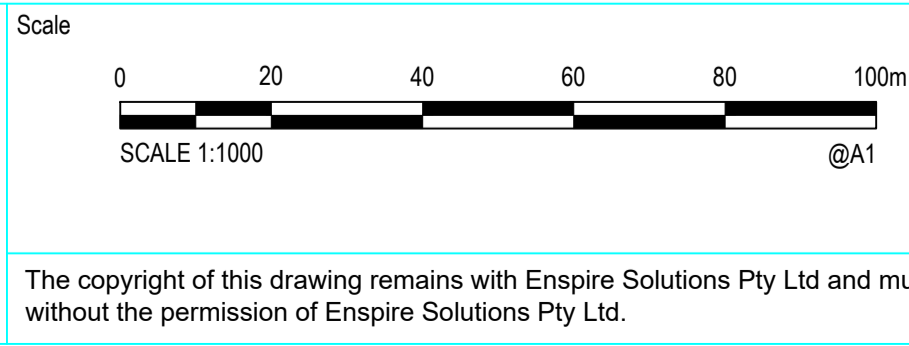
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Project  
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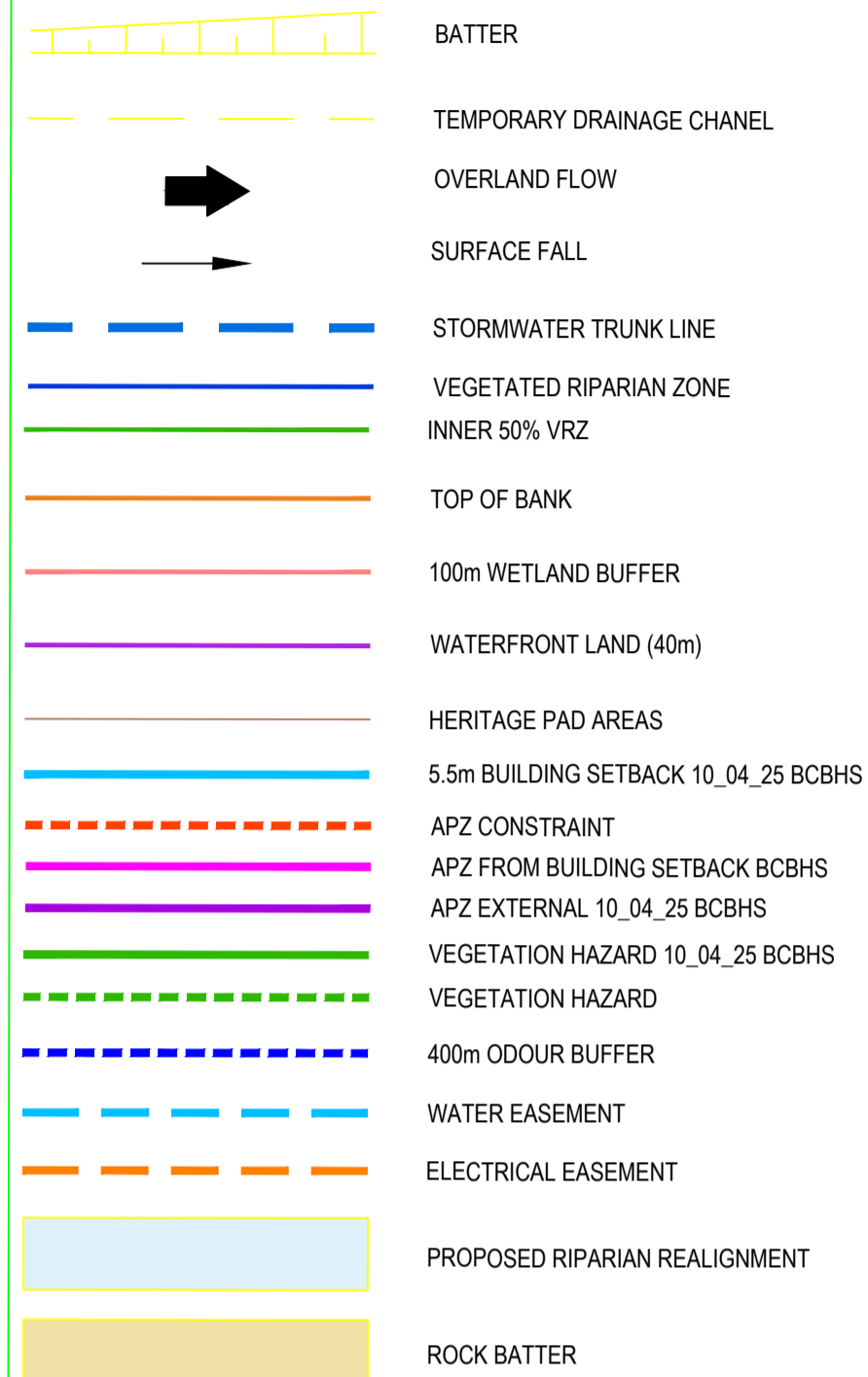
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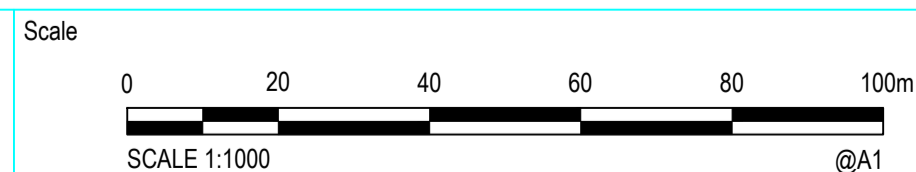
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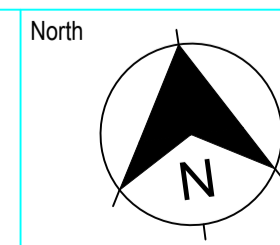
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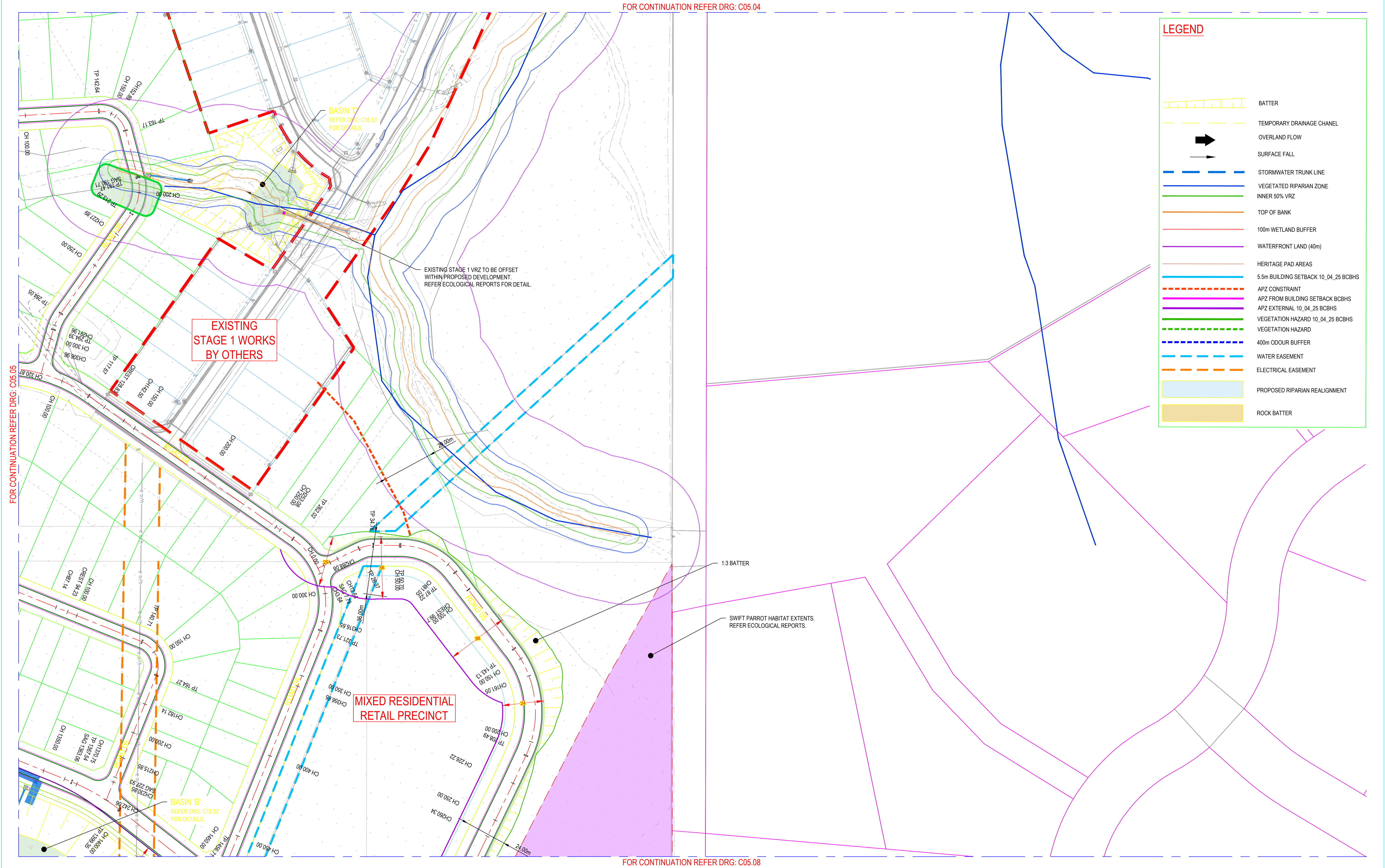
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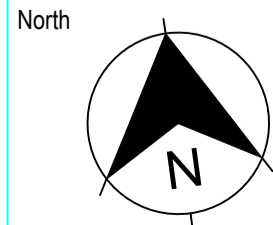
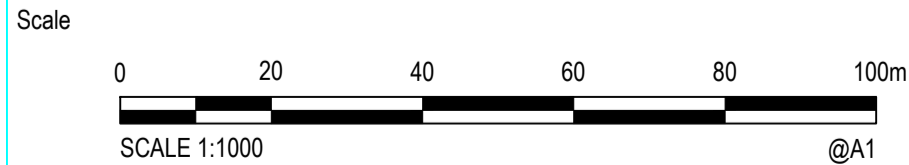
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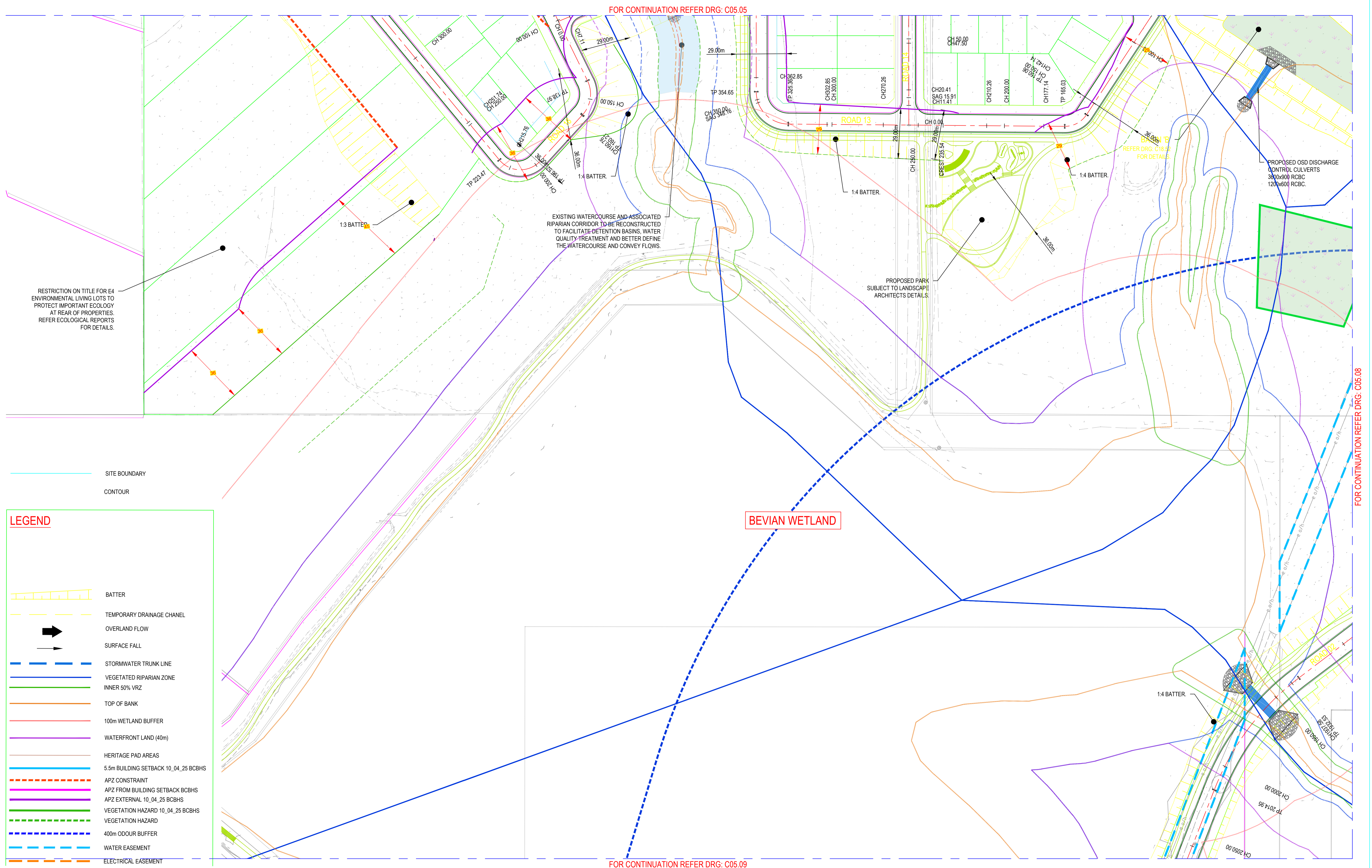
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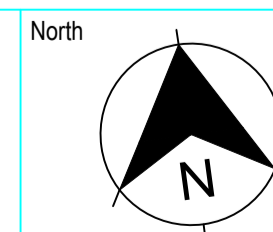


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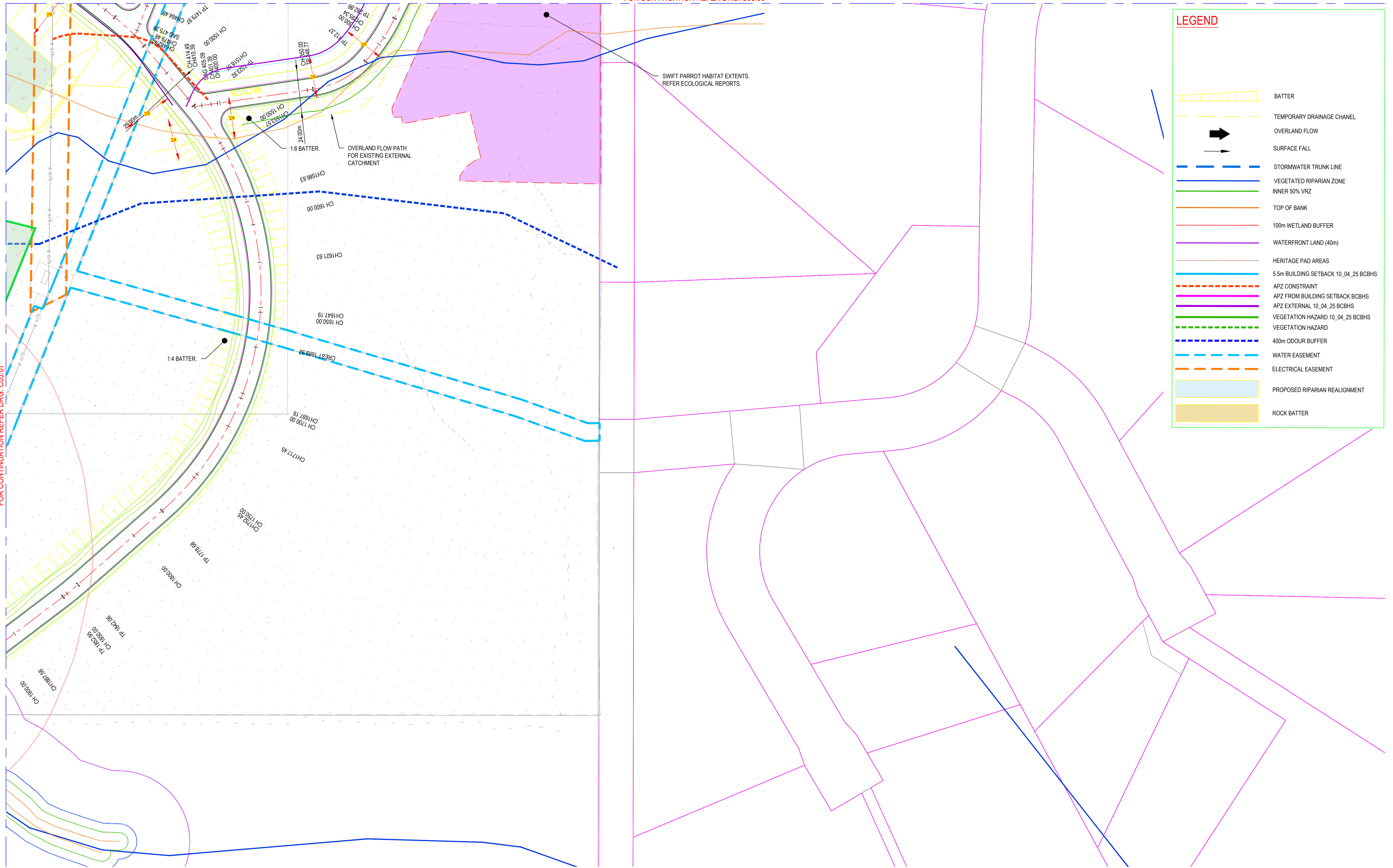
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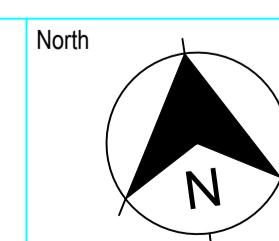


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SCALE 1:1000 @A1

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N	Scale	1:1000
	Date	14/06/2024
	Size	A1
	Datum	MGA 2020

Status

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Project Number/Drawing Number  
210123-00-C-C05.08

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DATE PLOTTED: 17 April 2025 1:32 PM BY: IAN

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