



BUSHFIRE THREAT ASSESSMENT

FOR A PROPOSED COMMUNITY
FACILITY
AT

37-39 METFORD ROAD,
TENAMBIT NSW 2323

Prepared by:

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Disclaimer

Notwithstanding the precautions adopted within this report, it should always be remembered that bushfires burn under a wide range of conditions. An element of risk, no matter how small always remains, and although the standard is designed to improve the performance of such buildings, there can be no guarantee, because of the variable nature of bushfires, that any one building will withstand bushfire attack on every occasion.



Executive Summary

A Bushfire Threat Assessment Report has been prepared by Firebird ecoSultants Pty Ltd at the request of HDB Planning and Design for a proposed community facility at 37-39 Metford Road, Tenambit NSW 2323.

Public assembly buildings are not defined as SFPP by the RF Reg but require referral under EP&A Act s.4.14 to the NSW RFS. Buildings used for public assembly with a floor space area of greater than 500m² are required to consider bush fire. These developments will be treated technically as SFPP due to the evacuation challenges presented by large numbers of occupants. Assembly buildings can accommodate large numbers of persons of various physical capabilities. Emergency management planning for these developments must account for the total number of occupants and be commensurate with the level of risk. These developments must not experience radiant heat levels of greater than 10kW/m² on any part of the building. Due to the variation in risk associated with the occupants of assembly buildings, a variety of bush fire safety solutions may apply based on the merits of the situation.

The following recommendations are provided in relation to meeting the provisions within chapter 7 of PBP (RFS, 2019):

- The proposed building is able to comply with the BCA;
- Any landscaping within the site is to meet the requirements of an Inner Protection Area (IPA); and
- Water reticulation is constructed to AS2419.1-2005.
- A Bush Fire Emergency Management and Evacuation Plan is to be prepared.

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Terms & Abbreviations

Abbreviation	Meaning
APZ	Asset Protection Zone
AS2419 -2005	Australian Standard – Fire Hydrant Installations
AS3959-2018	Australian Standard – Construction of Buildings in Bush Fire Prone Areas
BCA	Building Code of Australia
BPA	Bush Fire Prone Area (Also Bushfire Prone Land)
BFPL Map	Bush Fire Prone Land Map
BPMs	Bush Fire Protection Measures
BFSA	Bush Fire Safety Authority
CC	Construction Certificate
<i>EPA Act</i>	<i>NSW Environmental Planning and Assessment Act 1979</i>
FDI	Fire Danger Index
FMP	Fuel Management Plan
ha	hectare
IPA	Inner Protection Area
LGA	Local Government Area
MCC	Maitland City Council
OPA	Outer Protection Area
PBP	Planning for Bushfire Protection 2019
PoM	Plan of Management
RF Act	Rural Fires Act 1997
RF Regulation	Rural Fires Regulation



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I INTRODUCTION

Firebird ecoSultants Pty Ltd was engaged by HDB Planning and Design to undertake a Bushfire Threat Assessment (BTA) for a community facility at 37-39 Metford Road, Tenambit NSW 2323, now on referred to in this report as the Site (Refer to Figure 1-1).

Public assembly buildings are not defined as SFPP by the RF Reg but require referral under EP&A Act s.4.14 to the NSW RFS. Buildings used for public assembly with a floor space area of greater than 500m² are required to consider bush fire. These developments will be treated technically as SFPP due to the evacuation challenges presented by large numbers of occupants. Assembly buildings can accommodate large numbers of persons of various physical capabilities. Emergency management planning for these developments must account for the total number of occupants and be commensurate with the level of risk. These developments must not experience radiant heat levels of greater than 10kW/m² on any part of the building. Due to the variation in risk associated with the occupants of assembly buildings, a variety of bush fire safety solutions may apply based on the merits of the situation.

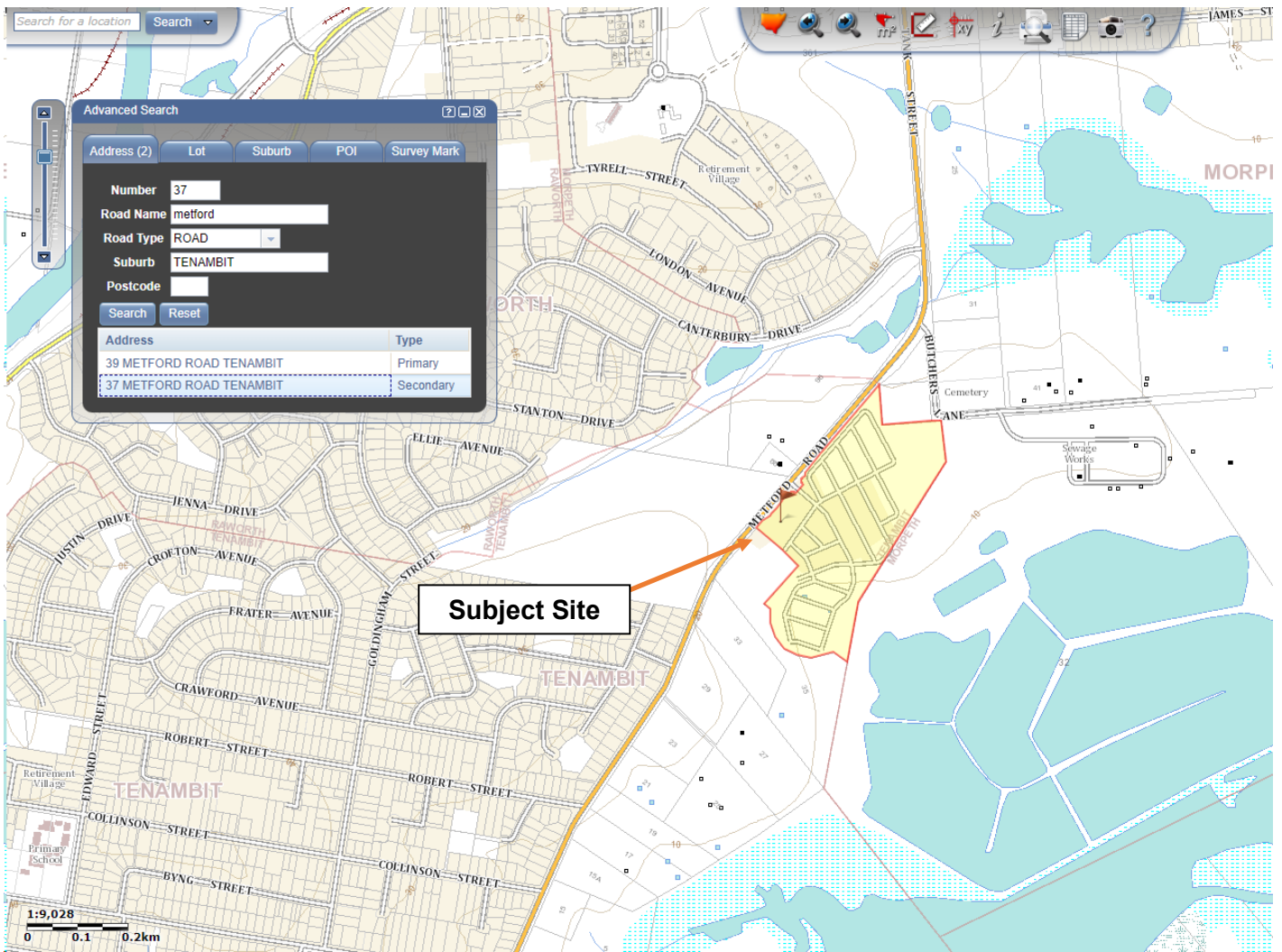
The intent of the BPMs is to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities.

This assessment has been based on the hazards within the site and surrounds in February 2024.

I.1 Site Particulars

Locality:	37-39 Metford Road, Tenambit NSW 2323
LGA:	Maitland City Council
Lot / DP:	Lot 1 in DP1288276
Current Land Use:	Existing community centre to be demolished

Figure 1-1: Site Location





I.2 Description of Proposal

The Proposal is for a community facility at 37-39 Metford Road, Tenambit NSW 2323. Refer to Appendix 1 – Site Layout and Plans.

I.3 Legislative Requirements

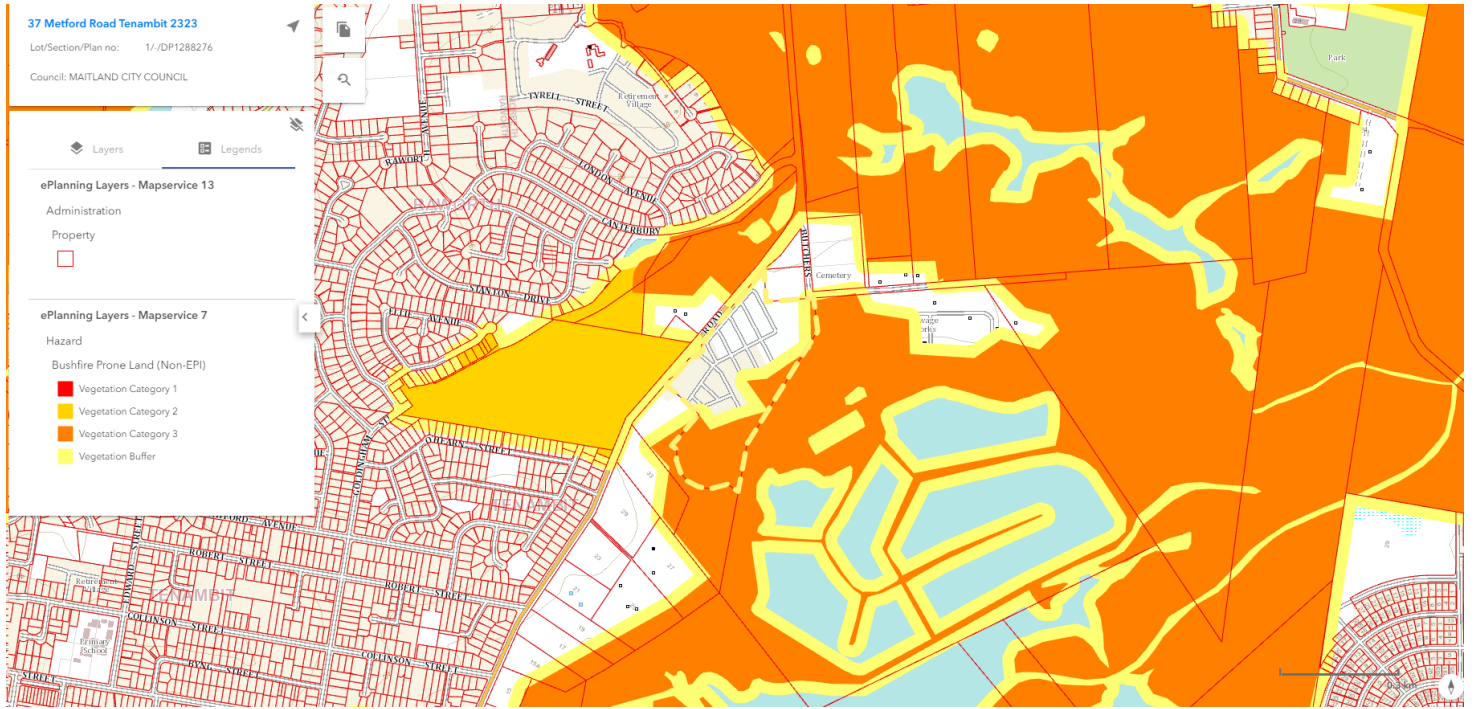
The Site has been mapped as Bushfire Prone Land Map (BFPLM) by MCC.

This report forms part of the supporting documentation for a Development Application (DA) to be submitted to MCC.

This BTA has been prepared using current legislative requirements and associated guidelines for assessment of bushfire protection, this being:

- PBP (RFS, 2019).

Figure 1-2: Bushfire Prone Land Map





2 METHODOLOGY

2.1 Vegetation Assessment

Vegetation surveys and vegetation mapping carried out on the Site has been undertaken as follows:

- Aerial Photograph Interpretation to map vegetation cover and extent
- Confirmation of the vegetation assemblage typology present.

2.2 Slope Assessment

Slope assessment has been undertaken as follows:

- Aerial Photograph Interpretation in conjunction with analysis of electronic contour maps with a contour interval of 2m.

3 SITE ASSESSMENT

The following assessment has been undertaken in accordance with the requirements of PBP (RFS, 2019).

3.1 Vegetation Assessment

In accordance with PBP (RFS 2019), an assessment of the vegetation and slope over a distance of 140m in all directions from the site was undertaken. Vegetation that may be considered a bushfire hazard was identified in all directions from the Site. Refer to **Table 3-1** for Vegetation and Slope Assessment and **Figure 4-1** Vegetation Map.

Table 3-1: Vegetation Classification

Direction	Vegetation Type	Slope Assessment
North	Grassland vegetation however, land has been approved for subdivision and thus will remove the vegetation ¹	Flat ground / Upslope
East	Managed Land – Existing Residential Development	N/A
Southwest	Grassland vegetation however, land has been approved for housing estate and thus will remove the vegetation ²	Cross slope
South	Grassland vegetation however, land has been approved for housing estate and thus will remove the vegetation	Downslope (0-5°)
West	Grassland vegetation however, land has been approved for subdivision and thus will remove the vegetation	Upslope / Cross slope

¹ Approved subdivision to the West of the subject site is shown in Appendix D

² Approved housing estate to the South of the subject site is shown in Appendix E

4 BUSHFIRE PROTECTION ASSESSMENT

4.1 Asset Protection Zones (APZ)

Using the results from the Site Assessment (section 3-1 of this report) the deemed to satisfy APZ requirements for the Proposal within the Site was determined using Table A1.12.1 APZs in PBP (RFS, 2019).

4.1.1 Required APZs for the Proposal

The Bushfire hazard that may impact upon the Proposal is the grassland vegetation to the North, West and South. Refer to Table 4-1 and Figure 4-1 detail the recommended APZs for the Proposal.

Table 4-1: Recommended APZs for the Proposal

Direction from Building Envelope	Vegetation Classification within 140m	APZs Required in accordance with PBP 2019	Setback (APZ) Provided
North	Grassland Vegetation - Future managed land	36m	>100m
East	Managed Land	N/A	N/A
Southwest	Grassland Vegetation - Future managed land	36m	>100m
South	Grassland Vegetation - Future managed land	40m	>100m
West	Grassland Vegetation - Future managed land	36m	>100m

4.1.2 Establishment of the APZ

Asset Protection Zones (APZ) refers to the area between the bushfire threat and the asset (i.e. building). APZs may contain two areas; the Inner Protection Area (IPA) and the Outer Protection Area (OPA). In this case the Site should be managed as an Inner Protection Area (IPA) within its development area. Refer to Figure 4-1 for location of APZs and distances from the Proposal.

Figure 4-1: Vegetation map





5 AIMS AND OBJECTIVES OF PBP 2019

The aim of PBP (RFS, 2019) is to use the NSW development assessment system to provide for the protection of human life and to minimize impacts on property from the threat of bushfire, while having due regard to development potential, on site amenity and protection of the environment.

More specifically the objectives are to:

- Afford occupants of any building adequate protection from exposure to bushfire;
- Provide for a defensible space to be located around buildings;
- Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent direct flame contact and material ignition;
- Ensure that safe operational access and egress for emergency personnel and residents is available;
- Provide for ongoing management and maintenance of bush fire protection measures, including fuel loads in the APZ; and
- Ensure that utility services are adequate to meet the needs of firefighters (and others assisting in bush fire-fighting).

The following comments are provided in relation to satisfying the objectives of PBP (RFS, 2019).

Objective 1

Afford occupants of any building adequate protection from exposure to bush fire
APZs as detailed on **Figure 4-1** are maintained for the life of the development and a FMP is prepared. Refer to Section 4.1.2 of this report for the establishment of the APZ.

Objective 2

Provide for a defensible space to be located around buildings
APZs as detailed on **Figure 4-1** are maintained for the life of the development and a FMP is prepared Refer to Section 4.1.2 of this report for the establishment of the APZ.

Objective 3

Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;
APZs as detailed on **Figure 4-1** are maintained for the life of the development and a FMP is prepared Refer to Section 4.1.2 of this report for the establishment of the APZ.



Objective 4

Ensure that appropriate operational access and egress for emergency service personnel and occupants is available;

It is considered that the proposed access will provide safe operational ingress for emergency services and also provide safe egress for residents during an emergency.

Objective 5

Provide for ongoing management and maintenance of BPMs;

APZs as detailed on **Figure 4-1** are maintained for the life of the development and a FMP is prepared. This APZ is to be managed in perpetuity. Refer to Section 4.1.2 of this report for the establishment of the APZ.

Objective 6

Ensure that utility services are adequate to meet the needs of firefighters.

The Site is to be connected to reticulated water and has access to hydrants providing appropriate water supply for firefighting needs. Refer to Appendix C for Water and Hydrant Information.



6 COMPLIANCE WITH PBP 2019

The Building Code of Australia (BCA) does not provide for any bush fire specific performance requirements and as such AS 3959 does not apply as a set of 'deemed to satisfy' provisions. The general fire safety construction provisions are taken as acceptable solutions, but the aim and objectives of PBP apply in relation to other matters such as access, water and services, emergency planning and landscaping/vegetation management. These matters are addressed below.

Note: The Performance criteria is only addressed in cases where the acceptable solution cannot be achieved.

Table 6-1: Conformation with PBP 2019

Acceptable Solutions	Performance Criteria	Compliance
ASSET PROTECTION ZONES		
<ul style="list-style-type: none"> › the building is provided with an APZ in accordance with PBP 2019 (Table A1.12.1 in Appendix 1). 	<ul style="list-style-type: none"> › radiant heat levels of greater than 10kW/m² (calculated at 1200K) will not be experienced on any part of the building. 	<p>Complies with Acceptable Solution - the building is provided with an APZ in accordance with PBP 2019 (Table A1.12.1 in Appendix 1).</p>
<ul style="list-style-type: none"> › APZs are located on lands with a slope less than 18 degrees. 	<ul style="list-style-type: none"> › APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised. 	<p>Complies with Acceptable Solution – APZs are located on lands with a slope less than 18 degrees.</p>
<ul style="list-style-type: none"> › the APZ is managed in accordance with the requirements of Appendix 4 of this document, and is wholly within the boundaries of the development site; › APZ are wholly within the boundaries of the development site; and › other structures located within the APZ need to be located further than 6m from the refuge building. 	<ul style="list-style-type: none"> › APZs are managed and maintained to prevent the spread of fire to the building. › the APZ is provided in perpetuity 	<p>Complies with Performance Criteria – the APZs to the North, West and South are inclusive of adjoining land that is approved for development therefore removing vegetation hazard</p>
LANDSCAPING		



<ul style="list-style-type: none"> > landscaping is in accordance with Appendix 4; and > fencing is constructed in accordance with section 7.6. 	<ul style="list-style-type: none"> > landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions 	<p>Complies with Acceptable Solution - landscaping will be in accordance with Appendix 4 of PBP 2019; and fencing will be constructed in accordance with section 7.6 of PBP 2019.</p>
CONSTRUCTION STANDARDS		
<ul style="list-style-type: none"> > a construction level of BAL-12.5 under AS 3959 or NASH Standard and section 7.5 of PBP is applied. 	<ul style="list-style-type: none"> > the proposed building can withstand bush fire attack in the form of wind, embers, radiant heat and flame contact. 	<p>N/A - The Building Code of Australia (BCA) does not provide for any bush fire specific performance requirements for this type of development and as such AS 3959 does not apply as a set of 'deemed to satisfy' provisions. The general fire safety construction provisions are taken as acceptable solutions.</p>
ACCESS		
<ul style="list-style-type: none"> > SFPP access roads are two-wheel drive, all-weather roads; > access is provided to all structures; > traffic management devices are constructed to not prohibit access by emergency services vehicles; > access roads must provide suitable turning areas in accordance with Appendix 3; and > one way only public access roads are no less than 3.5 metres wide and have designated parking bays with hydrants located outside of these areas to ensure accessibility to reticulated water for fire suppression 	<ul style="list-style-type: none"> > firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation. 	<p>Complies with Acceptable Solution – access roads comply with the acceptable solution.</p>
<ul style="list-style-type: none"> > the capacity of road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes); bridges and causeways are to clearly indicate load rating. 	<ul style="list-style-type: none"> > the capacity of access roads is adequate for firefighting vehicles. 	<p>Complies with Acceptable Solution – road surfaces and bridges/causeways are to comply.</p>



<ul style="list-style-type: none"> › 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; and › there is suitable access for a Category 1 fire appliances to within 4m of the static water supply where no reticulated supply is available. 	<ul style="list-style-type: none"> › there is appropriate access to water supply. 	<p>Complies with Acceptable Solution – hydrants are to comply with the acceptable solution.</p>
<h3>PERIMETER ROADS</h3>		
<ul style="list-style-type: none"> › there are two-way sealed roads; › minimum 8m carriageway width kerb to kerb; › parking is provided outside of the carriageway width; › hydrants are to be located clear of parking areas; › there are through roads, and these are linked to the internal road system at an interval of no greater than 500m; › 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. 	<ul style="list-style-type: none"> › perimeter access roads are designed to allow safe access and egress for firefighting vehicles while occupants are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface. 	<p>Complies with Acceptable Solution – the existing perimeter roads comply with the requirements of the acceptable solution</p>
<h3>NON-PERIMETER ROADS</h3>		



<ul style="list-style-type: none"> > minimum 5.5m carriageway width kerb to kerb; > parking is provided outside of the carriageway width; > hydrants are located clear of parking areas; > there are through roads, and these are linked to the internal road system at an interval of no greater than 500m; > 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. 	<ul style="list-style-type: none"> > non-perimeter access roads are designed to allow safe access and egress for firefighting vehicles while occupants are evacuating. 	<p>Complies with Acceptable Solution – the existing non-perimeter roads comply with the requirements of the acceptable solution.</p>
<h2 style="margin: 0;">WATER SUPPLY</h2>		
<ul style="list-style-type: none"> > reticulated water is to be provided to the development, where available; or > a 10,000 litres minimum static water supply for firefighting purposes is provided for each occupied building where no reticulated water is available. 	<ul style="list-style-type: none"> > an adequate water supply for firefighting purposes is installed and maintained. 	<p>Complies with acceptable solution - the site is connected to reticulated water.</p>
<ul style="list-style-type: none"> > fire hydrant spacing, design and sizing comply with the relevant clauses of AS 2419.1:2005; > hydrants are not located within any road carriageway; and > reticulated water supply to SFPPs uses a ring main system for areas with perimeter roads. 	<ul style="list-style-type: none"> > water supplies are located at regular intervals. > the water supply is accessible and reliable for firefighting operations. 	<p>Complies with acceptable solution – hydrant spacing, design and sizing comply.</p>



<ul style="list-style-type: none"> › fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2005. 	<ul style="list-style-type: none"> › flows and pressure are appropriate. 	<p>Complies with acceptable solution – hydrant flows and pressures comply.</p>
<ul style="list-style-type: none"> › all above-ground water service pipes external to the building are metal, including and up to any taps. 	<ul style="list-style-type: none"> › the integrity of the water supply is maintained. 	<p>Complies with acceptable solution – all above-ground water pipes are to comply.</p>
<ul style="list-style-type: none"> › a connection for firefighting purposes is located within the IPA or non-hazard side and away from the structure; a 65mm Storz outlet with a ball valve is fitted to the outlet; › ball valve and pipes are adequate for water flow and are metal; › supply pipes from tank to ball valve have the same bore size to ensure flow volume; › underground tanks have an access hole of 200mm to allow tankers to refill direct from the tank; › a hardened ground surface for truck access is supplied within 4m of the access hole; › above-ground tanks are manufactured from concrete or metal; › raised tanks have their stands constructed from non-combustible material or bush fire-resisting timber (see Appendix F AS 3959); › unobstructed access is provided at all times; › tanks on the hazard side of a building are provided with adequate shielding for the protection of firefighters; and › underground tanks are clearly marked, › all exposed water pipes external to the building are metal, including any fittings; › where pumps are provided, they are a minimum 5hp or 3kW petrol or diesel-powered pump, and are shielded against bush fire attack; Any hose 	<ul style="list-style-type: none"> › water supplies are adequate in areas where reticulated water is not available 	<p>Complies with acceptable solution – firefighting services are to comply.</p>



<p>and reel for firefighting connected to the pump shall be 19mm internal diameter; and</p> <ul style="list-style-type: none"> > 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 <i>Installation of fire hose reels</i>. 		
ELECTRICITY SERVICES		
<ul style="list-style-type: none"> > where practicable, electrical transmission lines are underground; > where overhead, electrical transmission lines are proposed as follow: <ul style="list-style-type: none"> ○ lines are installed with short pole spacing (30m), 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 accordance with the specifications in ISSC3 Guideline for Managing Vegetation Near Power Lines. 	<ul style="list-style-type: none"> > location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings. 	<p>Complies with acceptable solution – electricity services are to comply.</p>
GAS SERVICES		
<ul style="list-style-type: none"> > reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 and 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; > if gas cylinders need to be kept close to the building, safety valves are directed away from the building and at least 2m away from any 	<ul style="list-style-type: none"> > location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings. 	<p>Complies with acceptable solution – gas services are to comply.</p>



<p>combustible material, so they do not act as a catalyst to combustion;</p> <ul style="list-style-type: none"> › polymer-sheathed flexible gas supply lines to gas meters adjacent to buildings are not to be used; and › above-ground gas service pipes external to the building are metal, including and up to any outlets. 		
EMERGENCY MANAGEMENT		
<ul style="list-style-type: none"> › Bush Fire Emergency Management and Evacuation Plan is prepared consistent with the: <ul style="list-style-type: none"> ○ The NSW RFS document: A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan; ○ NSW RFS Schools Program Guide; ○ Australian Standard AS 3745:2010 Planning for emergencies in facilities; and ○ Australian Standard AS 4083:2010 Planning for emergencies – Health care facilities (where applicable). ○ the Bush Fire Emergency Management and Evacuation Plan should include planning for the early relocation of occupants <p>Note: A copy of the Bush Fire Emergency Management and Evacuation Plan should be provided to the Local Emergency Management Committee for its information prior to occupation of the development.</p>	<ul style="list-style-type: none"> › a Bush Fire Emergency Management and Evacuation Plan is prepared. 	<p>Complies with acceptable solution – a bushfire emergency management evacuation plan is to be prepared.</p>
<ul style="list-style-type: none"> › an Emergency Planning Committee is established to consult with residents (and their families in the case of aged care accommodation 	<ul style="list-style-type: none"> › appropriate and adequate management arrangements are established for consultation and 	<p>N/A – the proposal is not for a school or aged care</p>



<p>and schools) and staff in developing and implementing an Emergency Procedures Manual; and</p> <ul style="list-style-type: none">> detailed plans of all emergency assembly areas including on site and off-site arrangements as stated in AS 3745:2010 are clearly displayed, and an annually emergency evacuation is conducted.	<p>implementation of the Bush Fire Emergency Management and Evacuation Plan.</p>	
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7 CONCLUSION AND RECOMMENDATIONS

In conclusion, the Proposal is able to meet the aims and objectives of PBP 2019. 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.

The objectives are to:

- Afford buildings and their occupants protection from exposure to a bush fire;
- Provide for a defensible space to be located around buildings;
- Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent likely spread to buildings;
- Ensure that appropriate operations access for emergency service personnel and occupant is available;
- Provide for ongoing management and maintenance of BPMs;
- Ensure that utility services are adequate to meet the needs of firefighters.

The following recommendations are provided in relation to meeting the aims and objectives of PBP (RFS, 2019):

- The Proposal is to comply with the BCA;
- Any landscaping within the Site is to meet the requirements of an Inner Protection Area (IPA);
- Water reticulation is constructed to AS2419.1-2005.
- A Bush Fire Emergency Management and Evacuation Plan is to be prepared.



8 BIBLIOGRAPHY

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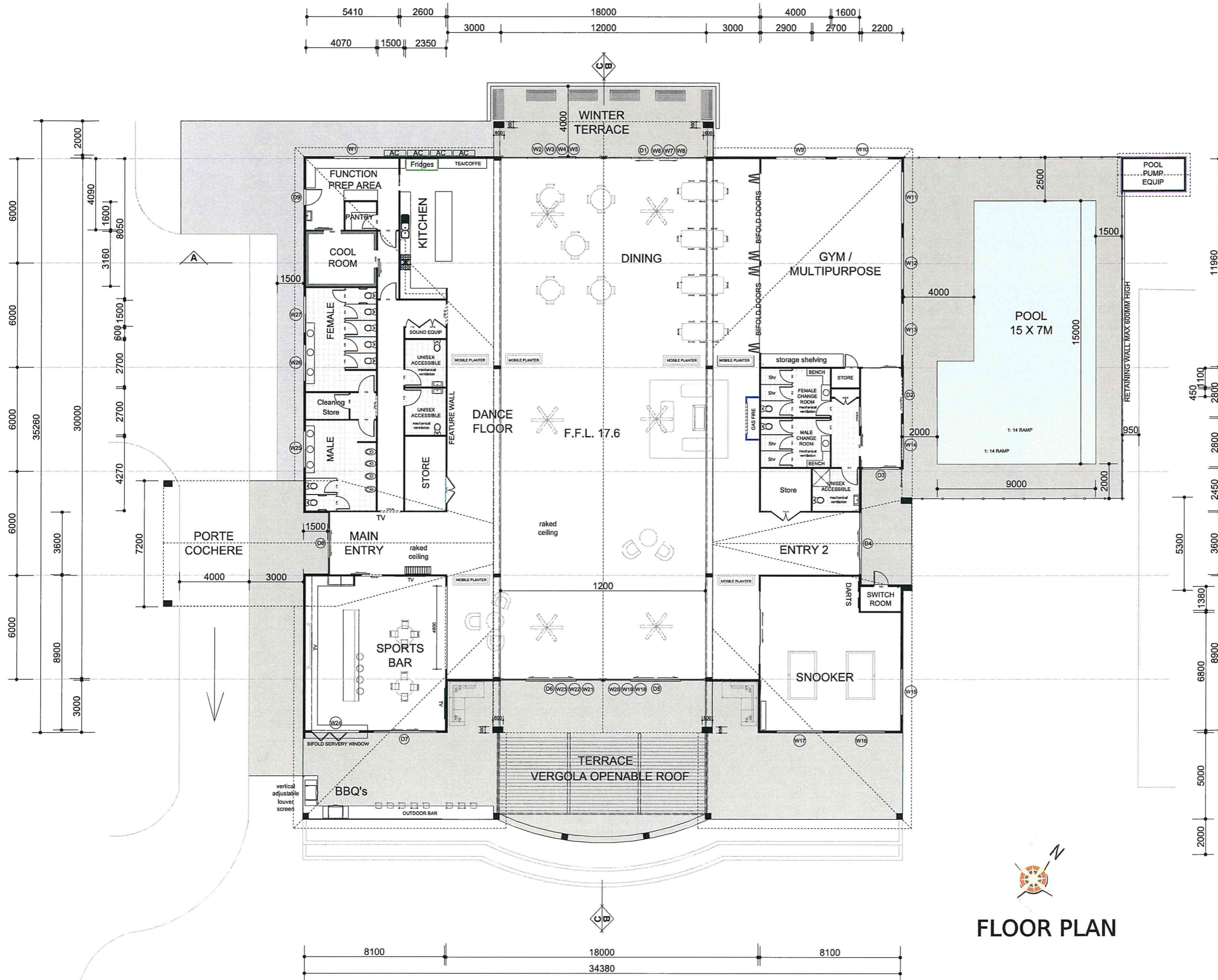
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APPENDIX A PROPOSED SITE PLANS



MODIFICATION TO CONSENT

No.	REVISION/ISSUE	DATE
1	MTC PRELIM	07/11/23
2	MTC REVISED	27/11/23
3	MTC	30/11/23

ALL DRAWINGS ARE THE PROPERTY OF THE DESIGNER AND THEY ARE NOT TO BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF THE DESIGNER. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE COMMENCING WORK AND TO REPORT ANY DISCREPANCIES TO THE DESIGNER.

 **NATURAL HOMESCAPES**
 Ph. 0468 656 133
 naturalhomescapes@gmail.com

PROJECT NAME:
PROPOSED COUNTRY CLUB

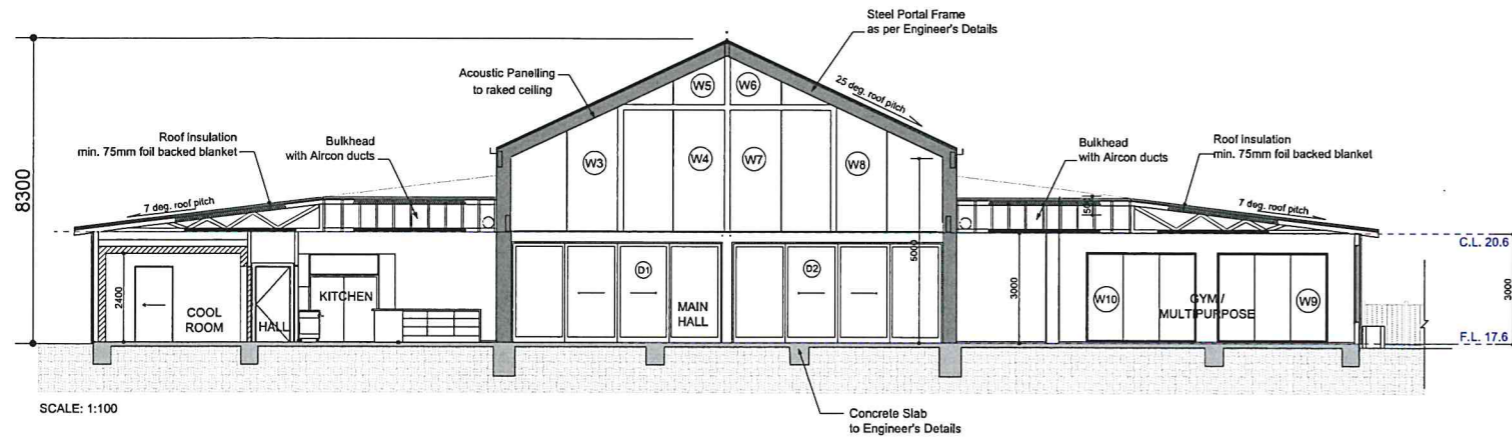
 39 Metford Road Tenambit

CLIENT: Rod Motbey

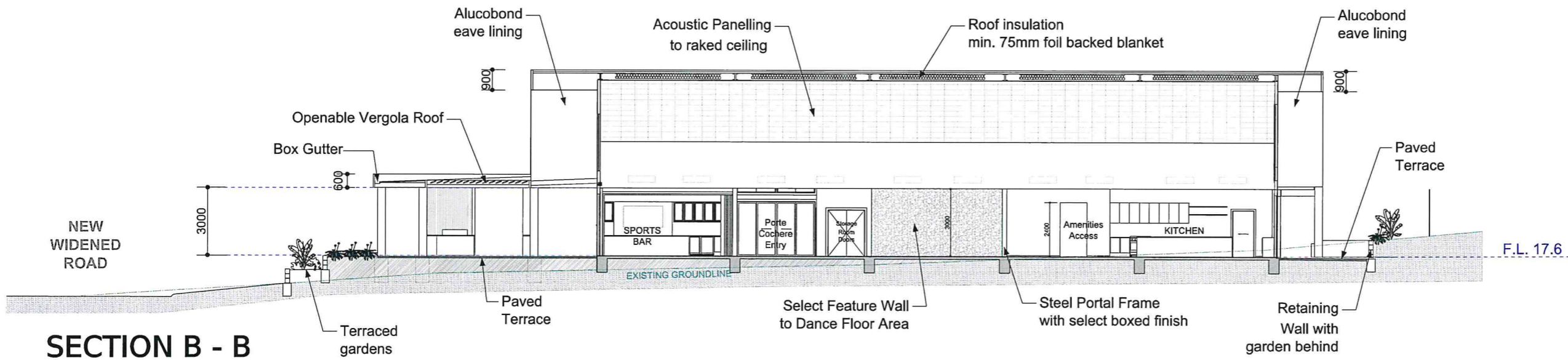
DRAWING: **FLOOR PLAN**
 SCALE: 1:100 (A1) DATE: November 2023

DRAWN BY: A.B.	JOB NO: 202114
CHECKED BY: A.B.	SHEET: DA02
APPROVED BY: A.B.	

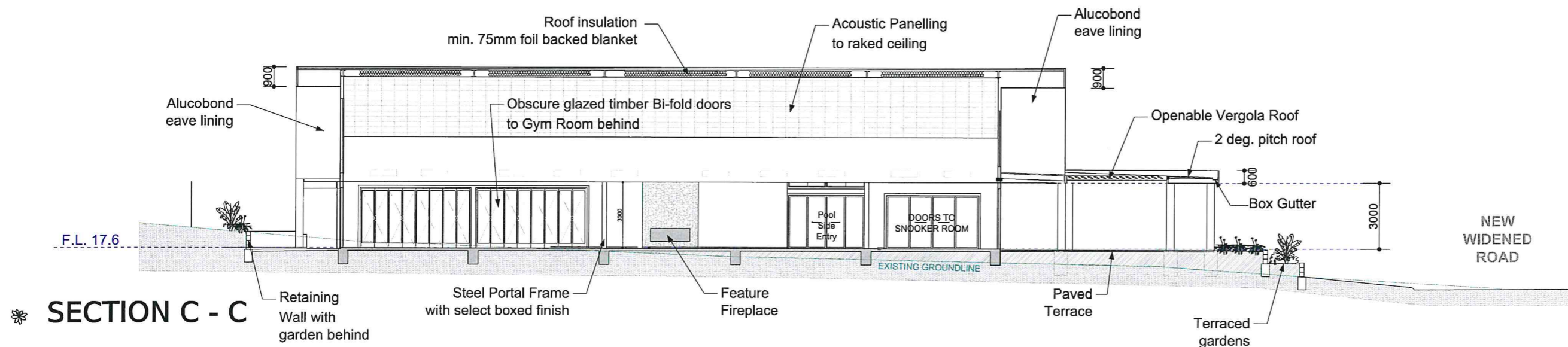

FLOOR PLAN



SECTION A - A



SECTION B - B



SECTION C - C

GENERAL NOTES

All work is to be constructed in Accordance with the NCC, referenced Australian Standards and in accordance with Local Council Regulations and Conditions of Approval.

Builders are to verify all levels, site dimensions and building setout prior to commencement of work and alert Designer of any significant discrepancies are found.

Figured Dimensions are to be used in preference to measured dimensions and any discrepancies to be discussed with Designer.

Refer to Engineer's Drawings and Specifications for details of Structural Elements inc. Slabs and Footings, Structural Memembers, Steel connection Detailing and Bracing.

MODIFICATION TO CONSENT

No.	REVISION/ISSUE	DATE
1	MTC PRELIM	07/11/23
2	MTC REVISED	27/11/23
3	MTC	30/11/23

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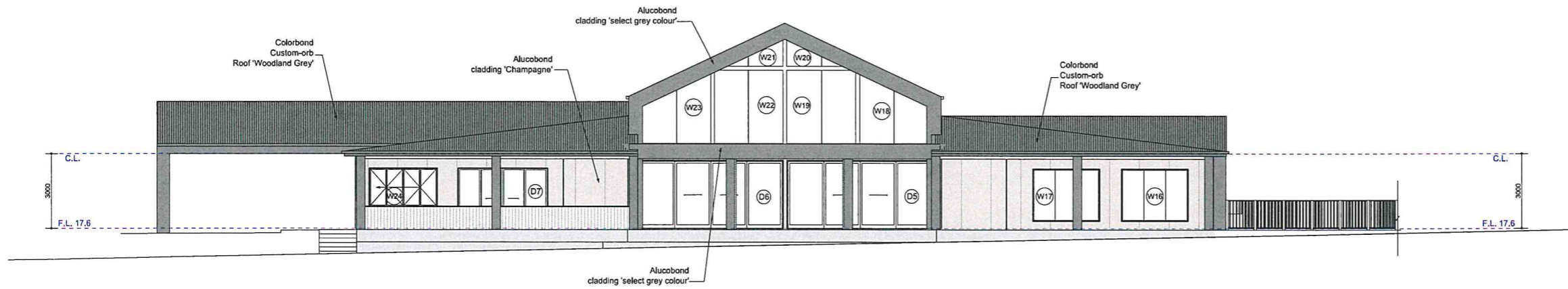
NATURAL HOMESCAPES
 Ph. 0468 656 133
 naturalhomescapes@gmail.com

PROJECT NAME:
PROPOSED COUNTRY CLUB
Morpeth Gardens
 39 Metford Road Tenambit

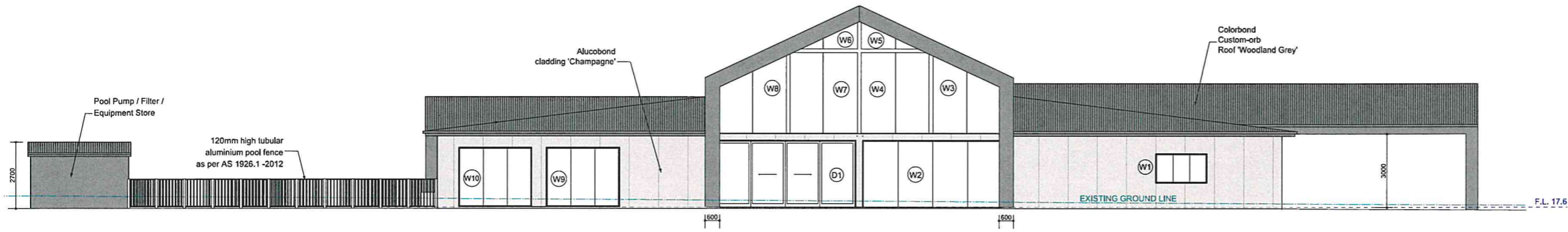
CLIENT: Rod Motbey

DRAWING: **SECTIONS**
 SCALE: 1:100 (A1) DATE: November 2023

DRAWN BY: A.B.	JOB NO: 202114
CHECKED BY: A.B.	SHEET: DA04
APPROVED BY: A.B.	



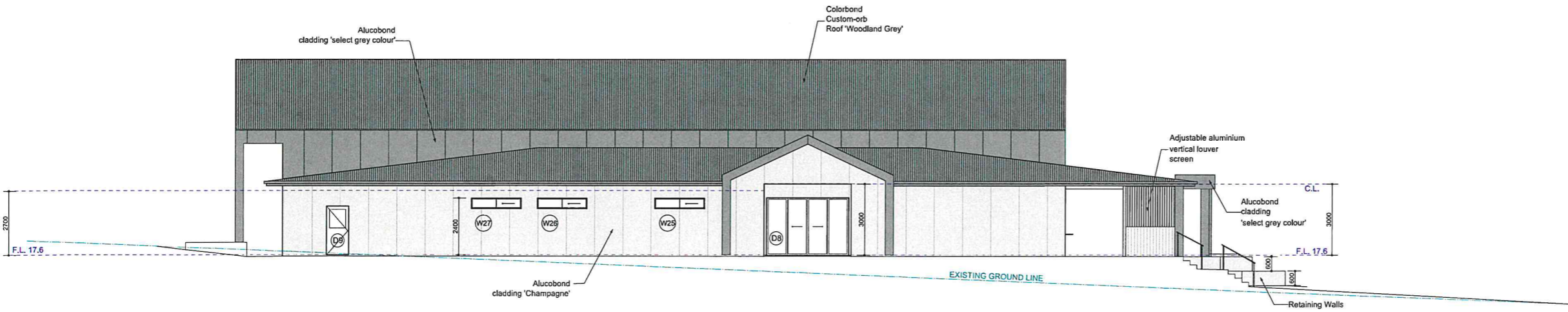
SOUTH EAST ELEVATION



NORTH WEST ELEVATION



NORTH EAST ELEVATION



SOUTH WEST ELEVATION

MODIFICATION TO CONSENT

No.	REVISION/ISSUE	DATE
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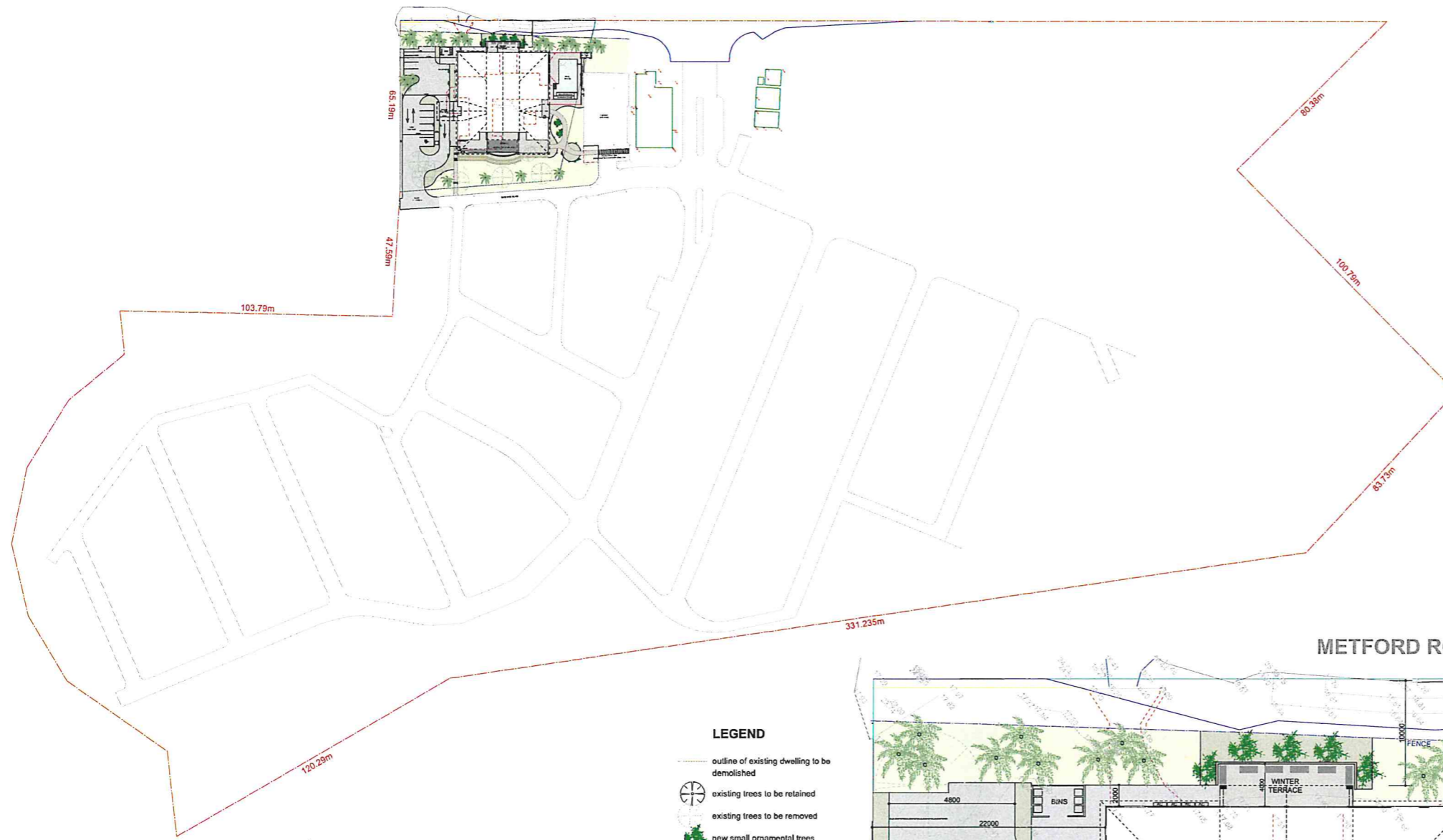
PROJECT NAME:
PROPOSED COUNTRY CLUB

 39 Metford Road Tenambit

CLIENT: Rod Motbey

DRAWING: **ELEVATIONS**
 SCALE: 1:100 (A1) DATE: November 2023

DRAWN BY: A.B.	JOB NO: 202114
CHECKED BY: A.B.	SHEET: DA03
APPROVED BY: A.B.	



WHOLE PROPERTY SITE PLAN
Scale 1:1000 (A1)

- LEGEND**
- outline of existing dwelling to be demolished
 - existing trees to be retained
 - existing trees to be removed
 - new small ornamental trees
 - new palm trees
 - lawn
 - new concrete paths
 - outdoor tiles
 - garden beds
 - 1200 high pool fence
 - retaining walls



SITE PLAN
Scale 1:250 (A1)

No.	REVISION/ISSUE	DATE
1	DA PRELIM	07/11/23
2	DA REVISED	10/11/23

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NATURAL HOMESCAPES
Ph. 0468 656 133
naturalhomescapes@gmail.com

PROJECT NAME:
PROPOSED COUNTRY CLUB
Morpeth Gardens
39 Metford Road Tenambit

CLIENT: Rod Motbey

DRAWING: **SITE PLAN**
SCALE: DATE: November 2023

DRAWN BY: A.B.	JOB NO: 202114
CHECKED BY: A.B.	SHEET:
APPROVED BY: A.B.	DA01

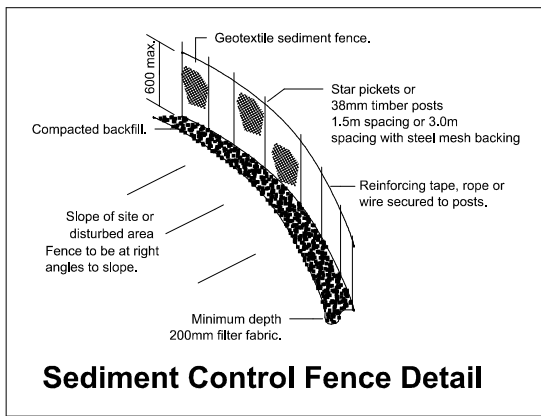


**WHOLE PROPERTY
SITE PLAN**
Scale 1:1000 (A1)

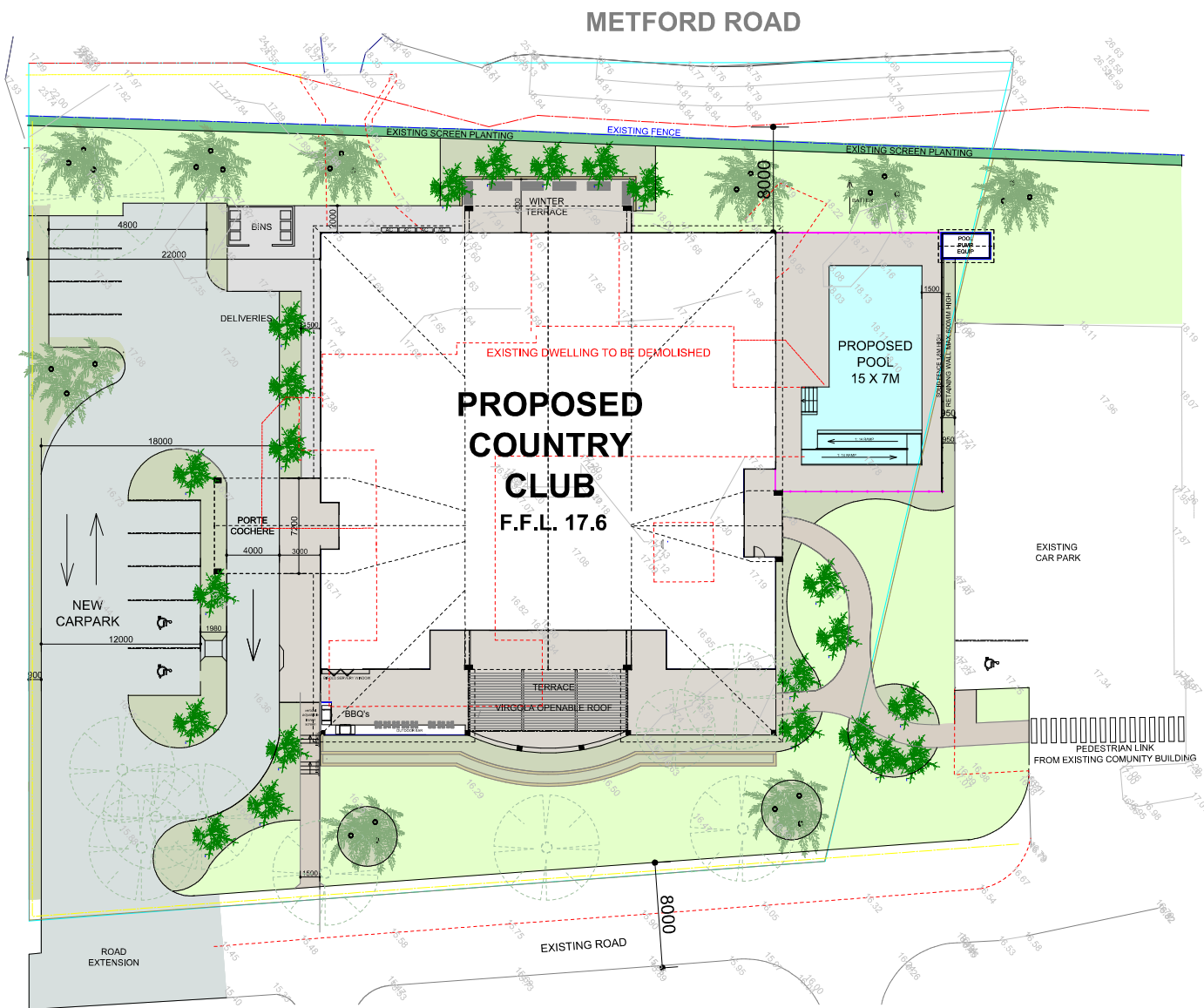
LEGEND

- outline of existing dwelling to be demolished
- existing trees to be retained
- existing trees to be removed
- new small ornamental trees
- new palm trees
- lawn
- new concrete paths
- outdoor tiles
- garden beds
- 1200 high pool fence
- retaining walls
- Erosion and Sediment Control Fence

Site Area: 10.38 Ha
Building Area: 1120m²
Covered Areas: 250m²



SITE PLAN
Scale 1:250 (A1)



**MODIFICATION
TO CONSENT**

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2	MTC REVISED	10/11/23
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PROJECT NAME:
PROPOSED COUNTRY CLUB

39 Metford Road Tenambit

CLIENT: Rod Motbey

DRAWING: **SITE PLAN**

SCALE: DATE: November 2023

DRAWN BY: A.B.	JOB NO: 202114
CHECKED BY: A.B.	SHEET: DA01
APPROVED BY: A.B.	



APPENDIX B ASSET PROTECTION ZONES

APPENDIX 4

ASSET PROTECTION ZONE REQUIREMENTS

In combination with other BPMS, a bush fire hazard can be reduced by implementing simple steps to reduce vegetation levels. This can be done by designing and managing landscaping to implement an APZ around the property.

Careful attention should be paid to species selection, their location relative to their flammability, minimising continuity of vegetation (horizontally and vertically), and ongoing maintenance to remove flammable fuels (leaf litter, twigs and debris).

This Appendix sets the standards which need to be met within an APZ.

A4.1 Asset Protection Zones

An APZ is a fuel-reduced area surrounding a building or structure. It is located between the building or structure and the bush fire hazard.

For a complete guide to APZs and landscaping, download the NSW RFS document *Standards for Asset Protection Zones* at the NSW RFS Website www.rfs.nsw.gov.au.

An APZ provides:

- a buffer zone between a bush fire hazard and an asset;
- an area of reduced bush fire fuel that allows for suppression of fire;
- an area from which backburning or hazard reduction can be conducted; and
- an area which allows emergency services access and provides a relatively safe area for firefighters and home owners to defend their property.

Bush fire fuels should be minimised within an APZ. This is so that the vegetation within the zone does not provide a path for the spread of fire to the building, either from the ground level or through the tree canopy.

An APZ, if designed correctly and maintained regularly, will reduce the risk of:

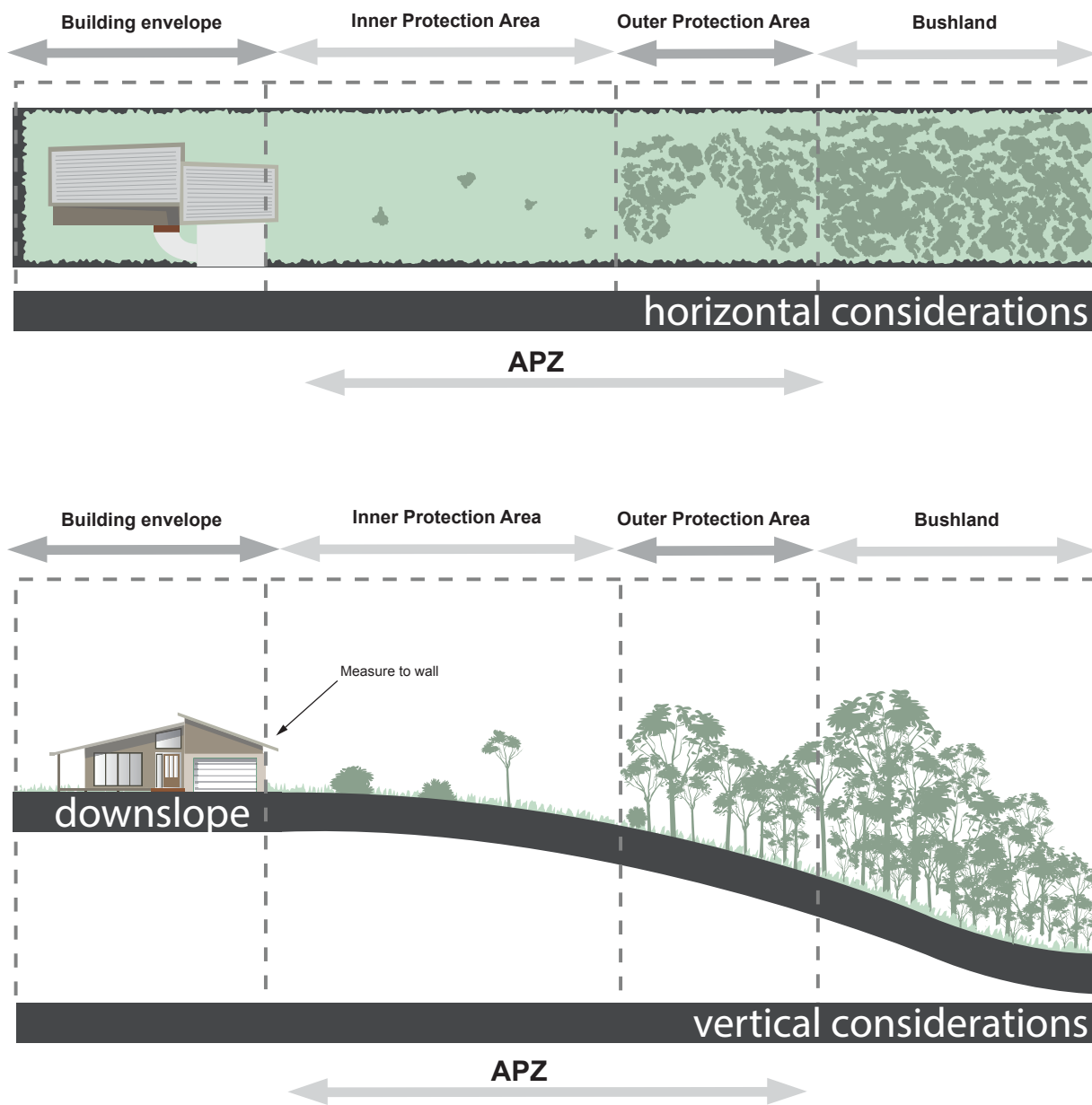
- direct flame contact on the building;
- damage to the building asset from intense radiant heat; and
- ember attack.

The methodology for calculating the required APZ distance is contained within Appendix 1. The width of the APZ required will depend upon the development type and bush fire threat. APZs for new development are set out within Chapters 5, 6 and 7 of this document.

In forest vegetation, the APZ can be made up of an Inner Protection Area (IPA) and an Outer Protection Area (OPA).

Figure A4.1

Typical Inner and Outer Protection Areas.



A4.1.1 Inner Protection Areas (IPAs)

The IPA is the area closest to the building and creates a fuel-managed area which can minimise the impact of direct flame contact and radiant heat on the development and act as a defensible space. Vegetation within the IPA should be kept to a minimum level. Litter fuels within the IPA should be kept below 1cm in height and be discontinuous.

In practical terms the IPA is typically the curtilage around the building, consisting of a mown lawn and well maintained gardens.

When establishing and maintaining an IPA the following requirements apply:

Trees

- tree canopy cover should be less than 15% at maturity;
- trees at maturity should not touch or overhang the building;
- lower limbs should be removed up to a height of 2m above the ground;
- tree canopies should be separated by 2 to 5m; and
- preference should be given to smooth barked and evergreen trees.

Shrubs

- create large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards buildings should be provided;
- shrubs should not be located under trees;
- shrubs should not form more than 10% ground cover; and
- clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.

Grass

- grass should be kept mown (as a guide grass should be kept to no more than 100mm in height); and
- leaves and vegetation debris should be removed.

A4.1.2 Outer Protection Areas (OPAs)

An OPA is located between the IPA and the unmanaged vegetation. It is an area where there is maintenance of the understorey and some separation in the canopy. The reduction of fuel in this area aims to decrease the intensity of an approaching fire and restricts the potential for fire spread from crowns; reducing the level of direct flame, radiant heat and ember attack on the IPA.

Because of the nature of an OPA, they are only applicable in forest vegetation.

When establishing and maintaining an OPA the following requirements apply:

Trees

- tree canopy cover should be less than 30%; and
- canopies should be separated by 2 to 5m.

Shrubs

- shrubs should not form a continuous canopy; and
- shrubs should form no more than 20% of ground cover.

Grass

- grass should be kept mown to a height of less than 100mm; and
- leaf and other debris should be removed.

An APZ should be maintained in perpetuity to ensure ongoing protection from the impact of bush fires. Maintenance of the IPA and OPA as described above should be undertaken regularly, particularly in advance of the bush fire season.



APPENDIX C WATER AND HYDRANT INFORMATION



Before You Dig Australia (BYDA) Location Information

Hunter Water Corporation
36 Honeysuckle Drive
NEWCASTLE NSW 2300

To:

Azmina Shafie
97 Scott Street
Newcastle NSW 2300

Enquiry Details	
Utility ID	80220
Job Number	36209850
Sequence Number	236433019
Enquiry Date	08/03/2024 10:22
Response	AFFECTED
Address	37 Metford Rd Tenambit
Location in Road	
Activity	Planning and Design

Enquirer Details	
Customer ID	3473355
Contact	Azmina Shafie
Company	
Email	azmina@firebirdeco.com.au
Phone	+61422344481

Enquirer Responsibilities

HWC's provision, and your access to and use, of the data, maps and other information contained in HWC's response to your Before You Dig Australia (BYDA) enquiry (Information) are subject to the following terms and conditions and any additional disclaimers contained in HWC's response.

1. Nature of HWC's assets

You acknowledge and accept that:

- (a) water in HWC mains is under pressure and may cause injury or damage if a main is damaged;
- (b) HWC sewer mains can be under pressure and may cause injury or damage if a main is damaged;
- (c) HWC recycled water mains can be under pressure and may cause injury or damage if a main is damaged;
- (d) HWC services are laid at varying depths;
- (e) the Information does not include data related to property services;
- (f) HWC will seek recovery of repair costs if an HWC asset is damaged; and
- (g) all electrical services are to be considered live.

Accordingly, all persons must exercise extreme care and only use hand excavation until the exact location of all assets within a work area is established.

2. Your use of Information

You acknowledge and accept that:

- (a) neither HWC nor BYDA make any representation or give any guarantee, warranty or undertaking (express or implied) as to the currency, accuracy, completeness, effectiveness or reliability of the Information;
- (b) all Information is:
 - i. generated by an automated system based on the information you submit to the BYDA website and it is your responsibility to ensure that the dig site is properly defined in your enquiry;
 - ii. approximate, intended to be of general application and may not be suitable for your specific requirements;
 - iii. unsuitable for scaling purposes; and
 - iv. based on information available to HWC and may not show all existing structures. For example, the location of Private Sewer/Water Mains is the initial indicative location supplied to HWC. This may not be the current location of such mains and not all private mains have been supplied to HWC;
- (c) you must not solely rely on the Information when undertaking underground works;
- (d) all Information is provided for the sole purpose of assisting you to locate HWC assets before excavation (Permitted Purpose) and you must not copy, translate, modify, distribute or make derivative works of the Information except as directly required to achieve the Permitted Purpose;
- (e) all Information must be used and kept together;
- (f) your access to and use of the Information does not grant you any ownership of or intellectual property rights in the Information;
- (g) in identifying in the Information the presence or potential presence of hazardous or potentially hazardous materials in HWC assets, HWC is not representing or warranting that other HWC assets not identified in the Information as containing or potentially containing hazardous materials do not also contain such materials; and
- (h) in excavating and conducting underground works, you must do so having regard to the fact that asbestos cement pipelines may form part of HWC's water and sewer reticulation systems.

3. Your other obligations

You are responsible for, amongst other things:

- (a) exposing underground structures, including HWC assets, by pot-holing using hand-held tools or vacuum techniques to determine the precise location and extent of structures before any mechanical means of excavation are used;
- (b) protecting underground structures, including HWC assets, from damage and interference;
- (c) maintaining acceptable clearances between HWC assets and structures belonging to others;
- (d) ensuring that backfilling in the vicinity of HWC assets complies with HWC's requirements (as set out on HWC's website or otherwise communicated to you by HWC);
- (e) notifying HWC immediately of any damage caused or threat of damage to any HWC asset; and
- (f) ensuring that plans are approved by HWC (usually by stamping) prior to landscaping or building over or in the vicinity of any HWC asset.

Enquirer Responsibilities Continued

4. Disclaimer

While HWC takes reasonable care in providing details of its underground assets, due to changes in road and footway alignments and levels, the age and incompleteness of some records and the general nature of the Information, it is not possible to conclusively specify the location of all HWC underground assets, including pipes that contain or may contain hazardous materials.

ALL INFORMATION IS PROVIDED AS GENERAL GUIDANCE ONLY AND SHOULD NOT BE USED OR RELIED UPON IN SUBSTITUTION FOR SPECIALISED PROFESSIONAL INDEPENDENT ADVICE. YOU ACKNOWLEDGE AND AGREE THAT YOUR USE OF THE INFORMATION IS AT YOUR OWN RISK.

If you have any questions or concerns about the appropriateness, reliability or application of any Information you must seek advice from a relevantly qualified professional. Further, dealing with hazardous materials is potentially dangerous, and you must always seek advice where the Information provides that HWC's assets contain or may contain hazardous materials.

HWC makes no representation and gives no warranty or undertaking (express or implied) as to the currency, accuracy, completeness, effectiveness or reliability of the Information or that the Information can be used for any purpose in substitution for specialised, professional and independent advice.

5. Limitation of liability

To the fullest extent permitted by law:

- (a) all conditions and guarantees concerning the Information (whether as to quality, outcome, fitness, care, skill or otherwise) expressed or implied by statute, common law, equity, trade, custom, usage or otherwise are expressly excluded and to the extent such conditions and guarantees cannot be excluded, HWC's liability is limited to either of the following (as nominated by HWC):
 - i. HWC supplying the Information to you again; or
 - ii. HWC paying you the cost of having the Information supplied to you again.
- (b) HWC is not responsible for and you release HWC from any actions, liabilities, losses, damages, costs, claims, expenses, injuries or other claims whatsoever (including loss of revenue, use, production, goodwill, profit, business, contract, anticipated savings, financing costs, increased operating costs or other purely financial, economic, special or indirect loss or damage) arising out of:
 - i. your access to or use of the Information;
 - ii. any delay in HWC providing you with Information;
 - iii. your reliance on the Information or its inability to meet your needs;
 - iv. your failure to correctly or accurately:
 - (1) submit relevant or valid data to BYDA; or
 - (2) use or interpret Information provided to you by HWC; or
 - v. any failure, interruption or corruption of any Information;
- (c) you must indemnify HWC and its employees, agents and officers from and against all actions, liabilities, losses, damages, costs, claims, expenses, injuries and other claims arising out of or in connection with HWC providing you with incorrect or incomplete Information; and you assume all risk associated with your use of BYDA and HWC's websites and you release BYDA and HWC from and against all actions, liabilities, losses, damages, costs, claims, expenses, injuries or other claims which may arise in respect of such usage.

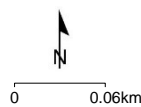
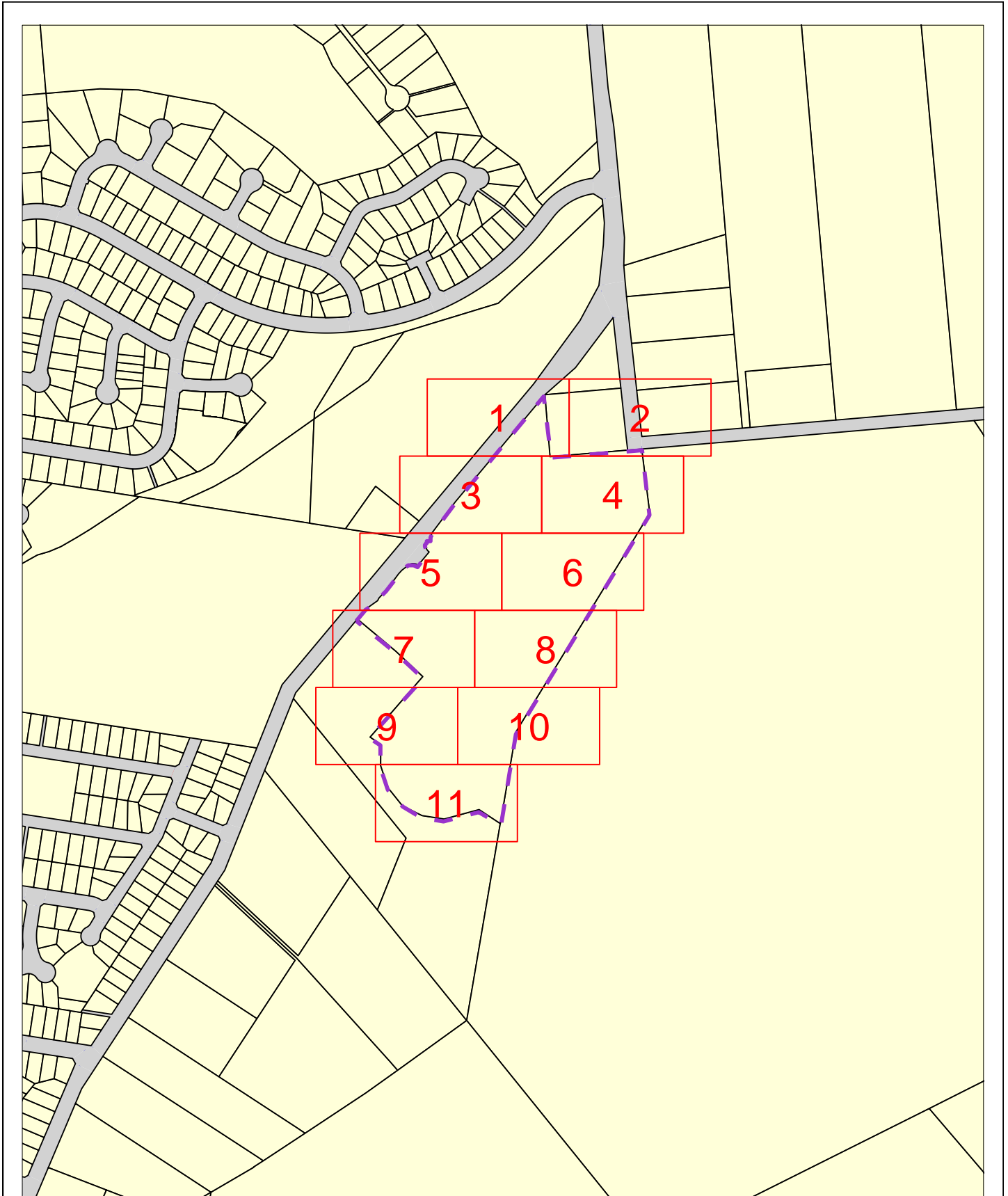
www.hunterwater.com.au

1300 657 000



Overview Map

Sequence No: 236433019
37 Metford Rd Tenambit



LEGEND:



Detail Map

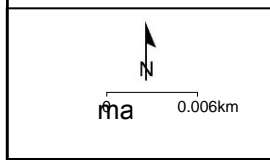
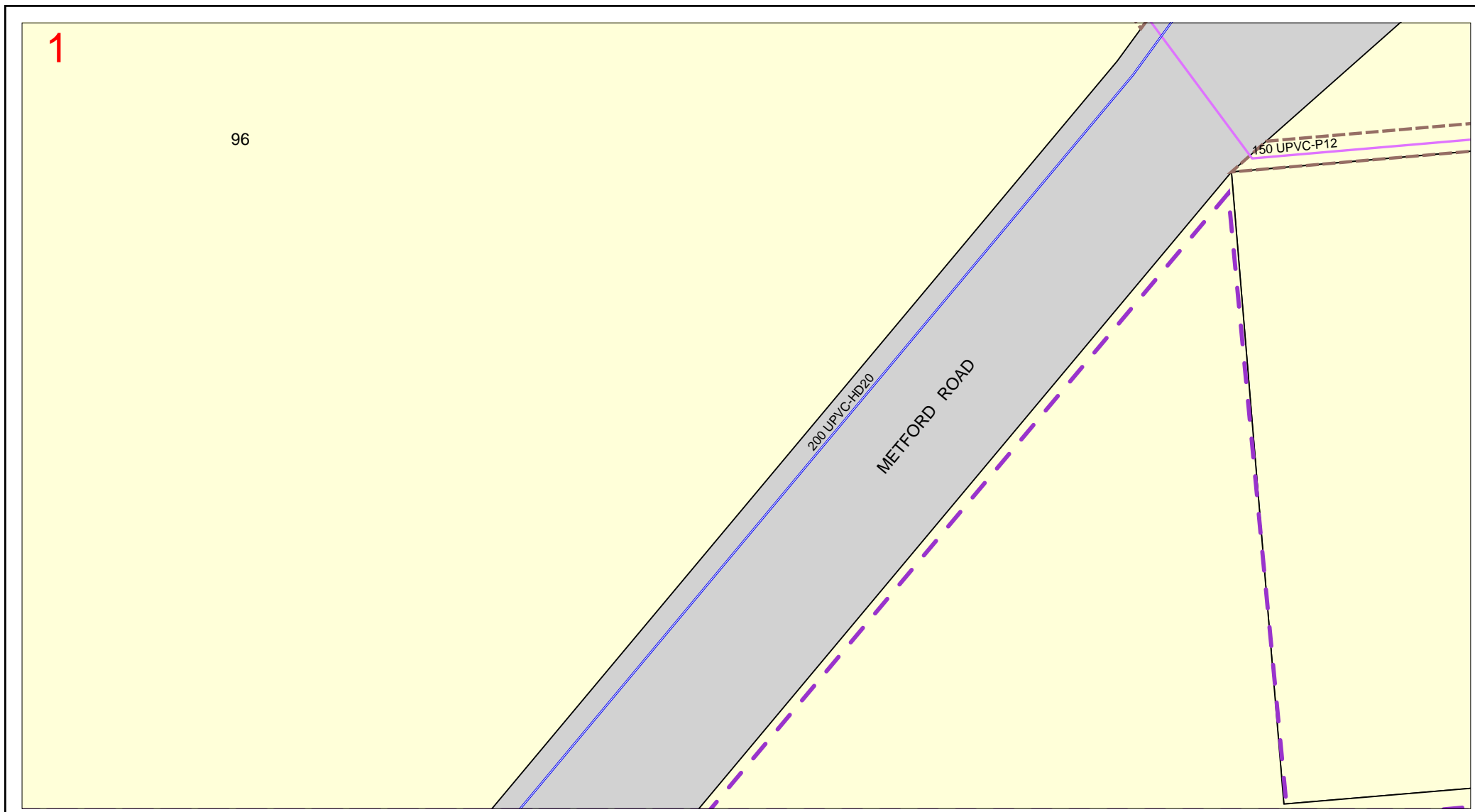


BYDADIA Work Area



Map 1

Sequence No: 236433019



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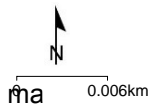
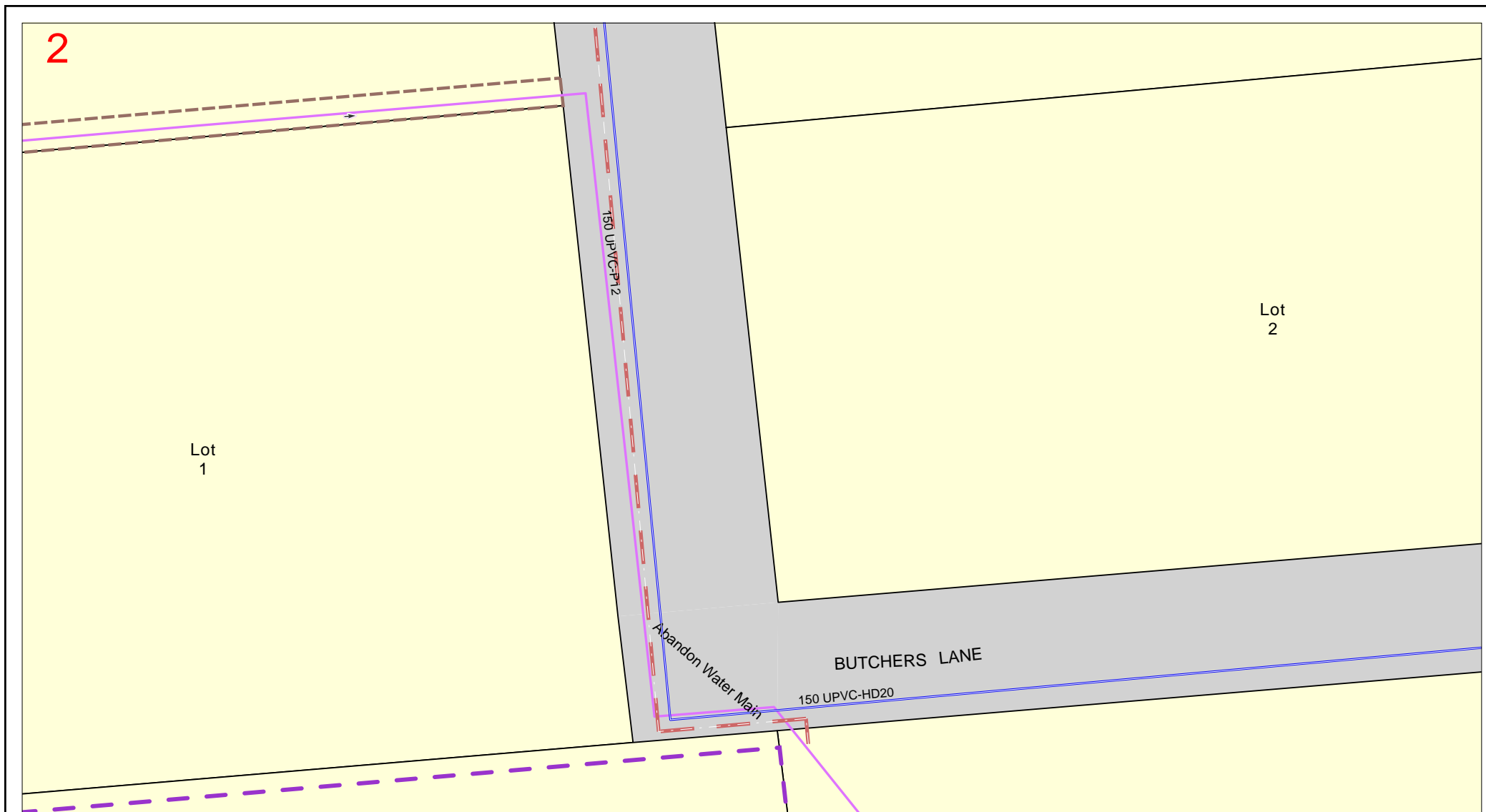
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Map 2

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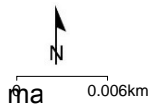
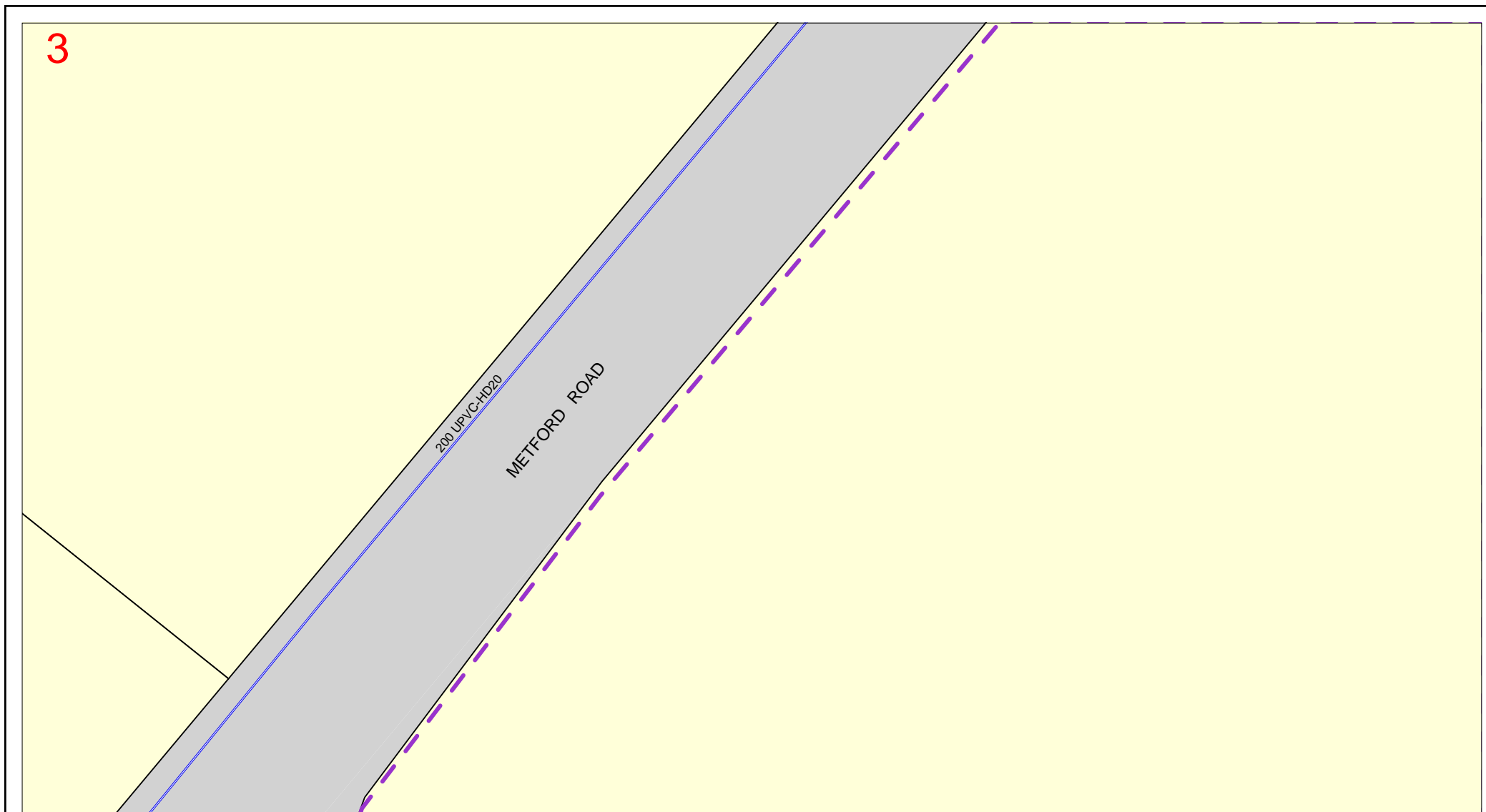
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Map 3

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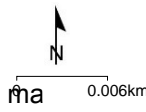
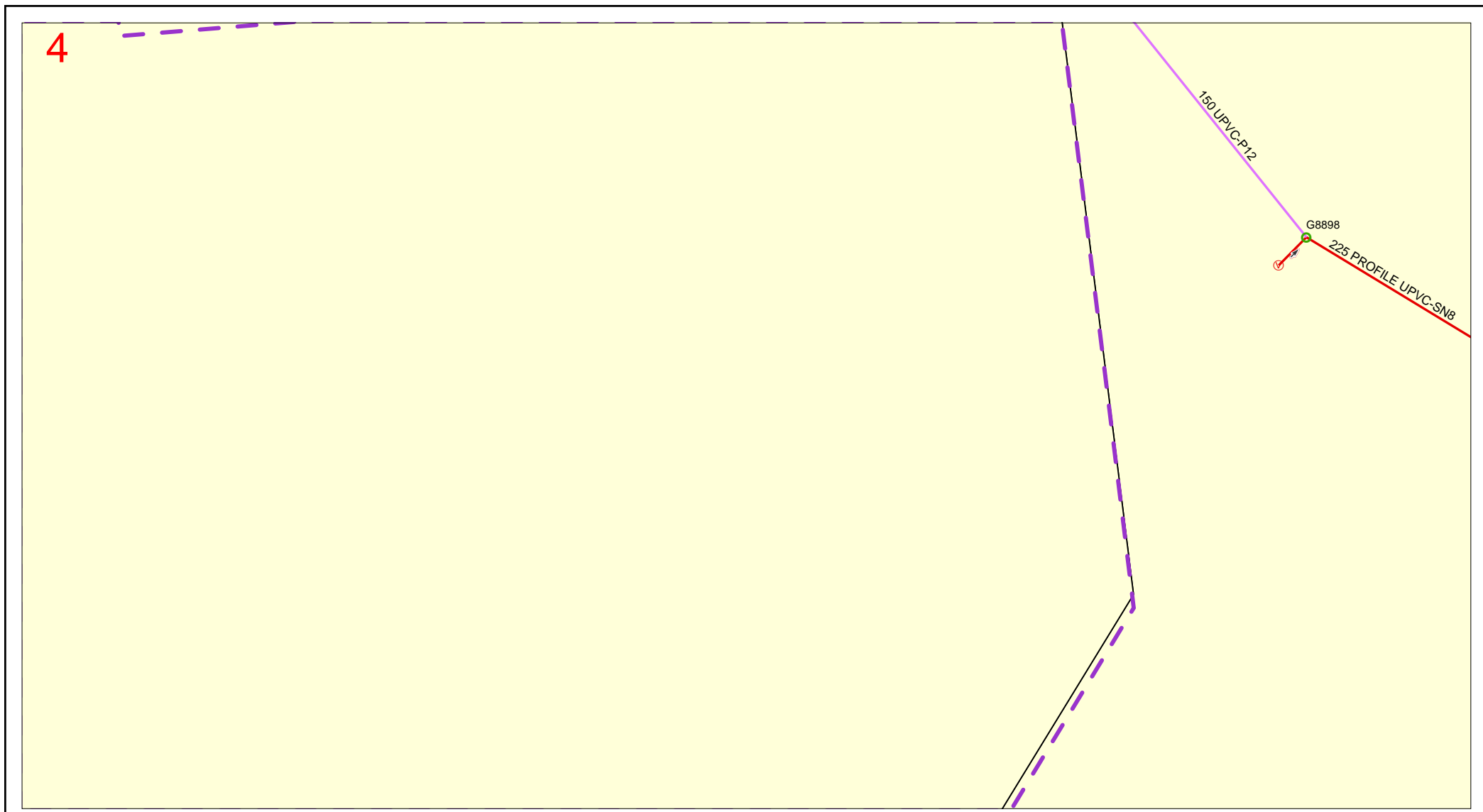
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Map 4

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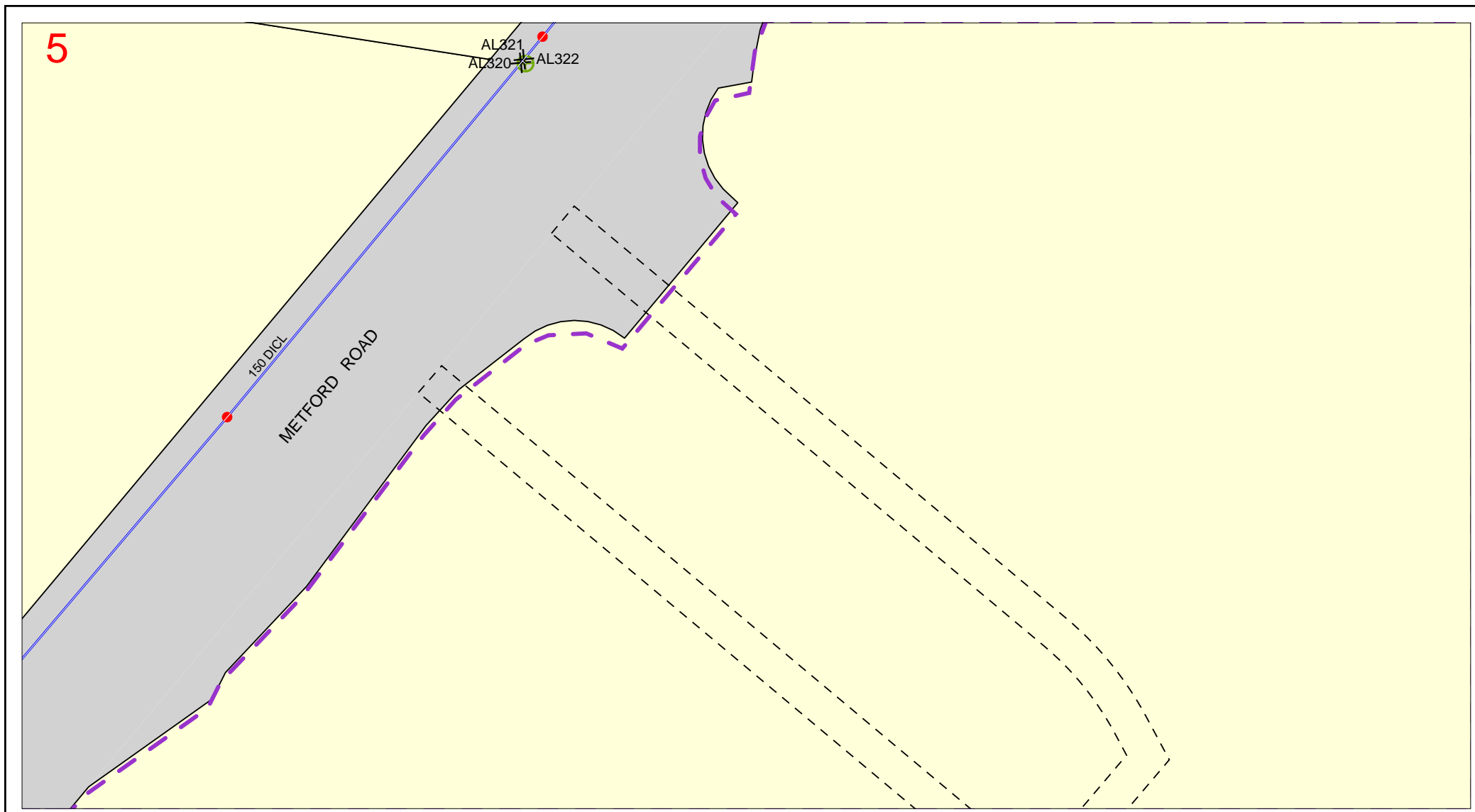
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Map 5

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0.006km

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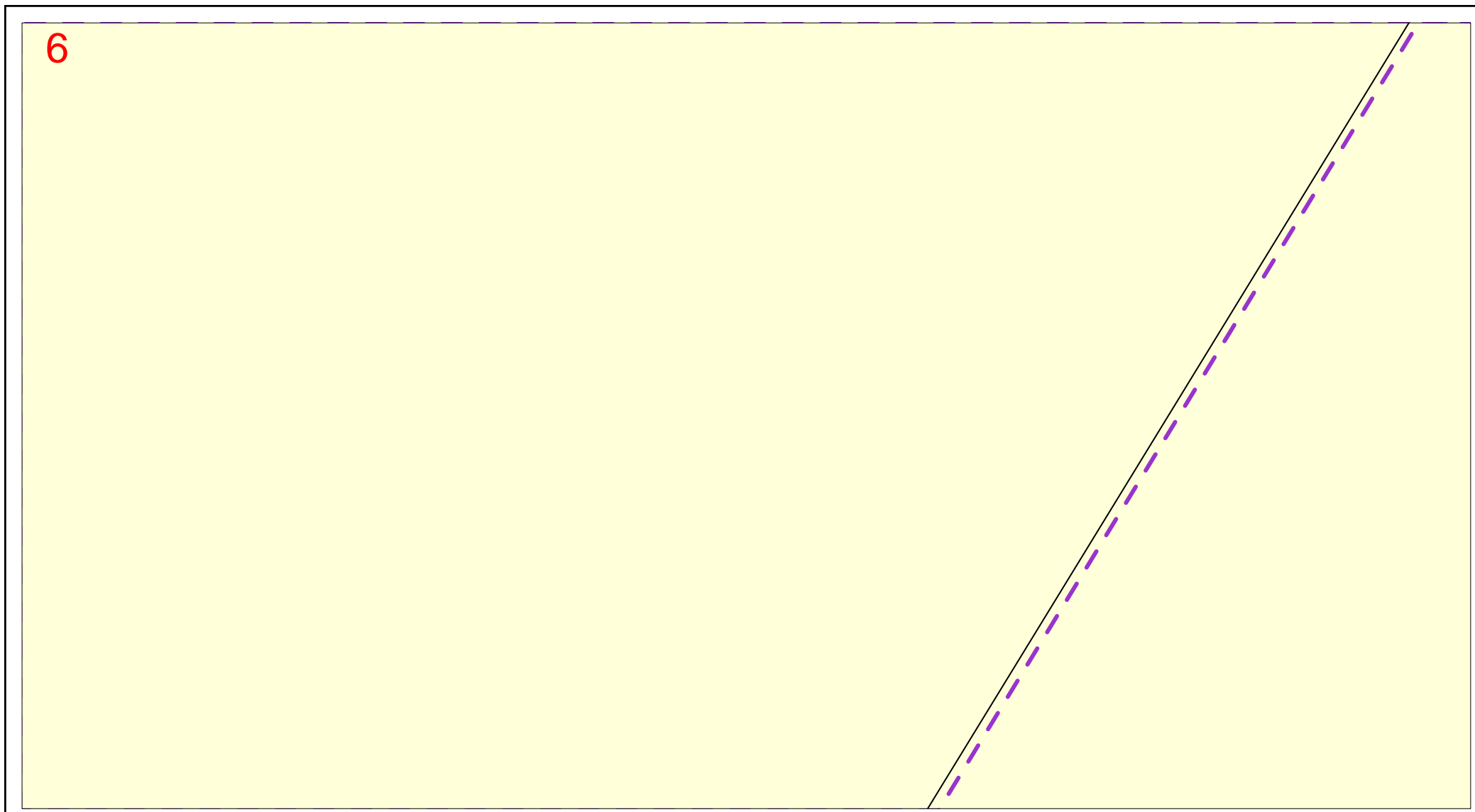
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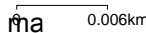
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Map 6

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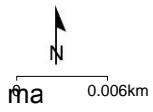
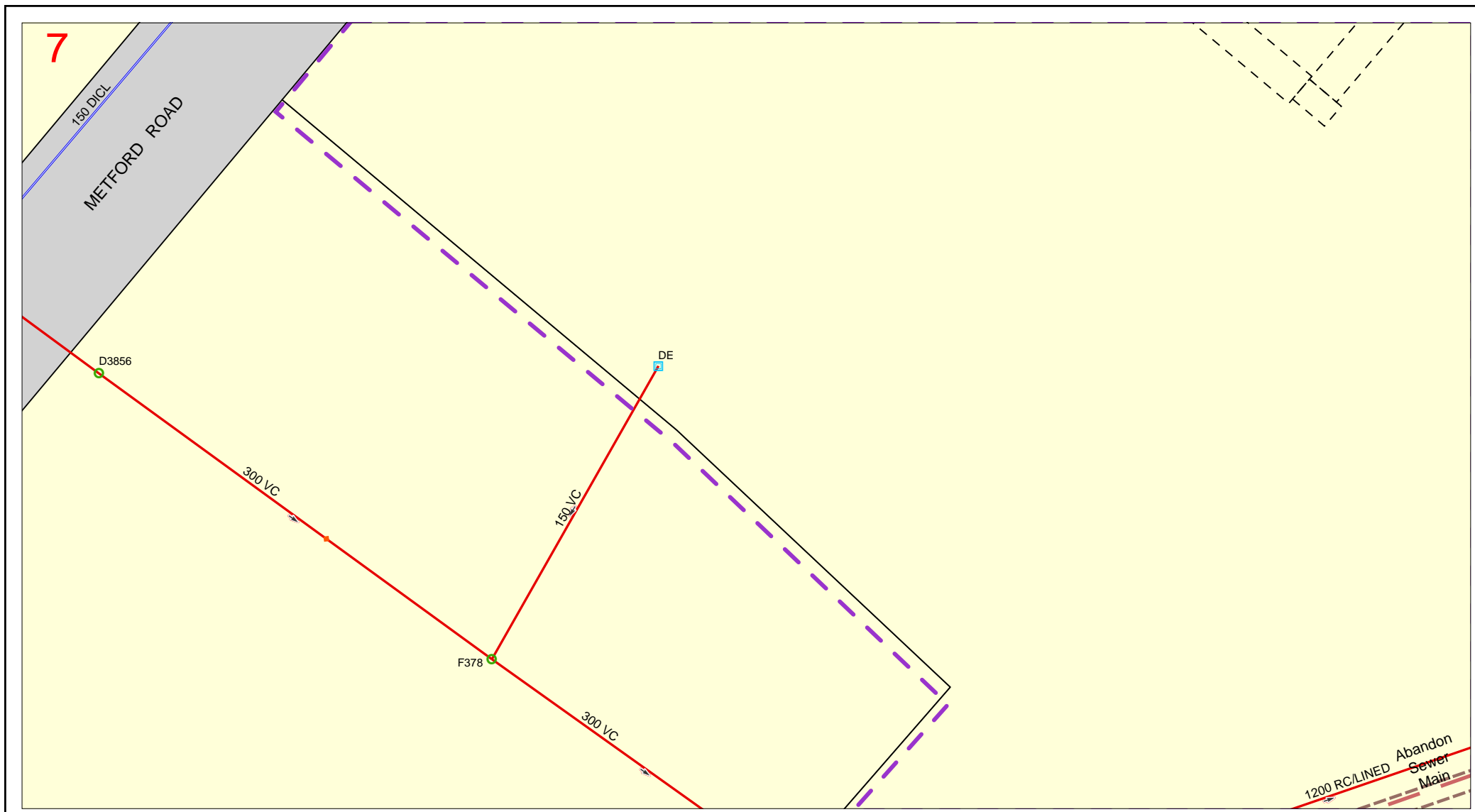
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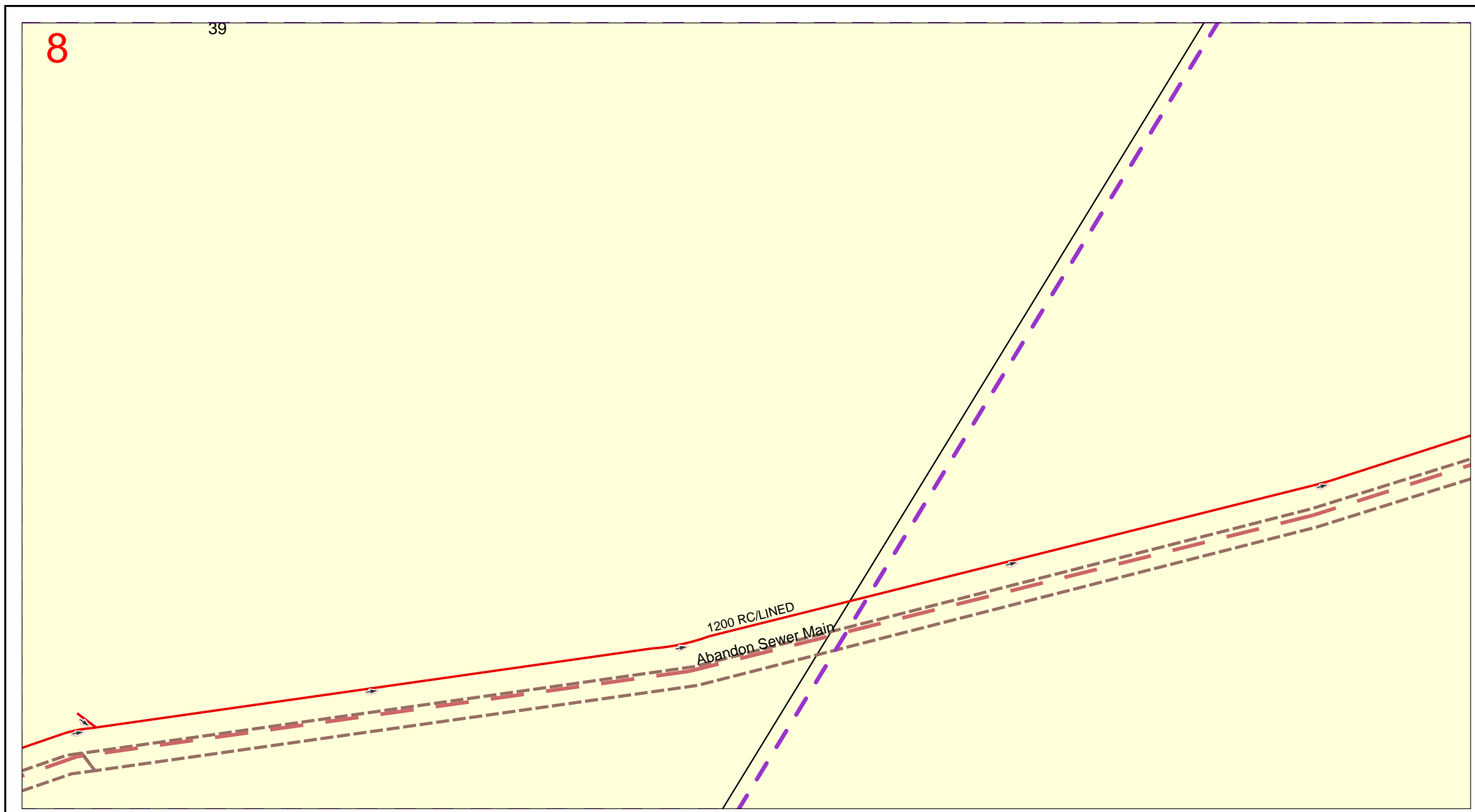
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Map 8

Sequence No: 236433019



North arrow pointing up. Scale bar showing 0.006km.

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HAND DIG UNTIL ACTUAL LOCATIONS ARE IDENTIFIED.
PROPERTY SERVICES ARE NOT SHOWN.

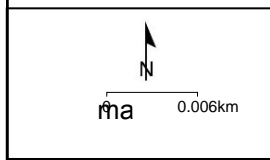
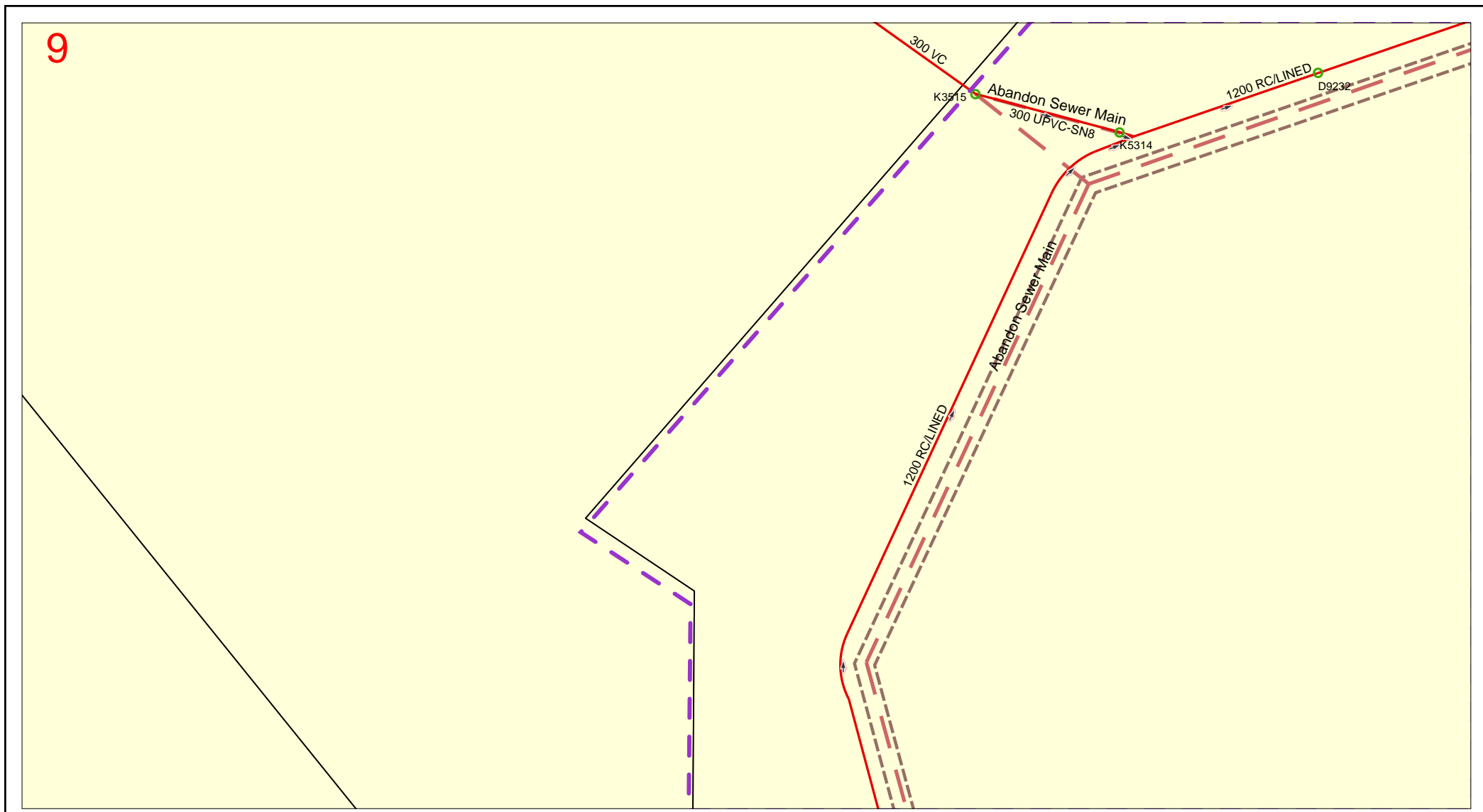
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Map 9

Sequence No: 236433019



IMPORTANT

THIS PLAN IS NOT TO BE USED FOR CONVEYANCING

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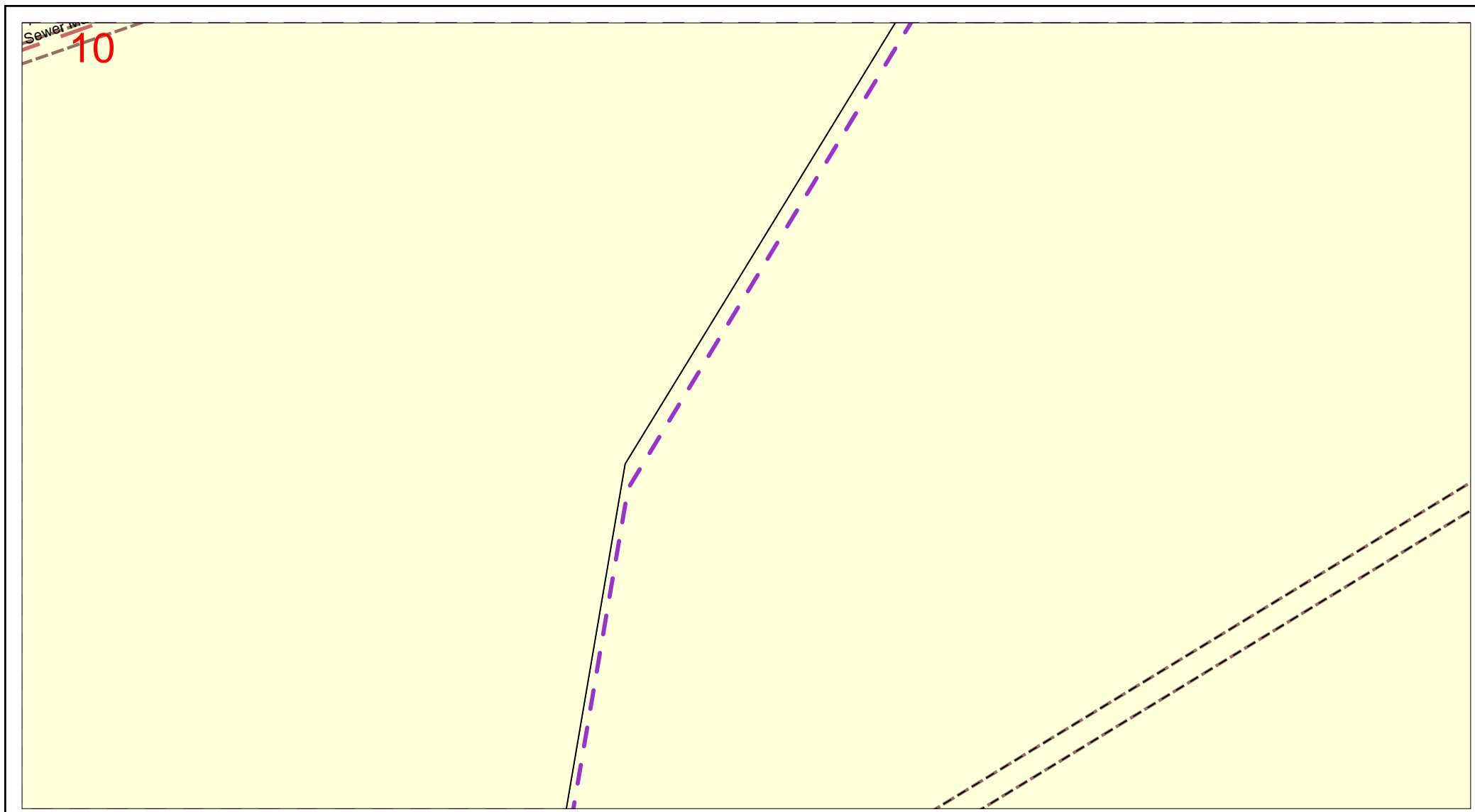
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Map 10

Sequence No: 236433019




0.006km

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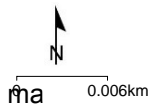
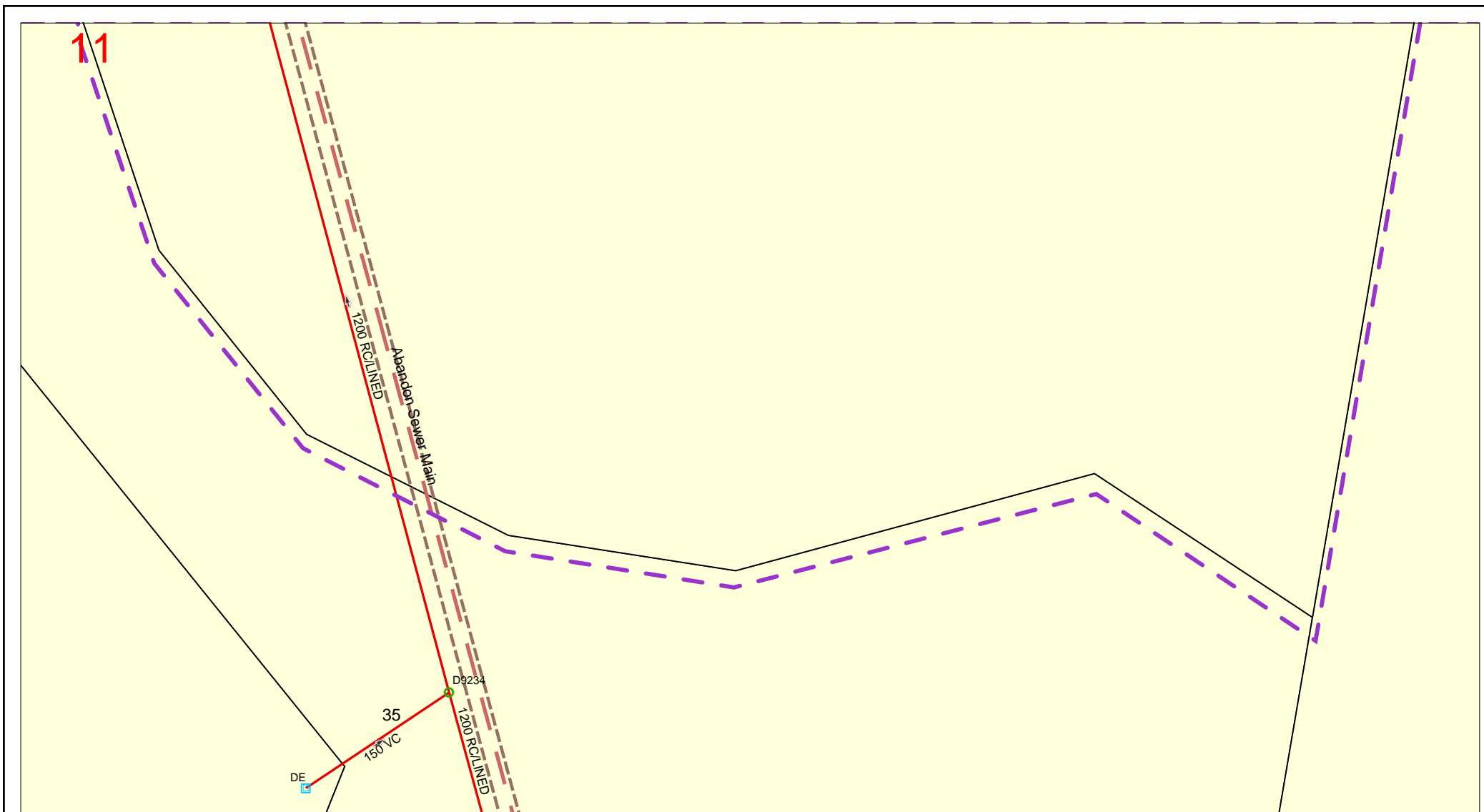
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Map 11

Sequence No: 236433019



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Hunter Water Corporation DBYD Asset Legend

<p>Electrical Assets</p> <ul style="list-style-type: none"> High Voltage Low Voltage Electrical Pole Distribution Transformer Air Break Switch Circuit Breaker High Voltage Low Voltage 	<p>Water Assets</p> <ul style="list-style-type: none"> Contol Valve Hydrant Control Valve Reflux Valve Stop/Scour Valve Tee & Stop Valve Hydrant Cluster Box End Cap Flushing Tap Manhole Scour Water Meter Water Network Structure Other Main Trunk Main Reticulation Main Water Encased Mains Water Prelaid Service 	<ul style="list-style-type: none"> HWC Rain Gauge HWC Stream Flow Gauge Radio Base Weather Station Piezometer Bore Site 	<p>RecycledWater Assets</p> <ul style="list-style-type: none"> Air Valve Reflux Valve Open Stop Valve Open RecycledWater Hydrant Cluster Box End Cap Flushing Tap Manhole RecycledWater Meter RecycledWater Network Structure Other Main Reticulation Main Encased/Conduit Trunk Main Encased/Conduit RecycledWater Encased Mains RecycledWater Prelaid Service 	<p>Sewer Assets</p> <ul style="list-style-type: none"> Air Valve Stop/Butterfly/Ball Valve Gate Valve Manhole Cap Dead End Flushing Tank H&V Bend Junction Connection Outfall Overflow Sewer/Valve Pit Tangent Point Sewer Meter Sewer Vent Sewer Network Structure Other Main Gravity Main Pressure/Vacuum Main Effluent Main Outfall Overflow Main Rising Main Sewer Encased Mains 	<ul style="list-style-type: none"> StormWater Assets StormWater Network Structure StormWater Mains Mains Abandon 	<p>Land Details</p> <ul style="list-style-type: none"> Area of Interest Easement Non HWC Fence Line Non-HWC Easement HWC Easement Parcel Road Water Parcels Hazardous Material Map Sheet Index
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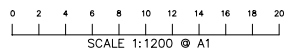


APPENDIX D APPROVED SUBDIVISION TO THE WEST



- STAGE 3 - 301-340 (40)
- STAGE 4 - 401-424 (24)
- STAGE 5 - 501-518 (18)
- STAGE 6 - 601-621 (21)
- STAGE 7 - 701-717 (17)
- TOTAL LOTS - 120

NOTE: NO SUBTERRANEAN INVESTIGATIONS HAVE BEEN UNDERTAKEN. IT IS THE CONTRACTORS RESPONSIBILITY TO LODGE AN ENQUIRY WITH DIAL BEFORE YOU DIG (www.1100.com.au) PRIOR TO ANY EXCAVATION OR EARTHWORKS.



NOTES:
 1. CONTOUR INTERVAL IS 0.5m
 2. SERVICES NOT LOCATED



RENNIE GOLLEDGE PTY. LTD.
 SURVEYORS & PLANNERS

P.O. BOX 132 PH (02) 49334977
 36 ST ANDREWS ST FAX (02) 49338579
 MAITLAND NSW 2320
 ABN: 55 002 622 317 mail@renniegolledge.com.au

CLIENT

WAFID PTY LTD

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PROPOSED SUBDIVISION PLAN
 LOT 254 D.P. 1092466 METFORD ROAD
 'VALLEY VIEW ESTATE'

FILE NO. 238.99 RATIO 1:1200 DATE 2/8/21 DESIGN GG DATUM ASSUMED

DATE	REVISION	BY

DRAWN SHEET 1 OF 1 SHEETS

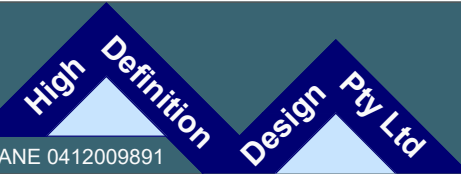


APPENDIX E APPROVED HOUSING ESTATE TO THE SOUTH



TITLE: PROPOSED LIFE STYLE VILLAGES
 METFORD ROAD TENAMBIT
 OVERALL PLAN
 METFORD ROAD Pty Ltd

MORPETH GARDENS



KEVIN URANE 0412009891

Date: 16.08.21		Scale: 1:2000		@: A3		Designed: KU		Project No	
Cad Ref: HD 56 adjoining site r8								HD56-2	
7	ADD ACOUSTIC FENCE	KU	21.10.21			Drawing No		Revision	
6	DA PLANS	KU	30.09.21						
8	ADJUST AREAS	KU	03.11.21						
No	Amendment	Drawn	Date			HD101		8	