



BUSHFIRE THREAT ASSESSMENT

FOR
A PROPOSED
RESIDENTIAL 1 INTO 3 LOT
SUBDIVISION & THREE DWELLINGS

AT
LOT 264 SPRINGFIELD DRIVE,
LOCHINVAR NSW 2321

Prepared by:

Firebird ecoSultants Pty Ltd

ABN – 16 105 985 993

PO Box 354

Newcastle NSW 2300

Mob: 0414 465 990

Ph: 02 4910 3939

Fax: 02 4929 2727

Email: sarah@firebirdeco.com.au



Site Details:	Lot 264 Springfield Drive, Lochinvar NSW 2321
Prepared by:	<i>Sarah Jones B.Env.Sc., G.Dip.DBPA (Design in Bushfire Prone Areas)</i> <i>Firebird ecoSultants Pty Ltd</i> ABN – 16 105 985 993 PO Box 354, Newcastle NSW 2300 M: 0414 465 990 Email: sarah@firebirdeco.com.au T: 02 4910 3939 Fax: 02 4929 2727
Prepared for:	Hunterland
Reference No.	Lochinvar – Hunterland – May 2024
Document Status & Date:	3 rd May 2024

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 (BTA) has been prepared by Firebird ecoSultants Pty Ltd at the request of Hunterland for a proposed residential 1 into 3 lot subdivision & three dwellings at Lot 264 Springfield Drive, Lochinvar NSW 2321. The report forms part of the supporting documentation for a DA to be submitted to Maitland City Council (MCC) because the site is mapped as Bushfire Prone Land (BPL) under the Environmental Planning & Assessment Act 1979 (s10.3 – Bush fire prone land).

The development is required to satisfy EP&A Act 1979 (Section 9.1 – Ministerial Direction, 4.4 – Planning for Bushfire Protection) for the planning proposal and EP&A Act 1979 (Section 4.46 – What is Integrated Development) for the residential subdivision. Council will refer the BAR to the NSW RFS to satisfy the gateway determination for the proposal and then need to satisfy the Rural Fire Act 1997 (s100B) for the subdivision.

This Report demonstrates how the development conforms with the document titled 'Planning for Bushfire Protection' (PBP). The aim of PBP is to provide for the protection of human life and minimise the impacts on property from the threat of bush fire, while having due regard to development potential, site characteristics and protection of the environment (p.10).

This assessment aims to consider and assess the bushfire hazard and associated potential threats relevant to the proposal. Recommendations are provided with regard to fuel management, access, provision of emergency services, building protection and construction standards to facilitate an acceptable level of bushfire protection.

In summary, the following is recommended to enable the proposal to meet the relevant legislative requirements:

1. **Asset Protection Zone (APZ) - The APZ provides space and reduced fuel loads to ensure radiant heat levels at the buildings are below critical limits and to prevent direct flame contact.**

To achieve a Bushfire Attack Level (BAL) of **BAL-12.5** the following land is to be managed as an APZ:

- West up to the property boundary on all proposed lots.

These distances are to be managed as described under 'Planning for Bushfire Protection (Appendix 4 – Asset Protect Zone Requirements)' and the document titled 'Standards for Asset Protection Zones'.

2. **Perimeter Roads - Access standards provide for emergency evacuation and firefighting operations**

- The existing road network complies with the Acceptable Solution for perimeter roads.



3. **Construction Standards – Construction standards seek to increase the protection of the habitable buildings from bushfire. The shorter the APZ (distance between the external wall of the habitable building and the unmanaged vegetation), then the higher the construction standard, which is referred to as the BAL**

The proposed dwellings in the proposed building envelope will be assessed as **BAL-12.5** based on the abovementioned APZs.

4. **Landscaping – The type, location and ongoing maintenance of landscaping is considered a necessary BPM**

- The identified APZs are to be managed in accordance with accordance with PBP (Appendix 4);
- A clear area of low-cut lawn or pavement is maintained adjacent to the dwellings; and
- Fencing details in accordance with PBP (7.6 – Fences and gates)

This report provides the above required information to assist Council and the RFS in determining compliance in accordance with the PBP 2019 and AS 3959-2018.



Sarah Jones

B.Env.Sc., G.Dip.DBPA (Design for Bushfire Prone Areas)

FPA BPAD-A Certified Practitioner (Certification Number BPD-26512)

Ecologist / Bushfire Planner



Terms & Abbreviations

Abbreviation	Meaning
APZ	Asset Protection Zone
AS2419 -2017	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>
FFDI	Forest 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



CONTENTS

1	INTRODUCTION	6
1.1	Site Particulars	6
1.2	Description of the Proposal	8
1.3	Legislative Requirements	8
1.4	Objectives of Assessment	8
2	METHODOLOGY	10
2.1	Vegetation Assessment	10
2.2	Slope Assessment	10
3	SITE ASSESSMENT	11
3.1	Vegetation & Slope Assessment	11
4	BUSHFIRE PROTECTION ASSESSMENT	14
4.1	Asset Protection Zones (APZ)	14
5	DWELLING DESIGN & CONSTRUCTION	15
5.1	Determination of Bushfire Attack Levels	16
6	COMPLIANCE	17
7	CONCLUSION & RECOMMENDATIONS	25
8	BIBLIOGRAPHY	27
	APPENDIX A PROPOSED SITE PLANS	A-1
	APPENDIX B ASSET PROTECTION ZONES	B-1
	APPENDIX C WATER INFORMATION	C-2

TABLES

Table 3-1: Vegetation Classification for Proposed Unit 1	11
Table 3-2: Vegetation Classification for Proposed Unit 2	11
Table 3-3: Vegetation Classification for Proposed Unit 3	12
Table 4-1: Recommended APZs for Proposed Dwellings within the proposed building envelope	14
Table 5-1: Determination of Required BALs for Proposed Dwellings within the proposed building envelope	16
Table 6-1: Proposed Subdivision Compliance with Development Standards	17

FIGURES

Figure 1-1: Site Location	7
Figure 1-2 Bushfire Prone Land Map	9
Figure 3-1: Vegetation map	13



I INTRODUCTION

A Bushfire Threat Assessment Report (BTA) has been prepared by Firebird ecoSultants Pty Ltd at the request of Hunterland for a proposed residential 1 into 3 lot subdivision & three dwellings at Lot 264 Springfield Drive, Lochinvar NSW 2321, hereafter referred to as the “site” (refer to Figure 1-1 for site locality). Refer to Appendix A for Proposed Site Plans.

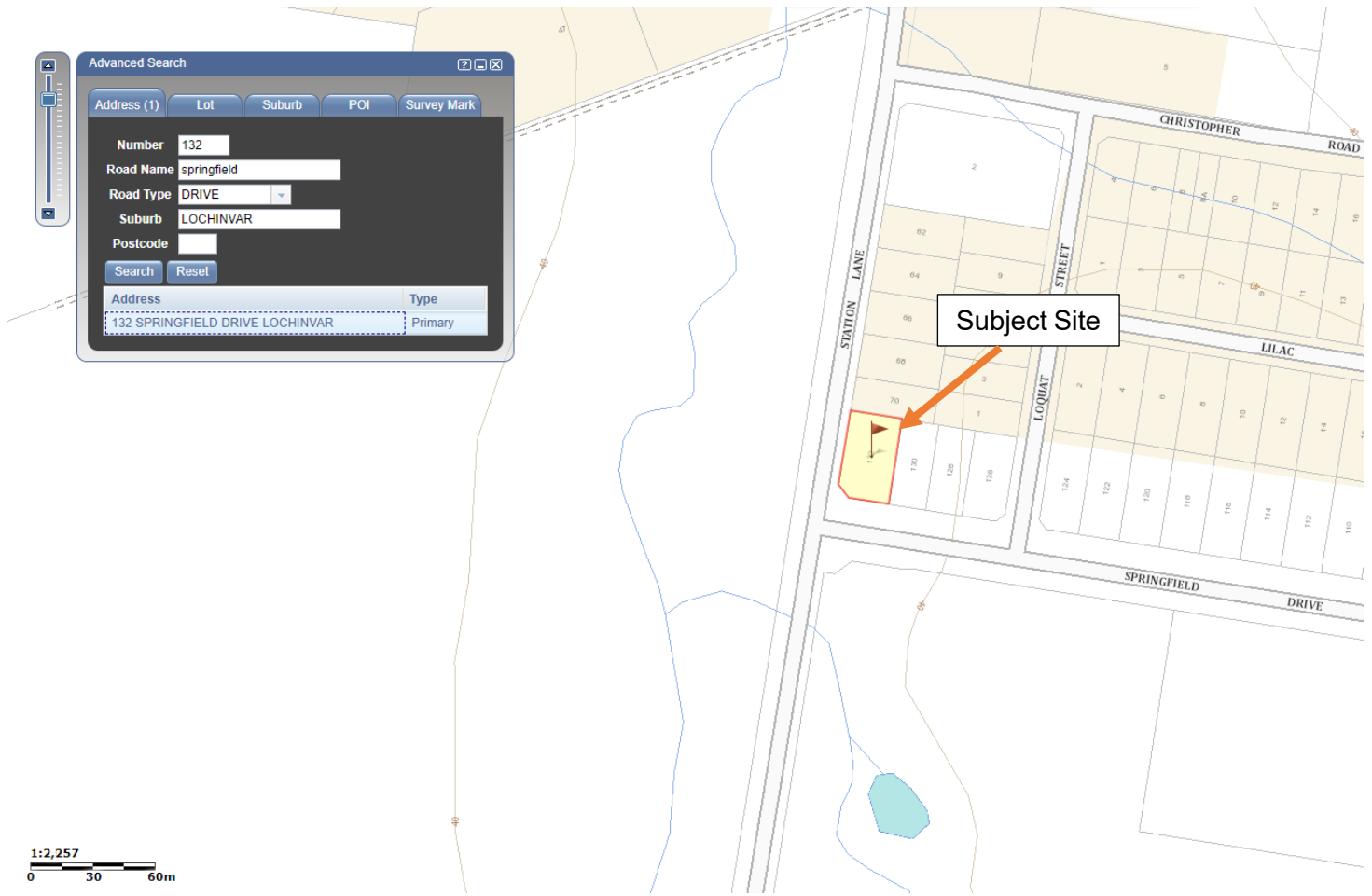
This BTA is suitable for submission with a Development Application (DA) and provides information on measures that will enable the development to comply with ‘Planning for Bushfire Protection’ (NSW RFS, 2019), hereafter referred to as PBP (RFS, 2019).

This assessment aims to consider and assess the bushfire hazard and associated potential threats relevant to such a proposal, and to outline the minimum mitigative measures which would be required in accordance with the provisions of the Environmental Planning and Assessment Amendment (Planning for Bushfire Protection) Regulation 2007 and the Rural Fires Amendment Regulation 2007 (RF Amendment Regulation 2007).

I.1 Site Particulars

Locality:	Lot 254 Springfield Drive, Lochinvar NSW 2321
LGA:	Maitland City Council
Current Land Use:	Vacant lot
Forest Danger Index:	100 FFDI

Figure 1-1: Site Location





I.2 Description of the Proposal

This DA relates to the proposal for a 1 into 3 lot residential subdivision and three dwellings. Refer to Appendix A for proposed plans.

I.3 Legislative Requirements

The Site has been mapped as Bush Fire 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, these being:

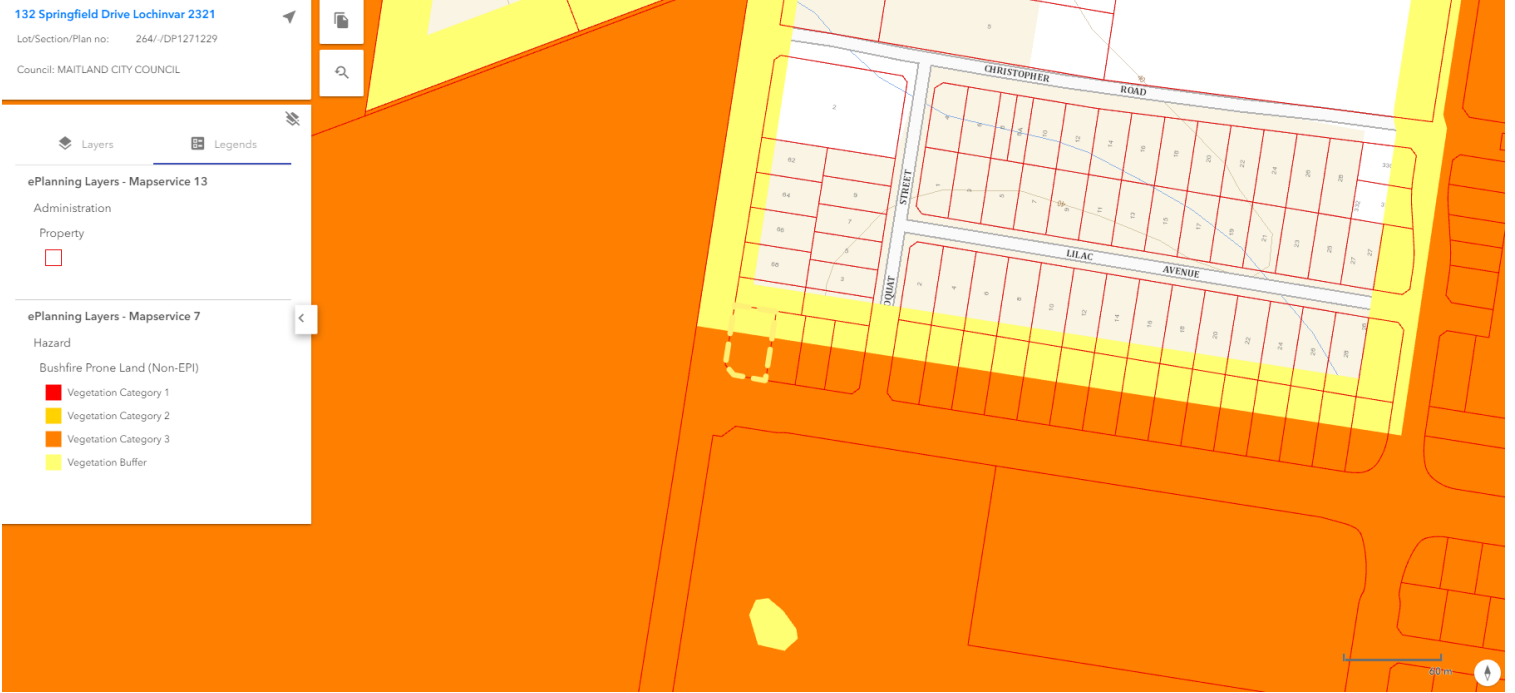
- PBP (RFS, 2019); and
- AS3959-2018 Construction of Buildings in Bushfire Prone Area.

I.4 Objectives of Assessment

This report has been prepared to address the requirements of Clause 44 of the Rural Fires Regulation. This BTA also addresses the six key Bush Fire Protection Measures (BFRMs) in a development assessment context being:

- The provision of clear separation of buildings and bush fire hazards, in the form of fuel-reduced APZ (and their components being Inner Protection Areas (IPA's) and Outer Protection Areas (OPA's);
- Sitting and design of the proposal;
- Construction standards;
- Appropriate access standards for residents, fire-fighters, emergency workers and those involved in evacuation;
- Adequate water supply and pressure, and utility services; and
- Suitable landscaping, to limit fire spreading to a building.

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 & Slope Assessment

In accordance with PBP (RFS 2019), an assessment of the vegetation 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. This assessment is depicted in Table 3-1.

In accordance with PBP (RFS 2019), an assessment of the slope beneath the vegetation considered a bushfire hazard was undertaken and the results are presented in Table 3-1 below.

Table 3-1: Vegetation Classification for Proposed Unit 1

Direction	Vegetation Type	Distance from Site Boundary	Slope Vegetation occurs on
North	Managed Land – Residential Development	>100m	N/A
East	Managed Land – Cleared for future development	>100m	N/A
South	Managed Land – Cleared for future development	>100m	N/A
West	Grassland vegetation	24m	Flat

Table 3-2: Vegetation Classification for Proposed Unit 2

Direction	Vegetation Type	Distance from Site Boundary	Slope Vegetation occurs on
North	Managed Land – Residential Development	>100m	N/A
East	Managed Land – Residential Development	>100m	N/A
South	Managed Land – Residential Development	>100m	N/A
West	Grassland vegetation	>24m	Flat



Table 3-3: Vegetation Classification for Proposed Unit 3

Direction	Vegetation Type	Distance from Site Boundary	Slope Vegetation occurs on
North	Managed Land – Residential Development	>100m	N/A
East	Managed Land – Residential Development	>100m	N/A
South	Managed Land – Residential Development	>100m	N/A
West	Grassland vegetation	>23m	Flat

Figure 3-1: Vegetation map



4 BUSHFIRE PROTECTION ASSESSMENT

4.1 Asset Protection Zones (APZ)

The PBP (RFS, 2019) guidelines have been used to determine the widths of the APZs required for habitable buildings within the site using the vegetation and slope data identified in Section 3-1 of this report.

The site lies within Maitland Local Government Area and therefore is assessed under an FDI rating of 100. Using the results from the Site Assessment (section 3.1 of this report) the deemed to satisfy APZ requirements for the proposed buildings within the site were determined using Table A1.12.2 in PBP (RFS, 2019). Refer to Table 4-1 for the required APZs for the proposed habitable buildings.

Table 4-1: Recommended APZs for Proposed Dwellings within the proposed building envelope

Direction from Development	Vegetation classified within 140m	Effective Slope (within 100m)	APZ to be provided
North	Managed Land	N/A	N/A
East	Managed Land	N/A	N/A
South	Managed Land	N/A	N/A
West	Grassland	Flat	West up to the property boundary. APZ is inclusive of Station Lane.



5 DWELLING DESIGN & CONSTRUCTION

Building design and the materials used for construction of future dwellings should be chosen based on the information contained within AS3959-2018, and accordingly the designer / architect should be made aware of this recommendation. It may be necessary to have dwelling plans checked by the architect involved to ensure that the proposed dwellings meet the relevant Bushfire Attack Level (BAL) as detailed in AS3959-2018.

The determinations of the appropriate BAL are based upon parameters such as weather modelling, fire-line intensity, flame length calculations, as well as vegetation and fuel load analysis. The determination of the construction level is derived by assessing the:

- Relevant FFDI = 100
- Flame temperature
- Slope
- Vegetation classification; and
- Building location.

The following BAL, based on heat flux exposure thresholds, are used in the standard:

(a) **BAL – LOW** The risk is considered to be **VERY LOW**

There is insufficient risk to warrant any specific construction requirements but there are still some risks.

(b) **BAL – 12.5** The risk is considered to be **LOW**

There is a risk of ember attack.

The construction elements are expected to be exposed to a heat flux not greater than 12.5 k/m².

(c) **BAL – 19** The risk is considered to be **MODERATE**

There is a risk of ember attack and burning debris ignited by wind borne embers and a likelihood of exposure to radiant heat.

The construction elements are expected to be exposed to a heat flux not greater than 19 kW/m².

(d) **BAL-29** The risk is considered to be **HIGH**

There is an increased risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to an increased level of radiant heat.



The construction elements are expected to be exposed to a heat flux no greater than 29 kW/m².

(e) **BAL-40** The risk is considered to be **VERY HIGH**

There is much increased risk of ember attack and burning debris ignited by windborne embers, a likelihood of exposure to a high level of radiant heat and some likelihood of direct exposure to flames from the fire front.

The construction elements are expected to be exposed to a heat flux no greater than 40 kW/m².

(f) **BAL-FZ** The risk is considered to be **EXTREME**

There is an extremely high risk of ember attack and burning debris ignited by windborne embers, a likelihood of exposure to an extreme level of radiant heat and direct exposure to flames from the fire front.

The construction elements are expected to be exposed to a heat flux greater than 40 kW/m².

5.1 Determination of Bushfire Attack Levels

Using a FFDI of 100, the information relating to vegetation and slope was applied to Table A1.12.5 of PBP 2019 to determine the appropriate BAL ratings. The results from this bush fire risk assessment are detailed below in Table 5-1–Bush Fire Attack Assessment.

Table 5-1: Determination of Required BALs for Proposed Dwellings within the proposed building envelope

Vegetation Type & Direction	Separation Distance from vegetation	Bushfire Attack Level (BAL)	Construction Section
Managed Land to the North	>100m	BAL-12.5	Sect 3 & 5 of AS3959
Managed Land to the East	>100m	BAL-12.5	Sect 3 & 5 of AS3959
Managed Land to the South	>100m	BAL-12.5	Sect 3 & 5 of AS3959
Grassland to the West	>23m	BAL-12.5	Sect 3 & 5 of AS3959

Given the information in Table 5-1 above the proposed dwellings within the proposed building envelope will be able to comply with AS3959-2018.



6 COMPLIANCE

The proposal is for a residential 1 into 3 lot subdivision & three dwelling and therefore development standards apply. Table 6-1 details compliance with Development Standards for Residential and Rural Residential Subdivisions.

Table 6-1: Proposed Subdivision Compliance with Development Standards

Acceptable Solutions	Performance Criteria	Compliance
Asset Protection Zones		
> APZs are provided in accordance with Tables A1.12.2 and A1.12.3 based on the FFDI.	potential building footprints must not be exposed to radiant heat levels exceeding 29 kW/m ² on each proposed lot.	Complies with Acceptable Solution – APZs for the site has been provided in accordance with Table A1.12.2 of PBP 2019.
> APZs are managed in accordance with the requirements of Appendix 4.	APZs are managed and maintained to prevent the spread of a fire towards the building.	Complies with Acceptable Solution – APZs on site are to be managed in accordance with Appendix 4 of PBP 2019.
> APZs are wholly within the boundaries of the development site	the APZs is provided in perpetuity	Complies with Acceptable Solution – APZs occur on site.
> APZs are located on lands with a slope less than 18 degrees.	APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised.	Complies with Acceptable Solution – APZs on site do not occur over land with slope <18°.
Landscaping		
> landscaping is in accordance with Appendix 4; and fencing is constructed in accordance with section 7.6.	landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions.	Complies with Acceptable Solution – All landscaping within the site will meet the requirements of the acceptable solution.



Access (General Requirements)

<ul style="list-style-type: none"> › property access roads are two-wheel drive, all-weather roads; › perimeter roads are provided for residential subdivisions of three or more allotments; › subdivisions of three or more allotments have more than one access in and out of the development; › 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; › all roads are through roads; › dead end roads are not recommended, but if unavoidable, are not more than 200 metres in length, incorporate a minimum 12 metres outer radius turning circle, and are clearly sign posted as a dead end; › where kerb and guttering is provided on perimeter roads, roll top kerbing should be used to the hazard side of the road; › where access/egress can only be achieved through forest, woodland and heath 	<p>firefighting vehicles are provided with safe, all-weather access to structures.</p>	<p>Complies with Acceptable Solution – no roads are proposed as part of the subdivision. The road network is already existing and the public roads comply with the requirements of the acceptable solution.</p>
--	--	--



<p>vegetation, secondary access shall be provided to an alternate point on the existing public road system; and</p> <p>› 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.</p>		
<p>› 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.</p>	<p>the capacity of access roads is adequate for firefighting vehicles.</p>	<p>Complies with Acceptable Solution - no roads are proposed as part of the subdivision. The existing public road complies with the acceptable solution requirements.</p>
<p>› hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression;</p> <p>› hydrants are provided in accordance with the relevant clauses of AS 2419.1:2017 - Fire hydrant installations System design, installation and commissioning; and</p> <p>› there is suitable access for a Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available.</p>	<p>there is appropriate access to water supply.</p>	<p>Complies with acceptable solution – hydrants occur within 70m of the site.</p>



Perimeter Roads

<ul style="list-style-type: none"> › 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; › 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 <p style="margin-left: 40px;">a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.</p>	<p>access roads are designed to allow safe access and egress for firefighting vehicles while residents are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface.</p>	<p>N/A – perimeter roads are not proposed. The existing public roads comply with the acceptable solution.</p>
---	--	--

Non-Perimeter Roads

<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; 	<p>access roads are designed to allow safe access and egress for firefighting vehicles while residents are evacuating.</p>	<p>N/A – no roads exist as part of the proposal.</p>
---	--	---



<ul style="list-style-type: none"> > roads 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 road crossfall does not exceed 3 degrees; and <ul style="list-style-type: none"> a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided. 		
Property Access		
<ul style="list-style-type: none"> > There are no specific access requirements in an urban area where an unobstructed path (no greater than 70m) is provided between the most distant external part of the proposed dwelling and the nearest part of the public access road (where the road speed limit is not greater than 70kph) that supports the operational use of emergency firefighting vehicles. <p>In circumstances where this cannot occur, the following requirements apply:</p> <ul style="list-style-type: none"> > minimum 4m carriageway width; > in forest, woodland and heath situations, rural property access roads have passing bays every 200m that are 20m long by 2m wide, making a minimum trafficable width of 6m at the passing bay; 	<p>firefighting vehicles can access the dwelling and exit the property safely.</p>	<p>Complies with Acceptable Solution – All proposed lots will be able to comply with PBP 2019 and in any case access will be connected to a public road by a driveway <70m.</p>



<ul style="list-style-type: none">› a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches;› provide a suitable turning area in accordance with Appendix 3;› curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress;› the minimum distance between inner and outer curves is 6m;› the crossfall is not more than 10 degrees;› maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads; and› a development comprising more than three dwellings has access by dedication of a road and not by right of way. <p>Note: Some short constrictions in the access may be accepted where they are not less than 3.5m wide, extend for no more than 30m and where the obstruction cannot be reasonably avoided or removed. The gradients applicable to public roads also apply to community style development property access roads in addition to the above.</p>		
--	--	--



Water Supplies

<ul style="list-style-type: none"> › reticulated water is to be provided to the development where available; › a static water and hydrant supply is provided for non-reticulated developments or where reticulated water supply cannot be guaranteed; and static water supplies shall comply with Table 5.3d. 	<p>adequate water supplies are provided for firefighting purposes.</p>	<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 complies with the relevant clauses of Australian Standard AS 2419.1:2017; › hydrants are not located within any road carriageway; and › reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads. 	<p>Water supplies are located at regular intervals; and the water supply is accessible and reliable for firefighting operations.</p>	<p>Complies with Acceptable Solution – hydrants are located within 70m of the site.</p>
<ul style="list-style-type: none"> › fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2017. 	<p>flows and pressure are appropriate.</p>	<p>Complies with Acceptable Solution – fire hydrant pressures and flows are assumed to be compliant.</p>
<ul style="list-style-type: none"> › all above-ground water service pipes are metal, including and up to any taps; and above-ground water storage tanks shall be of concrete or metal. 	<p>the integrity of the water supply is maintained.</p>	<p>Complies with Acceptable Solution – All above ground water service pipes will meet the requirements.</p>



Electricity Services

<ul style="list-style-type: none"> > where practicable, electrical transmission lines are underground; > where overhead, electrical transmission <ul style="list-style-type: none"> > lines are proposed as follows: lines are installed with short pole spacing of 30m, unless crossing gullies, gorges or riparian areas; and <p style="margin-left: 40px;">no part of a tree is closer to a power line than the distance set out in ISSC3 Guideline for Managing Vegetation Near Power Lines.</p>	<p>location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings.</p>	<p>Complies with Acceptable Solution – All proposed dwellings are able to meet the requirements for electricity services.</p>
---	---	--

Gas Services

<ul style="list-style-type: none"> > 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. 	<p>location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.</p>	<p>Can Complies with Acceptable Solution – All proposed dwellings are able to meet the requirements for gas services.</p>
--	--	--



7 CONCLUSION & RECOMMENDATIONS

In summary, a Bushfire Risk Assessment has been undertaken for a proposed residential 1 into 3 lot subdivision at Lot 264 Springfield Drive, Lochinvar NSW 2321. The report forms part of the supporting documentation for a Development Application (DA) to be submitted to MCC.

If the recommendations contained within this report are duly considered and incorporated, it is considered that the fire hazard present is containable to a level necessary to provide an adequate level of protection to life and property on the subdivision. In summary, the following is recommended to enable the proposal to meet the relevant legislative requirements:

1. **Asset Protection Zone (APZ) - The APZ provides space and reduced fuel loads to ensure radiant heat levels at the buildings are below critical limits and to prevent direct flame contact.**

To achieve a Bushfire Attack Level (BAL) of **BAL-12.5** the following land is to be managed as an APZ:

- West up to the property boundary for all proposed lots.

These distances are to be managed as described under 'Planning for Bushfire Protection (Appendix 4 – Asset Protect Zone Requirements)' and the document titled 'Standards for Asset Protection Zones'.

2. **Perimeter Roads - Access standards provide for emergency evacuation and firefighting operations**

- The existing road network complies with the Acceptable Solution for perimeter roads.

3. **Construction Standards – Construction standards seek to increase the protection of the habitable buildings from bushfire. The shorter the APZ (distance between the external wall of the habitable building and the unmanaged vegetation), then the higher the construction standard, which is referred to as the BAL**

Any proposed dwelling in the proposed building envelope will be assessed as **BAL-12.5** based on the above mentioned APZs.

4. **Landscaping – The type, location and ongoing maintenance of landscaping is considered a necessary BPM**

- The identified APZs are to be managed in accordance with accordance with PBP (Appendix 4);
- A clear area of low-cut lawn or pavement is maintained adjacent to the dwellings; and



-
- Fencing details in accordance with PBP (7.6 – Fences and gates)

This report provides the above required information to assist Council and the RFS in determining compliance in accordance with the PBP 2019 and AS 3959-2018.



8 BIBLIOGRAPHY

Department of Bush Fire Services (undated). *Bush Fire Readiness Checklist*.

NSWFB (1988). *Hazard Reduction for the Protection of Buildings in Bushland Areas*. New South Wales Fire Brigades.

NSW Rural Fire Service (1997). *Bush Fire Protection for New and Existing Rural Properties*. September 1997, NSW Government.

NSW Rural Fire Service (2006). *Planning for Bushfire Protection – A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners*.

NSW Rural Fire Service (2019). *Planning for Bushfire Protection – A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners*.

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

NSW Rural Fire Service (2002). *Circular 16/2002: Amendments to the Rural Fires Act 1997 – hazard reduction and planning requirements*.

Planning NSW & NSW Rural Fire Service (2001). *Planning for Bushfire Protection – A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners*.

Ramsay, GC and Dawkins, D (1993). *Building in Bushfire-prone Areas – Information and Advice*. CSIRO and Standards Australia.

Rural Fires and Environmental Assessment Legislation Amendment Act 2002.

Standards Australia (2018). *AS 3959 – 2018: Construction of Buildings in Bushfire-prone Areas*.

APPENDIX A PROPOSED SITE PLANS

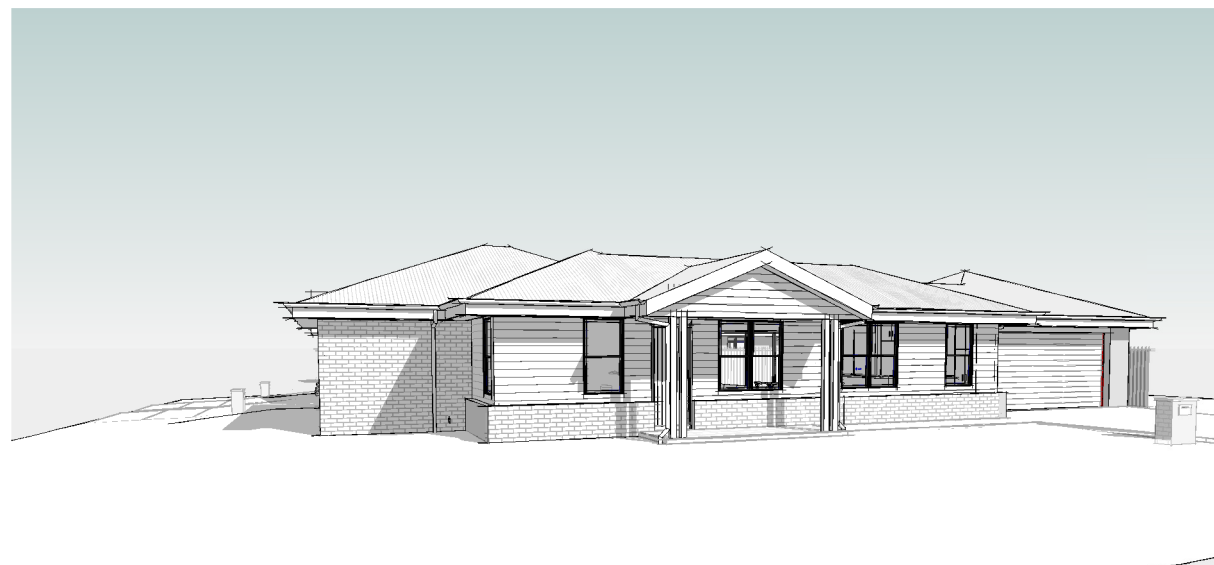
23039 GRUGEON CUSTOM

SHEET	TITLE	REV
A01.0.1	COVER SHEET	A
A10.0.1	SITE ANALYSIS, EROSION CONTROL	A
A11.0.1	SITE SETOUT PLAN (BULK EARTHWORKS)	A
A14.0.1	LANDSCAPE PLAN	A
A21.0.1	SLAB PLAN - UNIT 1	A
A21.1.1	LVL 01 FLOOR PLAN - UNIT 1	A
A21.5.1	ROOF PLAN - UNIT 1	A
A22.1.1	LVL 01 ELECTRICAL PLAN - UNIT 1	A
A30.0.1	ELEVATIONS - UNIT 1	A
A30.0.2	ELEVATIONS - UNIT 1	A
A40.0.1	SECTION, DRIVEWAY PROFILE - UNIT 1	A
B21.0.2	SLAB PLAN - UNIT 2	A
B21.1.2	LVL 01 FLOOR PLAN - UNIT 2	A
B21.5.2	ROOF PLAN - UNIT 2	A
B22.1.2	LVL 01 ELECTRICAL PLAN - UNIT 2	A
B30.0.2	ELEVATIONS - UNIT 2	A
B30.1.2	ELEVATIONS - UNIT 2	A
B40.0.2	SECTION, DRIVEWAY PROFILE UNIT 2	A
C21.0.3	SLAB PLAN - UNIT 3	A
C21.1.3	LVL 01 FLOOR PLAN - UNIT 3	A
C21.5.3	ROOF PLAN - UNIT 3	A
C22.1.3	LVL 01 ELECTRICAL PLAN - UNIT 3	A
C30.0.5	ELEVATIONS - UNIT 3	A
C30.0.6	ELEVATIONS - UNIT 3	A
C40.0.3	SECTION, DRIVEWAY PROFILE UNIT 3	A

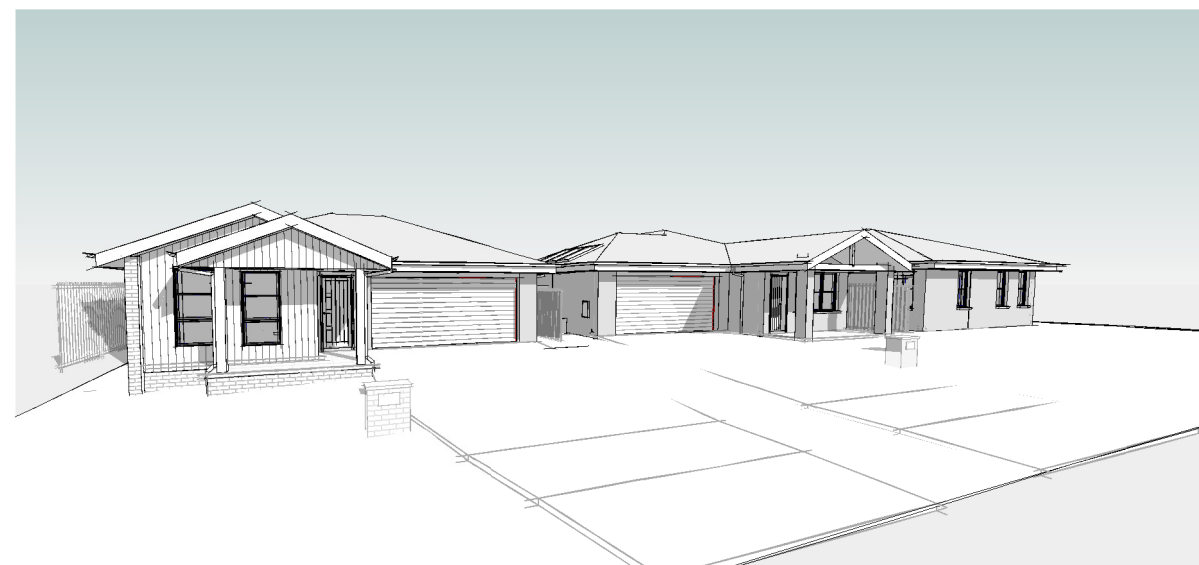
SHEET TOTAL: 25

REFER TO TENDER

TORRENS TITLE SUBDIVISION



SPRING FIELD PERSPECTIVE



STATION LANE PERSPECTIVE

Assessor BDAV/17/1819 Certificate # - Refer to stamp											
<p>These are the Specifications upon which the Certified Assessment is based. If they vary from drawings or other written specifications, these Specifications shall take precedence. If only one specification option is detailed for a building element, that specification must apply to all instances of that element for the whole project. If alternate location and extent of the alternate specification must be detailed below and / or clearly indicated on referenced documentation.</p>											
<p>The following specification details the requirements to achieve the thermal performance values as indicated on the BDAV Assessor Certificate. Once the development is approved by Council, these specifications will become a condition of consent and must be included in the built works. If you do not want to include these requirements, or need further information, please contact ecorATE Australia immediately.</p>											
<p>URBAN SUSTAINABILITY ASSESSORS</p> <p>0401 002 099 info@ecorate.com.au www.ecorate.com.au</p>											
<p>External Wall Construction</p> <table border="1"> <tr> <th>Insulation</th> <th>Colour (Solar Absorptance)</th> </tr> <tr> <td>H1.2,3 Brick Veneer</td> <td>R2.0 + Foil None Specified (default - medium)</td> </tr> <tr> <td>H1.3 Light weight with 35mm ext battens</td> <td>R2.0 + Foil None Specified (default - medium)</td> </tr> </table>		Insulation	Colour (Solar Absorptance)	H1.2,3 Brick Veneer	R2.0 + Foil None Specified (default - medium)	H1.3 Light weight with 35mm ext battens	R2.0 + Foil None Specified (default - medium)				
Insulation	Colour (Solar Absorptance)										
H1.2,3 Brick Veneer	R2.0 + Foil None Specified (default - medium)										
H1.3 Light weight with 35mm ext battens	R2.0 + Foil None Specified (default - medium)										
<p>Internal Wall Construction</p> <table border="1"> <tr> <th>Insulation</th> <th>Detail</th> </tr> <tr> <td>H1.2 Plasterboard on studs</td> <td>R2.0 to garage only, none to remaining</td> </tr> </table>		Insulation	Detail	H1.2 Plasterboard on studs	R2.0 to garage only, none to remaining						
Insulation	Detail										
H1.2 Plasterboard on studs	R2.0 to garage only, none to remaining										
<p>Ceiling Construction</p> <table border="1"> <tr> <th>Insulation</th> <th>Detail</th> </tr> <tr> <td>H1.2 Plasterboard</td> <td>R3.5 to ceilings adj roof</td> </tr> </table>		Insulation	Detail	H1.2 Plasterboard	R3.5 to ceilings adj roof						
Insulation	Detail										
H1.2 Plasterboard	R3.5 to ceilings adj roof										
<p>Roof Construction</p> <table border="1"> <tr> <th>Insulation</th> <th>Colour (Solar Absorptance)</th> </tr> <tr> <td>H1.2 Metal Anticon R1.3</td> <td>worse case has been modelled</td> </tr> </table>		Insulation	Colour (Solar Absorptance)	H1.2 Metal Anticon R1.3	worse case has been modelled						
Insulation	Colour (Solar Absorptance)										
H1.2 Metal Anticon R1.3	worse case has been modelled										
<p>Floor Construction</p> <table border="1"> <tr> <th>Insulation</th> <th>Covering</th> <th>Detail</th> </tr> <tr> <td>H1.2 Concrete (300mm waffle pod)</td> <td>none</td> <td></td> </tr> </table>		Insulation	Covering	Detail	H1.2 Concrete (300mm waffle pod)	none					
Insulation	Covering	Detail									
H1.2 Concrete (300mm waffle pod)	none										
<p>As drawn (default - wet area & kitchen-tiles) (default - carpet & underlay to remaining)</p>											
<p>Windows</p> <table border="1"> <tr> <th>Glass and frame type</th> <th>U</th> <th>SHGC</th> <th>Area sq m</th> <th>Detail</th> </tr> <tr> <td>H1.2,3 ALM-002-01 A Aluminium B Clear</td> <td>6.70</td> <td>0.70</td> <td></td> <td>As drawn</td> </tr> </table>		Glass and frame type	U	SHGC	Area sq m	Detail	H1.2,3 ALM-002-01 A Aluminium B Clear	6.70	0.70		As drawn
Glass and frame type	U	SHGC	Area sq m	Detail							
H1.2,3 ALM-002-01 A Aluminium B Clear	6.70	0.70		As drawn							
<p>Skylights</p> <table border="1"> <tr> <th>Glass and frame type</th> <th>U</th> <th>SHGC</th> <th>Area sq m</th> <th>Detail</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Glass and frame type	U	SHGC	Area sq m	Detail					
Glass and frame type	U	SHGC	Area sq m	Detail							
<p>Type A windows are awning windows, bifolds, casements, tilt 'n' turn windows, entry doors, french doors Type B windows are double hung windows, sliding windows & doors, fixed windows, stacker doors, louvres U and SHGC values are according to NFRC. Alternate products may be used if the U value is lower and the SHGC is less than 10% higher or lower than the above figures.</p>											
<p>External Window Cover</p> <table border="1"> <tr> <th>Detail</th> </tr> <tr> <td>Fixed shading - Eaves</td> <td>Width includes guttering, offset is distance above windows modelled as drawn Nominal only, refer to plan for detail</td> </tr> <tr> <td>Fixed shading - Other</td> <td>Verandahs, Pergolas (type and description)</td> </tr> </table>		Detail	Fixed shading - Eaves	Width includes guttering, offset is distance above windows modelled as drawn Nominal only, refer to plan for detail	Fixed shading - Other	Verandahs, Pergolas (type and description)					
Detail											
Fixed shading - Eaves	Width includes guttering, offset is distance above windows modelled as drawn Nominal only, refer to plan for detail										
Fixed shading - Other	Verandahs, Pergolas (type and description)										
<p>Shaded areas and shade devices as drawn</p>											
<p>*No* means that the item was not included in the assessment and shall not be installed. Yes to door & window seals means that seals are to be fitted to all external doors and windows.</p>											

The peak body for the building design profession Member

SUMMARY OF BASIS COMMITMENTS																								
<p>This is a summary of the BASIS Commitments as detailed in the BASIS Certificate. Refer to the CURRENT BASIS Certificate for complete details. For definitions refer to basis.nsw.gov.au</p> <p>The following specification details the requirements to achieve BASIS Compliance as indicated on the Basis Report. Once the development is approved by Council, these specifications will become a condition of consent and must be included in the built works. If you do not want to include these requirements, or need further information, please contact ecorATE Australia immediately.</p>																								
<p>URBAN SUSTAINABILITY ASSESSORS</p> <p>0401 002 099 info@ecorate.com.au www.ecorate.com.au</p>																								
<p>WATER COMMITMENTS</p> <p>Fixtures - H1.2</p> <table border="1"> <tr> <td>4 Star Shower Heads</td> <td>6.0 - 7.5L/min</td> <td></td> </tr> <tr> <td>4 Star Kitchen / Basin Taps</td> <td>4 Star Toilet</td> <td></td> </tr> </table> <p>Alternative Water</p> <table border="1"> <tr> <td>Minimum Tank Size (L)</td> <td>1200 each</td> <td>Collected from Roof Area (m²)</td> <td>100%</td> </tr> </table> <p>Tank Connected To:</p> <p>All Toilets, Laundry W/M Cold Tap, One Outdoor Tap</p>		4 Star Shower Heads	6.0 - 7.5L/min		4 Star Kitchen / Basin Taps	4 Star Toilet		Minimum Tank Size (L)	1200 each	Collected from Roof Area (m ²)	100%													
4 Star Shower Heads	6.0 - 7.5L/min																							
4 Star Kitchen / Basin Taps	4 Star Toilet																							
Minimum Tank Size (L)	1200 each	Collected from Roof Area (m ²)	100%																					
<p>THERMAL COMFORT COMMITMENTS - Refer to TPA Specification on plans</p> <p>ENERGY COMMITMENTS</p> <table border="1"> <tr> <th>Hot Water</th> <th>H1.2,3</th> <th>Electric Storage</th> </tr> <tr> <td>Cooling System</td> <td>Living</td> <td>1 Phase Ducted EER 3.0-3.5 + Ceiling Fans</td> </tr> <tr> <td></td> <td>Bedrooms</td> <td>1 Phase Ducted EER 3.0-3.5 + Ceiling Fans</td> </tr> <tr> <td>Heating System</td> <td>Living</td> <td>1 Phase Ducted EER 3.5-4.0</td> </tr> <tr> <td></td> <td>Bedrooms</td> <td>1 Phase Ducted EER 3.5-4.0</td> </tr> </table> <p>Individual fan, Ducted to Facade or roof manual switch on/off to Bathrooms, Kitchens and Laundry's</p> <table border="1"> <tr> <th>Natural Lighting</th> <th>Window/Skylight in Kitchen</th> <th>H1.2,3</th> <th>Yes</th> </tr> <tr> <td></td> <th>Window/Skylight in Bathrooms/Toilets</th> <td>H1.2,3</td> <td>2</td> </tr> </table> <p>Artificial Lighting</p> <p>Your development must be primarily lit (minimum 80% of light fittings) by compact fluorescent, fluorescent or LED Lamps</p>		Hot Water	H1.2,3	Electric Storage	Cooling System	Living	1 Phase Ducted EER 3.0-3.5 + Ceiling Fans		Bedrooms	1 Phase Ducted EER 3.0-3.5 + Ceiling Fans	Heating System	Living	1 Phase Ducted EER 3.5-4.0		Bedrooms	1 Phase Ducted EER 3.5-4.0	Natural Lighting	Window/Skylight in Kitchen	H1.2,3	Yes		Window/Skylight in Bathrooms/Toilets	H1.2,3	2
Hot Water	H1.2,3	Electric Storage																						
Cooling System	Living	1 Phase Ducted EER 3.0-3.5 + Ceiling Fans																						
	Bedrooms	1 Phase Ducted EER 3.0-3.5 + Ceiling Fans																						
Heating System	Living	1 Phase Ducted EER 3.5-4.0																						
	Bedrooms	1 Phase Ducted EER 3.5-4.0																						
Natural Lighting	Window/Skylight in Kitchen	H1.2,3	Yes																					
	Window/Skylight in Bathrooms/Toilets	H1.2,3	2																					
<p>OTHER COMMITMENTS</p> <table border="1"> <tr> <th>Photovoltaic</th> <th>Minimum of 1 (peak kW)</th> </tr> <tr> <td>Outdoor clothes line</td> <td>Yes</td> </tr> <tr> <td>Stove/Oven</td> <td>Electric cooktop & electric oven</td> </tr> </table>		Photovoltaic	Minimum of 1 (peak kW)	Outdoor clothes line	Yes	Stove/Oven	Electric cooktop & electric oven																	
Photovoltaic	Minimum of 1 (peak kW)																							
Outdoor clothes line	Yes																							
Stove/Oven	Electric cooktop & electric oven																							

BASIX Help Line: 1300 659 098
Weekdays: 9:00am - 5:00pm
Email: basis@planning.nsw.gov.au

Planning Department of Planning & Environment
23-27 Bridge Street, Sydney NSW 2000
GPO Box 39, Sydney NSW 2001



MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au

457 HIGH STREET, MAITLAND. 2320
PHONE: (02) 4934 1400

BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").

THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR: GRUGEON

AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
COVER SHEET

Date
04.10.2023

Drawn by	JH	Checked
Checked by Owner	Date	Signed by Builder

Scale
1:100 @ A3

Design
CUSTOM Rev
A

Drawing No.
23039 Sheet
A01.0.1

100
DP1256013



MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au
457 HIGH STREET, MAITLAND. 2320
PHONE:(02)49341400
BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:
THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").
THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR:
GRUGEON

AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
SITE ANALYSIS, EROSION CONTROL

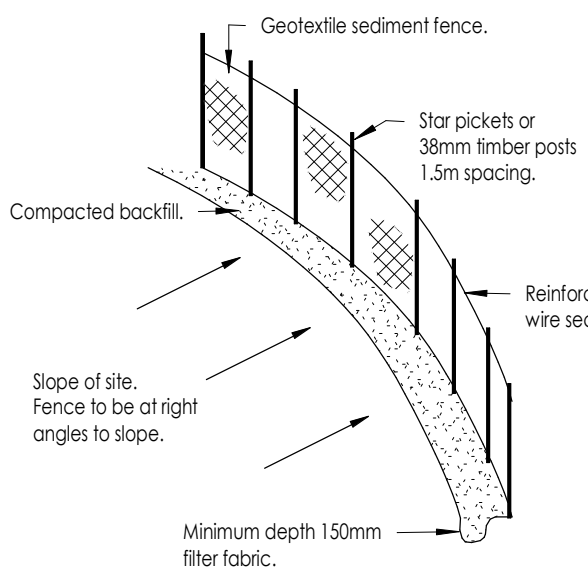
Date
04.10.2023

Drawn by
JH
Checked
Date
Signed by Builder

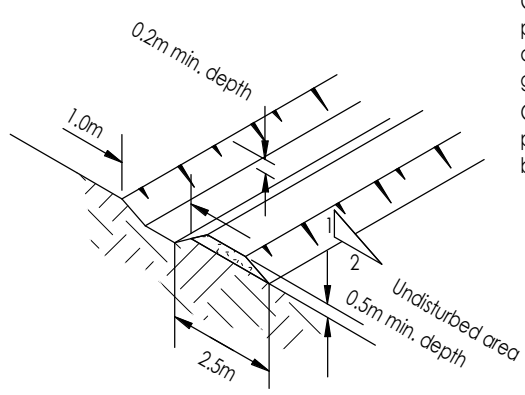
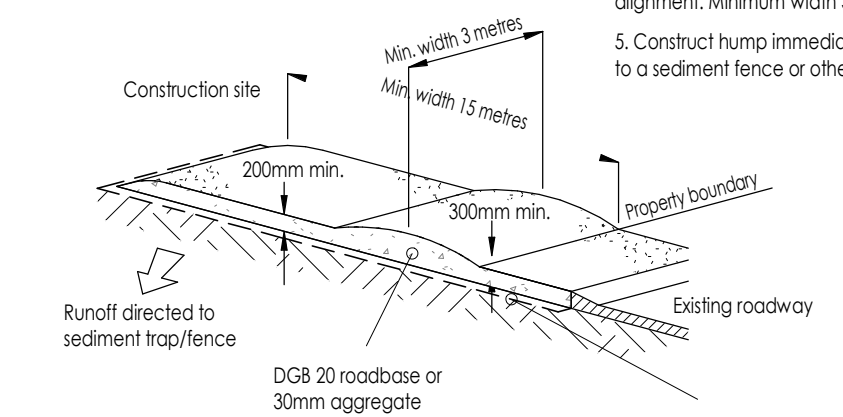
Scale
As indicated

Design
CUSTOM
Rev
A

Drawing No.
23039
Sheet
A10.0.1



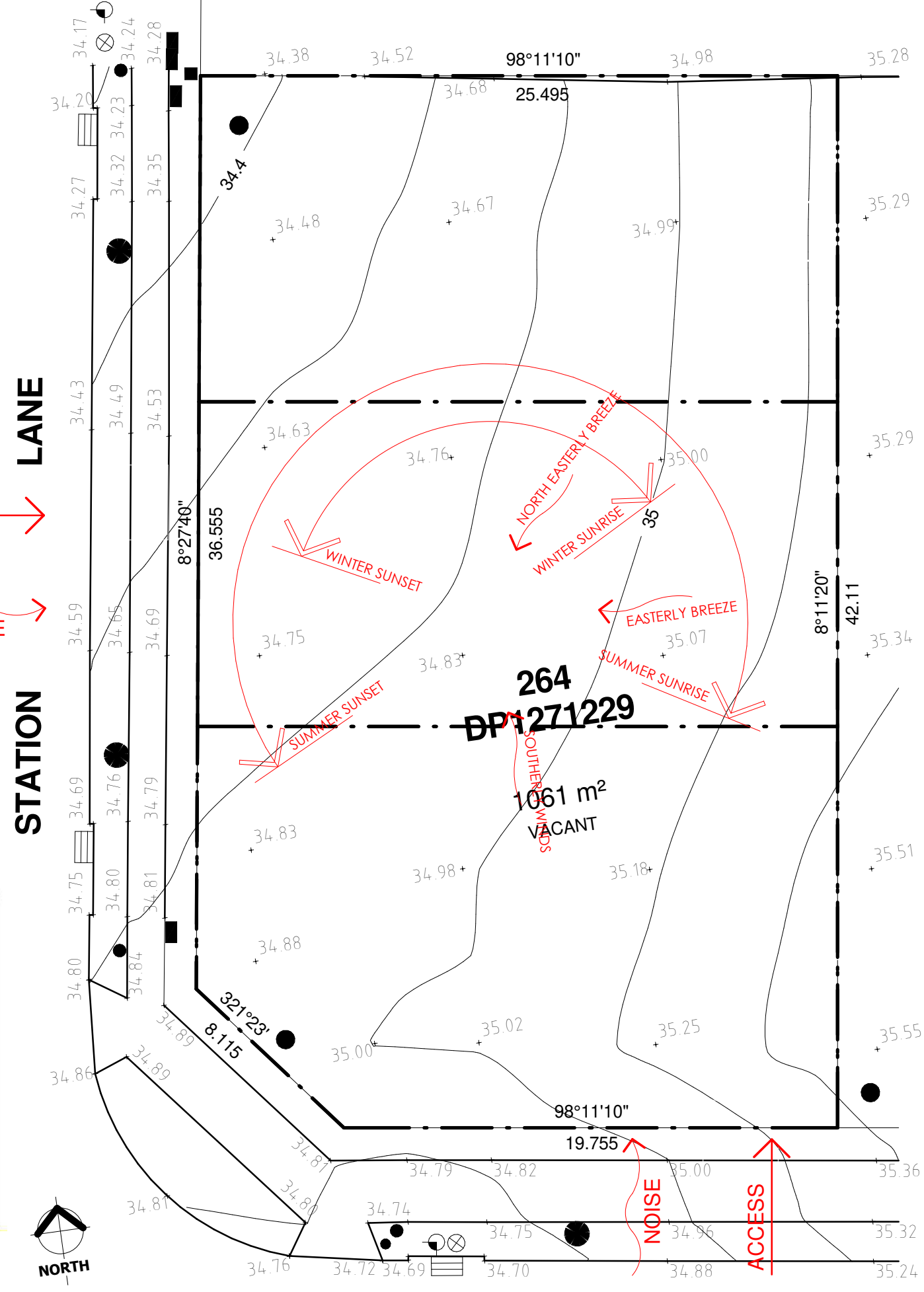
- Construction Notes**
1. Strip topsoil and level site.
 2. Compact subgrade.
 3. Cover area with needle-punched geotextile.
 4. Construct 200mm thick pad over geotextile using roadbase or 300mm aggregate. Minimum length 15 metres or to building alignment. Minimum width 3 metres.
 5. Construct hump immediately within boundary to divert water to a sediment fence or other sediment trap.



Geotextile fabric designed to prevent intermixing of subgrade and base materials and to maintain good properties of the sub-base layers
Geofabric may be a woven or needle punched product with a minimum CBR burst strength (AS3706.4-90) or 2500 N.

LEGEND

- BOUNDARY LINE
- ADJACENT BOUNDARY
- CONTOUR LINE
- EASEMENT
- TOP & TOE OF BANKS
- LIGHT POLE
- ELECTRICAL PILLAR
- KERB INLET PIT
- DRAINAGE PIT
- HYDRANT
- STOP VALVE
- SEWER MAN HOLE
- TELSTRA PIT
- SIGN
- TREE



All erosion and sediment control measures required as conditions of building approval to be installed prior to any other work such as cut and fill taking place on site. These measures to be maintained throughout the course of construction and satisfactory stabilisation of the site upon completion of the works.
Control measures to be in accordance with Council's information brochure, and the Department of Conservation and Land Management.
All sediment control techniques including runoff diversion techniques, sediment trapping devices, construction of entrances/exits, buffer zones and revegetation techniques shall be constructed to prevent sediment and other debris leaving the site or entering council drainage system. All such control measures to be maintained in a sound and workable condition and shall not be removed from site until permanent rehabilitation measures have been completed.

EROSION CONTROL
1 : 100

REFER TO TENDER

TORRENS TITLE SUBDIVISION

SITE ANALYSIS PLAN
1 : 200

SPRINGFIELD DRIVE

LEGEND - KEYNOTES (REFER SPECIFICATIONS)

AC	AIR CONDITIONING AS SPECIFIED
CL	CLOTHES LINE AS SELECTED
HWS	HOT WATER SYSTEM
RWT	RAINWATER TANK

SITE COVERAGE

HARDSTAND	631.01 m ²	60%
PERMEABLE	429.51 m ²	40%
SITE AREA	1060.51 m ²	

106
DP1256013

LEGEND - KEYNOTES (REFER SPECIFICATIONS)

AC	AIR CONDITIONING AS SPECIFIED
CL	CLOTHES LINE AS SELECTED
HWS	HOT WATER SYSTEM
RWT	RAINWATER TANK



MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au

457 HIGH STREET, MAITLAND. 2320
PHONE:(02)49341400

BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY
CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").

THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

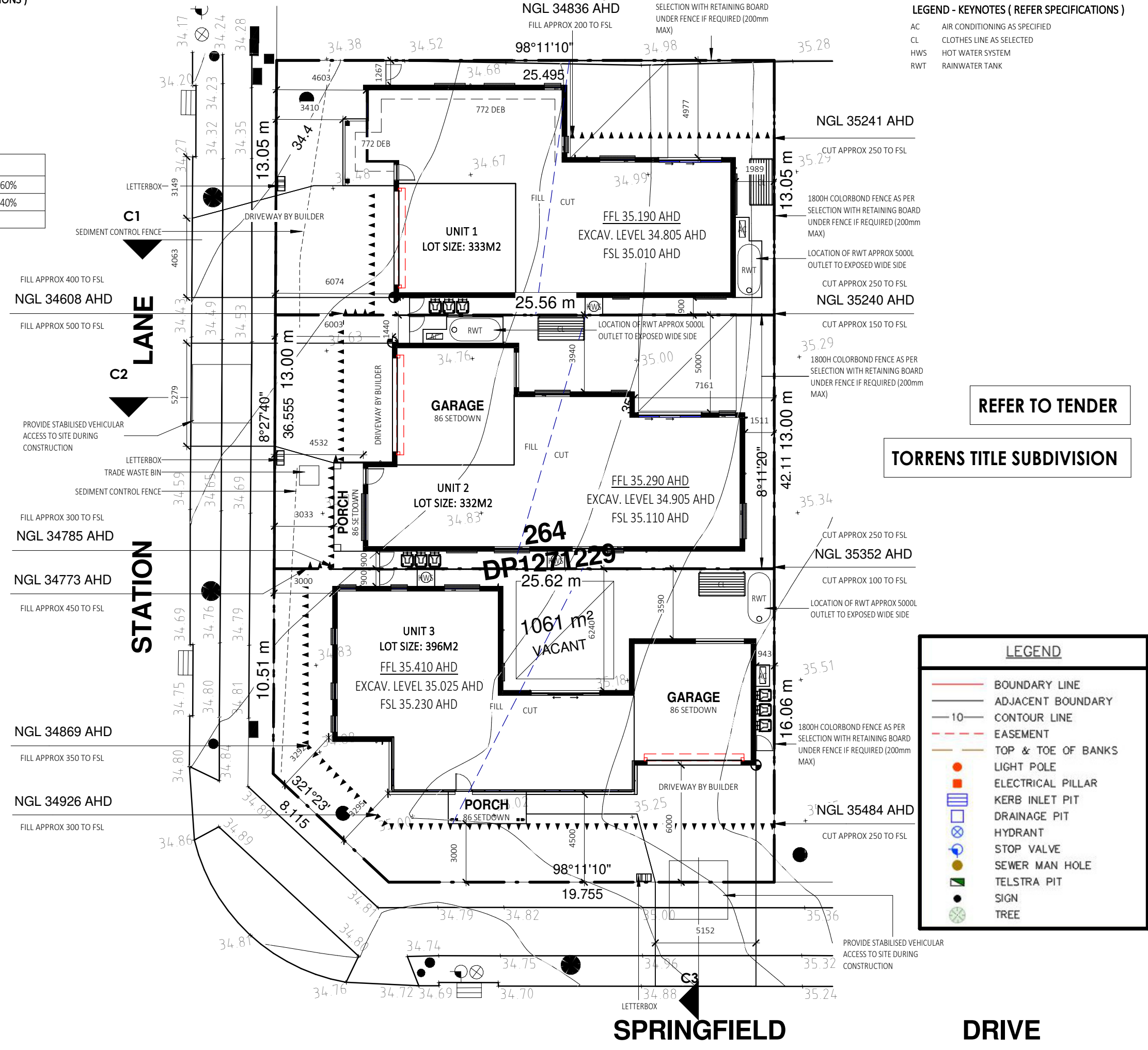
FOR:
GRUGEON

AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
SITE SETOUT PLAN (BULK
EARTHWORKS)

Date	04.10.2023	
Drawn by	JH	Checked
Checked by Owner	Date	Signed by Builder

Scale	As indicated	@ A3
Design	CUSTOM	Rev A
Drawing No.	23039	Sheet A11.0.1



REFER TO TENDER

TORRENS TITLE SUBDIVISION

LEGEND

- BOUNDARY LINE
- ADJACENT BOUNDARY
- 10 CONTOUR LINE
- EASEMENT
- TOP & TOE OF BANKS
- LIGHT POLE
- ELECTRICAL PILLAR
- KERB INLET PIT
- DRAINAGE PIT
- HYDRANT
- STOP VALVE
- SEWER MAN HOLE
- TELSTRA PIT
- SIGN
- TREE

SITE PLAN

1 : 200



SPRINGFIELD

DRIVE

- CONCRETE PATHS
- DRIVEWAY
- DRIVEWAY CROSSOVER
- DRIVEWAY CROSSOVER EXISTING PATH
- GARDENS (TREATED PINE GARDEN EDGING)
- LAWN (KIKUYU TURF)
- RAIN GARDEN
- RIVER GRAVEL (WEED MAT UNDER)

PLANT SCHEDULE (TREES, SHRUBS, GRASSES, GROUNDCOVERS)

ID	BOTANICAL NAME	QTY	POT SIZE (mm/Ltr)	MATURE SIZE
CA	CALLISTEMON VIMALIS	2	75L	7 x 4m
CLJ	CALLISTEMON LITTLE JOHN	15	200mm	1.5 x 1.5m
CT	CUPANIOPSIS ANARACIODES	2	50L	5-8m
GC	DURANTA MINI GOLD	15	140mm	0.6 x 0.6m
MO	MURRAYA MIN A MIN	30	200MM	1x1 m

Grand total: 64

SITE COVERAGE		
HARDSTAND	631.01 m ²	60%
PERMEABLE	429.51 m ²	40%
SITE AREA	1060.51 m ²	

PRIVATE OPEN SPACE(24m ² REQ/UNIT)	
UNIT 1	
POS UNIT 1	53.03 m ²
UNIT 2	
POS UNIT 2	59.17 m ²
UNIT 3	
POS UNIT 3	62.58 m ²
TOTAL POS	174.79 m ²

LANDSCAPED AREAS	
CONCRETE PATHS	17.61 m ²
DRIVEWAY	104.53 m ²
DRIVEWAY CROSSOVER	42.59 m ²
DRIVEWAY CROSSOVER EXISTING PATH	27.51 m ²
GARDENS (TREATED PINE GARDEN EDGING)	37.57 m ²
LAWN (BUFFALO TURF)	14.40 m ²
LAWN (KIKUYU TURF)	281.54 m ²
RIVER GRAVEL (WEED MAT UNDER)	95.97 m ²
Grand total	621.71 m ²

GARDEN 1

- CA 1 CALLISTEMON VIMALIS
- MO 5 MURRAYA MIN A MIN
- TOTAL 6

GARDEN 2

- CLJ 8 CALLISTEMON LITTLE JOHN
- GC 15 DURANTA MINI GOLD
- TOTAL 23

GARDEN 3

- CT 1 CUPANIOPSIS ANARACIODES
- MO 7 MURRAYA MIN A MIN
- TOTAL 8

GARDEN 4

- CA 1 CALLISTEMON VIMALIS
- MO 18 MURRAYA MIN A MIN
- TOTAL 19

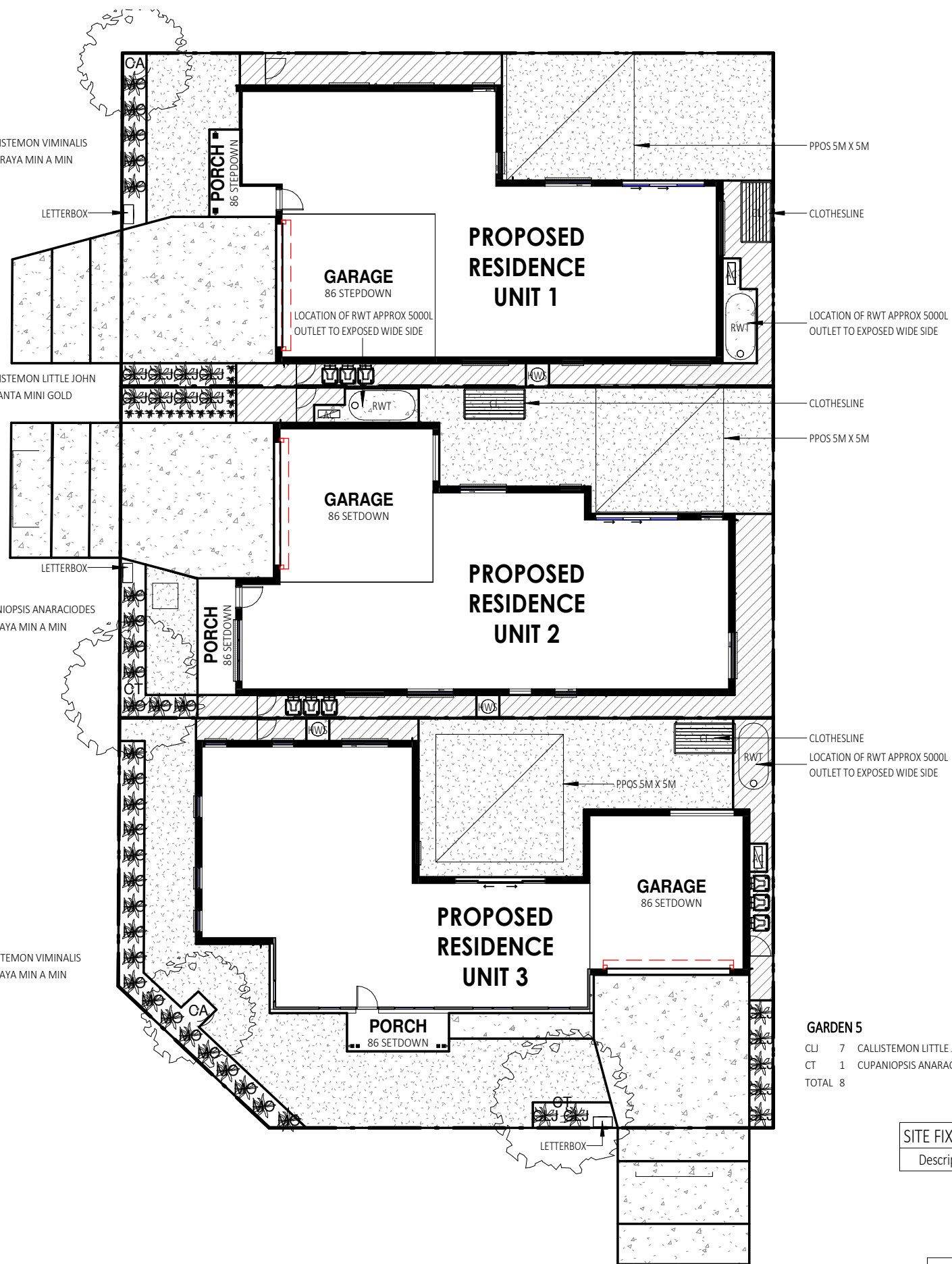
GARDEN 5

- CLJ 7 CALLISTEMON LITTLE JOHN
- CT 1 CUPANIOPSIS ANARACIODES
- TOTAL 8



LANDSCAPE PLAN

1 : 200



SITE FIXTURE SCHEDULE		
Description	Keystone	Count

REFER TO TENDER

TORRENS TITLE SUBDIVISION



MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au
457 HIGH STREET, MAITLAND. 2320
PHONE:(02)49341400
BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").
THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drm
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR: **GRUGEON**

AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
LANDSCAPE PLAN

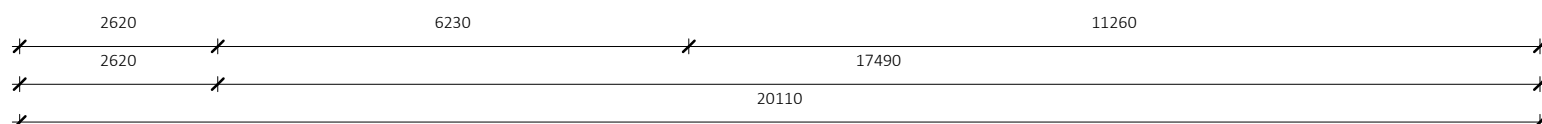
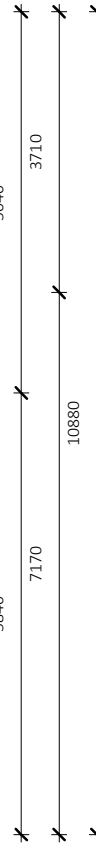
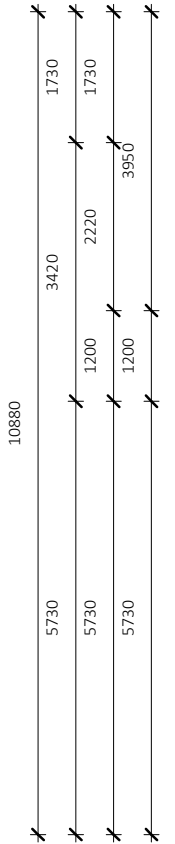
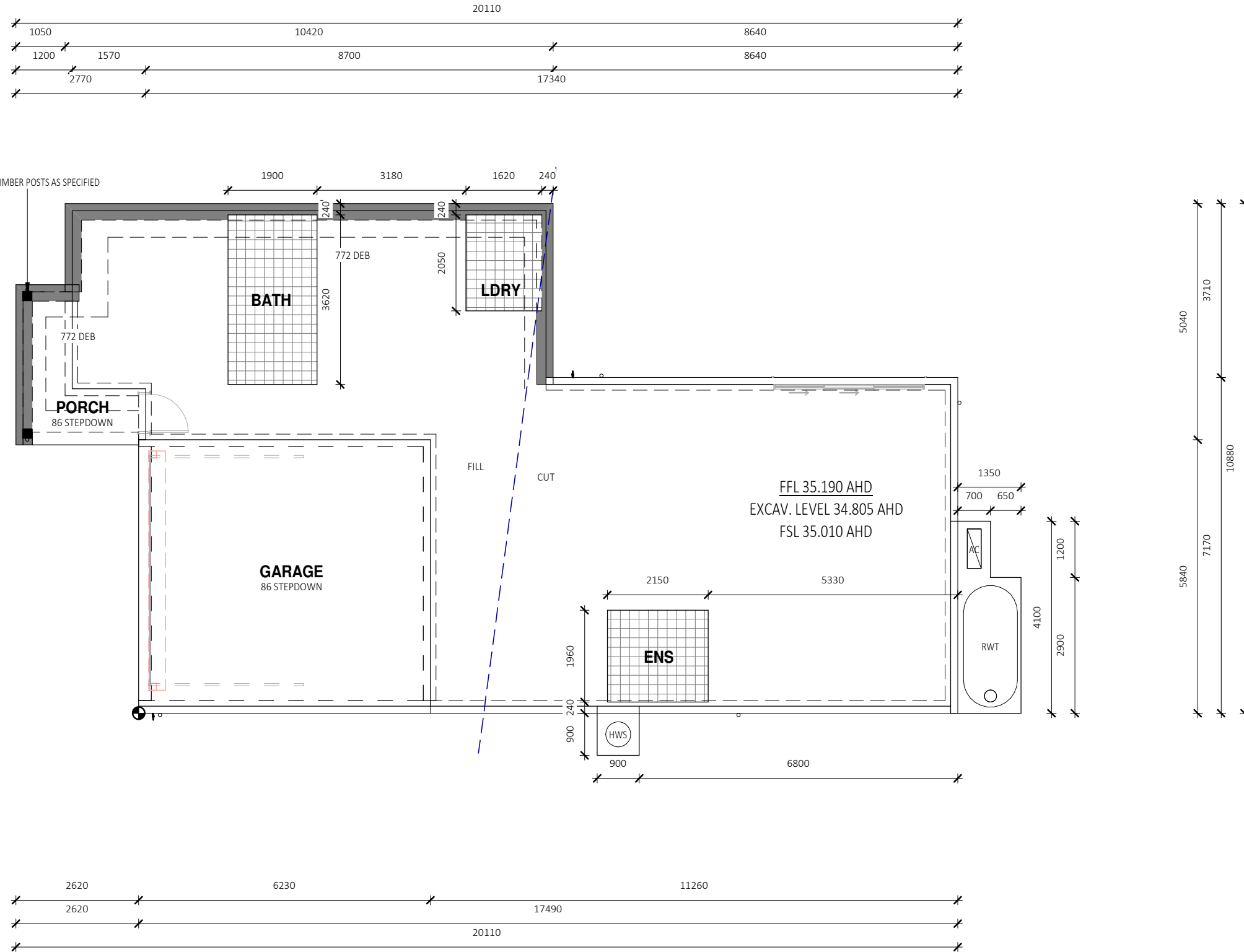
Date	04.10.2023	
Drawn by	JH	Checked
Checked by Owner	Date	Signed by Builder
Scale	As indicated	@ A3
Design	CUSTOM	Rev A
Drawing No.	23039	Sheet A14.0.1

CONCRETE WAFFLE SLAB TO BE CONSTRUCTED TO THE ENGINEERS DETAILS AND LAYOUT AS SHOWN ON THE WORKING DRAWINGS OR AS SUPPLIED IN ADDITION TO THE DRAWINGS.

45mm SET DOWN IN SLAB FOR WET AREA TILING SHOWN HATCHED.

LEGEND - KEYNOTES (REFER SPECIFICATIONS)

AC AIR CONDITIONING AS SPECIFIED
HWS HOT WATER SYSTEM
RWT RAINWATER TANK



VALLEY HOMES
SINCE 1971

MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au
457 HIGH STREET, MAITLAND. 2320
PHONE:(02)49341400
BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:
THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").
THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR:
GRUGEON

AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
SLAB PLAN - UNIT 1

Date: 04.10.2023
Drawn by: JH
Checked by Owner: Date: Signed by Builder:

Scale: 1:100 @ A3
Design: CUSTOM Rev: A
Drawing No. 23039 Sheet: A21.0.1



SLAB PLAN - UNIT 1
1 : 100

REFER TO TENDER

TORRENS TITLE SUBDIVISION

LEGEND - KEYNOTES (REFER SPECIFICATION...



MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au

457 HIGH STREET, MAITLAND. 2320
PHONE:(02)49341400

BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").

THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR:
GRUGEON

AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
ROOF PLAN - UNIT 1

Date
04.10.2023

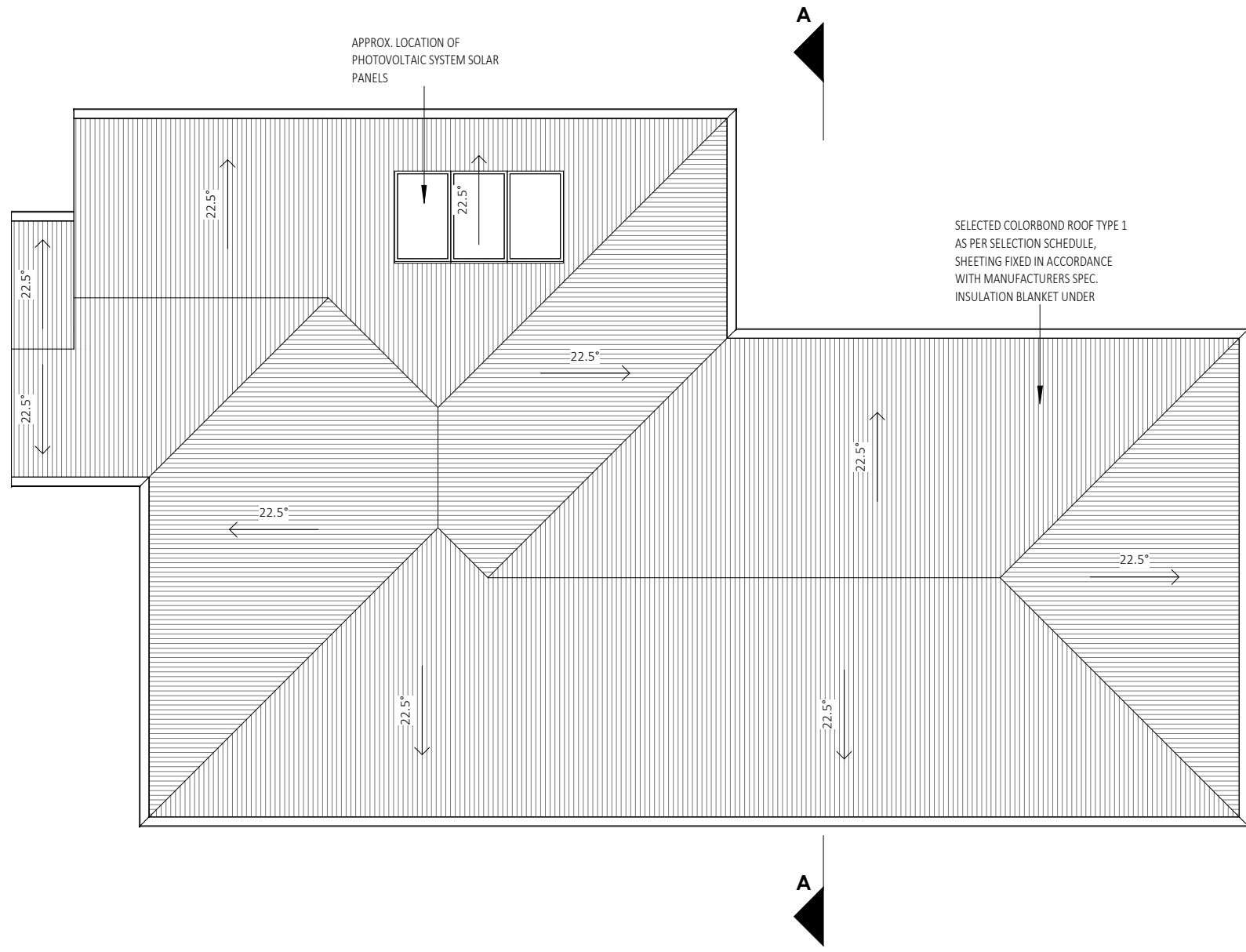
Drawn by
JH

Checked by Owner Date Signed by Builder

Scale
1 : 100 @ A3

Design
CUSTOM Rev A

Drawing No.
23039 Sheet A21.5.1



ROOF PLAN - UNIT 1
1 : 100

REFER TO TENDER

TORRENS TITLE SUBDIVISION

LEGEND: AS SPECIFIED

ELECTRICAL FIXTURE SCHEDULE

Type	Count	Comments
ELECTRICAL METER & FUSE BOX	1	UNIT 1
GPO DOUBLE	21	UNIT 1
GPO SINGLE	5	UNIT 1
NBN CONNECTION BOX	1	UNIT 1
SMOKE ALARM	2	UNIT 1
TELEPHONE / DATA POINT	2	UNIT 1
TV POINT	2	UNIT 1
VH_EXHAUST FAN	3	UNIT 1
Grand total:	37	

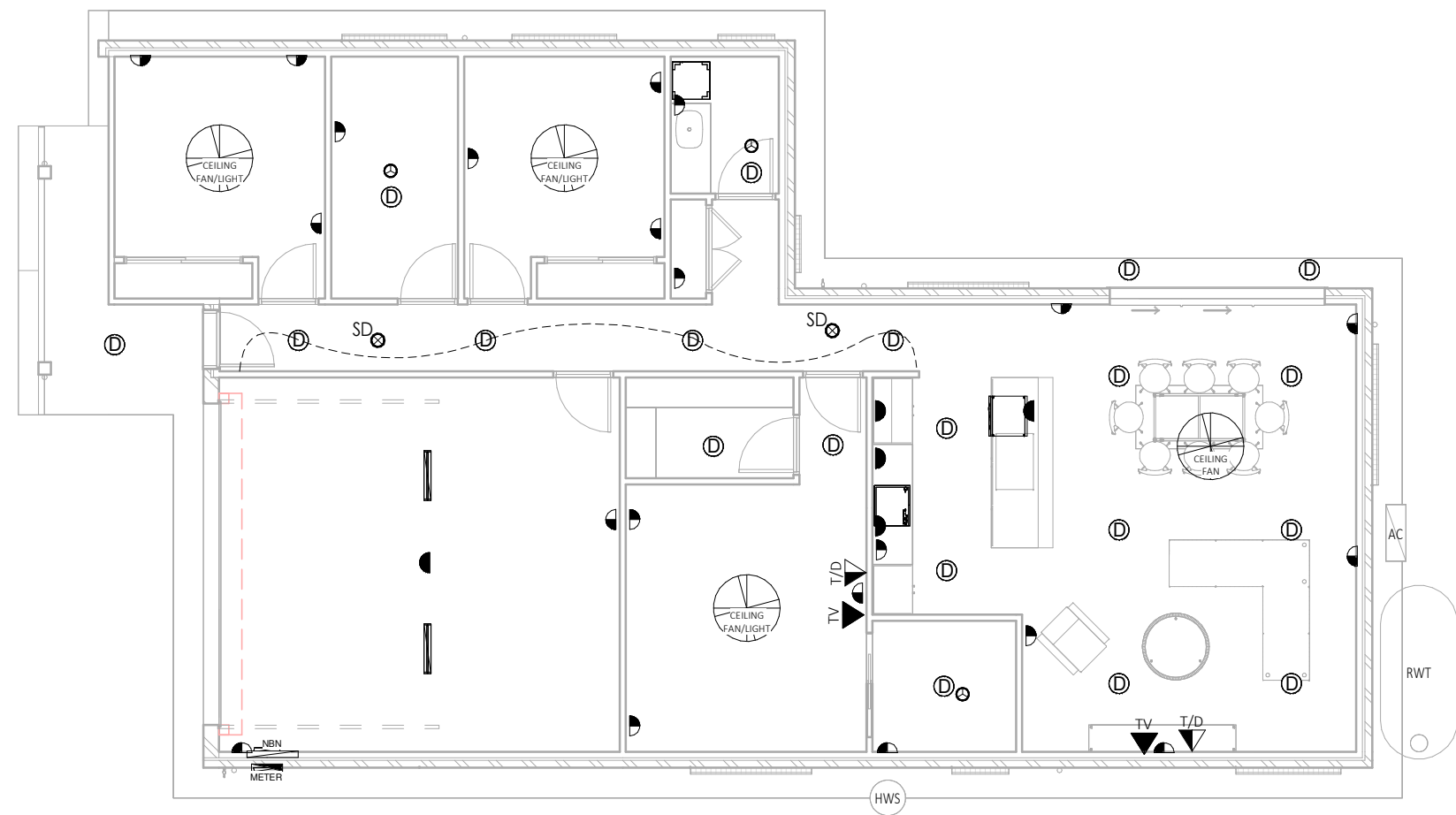
LIGHTING FIXTURE SCHEDULE

Type	Count	Comments
CEILING FAN	1	UNIT 1
CEILING FAN LIGHT	3	UNIT 1
LED BATTEN LIGHT	2	UNIT 1
LED DOWNLIGHT	20	UNIT 1
Grand total:	26	

LEGEND - KEYNOTES (REFER SPECIFICATIONS)

- AC AIR CONDITIONING AS SPECIFIED
 HWS HOT WATER SYSTEM
 RWT RAINWATER TANK

- ⓓ LED DOWNLIGHT - IC4 RATED
- Ⓟ¹ PEDANT LIGHT TYPE 1
- Ⓟ² PEDANT LIGHT TYPE 2
- Ⓟ³ PEDANT LIGHT TYPE 3
- Ⓢ¹ EXTERNAL WALL LIGHT
- Ⓢ SENSOR LIGHT
- Ⓢ HEATER FAN LIGHT
- Ⓢ EXHAUST FAN LIGHT
- Ⓢ EXTERNALLY DUCTED EXHAUST FAN
- FLUORESCENT LIGHT SINGLE
- LED BATTEN LIGHT
- Ⓢ CEILING FAN
- Ⓢ CEILING FAN WITH LIGHT
- SD LOCATION OF SMOKE ALARM
IN ACCORDANCE WITH AS3786.
- g GAS POINT
- ▀ GPO SINGLE
- ▀ GPO DOUBLE
- ▀^{EXT} GPO SINGLE WATERPROOF
- ▀^{EXT} GPO DOUBLE WATERPROOF
- ▀¹⁰⁰⁰ GPO SINGLE ELEVATED 1000
- ▀¹⁰⁰⁰ GPO DOUBLE ELEVATED 1000
- NBN NBN CONNECTION BOX
- METER ELECTRICAL METER & FUSE BOX
- TV TV POINT
- T/D TELEPHONE / DATA POINT
- ▽ HARD WIRED DOOR BELL
- - - 2 WAY SWITCHING
- - - 3 3 WAY SWITCHING



REFER TO TENDER

TORRENS TITLE SUBDIVISION



MAMBARE PTY LTD T/A VALLEY HOMES
 A.C.N. 000 939 980
 www.valleyhomes.com.au
 457 HIGH STREET, MAITLAND. 2320
 PHONE:(02)49341400
BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").

THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR: **GRUGEON**

AT:
 LOT 264 / DP1271229
 132 SPRINGFIELD DRIVE
 LOCHINVAR
 NSW 2321

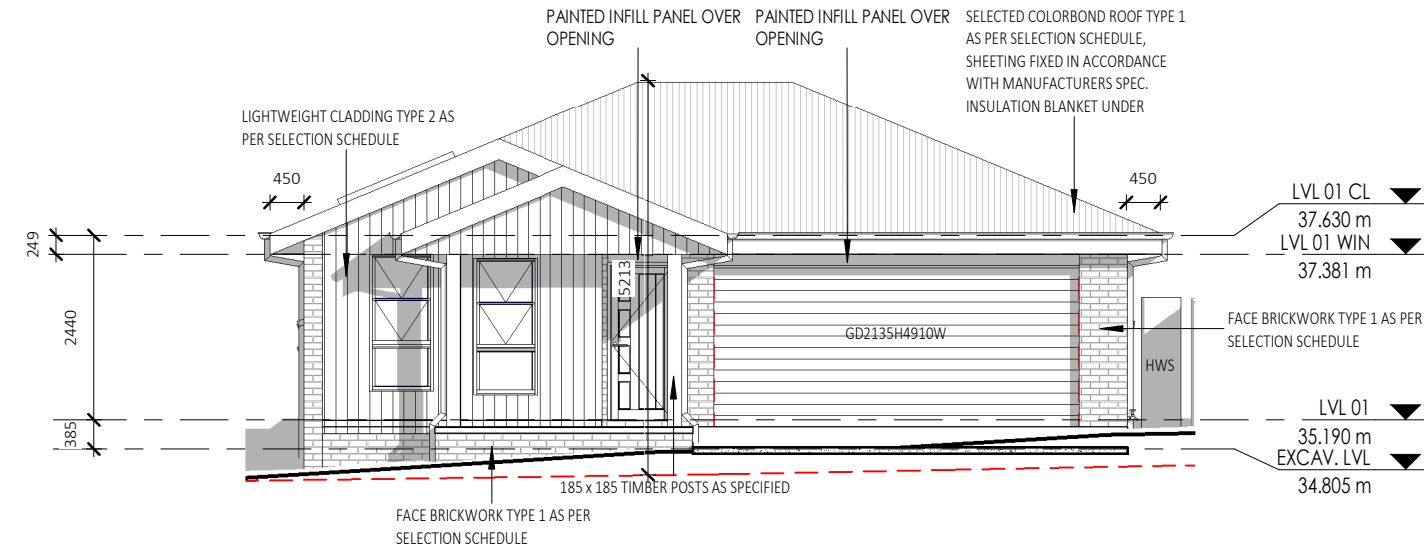
Sheet Title
LVL 01 ELECTRICAL PLAN - UNIT 1

Date	04.10.2023		
Drawn by	JH	Checked	
Checked by Owner	Date	Signed by Builder	
Scale	1 : 100	@ A3	
Design	CUSTOM	Rev	A
Drawing No.	23039	Sheet	A22.1.1

LVL 01 ELECTRICAL PLAN - UNIT 1
 1 : 100

LEGEND - KEYNOTES (REFER SPECIFICATIONS)

- AC AIR CONDITIONING AS SPECIFIED
- AJ ARTICULATION JOINT
- HWS HOT WATER SYSTEM
- RWT RAINWATER TANK



FRONT ELEVATION - UNIT 1

1 : 100



REAR ELEVATION - UNIT 1

1 : 100



MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au

457 HIGH STREET, MAITLAND. 2320
PHONE:(02)49341400

BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").

THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drm
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR: GRUGEON

AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
ELEVATIONS - UNIT 1

Date 04.10.2023

Drawn by JH Checked

Checked by Owner Date Signed by Builder

Scale 1 : 100 @ A3

Design CUSTOM Rev A

Drawing No. 23039 Sheet A30.0.1

REFER TO TENDER

TORRENS TITLE SUBDIVISION



MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au

457 HIGH STREET, MAITLAND. 2320
PHONE:(02)49341400

BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").

THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR: **GRUGEON**

AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
ELEVATIONS - UNIT 1

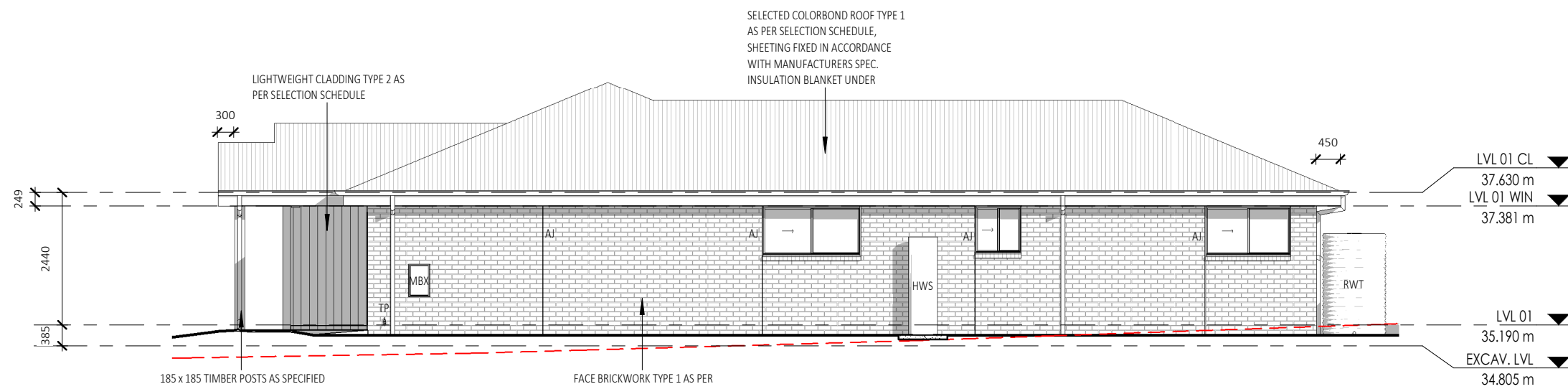
Date
04.10.2023

Drawn by	JH	Checked	.
Checked by Owner	Date	Signed by Builder	

Scale
1 : 100 @ A3

Design	CUSTOM	Rev	A
--------	--------	-----	---

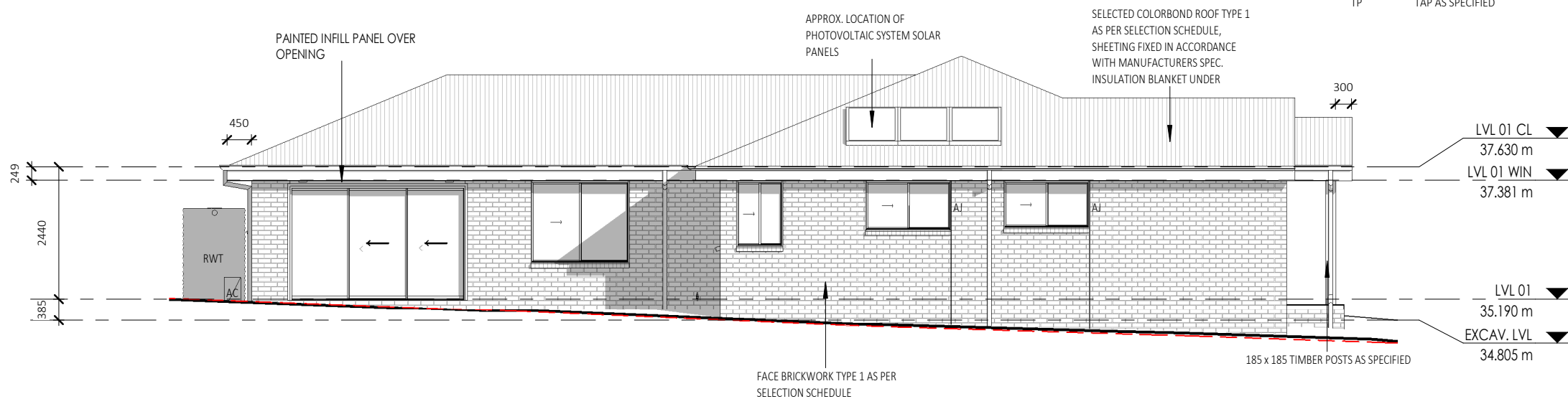
Drawing No.	23039	Sheet	A30.0.2
-------------	--------------	-------	---------



SIDE ELEVATION - UNIT 1
1 : 100

LEGEND - KEYNOTES (REFER SPECIFICATIONS)

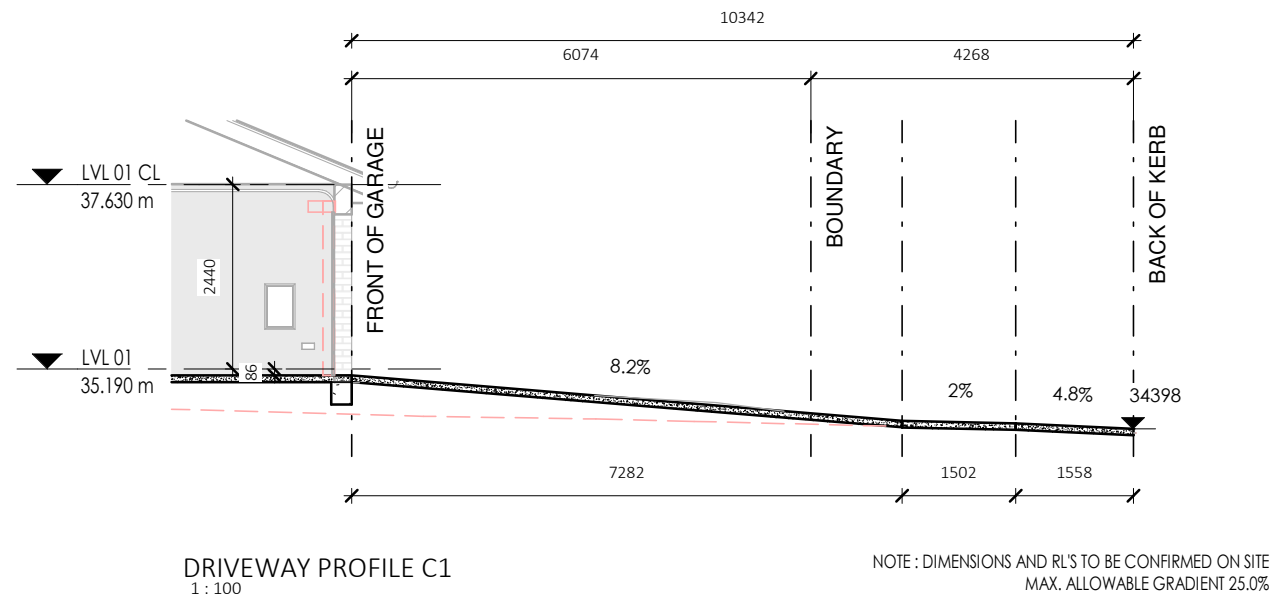
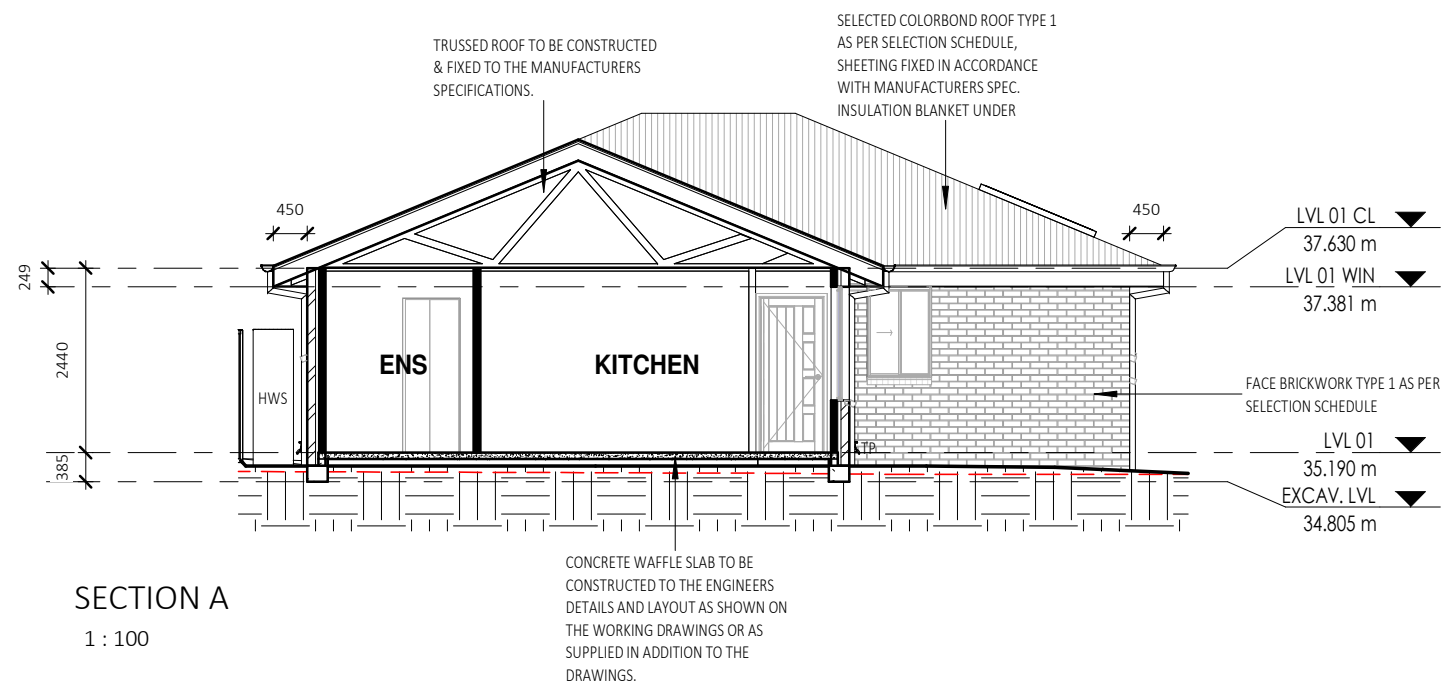
- AC AIR CONDITIONING AS SPECIFIED
- AJ ARTICULATION JOINT
- HWS HOT WATER SYSTEM
- MBX METER BOX
- RWT RAINWATER TANK
- TP TAP AS SPECIFIED



SIDE ELEVATION - UNIT 1
1 : 100

REFER TO TENDER

TORRENS TITLE SUBDIVISION



LEGEND - KEYNOTES (REFER SPECIFICATION...

HWS HOT WATER SYSTEM
TP TAP AS SPECIFIED

ALL BRICKWORK TO BE FULLY ARTICULATED IN ACCORDANCE WITH AS 3700 MASONRY STRUCTURES OR AS4773 MASONRY FOR SMALL BUILDINGS, PARTS 1 AND 2.
ARTICULATION JOINTS MUST HAVE A WIDTH NOT LESS THAN 10mm AND BE PROVIDED IN FOLLOWING LOCATIONS:

- * FOR STRAIGHT, CONTINUOUS WALLS HAVING NO OPENINGS, THE MAXIMUM SPACING OF 10mm ARTICULATION JOINTS UP TO 4m HIGH: EXTERNAL FACE FINISHED MASONRY 5.0m CTS; EXTERNAL RENDERED AND/OR PAINTED MASONRY 4.5m OR
- * FOR STRAIGHT, CONTINUOUS WALLS HAVING NO OPENINGS, THE MAXIMUM SPACING OF 10mm ARTICULATION JOINTS FROM 4m-8.5m H: EXTERNAL FACE FINISHED MASONRY 3.5m CTS; EXTERNAL RENDERED AND/OR PAINTED MASONRY 3.2m
- * MAXIMUM SPACING OF ARTICULATION JOINTS IN WALLS WHERE WINDOW OR DOOR OPENINGS MORE THAN 900 x 900mm OCCUR, TO BE NO MORE THAN 5.0m CTRS, AND POSITIONED IN LINE WITH ONE EDGE OF THE OPENING; AND
- * WHERE THE HEIGHT OF THE WALL CHANGES BY MORE THAN 20%, AT THE POSITION OF CHANGE IN HEIGHT; AND
- * WHERE WALLS CHANGE IN THICKNESS; AND
- * AT CONTROL OR CONSTRUCTION JOINTS IN FOOTING SLABS; AND
- * AT JUNCTIONS OF WALLS CONSTRUCTED OF DIFFERENT MASONRY MATERIALS; AND
- * AT DEEP CHASES (REBATES) FOR SERVICE PIPES.
- * AT A DISTANCE FROM ALL CORNERS NOT GREATER THAN 4500mm AND NOT LESS THAN 470mm FOR CAVITY WALLS OR 230mm FOR VENEER WALLS.

REFER TO TENDER

TORRENS TITLE SUBDIVISION

INSULATION NOTES:

R3.5 INSULATION TO CEILINGS (EXCLUDES GARAGES, PORCHES, BALCONIES AND ALFRESCOS).

R2.0 INSULATION TO EXTERNAL WALLS (EXCLUDES GARAGE WALLS)

R2.0 INSULATION TO INTERNAL GARAGE WALLS

UNDER SLAB INSULATION:

REFER TO GEOTECH S/M/H CLASS.

S&M CLASS - 310MM SLAB THICKNESS / 225MM THICK STYROFOAM PODS UNDER SLAB

H CLASS - 385MM SLAB THICKNESS / 300MM THICK STYROFOAM PODS UNDER SLAB

ROOF COLOUR:



MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au

457 HIGH STREET, MAITLAND. 2320
PHONE:(02)49341400

BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").

THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR: GRUGEON

AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
SECTION, DRIVEWAY PROFILE - UNIT 1

Date 04.10.2023

Drawn by JH Checked

Checked by Owner Date Signed by Builder

Scale As indicated @ A3

Design CUSTOM Rev A

Drawing No. 23039 Sheet A40.0.1



MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au

457 HIGH STREET, MAITLAND, 2320
PHONE:(02)49341400

BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").

THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR:
GRUGEON

AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
SLAB PLAN - UNIT 2

Date
04.10.2023

Drawn by
JH Checked

Checked by Owner Date Signed by Builder

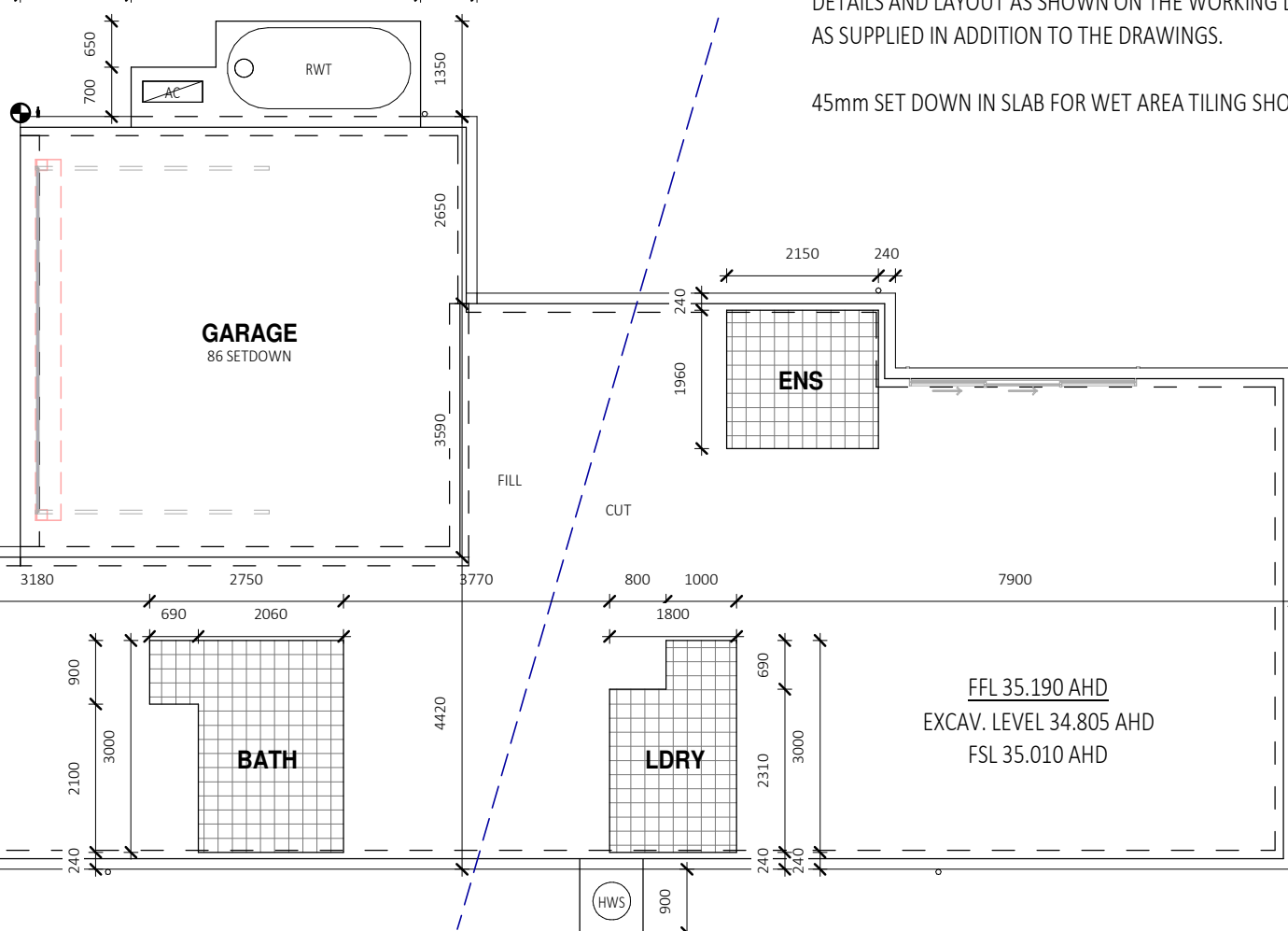
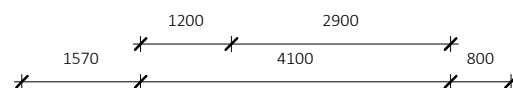
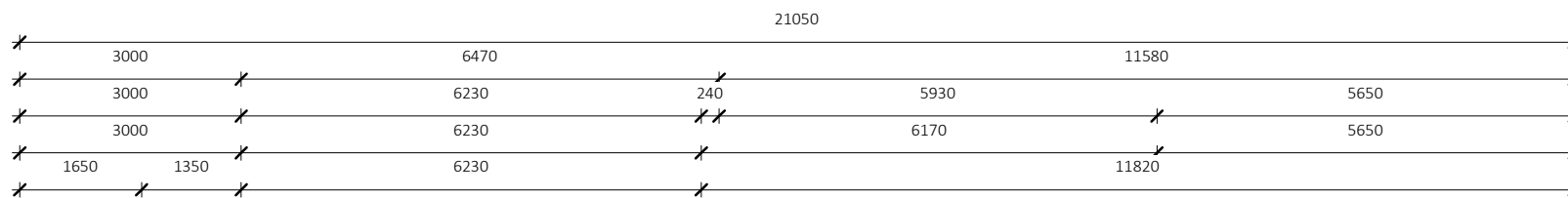
Scale
1 : 100 @ A3

Design
CUSTOM Rev A

Drawing No.
23039 Sheet B21.0.2

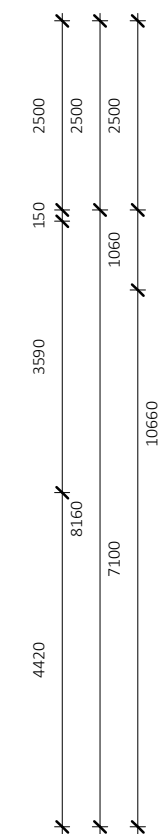
LEGEND - KEYNOTES (REFER SPECIFICATIONS)

- AC AIR CONDITIONING AS SPECIFIED
- HWS HOT WATER SYSTEM
- RWT RAINWATER TANK



CONCRETE WAFFLE SLAB TO BE CONSTRUCTED TO THE ENGINEERS
DETAILS AND LAYOUT AS SHOWN ON THE WORKING DRAWINGS OR
AS SUPPLIED IN ADDITION TO THE DRAWINGS.

45mm SET DOWN IN SLAB FOR WET AREA TILING SHOWN HATCHED.



SLAB PLAN - UNIT 2
1 : 100

REFER TO TENDER

TORRENS TITLE SUBDIVISION

LEGEND - KEYNOTES (REFER SPECIFICATION...

- AC AIR CONDITIONING AS SPECIFIED
- AJ ARTICULATION JOINT
- BRM BROOM CLOSET
- DP DOWNPIPE AS SPECIFIED
- DW DISHWASHER AS SPECIFIED
- HWS HOT WATER SYSTEM
- REF REFRIGERATOR OPENING AS SPECIFIED
- RWT RAINWATER TANK
- TP TAP AS SPECIFIED
- WM WASHING MACHINE

DOOR LEAF LEGEND:

- XXX/21=2040H LEAF
- XXX/24=2340H LEAF

SHELVING NOTES:
MELAMINE SHELF AND HANGING RAIL TO ROBES
4x MELAMINE SHELVES TO LINEN CUPBOARD

FLOOR AREAS UNIT 2

GARAGE	39.49 m²
LIVING	124.84 m²
PORCH	6.86 m²
TOTAL	171.18 m²



MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au
457 HIGH STREET, MAITLAND. 2320
PHONE:(02)49341400
BUILDERS LIC. No. 5117

**INTELLECTUAL PROPERTY
CLAUSE:**

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").
THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR: GRUGEON

AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
LVL 01 FLOOR PLAN - UNIT 2

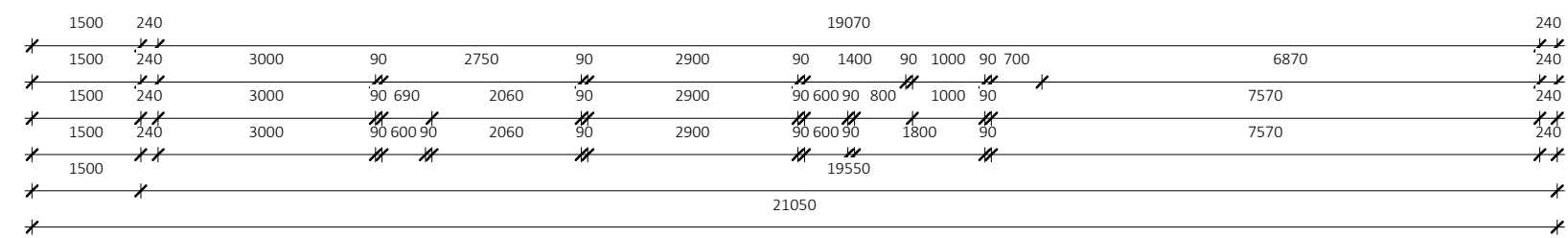
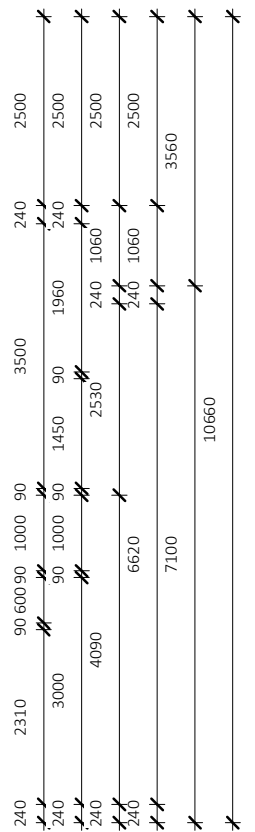
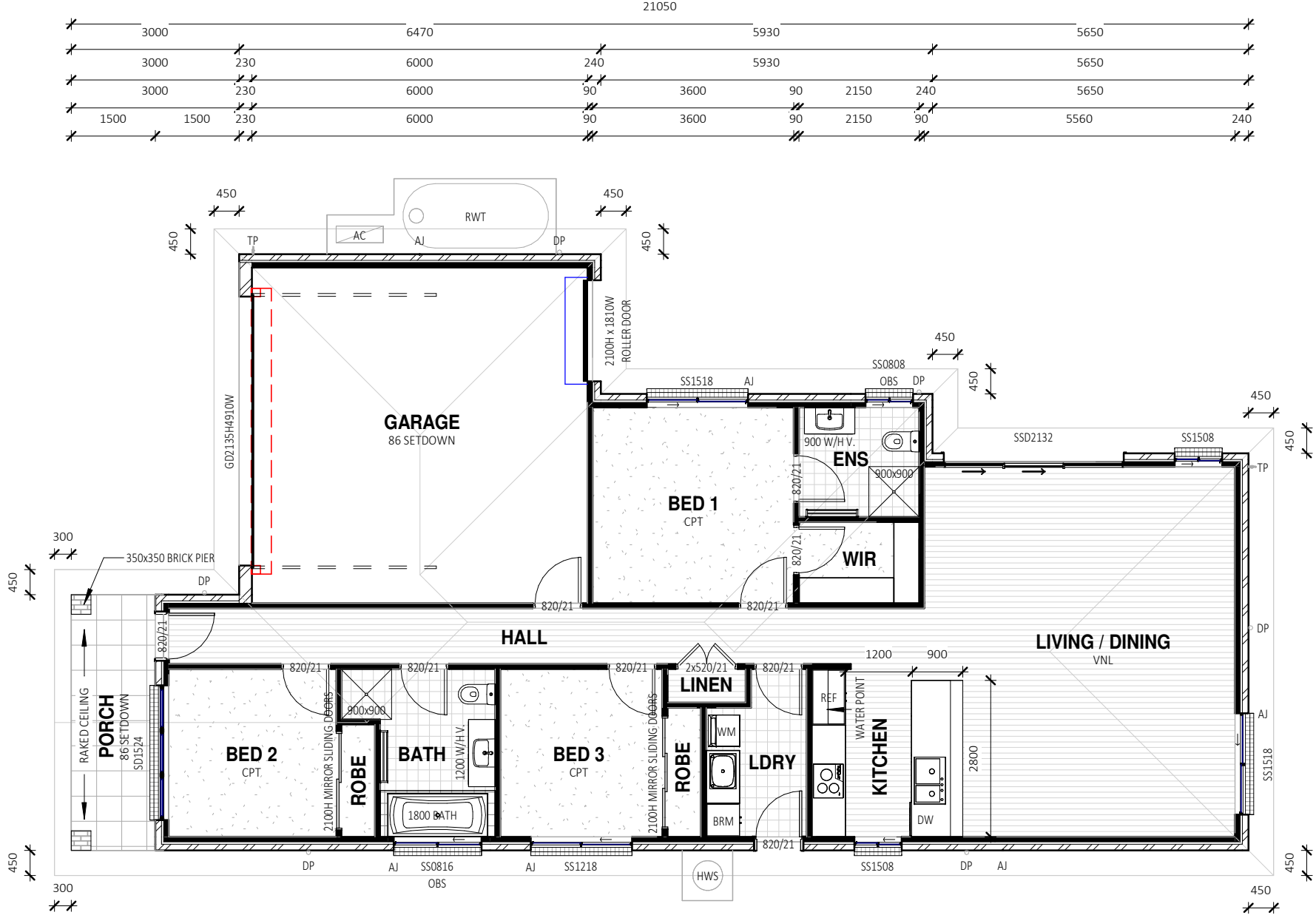
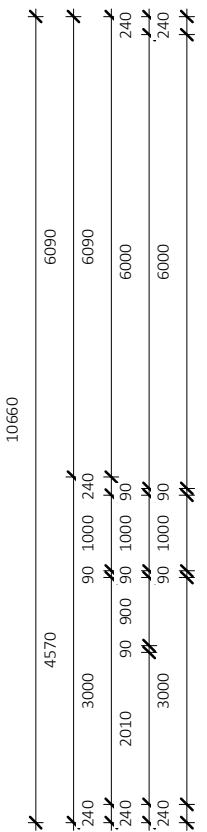
Date 04.10.2023

Drawn by JH Checked
Checked by Owner Date Signed by Builder

Scale As indicated @ A3

Design CUSTOM Rev A

Drawing No. 23039 Sheet B21.1.2



LVL 01 FLOOR PLAN - UNIT 2
1 : 100

REFER TO TENDER

TORRENS TITLE SUBDIVISION

LEGEND - KEYNOTES (REFER SPECIFICATION...

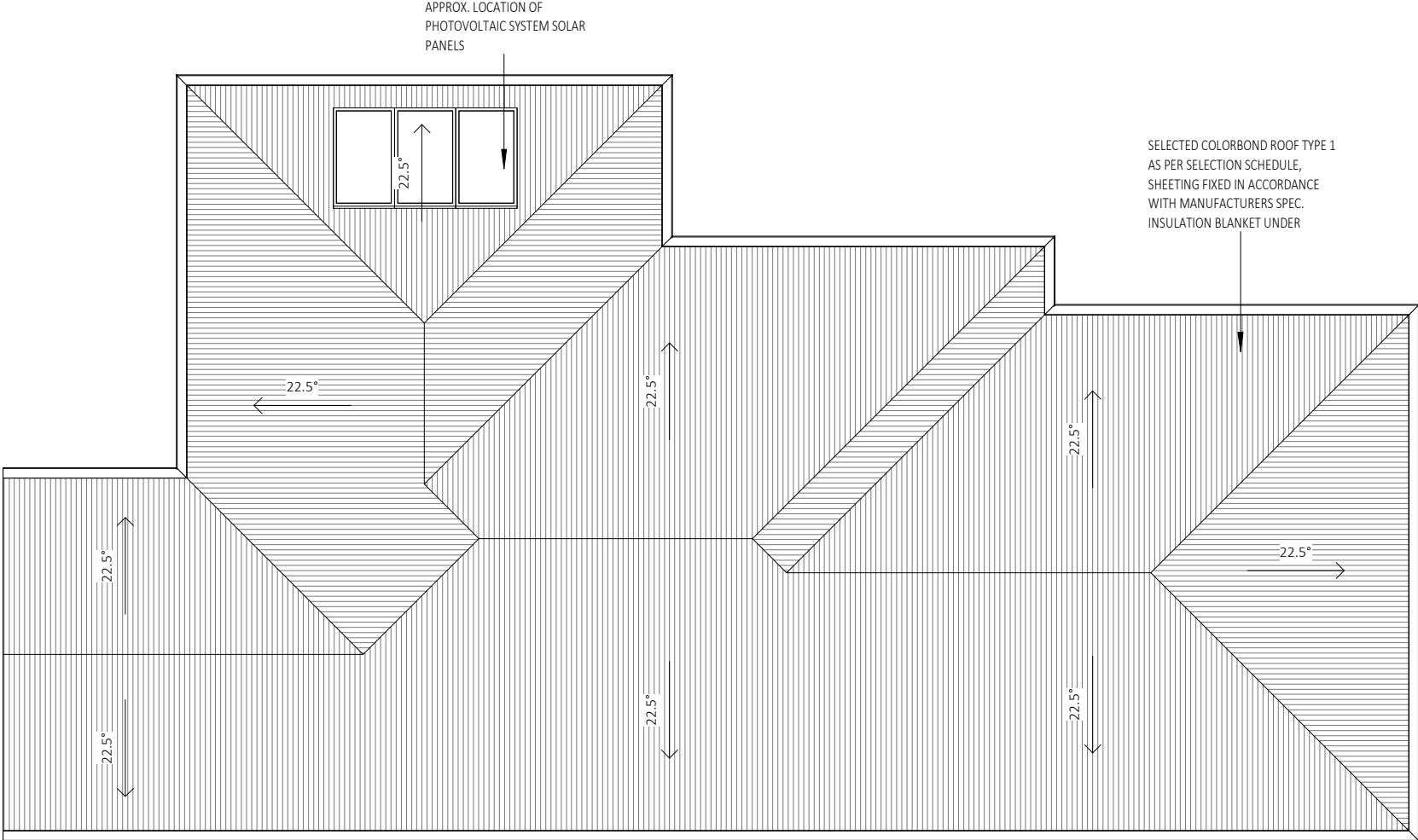


MAMBARE PTY LTD T/A VALLEY HOMES
 A.C.N. 000 939 980
 www.valleyhomes.com.au
 457 HIGH STREET, MAITLAND, 2320
 PHONE:(02)49341400
BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").
 THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH



REFER TO TENDER

TORRENS TITLE SUBDIVISION



ROOF PLAN - UNIT 2
 1 : 100

FOR:
GRUGEON

AT:
 LOT 264 / DP1271229
 132 SPRINGFIELD DRIVE
 LOCHINVAR
 NSW 2321

Sheet Title
 ROOF PLAN - UNIT 2

Date
 04.10.2023

Drawn by	JH	Checked	
Checked by Owner	Date	Signed by Builder	

Scale
 1 : 100 @ A3

Design
 CUSTOM Rev
 A

Drawing No.
 23039 Sheet
 B21.5.2

LEGEND: AS SPECIFIED

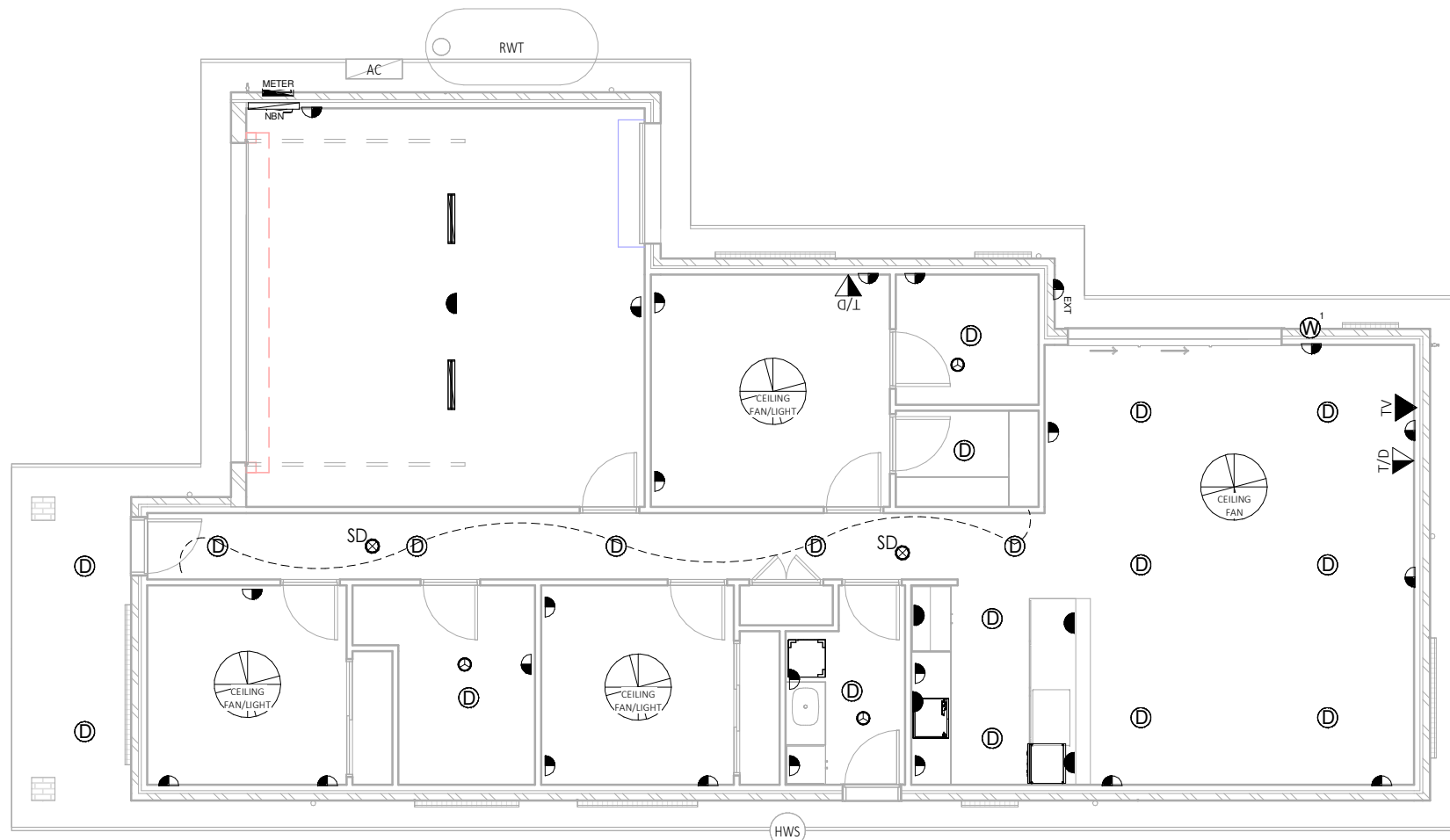
- D LED DOWNLIGHT - IC4 RATED
- P¹ PEDANT LIGHT TYPE 1
- P² PEDANT LIGHT TYPE 2
- P³ PEDANT LIGHT TYPE 3
- W¹ EXTERNAL WALL LIGHT
- S SENSOR LIGHT
- HF HEATER FAN LIGHT
- EF EXHAUST FAN LIGHT
- ED EXTERNALLY DUCTED EXHAUST FAN
- | | FLUORESCENT LIGHT SINGLE
- | | | | LED BATTEN LIGHT
- CEILING FAN
- CEILING FAN WITH LIGHT
- LOCATION OF SMOKE ALARM IN ACCORDANCE WITH AS3786.
- GAS POINT
- GPO SINGLE
- GPO DOUBLE
- GPO SINGLE WATERPROOF
- GPO DOUBLE WATERPROOF
- GPO SINGLE ELEVATED 1000
- GPO DOUBLE ELEVATED 1000
- NBN CONNECTION BOX
- ELECTRICAL METER & FUSE BOX
- TV POINT
- TELEPHONE / DATA POINT
- HARD WIRED DOOR BELL
- 2 WAY SWITCHING
- 3

ELECTRICAL FIXTURE SCHEDULE		
Type	Count	Comments
ELECTRICAL METER & FUSE BOX	1	UNIT 2
GPO DOUBLE	23	UNIT 2
GPO DOUBLE WP	1	UNIT 2
GPO SINGLE	5	UNIT 2
NBN CONNECTION BOX	1	UNIT 2
SMOKE ALARM	2	UNIT 2
TELEPHONE / DATA POINT	2	UNIT 2
TV POINT	1	UNIT 2
VH_EXHAUST FAN	3	UNIT 2
Grand total:	39	

LIGHTING FIXTURE SCHEDULE		
Type	Count	Comments
CEILING FAN	1	UNIT 2
CEILING FAN LIGHT	3	UNIT 2
LED BATTEN LIGHT	2	UNIT 2
LED DOWNLIGHT	19	UNIT 2
WALL LIGHT	1	UNIT 2
Grand total:	26	

LEGEND - KEYNOTES (REFER SPECIFICATIONS)

- AC AIR CONDITIONING AS SPECIFIED
- HWS HOT WATER SYSTEM
- RWT RAINWATER TANK



LVL 01 ELECTRICAL PLAN - UNIT 2
1 : 100

REFER TO TENDER

TORRENS TITLE SUBDIVISION



MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au

457 HIGH STREET, MAITLAND. 2320
PHONE: (02) 4934 1400

BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY
CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").

THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR:
GRUGEON

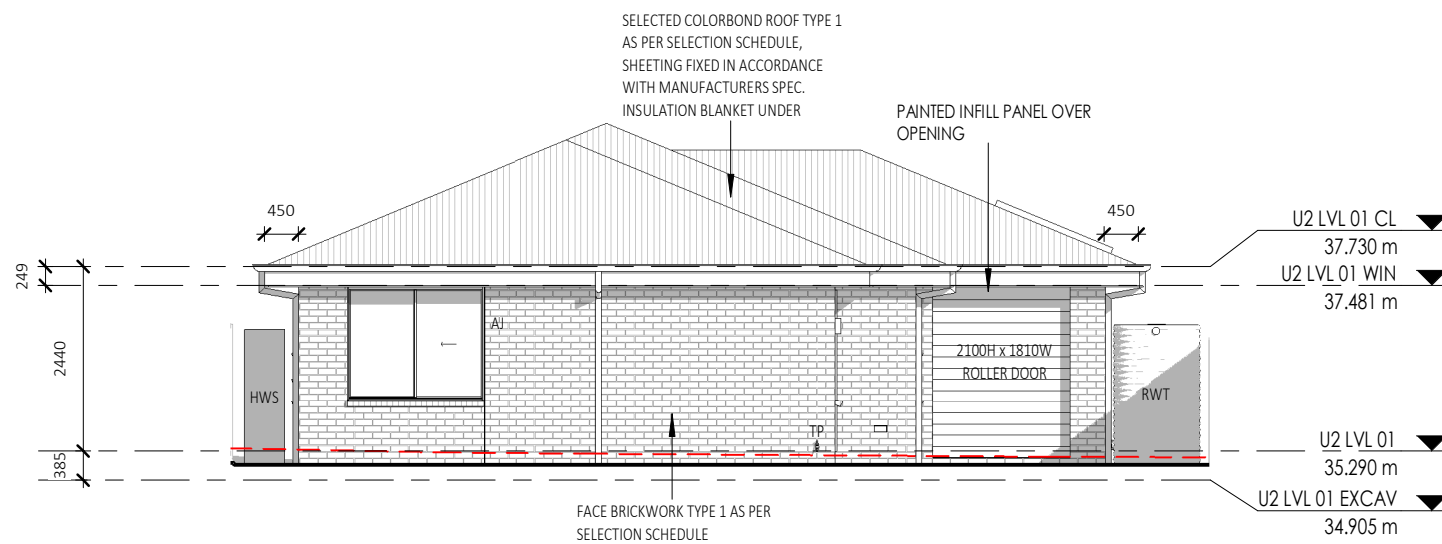
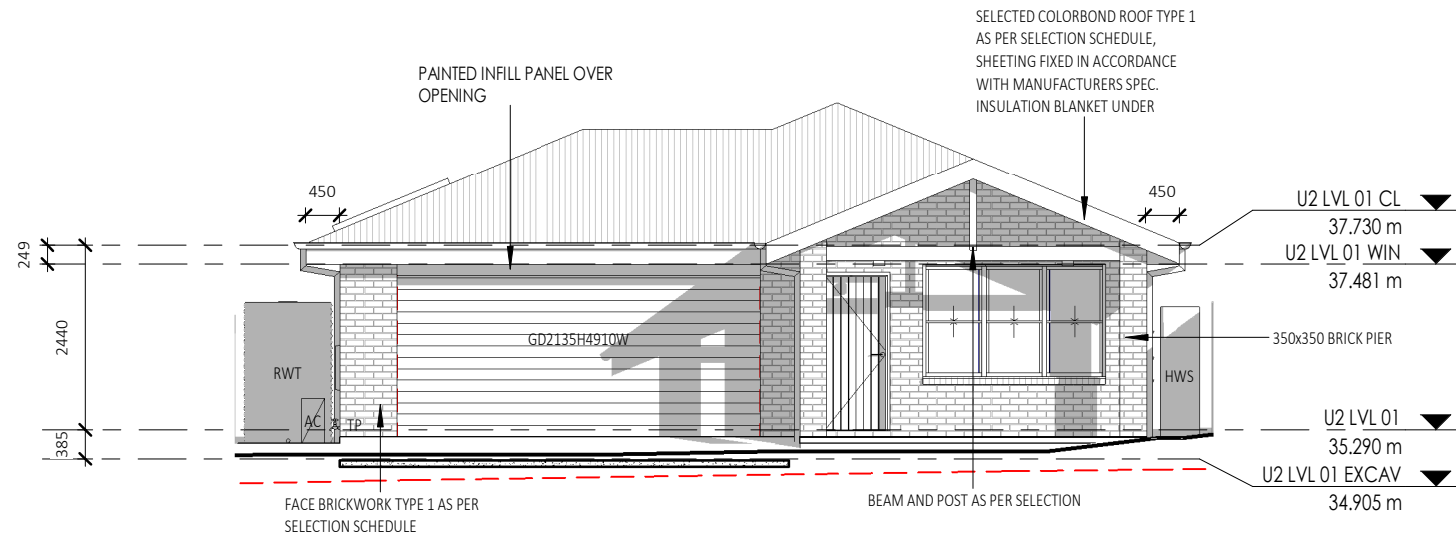
AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
LVL 01 ELECTRICAL PLAN - UNIT 2

Date		04.10.2023
Drawn by	JH	Checked
Checked by Owner	Date	Signed by Builder
Scale	1 : 100	@ A3
Design	CUSTOM	Rev A
Drawing No.	23039	Sheet B22.1.2

LEGEND - KEYNOTES (REFER SPECIFICATIONS)

- AC AIR CONDITIONING AS SPECIFIED
- AJ ARTICULATION JOINT
- HWS HOT WATER SYSTEM
- RWT RAINWATER TANK
- TP TAP AS SPECIFIED



REFER TO TENDER

TORRENS TITLE SUBDIVISION



VALLEY HOMES
SINCE 1971
MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au
457 HIGH STREET, MAITLAND. 2320
PHONE: (02) 4934 1400
BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").

THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drm
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR: GRUGEON

AT: LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title: ELEVATIONS - UNIT 2

Date	04.10.2023		
Drawn by	JH	Checked	.
Checked by Owner	Date	Signed by Builder	
Scale	1 : 100	@ A3	
Design	CUSTOM	Rev	A
Drawing No.	23039	Sheet	B30.0.2



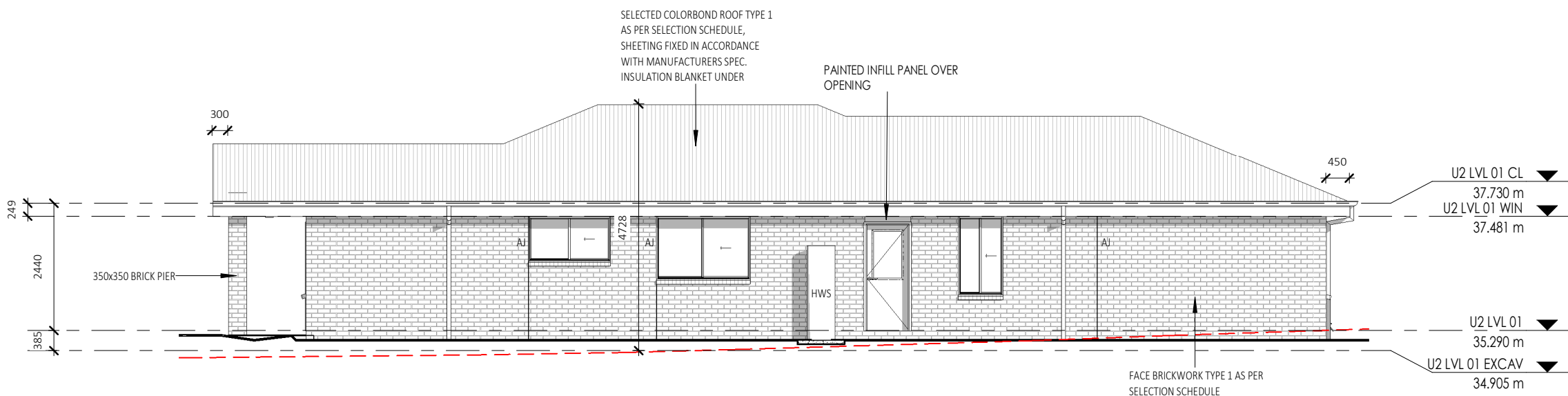
MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au
457 HIGH STREET, MAITLAND. 2320
PHONE:(02)49341400
BUILDERS LIC. No. 5117

**INTELLECTUAL PROPERTY
CLAUSE:**

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").

THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

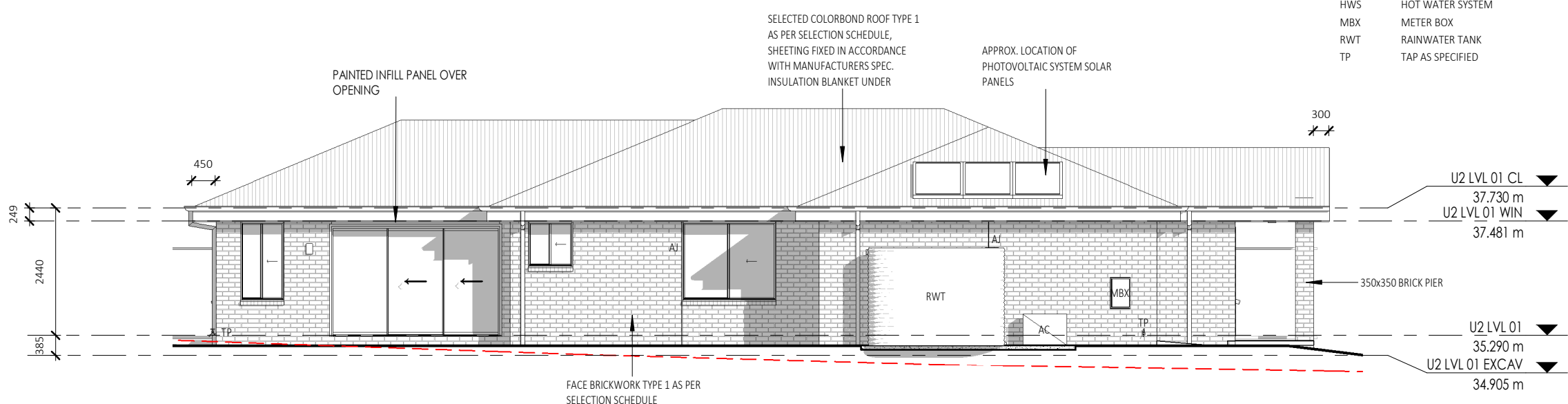
No.	Date	Description	Drm
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH



SIDE ELEVATION - UNIT 2
1 : 100

LEGEND - KEYNOTES (REFER SPECIFICATIONS)

- AC AIR CONDITIONING AS SPECIFIED
- AJ ARTICULATION JOINT
- HWS HOT WATER SYSTEM
- MBX METER BOX
- RWT RAINWATER TANK
- TP TAP AS SPECIFIED



SIDE ELEVATION - UNIT 2
1 : 100

REFER TO TENDER

TORRENS TITLE SUBDIVISION

FOR: GRUGEON

AT: LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
ELEVATIONS - UNIT 2

Date 04.10.2023

Drawn by JH Checked

Checked by Owner Date Signed by Builder

Scale 1 : 100 @ A3

Design CUSTOM Rev A

Drawing No. 23039 Sheet B30.1.2



MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au

457 HIGH STREET, MAITLAND, 2320
PHONE:(02)49341400

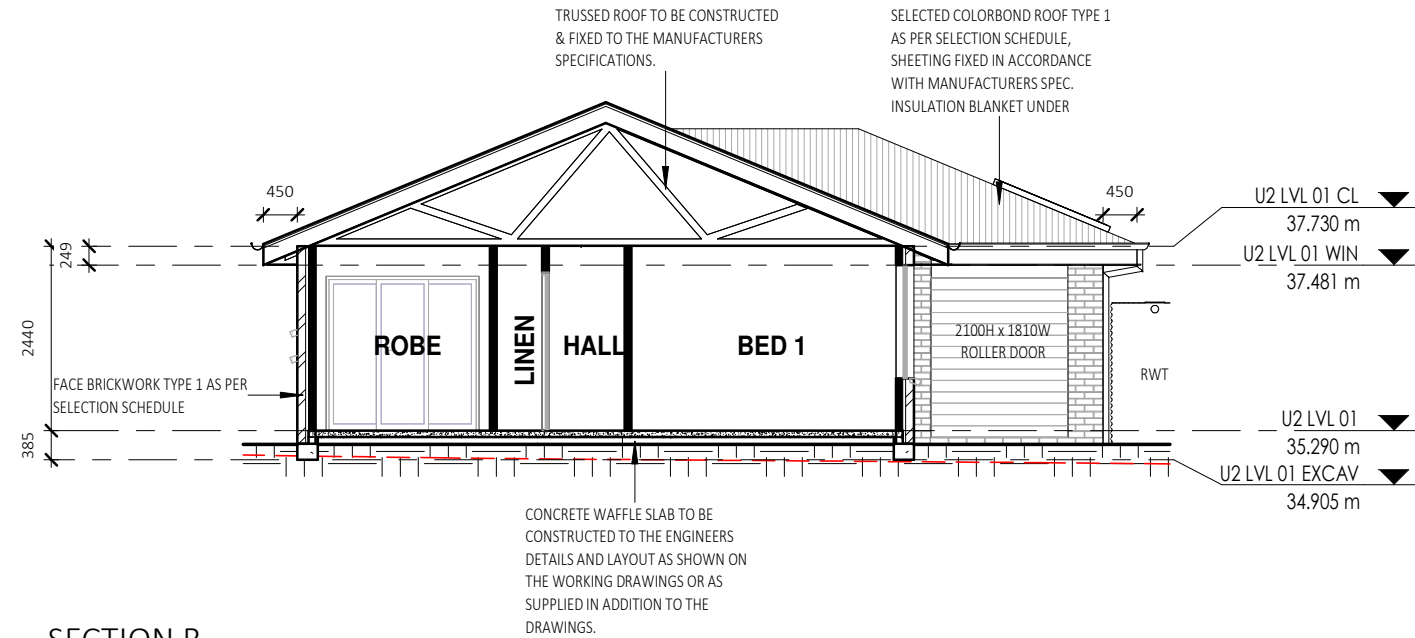
BUILDERS LIC. No. 5117

**INTELLECTUAL PROPERTY
CLAUSE:**

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL"). THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

ALL BRICKWORK TO BE FULLY ARTICULATED IN ACCORDANCE WITH AS 3700 MASONRY STRUCTURES OR AS4773 MASONRY FOR SMALL BUILDINGS, PARTS 1 AND 2.
ARTICULATION JOINTS MUST HAVE A WIDTH NOT LESS THAN 10mm AND BE PROVIDED IN FOLLOWING LOCATIONS:
* FOR STRAIGHT, CONTINUOUS WALLS HAVING NO OPENINGS, THE MAXIMUM SPACING OF 10mm ARTICULATION JOINTS UP TO 4m HIGH: EXTERNAL FACE FINISHED MASONRY 5.0m CTS; EXTERNAL RENDERED AND/OR PAINTED MASONRY 4.5m OR
* FOR STRAIGHT, CONTINUOUS WALLS HAVING NO OPENINGS, THE MAXIMUM SPACING OF 10mm ARTICULATION JOINTS FROM 4m-8.5m H: EXTERNAL FACE FINISHED MASONRY 3.5m CTS; EXTERNAL RENDERED AND/OR PAINTED MASONRY 3.2m
* MAXIMUM SPACING OF ARTICULATION JOINTS IN WALLS WHERE WINDOW OR DOOR OPENINGS MORE THAN 900 x 900mm OCCUR, TO BE NO MORE THAN 5.0m CTRS, AND POSITIONED IN LINE WITH ONE EDGE OF THE OPENING; AND
* WHERE THE HEIGHT OF THE WALL CHANGES BY MORE THAN 20%, AT THE POSITION OF CHANGE IN HEIGHT; AND
* WHERE WALLS CHANGE IN THICKNESS; AND
* AT CONTROL OR CONSTRUCTION JOINTS IN FOOTING SLABS; AND
* AT JUNCTIONS OF WALLS CONSTRUCTED OF DIFFERENT MASONRY MATERIALS; AND
* AT DEEP CHASES (REBATES) FOR SERVICE PIPES.
* AT A DISTANCE FROM ALL CORNERS NOT GREATER THAN 4500mm AND NOT LESS THAN 470mm FOR CAVITY WALLS OR 230mm FOR VENEER WALLS.



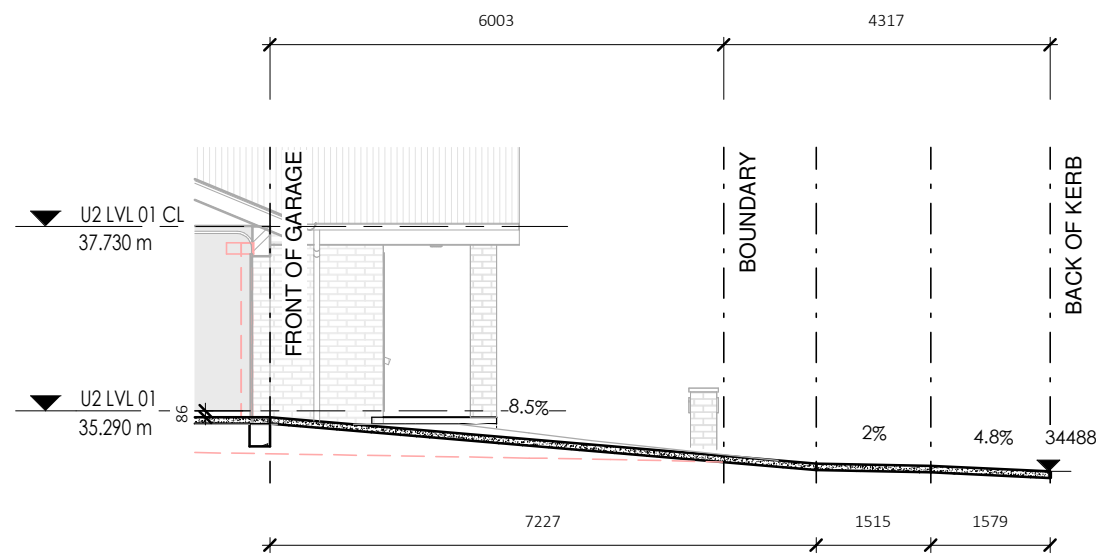
SECTION B
1 : 100

LEGEND - KEYNOTES (REFER SPECIFICATION...

RWT RAINWATER TANK

REFER TO TENDER

TORRENS TITLE SUBDIVISION



DRIVEWAY PROFILE C2
1 : 100

NOTE : DIMENSIONS AND RLS TO BE CONFIRMED ON SITE
MAX. ALLOWABLE GRADIENT 25.0%

INSULATION NOTES:

R3.5 INSULATION TO CEILINGS (EXCLUDES GARAGES, PORCHES, BALCONIES AND ALFRESCOS).

R2.0 INSULATION TO EXTERNAL WALLS (EXCLUDES GARAGE WALLS)

R2.0 INSULATION TO INTERNAL GARAGE WALLS

UNDER SLAB INSULATION:

REFER TO GEOTECH S/M/H CLASS.

S&M CLASS - 310MM SLAB THICKNESS / 225MM THICK STYROFOAM PODS UNDER SLAB

H CLASS - 385MM SLAB THICKNESS / 300MM THICK STYROFOAM PODS UNDER SLAB

ROOF COLOUR:

FOR:
GRUGEON

AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

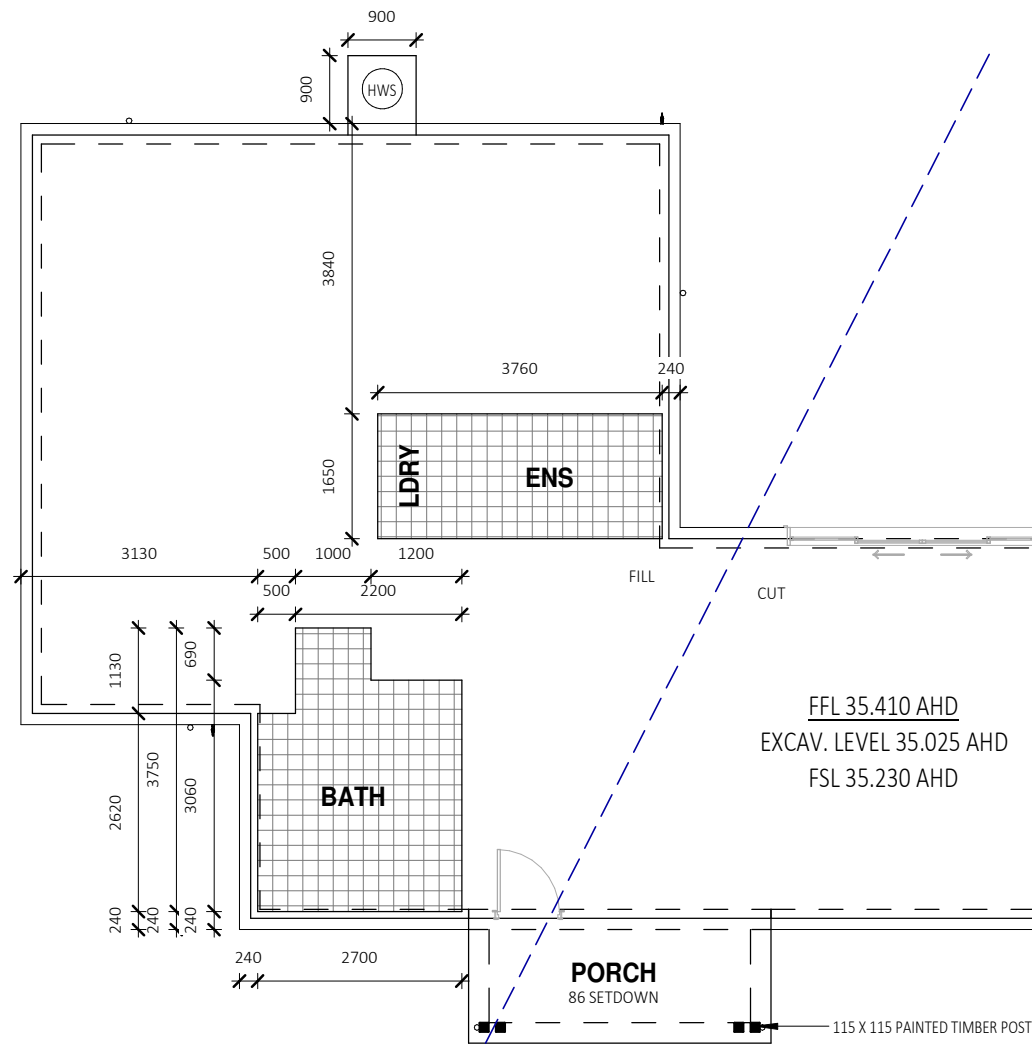
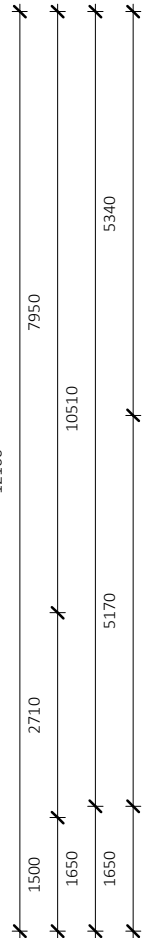
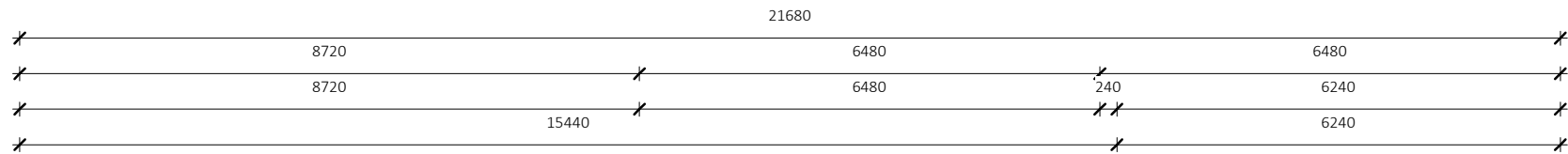
Sheet Title
SECTION, DRIVEWAY PROFILE
UNIT 2

Date
04.10.2023

Drawn by	JH	Checked	.
Checked by Owner	Date	Signed by Builder	
Scale	As indicated	@ A3	
Design	CUSTOM	Rev	A
Drawing No.	23039	Sheet	B40.0.2

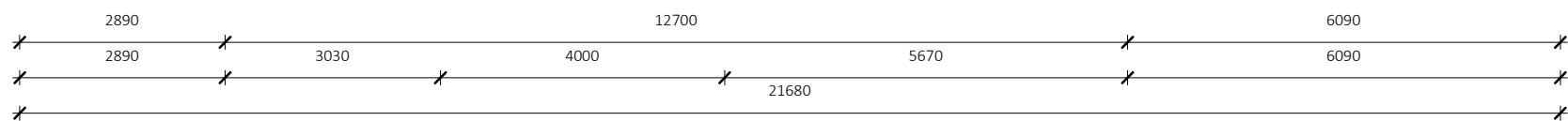
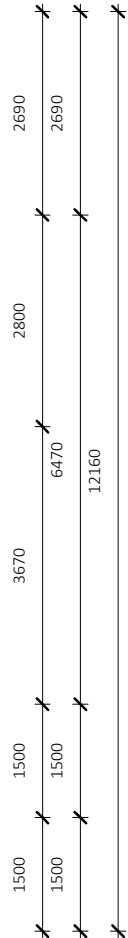
LEGEND - KEYNOTES (REFER SPECIFICATIONS)

AC AIR CONDITIONING AS SPECIFIED
 HWS HOT WATER SYSTEM



CONCRETE WAFFLE SLAB TO BE CONSTRUCTED TO THE ENGINEERS DETAILS AND LAYOUT AS SHOWN ON THE WORKING DRAWINGS OR AS SUPPLIED IN ADDITION TO THE DRAWINGS.

45mm SET DOWN IN SLAB FOR WET AREA TILING SHOWN HATCHED.



SLAB PLAN - UNIT 3
 1 : 100

REFER TO TENDER

TORRENS TITLE SUBDIVISION



MAMBARE PTY LTD T/A VALLEY HOMES
 A.C.N. 000 939 980
 www.valleyhomes.com.au
 457 HIGH STREET, MAITLAND. 2320
 PHONE:(02)49341400
 BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").
 THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR: GRUGEON

AT:
 LOT 264 / DP1271229
 132 SPRINGFIELD DRIVE
 LOCHINVAR
 NSW 2321

Sheet Title
 SLAB PLAN - UNIT 3

Date 04.10.2023

Drawn by JH Checked
 Checked by Owner Date Signed by Builder

Scale 1 : 100 @ A3

Design CUSTOM Rev A

Drawing No. 23039 Sheet C21.0.3

LEGEND - KEYNOTES (REFER SPECIFICATIONS)

- AC AIR CONDITIONING AS SPECIFIED
- AJ ARTICULATION JOINT
- DP DOWNPIPE AS SPECIFIED
- DW DISHWASHER AS SPECIFIED
- HWS HOT WATER SYSTEM
- REF REFRIGERATOR OPENING AS SPECIFIED
- TP TAP AS SPECIFIED
- WM WASHING MACHINE

DOOR LEAF LEGEND:

- XXX/21=2040H LEAF
- XXX/24=2340H LEAF

WALL NOTES:

35MM BATTENS TO EXTERNAL LIGHT WEIGHT CLADDING

SHELVING NOTES:

MELAMINE SHELF AND HANGING RAIL TO ROBES
4x MELAMINE SHELVES TO LINEN CUPBOARD

FLOOR AREAS UNIT 3

- PORCH 6.00 m²
- GARAGE 41.04 m²
- LIVING 121.07 m²
- TOTAL 168.11 m²



MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au

457 HIGH STREET, MAITLAND. 2320
PHONE:(02)49341400

BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").

THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

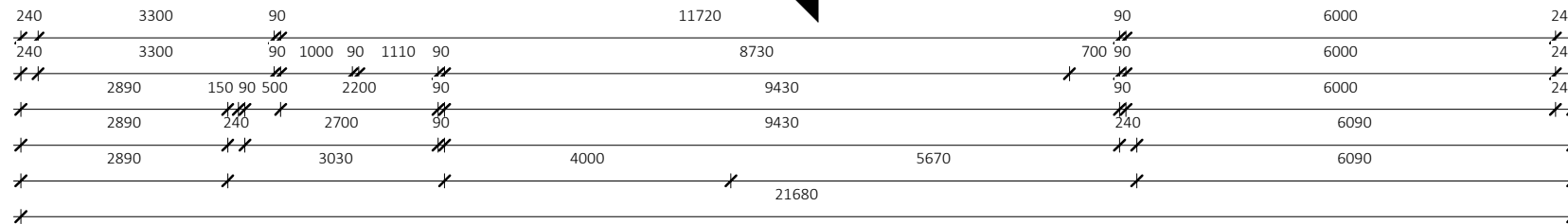
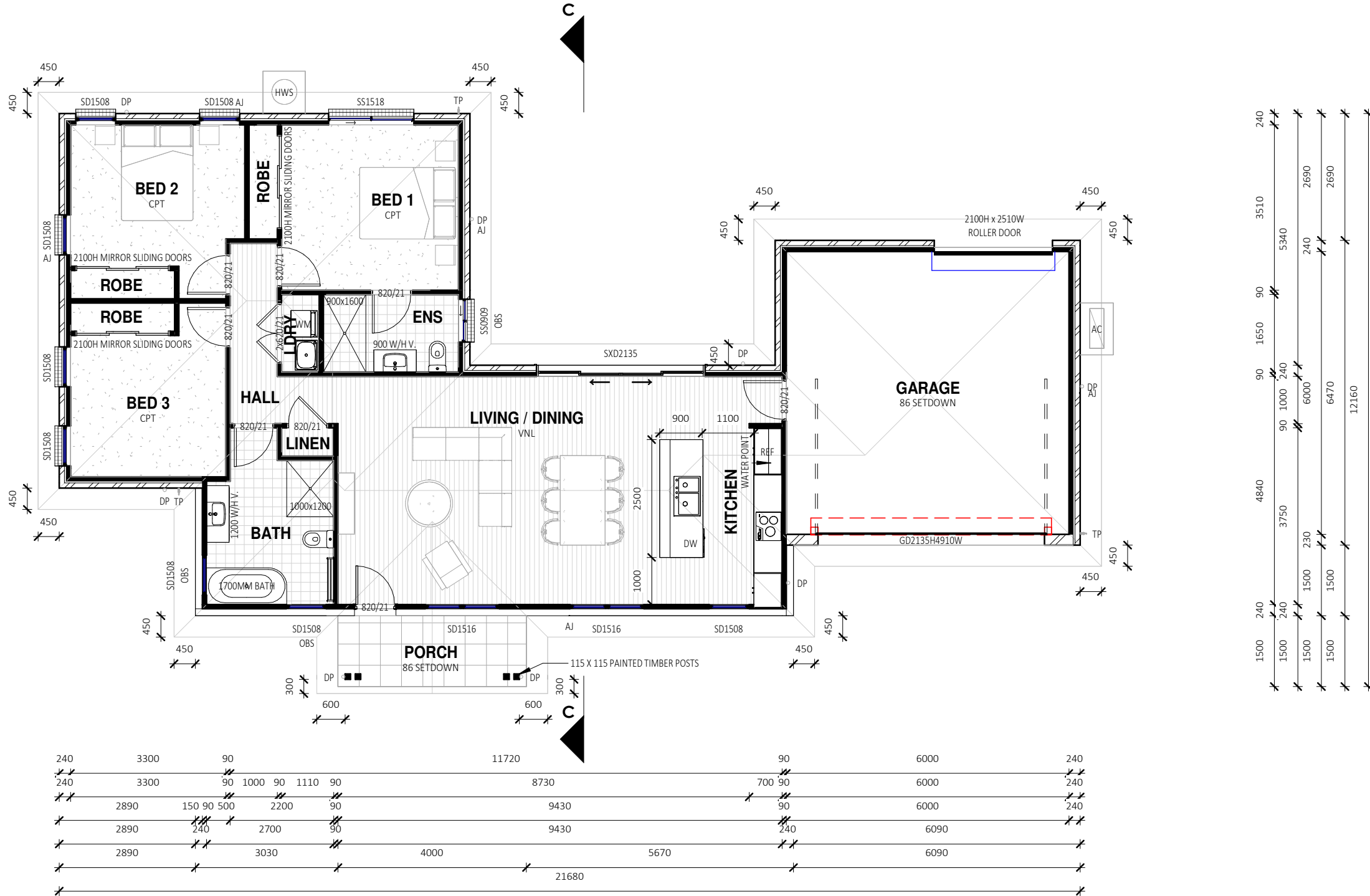
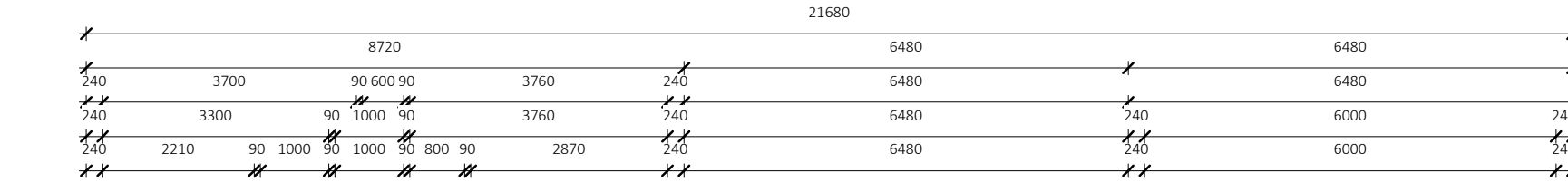
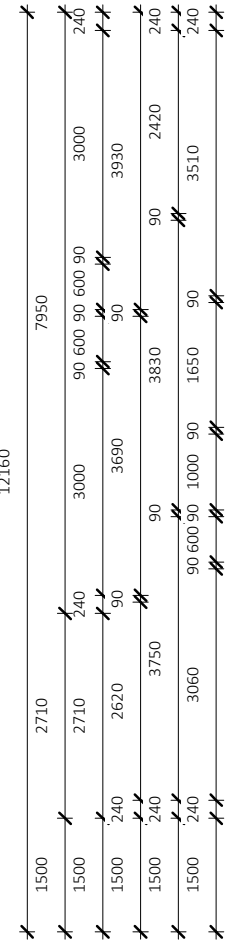
No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR:
GRUGEON

AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
LVL 01 FLOOR PLAN - UNIT 3

Date	04.10.2023		
Drawn by	JH	Checked	
Checked by Owner	Date	Signed by Builder	
Scale	As indicated	@ A3	
Design	CUSTOM	Rev	A
Drawing No.	23039	Sheet	C21.1.3



LVL 01 FLOOR PLAN - UNIT 3
1 : 100

REFER TO TENDER

TORRENS TITLE SUBDIVISION

LEGEND - KEYNOTES (REFER SPECIFICATION...

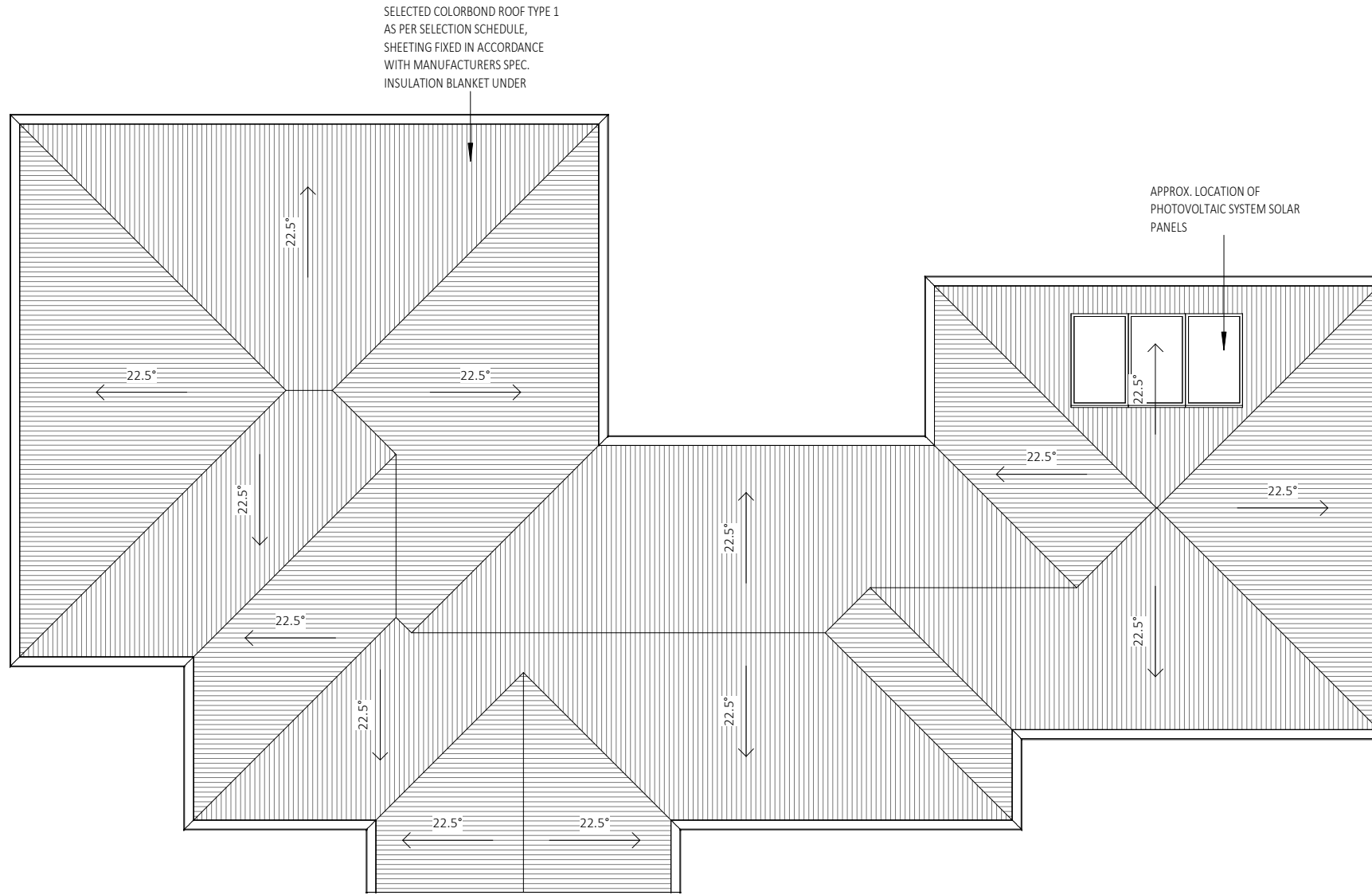


MAMBARE PTY LTD T/A VALLEY HOMES
 A.C.N. 000 939 980
 www.valleyhomes.com.au
 457 HIGH STREET, MAITLAND. 2320
 PHONE:(02)49341400
 BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL"). THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH



ROOF PLAN - UNIT 3
 1 : 100

REFER TO TENDER

TORRENS TITLE SUBDIVISION

FOR:
GRUGEON
 AT:
 LOT 264 / DP1271229
 132 SPRINGFIELD DRIVE
 LOCHINVAR
 NSW 2321

Sheet Title
ROOF PLAN - UNIT 3

Date
04.10.2023

Drawn by JH	Checked .
Checked by Owner	Signed by Builder

Scale
1 : 100 @ A3

Design CUSTOM	Rev A
------------------	----------

Drawing No. 23039	Sheet C21.5.3
----------------------	------------------

LEGEND - KEYNOTES (REFER SPECIFICATIONS)

AC	AIR CONDITIONING AS SPECIFIED
AJ	ARTICULATION JOINT
HWS	HOT WATER SYSTEM
RWT	RAINWATER TANK
TP	TAP AS SPECIFIED



MAMBARE PTY LTD T/A VALLEY HOMES
A.C.N. 000 939 980
www.valleyhomes.com.au

457 HIGH STREET, MAITLAND. 2320
PHONE:(02)49341400

BUILDERS LIC. No. 5117

**INTELLECTUAL PROPERTY
CLAUSE:**

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").

THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

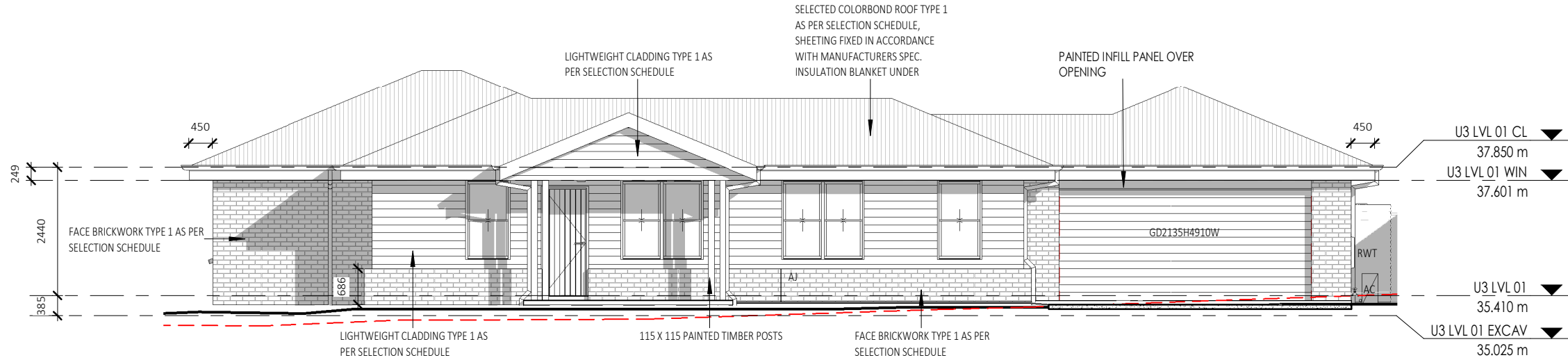
No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR:
GRUGEON

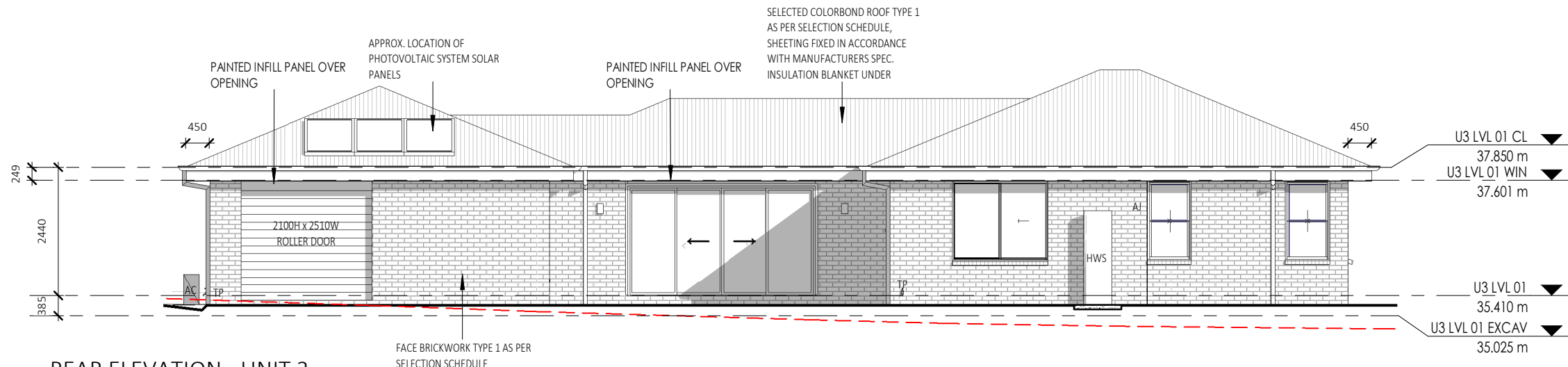
AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
ELEVATIONS - UNIT 3

Date	04.10.2023	
Drawn by	JH	Checked
Checked by Owner	Date	Signed by Builder
Scale	1 : 100	@ A3
Design	CUSTOM	Rev A
Drawing No.	23039	Sheet C30.0.5



FRONT ELEVATION - UNIT 3
1 : 100



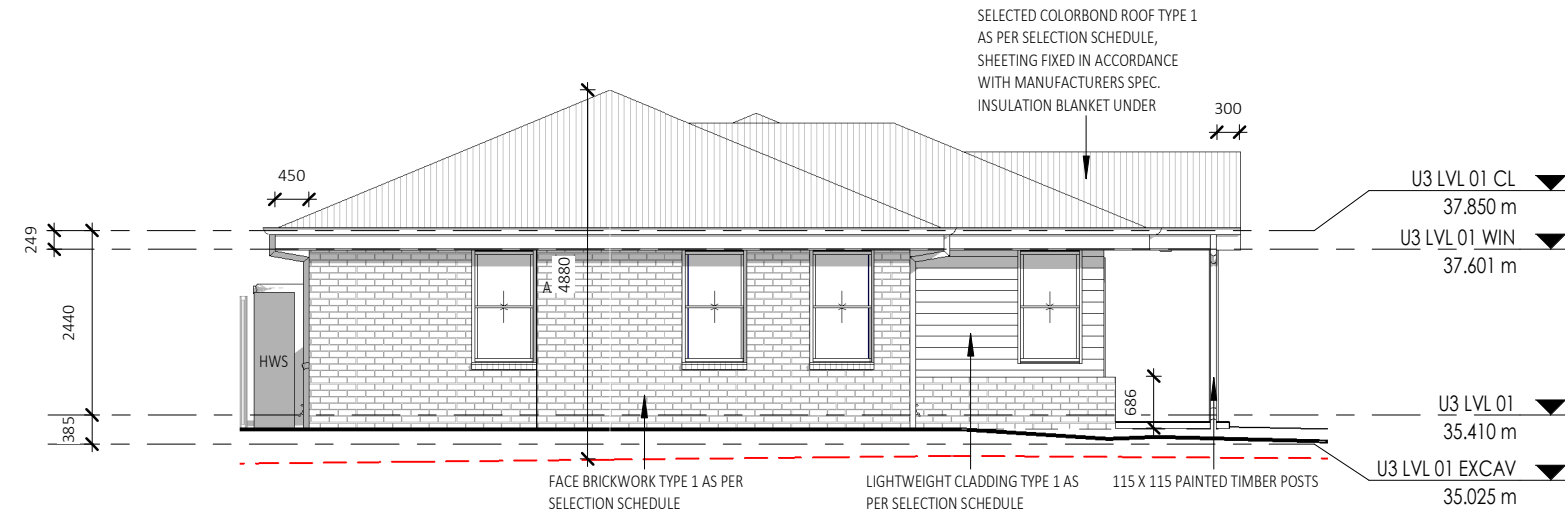
REAR ELEVATION - UNIT 3
1 : 100

REFER TO TENDER

TORRENS TITLE SUBDIVISION

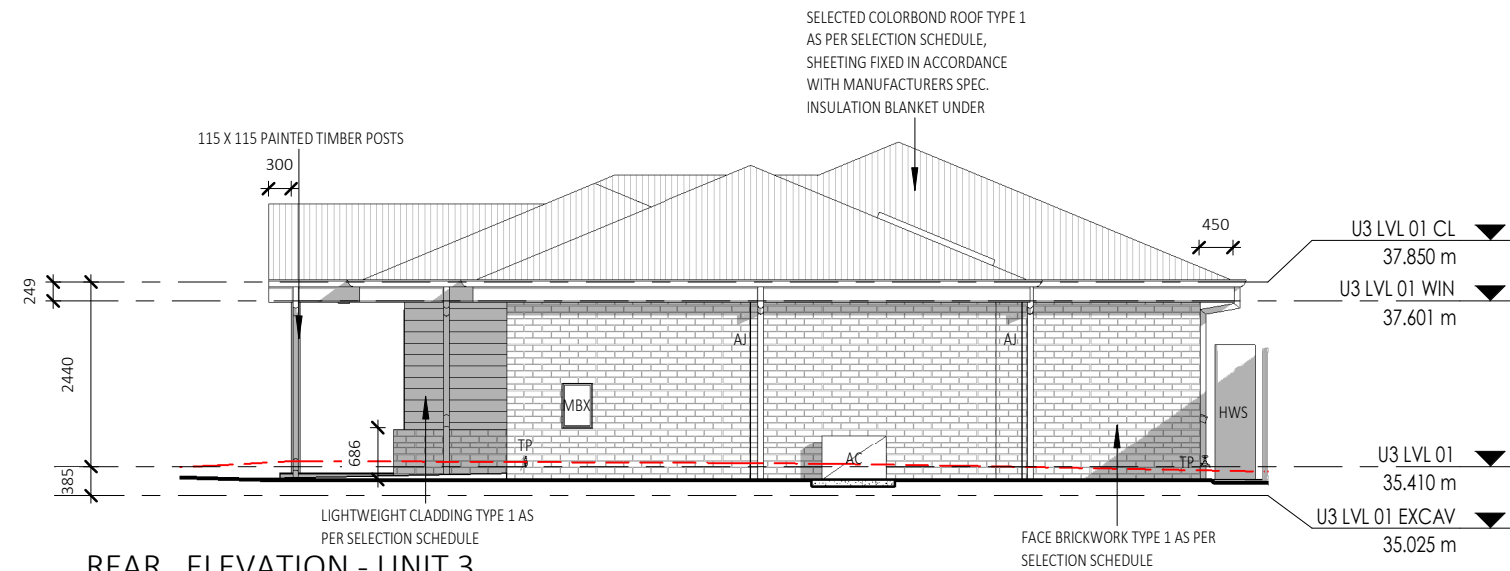
LEGEND - KEYNOTES (REFER SPECIFICATIONS)

- AC AIR CONDITIONING AS SPECIFIED
- AJ ARTICULATION JOINT
- HWS HOT WATER SYSTEM
- MBX METER BOX
- TP TAP AS SPECIFIED



SIDE ELEVATION - UNIT 3

1 : 100



REAR ELEVATION - UNIT 3

1 : 100

REFER TO TENDER

TORRENS TITLE SUBDIVISION



MAMBARE PTY LTD T/A VALLEY HOMES
 A.C.N. 000 939 980
www.valleyhomes.com.au
 457 HIGH STREET, MAITLAND. 2320
 PHONE:(02)49341400
BUILDERS LIC. No. 5117

INTELLECTUAL PROPERTY CLAUSE:

THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL"). THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drn
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH

FOR:
GRUGEON

AT:
 LOT 264 / DP1271229
 132 SPRINGFIELD DRIVE
 LOCHINVAR
 NSW 2321

Sheet Title
ELEVATIONS - UNIT 3

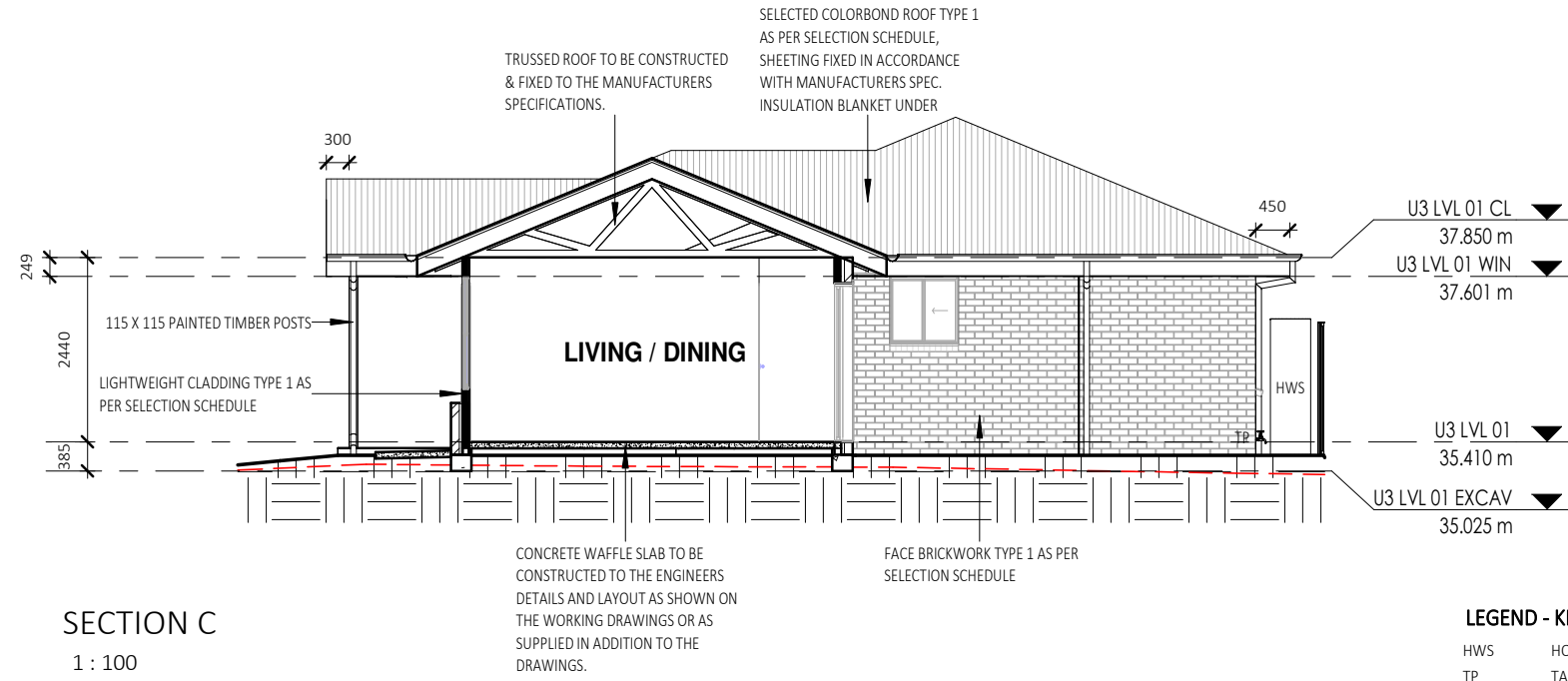
Date	04.10.2023	
Drawn by	JH	Checked
Checked by Owner	Date	Signed by Builder
Scale	1 : 100	@ A3
Design	CUSTOM	Rev A
Drawing No.	23039	Sheet C30.0.6

INTELLECTUAL PROPERTY

CLAUSE:
THIS AND ALL ASSOCIATED MATERIAL PROVIDED BY MAMBARE PTY LTD ("US") TO YOU IS OUR PROPERTY AND IS PROTECTED BY COPYRIGHT, TRADE MARK AND OTHER INTELLECTUAL PROPERTY LAWS UNLESS EXPRESSLY INDICATED OTHERWISE ("THE MATERIAL").

THE MATERIAL REMAINS OUR EXCLUSIVE PROPERTY. YOU MUST NOT USE THE MATERIAL IN ANY WAY OR FOR ANY PURPOSE WHICH IS UNLAWFUL OR WHICH INFRINGES OUR OWNERSHIP OF THE MATERIAL. YOU MUST NOT UNDER ANY CIRCUMSTANCES (EITHER YOURSELF OR WITH A THIRD PARTY) USE, DISTRIBUTE, EMPLOY OR EXPLOIT THE MATERIAL OTHER THAN AS EXPRESSLY PERMITTED BY US IN WRITING.

No.	Date	Description	Drm
A	26.02.24	ISSUED FOR CLIENT REVIEW	JH



ALL BRICKWORK TO BE FULLY ARTICULATED IN ACCORDANCE WITH AS 3700 MASONRY STRUCTURES OR AS4773 MASONRY FOR SMALL BUILDINGS, PARTS 1 AND 2.
ARTICULATION JOINTS MUST HAVE A WIDTH NOT LESS THAN 10mm AND BE PROVIDED IN FOLLOWING LOCATIONS:
* FOR STRAIGHT, CONTINUOUS WALLS HAVING NO OPENINGS, THE MAXIMUM SPACING OF 10mm ARTICULATION JOINTS UP TO 4m HIGH: EXTERNAL FACE FINISHED MASONRY 5.0m CTS; EXTERNAL RENDERED AND/OR PAINTED MASONRY 4.5m OR
* FOR STRAIGHT, CONTINUOUS WALLS HAVING NO OPENINGS, THE MAXIMUM SPACING OF 10mm ARTICULATION JOINTS FROM 4m-8.5m H: EXTERNAL FACE FINISHED MASONRY 3.5m CTS; EXTERNAL RENDERED AND/OR PAINTED MASONRY 3.2m
* MAXIMUM SPACING OF ARTICULATION JOINTS IN WALLS WHERE WINDOW OR DOOR OPENINGS MORE THAN 900 x 900mm OCCUR, TO BE NO MORE THAN 5.0m CTRS, AND POSITIONED IN LINE WITH ONE EDGE OF THE OPENING; AND
* WHERE THE HEIGHT OF THE WALL CHANGES BY MORE THAN 20%, AT THE POSITION OF CHANGE IN HEIGHT; AND
* WHERE WALLS CHANGE IN THICKNESS; AND
* AT CONTROL OR CONSTRUCTION JOINTS IN FOOTING SLABS; AND
* AT JUNCTIONS OF WALLS CONSTRUCTED OF DIFFERENT MASONRY MATERIALS; AND
* AT DEEP CHASES (REBATES) FOR SERVICE PIPES.
* AT A DISTANCE FROM ALL CORNERS NOT GREATER THAN 4500mm AND NOT LESS THAN 470mm FOR CAVITY WALLS OR 230mm FOR VENEER WALLS.

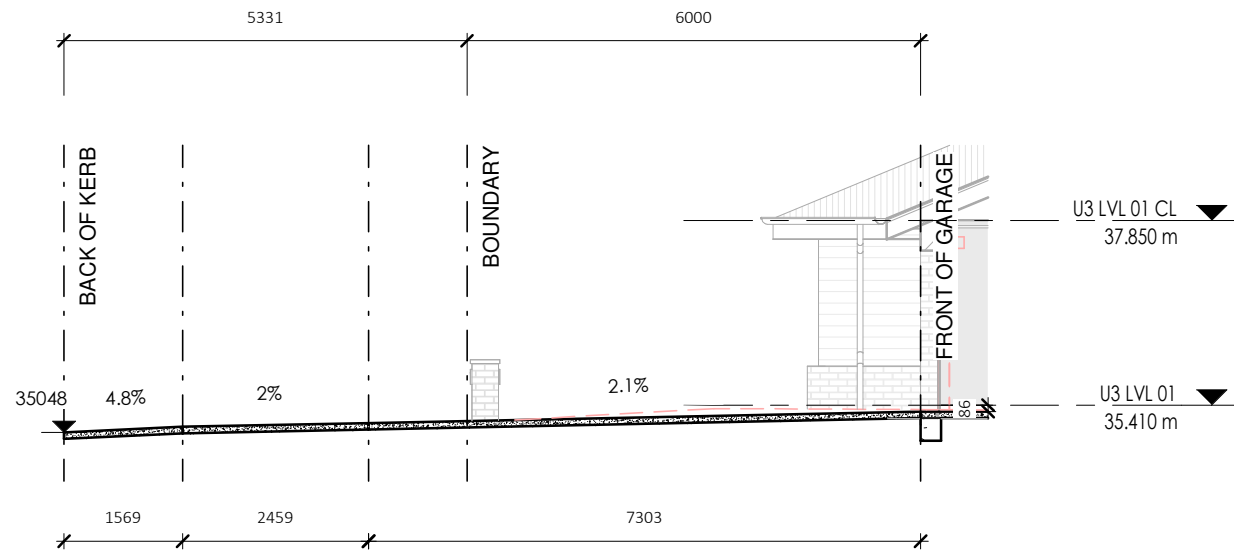
LEGEND - KEYNOTES (REFER SPECIFICATION...)

HWS HOT WATER SYSTEM
TP TAP AS SPECIFIED

REFER TO TENDER

TORRENS TITLE SUBDIVISION

NOTE : DIMENSIONS AND RL'S TO BE CONFIRMED ON SITE
MAX. ALLOWABLE GRADIENT 25.0%



INSULATION NOTES:

R3.5 INSULATION TO CEILINGS (EXCLUDES GARAGES, PORCHES, BALCONIES AND ALFRESCOS).

R2.0 INSULATION TO EXTERNAL WALLS (EXCLUDES GARAGE WALLS)

R2.0 INSULATION TO INTERNAL GARAGE WALLS

UNDER SLAB INSULATION:

REFER TO GEOTECH S/M/H CLASS.

S&M CLASS - 310MM SLAB THICKNESS / 225MM THICK STYROFOAM PODS UNDER SLAB

H CLASS - 385MM SLAB THICKNESS / 300MM THICK STYROFOAM PODS UNDER SLAB

ROOF COLOUR:

DRIVEWAY PROFILE C3

1 : 100

FOR:
GRUGEON

AT:
LOT 264 / DP1271229
132 SPRINGFIELD DRIVE
LOCHINVAR
NSW 2321

Sheet Title
**SECTION, DRIVEWAY PROFILE
UNIT 3**

Date
04.10.2023

Drawn by
JH Checked

Checked by Owner Date Signed by Builder

Scale
As indicated @ A3

Design
CUSTOM Rev **A**

Drawing No.
23039 Sheet **C40.0.3**

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:

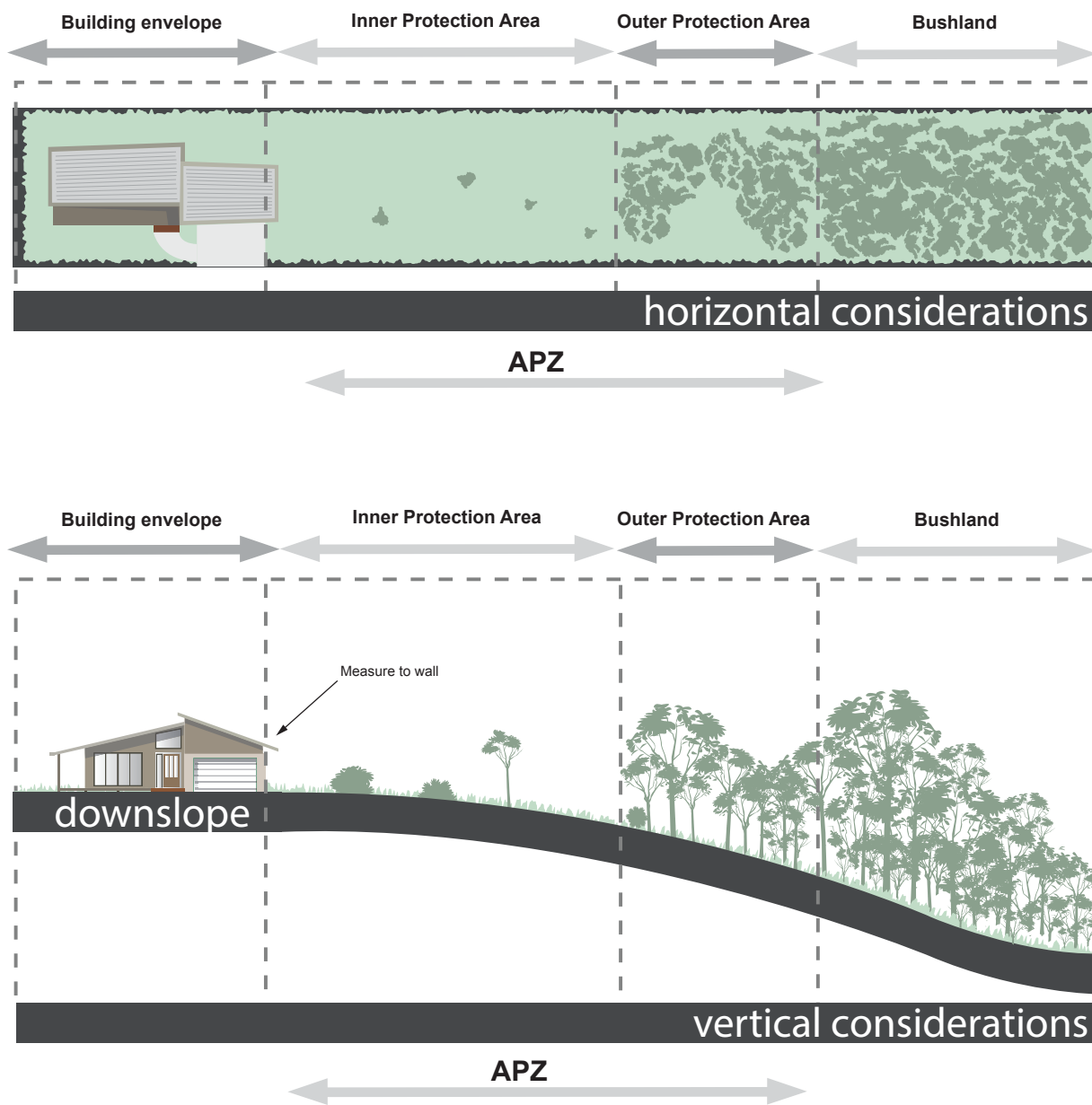
- direct flame contact on the building;
- damage to the building asset from intense radiant heat; and
- ember attack.

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 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	36591829
Sequence Number	238693671
Enquiry Date	02/05/2024 11:50
Response	AFFECTED
Address	132 Springfield Dr Lochinvar
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.

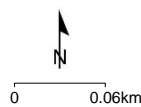
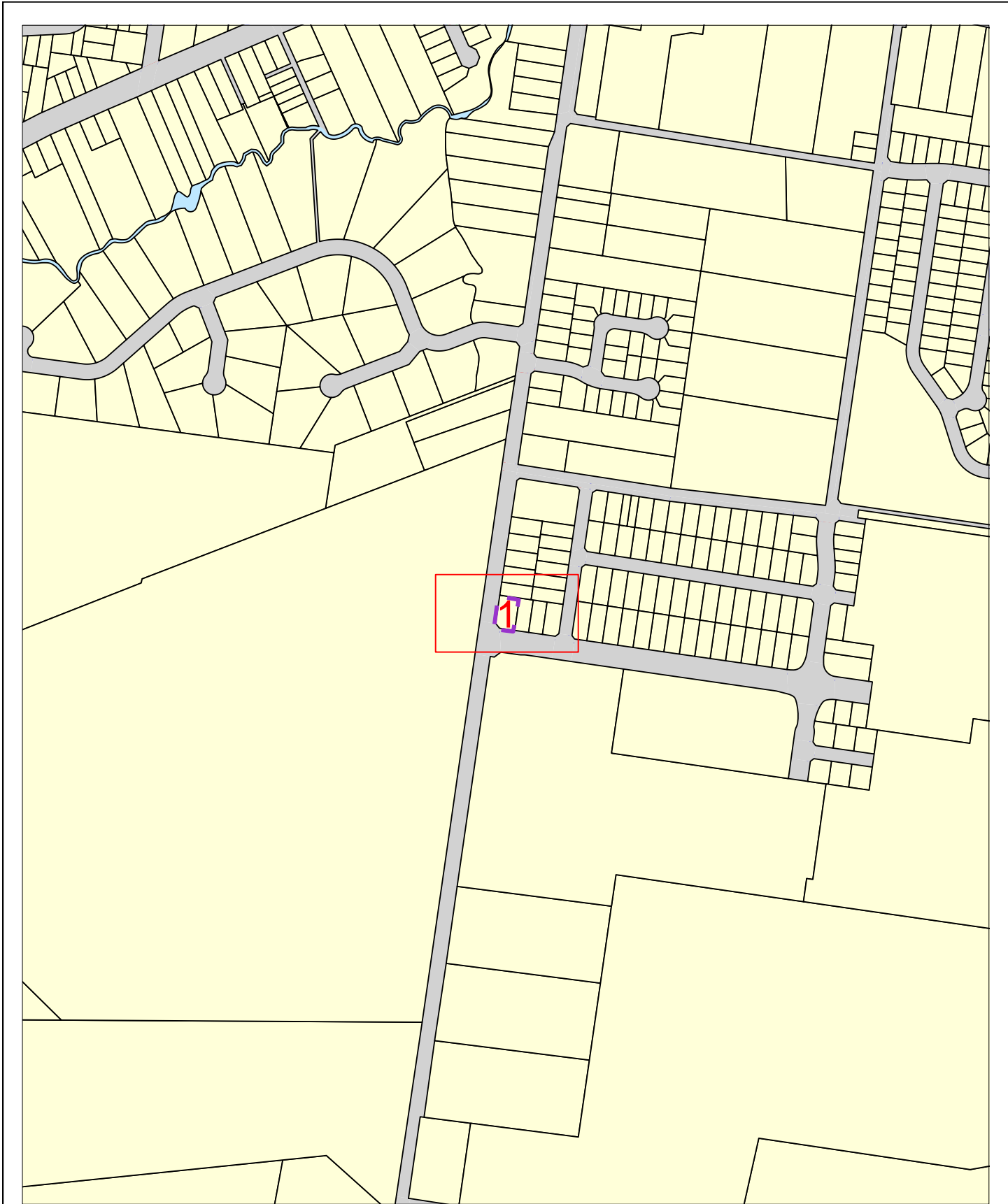
www.hunterwater.com.au

1300 657 000



Overview Map

Sequence No: 238693671
132 Springfield Dr Lochinvar



LEGEND:



Detail Map

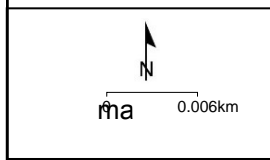
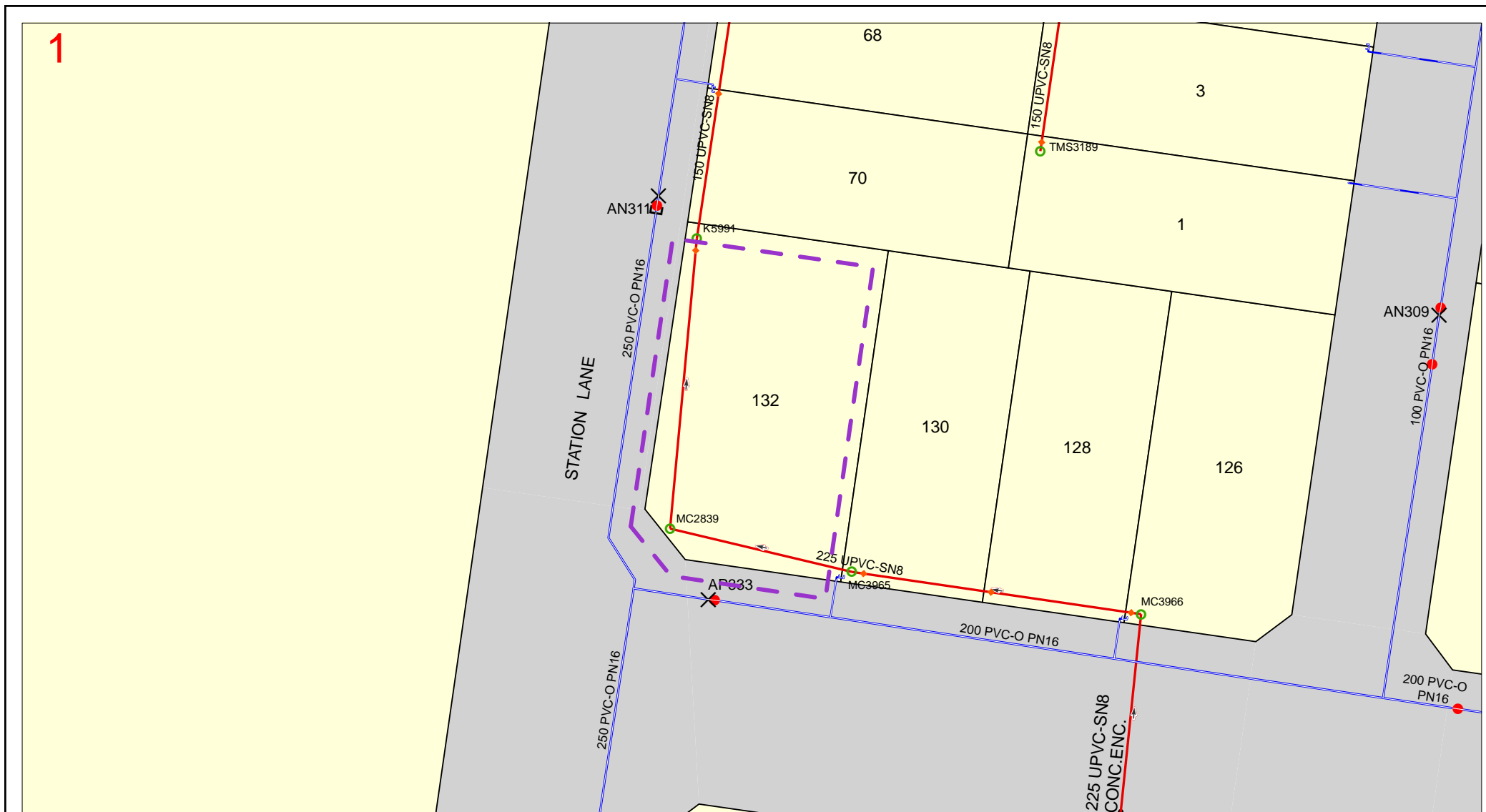


BYDADIA Work Area



Map 1

Sequence No: 238693671



IMPORTANT

THIS PLAN IS NOT TO BE USED FOR CONVEYANCING

THIS INFORMATION IS VALID FOR 30 DAYS FROM THE DATE OF ISSUE

SEWER/WATER/RECYCLED WATER/
ELECTRICAL - UTILITY DATA
© HUNTER WATER CORPORATION 2019

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

ANY INFORMATION ON THIS PLAN MAY NOT BE UP TO DATE
AND THE CORPORATION ACCEPTS NO RESPONSIBILITY FOR
ITS ACCURACY.

CADASTRAL DATA © Department Finance, Services & Innovation
[Nov 2017]

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 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
--	--	---	---	---	--	---