



BUSHFIRE THREAT ASSESSMENT

FOR
A PROPOSED
CHILDCARE CENTRE
AT

14 LAVENDER CLOSE, GILLIESTON
HEIGHTS

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:	14 Lavender Close, Gillieston Heights 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:	Artmade Architects
Reference No.	Gillieston Heights – Artmade Architects – June 2024
Document Status & Date:	20/06/2024
Author	Liv Page
Reviewer 1	Azmina Shafie
Reviewer 2	Sarah Jones

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 Artmade Architects for a proposed Childcare at 14 Lavender Close, Gillieston Heights NSW 2321. The report forms part of the supporting documentation for a Development Application to be submitted to Maitland City Council (MCC).

The proposal is for a childcare centre and, as such, must meet the requirements of a Special Fire Protection Purposes (SFPP) development in accordance with Planning for Bushfire Protection 2019 (PBP 2019) (NSW RFS, 2019). Under RF Act s.100B, a BFSA from the NSW RFS is required for SFPP development. As such, an Integrated Development approval may be required under of the EP&A Act s.4.46. The report demonstrates compliance with PBP 2019 and AS3959-2018 Construction of Buildings in Bush Fire Prone Areas as well as Appendix B of PBP Addendum November 2022.

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 for the proposed childcare centre:

1. Asset Protection Zones (APZ)

An APZ of >22m to the South is provided between the proposed childcare building and the vegetation at the site in order to get a radiant heat of <10kw/m². This is based on Table A1.12.1 in Appendix 1 of Planning for Bushfire Protection 2019.

2. Bushfire Attack Level (BAL)

The BAL relates to a set of construction specifications listed within Australian Standard AS 3959-2018 Constructions of buildings in bushfire-prone areas (AS 3959) and the NSW variation to AS 3959 listed at Section 7.5.2 of PBP.

The BAL for the childcare centre has been determined as BAL-12.5 in accordance with Table A1.12.1 of PBP 2019. However, in accordance with Appendix B of PBP Addendum November 2022, the constructions requirements must comply with BAL-19 as the acceptable solution.

3. Access

PBP 2019 requires an access design that enables safe evacuation whilst facilitating adequate emergency and operational response. The Performance based criteria in accordance with Appendix B of PBP Addendum November 2022 states



Firefighting vehicles are provided with safe, all-weather access to structures and hazardous vegetation

The surrounding public roads provide satisfactory access for evacuation and emergency response. Lavender Close provides direct access to the site and the access road provides access for firefighters to the building.

4. Water Supply and Utilities

The site is connected to the reticulated water and a hydrant exist within 70m of the proposed childcare centre in accordance with the Acceptable Solution of PBP 2019 and Appendix B of PBP Addendum November 2022.

5. Emergency Management and Evacuation

An emergency evacuation plan is to be prepared in accordance with RFS, 2014, 'Development Planning – A Guide to developing a Bush Fire Emergency Management and Evacuation Plan'.



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	1
1.1	Site Particulars	1
1.2	Description of the Proposal	3
1.3	Legislative Requirements	3
1.4	Objectives of Assessment	3
2	METHODOLOGY	5
2.1	Vegetation Assessment	5
2.2	Slope Assessment	5
3	SITE ASSESSMENT	6
3.1	Vegetation & Slope Assessment	6
4	BUSHFIRE PROTECTION MEASURES	8
4.1	Asset Protection Zones	10
4.2	Bushfire Attack Assessment	10
4.3	Determination of Bushfire Attack Levels	11
5	COMPLIANCE	13
6	CONCLUSION & RECOMMENDATIONS	20
7	BIBLIOGRAPHY	22
	APPENDIX A PROPOSED SITE PLANS	A-1
	APPENDIX B ASSET PROTECTION ZONES	B-2
	APPENDIX C WATER AND HYDRANT INFORMATION	C-3

TABLES

Table 3-1: Vegetation Classification	6
Table 4-1 Bushfire Protection Measures	8
Table 5-1: Determination of APZs for the Proposed Childcare Centre	10
Table 6-1: Determination of BALs for the Proposed Childcare Centre	12
Table 7-1: Proposed Childcare Centre Compliance with Special Fire Protection Purpose Development Standards	13

FIGURES

Figure 1-1: Site Location	2
Figure 1-2: Bushfire Prone Land Map	4
Figure 3-1: Vegetation Map	7



I INTRODUCTION

A Bushfire Threat Assessment Report (BTA) has been prepared by Firebird ecoSultants Pty Ltd at the request of Artmade Architects for proposed Childcare at 14 Lavender Close, Gillieston Heights 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 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:	14 Lavender Close, Gillieston Heights NSW 2321
LGA:	Maitland City Council
Current Land Use:	R1: General Residential
Forest Danger Index:	100 FFDI

Figure 1-1: Site Location





I.2 Description of the Proposal

This Section DA relates to the proposal for a childcare centre. 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 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:

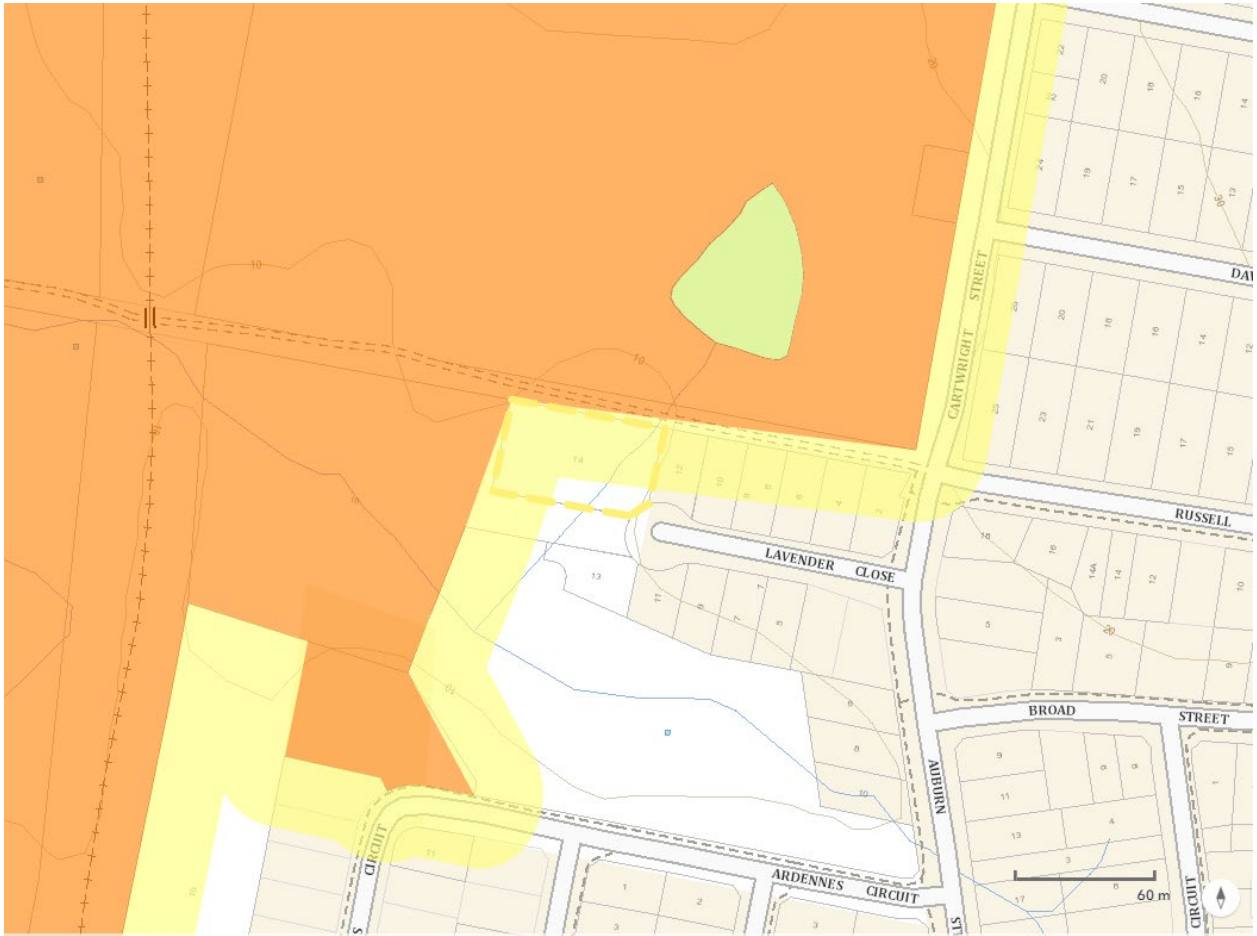
- PBP (RFS, 2019); and
- AS3959-2018 Construction of Buildings in Bushfire Prone Area.

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 and Figure 3-1 that shows the vegetation post development.

Table 3-1: Vegetation Classification

Proposed Childcare Centre		
Direction	Vegetation Type	Slope
North	Low Threat Vegetation	Downslope (0-5°)
East	Managed Land – Residential development	N/A
South	Grassland	Downslope (0-5°)
South-West	Managed Land	N/A
West	Managed Land	N/A

*Vegetation to the west and south-west have been assessed as managed land. Refer to appendix D for site photos. The vegetation to north has been considered as low threat in accordance with section A.1.10 of PBP 2019 being less than 1 hectare in area and greater than 100m separation from other areas of Category 1 or 2 vegetation. The vegetation to the west and south-west can also be considered as low threat in accordance with the same clause as worst case.

Figure 3-1: Vegetation Map





4 BUSHFIRE PROTECTION MEASURES

PBP requires the assessment of a suite of bushfire protection measures that in total provide an adequate level of protection for SFPP development. The measures required to be assessed are listed in Table 4-1 below

Table 4-1 Bushfire Protection Measures

Bushfire Protection Measures	Performance Criteria	Acceptable Solution
Asset Protection Zones (APZ)	The proposed building can withstand bush fire attack in the form of wind, embers, radiant heat and flame contact.	APZs are established in accordance with the Acceptable solution APZs within PBP 2019.
Construction Standards (BALs)	The proposed building can withstand bush fire attack in the form of wind, embers, radiant heat and flame contact. Compliance with Appendix B of PBP Addendum November 2022.	A construction level of BAL-19 or greater under AS 3959 and section 7.5 of PBP is applied. Compliance with Appendix B of PBP Addendum November 2022.
Access	Firefighting vehicles are provided with safe, all-weather access to structures and hazardous vegetation.	<ul style="list-style-type: none"> › Vehicular access must be capable of providing continuous access for emergency vehicles to enable travel in a forward direction from a public road around the entire building; and › Must have a minimum unobstructed width of 6m with no part of its furthest boundary more than 18m from the building and in no part of the 6m width be built upon or used for any purpose other than vehicular or pedestrian movement; and › Must provide reasonable pedestrian access from the vehicular access to the building; and

Bushfire Protection Measures	Performance Criteria	Acceptable Solution
		<ul style="list-style-type: none"> › Must have a load bearing capacity and unobstructed height to permit the operation and passage of fire fighting vehicles; and › Must be wholly within the allotment except that a public road complying with above may serve as the vehicular access or part thereof. <p>Compliance with Appendix B of PBP Addendum November 2022.</p>
Water supply and other utilities	An adequate water supply for firefighting purposes is installed and maintained. Compliance with Appendix B of PBP Addendum November 2022	<p>Reticulated water is to be provided to the development, where available; and</p> <p>Water for firefighting purposes must be made available and consist of –</p> <ul style="list-style-type: none"> › A fire hydrant system installed in accordance with AS2419.1; or › Where no reticulated water is available, a static water supply consisting of tanks, swimming pools, dams or the like, or a combination of these, together with suitable pumps, hoses and fittings, determined in consultation with NSW RFS that – <ul style="list-style-type: none"> › is capable of providing the required flow rate for a period of not less than 4 hours or › has a volume of 10,000 litres for each occupied building. <p>Compliance with Appendix B of PBP Addendum November 2022.</p>
Emergency and evacuation management		Preparation of 'Bushfire Emergency Management & Evacuation Plan'.



4.1 Asset Protection Zones

Using the vegetation and slope information presented in Section 3-1 and mapped on Figure 3-1, it has been determined that a specific APZs are required to comply with PBP 2019.

Table 5-2: Determination of APZs for the Proposed Childcare Centre

Vegetation Type & Direction	Slope	APZ Provided (OPA)
Low Threat Vegetation to the North	Downslope (0-5°)	N/A
Managed Land to the East	N/A	N/A
Grassland to the South	Downslope (0-5°)	>22m – Refer to Appendix D for photos of managed land.
Managed Land to the South-West	N/A	N/A
Managed Land to the West	N/A	N/A

4.2 Bushfire Attack Assessment

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.

4.3 Determination of Bushfire Attack Levels

Using a FFDI of 100, the information relating to vegetation, slope and according to Table A1.12.1 of PBP 2019 that determined the appropriate BAL. The results from this bush fire risk assessment are detailed below in Table 4-1–Bush Fire Attack Assessment and Figure 4-1 shows the APZs



Table 6-3: Determination of BALs for the Proposed Childcare Centre

Vegetation Type & Direction	APZ Provided (OPA)	Bushfire Attack Level (BAL)
Low Threat Vegetation to the North	>51m	BAL-LOW*
Managed Land to the East	>100m	BAL-LOW*
Grassland to the South	>22m	BAL-12.5*
Managed Land to the South-West	>100m	BAL-LOW*
Managed Land to the West	>100m	BAL-LOW*

*The above BAL rating is based on Table A1.12.1 of PBP 2019 showing compliance with minimum APZ distances for SFPP developments to achieve $<10\text{kW}/\text{m}^2$ and calculated at 1200K.

In accordance with Appendix B of PBP Addendum November 2022, childcare centres must meet a construction level of BAL-19 or greater under AS3959 and Section 7.5 of PBP is applied as the acceptable solution.



5 COMPLIANCE

The proposal is for a childcare centre and therefore development standards apply. Table 5-1 details the compliance with Development Standards for Special Fire Protection Purpose Developments and Compliance with Appendix B of PBP Addendum November 2022.

Table 7-1: Proposed Childcare Centre Compliance with Special Fire Protection Purpose Development Standards

Acceptable Solutions	Performance Criteria	Compliance
ASSET PROTECTION ZONES		
<ul style="list-style-type: none"> › the building is provided with an APZ in accordance with PBP 2019 (Table A1.12.1 in Appendix 1). 	<ul style="list-style-type: none"> › radiant heat levels of greater than 10kW/m² (calculated at 1200K) will not be experienced on any part of the building. 	<p>Complies with Acceptable Solution – The proposed childcare centre has been provided an APZ in accordance with Table A1.12.1 in Appendix 1 of PBP 2019.</p>
<ul style="list-style-type: none"> › APZs are located on lands with a slope less than 18 degrees. 	<ul style="list-style-type: none"> › APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised. 	<p>Complies with Acceptable Solution – APZs do not occur on steep land.</p>
<ul style="list-style-type: none"> › the APZ is managed in accordance with the requirements of Appendix 4 of this document, and is wholly within the boundaries of the development site; › APZ are wholly within the boundaries of the development site; and › other structures located within the APZ need to be located further than 6m from the refuge building. 	<ul style="list-style-type: none"> › APZs are managed and maintained to prevent the spread of fire to the building. › the APZ is provided in perpetuity 	<p>Complies with Acceptable Solution – An APZ of >22m to the South has been provided, consistent to the requirements of Appendix 4 of PBP.</p>



LANDSCAPING		
<ul style="list-style-type: none"> > landscaping is in accordance with Appendix 4; and > fencing is constructed in accordance with section 7.6. 	<ul style="list-style-type: none"> > landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions 	<p>Complies with Acceptable Solution – the site is to be managed to the requirements of PBP Appendix 4 (summarised in Appendix B here).</p>
CONSTRUCTION STANDARDS		
<ul style="list-style-type: none"> > a construction level of BAL-19 or greater under AS 3959 or NASH Standard and section 7.5 of PBP is applied. 	<ul style="list-style-type: none"> > the proposed building can withstand bush fire attack in the form of wind, embers, radiant heat and flame contact. 	<p>Complies with Acceptable Solution – The proposed childcare centre has been assessed as BAL-12.5 in accordance with Appendix 1 of PBP 2019 however in accordance with Appendix B of PBP 2019 Addendum 2022, a construction level of BAL-19 or greater is applied.</p>
ACCESS		
<ul style="list-style-type: none"> > vehicular access must be capable of providing continuous access for emergency vehicles to enable travel in a forward direction from a public road around the entire building; and > must have a minimum unobstructed width of 6m with no part of its furthest boundary more than 18m from the building and in no part of the 6m width be built upon or used for any purpose other vehicular or pedestrian movement; and > must provide reasonable pedestrian access from the vehicular access to the building; and > must have a load bearing capacity and unobstructed height to permit the operation and passage of fire fighting vehicles; and 	<ul style="list-style-type: none"> > firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation. 	<p>Complies with Performance Criteria – All roads surrounding the site provide safe, all-weather access to structures and hazard vegetation.</p>



<ul style="list-style-type: none"> › must be wholly within the allotment except that a public road complying with the above may serve as the vehicular access or part thereof. 		
PERIMETER ROADS		
<ul style="list-style-type: none"> › there are two-way sealed roads; › minimum 8m carriageway width kerb to kerb; › parking is provided outside of the carriageway width; › hydrants are to be located clear of parking areas; › there are through roads, and these are linked to the internal road system at an interval of no greater than 500m; › curves of roads have a minimum inner radius of 6m; › the maximum grade road is 15 degrees and average grade of not more than 10 degrees; › the road crossfall does not exceed 3 degrees; and › a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided. 	<ul style="list-style-type: none"> › perimeter access roads are designed to allow safe access and egress for firefighting vehicles while occupants are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface. 	<p>N/A – Perimeter roads are not proposed. The public road system is already existing.</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; › there are through roads, and these are linked to the internal road system at an interval of no greater than 500m; › curves of roads have a minimum inner radius of 6m; › the maximum grade road is 15 degrees and average grade of not more than 10 degrees; › the road crossfall does not exceed 3 degrees; and › a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided. 	<ul style="list-style-type: none"> › non-perimeter access roads are designed to allow safe access and egress for firefighting vehicles while occupants are evacuating. 	<p>N/A – Non-perimeter roads are not proposed. The public road system is already existing.</p>
WATER SUPPLY		
<ul style="list-style-type: none"> › reticulated water is to be provided to the development, where available; or › a 10,000 litres minimum static water supply for firefighting purposes is provided for each occupied building where no reticulated water is available. 	<ul style="list-style-type: none"> › an adequate water supply for firefighting purposes is installed and maintained. 	<p>Complies with Acceptable Solution – The site is connected to reticulated water.</p>
<ul style="list-style-type: none"> › fire hydrant spacing, design and sizing comply with the relevant clauses of AS 2419.1:2017; › hydrants are not located within any road carriageway; and 	<ul style="list-style-type: none"> › water supplies are located at regular intervals; and › the water supply is accessible and reliable for firefighting operations. 	<p>Complies with Acceptable Solution – a hydrant is located within 70m of the proposed childcare centre.</p>



› reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.		
fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2017.	flows and pressure are appropriate.	Complies with Acceptable Solution – Flow and pressure compliant with AS 2419.1:2017
all above-ground water service pipes external to the building are metal, including and up to any taps.	the integrity of the water supply is maintained.	Complies with Acceptable Solution – All above ground pipes will comply with requirements
› where no reticulated water supply is available, water for firefighting purposes is provided in accordance with Table 5.3d.	a static water supply is provided for firefighting purposes in areas where reticulated water is not available.	Complies with Acceptable Solution – The site is connected to reticulated water
<h2>ELECTRICITY SERVICES</h2>		
› where practicable, electrical transmission lines are underground; › where overhead, electrical transmission lines are proposed as follow: <ul style="list-style-type: none"> ○ lines are installed with short pole spacing (30m), unless crossing gullies, gorges or riparian areas; and ○ no part of a tree is closer to a power line than the distance set out in accordance with the specifications in ISSC3 Guideline for Managing Vegetation Near Power Lines. 	› location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings.	Complies with Acceptable Solution – Electrical transmission lines are to comply with the acceptable solution.



GAS SERVICES

<ul style="list-style-type: none"> › reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 and the requirements of relevant authorities, and metal piping is used; › all fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side; › connections to and from gas cylinders are metal; › if gas cylinders need to be kept close to the building, safety valves are directed away from the building and at least 2m away from any combustible material, so they do not act as a catalyst to combustion; › polymer-sheathed flexible gas supply lines to gas meters adjacent to buildings are not to be used; and › above-ground gas service pipes external to the building are metal, including and up to any outlets. 	<ul style="list-style-type: none"> › location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings. 	<p>Complies with Acceptable Solution – Gas services are to comply with the acceptable solution.</p>
---	---	--

EMERGENCY MANAGEMENT

<ul style="list-style-type: none"> › Bush Fire Emergency Management and Evacuation Plan is prepared consistent with the: <ul style="list-style-type: none"> ○ The NSW RFS document: A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan; ○ NSW RFS Schools Program Guide; ○ Australian Standard AS 3745:2010 Planning for emergencies in facilities; and 	<ul style="list-style-type: none"> › a Bush Fire Emergency Management and Evacuation Plan is prepared. 	<p>Complies with Acceptable Solution – An emergency evacuation plan shall be prepared for the childcare centre.</p>
--	---	--



<ul style="list-style-type: none">○ Australian Standard AS 4083:2010 Planning for emergencies – Health care facilities (where applicable).○ the Bush Fire Emergency Management and Evacuation Plan should include planning for the early relocation of occupants <p>Note: A copy of the Bush Fire Emergency Management and Evacuation Plan should be provided to the Local Emergency Management Committee for its information prior to occupation of the development.</p>		
--	--	--



6 CONCLUSION & RECOMMENDATIONS

In summary, a Bushfire Risk Assessment has been undertaken for a proposed childcare centre at 14 Lavender Close, Gillieston Heights NSW 2321. The report forms part of the supporting documentation for a 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 site. In summary, the following is recommended to enable the proposal to meet the relevant legislative requirements for the proposed childcare centre:

1. Asset Protection Zones (APZ)

An APZ of >22m to the South is provided between the proposed childcare building and the vegetation at the site in order to get a radiant heat of <10kw/m². This is based on Table A1.12.1 in Appendix 1 of Planning for Bushfire Protection 2019.

2. Bushfire Attack Level (BAL)

The BAL relates to a set of construction specifications listed within Australian Standard AS 3959-2018 Constructions of buildings in bushfire-prone areas (AS 3959) and the NSW variation to AS 3959 listed at Section 7.5.2 of PBP.

The BAL for the childcare centre has been determined as BAL-12.5 in accordance with Table A1.12.1 of PBP 2019. However, in accordance with Appendix B of PBP Addendum November 2022, the constructions requirements must comply with BAL-19 as the acceptable solution.

3. Access

PBP 2019 requires an access design that enables safe evacuation whilst facilitating adequate emergency and operational response. The Performance based criteria in accordance with Appendix B of PBP Addendum November 2022 states

Firefighting vehicles are provided with safe, all-weather access to structures and hazardous vegetation

The surrounding public roads provide satisfactory access for evacuation and emergency response. Lavender Close provides direct access to the site and the access road provides access for firefighters to the building.

4. Water Supply and Utilities



The site is connected to the reticulated water and a hydrant exist within 70m of the proposed childcare centre in accordance with the Acceptable Solution of PBP 2019 and Appendix B of PBP Addendum November 2022.

5. Emergency Management and Evacuation

An emergency evacuation plan is to be prepared in accordance with RFS, 2014, 'Development Planning – A Guide to developing a Bush Fire Emergency Management and Evacuation Plan'.



7 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

DRAFT
DRAWING NOT FOR FINAL ISSUE

17 JUN 2024



ARTISTS IMPRESSION

14 LAVENDER CLOSE GILLIESTON HEIGHTS NSW 2321

**CHILDCARE CENTRE
DEVELOPMENT APPLICATION**


ARCHITECTURAL DRAWING LIST - DA			
SHEET NUMBER	SHEET NAME	CURRENT REVISION	CURRENT REVISION DATE
DA00.00	COVER PAGE	A	XX.06.2024
DA02.01	SITE PLAN	A	XX.06.2024
DA03.01	GROUND FLOOR PLAN	A	XX.06.2024
DA03.02	AREA CALCULATIONS	A	XX.06.2024
DA04.01	EXTERNAL ELEVATIONS	A	XX.06.2024
DA05.01	SECTIONS & EXTERNAL FINISHES	A	XX.06.2024
DA06.01	SHADOW DIAGRAMS & VIEW FROM SUN	A	XX.06.2024
DA06.02	OUTDOOR PLAY AREA SOLAR/SHADE CALCULATIONS	A	XX.06.2024

ISSUE	DATE	DESCRIPTION
A	XX.06.2024	ISSUED FOR DEVELOPMENT APPLICATION

ASSOCIATED CONSULTANTS	
ACOUSTIC	MULLER
GEOTECH	IDEALCORP
CIVIL/FLOOR	PAVEY
TRAFFIC	PAVEY
WASTE	PAVEY
BUSHFIRE	FIREBIRD CO
PLANNER	
LS	

- NOTES**
- Any Discrepancies MUST be reported to the Architect.
 - All work to conform to relevant Australian Standards & Codes as applicable.
 - This drawing is copyright© and must NOT be copied or reused without authority from ArtMade Architects.
 - Contractors to check all dimensions on site prior to commencing Construction.
 - Do not scale from this drawing, use given written dimensions.
 - Drawing not for construction purposes.

CLIENT
S. PINGALA

ARCHITECT

ArtMade Architects

1507/50 Holt St, Surry Hills NSW 2010
P: 02 8760 9300 | hello@artmade.com.au | www.artmade.com.au

© COPYRIGHT
The copyright of this drawing together with any other documents prepared by ArtMade Architects (AMA) remains the property of AMA. AMA grants licence for the use of this document for the purpose for which it is intended. This licence is not transferable without permission from AMA. AMA Nominated Architect Sherif Saad, Registration No. 7867

PROJECT
CHILDCARE CENTRE

PROJECT ADDRESS
14 LAVENDER CLOSE, GILLIESTON HEIGHTS, NSW 2321

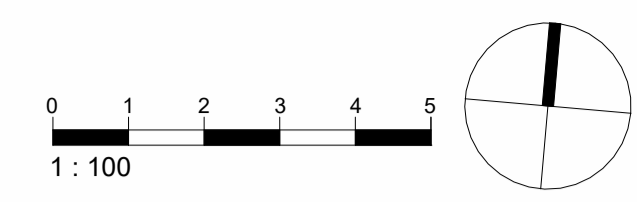
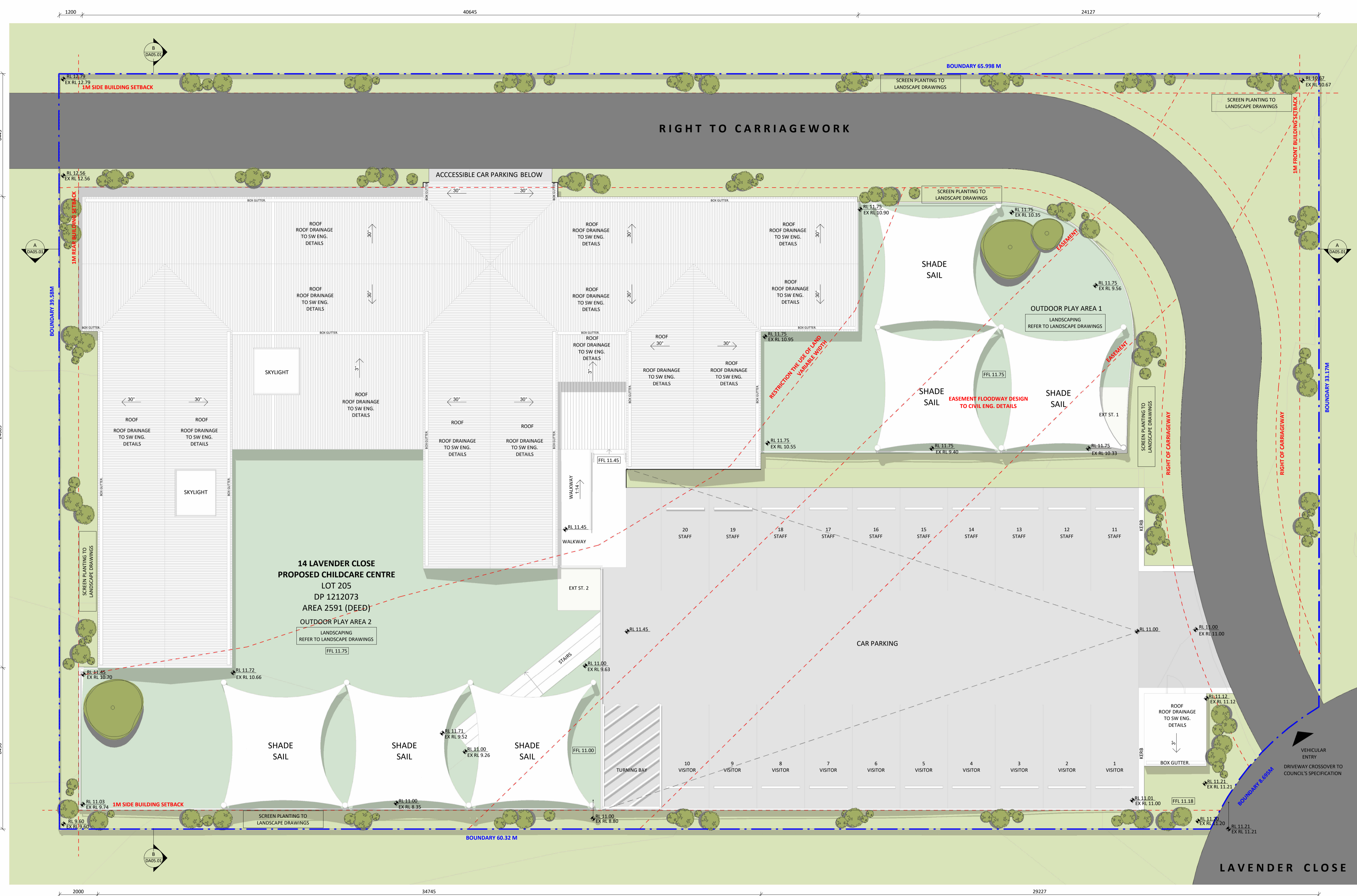
SHEET NAME
COVER PAGE

ISSUED FOR DEVELOPMENT APPLICATION			
Project number	Sheet No.	Issue	Phase
24749	DA00.00	A	DA

Sheet Size	Scale	L.G.A.
A1	N T S	MAITLAND

Drawn By	Checked By	Date
KG1/BR	AS/SS	XX.06.2024

NOT FOR CONSTRUCTION



ABBREVIATIONS

DRAFT

17 JUN 2024

ENG.	- ENGINEER
ES	- EXISTING SLAB LEVEL
EX	- EXISTING EXTERIOR
FFL	- FINISH FLOOR LEVEL
FSL	- FINISH SUB FLOOR LEVEL
GL	- GROUND LINE
GLZ	- GLAZING
EX.GL	- EXISTING GROUND LINE
REQ.	- REQUIREMENTS
XX.XX	- PROPOSED LEVEL
XX.XX	- EXISTING LEVEL
▲XX.XX	- SPOT LEVEL (PLAN)
▼XX.XX	- SPOT LEVEL (ELEVATION)

LANDSCAPE LEGEND

	EXISTING TREE / TREE TO BE RETAINED
	TREE TO BE REMOVED
	NEW TREE
	LANDSCAPING / BUFFER
	TURF / ARTIFICIAL TURF
	EXTERNAL FLOOR FINISH
	LINE OF STRUCTURAL ROOT ZONE (SRZ)
	LINE OF TREE EXCLUSION ZONE (TEZ)
	LINE OF TREE PROTECTION ZONE (TPZ)

NOTE: REFER TO ARBORIST REPORT FOR FURTHER DETAILS

- GENERAL NOTES**
- ALL EXISTING BUILDING ELEMENTS TO BE CHECKED ON SITE U.N.O
 - DEMOLITION TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARDS AND TO BE CARRIED OUT BY A LICENCED CONTRACTOR U. N.O
 - REFER TO SW DRAWINGS FOR DRAINAGE DESIGN.
 - REFER TO LANDSCAPE DRAWINGS FOR LANDSCAPE DESIGN.
 - KITCHEN AREA TO BE ACCORDANCE WITH NSW A54674, FOOD ACT 2003, FOOD REGULATION 2015 AND FOOD STANDARD CODES 3.2.2 AND 3.2.3.
 - CONSTRUCTION TO BE IN ACCORDANCE WITH BTA REPORT FROM FIREBIRD (GET REFERENCES FROM REPORT) AND BE BAL 19.
 - REFERENCE THE PLANNING FOR BUSHFIRE PROTECTION AS REFERENCED IN THE REPORT.

A	XX.06.2024	ISSUED FOR DEVELOPMENT APPLICATION
ISSUE	DATE	DESCRIPTION
ASSOCIATED CONSULTANTS		
ACOUSTIC	MULLER	
GEOTECH	IDEALCORP	
CIVIL/FLOOR	PAVEY	
TRAFFIC	PAVEY	
WASTE	PAVEY	
BUSHFIRE	FIREBIRD CO	
PLANNER		
LS		

- NOTES**
- Any Discrepancies MUST be reported to the Architect.
 - All work to conform to relevant Australian Standards & Codes as applicable.
 - This drawing is copyright© and must NOT be copied or reused without authority from ArtMade Architects.
 - Contractors to check all dimensions on site prior to commencing construction.
 - Do not scale from this drawing, use given written dimensions.
 - Drawing not for construction purposes.

CLIENT

S. PINGALA

ARCHITECT

ArtMade Architects

1507/50 Holt St, Surry Hills NSW 2010
P: 02 8760 9300 | hello@artmade.com.au | www.artmade.com.au

© COPYRIGHT

The copyright of this drawing together with any other documents prepared by ArtMade Architects (AM) remains the property of AM. AM grants licence for the use of this document for the purpose for which it is intended. This licence is not transferable without permission from AM. AM Nominated Architect Sheriff Saad. Registration No. 7867

PROJECT

CHILDCARE CENTRE

PROJECT ADDRESS

14 LAVENDER CLOSE, GILLIESTON HEIGHTS, NSW 2321

SHEET NAME

SITE PLAN

ISSUED FOR DEVELOPMENT APPLICATION

Project number	Sheet No.	Issue	Phase
24749	DA02.01	A	DA

Sheet Size	Scale	L.G.A.
A1	As indicated	MAITLAND
Drawn By	Checked By	Date
KG1/BR	AS/SS	XX.06.2024

INDOOR PLAYROOM SCHEDULE

ROOM	AGE	NO. CHLDN	NO. STAFF	UNENCLUMBERED REQ AREA	AREA
PLAYROOM 1	AGE 3-5	30	3	97.5 m²	122.60 m²
PLAYROOM 2	AGE 3-5	20	2	65 m²	66.20 m²
PLAYROOM 3	AGE 0-2	12	3	39 m²	40.25 m²
PLAYROOM 4	AGE 2-3	20	4	65 m²	66.10 m²
TOTAL		82	12	266.5 m²	295.15 m²

OUTDOOR PLAY AREA SCHEDULE

AREA	AGE	NO. CHLDN	REQ AREA	AREA
OUTDOOR PLAY AREA 1 (AGE 3-5)	30	210 m²	210.05 m²	
OUTDOOR PLAY AREA 2 (AGE 0-5)	52	364 m²	374.55 m²	
TOTAL		82	574 m²	584.60 m²

INTERNAL STORAGE SCHEDULE

NAME	NO. CHLDN	REQ VOL	VOL
INT ST. 1	30	6.00 m³	3.55 m³
INT ST. 2	20	4.00 m³	6.30 m³
INT ST. 3	12	2.40 m³	8.40 m³
INT ST. 4	20	4.00 m³	5.85 m³
TOTAL	82	16.40 m³	24.10 m³

EXTERNAL STORAGE SCHEDULE

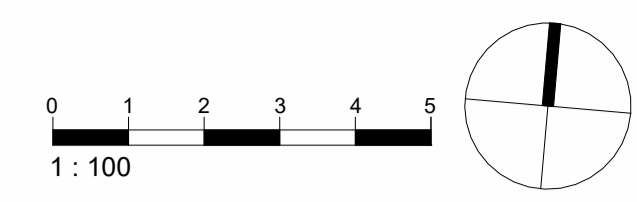
NAME	NO. CHLDN	REQ VOL	VOL
EX ST. 1	52	15.60 m³	15.65 m³
EX ST. 2	30	9.00 m³	12.10 m³
TOTAL	82	24.60 m³	27.75 m³

PARKING SCHEDULE

PARKING	NO. SPACES
ACCESSIBLE	1
STAFF	10
VISITOR	10
TOTAL	21

1 SITE PLAN
1:100

NOT FOR CONSTRUCTION



ABBREVIATIONS
 ENG. - ENGINEER
 EX. DRAWING - EXISTING DRAWING
 FFL - FINISH FLOOR LEVEL
 FSL - FINISH SILL LEVEL
 GL - GROUND LINE
 GLZ - GLAZING
 EX.GL - EXISTING GROUND LINE
 REQ. - REQUIREMENTS

LANDSCAPE LEGEND

- EXISTING TREE / TREE TO BE RETAINED
- TREE TO BE REMOVED
- NEW TREE
- LANDSCAPING / BUFFER
- TURF / ARTIFICIAL TURF
- EXTERNAL FLOOR FINISH
- LINE OF STRUCTURAL ROOT ZONE (SRZ)
- LINE OF TREE EXCLUSION ZONE (TEZ)
- LINE OF TREE PROTECTION ZONE (TPZ)

NOTE: REFER TO ARBORIST REPORT FOR FURTHER DETAILS

GENERAL NOTES

- ALL EXISTING BUILDING ELEMENTS TO BE CHECKED ON SITE U.N.O
- DEMOLITION TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARDS AND TO BE CARRIED OUT BY A LICENCED CONTRACTOR U. N.O
- REFER TO SW DRAWINGS FOR DRAINAGE DESIGN.
- REFER TO LANDSCAPE DRAWINGS FOR LANDSCAPE DESIGN.
- KITCHEN AREA TO BE ACCORDANCE WITH NSW AS4674, FOOD ACT 2003, FOOD REGULATION 2015 AND FOOD STANDARD CODES 3.2.2 AND 3.2.3.
- CONSTRUCTION TO BE IN ACCORDANCE WITH BTA REPORT FROM FIREBIRD (GET REFERENCES FROM REPORT) AND BE BAL 19.
- REFERENCE THE PLANNING FOR BUSHFIRE PROTECTION AS REFERENCED IN THE REPORT.

ISSUE LOG

ISSUE	DATE	DESCRIPTION
A	XX.06.2024	ISSUED FOR DEVELOPMENT APPLICATION

ASSOCIATED CONSULTANTS

CONSULTANT	NAME
ACOUSTIC	MULLER
GEOTECH	IDEALCORP
CIVIL/FLOOR	PAVEY
TRAFFIC	PAVEY
WASTE	PAVEY
BUSHFIRE	FIREBIRD CO
PLANNER	IS

NOTES

- Any Discrepancies MUST be reported to the Architect.
- All work to conform to relevant Australian Standards & Codes as applicable.
- This drawing is copyrighted and must NOT be copied or reused without authority from ArtMade Architects.
- Contractors to check all dimensions on site prior to commencing Construction.
- Do not scale from this drawing, use given written dimensions.
- Drawing not for construction purposes.

CLIENT
 S. PINGALA

ARCHITECT
 ArtMade Architects
 1507/50 Holt St, Surry Hills NSW 2010
 P: 02 8760 9300 | hello@artmade.com.au | www.artmade.com.au

COPYRIGHT
 The copyright of this drawing together with any other documents prepared by ArtMade Architects (AM) remains the property of AM. AM grants licence for the use of this document for the purpose for which it is intended. This licence is not transferable without permission from AM. AM Nominated Architect Sheif Saad. Registration No. 7867

PROJECT
 CHILDCARE CENTRE

PROJECT ADDRESS
 14 LAVENDER CLOSE, GILLISTON HEIGHTS, NSW 2321

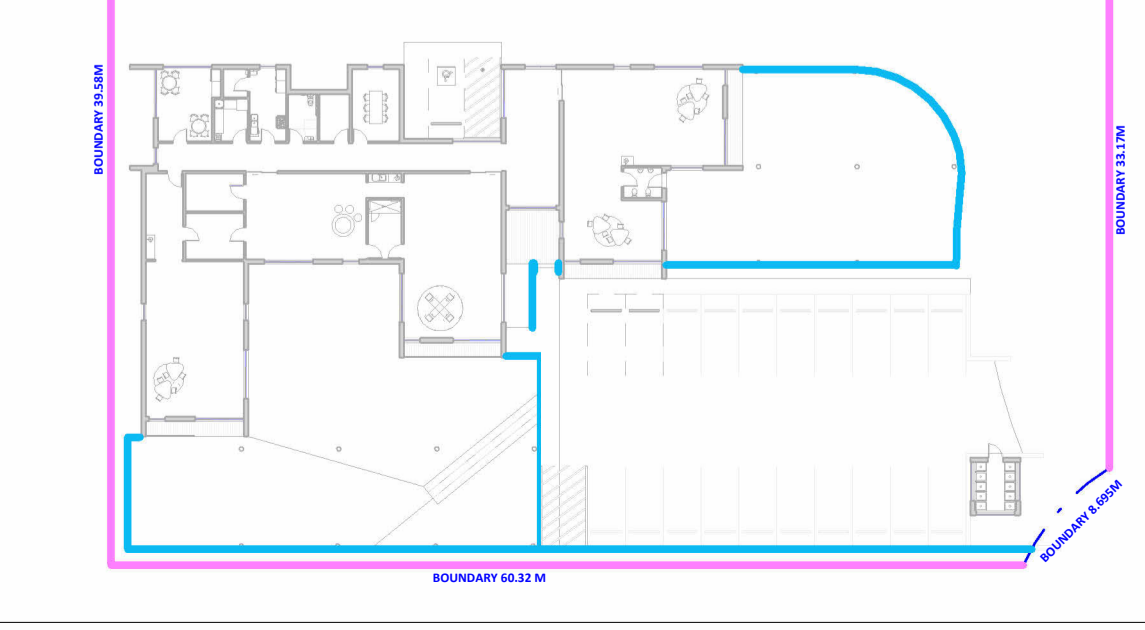
SHEET NAME
 GROUND FLOOR PLAN

ISSUED FOR DEVELOPMENT APPLICATION

Project number	Sheet No.	Issue	Phase
24749	DA03.01	A	DA

Sheet Size A1
Scale As indicated
L.G.A. MAITLAND
Drawn By KG1/BR
Checked By AS/SS
Date XX.06.2024

1 GROUND FLOOR PLAN
 1:100



DA - FENCE LEGEND

- 1.8M HT BOUNDARY FENCE (REFER TO DETAIL 01)
- 1.2M HT FORWARD OF BUILDING LINE (REFER TO DETAIL 02)
- ?

NOTE:
 ALL ACOUSTIC BARRIERS IN ACCORDANCE WITH ACOUSTIC REPORT. REFER TO SHEET ADS.01 FOR FENCE DETAILS.

2 FENCE/BARRIER DIAGRAM
 1:500

INDOOR PLAYROOM SCHEDULE

ROOM	AGE	NO. CHLDN	NO. STAFF	UNENCUMBERED REQ AREA	AREA
PLAYROOM 1	AGE 3-5	30	3	97.5 m²	122.60 m²
PLAYROOM 2	AGE 3-5	20	2	65 m²	66.20 m²
PLAYROOM 3	AGE 0-2	12	3	39 m²	40.25 m²
PLAYROOM 4	AGE 2-3	20	4	65 m²	66.10 m²
TOTAL		82	12	266.5 m²	295.15 m²

OUTDOOR PLAY AREA SCHEDULE

AREA	AGE	NO. CHLDN	REQ AREA	AREA
OUTDOOR PLAY AREA 1	(AGE 3-5)	30	210 m²	210.05 m²
OUTDOOR PLAY AREA 2	(AGE 0-5)	52	364 m²	374.55 m²
TOTAL		82	574 m²	584.60 m²

INTERNAL STORAGE SCHEDULE

NAME	NO. CHLDN	REQ VOL	VOL
INT ST. 1	30	6.00 m³	3.55 m³
INT ST. 2	20	4.00 m³	6.30 m³
INT ST. 3	12	2.40 m³	8.40 m³
INT ST. 4	20	4.00 m³	5.85 m³
TOTAL	82	16.40 m³	24.10 m³

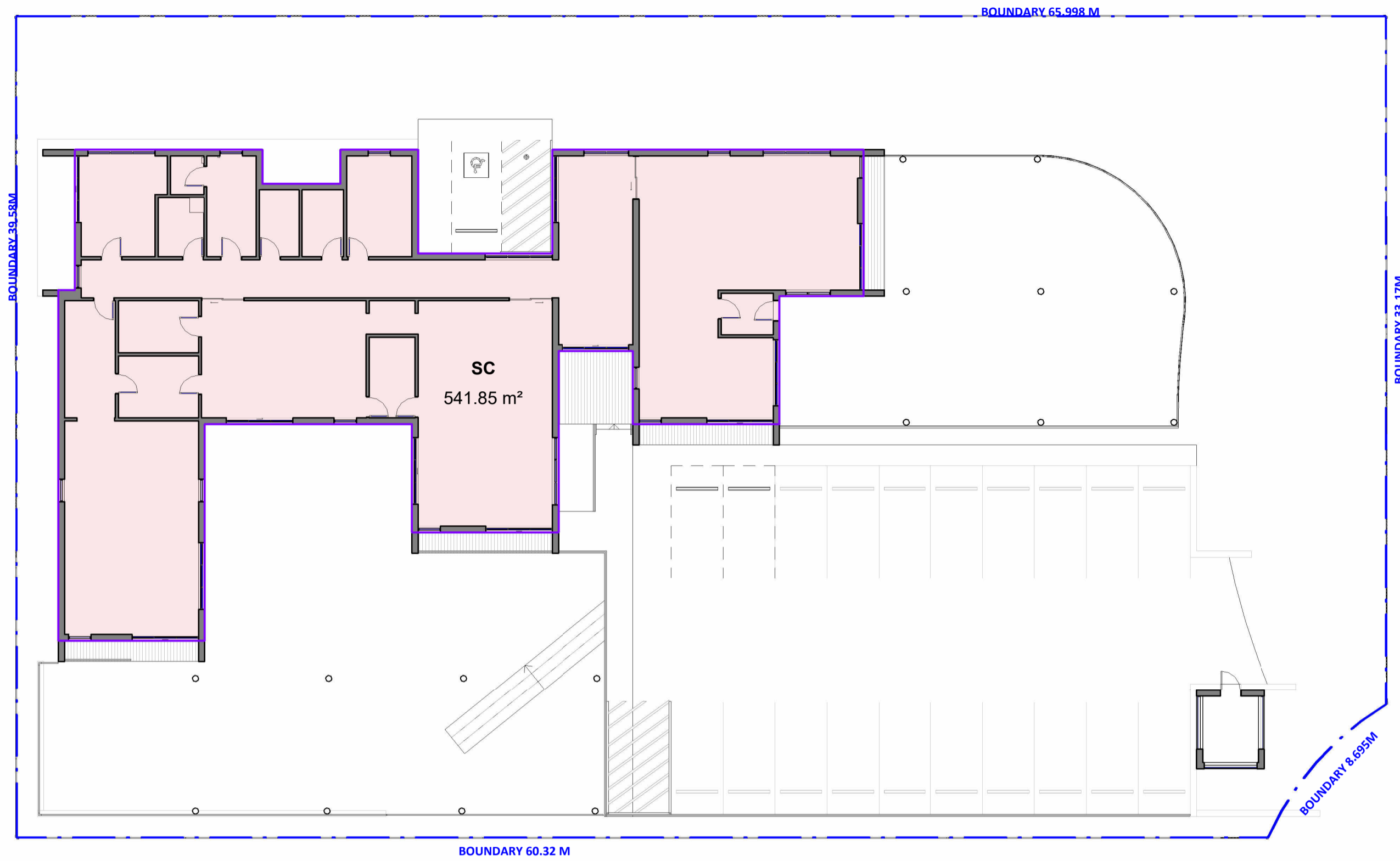
EXTERNAL STORAGE SCHEDULE

NAME	NO. CHLDN	REQ VOL	VOL
EX ST. 1	52	15.60 m³	15.65 m³
EX ST. 2	30	9.00 m³	12.10 m³
TOTAL	82	24.60 m³	27.75 m³

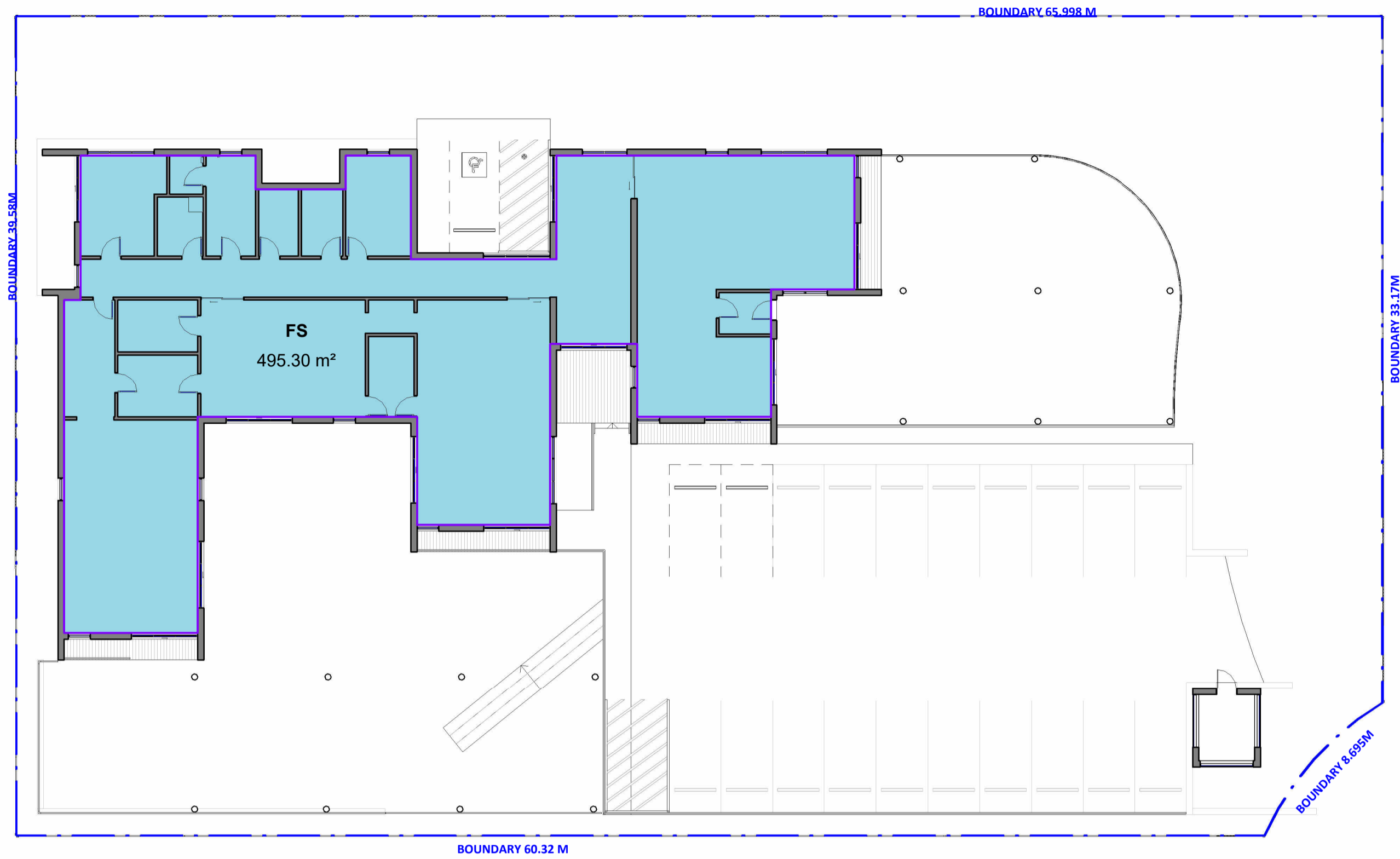
PARKING SCHEDULE

PARKING	NO. SPACES
ACCESSIBLE	1
STAFF	10
VISITOR	10
TOTAL	21

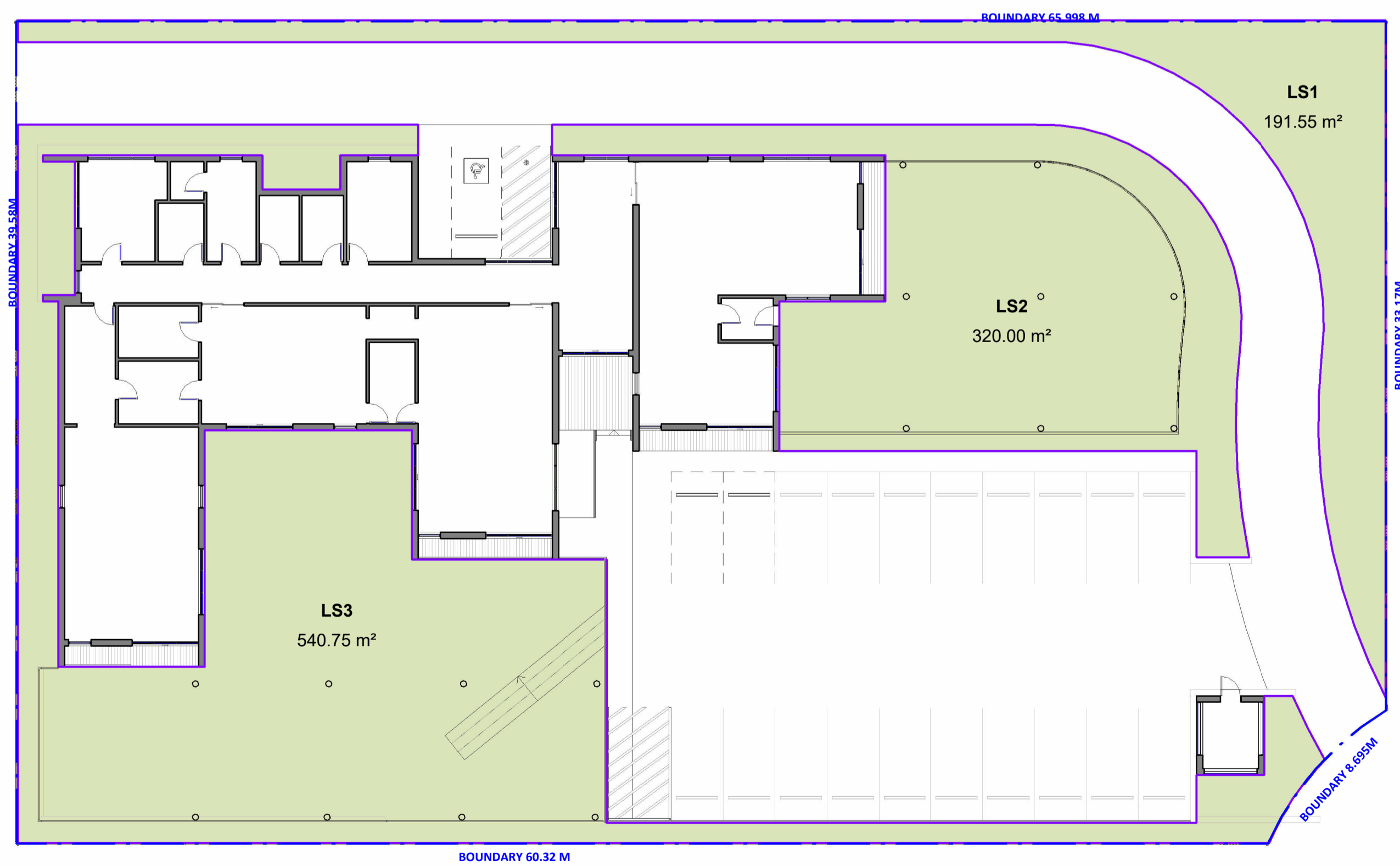
NOT FOR CONSTRUCTION



① SITE COVERAGE
1 : 200



② GFA - GROUND FLOOR LEVEL
1 : 200



③ LANDSCAPE - GROUND FLOOR LEVEL
1 : 200

ISSUE	DATE	ISSUED FOR DEVELOPMENT APPLICATION
A	XX.06.2024	ISSUED FOR DEVELOPMENT APPLICATION

ASSOCIATED CONSULTANTS	DESCRIPTION
ACOUSTIC	MULLER
GEO/TECH	IDEALCORP
CIVIL/FLOOR	PAVEY
TRAFFIC	PAVEY
WASTE	PAVEY
BUSHFIRE	FIREBIRD CO
PLANNER	
LS	

- NOTES**
- Any Discrepancies MUST be reported to the Architect.
 - All work to conform to relevant Australian Standards & Codes as applicable.
 - This drawing is copyright© and must NOT be copied or reused without authority from ArtMade Architects.
 - Contractors to check all dimensions on site prior to commencing Construction.
 - Do not scale from this drawing, use given written dimensions.
 - Drawing not for construction purposes.

CLIENT
S. PINGALA

ARCHITECT

ArtMade Architects
1507/50 Holt St, Surry Hills NSW 2010
P: 02 8760 9300 | hello@artmade.com.au | www.artmade.com.au

© COPYRIGHT
The copyright of this drawing together with any other documents prepared by ArtMade Architects (AM) remains the property of AM. AM grants licence for the use of this document for the purpose for which it is intended. This licence is not transferable without permission from AM. AM Nominated Architect Sherif Saad, Registration No. 7867

PROJECT
CHILDCARE CENTRE

PROJECT ADDRESS
14 LAVENDER CLOSE, GILLIESTON HEIGHTS, NSW 2321

SHEET NAME
AREA CALCULATIONS

ISSUED FOR DEVELOPMENT APPLICATION			
Project number	Sheet No.	Issue	Phase
24749	DA03.02	A	DA

Sheet Size	Scale	L.G.A.
A1	1 : 200	MAITLAND
Drawn By	Checked By	Date
KG1/BR	AS/SS	XX.06.2024

DCP - SITE COVERAGE (SITE AREA 2591M²)	
MAX SITE COVERAGE AREA	MAX SITE COVERAGE %
1555 m²	60%

PROPOSED - SITE COVERAGE		
Name	Area	Site Coverage %
SC	542 m²	21%

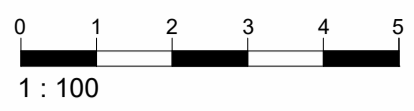
DCP - GFA (SITE AREA 2591M²)		
PERMITTED AREA	MIN FSR	
2591.00 m²	0	

PROPOSED - GFA		
Name	Area	FSR
FS	495.30 m²	0.191164

DCP - LANDSCAPE AREA (SITE AREA 2591M²)	
MIN LS AREA	MIN LS %
777.30 m²	30%

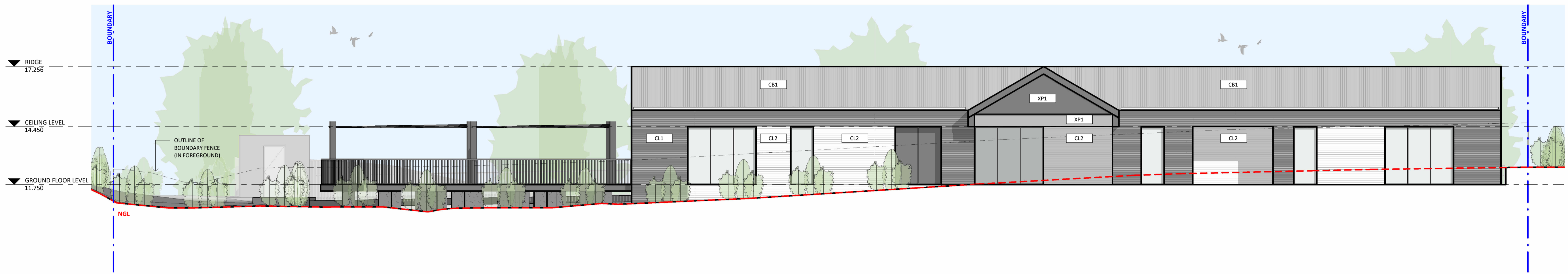
PROPOSED - LANDSCAPE AREA			
Name	Area	LS %	
LS1	191.55 m²	7.4%	
LS2	320.00 m²	12.4%	
LS3	540.75 m²	20.9%	
TOTAL	1052.30 m²	40.6%	

NOT FOR CONSTRUCTION



DRAFT
DRAWING NOT FOR FINAL ISSUE

17 JUN 2024



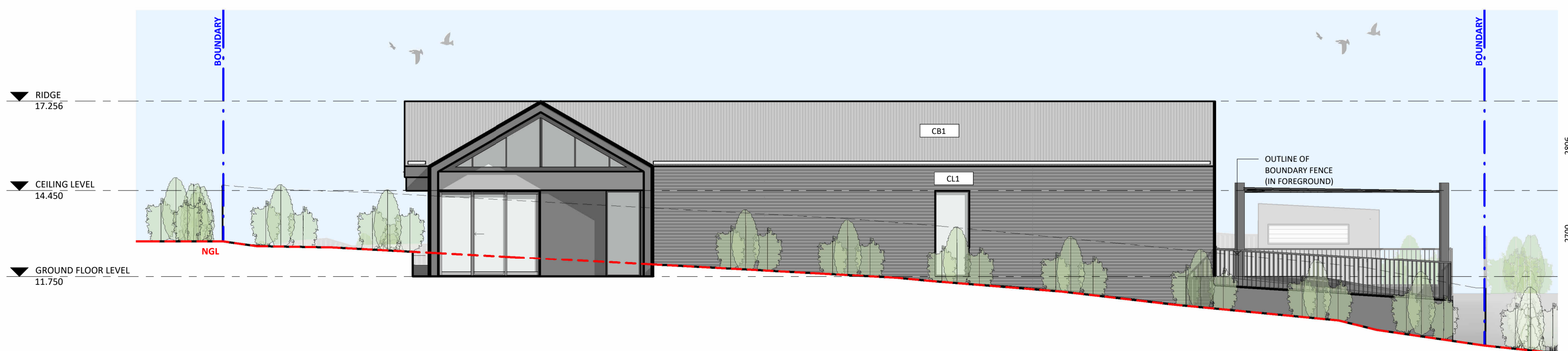
1 NORTHERN ELEVATION
1 : 100



2 SOUTHERN ELEVATION
1 : 100



3 EASTERN ELEVATION
1 : 100



4 WESTERN ELEVATION
1 : 100

ISSUE	DATE	DESCRIPTION
A	XX.06.2024	ISSUED FOR DEVELOPMENT APPLICATION

ASSOCIATED CONSULTANTS	DESCRIPTION
ACOUSTIC	MULLER
GEOTECH	IDEALCORP
CIVIL/FLOOR	PAVEY
TRAFFIC	PAVEY
WASTE	PAVEY
BUSHFIRE	FIREBIRD CO
PLANNER	
LS	

- NOTES**
- Any Discrepancies MUST be reported to the Architect.
 - All work to conform to relevant Australian Standards & Codes as applicable.
 - This drawing is copyright© and must NOT be copied or reused without authority from ArtMade Architects.
 - Contractors to check all dimensions on site prior to commencing Construction.
 - Do not scale from this drawing, use given written dimensions.
 - Drawing not for construction purposes.

CLIENT

S. PINGALA

ARCHITECT



1507/50 Holt St, Surry Hills NSW 2010
P: 02 8760 9300 | hello@artmade.com.au | www.artmade.com.au

© COPYRIGHT
The copyright of this drawing together with any other documents prepared by ArtMade Architects (AM) remains the property of AM. AM grants licence for the use of this document for the purpose for which it is intended. This licence is not transferable without permission from AM. AM Nominated Architect Sherif Saad. Registration No. 7867

PROJECT

CHILDCARE CENTRE

PROJECT ADDRESS

14 LAVENDER CLOSE, GILLIESTON HEIGHTS, NSW 2321

SHEET NAME

EXTERNAL ELEVATIONS

ISSUED FOR DEVELOPMENT APPLICATION

Project number	Sheet No.	Issue	Phase
24749	DA04.01	A	DA

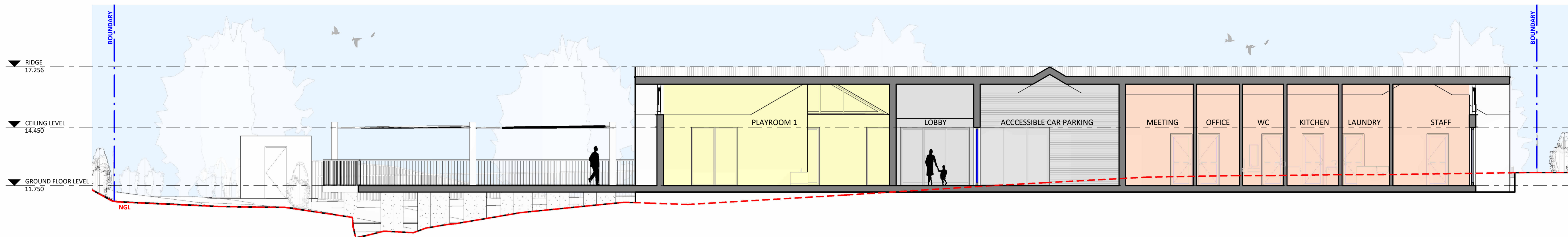
Sheet Size	Scale	L.G.A.
A1	1 : 100	MAITLAND

Drawn By	Checked By	Date
KG1/BR	AS/SS	XX.06.2024

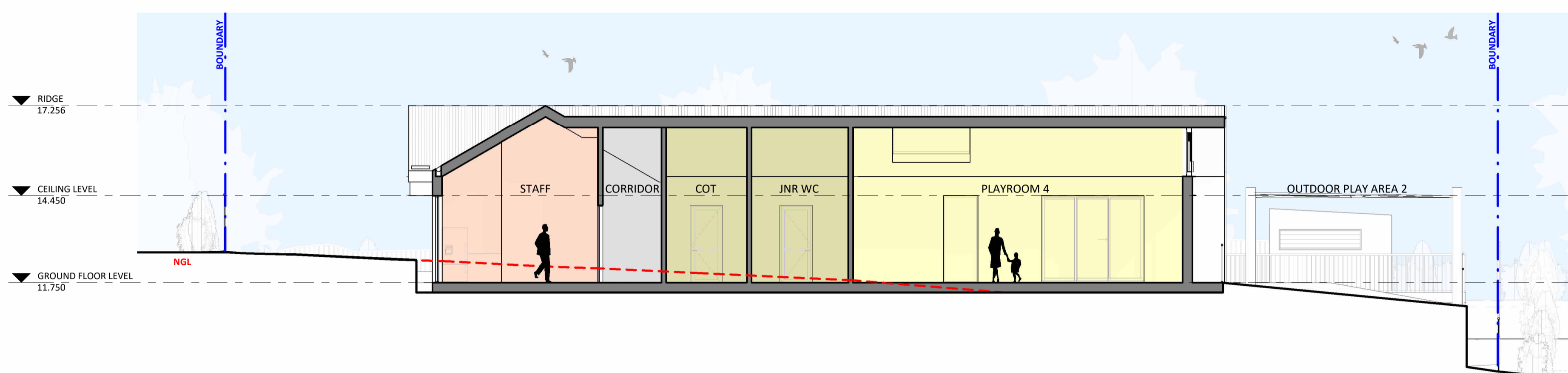
EXTERNAL FINISHES

- CB1** ROOF, GUTTER, DOWNPIPES
COLORBOND
COLOUR: WOODLAND GREY OR SIMILAR
- CB2** ROOF, GUTTER, DOWNPIPES
COLORBOND
COLOUR: WOODLAND GREY OR SIMILAR
- CL1** WEATHERTEX GROOVED CLADDING
DULUX
COLOUR: PAINT FINISH XP1
- CL2** WEATHERTEX GROOVED CLADDING
DULUX
COLOUR: PAINT FINISH XP2
- XP1** EXTERNAL PAINT
DULUX
COLOUR: WOODLAND GREY OR SIMILAR
- XP2** EXTERNAL PAINT
DULUX
COLOUR: LEXICON WHITE OR SIMILAR

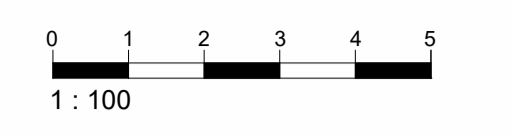
NOT FOR CONSTRUCTION



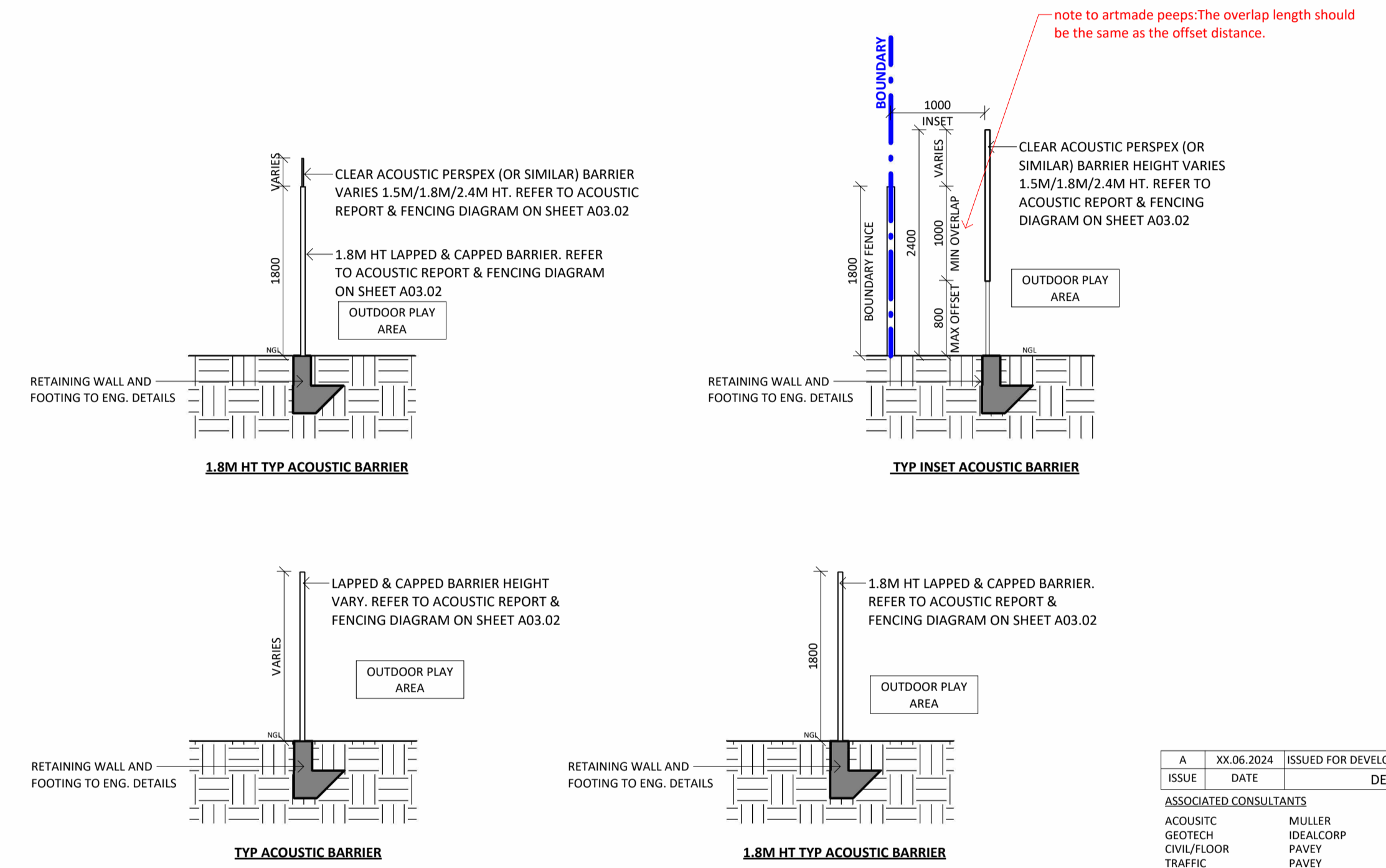
A SECTION A-A
1 : 100



B SECTION B-B
1 : 100



DRAFT
DRAWING NOT FOR FINAL ISSUE
17 JUN 2024



FENCE DETAILS

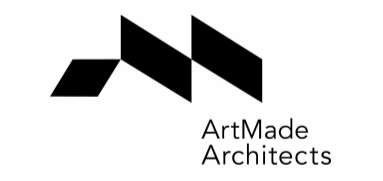
ISSUE	DATE	DESCRIPTION
A	XX.06.2024	ISSUED FOR DEVELOPMENT APPLICATION
ASSOCIATED CONSULTANTS		
ACOUSTIC	MULLER	
GEOTECH	IDEALCORP	
CIVIL/FLOOR	PAVEY	
TRAFFIC	PAVEY	
WASTE	PAVEY	
BUSHFIRE	FIREBIRD CO	
PLANNER	LS	

- NOTES**
- Any Discrepancies MUST be reported to the Architect.
 - All work to conform to relevant Australian Standards & Codes as applicable.
 - This drawing is copyright© and must NOT be copied or reused without authority from ArtMade Architects.
 - Contractors to check all dimensions on site prior to commencing Construction.
 - Do not scale from this drawing, use given written dimensions.
 - Drawing not for construction purposes.

CLIENT

S. PINGALA

ARCHITECT



1507/50 Holt St, Surry Hills NSW 2010
P: 02 8760 9300 | hello@artmade.com.au | www.artmade.com.au

© COPYRIGHT
The copyright of this drawing together with any other documents prepared by ArtMade Architects (AM) remains the property of AM. AM grants licence for the use of this document for the purpose for which it is intended. This license is not transferable without permission from AM. AM Nominated Architect Sherif Saad. Registration No. 7867

PROJECT

CHILDCARE CENTRE

PROJECT ADDRESS

14 LAVENDER CLOSE, GILLIESTON HEIGHTS, NSW 2321

SHEET NAME

SECTIONS & EXTERNAL FINISHES

ISSUED FOR DEVELOPMENT APPLICATION

Project number	Sheet No.	Issue	Phase
24749	DA05.01	A	DA

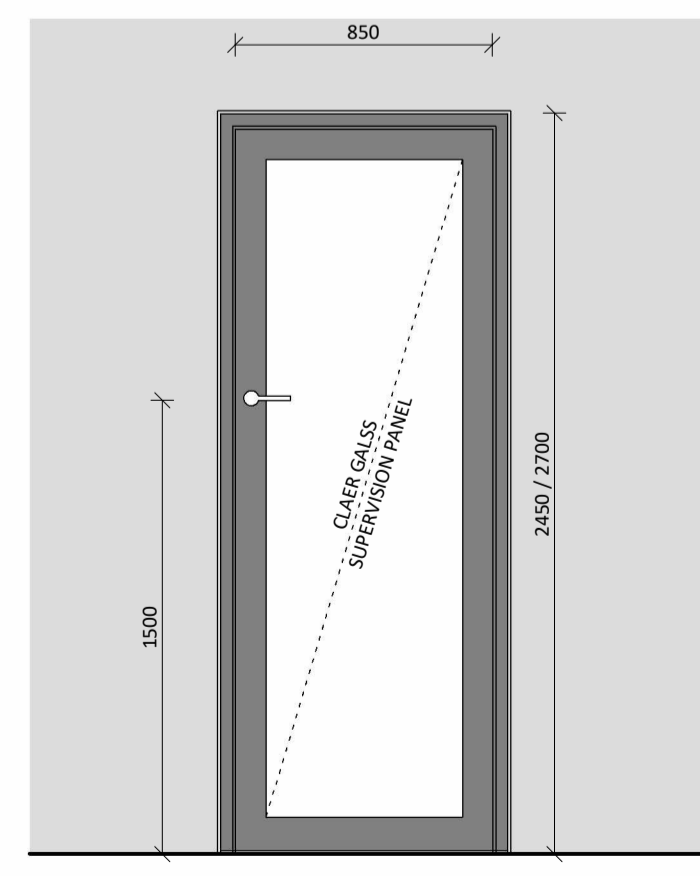
Sheet Size A1 **Scale** As indicated **L.G.A.** MAITLAND

Drawn By KG1/BR **Checked By** AS/SS **Date** XX.06.2024

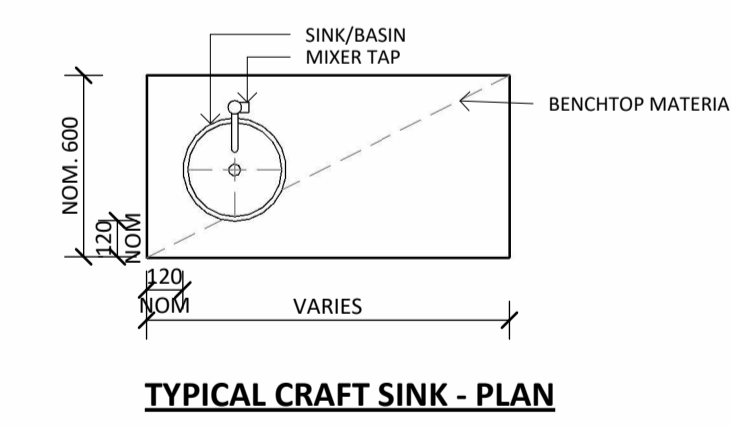


ARTIST'S IMPRESSION

- CB1
- XP1
- CL1
- XP2



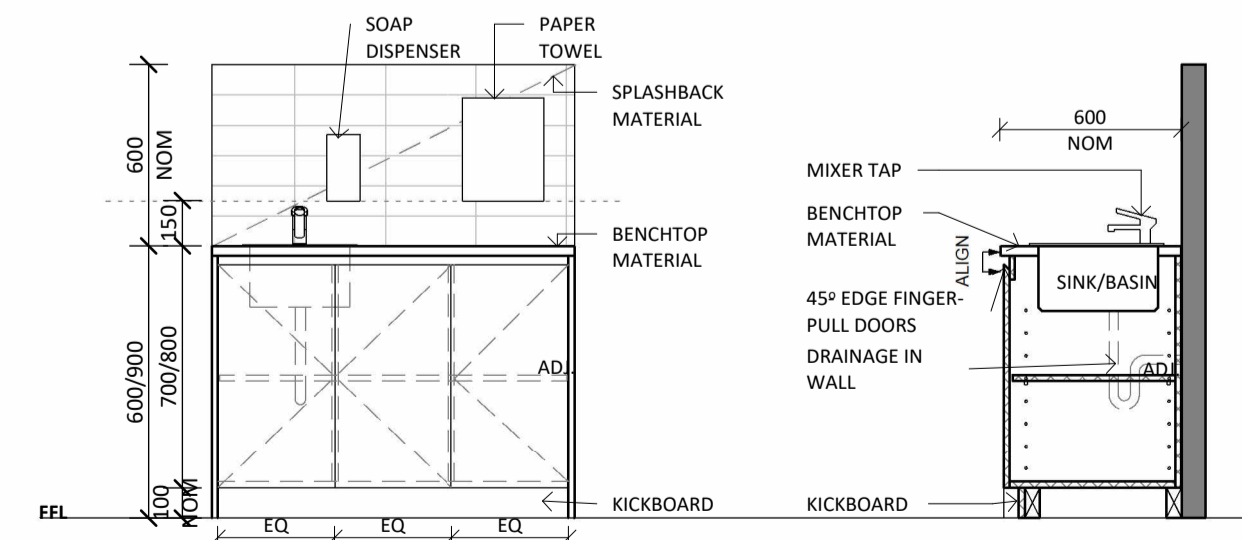
TYP GLASS DOORS TO COT ROOMS, JNR WC



TYPICAL CRAFT SINK - PLAN



NOTE: SIMILAR CRAFT SINK. IMAGE FOR JOINERY REFERENCE ONLY

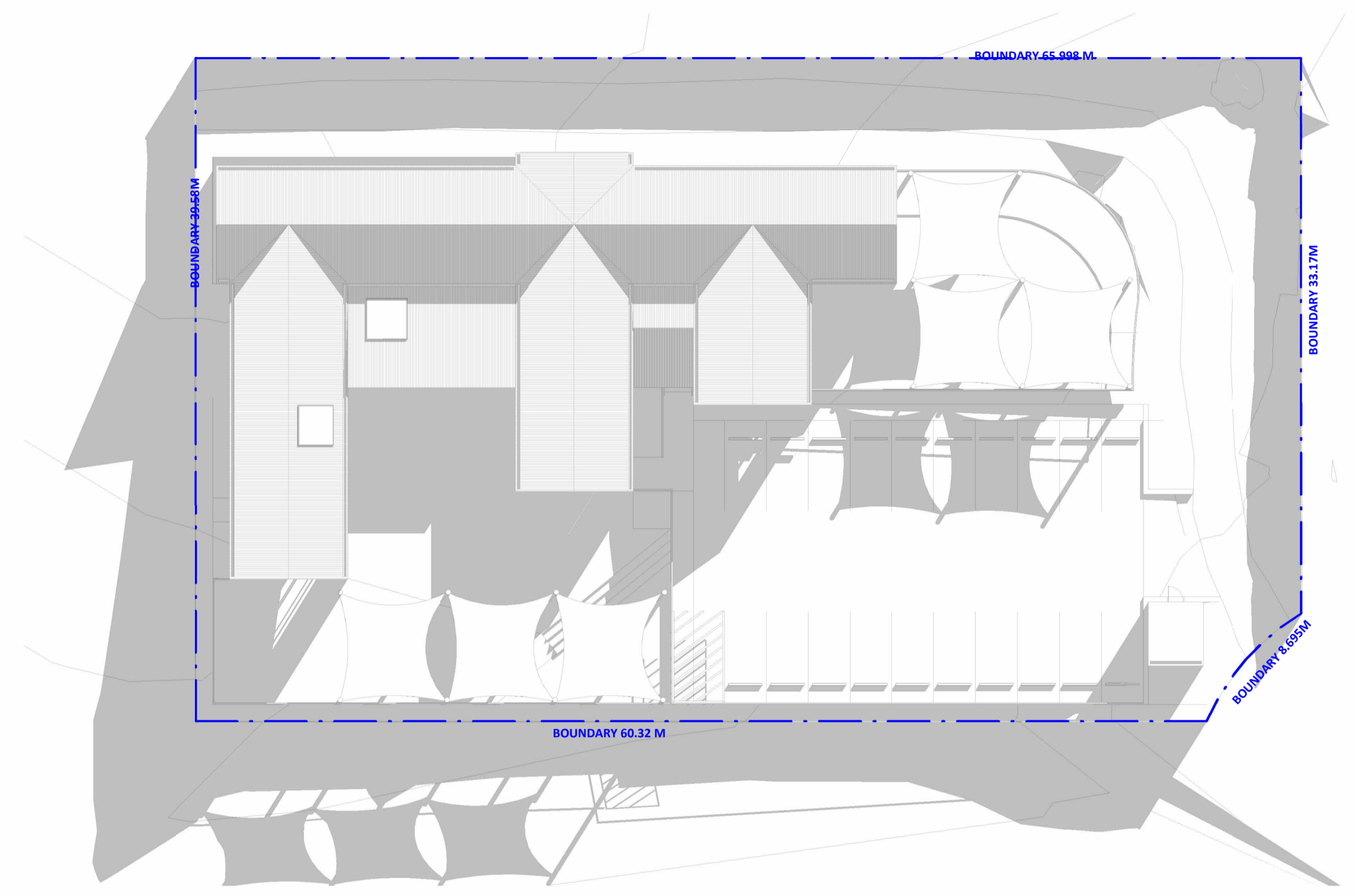


TYPICAL CRAFT SINK - ELEVATION

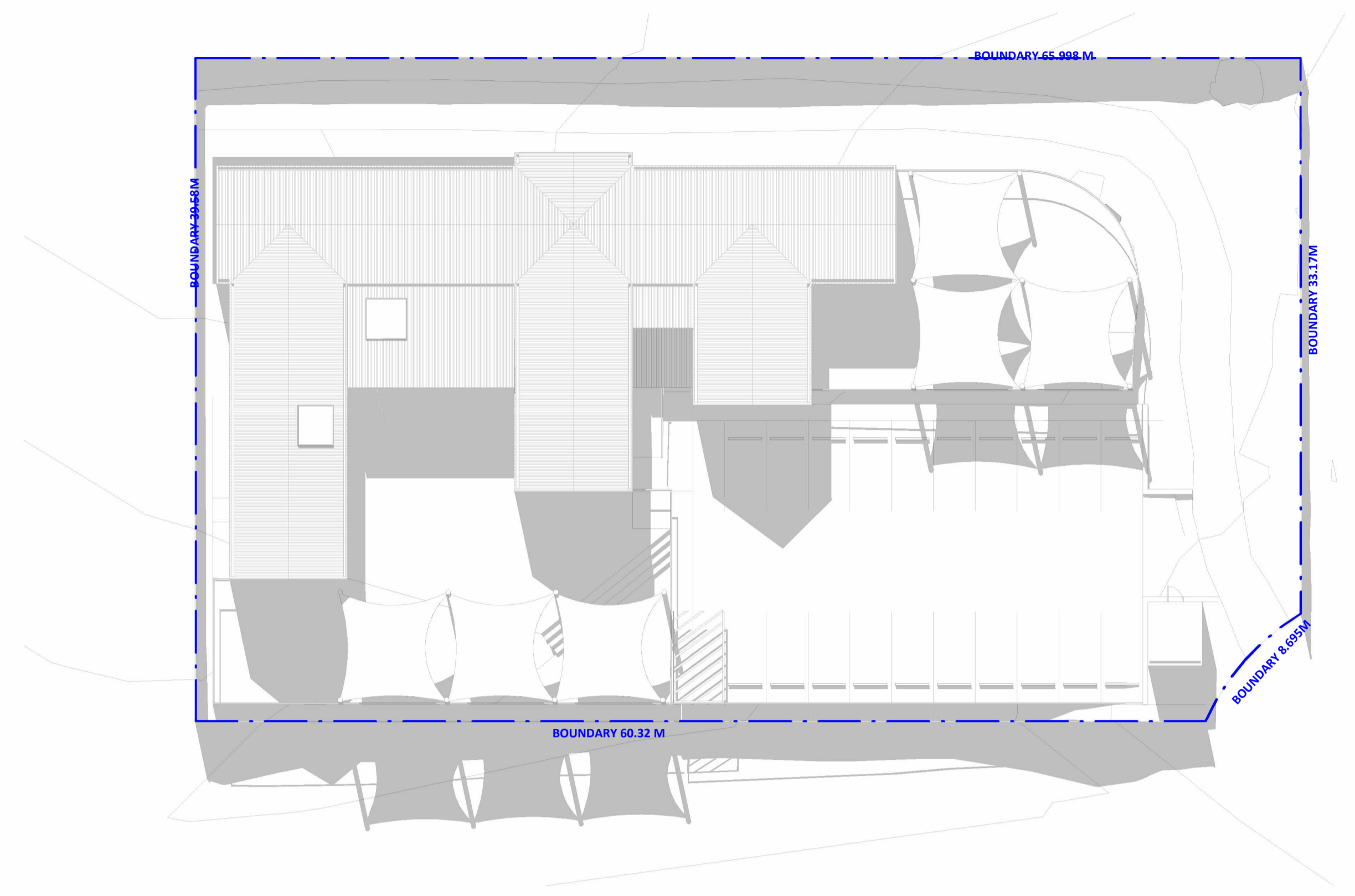
NOTE: PROVIDE MAGNETIC CHILDPROOF LOCKS TO ALL CABINETS IN INDOOR PLAY AREA (CRAFT SINKS & BOTTLE PREP.)

TYPICAL CRAFT SINK - SECTION

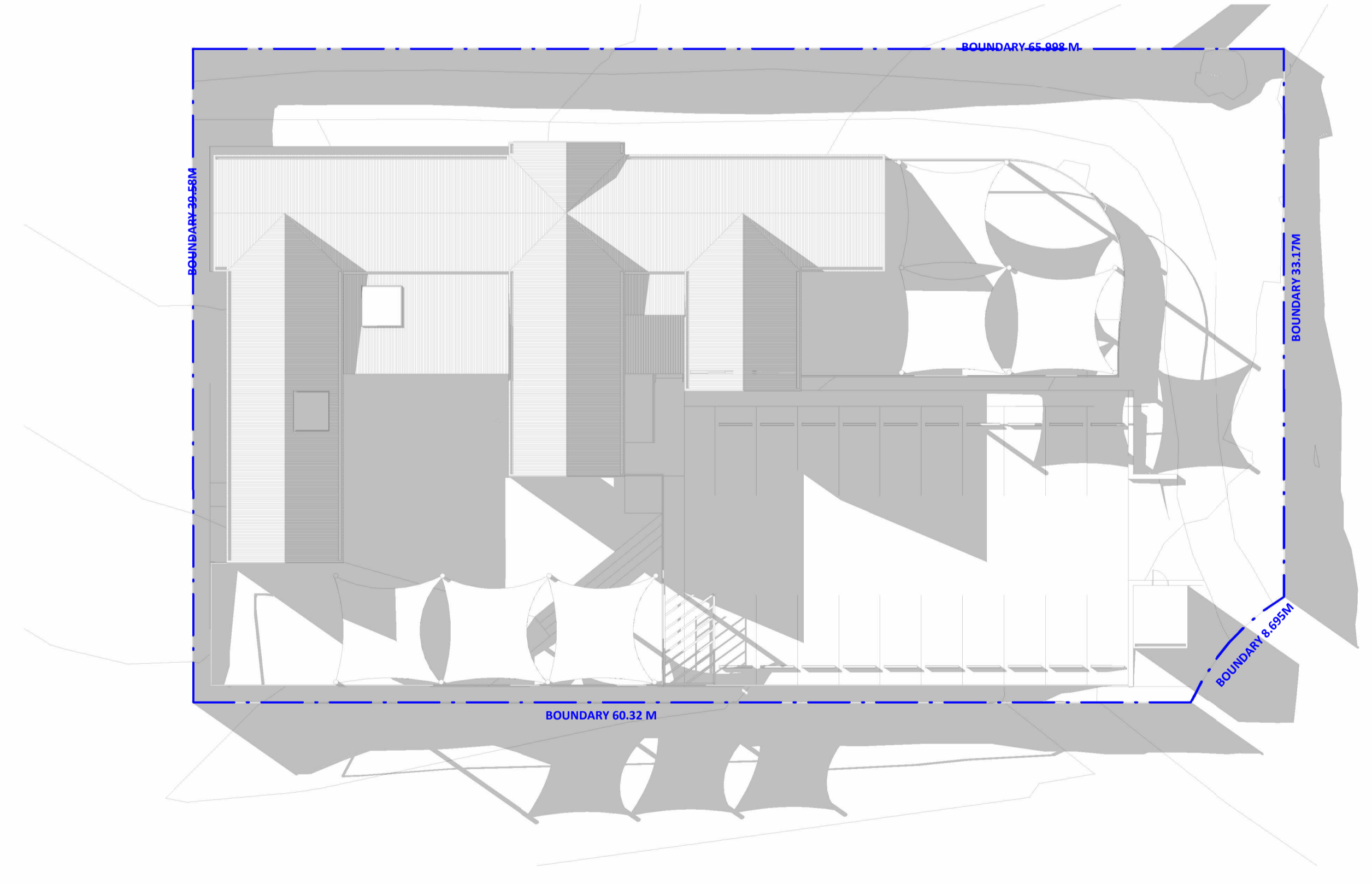
NOT FOR CONSTRUCTION



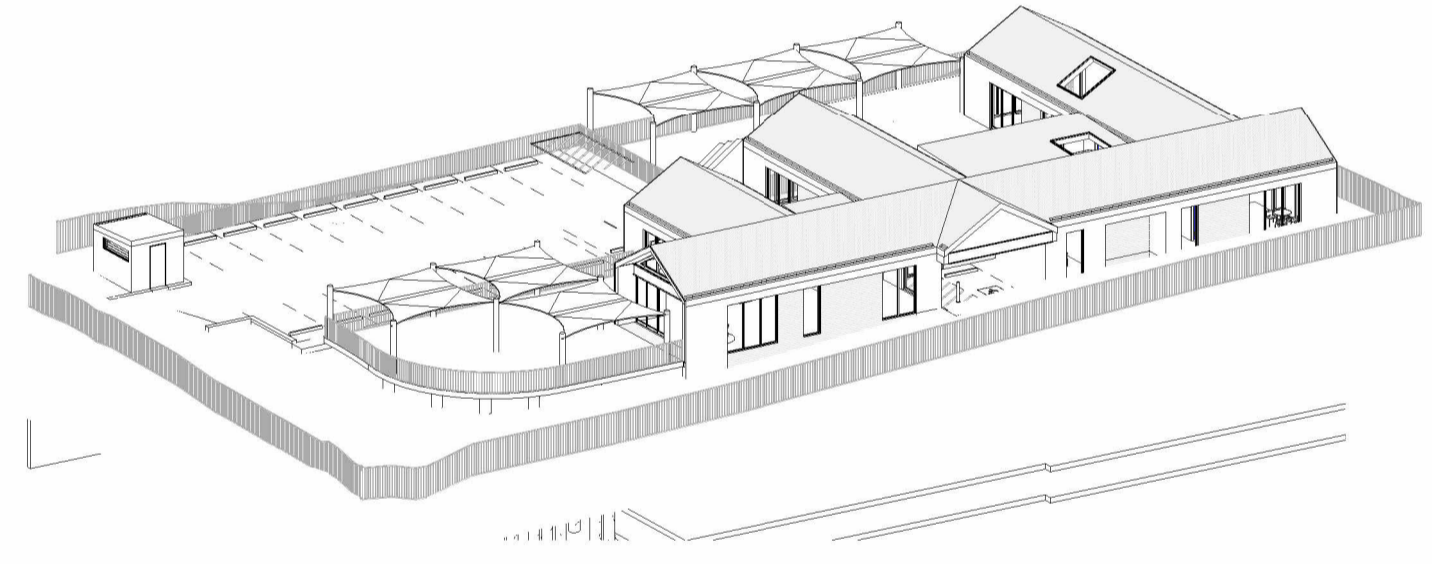
① SHADOW DIAGRAM-WINTER SOLSTICE - 21 JUNE - 9 AM
1:250



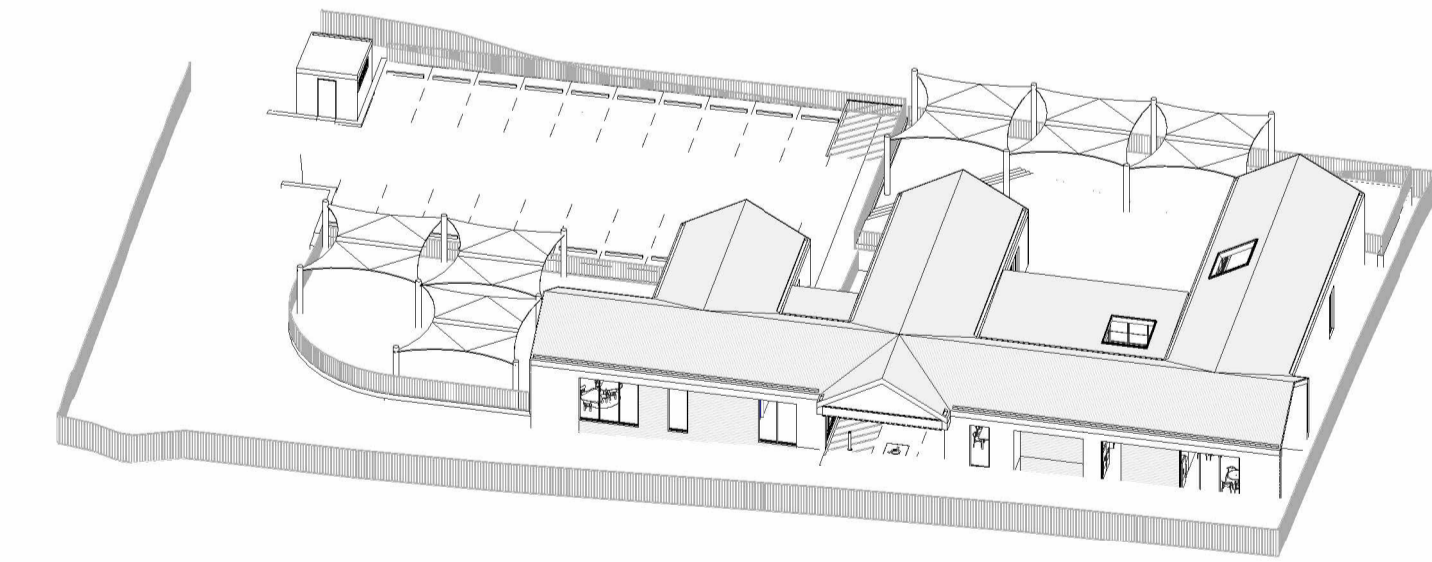
② SHADOW DIAGRAM-WINTER SOLSTICE - 21 JUNE - 12 PM
1:250



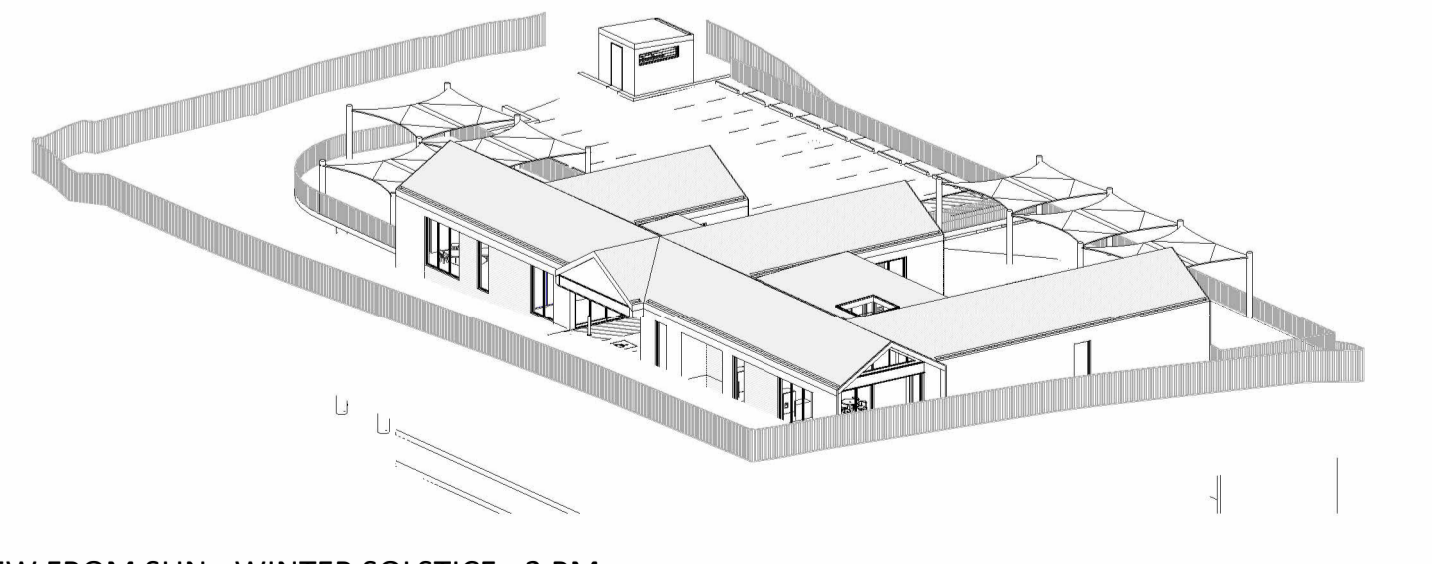
③ SHADOW DIAGRAM-WINTER SOLSTICE - 21 JUNE - 3 PM
1:250



④ VIEW FROM SUN - WINTER SOLSTICE - 9 AM



⑤ VIEW FROM SUN - WINTER SOLSTICE - 12 PM



⑥ VIEW FROM SUN - WINTER SOLSTICE - 3 PM

ISSUE	DATE	DESCRIPTION
A	XX.06.2024	ISSUED FOR DEVELOPMENT APPLICATION

ASSOCIATED CONSULTANTS	DESCRIPTION
ACOUSTIC	MULLER
CIVIL/FLOOR	IDEALCORP
TRAFFIC	PAVEY
WASTE	PAVEY
BUSHFIRE	FIREBIRD CO
PLANNER	LS

- NOTES**
- Any Discrepancies MUST be reported to the Architect.
 - All work to conform to relevant Australian Standards & Codes as applicable.
 - This drawing is copyright© and must NOT be copied or reused without authority from ArtMade Architects.
 - Contractors to check all dimensions on site prior to commencing Construction.
 - Do not scale from this drawing, use given written dimensions.
 - Drawing not for construction purposes.

CLIENT
S. PINGALA

ARCHITECT

ArtMade Architects
[507/50 Holt St, Surry Hills NSW 2010
[P: 02 8760 9300 | hello@artmade.com.au | www.artmade.com.au]

© COPYRIGHT
The copyright of this drawing together with any other documents prepared by ArtMade Architects (AMA) remains the property of AMA. AMA grants licence for the use of this document for the purpose for which it is intended. This licence is not transferable without permission from AMA. AMA Nominated Architect Sherif Saad. Registration No. 7867

PROJECT
CHILDCARE CENTRE

PROJECT ADDRESS
14 LAVENDER CLOSE, GILLIESTON HEIGHTS, NSW 2321



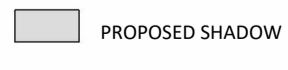
SHEET NAME
SHADOW DIAGRAMS & VIEW FROM SUN

ISSUED FOR DEVELOPMENT APPLICATION			
Project number	Sheet No.	Issue	Phase
24749	DA06.01	A	DA

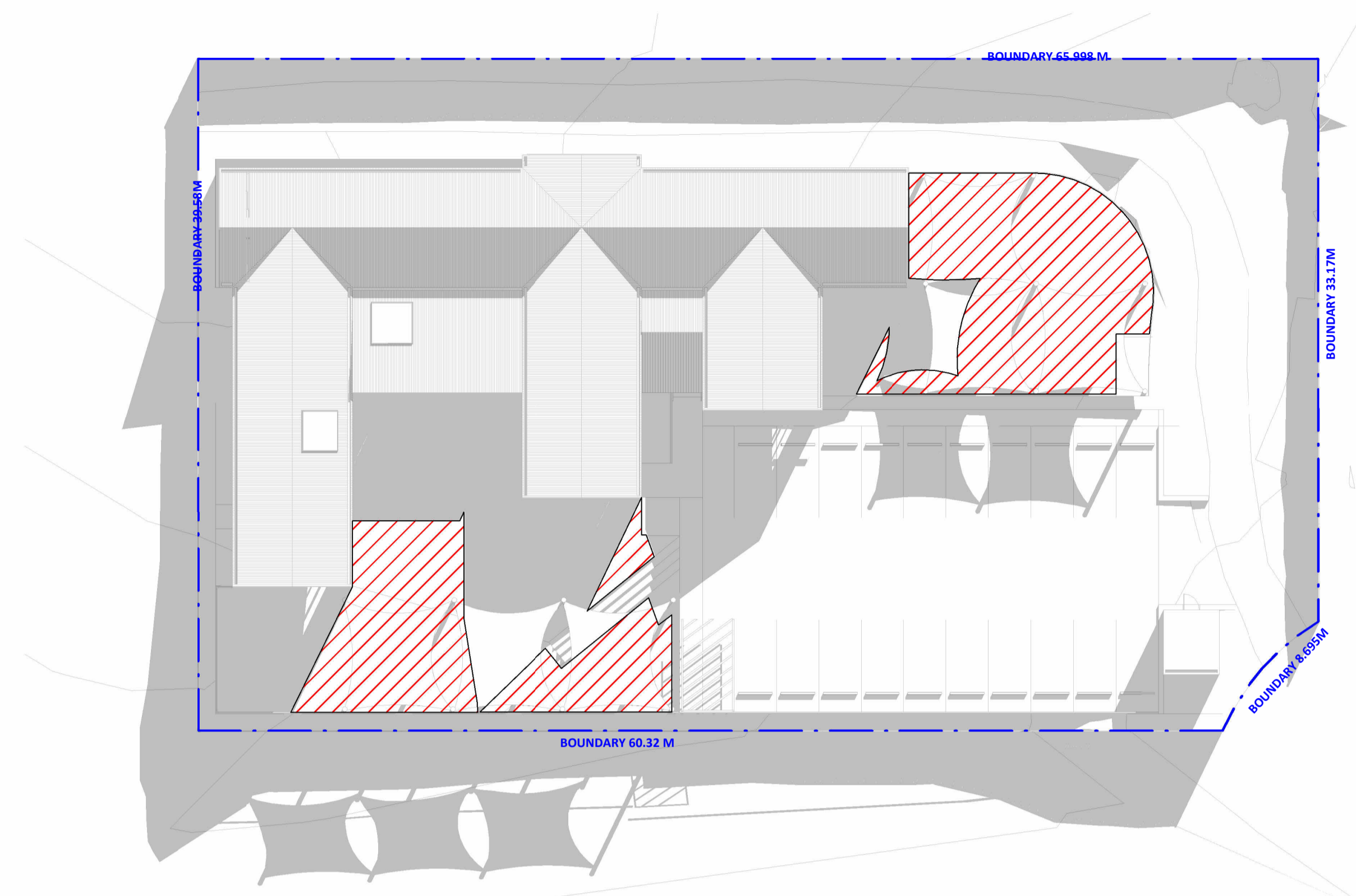
Sheet Size	Scale	L.G.A.
A1	As indicated	MAITLAND

Drawn By	Checked By	Date
KG1/BR	AS/SS	XX.06.2024

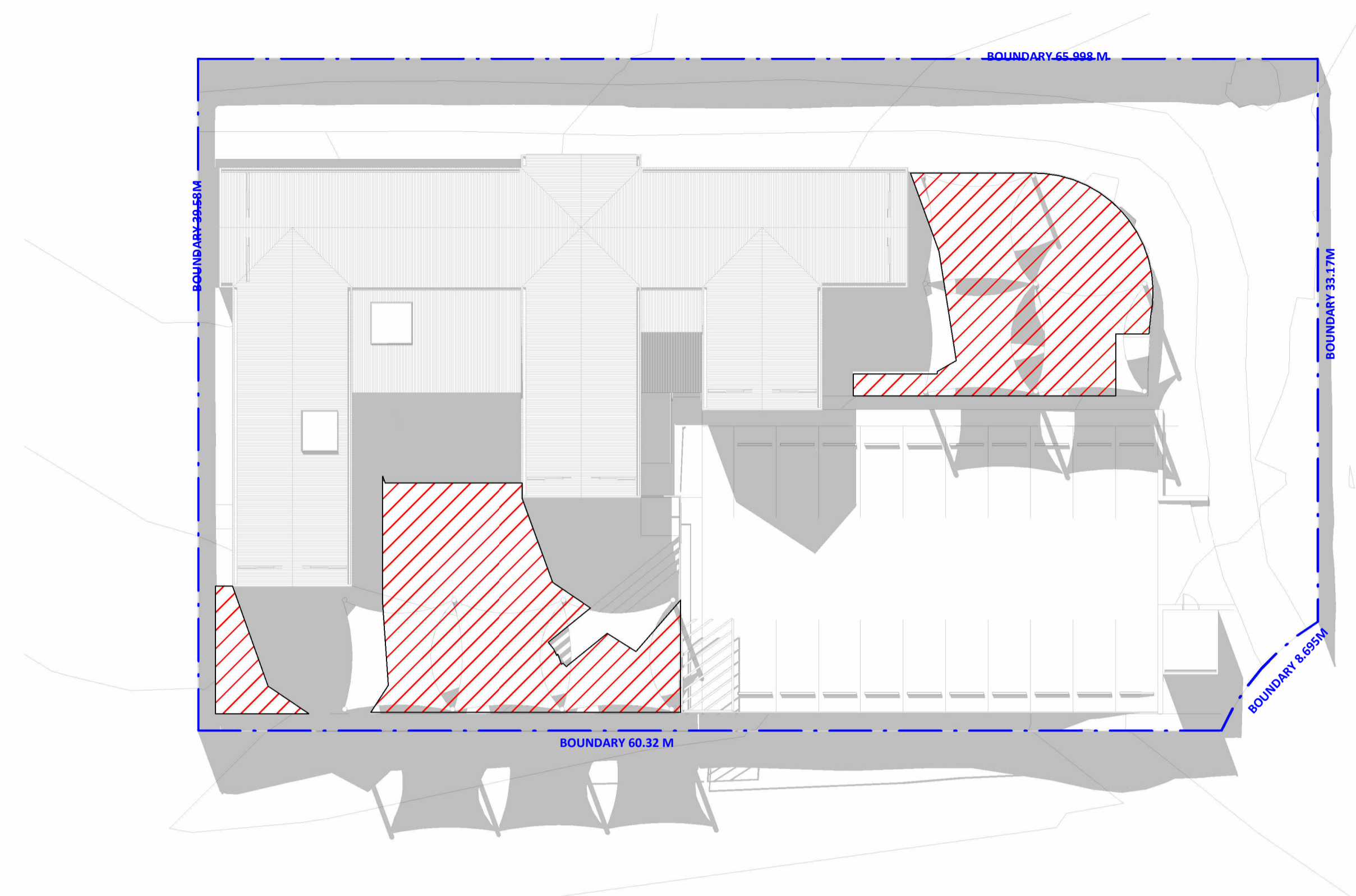
LEGEND

	NEIGHBOUR SHADOW
	EXISTING SHADOW
	PROPOSED SHADOW

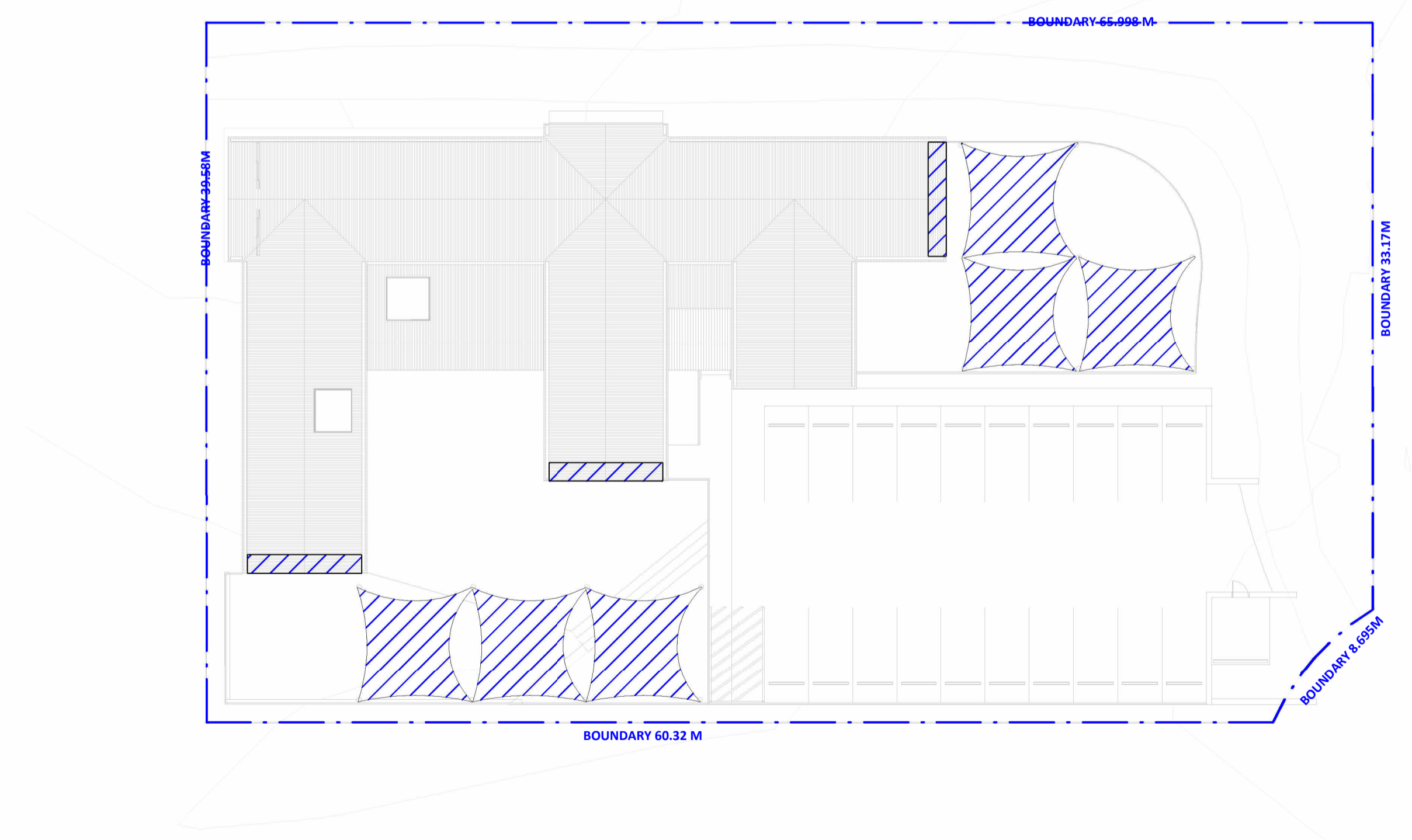
NOT FOR CONSTRUCTION



1 OUTDOOR SOLAR ACCESS - WINTER SOLSTICE - 21 JUNE - 09:30 AM
1:250





2 OUTDOOR SOLAR ACCESS - WINTER SOLSTICE - 21 JUNE - 12:30 PM
1:250



3 SHADE CALC GROUND FLOOR LEVEL
1:250

LEGEND

-  OUTDOOR PLAY AREA SOLAR ACCESS
-  COVERED OUTDOOR PLAY AREA

MIN REQ OUTDOOR PLAY AREA	=574M ²
MIN REQ SOLAR TO OUTDOOR PLAY AREA	=172.2M ² (30%)
WINTER SOLSTICE 09:30AM	=325.37M ² (56.6%)
WINTER SOLSTICE 12:30PM	=336.4M ² (58.5%)
SHADED OUTDOOR PLAY AREA	=194.75M ² (33.9%)

ISSUE	DATE	DESCRIPTION
A	XX.06.2024	ISSUED FOR DEVELOPMENT APPLICATION

ASSOCIATED CONSULTANTS	DESCRIPTION
ACOUSTIC	MULLER
GEOTECH	IDEALCORP
CIVIL/FLOOR	PAVEY
TRAFFIC	PAVEY
WASTE	PAVEY
BUSHFIRE	FIREBIRD CO
PLANNER	LS

- NOTES**
- Any Discrepancies MUST be reported to the Architect.
 - All work to conform to relevant Australian Standards & Codes as applicable.
 - This drawing is copyright© and must NOT be copied or reused without authority from ArtMade Architects.
 - Contractors to check all dimensions on site prior to commencing Construction.
 - Do not scale from this drawing, use given written dimensions.
 - Drawing not for construction purposes.

CLIENT

S. PINGALA

ARCHITECT



ArtMade Architects
1507/50 Holt St, Surry Hills NSW 2010
P: 02 8760 9300 | hello@artmade.com.au | www.artmade.com.au

© COPYRIGHT

The copyright of this drawing together with any other documents prepared by ArtMade Architects (AM) remains the property of AM. AM grants licence for the use of this document for the purpose for which it is intended. This licence is not transferable without permission from AM. AM Nominated Architect Sherif Saad. Registration No. 7867

PROJECT

CHILDCARE CENTRE

PROJECT ADDRESS

14 LAVENDER CLOSE, GILLIESTON HEIGHTS, NSW 2321

SHEET NAME

OUTDOOR PLAY AREA SOLAR/SHADE CALCULATIONS

ISSUED FOR DEVELOPMENT APPLICATION			
Project number	Sheet No.	Issue	Phase
24749	DA06.02	A	DA

Sheet Size	Scale	L.G.A.
A1	As indicated	MAITLAND

Drawn By	Checked By	Date
KG1/BR	AS/SS	XX.06.2024

NOT FOR CONSTRUCTION

APPENDIX B ASSET PROTECTION ZONES

APPENDIX 4

ASSET PROTECTION ZONE REQUIREMENTS

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

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

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

A4.1 Asset Protection Zones

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

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

An APZ provides:

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

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

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

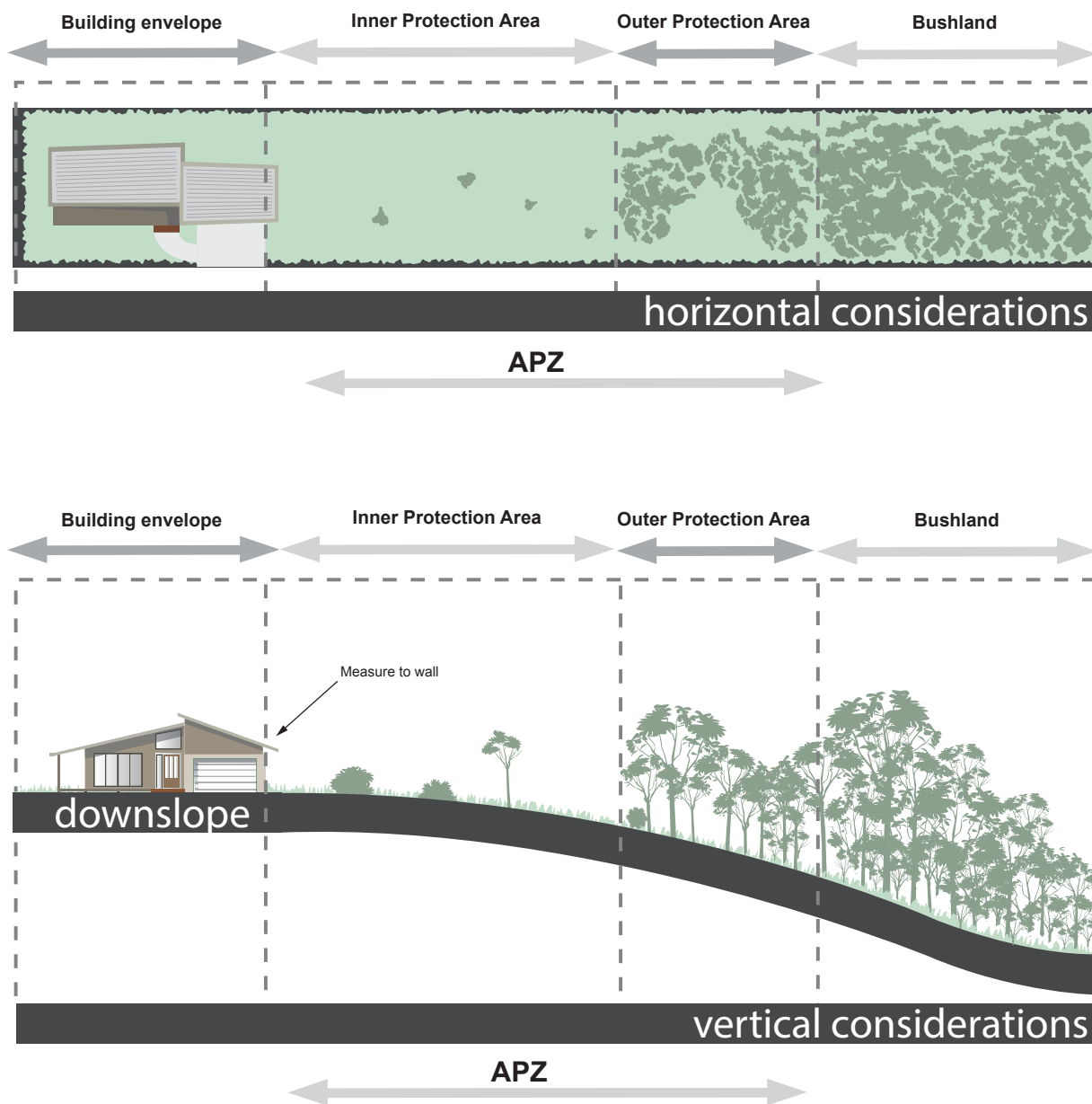
- direct flame contact on the building;
- damage to the building asset from intense radiant heat; and
- ember attack.

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

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

Figure A4.1

Typical Inner and Outer Protection Areas.



A4.1.1 Inner Protection Areas (IPAs)

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

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

When establishing and maintaining an IPA the following requirements apply:

Trees

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

Shrubs

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

Grass

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

A4.1.2 Outer Protection Areas (OPAs)

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

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

When establishing and maintaining an OPA the following requirements apply:

Trees

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

Shrubs

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

Grass

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

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

APPENDIX C WATER AND HYDRANT INFORMATION



Before You Dig Australia (BYDA) Location Information

Hunter Water Corporation
36 Honeysuckle Drive
NEWCASTLE NSW 2300

To:

Olivia Page
97 Scott Street
Newcastle NSW 2300

Enquiry Details	
Utility ID	80220
Job Number	36947767
Sequence Number	240814136
Enquiry Date	20/06/2024 11:32
Response	AFFECTED
Address	14 Lavender Cl Gillieston Heights
Location in Road	
Activity	Planning and Design

Enquirer Details	
Customer ID	3370632
Contact	Olivia Page
Company	
Email	olivia@firebirdeco.com.au
Phone	+61249103939

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.

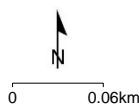
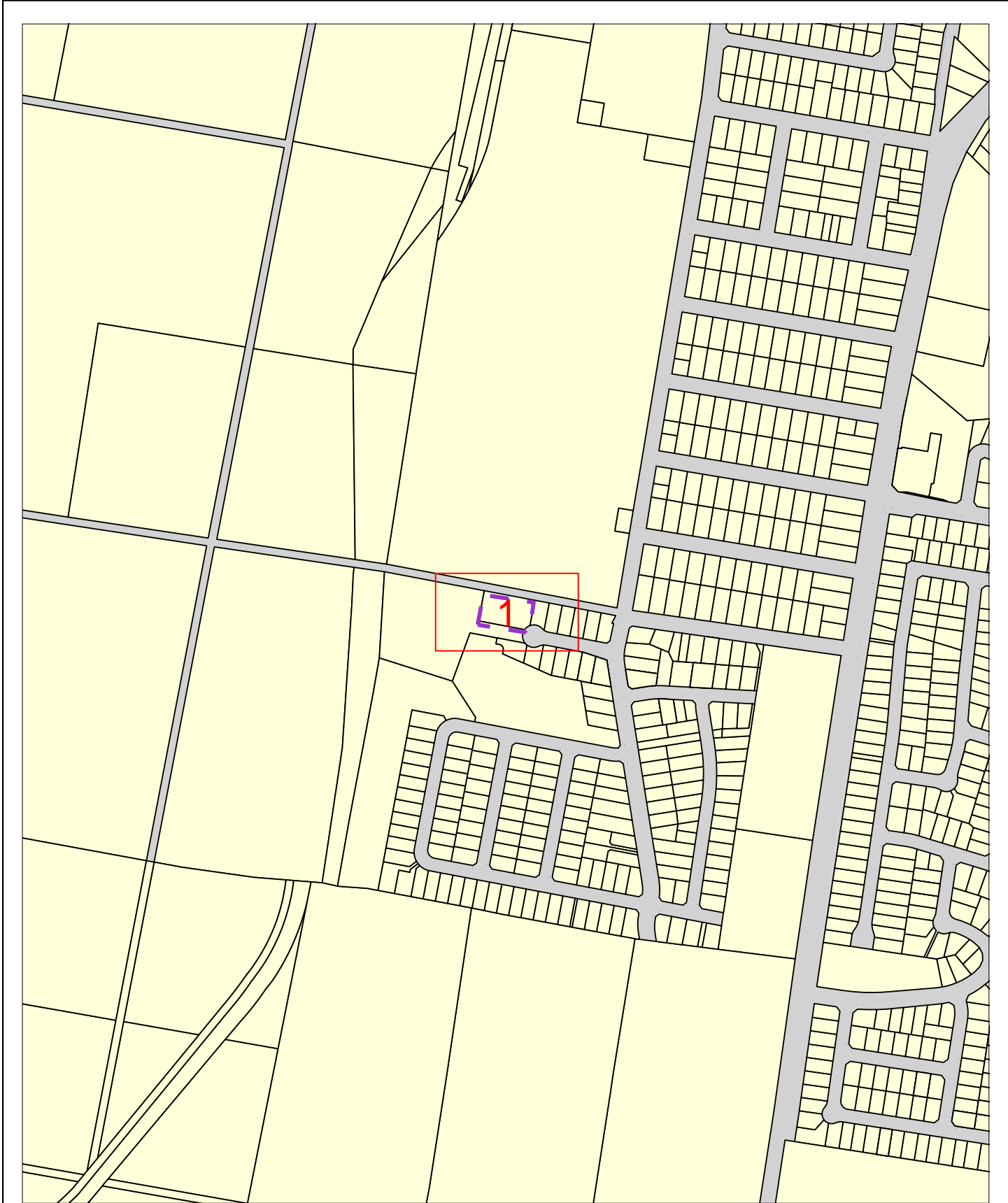
www.hunterwater.com.au

1300 657 000



Overview Map

Sequence No: 240814136
14 Lavender Cl Gillieston Heights



LEGEND:



Detail Map

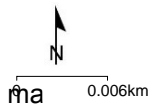
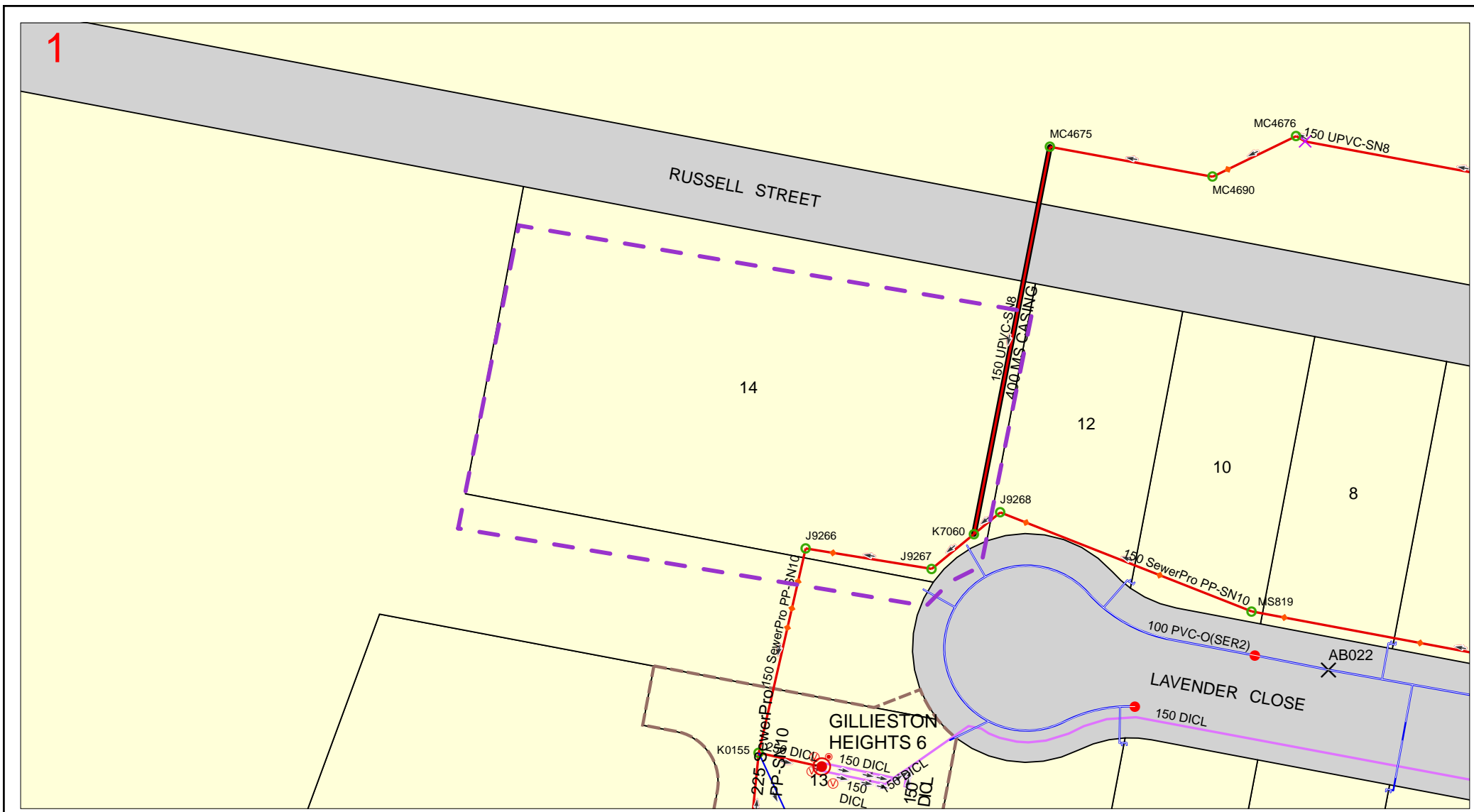


BYDADIA Work Area



Map 1

Sequence No: 240814136



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]



APPENDIX D PHOTOS OF MANAGED LAND



