CAMPBELLTOWN
CITY COUNCIL

LOCAL PLANNING PANEL

28 MAY 2025

MEETING NOTICE

Campbelltown City Council Local Planning Panel

The meeting of the Campbelltown City Council Local Planning Panel will be held via Teams on **Wednesday, 28 May 2025 at 3.00pm**.

MEETING AGENDA

1. ACKNOWLEDGEMENT OF LAND

I would like to acknowledge the Traditional Custodians, the Dharawal people, whose Lands we are now meeting on. I would like to pay my respects to the Dharawal Elders, past and present and all other Aboriginal people who are here today.

2. APOLOGIES

3. DECLARATIONS OF INTEREST

General Information

The role of the Local Planning Panel (the Panel) is to determine certain types of development applications and provide advice on planning proposals.

Public Involvement

When the Panel is holding a formal meeting to consider a report relating to a development application, the Panel will receive and consider verbal submissions from the applicant and from any person that made a written submission in regard to that development application (during the notification or exhibition period), provided that they have registered to speak by midday on the day prior to the meeting. In some circumstances where there have been no submissions received a development application may be determined by the Panel through the electronic circulation of documents rather than by holding a formal meeting. In these circumstances there is no opportunity to address the Panel.

As required by the Minister's Local Planning Panels Direction, when considering a planning proposal, the role of the Panel is to provide advice to Council. The Panel is the first step in the evaluation process before Council and the State Government (through the Gateway process) decide whether to support a formal public exhibition or consultation period on the proposal. It is possible that the proposal will be modified before or as part of the consideration by Council and/or through the Gateway process. The Panel may, upon request, consider verbal submissions made in relation to the planning proposal from the applicant, if there is one.

Any person who makes a verbal submission to the Panel must identify themselves and must also accept that their presentation will include their images and sounds and will be webcast and stored on Council's website for future viewing. Any person who makes a verbal submission to the Panel must also declare before their submission any political contributions or donations they have made over the last four years exceeding $1,000 to any political party or candidate who contested the last Ordinary Election of Council.

If you would like to make a verbal submission to the Panel, it is necessary to submit the "request to address – community access to meetings" form available on Council's website by midday the day prior to the meeting. The Panel Chair will invite the registered speakers to speak at the appropriate time in the agenda. Verbal submissions to the Panel will be limited to 5 minutes each. The Chairperson has the discretion to extend the period if considered appropriate. Panel members will have the opportunity to ask you questions at the end of your submission.

Outcomes from the meeting

After the Panel has considered submissions made by interested parties, the Panel will close the public meeting to deliberate on the items reported to the Panel.

If the item before the Panel is a development application, the Panel will either determine the development application by approval with conditions or refusal or defer determination by seeking additional information.

If the item before the Panel is a planning proposal, the Panel will document its advice to the Council.

The Panel's decision/advice become public information when the minutes are published on the Council website usually by the Friday following the Local Planning Panel meeting.

Should you require information about the Panel, or any item listed on the agenda, please contact Council's Planning and Development team on 4645 4575 between 8.30 am and 4.30pm on weekdays.

4. REPORTS

4.1 Construction of New Single Storey Dwelling with Attached Secondary Dwelling - 70 Frampton Drive, Gilead

Community Strategic Plan

Objective	Strategy
2 Places For People	2.3.1 Ensure all people in Campbelltown have access to safe, secure, and affordable housing

Delivery Program

Principal Activity
PA Building Development and Controls

Referral Criteria

In accordance with section 4.8 of *Environmental Planning and Assessment Act 1979* and the Local Planning Panels Direction this application is to be determined by the Local Planning Panel as prescribed in Schedule 1 of that direction due to a prescribed conflict of interest.

The land on which the proposed development is to be carried out is owned by a staff member of Campbelltown City Council.

Executive Summary

- Council has received a development application for the construction of a single storey dwelling and attached secondary dwelling at 70 Frampton Drive, Gilead.
- The subject site is zoned R2 low Density Residential under the Campbelltown Local Environmental Plan 2015.
- The development application was notified from 10 April 2025 to 2 May 2025, as required by the Campbelltown Community Participation Plan. No submissions were received.
- The application has been assessed against Section 4.15 of the *Environmental Planning and Assessment Act 1979*, and it is recommended that the application be approved, subject to the recommended conditions of consent.

Officer's Recommendation

That development application 1493/2025/DA-DS for the construction of a single storey dwelling and attached secondary dwelling at 70 Frampton Drive, Gilead be approved, subject to the recommended conditions listed in attachment 1.

Purpose

To assist the Panel in its determination of the subject application in accordance with the provisions of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Property Description	Lot 1146 DP 1242642 70 Frampton Drive, Gilead
Application No	1493/2025/DA-DS
Applicant	McDonald Jones Homes
Owner	Mr Md Abutalha Talukdar and Ms Mst Alma Malia
Provisions	State Environmental Planning Policy (Sustainable Buildings) 2022 State Environmental Planning Policy (Resilience and Hazards) 2021 State Environmental Planning Policy (Biodiversity and Conservation) 2021 State Environmental Planning Policy (Housing) 2021 Campbelltown Local Environmental Plan 2015 Campbelltown (Sustainable City) Development Control Plan 2015
Date Received	10 April 2025

The Site

The subject site is known as 70 Frampton Drive, Gilead, and is legally identified as Lot 1146 DP 1242642. The site area is approximately 512 m^2. The site is a rectangular shaped allotment with a primary frontage to Frampton Drive.

The site is currently vacant and is part of the Mount Gilead Urban Release area.

Surrounding lots and the greater residential area of the Mount Gilead Urban Release area are vacant. The surrounds include RE1, RE2, MU1 and R2 and R3 zoned land and is within close access to Appin Road.

The site has a cross slope of approximately 1.13 m from south-eastern rear corner to north-western front corner.

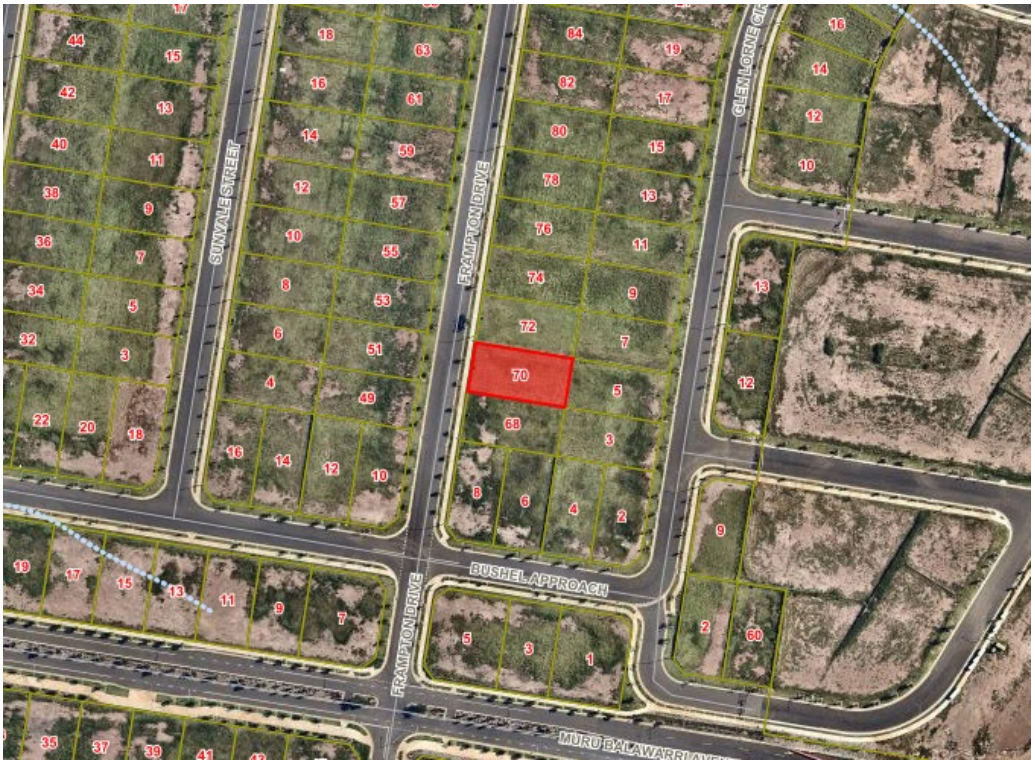


Figure 1 – Aerial image of the subject site (in red) and surrounding area

Proposal

The proposal includes:

- Construction of a single storey dwelling and attached secondary dwelling
- Cut and fill to achieve a level building foundation and the construction of a slab
- Stormwater and drainage work

Report

1. Vision

Campbelltown 2032 is the Community Strategic Plan for the City of Campbelltown. The Strategic Plan addresses 5 key strategic outcomes that Council and other stakeholders will work to achieve over the next 10 years:

- Outcome 1: Community and belonging
- Outcome 2: Places for people
- Outcome 3: Enriched natural environment
- Outcome 4: Economic prosperity
- Outcome 5: Strong leadership

The proposed development is consistent with Outcome 2 in that the proposed development will provide safe, secure and affordable housing for people in Campbelltown.

2. Planning Provisions

2.1 State Environmental Planning Policy (Sustainable Buildings) 2022

A multi-dwelling BASIX certificate has been accompanied with the application (Certificate Number – 1782461M). The requirements outlined in the BASIX certificate have been satisfied in the design of the proposal. A condition has been imposed to ensure such commitments are fulfilled during the construction of the development.

2.2 State Environmental Planning Policy (Housing) 2021

Under Clause 52 a consent authority must not grant development consent to which this Part applies unless:

a) no dwellings, other than the principal dwelling and the secondary dwelling, will be located on the land, and

b) the total floor area of the principal dwelling and the secondary dwelling is no more than the maximum floor area permitted for a dwelling house on the land under another environmental planning instrument, and

c) the total floor area of the secondary dwelling is—

(i) no more than 60 m^2, or

(ii) if a greater floor area is permitted for a secondary dwelling on the land under another environmental planning instrument—the greater floor area.

The proposal is consistent provisions of Clause 52 of SEPP Housing 2021 for the following reasons:

- A principal dwelling and secondary dwelling are proposed on the land.
- The proposal does not exceed the maximum floor area.
- The secondary dwelling is no more than 60 m^2.

2.3 State Environmental Planning Policy (Resilience and Hazards) 2021

Under Clause 4.6 a consent authority must not consent to the carrying out of any development on land unless:

a) It has considered whether the land is contaminated, and

b) If the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and

c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

The use of the site as a residential area has only been established in recent years. Historically the area has been vacant and used for primarily agricultural purposes. The area is currently part of the new urban release area (Figtree Hill) in Gilead and any required remediation works required were carried out prior to the issue of the subdivision certificate.

The site is therefore considered to be suitable in its current form for the proposed construction of a single storey dwelling and secondary dwelling and the requirements of the State Environmental Planning Policy (Resilience and Hazards) 2021 have been satisfied.

2.4 State Environmental Planning Policy (Biodiversity and Conservation) 2021

The subject land is located within the Hawksbury-Nepean Catchments and as such Chapter 6 (Water Catchments) of State Environmental Planning Policy (Biodiversity and Conservation) 2021 applies to the application. Chapter 6 (Water Catchments) of State Environmental Planning Policy (Biodiversity and Conservation) 2021 generally aims to maintain and improve the water quality and river flows of the Hawksbury-Nepean Catchments and its tributaries.

Stormwater is proposed to be stored in a rainwater tank with any overflow discharged to the stormwater kerb outlet on Frampton Drive.

The proposal is unlikely to have a negative impact on the environmental quality of the Hawkesbury-Nepean Catchments due to the development being minor in nature and its ongoing residential use.

3. Planning Assessment

3.1 Campbelltown Local Environmental Plan 2015

The subject site is zoned R2 Low Density Residential under the provisions of Campbelltown Local Environmental Plan (CLEP 2015). The objectives of the R2 zone

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To enable development for purposes other than residential only if that development is compatible with the character of the living area and is of a domestic scale.
- To minimise overshadowing and ensure a desired level of solar access to all properties.
- To facilitate diverse and sustainable means of access and movement.

The proposed development is defined as a dwelling and secondary dwelling. Dwelling houses are permissible with consent within an R2 zone under CLEP 2015 and secondary dwellings are permissible with consent under the provisions of the SEPP Housing 2021.

The proposal is considered acceptable having regard to the objectives of the zone.

Clause 4.3 Height of Building

Clause 4.3 provides that the height of a building on any land must not to exceed the maximum height shown for the land on the Height of Building Map. The Height of Building Map identifies a maximum height of 9 m for the subject site. The proposal has a maximum height of 5.9 m which is below the prescribed height limit and complies with this clause.

Clause 4.3A Height Restriction for Certain Residential Accommodation

Clause 4.3A provides that the height for certain residential accommodation must not to exceed 2 storeys. The proposal does not exceed 2 storeys and complies with this clause.

Clause 4.4 Floor Space Ratio

Clause 4.4, subclause 2B provides that floor space ratio (FSR) does not apply to land identified as "Mount Gilead Urban Release Area" on the Urban Release Area Map. The subject site is located within the Mount Gilead Urban Release Area. The proposal complies with this clause.

Clause 5.10 Heritage Conservation

The site is not listed as a heritage item or is within a heritage conservation area.

A search of the Aboriginal Heritage Information Management System (AHIMS) was undertaken revealing no known Aboriginal sites, places, or items within the site.

Clause 5.21 Flood Planning

The site is not subject to flood planning controls.

Clause 7.1 Earthworks

Clause 7.1(3) of the CLEP 2015 states:

3) In deciding whether to grant development consent for earthworks (or for development involving ancillary earthworks), the consent authority must consider the following matters—

   a) The likely disruption of, or any detrimental effect on, drainage patters and soil stability in the locality of the development

   b) The effect of the development on likely future use or redevelopment of the land

   c) The quality of the fill or the soil to be excavated, or both,

   d) The effect of the development on the existing and likely amenity of adjoining properties,

   e) The source of any fill material and the destination of any excavated material,

   f) The likelihood of disturbing relics,

g) The proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area, and

h) Any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.

The proposed development involves earthworks of up to 470 mm in cut and up to 600 mm in fill. The development has been accompanied with a geotechnical report. The proposed earthworks will be contained within the site and is unlikely to result in adverse impact on soil stability or stormwater flow. Further, no adverse impacts on the amenity of adjoining properties are envisaged.

A condition is recommended to ensure any imported fill is of an appropriate quality.

The proposed works are considered satisfactory with respect to clause 7.1 of CLEP 2015.

Clause 7.4 Salinity

Salinity considerations under the Clause 7.4(3) of CLEP 2015 are as follows:

3) In deciding whether to grant development consent for development on land to which this clause applies, the consent authority must consider the following—

a) Whether the development is likely to have any adverse impact on salinity processes on the land,

b) Whether salinity is likely to have an impact on the development, and

c) Any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.

The subject lot has been identified as having low to moderate salinity potential. Salinity is not expected to adversely impact the development, nor is the development likely to affect salinity levels.

Clause 7.10 Essential Services

The consent authority must be satisfied that certain essential services are available, or can be made available, to development, including servicing access to water, electricity, sewage, stormwater drainage, vehicular access, telecommunication, and natural gas.

The site has access to the required essential services.

3.2 Section 4.15(1)(a)(ii) The Provisions of any Draft Provisions

No draft provisions are relevant to the application.

3.3 Section 4.15(1)(a)(iii) The Provisions of any Development Control Plan

The provisions of the Campbelltown (Sustainable City) Development Control Plan 2015 (SCDCP) applies to the subject land. An assessment against Volume 1 Part 2 - Requirements Applying to

All Types of Development, Part 3 - Low and Medium Density Residential Development, and Volume 2 Part 7 – Mount Gilead DCP, has been undertaken. The proposed development complies with the SCDCP, with a full assessment included in attachment 2 to this report.

3.4 Section 4.15(1)(a)(iiia) The provisions of any Planning Agreement

The proposed development is not subject to the provisions of a planning agreement pursuant to Section 7.4 of the EP&A Act.

3.5 Section 4.15(1)(a)(iv) The provisions of the Regulations

Applicable regulation considerations including compliance with the Building Code of Australia, compliance with the *Home Building Act*, PCA appointment, notice of commencement of works, sign on work sites, critical stage inspections and records of inspection have been addressed by appropriate consent conditions.

3.6 Section 4.15 (1)(b) The Likely Impacts of the Development

Section 4.15(1)(b) of the EP&A Act requires Council to assess the development's potential impacts on the natural and built environment, as well as potential social and economic impacts.

The proposed development is not considered to have a significantly adverse impact on the natural environment. The proposed development provides an appropriate and sustainable use of the site and in a built form that is consistent with the desired future character of the locality.

Having regard to social and economic impacts generated by the development, the proposed construction and use as a dwelling and secondary dwelling will contribute to the provision of housing choice within the Campbelltown locality.

The construction phases of the development will have minor short term economic benefits for the locality, through the generation of employment.

3.7 Section 4.15 (1)(c) The suitability of the development

Section 4.15(1)(c) of the EP&A Act requires Council to assess the suitability of the site for the proposed development.

The proposed development is of a scale and design that is suitable for the site. The proposal responds well to site conditions in terms of its size, shape, and topography.

Constraints or hazards identified (including bushfire prone land and mine subsidence) on site, have been accompanied with the relevant approvals and supporting documentation to support the suitability of the site for the proposed development.

3.8 Section 4.15(1)(e) Public Interest

The proposed development has addressed the requirements of the relevant planning instruments and development controls including the objectives of the R2 Low Density Residential zone. The proposed development has demonstrated that the site is suitable for the proposed development.

The proposed development has addressed the requirements of the relevant planning instruments and development controls including the objectives of the zone.

3.9 Contributions

Section 7.11 contributions are applicable to this development and have been included in the recommended conditions of consent.

4. Public Participation

Section 4.15(1)(d) of the EP&A Act require that the consent authority must consider any submissions made in relation to a development proposal.

The application was publicly exhibited for 21 days in accordance with the Campbelltown Community Participation Plan 2018, between 10 April 2025 and 2 May 2025, and no submissions were received.

Conclusion

The subject development application (1493/2025/DA-DS) proposing the construction of a single storey dwelling and attached secondary dwelling at 70 Frampton Drive, Gilead has been assessed under the heads of consideration of Section 4.15 of the *Environmental Planning and Assessment Act 1979*.

The proposed development is consistent with the aim and objectives of Council Community Strategic Plan Campbelltown 2032, which outlines the long-term vision for Campbelltown and the Macarthur region.

The proposed use as a dwelling house and secondary dwelling is permissible under Campbelltown Local Environmental Plan 2015 and the provisions of the SEPP Housing 2021. In assessing the development application against the development standards and objectives contained within the Campbelltown Local Environmental Plan 2015 and the Campbelltown (Sustainable City) Development Control Plan 2015, the proposal satisfies the requirements, subject to the recommended conditions of consent.

Attachments

4.1.1 Recommended Conditions of Consent (contained within this report)
4.1.2 Compliance Table (contained within this report)
4.1.3 Architectural Plans (contained within this report)
4.1.4 Schedule of Colours, Materials and Finishes (contained within this report)
4.1.5 Landscape Plan (contained within this report)
4.1.6 Survey Plan (contained within this report)
4.1.7 Bushfire Report (contained within this report)
4.1.8 Acoustic Report (contained within this report)
4.1.9 Geotechnical Report (contained within this report)
4.1.10 Mine Subsidence Stamped Plan (due to confidentiality) (distributed under separate cover)
4.1.11 Floor Plan (due to confidentiality) (distributed under separate cover)

Reporting Officer

Manager Development Assessment

ATTACHMENT 1

1493/2025/DA-DS
Recommended Conditions of Consent

Terms and Reasons for Conditions
Under section 88(1)(c) of the EP&A Regulation, the consent authority must provide the terms of all conditions and reasons for imposing the conditions other than the conditions prescribed under section 4.17(11) of the EP&A Act. The terms of the conditions and reasons are set out below.

GENERAL CONDITIONS

1. Approved plans and supporting documentation

Development must be carried out in accordance with the following approved plans and documents, except where the conditions of this consent expressly require otherwise.

Approved plans				
Plan no.	Revision no.	Plan title	Drawn by	Date of plan
3	N/A	Site Plan	McDonald Jones	27/03/2025
5	N/A	Ground Floor Plan	McDonald Jones	27/03/2025
6	N/A	Roof Plan	McDonald Jones	27/03/2025
7	N/A	Window and Door Schedule	McDonald Jones	27/03/2025
8	N/A	Elevations/Section	McDonald Jones	27/03/2025
9	N/A	Elevations	McDonald Jones	27/03/2025

Approved documents			
Document title	Version no.	Prepared by	Date of document
Acoustic Report	N/A	Lendlease Communities	19/01/2028
Bushfire Report	70Fra-01	Bushfire Consultancy Australia	18/03/2025
Geotechnical Report	25/0105	Geotechnics Pty Ltd	13/01/2025

In the event of any inconsistency between the approved plans and documents, the approved plans prevail.

In the event of any inconsistency with the approved plans and a condition of this consent, the condition prevails.

Condition reason: To ensure all parties are aware of the approved plans and supporting documentation that applies to the development.

D.01.101.D

2. Erection of signs

1. This section applies to a development consent for development involving building work, subdivision work or demolition work.

2. It is a condition of the development consent that a sign must be erected in a prominent position on a site on which building work, subdivision work or demolition work is being carried out—

   a. showing the name, address and telephone number of the principal certifier for the work, and

	b. showing the name of the principal contractor, if any, for the building work and a telephone number on which the principal contractor may be contacted outside working hours, and c. stating that unauthorised entry to the work site is prohibited. 3. The sign must be— a. maintained while the building work, subdivision work or demolition work is being carried out, and b. removed when the work has been completed. 4. This section does not apply in relation to— a. building work, subdivision work or demolition work carried out inside an existing building, if the work does not affect the external walls of the building, or b. Crown building work certified to comply with the Building Code of Australia under the Act, Part 6. *Condition reason: Prescribed condition under section 70 of the Environmental Planning and Assessment Regulation 2021.* D.01.070.P
3.	**Notification of Home Building Act 1989 requirements** 1. This section applies to a development consent for development involving residential building work if the principal certifier is not the council. 2. It is a condition of the development consent that residential building work must not be carried out unless the principal certifier for the development to which the work relates has given the council written notice of the following— a. for work that requires a principal contractor to be appointed— i. the name and licence number of the principal contractor, and ii. the name of the insurer of the work under the Home Building Act 1989, Part 6, b. for work to be carried out by an owner-builder— i. the name of the owner-builder, and ii. if the owner-builder is required to hold an owner-builder permit under the Home Building Act 1989—the number of the owner-builder permit. 3. If the information notified under subsection (2) is no longer correct, it is a condition of the development consent that further work must not be carried out unless the principal certifier has given the council written notice of the updated information. 4. This section does not apply in relation to Crown building work certified to comply with the Building Code of Australia under the Act, Part 6. *Condition reason: Prescribed condition under section 71 of the Environmental Planning and Assessment Regulation 2021.*

	D.01.071.P
4.	**Shoring and adequacy of adjoining property** 1. This section applies to a development consent for development that involves excavation that extends below the level of the base of the footings of a building, structure or work on adjoining land, including a structure or work in a road or rail corridor. 2. It is a condition of the development consent that the person having the benefit of the development consent must, at the person's own expense — a. protect and support the building, structure or work on adjoining land from possible damage from the excavation, and b. if necessary, underpin the building, structure or work on adjoining land to prevent damage from the excavation. 3. This section does not apply if — a. the person having the benefit of the development consent owns the adjoining land, or b. the owner of the adjoining land gives written consent to the condition not applying. *Condition reason: Prescribed condition under section 74 of the Environmental Planning and Assessment Regulation 2021.* D.01.074.P
5.	**Building Code of Australia** All building work must be carried out in accordance with the provisions of the *Building Code of Australia*. In this clause, a reference to the *Building Code of Australia* is a reference to that Code as in force on the date the application for the relevant construction certificate is made. *Condition reason: Prescribed condition under Section 69 of the Environmental Planning and Assessment Regulation 2021.* D01.02
6.	**Contract of insurance (residential building work)** In the case of residential building work for which the *Home Building Act 1989* requires there to be a contract of insurance in force in accordance with Part 6 of that Act, that such a contract of insurance is in force before any building work authorised to be carried out by the consent commences. This clause does not apply: 1. To the extent to which an exemption is in force under Clause 187 or 188 of the Environmental Planning and Assessment Regulation 2000, subject to the terms of any condition or requirement referred to in Clause 187(6) or 188(4) of that regulation, or 2. To the erection of a temporary building. *Condition reason: Prescribed condition under Section 69 of the Environmental Planning and Assessment Regulation 2021.* D01.04
7.	**Landscaping**

	The provision and maintenance of landscaping shall be in accordance with the approved landscape plan containing Council's approved development stamp including the engagement of a suitably qualified landscape consultant/ contractor for landscaping works. The landscape design shall incorporate native plants consistent with BASIX requirements. *Condition reason: To provide for planting that will enhance the natural and built environment.* D01.06
8.	**External finishes** The external finishes shall be in accordance with the approved plans and the schedule of finishes submitted with this application. Any proposed alterations to these finishes are considered to be a modification to the development consent and require separate approval by Council. *Condition reason: To ensure the approved development is constructed in the form illustrated to Council during assessment.* D01.07
9.	**Fencing** A 1.8 metre high fence shall be erected on the site's side and rear boundaries behind the front building alignment and between each required courtyard at the sole cost of the developer. 'Colorbond' style metal fences that face a public space are not permitted. *Condition reason: To ensure that suitable boundary fencing is in place to protect the privacy and amenity of the occupants.* D01.11
10.	**Switchboards/utilities/air conditioning units** Switchboards, air conditioning units, garbage storage areas and storage for other utilities shall not be attached to the front elevations of the building or side elevations that can be seen from a public place. *Condition reason: To ensure that utilities are not directly visible from public spaces.* D01.12
11.	**Driveway** The gradients of driveways and manoeuvring areas shall be designed in accordance with *Australian Standard AS 2890.1 and AS 2890.2 (as amended).* All driveways in excess of 20 metres in length shall be separated from the landscaped areas by the construction of a minimum 150mm high kerb, dwarf wall or barrier fencing. *Condition reason: To ensure parking facilities are designed in accordance with relevant Australian Standards and Council's DCP.* D01.13
12.	**Engineering design works** The design of all engineering works shall be carried out in accordance with the requirements set out in Council's 'Engineering Design Guide for Development' (as amended) and the applicable development control plan. *Condition reason: To comply with Council requirements for engineering works.* D01.44

13.	**Rain water tank/s** Rain water tank/s shall be installed on site for the collection and storage of stormwater for irrigation and reuse purposes (eg the flushing of toilets), in accordance with the approved plans. *Condition reason: To reuse rainwater and comply with any BASIX commitments made in the application.* D01.53
14.	**Construction certificate** Before commencement of any works that require a construction certificate: 1. the applicant shall appoint a principal certifier; 2. the applicant shall obtain a construction certificate for the particular works; and 3. when Council is not the principal certifier, the appointed principal certifier shall notify Council of their appointment no less than two days before the commencement of any works. *Condition reason: To comply with legislation.* D01.54

BEFORE ISSUE OF A CONSTRUCTION CERTIFICATE

15.	**Utility servicing provisions** Before the issue of a construction certificate, the applicant shall obtain a letter from both the relevant electricity authority and the relevant telecommunications authority stating that satisfactory arrangements have been made to service the proposed development. Note: The applicant should also contact the relevant water servicing authority to determine whether the development will affect the authority's water or sewer infrastructure. *Condition reason: To ensure relevant utility and service providers' requirements are provided to the certifier.* D02.04
16.	**Waste Management Plan** Before the issue of a construction certificate, the relevant provisions of Council's Waste Management Plan is to be completed to the satisfaction of Council. *Condition reason: To ensure resource recovery is promoted and local amenity protected during construction.* D02.06
17.	**Soil and water management plan** Before the issue of a construction certificate, a detailed soil and water management plan shall be submitted for approval. *Condition reason: To ensure no sediments or substances other than rainwater enters the stormwater system and waterways.* D02.10
18.	**Classification of residential lots (Development with dwelling construction)**

	Before the issue of a construction certificate for any dwellings approved under this consent, all proposed residential lots are to be individually classified in accordance with guidelines contained in the Australian Standard for Residential Slabs and Footings - *AS2870.1996 (as amended).* All slabs and footings shall be designed in accordance with the relevant site classifications and recommendations resulting from a geotechnical investigation of the site. The designing structural engineer shall certify that the design of all slabs and footings is in accordance with the geotechnical investigation and soil classification for the site. *Condition reason: To comply with Australian Standards.* D02.14
19.	**Stormwater management plan** Before the issue of a construction certificate, a plan indicating all engineering details and calculations relevant to site regrading and the collection and disposal of stormwater from the site, building/s and adjacent catchment, shall be submitted for approval. Floor levels of all buildings shall be a minimum of 150mm above the adjacent finished site levels and stormwater shall be conveyed from the site to Frampton Drive. All proposals shall comply with Council's 'Engineering Design Guide for Development' (as amended) and the applicable development control plan. *Condition reason: To protect the operation of stormwater systems.* D02.26
20.	**Telecommunications infrastructure** 1. If the development is likely to disturb or impact upon telecommunications infrastructure, written confirmation from the service provider that they have agreed to proposed works must be submitted to the appointed certifier prior to the issue of a construction certificate or any works commencing, whichever occurs first; and 2. The arrangements and costs associated with any adjustment to telecommunications infrastructure shall be borne in full by the applicant/developer. *Condition reason: To ensure that the development does not impact any telecommunications infrastructure and that appropriate arrangements have been made for the approved development.* D02.59
21.	**Sydney Water** Before the issue of a construction certificate, the approved plans must be submitted to Sydney Water via the Sydney Water Tap In service, to determine whether the development will affect any Sydney Water wastewater and water mains, stormwater drains and/or easements, and if any requirements need to be met. An approval receipt will be issued if the building plans have been approved. The approval receipt shall be submitted to the appointed certifier prior to issue of a construction certificate. The Sydney Water Tap In service can be accessed at www.sydneywater.com.au. *Condition reason: To ensure the development does not adversely affect Sydney Water infrastructure and that appropriate arrangements have been made to connect to Sydney Water services.* D02.60
22.	**Section 7.11 Contribution**

Contribution

The developer must make a monetary contribution to Campbelltown City Council in the amount of **$14,360.81** for the purposes of the Local Infrastructure identified in the Campbelltown Local Infrastructure Contributions Plan 2018 (the Plan).

Open space and recreation facilities	57% of total
Community facilities	16.4% of total
Traffic, transport and access facilities	16.1% of total
Cycleways	5.6% of total
Town centre public domain facilities	3.5% of total
Plan management and administration	1.4% of total
Total	**$14,360.81**

The contribution rate will be adjusted on a quarterly basis with CPI indexation as detailed in Section 6.3.2 of the Plan. The exact amount of the contribution will be calculated at the rate applicable at the time of payment.

Indexation

The monetary contribution must be indexed between the date of this certificate and the date of payment in accordance with the following formula:

$$\frac{\$CC \times CPI_P}{CPI_C}$$

Where:

- $CC is the contribution amount shown in this certificate expressed in dollars.
- CPI_P is the Consumer Price Index (All Groups Index) for Sydney as published by the Australian Statistician at the time of the payment of the contribution.
- CPI_C is the Consumer Price Index (All Groups Index) for Sydney as published by the Australian Statistician which applied at the time of the issue of this certificate – **140.9 – Mar 2025**

Time for payment

The contribution must be paid prior to the release of the construction certificate for any works authorising construction above the floor level of the ground floor - *For development not involving subdivision, but where a construction certificate is required*]

Works in kind agreement

This condition does not need to be complied with to the extent specified, if a works in kind agreement is entered into between the developer and the Council.

How to make the contribution payment

Contact Council's Development Contributions Officer on 4645 4000 or email, council@campbelltown.nsw.gov.au for an invoice which will also provide details of the various methods of payment available, prior to payment.

Condition reason: To contribute to the provision of public amenities and services to meet the increased demands created by the new development.

D02.65

23. Civil Works under S138 Roads Act

Prior to Council or the appointed Certifier issuing a Construction Certificate, including payment of plan assessment and inspection fees, a S138 Application shall be lodged with Campbelltown City Council on the NSW Planning Portal for the construction of:

	a. Construction of driveway layback/crossing. b. Stormwater connection and kerb outlets in Frampton Drive. c. Removal of redundant layback in Frampton Drive, and reinstatement as kerb and gutter to match existing alignment and levels. All driveways and kerb outlets shall be designed in accordance with SD-R06 and SD-R08 of Campbelltown City Councils Standard Drawings. Detailed engineering plans for the proposed works in Frampton Drive reserve shall be submitted to Council for approval. All works shall be carried out in accordance with Roads Act approval including the stamped approved plans and Council specifications. *Condition reason: To comply with Council Requirements.* D02.999

BEFORE BUILDING WORK COMMENCES

24.	**Erosion and sediment control** Before any site work commences on the land, adequate/approved erosion and sediment control measures shall be fully installed/implemented. *Condition reason: To ensure sediment laden runoff and site debris do not impact local stormwater systems and waterways.* D03.01
25.	**Erection of construction sign** Before any site work commences on the land, signs must be erected in prominent positions on the site: 1. Showing the name of the principal contractor (if any) for any building work and a telephone number on which that person may be contacted outside working hours 2. Stating that unauthorised entry to the work site is prohibited 3. Pollution warning sign promoting the protection of waterways (a digital copy is provided with this consent that can be printed, laminated and affixed to the site or a corflute sign is available for free pick up at Council's administration office) 4. Stating the approved construction hours in which all works can occur 5. Showing the name, address and telephone number of the principal certifier for the work. Any such signs are to be maintained while the building work, subdivision work or demolition work is being carried out, but must be removed when the work has been completed. *Condition reason: Prescribed condition under Section 70 of the Environmental Planning and Assessment Regulation 2021.* D03.02
26.	**Toilet on construction site** Before any site work commences on the land, toilet facilities are to be provided, at or in the vicinity of the work site on which work involved in the erection or demolition of a building is being carried out, at the rate of one toilet for every 20 persons or part thereof. Each toilet provided must be a standard flushing toilet and be connected to:

	1. A public sewer, or 2. If connection to a public sewer is not practicable, to an accredited sewage management facility approved by Council, or 3. If connection to a public sewer or an accredited sewage management facility is not practicable, to some other management facility approved by Council. *Condition reason: To ensure that appropriate toilets are provided for construction workers.* D03.03
27.	**Trade waste** Before any site work commences on the land, a trade waste facility shall be provided on-site to store all waste pending disposal. The facility shall be screened, regularly cleaned and accessible to collection vehicles. *Condition reason: To ensure all waste is moved off-site for disposal.* D03.04
28.	**Vehicular access during construction** Before any site work commences on the land, a single vehicle/plant access to the site shall be provided, to minimise ground disturbance and prevent the transportation of soil onto any public road system. Single sized aggregate, 40mm or larger placed 150mm deep, extending from the kerb and gutter to the property boundary, shall be provided as a minimum requirement. *Condition reason: To ensure that construction vehicles do not disturb the soil and adversely impact Council infrastructure.* D03.05
29.	**Public property** Before any site work commences on site, the applicant shall provide Council with a report establishing the condition of the property which is controlled by Council which adjoins the site including (but not limited to) kerbs, gutters, footpaths, and the like. Failure to identify existing damage may result in all damage detected after completion of the development being repaired at the applicant's expense. *Condition reason: To ensure the condition of public infrastructure is recorded before the commencement of any works.* D03.06
30.	**Footpath and vehicular crossing levels** Before any site work commences, footpath and vehicular crossing levels are to be obtained from Council by lodging an application on the prescribed form. *Condition reason: To confirm requirements for works over Council land.* D03.07
31.	**Hoarding / Fence** Before any site work commences, a hoarding or fence must be erected between the work site and a public place if the work involved in the development is likely to cause pedestrian or vehicular traffic in a public place to be obstructed or rendered inconvenient, or if the building involves the enclosure of a public place in accordance with Work Cover requirements. The work site must be kept lit between sunset and sunrise if it is likely to be hazardous to persons in the public place.

	A separate land use application under *Section 68 of the Local Government Act 1993* shall be submitted to and approved by Council prior to the erection of any hoarding on public land. *Condition reason: To protect workers, the public and the environment.* D03.09
32.	**Fencing** An appropriate fence preventing public access to the site shall be erected for the duration of construction works. *Condition reason: To protect workers, the public and the environment.* D03.11
33.	**Structural engineer details** Before any site work commences, the submission to the principal certifier of all details prepared by a practicing structural engineer. *Condition reason: To ensure the principal certifier has all the necessary structural engineering details for the approved works.* D03.14

DURING BUILDING WORK

34.	**Construction work hours** All work on site shall only occur between the following hours: Monday to Friday 7.00 am to 6.00 pm Saturday 8.00 am to 5.00 pm Sunday and public holidays No Work. *Condition reason: To protect the amenity of the surrounding area.* D04.01
35.	**Erosion and sediment control** Erosion and sediment control measures shall be provided and maintained throughout the construction period, in accordance with the requirements of the manual – Soils and Construction (2004) (Bluebook), the approved plans, Council specifications and to the satisfaction of the principal certifier. The erosion and sedimentation control devices shall remain in place until the site has been stabilised and revegetated. Note: On the spot penalties up to $8,000 will be issued for any non-compliance with this requirement without any further notification or warning. *Condition reason: To ensure sediment laden runoff and site debris do not impact local stormwater and waterways.* D04.02
36.	**Work zones** All loading, unloading and other activities undertaken during construction shall be accommodated on the development site. Where it is not practical to load, unload or undertake specific activities on the site during construction, the provision of a 'Work Zone' external to the site may be approved by Council following an application being submitted to Council's Traffic Unit outlining the proposal for the work zone. The application is required to be made prior to the commencement of any

	works and is to include a suitable 'Traffic / Pedestrian Management and Control Plan' for the area of the work zone that will be affected. All costs of approved traffic/pedestrian control measures, including relevant fees, shall be borne by the applicant. *Condition reason: To comply with legislative requirements and minimise impacts on traffic safety and efficiency.* D04.03
37.	**Protection of existing trees** While site work is being carried out, no trees are to be cut down, lopped, destroyed or removed without the separate written approval of Council unless those trees are within three metres of the footprint of a building that has been approved by Council. All trees that are to be retained are to be protected by fencing, firmly staked within the drip line/ canopy of the tree and maintained during the duration of the works. The area within the fencing must not be used for stockpiling of any material, nor for vehicle or pedestrian convenience. All useable trees and shrubs shall be salvaged for re-use, either in log form, or as woodchip mulch for erosion control or garden beds or site rehabilitation. Non-salvable materials such as roots and stumps shall be disposed of to a waste management centre or other approved form. *Condition reason: To protect and retain existing trees.* D04.04
38.	**Dust nuisance** Measures shall be implemented to minimise wind erosion and dust nuisance in accordance with the requirements of the manual – 'Soils and Construction (2004) (Bluebook). Construction areas shall be treated/regularly watered to the satisfaction of the appointed principal certifier. *Condition reason: To minimise the impacts of the development construction on the environment.* D04.08
39.	**Termite control** The building shall be protected from subterranean termites in accordance with Australian Standard 3660.1. Certification of the treatment shall be submitted to the principal certifier before the issue of the relevant occupation certificate. *Condition reason: To ensure termite control measures are in place.* D04.13
40.	**Excess material** All excess material is to be removed from the site. The spreading of excess material or stockpiling on site will not be permitted without prior written approval from Council. *Condition reason: To ensure that the levels of the land remain consistent with the approved plans.* D04.14
41.	**Compliance with Council specification** All design and construction work shall be in accordance with: • Council's specification for Construction of Subdivisional Road and Drainage Works (as amended)

	• Campbelltown (Sustainable City) DCP - Volumes 1 and 3 as amended • Soils and Construction (2004) (Bluebook) and • Relevant Australian standards and State Government publications. *Condition reason: To ensure earthworks are carried out in accordance with the relevant Australian Standards, best practice and Council's DCP.* D04.21
42.	**Redundant laybacks** All redundant layback/s shall be reinstated to conventional kerb and gutter to Council's Specification for Construction of Subdivisional Road and Drainage Works (as amended) and with the design requirements of the Campbelltown (Sustainable City) DCP - Volumes 1 and 3 (as amended). *Condition reason: To ensure any redundant infrastructure is removed.* D04.32
43.	**Imported 'waste-derived' fill material** The only waste-derived fill material that may be received at the development site is: • virgin excavated natural material (within the meaning of the Protection of the *Environment Operations Act 1997*); and • any other waste-derived material the subject of a resource recovery exemption under cl.51A of the Protection of the Environment Operations (Waste) Regulation 2005 that is permitted to be used as fill material. Any waste-derived material the subject of resource recovery exemption received at the development site must be accompanied by documentation as to the material's compliance with the exemption conditions and must be provided to the principal certifier on request. *Condition reason: To ensure any fill material used on site is not contaminated and is safe for future occupants.* D04.36

BEFORE ISSUE OF AN OCCUPATION CERTIFICATE

44.	**Structural engineering certificate** Before the issue of the relevant occupation certificate, the submission of a certificate from a practising structural engineer certifying that the building has been erected in compliance with the approved structural drawings, the relevant Standards Association of Australia Codes and is structurally adequate. *Condition reason: To ensure all structure are built in accordance with approval structural drawings and compliant with the relevant Standards Association of Australia Codes* D05.02.0
45.	**Completion of external works onsite** Before the issue of the relevant occupation certificate, all external works, repairs and renovations detailed in the schedule of treatment/finishes, landscaping, driveways, fencing and retaining walls to be completed to the satisfaction of the principal certifier.

	Condition reason: To ensure that approved, landscaping, driveways, fencing, external finishes and retaining walls are in place prior to occupation of the building. D05.03.0
46.	**House numbers** Before the issue of the relevant occupation certificate all house numbers shall be stencilled onto the kerb at appropriate locations with black letters/numbers 75mm high on a white background using approved pavement marking grade paint. For all new lots/dwellings created, please submit the details of the development via the "Property Address Enquiry form" on Campbelltown City Council's website to ensure the correct house number is used. *Condition reason: To ensure property details are clearly visible from the street for emergency services.* D05.25.0
47.	**Council fees and charges** Before the issue of the relevant occupation certificate, the applicant shall obtain written confirmation from Council that all applicable Council fees and charges associated with the development have been paid in full. Written confirmation will be provided to the applicant following Council's final inspection and satisfactory clearance of the public area adjacent the site. *Condition reason: To ensure that there are no outstanding fees, charges or rectification works associated with the approved development.* D05.40.0
48.	**Completion of external works onsite** Before the issue of the relevant occupation certificate, all external works, repairs and renovations detailed in the schedule of treatment/finishes, landscaping, driveways, fencing and retaining walls to be completed to the satisfaction of the principal certifier. *Condition reason: To ensure that approved, landscaping, driveways, fencing, external finishes and retaining walls are in place prior to occupation of the building.* D05.03.0
49.	**Restoration of public roads** Before the issue of the relevant occupation certificate, the restoration of public road and associated works required as a result of the development shall be carried out by Council and all costs shall be paid by the applicant. *Condition reason: To ensure any damage to public infrastructure is rectified.* D05.22.0
50.	**Public utilities** Before the issue of the relevant occupation certificate, any adjustments to public utilities, required as a result of the development, shall be completed to the satisfaction of the relevant authority and at the applicant's expense. *Condition reason: To ensure any damage to public infrastructure is rectified.* D05.23.0
51.	**Service authorities**

	To ensure that an adequate level of services and infrastructure is provided to this development, prior to the appointed principal certifier issuing an occupation certificate the following is required: 1. Energy supplier – A Notice of Arrangement for the provision of distribution of electricity from Endeavour Energy to service the proposed development 2. Telecommunications – Evidence demonstrating that satisfactory arrangements have been made with a telecommunications carrier to service the proposed development 3. Gas supplier (if relevant)- Evidence demonstrating that satisfactory arrangements have been made with a gas supplier to service the proposed development; and 4. Water supplier – A Section 73 Compliance Certificate (where required) demonstrating that satisfactory arrangements have been made with a water supply provider to service the proposed development. All construction work shall conform to the relevant authorities' specifications. The final seal shall be deferred pending installation of all services. In this regard the applicant shall provide a temporary seal and lodge with Council as security, the amount to be determined by Council, to cover the cost of trench restoration by Council and the placement of the final asphaltic concrete seal. *Condition reason: To ensure that services are provided.* D05.24.0
52.	**Termite protection** Before the issue of the relevant occupation certificate, certification from a licensed pest controller shall be submitted certifying that the termite treatment has been installed in accordance with AS3660.1. *Condition reason: To ensure termite control measures are in place.* D05.36.0
53.	**Retaining** Before the issue of the relevant occupation certificate, all excavated and filled areas shall be battered to a slope of not greater than 1:2 or similarly be retained in accordance with the approved plan or State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 provisions for exempt development. Construction of retaining walls outside the scope of the State Environmental Planning Policy and not shown on the approved plans require lodgement of a separate development application. *Condition reason: To ensure any retaining walls or filling onsite has been authorised.* D05.35.0
54.	**BASIX** Before the issue of the relevant occupation certificate, completion of all requirements listed in the relevant BASIX certificate for the subject development shall be completed/installed. *Condition reason: To confirm BASIX commitments have been provided.* D05.37.0

General advisory notes

This consent contains the conditions imposed by the consent authority which are to be complied with when carrying out the approved development. However, this consent is not an exhaustive list of all obligations which may relate to the carrying out of the development under the EP&A Act, EP&A Regulation and other legislation. Some of these additional obligations are set out in the *Conditions of development consent: advisory notes*. The consent should be read together with the *Conditions of development consent: advisory notes* to ensure the development is carried out lawfully.

The approved development must be carried out in accordance with the conditions of this consent. It is an offence under the EP&A Act to carry out development that is not in accordance with this consent.

Building work or subdivision work must not be carried out until a construction certificate or subdivision works certificate, respectively, has been issued and a principal certifier has been appointed.

A document referred to in this consent is taken to be a reference to the version of that document which applies at the date the consent is issued, unless otherwise stated in the conditions of this consent.

ADVISORY NOTES

A. Environmental Planning and Assessment Act 1979 Requirements

The Environmental Planning and Assessment Act 1979 requires you to:

a. Obtain a construction certificate prior to the commencement of any works. Enquiries regarding the issue of a construction certificate can be made to Council's Customer Service Centre on 4645 4608.

b. Nominate a Principal Certifier and notify Council of that appointment prior to the commencement of any works.

c. Give Council at least two days notice prior to the commencement of any works.

d. Have mandatory inspections of nominated stages of the construction inspected.

e. Obtain an occupation certificate before occupying any building or commencing the use of the land.

DAADV.01

B. Tree Preservation Order

To ensure the maintenance and protection of the existing natural environment, you are not permitted to ringbark, cut down, top, lop, remove, wilfully injure or destroy a tree outside three metres of the building envelope unless you have obtained prior written consent from Council. Fines may be imposed if you choose to contravene Council's Tree Preservation Order.

A tree is defined as a perennial plant with self supporting stems that are more than three metres or has a trunk diameter more than 150mm measured one metre above ground level, and excludes any tree declared under the *NSW Biosecurity Act 2015* or included within the NSW Governments Greater Sydney Strategic Management Plan 2017-2022.

DAADV.02

C. Provision of Equitable Access

Nothing in this consent is to be taken to imply that the development meets the requirements of the *Disability Discrimination Act 1992* (DDA1992) or *Disability (Access to Premises – Buildings) Standards 2010* (Premises Standards).

Where a Construction Certificate is required for the approved works, due regard is to be given to the requirements of the *Building Code of Australia* (BCA) & the Premises Standards. In this regard it is the sole responsibility of the certifier, building developer and building manager to ensure compliance with the Premises Standards.

Where no building works are proposed and a Construction Certificate is not required, it is the sole responsibility of the applicant and building owner to ensure compliance with the DDA1992.

DAADV.03

D. Smoke Alarms

All NSW residents are required to have at least one working smoke alarm installed on each level of their home. This includes owner occupier, rental properties, relocatable homes and any other residential building where people sleep.

The installation of smoke alarms is required to be carried out in accordance with AS 3786. The licensed electrical contractor is required to submit to the appointed Principal Certifier a certificate certifying compliance with AS 3000 and AS 3786.

DAADV.04

E. Retaining Walls

A separate application for development consent shall be submitted and approved for any retaining walls that do not meet the exempt requirements of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

Consent must be received for the construction of any such retaining walls before work commences.

DAADV.05

F. Covenants

The land upon which the subject building is to be constructed may be affected by restrictive covenants. Council issues this approval without enquiry as to whether any restrictive covenant affecting the land would be breached by the construction of the building, the subject of this permit. Persons to whom this permit is issued rely on their own enquiries as to whether or not the building breaches any such covenant.

DAADV.08

G. Inspection within Public Areas

All works within public areas are required to be inspected at all stages of construction and approved by Council prior to the principal certifier releasing the Occupation Certificate.

DAADV.12

H. Adjustment to Public Utilities

Adjustment to any public utilities necessitated by the development is required to be completed prior to the occupation of the premises and in accordance with the requirements

of the relevant Authority. Any costs associated with these adjustments are to be borne by the applicant.

DAADV.13

I. Asbestos Warning

Should asbestos or asbestos products be encountered during construction or demolition works you are advised to seek advice and information prior to disturbing the material. It is recommended that a contractor holding an asbestos-handling permit (issued by Work Cover NSW), be engaged to manage the proper disposal and handling of the material. Further information regarding the safe handling and removal of asbestos can be found at:

www.environment.nsw.gov.au
www.nsw.gov.au/fibro
www.adfa.org.au
www.workcover.nsw.gov.au

Alternatively, call Work Cover Asbestos and Demolition Team on 8260 5885.

DAADV.23

J. Rain Water Tank

It is recommended that water collected within any rainwater tank as part of the development be limited to non-potable uses. NSW Health recommends that the use of rainwater tanks for drinking purposes not occur where a reticulated potable water supply is available.

DAADV.26

K. Dial before you Dig

Underground assets may exist in the area that is subject to your application. In the interests of health and safety and in order to protect damage to third party assets please contact Dial before you dig at www.1100.com.au or telephone on 1100 before excavating or erecting structures (This is the law in NSW). If alterations are required to the configuration, size, form or design of the development upon contacting the Dial before you dig service, an amendment to the development consent (or a new development application) may be necessary. Individuals owe asset owners a duty of care that must be observed when working in the vicinity of plant or assets. It is the individual's responsibility to anticipate and request the nominal location of plant or assets on the relevant property via contacting the Dial before you dig service in advance of any construction or planning activities.

DAADV.31

L. Telecommunications Act 1997 (Commonwealth)

Telstra (and its authorised contractors) are the only companies that are permitted to conduct works on Telstra's network and assets. Any persons interfering with a facility or installation owned by Telstra is committing an offence under the Criminal Code Act 1995 (Cth) and is liable for prosecution.

Furthermore, damage to Telstra's infrastructure may result in interruption to the provision of essential services and significant costs. If you are aware of any works or proposed works which may affect or impact on Telstra's assets in any way, you are required to contact: Telstra's Network Integrity Team on phone number 1800 810 443.

DAADV.32

Dictionary

The following terms have the following meanings for the purpose of this determination (except where the context clearly indicates otherwise):

Approved plans and documents means the plans and documents endorsed by the consent authority, a copy of which is included in this notice of determination.
AS means Australian Standard published by Standards Australia International Limited and means the current standard which applies at the time the consent is issued.
Building work means any physical activity involved in the erection of a building.
Certifier means a council or a person that is registered to carry out certification work under the *Building and Development Certifiers Act 2018*.
Construction certificate means a certificate to the effect that building work completed in accordance with specified plans and specifications or standards will comply with the requirements of the EP&A Regulation and *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021*.
Council means Campbelltown City Council.
Court means the Land and Environment Court of NSW.
EPA means the NSW Environment Protection Authority.
EP&A Act means the *Environmental Planning and Assessment Act 1979*.
EP&A Regulation means the *Environmental Planning and Assessment Regulation 2021*.
Independent Planning Commission means Independent Planning Commission of New South Wales constituted by section 2.7 of the EP&A Act.
Local planning panel means Campbelltown local planning panel.
Occupation certificate means a certificate that authorises the occupation and use of a new building or a change of building use for an existing building in accordance with this consent.
Principal certifier means the certifier appointed as the principal certifier for building work or subdivision work under section 6.6(1) or 6.12(1) of the EP&A Act respectively.
Site work means any work that is physically carried out on the land to which the development the subject of this development consent is to be carried out, including but not limited to building work, subdivision work, demolition work, clearing of vegetation or remediation work.
Stormwater drainage system means all works and facilities relating to:
- the collection of stormwater,
- the reuse of stormwater,
- the detention of stormwater,
- the controlled release of stormwater, and
- connections to easements and public stormwater systems.

Strata certificate means a certificate in the approved form issued under Part 4 of the *Strata Schemes Development Act 2015* that authorises the registration of a strata plan, strata plan of subdivision or notice of conversion.
Subdivision certificate means a certificate that authorises the registration of a plan of subdivision under Part 23 of the *Conveyancing Act 1919*.
Subdivision works certificate means a certificate to the effect that subdivision work completed in accordance with specified plans and specifications will comply with the requirements of the EP&A Regulation.
Sydney district or regional planning panel means Sydney Western City Planning Panel (SWCPP).

4.2 Section 4.15(1)(a)(iii) The provisions of any development control plan

Campbelltown (Sustainable City) Development Control Plan 2015

Part	Requirement	Proposed	Compliance
Part 2. Requirements Applying to All Types of Development			
2.2 Site Analysis	A Site Analysis Plan shall be lodged with the development application.	Site Analysis Plan has been submitted with the application.	Yes
2.4 Sustainable Building Design	**2.4.1 Rainwater Tanks** b) A rain water tank shall be provided for all new buildings containing a roof area greater than 100sqm for all development not specified by BASIX. The rain water tank shall have a minimum capacity in accordance with Table 2.4.1.	A 3050L rainwater tank is proposed. Located at the northern side elevation.	Yes
	f) Above ground water tanks shall be located behind the primary or secondary building line.	Proposed rainwater tank is above ground and located behind the primary dwelling.	Yes
	2.4.3 Natural Ventilation a) The design of new buildings shall be encouraged to maximise opportunities for cross flow ventilation, where practical, thus minimising the need for air conditioning.	Dwelling provides adequate cross flow ventilation.	Yes
	2.4.5 BASIX BASIX Certificate to be provided in accordance with State Environmental Planning Policy (Sustainable Buildings) 2022.	A Multi-dwelling BASIX Certificate has been accompanied with the application.	Yes
2.7 Erosion and Sediment Control	a) An Erosion and Sediment Control Plan shall be prepared and submitted with a development application proposing construction and/or activities involving the disturbance of the land surface.	Erosion and Sediment Control measures have been indicated on the site plan as part of this application. This plan details the location of the sediment fence.	Yes
	d) All stockpiles shall be located	A condition of consent is	Yes

Part	Requirement	Proposed	Compliance
	within the sediment control zone and shall not be located within an overland flow path.	recommended for the material stockpiles and any waste during construction to be within the sediment control zone.	
2.8.1 Cut and Fill.	a) A Cut and Fill Management Plan (CFMP) shall be submitted with a development application where the development incorporates cut and/or fill operations. b) For any dwellings within residential zones, the maximum level of cut shall not exceed 1.0 metre below the ground level (existing) and the maximum level of fill shall not exceed 1.0 metre above ground level (existing), when measured at any corner of the building platform. c) Development incorporating any cut or fill shall comply with the following requirements: i) minimum cross fall of 1% to any adjoining waterway; and ii) batters to be no steeper than 2H:1V ('H' stands for the term 'horizontal distance' and 'V' stands for the term 'Vertical distance'; iii) batters to be no steeper than 6H:1V for public areas. d) All fill shall be 'Virgin Excavated Natural Material' (VENM).	Proposed cut and fill details are shown on the submitted plans along with erosion and sediment control measures and locations and dimensions of soil stockpiles. The works are fully contained within the site and are not expected to result in adverse impacts on soil stability or stormwater flow. The development is located on land zoned R2, with a maximum cut of 471mm and maximum fill of 600mm, which complies with the relevant controls. A condition has been included to ensure all fill material is Virgin Excavated Natural Material (VENM).	Yes
2.10 Water Cycle Management	**2.10.2 Stormwater** a) The design and certification of any stormwater system shall be undertaken by a suitably qualified person.	Stormwater plan was prepared by a suitably qualified person from *McDonald Jones*.	Yes

Part	Requirement	Proposed	Compliance
	d) Development shall not impact on adjoining sites by way of overland flow of stormwater unless an easement is provided. All overland flow shall be directed to designated overland flow paths such as roads.	Site is not affected by overland flow.	Yes
	h) Stormwater collected on a development site shall be disposed of (under gravity) directly to the street or to another Council drainage system/ device.	Stormwater is to be discharged to kerb outlet provided on Frampton Drive.	Yes
	2.10.3 Stormwater Drainage a) A stormwater Drainage Concept Plan shall be prepared by a suitably qualified person, and submitted with all development applications, involving construction (except for internal alterations/fitouts), demonstrating to Council how the stormwater will be collected and discharged from the site.	A stormwater drainage plan has been submitted as part of this application and has been prepared by a suitably qualified person from McDonald Jones. The plan indicates collection and discharge of stormwater from the subject development, and notes that stormwater will be discharged to the kerb via gravity.	Yes
	b) The stormwater concept plan shall include the following information as a minimum: i) locations, layouts and sizes of stormwater pipes and pits; ii) minimum grades and capacity of stormwater pipes; and iii) existing and proposed easements, site contours and overland flow path/s.	Stormwater drainage plan provides relevant details associated with the proposal. Conditions are imposed to submit a detailed stormwater plan prior to construction.	Yes
2.11 Heritage Conservation	**2.11.1 Aboriginal Heritage** a) All developments that have the potential to impact upon Aboriginal cultural heritage must provide an	It is acknowledged that the site is within an Aboriginal Archaeological Sensitivity Zone (Mid to basal valley slopes)	Yes

Part	Requirement	Proposed	Compliance
	assessment in accordance with the "Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW", published by the Office of Environment and Heritage (OEH).	according to council records. However, given the Aboriginal Heritage Study was done in 2002 and since then, urbanisation of the area has been undertaken in recent years, it is unlikely development is to impact upon Aboriginal and cultural heritage. Further, A search of the Aboriginal Heritage Information Management System (AHIMS) was undertaken revealing no known Aboriginal sites, places, or items within the site.	
2.13 Security	**2.13 Security** c) Development shall incorporate appropriate landscaping, fencing and security devices to assist in crime prevention.	The front living room window will maintain passive surveillance of the street and front setback, supporting safety and visibility. There are no apparent security risks arising from the design or landscaping, and the absence of a front fence further enhances sightlines and natural surveillance.	Yes
2.14 Risk Management	**2.14.1 Salinity** b) A detailed Salinity Analysis and Remedial Action Plan shall be submitted with the development application if: i) The site has been identified as being subject to a salinity hazard; or ii) An investigation reveals that the land is saline.	The subject lot has been identified as having low to moderate salinity potential. Salinity is not expected to adversely impact the development, nor is the development likely to affect salinity levels. A geotechnical report was accompanied with the application and addressed salinity requirements within the report.	Yes
	2.14.2 Bushfire		

Part	Requirement	Proposed	Compliance
	a) Development shall be designed and located so as to minimise the risk of loss of life or property from bushfire. b) Development on bush fire prone land (as detailed on the Campbelltown Bush Fire Prone Lands Map) shall comply with the requirements of Planning for Bushfire Protection, (NSW Rural Fire Service) as amended. c) Development applications relating to land identified on the Bushfire Prone Land Map shall be accompanied by a Bushfire Hazard Assessment Report prepared by a suitably qualified person.	A bushfire report was prepared for this proposal and has addressed necessary requirements and construction standards BAL- Low have been recommended. A condition has been included to ensure that the development is carried out in accordance with the bushfire report.	Yes
	2.14.3 Subsidence a) Any development on a site located within South Campbelltown Mine Subsidence District, or Appin Mine Subsidence District may be at risk of the effects of subsidence from past and/or future underground mining. An appropriate engineering outcome shall be achieved. b) An applicant shall make appropriate enquiries and have plans stamped with the Mine Subsidence Board regarding any construction requirements for any type of development involving the erection of a building within a mine subsidence district prior to a development application being submitted to Council.	Development is located within a mine subsidence zone. A geotechnical report was accompanied with the application. The application has been accompanied with approved stamped plans from the Subsidence Advisory NSW Board.	Yes Yes
2.15 Waste	**2.15.1 Waste Management Plan**		

Part	Requirement	Proposed	Compliance
Management	a) A detailed Waste Management Plan (WMP), prepared by an appropriately qualified waste management professional, shall accompany development applications for certain types of development/land uses, as detailed in Table 2.15.1 and for any other development that in the opinion of Council a WMP is required.	Waste Management Plan (WMP) has been accompanied with the application. WMP details the estimated volume for re-use and recycling and specifies the on-site application and engaged contractor for the disposal and re-use of materials.	Yes
	2.15.2 Waste Management During Demolition and Construction a) Waste and recyclable streams shall be stored separately on site. b) All storage areas/containers for each waste and recycling stream shall be kept on the site at all times and shall be indicated on the site plans/drawings as part of the WMP. c) Where material cannot be reused or recycled, it shall be disposed of at an appropriately licensed waste management or recycling facility. Details of disposal arrangements shall be specified in the WMP for each material type.	Complies. Storage areas for waste and recycling are shown on site plan, front of the building line. Off-site waste management facility provided on WMP.	Yes Yes Yes
	2.15.3 On-going Waste Management a) Provision shall be made for all waste and recycling storage containers to be located behind the primary and secondary building line and out of public view.	Submitted plans provide storage location of bin areas. Bin storage areas are located behind the building line of each proposed allotment out of public view.	Yes

Part	Requirement	Proposed	Compliance
		There is also sufficient space behind the building line for bins associated with the secondary dwelling.	
	j) Where bins are to be collected from the kerbside, at least 1.5m of clear and unobstructed footpath area per dwelling must be provided within the confines of the site's frontage (not impeding driveways or neighbouring lots) to allow for the presentation of bins and kerbside clean up material.	Bin Storage areas are within 30m walking distance and provide greater than 1.5m (approximately 7.8m) of clear and unobstructed footpath area per dwelling.	Yes
	k) The bin storage area must be located in a position that does not require any bins to be transported through any habitable room to reach the collection point.	Bin storage area does not require bins to be transported through any habitable room.	Yes
	2.15.9 Bin Storage Areas		
	a) The design of the bin storage areas shall be considered early in the design process so that they can be successfully integrated into the overall design of the development and are convenient for all users.	Submitted plans provide storage location of bin areas.	Yes
	b) Sufficient areas/space shall be made available within the property boundary to store the range of bins for the quantity of waste, recycling and organics (and other materials where appropriate) likely to be generated between collections.	Bin storage areas are located behind the building line of each proposed allotment out of public view.	Yes
	c) Residents shall not be required to walk more than a maximum distance of 30m to access the bin storage area.	Bin storage area is within 30m walking distance.	Yes

Part	Requirement	Proposed	Compliance
2.16 Provision of Services	• Ensure that development is provided with adequate water and power supply. • Ensure that the operations, installation and maintenance of on-site sewage systems do not: ○ impose risks on public health. ○ result in any potential contamination to groundwater, and natural and artificial watercourses. ○ Result in degradation of soil structure	The subject site is located within a recently established area where essential utilities including water and power have been provided on site. The proposal will connect into existing infrastructure servicing the site.	Yes
Part 3. Low and Medium Density Development			
3.4.2 Car Parking and Access	a) The minimum dimensions of any required parking space shall be 2.5 metres x 5.5 metres. If the car parking space adjoins a vertical edge which is 100mm or higher, the minimum width of the car parking space shall be 2.7 metres.	Double garage proposed for each dwelling with dimensions of 5.5m x 5.5m.	Yes
	b) The minimum internal dimension of an enclosed garage shall be 3 metres x 6 metres.	Proposed garage size is 5.5m x 5.5m. Garage size proposed complies with minimum dimension controls outlined in Part 7 Mount Gilead DCP.	Yes
	c) Transitional grades shall comply with AS2890.1 (as amended) Parking Facilities - Off-Street Car Parking.	Condition imposed to comply with Australian Standards.	Yes
	d) The maximum garage floor levels (above or below) for a garage setback 6 metres from the front property boundary shall be in accordance with the	Condition imposed to comply under Council's Engineering Guide for Development.	Yes

Part	Requirement	Proposed	Compliance
	requirements contained under Council's Engineering Guide for Development, (Appendix K - Standard Drawings No. SD-R08 and SDR09), which is available at Council's website at www.campbeltown.nsw.gov.au.		
	e) Driveways greater than 30 metres in length as viewed from the street shall be avoided.	Not applicable. Proposed driveway is less than 30 metres.	Yes
	f) Driveways shall be located a minimum distance of 6 metres from the tangent point of any unsignalled intersection (refer to Figure 3.4.2.1).	Not applicable.	Yes
	g) The minimum width of the driveway at the street kerb shall be: i) 2.5 metres where the driveway provides access for one (1) dwelling;	4.5 metres.	Yes
	i) Driveways shall be designed and located perpendicular to the road (Figure 3.4.2. 2).	Complies.	Yes
	j) Plain concrete driveways including crossover and layback shall not be permitted. Details of driveway colours and patterns shall be submitted with the development application.	Mount Gilead DCP, Volume 2 of the CSCDCP 2015 prevails and provides that crossovers are to be plain concrete.	Yes
	k) Garages and driveways shall be located and designed to minimise the loss of any on street parking and ensure that sufficient area is maintained along the site frontage for the provision of on street parking spaces, where possible.	Proposed driveway provides sufficient parking areas and ensures sufficient street parking is maintained.	Yes

Part	Requirement	Proposed	Compliance
3.4.3 Acoustic and Visual Privacy	**3.4.3.1 Acoustic Privacy** a) Development that adjoins significant noise sources, (such as main roads, commercial/industrial development, public transport interchanges and railways) shall be designed to achieve acceptable internal noise levels, based on recognised Australian Standards and any criteria and standards regulated by a relevant State Government Authority.	Acoustic report has been accompanied with the application.	Yes
	3.4.3.2 Visual Privacy a) No window of a habitable room or balcony shall directly face a window of another habitable room, balcony or private open space of another dwelling located within 6 metres of the proposed window or balcony unless appropriately screened (refer to Figure 3.4.3.1).	Proposed dwelling is single storey and is unlikely to result in an unreasonable adverse impact to the privacy of adjoining dwellings.	Yes
3.4.5 Waste Requirements	a) Each dwelling shall be provided with adequate space behind the primary and secondary building lines and out of public view to store the following bins: i) one (1) x 140 litre bin; and ii) two (2) x 240 litre bins	Site plan shows each dwelling, with a dedicated bin storage area behind the front building line and out of public view.	Yes
	b) The bin storage area shall not be located in such a place that requires any bins to be transported through any habitable part of the dwelling to reach the collection point.	Complies.	Yes
	d) The maximum travel distance between any waste storage area and the collection point should not exceed 30 metres.	Travel distance is within 30m.	Yes

Part	Requirement	Proposed	Compliance
	e) Each dwelling must be provided with at least 1.5m clear and unobstructed kerbside for the presentation of bins and kerbside clean up material within the confines of the site's frontage (not impeding driveways or neighbouring lots).	Dwelling is provided with 7.8m of unobstructed kerbside along the primary frontage.	Yes
3.6.2 Secondary Dwellings	a) A secondary dwelling shall incorporate similar or complementary design and construction features, finishes, materials and colours to those of the principal dwelling house.	Dwelling house is well integrated with the principle dwelling house incorporating same design features and building elements and under the same roofline.	Yes
	b) Any new primary or secondary dwelling shall be designed to ensure that a front door and window are visible from the public domain by installing these elements into the front building wall of any habitable room which faces the primary street.	Living area window is visible from the public street.	Yes
	c) A secondary dwelling shall be provided with at a least 12sqm area of private open space for the exclusive use of the occupants of the secondary dwelling. The area shall be accessible from the living area, have a minimum width of 3sqm and not be steeper than 1:50.	12sqm of private open space is provided behind the primary building line and is accessible from the living area exclusive for the occupants of the secondary dwelling.	Yes
	d) A BASIX certificate shall accompany a development application for a secondary dwelling.	Multi-dwelling Certificate has been accompanied with the application.	Yes
	e) An attached secondary dwelling shall be located under the same roof as the main part of the principal dwelling house.	Complies.	Yes
	f) The principle dwelling shall continue to meet all the	Principle dwelling complies with Volume 2, Part 7 – Mount Gilead	Complies with site specific

Part	Requirement	Proposed	Compliance
	relevant requirements and development controls under Part 3 of Volume 1 of the Plan.	DCP.	DCP controls
	3.6.2.2 Setbacks a) A secondary dwelling land shall be setback a minimum of: i) 5.5 metres from the primary street boundary of the dwelling and shall align with the existing front building line, ii) 0.9 metres from any side boundary; and iii) 3 metres from the rear boundary for any part of the building that is up to 3.8 metres in height from ground level (existing);	Front setback = 11m Side setback = 0.915m Rear setback = 4.3m	Yes Yes Yes

The above provides an assessment of the proposal in accordance with the relevant requirements of the SCDCP 2015.

Volume 2 Site Specific Development Control Plans: Part 7 – Mount Gilead DCP – Volume 2

Part	Requirement	Proposed	Compliance
Part 7 – Mount Gilead DCP – Volume 2			
3.5 Residential Development	**3.5.1 Front Setbacks** 1. Front setbacks for all dwelling types are to be consistent with Table 2. a. 4.5m front setback b. 3.5m Articulation zone c. Garage line – 5.5m and at least 1m minimum behind the building line	a) 4.5m b) 3.5m c) 5.5m	Yes Yes Yes
	2. At least two of the following building elements are required within the front setback articulation zone: i) Entry feature or portico; ii) Awnings or other features over windows (excluding roller shutters); iii) Balcony treatment to any first-floor element iv) Recessed or projecting architectural elements; v) Open verandas; and vi) A mix of building materials, finishes and colours.	Proposed dwellings a variety of articulation and include: • Portico • A mix of building materials and finishes including: ○ Brick; ○ Rendering; ○ and cladding	Yes
	3. The articulation zone is to occupy no more than 50% of the frontage, excluding any garage.	The articulation zone occupies 19% of the frontage excluding the garage.	Yes
	3.5.2 Side and rear setbacks 1. Minimum side and rear setbacks are to be consistent with Table 3 and Figure 8,	Lot width greater than 12.5m a) Side setback (North) – 1.5m Side setback (South) – 0.915m b) Side setback (Garage) – 3m c) Rear setback – 4.3m	Yes

<table>
<tr><th>Part</th><th>Requirement</th><th>Proposed</th><th>Compliance</th></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td colspan="3">Table 3: Minimum side and rear setbacks
<table>
<tr><th>Lot Size</th><th>Lot width of 12.5m</th><th>Lot width > 12.5m</th></tr>
<tr><td>Side setback – ground floor</td><td>Side A – 0m Side B – 0.9m</td><td>0.9m</td></tr>
<tr><td>Side setback – upper floor</td><td colspan="2">Side A – 1.2m
Side B – 0.9m</td></tr>
<tr><td>Side setback - garage</td><td>Side A - 0m
Side B - 0.9m</td><td>0.9m</td></tr>
<tr><td>Rear setback – ground level</td><td colspan="2">4m</td></tr>
<tr><td>Rear setback – upper level</td><td colspan="2">6m</td></tr>
<tr><td>Zero Lot line Max Length</td><td colspan="2">11m</td></tr>
</table></td></tr>
<tr><td></td><td>3.5.4. Building design and materials

1. With the exception of zero lot line walls, eaves are to be provided to all facades of the dwelling with a maximum width of 450mm excluding facia and gutters

2. Alternative solutions to eaves may be considered on merit provided appropriate sub shading is provided to windows and of contemporary architectural design.

3. Front facades are to feature at least one habitable room with a window facing onto the street.

4. Small windows to bathrooms, en-suites or the laundry are not to be visible from the ground floor to the primary street frontage.

5. Building material colours are to be of neutral and lighter colours. Front doors are exempt from this requirement.

6. Building facades visible</td><td>450mm Eaves provided along all facades.

Not Applicable.

Front façade provides three (3) habitable room windows facing the street.

Habitable rooms only face the primary street.

Material colours provide contemporary neutral colours including light greys and creams, and dark greys.

Building façade facing primary</td><td>Yes

N/A

Yes

Yes

Yes

Yes</td></tr>
</table>

Part	Requirement	Proposed	Compliance
	from the street are to incorporate three different building materials.	and secondary street frontages incorporate the following materials: • Brick • Cladding • Rendering	
	7. Black and dark coloured roofs are not permitted. Metal roofs are to have a Solar Absorption ration equal to or below 0.65 and tile roofs are to have a Solar Absorption ratio equal to or below 0.80 as classified by the National Construction Code. This selection is also to be reflected in the BASIX Report submitted with the DA.	Soft grey (Bluegum) Colourbond (metal) roofing proposed and is consistent with BASIX requirements.	Yes
	8. Garage doors are to have a Solar Absorption ratio below 0.65 as classified by the National Construction Code.	Garage doors proposed are of a off white (Colourbond Southerly) colour and is unlikely to absorb a considerate amount of heat.	Yes
	3.5.5. Garages, Driveways, Parking		
	1. These controls are in addition to the provisions in section 3.4.2 of the DCP. Where there is an inconsistency, the controls in this section prevail.	The proposal is consistent to the provisions in section 3.4.2 of the DCP.	Yes
	2. Each dwelling is to be provided with a minimum of 2 carparking spaces, 1 of which must be garaged behind the building line.	Proposed dwelling provides a double car garage (5.5m x 5.5m), and sufficient parking space within the driveway.	Yes
	3. Garage door openings cannot exceed 6m in width.	Garage doors proposed are 4.8m in width.	Yes
	4. Triple garages are only permitted where lots have an area of 700m2 or more and a lot width at the building line of at least 18.5m	Not applicable.	N/A
	5. Triple garages are not to be	Not applicable.	N/A

Part	Requirement	Proposed	Compliance
	orientated to the secondary frontage or corner lots.		
	6. Carports are not permitted.	Carports not proposed.	Yes
	7. The maximum crossover width across the verge is 3m for a single garage and 4.5m for double and triple garages.	4.5m proposed for double garage.	Yes
	8. Driveways are to be constructed with pavers, coloured concrete or stencilled concrete. Lighter driveway colours and materials are required to reduce heat absorption	Driveway colour proposed is off dark grey (Monument) and is sympathetic with the building design.	Yes
	9. The section of driveway located between the property boundary and the street kerb (verge) must be constructed from plain concrete	Vehicle crossing proposed is constructed of plain concrete, as illustrated on plans.	Yes
	10. Landscaping at a minimum of 500mm is to be provided between the driveway and boundary line.	Complies.	Yes
	3.5.6. Private Open Space		
	1. An area of Principal Private Open Space (PPOS) is to be provided that is directly accessible from the main living area of a dwelling. It is to have a maximum gradient of 1:10 and be provided at the following minimum rates: ii. Lots above 450m2 : 25m2 with minimum dimension of 5m	Allotment provides a total POS of 91sqm, accessible from the main living area, and a maximum gradient of 0.48:10	Yes
	2. For lots equal to or less than 450m2 , at least 2 hours of direct sunlight is to be received to 50% of the PPOS area of the proposed dwelling between 9am and 3pm on 21 June.	Not applicable.	N/A

Part	Requirement	Proposed	Compliance
	3. For lots above 450m2 , at least 3 hours of direct sunlight is to be received to 50% of the PPOS area of the proposed dwelling between 9am and 3pm on 21 June.	POS achieves direct sunlight to at least 50% of PPOS between 9am and 12pm, total of three (3) hours.	Yes
	4. Direct sunlight to the PPOS of neighbouring dwellings is to be maintained in accordance with the above minimum requirements.	Dwelling house is single storey and is unlikely to adversely impact solar access for adjoining properties.	Yes
	3.5.7. Landscaping		
	1. Minimum landscaped areas are to be provided for lots as outlined in Table 5: a. 450sqm to 600sqm – 20%	Total Landscape area = 26% (133.64sqm).	Yes
	2. At least 50% of the landscaped area required by Table 5 is to be provided behind the building line.	Approximately 53% (71.36sqm) of total landscaped area is behind the building line.	Yes
	3. The front yard of all allotments must provide a minimum area of soft landscaping consistent with Table 6. a. 12.5-18m – 25%	64% Soft landscaping within front yard.	Yes
	4. A minimum of two trees must be provided to be provided to the front garden and additional two trees in the rear of all lots. Tree species are to be a minimum pot size of 30L when planted and capable of growing between 4m to 6m in height at maturity.	Landscape plan provides four (4) trees between 4m and 6m in height maturity within the front and rear setbacks with a pot size of 30L.	Yes
	5. Landscaping should maximise the use of locally indigenous and other drought tolerant native plants where possible.	Landscape plan specifies two (2) native tree species. Condition to ensure all proposed plants are native species.	Yes
	6. Artificial turf is not permitted.	Artificial turf not proposed.	Yes

Part	Requirement	Proposed	Compliance
	3.5.8. Retaining Walls		
	1. All retaining walls (i.e. structural or landscaped) need to be identified in the DA plans.	Retaining walls not proposed.	N/A
	2. No filling shall be permitted within 2m of any property boundary unless sufficient details are submitted to Council illustrating how privacy, overshadowing, stormwater management and access issues have been addressed to Council's satisfaction.	Filling is proposed within 2m of property boundary. Relevant plans have been submitted to address any issues associated. Proposed fill is minor and is unlikely to result in any unreasonable adverse impacts on adjoining properties. Not applicable.	Yes
	3.5.9. Fencing		
	1. All fencing is to be constructed flush to finished ground level to prevent koala access to private lots.	As specified on plans.	Yes
	2. All boundary fencing is to be of Lysaght 'Smartascreen' or similar in Colorbond 'Woodland Grey' colour or similar to meet the requirements of the Biodiversity Certification Agreement to prevent koala from entering private lots. Refer to Figure 14.	Landscape plans indicate colour bond fencing in Woodland grey to side and rear boundaries.	Yes
	3. Boundary fencing not visible from the street is required to be a maximum of 1.8m high and must finish 6.5m from the front boundary and return to the side wall of the home.	Landscape plans indicate 1.8m high fencing to rear and side boundaries.	Yes
	4. Any fence forward of the building line to the primary street frontage or side boundaries is to be a maximum of 1.2m high and with a predominantly open character. The design of the fence is also to integrate a letterbox.	Fencing forward of building line not proposed.	Yes

DA

CAMPBELLTOWN CITY COUNCIL (NSW)

SHEET INDEX

TOTAL FLOOR AREAS

GRANNY FLAT, GROUND FLOOR		
	LIVING	59.88
		59.88 m²
MAIN DWELLING, GROUND FLOOR		
	ALFRESCO	15.27
	GARAGE	33.46
	LIVING	186.10
	PATIO	5.00
		239.88 m²
		299.76 m²

AS & NCC COMPLIANCE

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH NCC 2022 AND APPLICABLE AUSTRALIAN STANDARDS AT TIME OF APPROVAL.

- SLAB IN ACCORDANCE WITH AS 2870. REFER TO ENGINEERS DETAILS FOR ALL SLAB DETAILS.
- BRICK CONTROL JOINTS PROVIDED IN ACCORDANCE WITH NCC 2022.
- ALL STEEL FRAMING TO BE DESIGNED TO AS 4100-2020 OR AS/NZS 4600-2018.
- INSULATION TO BE INSTALLED IN ACCORDANCE WITH NCC 2022 AND ALL APPLICABLE AUSTRALIAN STANDARDS.
- TERMITE MANAGEMENT IN ACCORDANCE WITH AS 3660 AND NCC 2022.
- GLAZING IN ACCORDANCE WITH AS 1288 AND NCC 2022.
- SMOKE ALARMS IN ACCORDANCE WITH AS 3786 AND NCC 2022.
- INTERNAL WATERPROOFING IN ACCORDANCE WITH NCC 2022 HOUSING PROVISIONS PART 10.2.
- EXTERNAL WATERPROOFING IN ACCORDANCE WITH AS 3740 AND AS 4654.
- WET AREA FLOORS TO FALL TO FLOOR WASTES AT MIN. 1:80 AND MAX. 1:50 GRADE (IF APPLICABLE).
- CONDENSATION MANAGEMENT IN ACCORDANCE WITH NCC 2022 HOUSING PROVISIONS PART 10.8.
- BUILDING SEALING IN ACCORDANCE WITH NCC 2022.
- SERVICES IN ACCORDANCE WITH NCC 2022.
- EARTHWORKS IN ACCORDANCE WITH AS 3798-2007.
- EXTERNAL WALL WRAP (SARKING) IN ACCORDANCE WITH NCC 2022 (IF APPLICABLE).
- EXHAUST FANS DUCTED TO OUTSIDE AIR (IF APPLICABLE).

SITE SPECIFIC CONTROLS

CONTROL	DETAILS
ACID SULPHATE SOIL	NO
BIODIVERSITY	NO
BUILDING ENVELOPE	YES
BUSHFIRE	BAL-LOW
CLASSIFIED ROAD	NO
DESIGN WIND CLASSIFICATION	N2 (NOT EXPOSED)
ESTATE/DEVELOPER GUIDELINES	FIGTREE HILL
HERITAGE	NO
LANDSLIP HAZARD	NO
MINE SUBSIDENCE	GUIDELINE 8
MINIMUM FLOOR LEVEL	NO
NOISE ATTENUATION	YES
SALINE SOIL	NO
SITE CLASSIFICATION	P-M
SNOW LOAD	NO
WITHIN 1km CALM SALT WATER	NO
WITHIN 50km BREAKING SURF	21.70km
ZONING	R2 - LOW DENSITY RESIDENTIAL
TERRESTRIAL BIODIVERSITY	
URBAN RELEASE AREA	

BUILDING CONTROLS & COMPLIANCE

CONTROL	REQUIRED	PROPOSED
SETBACKS		
FRONT	MIN. 4.500mm	4.500mm
ARTICULATION ZONE	MIN. 2.500mm	2.500mm
ARTICULATION ZONE	MAX. 50%	17.25%
GARAGE TO BOUNDARY	MIN. 5.500mm	5.500mm
GARAGE TO BUILDING LINE	MIN. 1.000mm	1.000mm
SIDE	MIN. 900mm	915mm
REAR	MIN. 4.000mm	4.200mm
BULK & SCALE		
SITE AREA	512m²	
SITE COVERAGE	N/A	58.35%
FLOOR SPACE RATIO	MAX. 0.55:1	0.47k:1
BUILDING HEIGHT	MAX. 9.000mm	5.266mm
LANDSCAPE		
LANDSCAPED AREA	MIN. 102.4m²	135.14m²
LANDSCAPED AREA - FRONT	MIN. 18m²	46.57m²
LANDSCAPED AREA - REAR	MIN. 51.2m²	89.57m²
EARTHWORKS		
CUT DEPTH	MAX. 1.000mm	465mm
FILL DEPTH	MAX. 1.000mm	590mm
ACCESS & AMENITY		
PARKING SPACES	MIN. 2 SPACES	2 SPACES
PRIVATE OPEN SPACE	MIN. 102.4m²	107.20m²
PRINCIPAL PRIVATE OPEN SPACE	MIN. 25m²	37m²

BUILDING INFORMATION

GROUND FLOOR PITCHING HEIGHT(S)	2745mm
FRAMES AND TRUSSES	STEEL
ROOF PITCH (U.N.O.)	22.5°
ELECTRICITY SUPPLY	SINGLE PHASE
GAS SUPPLY	MAINS / RETICULATED
ROOF MATERIAL	SHEET METAL
ROOF COLOUR	N/A
WIND DRIVEN ROOF VENTILATORS	3
WALL MATERIAL	BRICK VENEER CLADDING
WALL COLOUR	N/A
SLAB CLASSIFICATION	M

ROOF SPACE VENTILATION

REFER TO ROOF PLAN FOR VENTILATION LOCATIONS

GRANNY FLAT ROOF		
LONGEST HORIZONTAL ROOF LENGTH		12.146m
ROOF PITCH		22.50°
HIGH LEVEL VENTILATION	REQUIRED	65.720mm² (5.000 x 13.146m)
	PROVIDED	70,386mm²
LOW LEVEL VENTILATION	REQUIRED	92,008mm² (7,000 x 13.146m)
	PROVIDED	101,200mm²
MAIN HOUSE ROOF		
LONGEST HORIZONTAL ROOF LENGTH		25.100m
ROOF PITCH		22.50°
HIGH LEVEL VENTILATION	REQUIRED	125,500mm² (5,000 x 25.100m)
	PROVIDED	140,770mm²
LOW LEVEL VENTILATION	REQUIRED	175,700mm² (7,000 x 25.100m)
	PROVIDED	177,100mm²

INSULATION

ROOF	MIN. 60mm FOIL FACED BLANKET UNDER ROOFING
CEILING	R6.0 BATTS (HOUSE AREA ONLY)
EXT. WALLS	R2.2 BATTS (HABITABLE ROOMS)
INT. WALLS	R2.2 BATTS (TO BATHROOM AND LAUDRY)
FLOOR	NO ADDITIONAL INSULATION

NOTE TO OWNER

THESE PLANS MAY FEATURE WORKS THAT ARE EXCLUDED FROM THE SCOPE OF WORKS WITH THE BUILDER, BUT THEY HAVE BEEN INCLUDED IN THESE DRAWINGS TO ASSIST IN THE OVERALL PLANNING AND ASSESSMENT OF THE BUILDING PROJECT. EXAMPLES OF SOME REGULARLY EXCLUDED WORKS INCLUDE DRIVEWAYS, RETAINING WALLS, SOLAR PANEL SPACING AND SITE DRAINAGE. PLEASE REFER TO YOUR SCOPE OF WORKS AND COLOUR SELECTIONS DOCUMENTATION FOR DETAILS OF INCLUDED WORKS. SOME DETAILS ARE INDICATIVE ONLY FOR EXAMPLE FLOORING, TILING, BRICKWORK AND CLADDING (EXPANSION JOINTS, ORIENTATION AND LAYOUT) AND ARE SUBJECT TO CHANGE.

SUSTAINABILITY

PRELIMINARY SUSTAINABILITY COMPLIANCE FOR YOUR HOME REQUIRES FURTHER ASSESSMENT TO DETERMINE COMPLIANCE CRITERIA. THIS ASSESSMENT WILL BE FINALISED UPON APPROVAL OF YOUR EXTERNAL COLOUR SELECTIONS TO DETERMINE IF VARIATIONS ARE REQUIRED TO THE PROPOSED DWELLING E.G. ADDITIONAL INSULATION, CHANGES IN WINDOW GLAZING / SIZE / ORIENTATION ETC. YOU WILL BE ADVISED OF ANY REQUIREMENTS OR ALTERNATIVES ONCE THE ASSESSMENT HAS BEEN COMPLETED.

BASIX AREAS	
CONDITIONED AREA	199.56 m²
UNCONDITIONED AREA	17.49 m²
WATER RATINGS	
SHOWER HEADS	3 STAR (> 7.5 BUT <= 9 L/MIN)
TOILET SUITES	3 STAR
KITCHEN TAPS	3 STAR
BATHROOM TAPS	3 STAR
WATER HARVESTING AND USAGE	
TOTAL ROOF AREA	333.59 m²
MIN. WATER TANK CAPACITY	3050 L
MIN. ROOF AREA DIRECTED TO TANK(S)	171.11 m²
WATER TANK(S) CONNECTED TO	AT LEAST ONE OUTDOOR TAP ALL TOILETS WASHING MACHINE
GARDEN/LAWN AREA	0 m²
RECYCLED WATER	
RETICULATED RECYCLED WATER	N/A
ENERGY COMMITMENTS	
HOT WATER SYSTEM	GAS CONTINUOUS FLOW 6 STAR
HEATING SYSTEM	1-PHASE REVERSE CYCLE AIR CONDITIONING COP 3.5 - 4.0
COOLING SYSTEM	1-PHASE REVERSE CYCLE AIR CONDITIONING EER 3.0 - 3.5
CEILING FANS	6 - REFER TO FLOOR PLAN FOR LOCATIONS
VENTILATION (EXHAUST FANS)	
NO MECHANICAL VENTILATION TO BATHROOMS	
KITCHEN RANGEHOOD: NOT DUCTED, MANUAL ON/TIMER OFF	
NO MECHANICAL VENTILATION TO LAUNDRY	
PRIMARY FLUORESCENT/LED LIGHTING (INCL. COVER)	
N/A	
NATURAL LIGHTING	
N/A	
ALTERNATIVE ENERGY	
PHOTOVOLTAIC SYSTEM	MIN. 6.60KW PEAK
OTHER	
ELECTRIC COOKTOP, ELECTRIC OVEN	
FIXED OUTDOOR CLOTHESLINE BY OWNER	
NO FIXED INDOOR CLOTHESLINE	

BUSHFIRE REQUIREMENTS - BAL-LOW

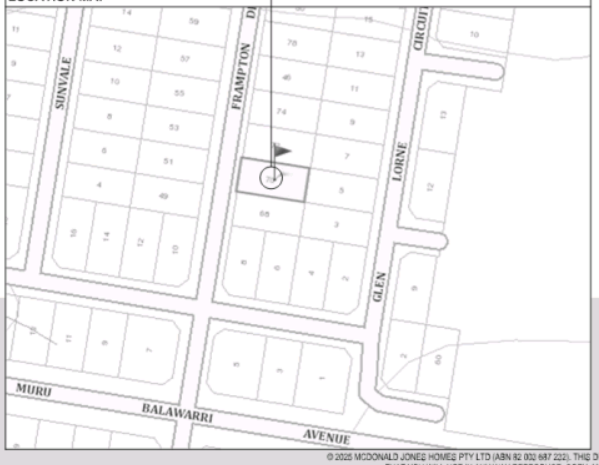
- PROVIDE COPPER WATER PIPES FROM WATER TANK TO HOUSE.

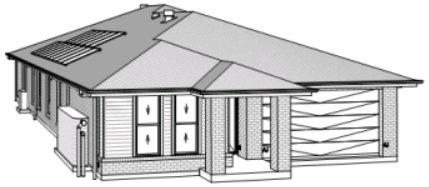
88B INSTRUMENT APPLICABLE CLAUSES

16, 17, 18, 20, 22, 35 & 36

LOT 1146
70 FRAMPTON DRAIVE

LOCATION MAP





SUBJECT TO NCC 2022
(1 OCT 2023 + 7 STAR BASIX)
WATERPROOFING & PLUMBING
CONDENSATION MANAGEMENT
ENERGY EFFICIENCY

PLAN ACCEPTANCE BY OWNER

SIGNATURE: DATE:

SIGNATURE: DATE:

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	REVISION	DRAWN	
1	DESIGN FEE PLAN	KNL	24/09/2024
2	DRAFT SALES PLAN - BOW	CES	06/11/2024
3	SITING + FACADE CHANGE	CES	02/12/2024
4	SITING AMMENDMENT	CES	06/12/2024
5	WORKING DRAWING PLANS	TPH	16/12/2024

CLIENT: MR MD ABUTALHA TALUKDAR & MS MST ALMA MALIA
ADDRESS: 70 FRAMPTON DRIVE, GILEAD NSW 2560
LOT / SECTION / DP: 1146 / - / 1242642
COUNCIL: CAMPBELLTOWN CITY COUNCIL (NSW)

HOUSE DESIGN: SERRANO FOUR
FACADE DESIGN: EVERTON
SHEET TITLE: COVER SHEET
SHEET No.: 1 / 21

HOUSE CODE: H-MNWSRN40SA
FACADE CODE: F-SRNEVTN01
SCALES: 1:100

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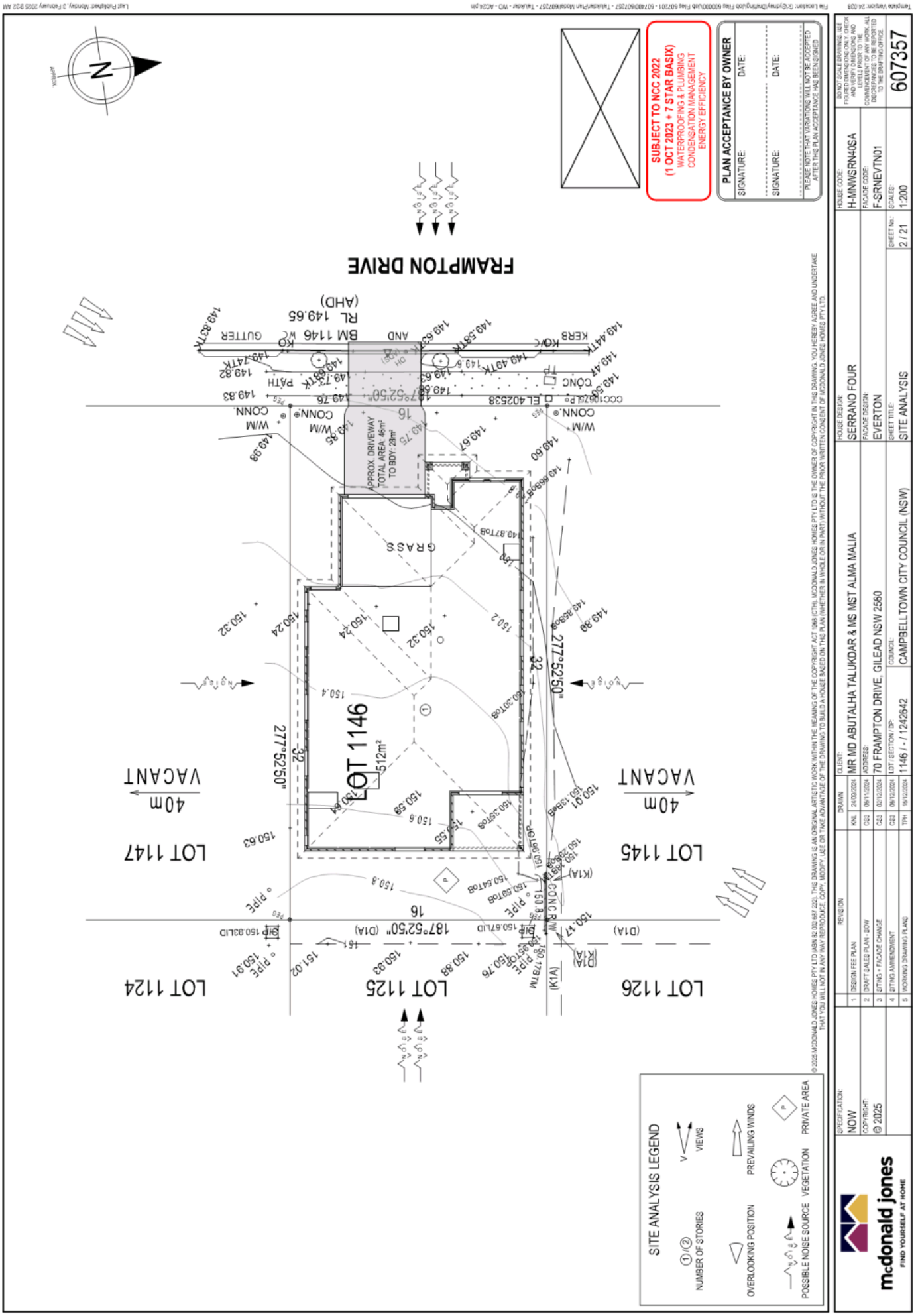
FRAMPTON DRIVE
LOT 1146
512m²
277°52'50"
32
16
APPROX. DRIVEWAY
TOTAL AREA: 46m²
TO BDY: 28m²
LOT 1147
LOT 1145
LOT 1124
LOT 1125
LOT 1126
40m
VACANT
SUBJECT TO NCC 2022
(1 OCT 2023 + 7 STAR BASIX)
WATERPROOFING & PLUMBING
CONDENSATION MANAGEMENT
ENERGY EFFICIENCY
PLAN ACCEPTANCE BY OWNER
SIGNATURE: DATE:
SIGNATURE: DATE:
PLEASE NOTE THAT VARIATIONS WILL NOT BE ACCEPTED AFTER THIS PLAN ACCEPTANCE HAS BEEN SIGNED
SITE ANALYSIS LEGEND
NUMBER OF STORIES
VIEWS
OVERLOOKING POSITION
PREVAILING WINDS
POSSIBLE NOISE SOURCE
VEGETATION
PRIVATE AREA
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REVISION
1 DESIGN FEE PLAN KNL 24/03/2024
2 DRAFT SALES PLAN - SOW CEO 06/11/2024
3 SITING + FACADE CHANGE CEO 02/12/2024
4 SITING AMMENDMENT CEO 06/12/2024
5 WORKING DRAWING PLANS TPH 16/12/2024
DRAWN
CLIENT: MR MD ABUTALHA TALUKDAR & MS MST ALMA MALIA
ADDRESS: 70 FRAMPTON DRIVE, GILEAD NSW 2560
LOT / SECTION / DP: 1146 / - / 1242642
COUNCIL: CAMPBELLTOWN CITY COUNCIL (NSW)
HOUSE DESIGN: SERRANO FOUR
FACADE DESIGN: EVERTON
SHEET TITLE: SITE ANALYSIS
HOUSE CODE: H-MNWSRN40SA
FACADE CODE: F-SRNEVTN01
SHEET No.: 2 / 21
SCALES: 1:200
607357
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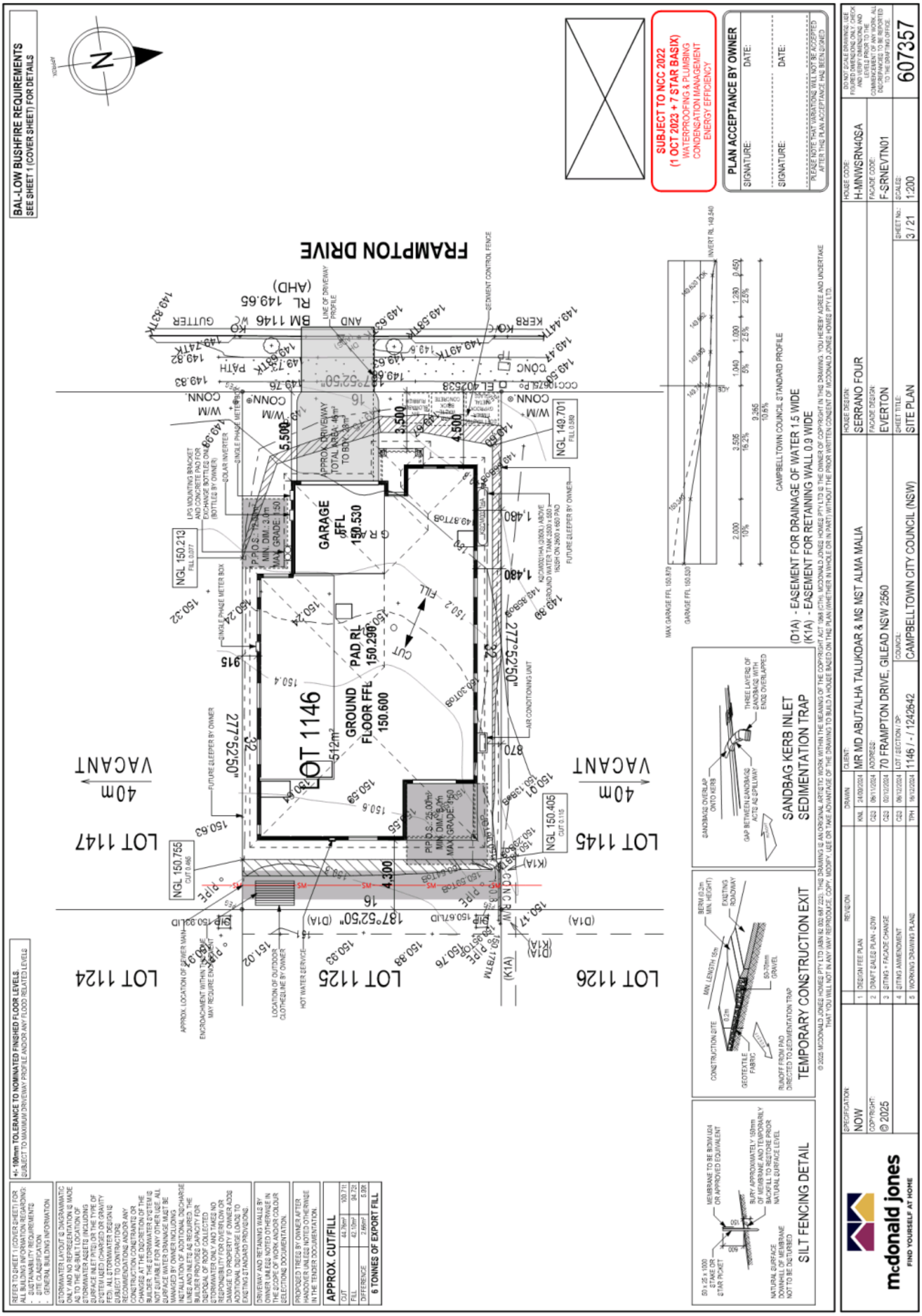

FRAMPTON DRIVE
LOT 1146
512m²
GARAGE
FFL 150.530
GROUND FLOOR FFL 150.600
PAD RL 150.290
LOT 1147
LOT 1145
LOT 1124
LOT 1125
LOT 1126
VACANT
40m
277°52'50"
187°52'50"
BAL-LOW BUSHFIRE REQUIREMENTS
SEE SHEET 1 (COVER SHEET) FOR DETAILS
SUBJECT TO NCC 2022
(1 OCT 2023 + 7 STAR BASIX)
PLAN ACCEPTANCE BY OWNER
SIGNATURE:
DATE:
APPROX. CUT/FILL
6 TONNES OF EXPORT FILL
SILT FENCING DETAIL
TEMPORARY CONSTRUCTION EXIT
SANDBAG KERB INLET SEDIMENTATION TRAP
(D1A) - EASEMENT FOR DRAINAGE OF WATER 1.5 WIDE
(K1A) - EASEMENT FOR RETAINING WALL 0.9 WIDE
CAMPBELLTOWN COUNCIL STANDARD PROFILE
MR MD ABUTALHA TALUKDAR & MS MST ALMA MALIA
70 FRAMPTON DRIVE, GILEAD NSW 2560
1146 / - / 1242642
CAMPBELLTOWN CITY COUNCIL (NSW)
SERRANO FOUR
EVERTON
SITE PLAN
H-MNWSRN40SA
F-SRNEVTN01
1:200
3 / 21
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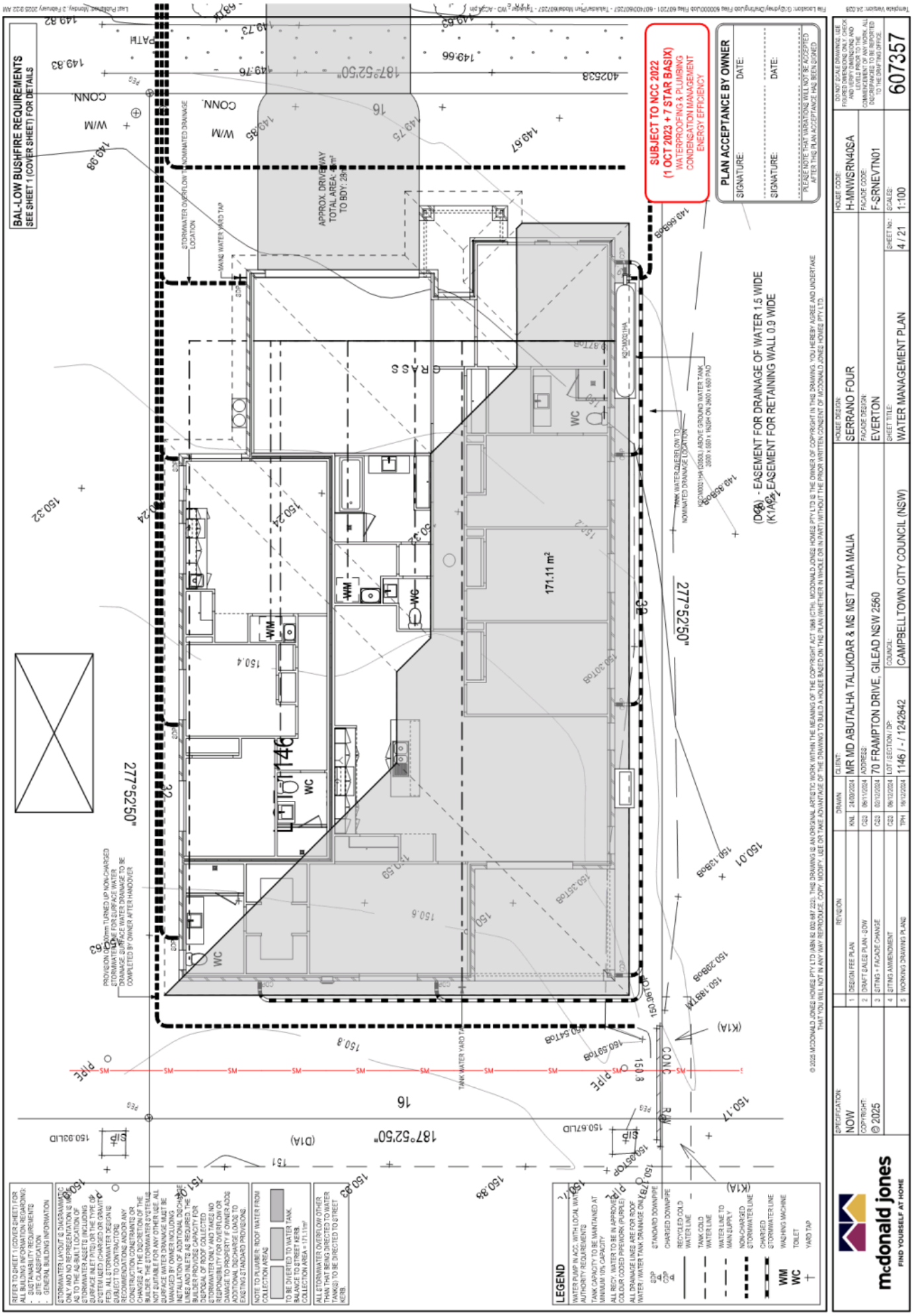
BAL-LOW BUSHFIRE REQUIREMENTS
SEE SHEET 1 (COVER SHEET) FOR DETAILS
SUBJECT TO NCC 2022
(1 OCT 2023 + 7 STAR BASIX)
WATERPROOFING & PLUMBING
CONDENSATION MANAGEMENT
ENERGY EFFICIENCY
PLAN ACCEPTANCE BY OWNER
SIGNATURE: DATE:
SIGNATURE: DATE:
PLEASE NOTE THAT VARIATIONS WILL NOT BE ACCEPTED AFTER THIS PLAN ACCEPTANCE HAS BEEN SIGNED
(D&B) - EASEMENT FOR DRAINAGE OF WATER 1.5 WIDE
(K1A) - EASEMENT FOR RETAINING WALL 0.9 WIDE
APPROX. DRIVEWAY
TOTAL AREA: 45m²
TO BOY: 28m
171.11 m²
277°52'50"
187°52'50"
LEGEND
mcdonald jones
FIND YOURSELF AT HOME
SPECIFICATION: NOW
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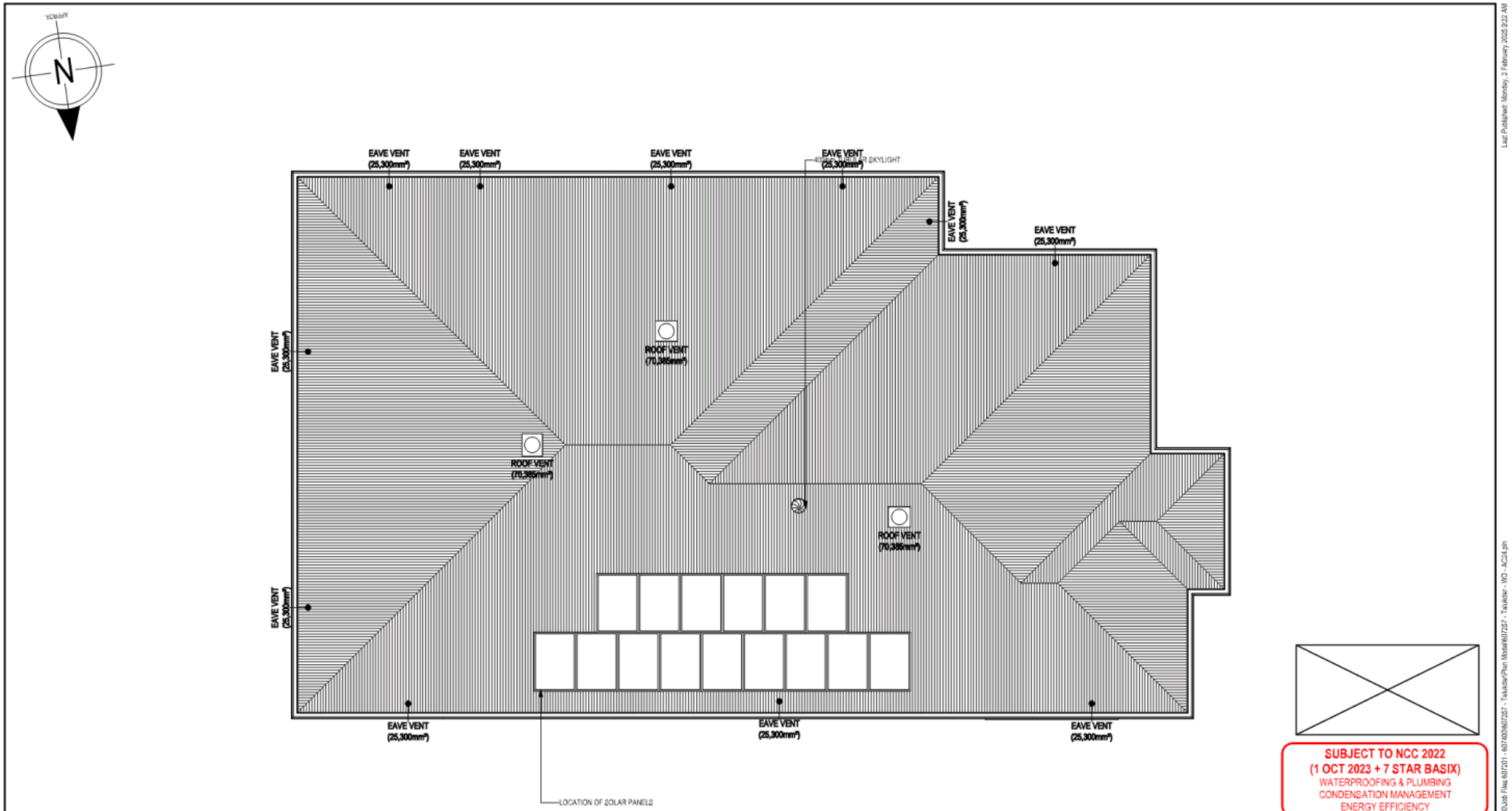
1 DESIGN FEE PLAN KNL 24/03/2024
2 DRAFT SALES PLAN - SOW CS3 06/11/2024
3 SITING + FACADE CHANGE CS3 02/12/2024
4 SITING AMENDMENT CS3 06/12/2024
5 WORKING DRAWING PLANS TPH 16/12/2024
CLIENT: MR MD ABUTALHA TALUKDAR & MS MST ALMA MALIA
ADDRESS: 70 FRAMPTON DRIVE, GILEAD NSW 2560
LOT / SECTION / DP: 1146 / - / 1242642
COUNCIL: CAMPBELLTOWN CITY COUNCIL (NSW)
HOUSE DESIGN: SERRANO FOUR
FACADE DESIGN: EVERTON
SHEET TITLE: WATER MANAGEMENT PLAN
HOUSE CODE: H-MNWSRN40SA
FACADE CODE: F-SRNEVTN01
SCALES: 1:100
SHEET No.: 4 / 21
607357



ROOF PLAN
SCALE: 1:100

SUBJECT TO NCC 2022
(1 OCT 2023 + 7 STAR BASIX)
WATERPROOFING & PLUMBING
CONDENSATION MANAGEMENT
ENERGY EFFICIENCY

PLAN ACCEPTANCE BY OWNER

SIGNATURE: DATE:

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2	DRAFT SALES PLAN - SOW	CS3	06/11/2024
3	SITING + FACADE CHANGE	CS3	02/12/2024
4	SITING AMMENDMENT	CS3	06/12/2024
5	WORKING DRAWING PLANS	TPH	16/12/2024

CLIENT: MR MD ABUTALHA TALUKDAR & MS MST ALMA MALIA
ADDRESS: 70 FRAMPTON DRIVE, GILEAD NSW 2560
LOT / SECTION / DP: 1146 / - / 1242642
COUNCIL: CAMPBELLTOWN CITY COUNCIL (NSW)

HOUSE DESIGN: SERRANO FOUR
FACADE DESIGN: EVERTON
SHEET TITLE: ROOF PLAN
SHEET No.: 6 / 21

HOUSE CODE: H-MNWSRN40SA
FACADE CODE: F-SRNEVTN01
SCALES: 1:100

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EXTERIOR WINDOW & DOOR SCHEDULE

[1,2] ASSUME LOOKING FROM OUTSIDE

MANUFACTURER: BRADNAMS (NSW)

STOREY	ID	CODE[1]	TYPE	ROOM	HEIGHT	WIDTH	PERIMETER	AREA (m²)	FRAME TYPE	BAL RATING	SILL TYPE	ORIENT.	GLAZING AREA (m²)	GLAZING TYPE	ADDITIONAL INFORMATION[2]
WINDOW															
GROUND FLOOR	W01	D2109	DOUBLE HUNG	HOME THEATRE	2,060	850	5,820	1.75	ALUMINIUM	BAL-LOW	NONE	W	1.49	CLEAR, DOUBLE GLAZED	
GROUND FLOOR	W02	D2109	DOUBLE HUNG	HOME THEATRE	2,060	850	5,820	1.75	ALUMINIUM	BAL-LOW	NONE	W	1.49	CLEAR, DOUBLE GLAZED	
GROUND FLOOR	W03	AA1816	AWNING	LIVING / DINING	1,800	1,570	6,740	2.83	ALUMINIUM	BAL-LOW	SNAP HEADER	W	2.20	CLEAR, DOUBLE GLAZED	MP 785
GROUND FLOOR	W04	F150-0715	FIXED	KITCHEN	727	1,570	4,594	1.14	ALUMINIUM	BAL-LOW	ANGLED	S	0.98	CLEAR, DOUBLE GLAZED, TOUGHENED	
GROUND FLOOR	W05	SF1216	SLIDING	BED 2	1,200	1,570	5,540	1.88	ALUMINIUM	BAL-LOW	ANGLED	S	1.64	CLEAR, DOUBLE GLAZED	
GROUND FLOOR	W06	SF1216	SLIDING	BED 1	1,200	1,570	5,540	1.88	ALUMINIUM	BAL-LOW	ANGLED	S	1.64	CLEAR, DOUBLE GLAZED	
GROUND FLOOR	W07	A1006	AWNING	ENS	1,020	610	3,280	0.62	ALUMINIUM	BAL-LOW	ANGLED	S	0.44	SATINLITE, DOUBLE GLAZED, TOUGHENED	
GROUND FLOOR	W08	SF/FF2118	SLIDING	MASTER SUITE	2,060	1,810	7,740	3.73	ALUMINIUM	BAL-LOW	ANGLED	E	3.23	CLEAR, DOUBLE GLAZED	BP 600, MP 905/0
GROUND FLOOR	W09	A2109	AWNING	FAMILY / LIVING	2,060	850	5,820	1.75	ALUMINIUM	BAL-LOW	ANGLED	N	1.40	CLEAR, DOUBLE GLAZED	
GROUND FLOOR	W10	A2109	AWNING	FAMILY / LIVING	2,060	850	5,820	1.75	ALUMINIUM	BAL-LOW	ANGLED	N	1.40	CLEAR, DOUBLE GLAZED	
GROUND FLOOR	W11	SF/F2112	SLIDING	BED 4	2,060	1,210	6,540	2.49	ALUMINIUM	BAL-LOW	ANGLED	N	2.12	CLEAR, DOUBLE GLAZED	BP 600
GROUND FLOOR	W12	SF/F2112	SLIDING	BED 3	2,060	1,210	6,540	2.49	ALUMINIUM	BAL-LOW	ANGLED	N	2.12	CLEAR, DOUBLE GLAZED	BP 600
GROUND FLOOR	W13	SF/F2112	SLIDING	BED 2	2,060	1,210	6,540	2.49	ALUMINIUM	BAL-LOW	ANGLED	N	2.12	CLEAR, DOUBLE GLAZED	BP 600
GROUND FLOOR	W14	A1006	AWNING	ENS 2	1,020	610	3,280	0.62	ALUMINIUM	BAL-LOW	ANGLED	N	0.44	SATINLITE, DOUBLE GLAZED, TOUGHENED	
								27.19					**22.71**		
DOOR															
GROUND FLOOR	D01	920	SWINGING	ENTRY	2,406	987	6,786	2.37	TIMBER	BAL-LOW	SNAP HEADER	W	---	DOOR(S): N/A - SIDELIGHT(S): N/A	LEAF SIZE: 2340 x 920mm
GROUND FLOOR	D02	1020	SWINGING	LIVING / DINING	2,406	1,087	6,986	2.62	TIMBER	BAL-LOW	SNAP HEADER	S	---	DOOR(S): N/A - SIDELIGHT(S): N/A	LEAF SIZE: 2340 x 1020mm
GROUND FLOOR	D03	SSF2427	STACKER	FAMILY / LIVING	2,400	2,688	10,176	6.45	ALUMINIUM	BAL-LOW	SNAP HEADER	E	5.70	CLEAR, DOUBLE GLAZED, TOUGHENED	
								11.44					**5.70**		
								38.63					**28.41**		

INTERIOR WINDOW & DOOR SCHEDULE

STOREY	QTY	CODE	TYPE	HEIGHT	WIDTH	GLAZING TYPE	ADDITIONAL INFORMATION
DOOR							
GROUND FLOOR	1	1325 SS	SQUARE SET OPENING	2,455	1,325	N/A	
GROUND FLOOR	1	2 x 520	SWINGING	2,340	1,040	N/A	
GROUND FLOOR	5	2 x 620	SWINGING	2,340	1,240	N/A	
GROUND FLOOR	1	2 x 620 UC	SWINGING	2,340	1,240	N/A	20mm UNDERCUT
GROUND FLOOR	1	2 x 770	SWINGING	2,340	1,540	N/A	
GROUND FLOOR	1	520	SWINGING	2,340	520	N/A	
GROUND FLOOR	1	620	SWINGING	2,340	620	N/A	
GROUND FLOOR	2	720	SWINGING	2,340	720	N/A	
GROUND FLOOR	1	720	SWINGING	2,340	720	N/A	LIFT-OFF HINGES
GROUND FLOOR	2	720 UC	SWINGING	2,340	720	N/A	20mm UNDERCUT, LIFT-OFF HINGES
GROUND FLOOR	1	770	SWINGING	2,340	770	N/A	LIFT-OFF HINGES
GROUND FLOOR	8	820	SWINGING	2,340	820	N/A	
GROUND FLOOR	2	820 UC	SWINGING	2,340	820	N/A	20mm UNDERCUT
GROUND FLOOR	1	900 SS	SQUARE SET OPENING	2,455	900	N/A	
GROUND FLOOR	2	970 SS	SQUARE SET OPENING	2,455	970	N/A	
GROUND FLOOR	1	990 SS	SQUARE SET OPENING	2,455	990	N/A	

PICTURE, TV RECESS AND SS WINDOW OPENINGS

QTY	TYPE	HEIGHT	WIDTH	AREA (m²)

REFER TO SHEET 1 (COVER SHEET) FOR ALL BUILDING INFORMATION REGARDING:
- SUSTAINABILITY REQUIREMENTS
- SITE CLASSIFICATION
- GENERAL BUILDING INFORMATION

BAL-LOW BUSHFIRE REQUIREMENTS
SEE SHEET 1 (COVER SHEET) FOR DETAILS

SUBJECT TO NCC 2022
(1 OCT 2023 + 7 STAR BASIX)
WATERPROOFING & PLUMBING
CONDENSATION MANAGEMENT
ENERGY EFFICIENCY

PLAN ACCEPTANCE BY OWNER

SIGNATURE: DATE:

SIGNATURE: DATE:

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	REVISION	DRAWN	
1	DESIGN FEE PLAN	KNL	24/09/2024
2	DRAFT SALES PLAN - SOW	CS3	06/11/2024
3	SITING + FACADE CHANGE	CS3	02/12/2024
4	SITING AMMENDMENT	CS3	06/12/2024
5	WORKING DRAWING PLANS	TPH	16/12/2024

CLIENT:	MR MD ABUTALHA TALUKDAR & MS MST ALMA MALIA	HOUSE DESIGN:	SERRANO FOUR	HOUSE CODE:	H-MNWSRN40SA
ADDRESS:	70 FRAMPTON DRIVE, GILEAD NSW 2560	FACADE DESIGN:	EVERTON	FACADE CODE:	F-SRNEVTN01
LOT / SECTION / DP:	1146 / - / 1242642	COUNCIL:	CAMPBELLTOWN CITY COUNCIL (NSW)	SHEET TITLE:	WINDOW & DOOR SCHEDULES
SHEET No.:	7 / 21	SCALES:			

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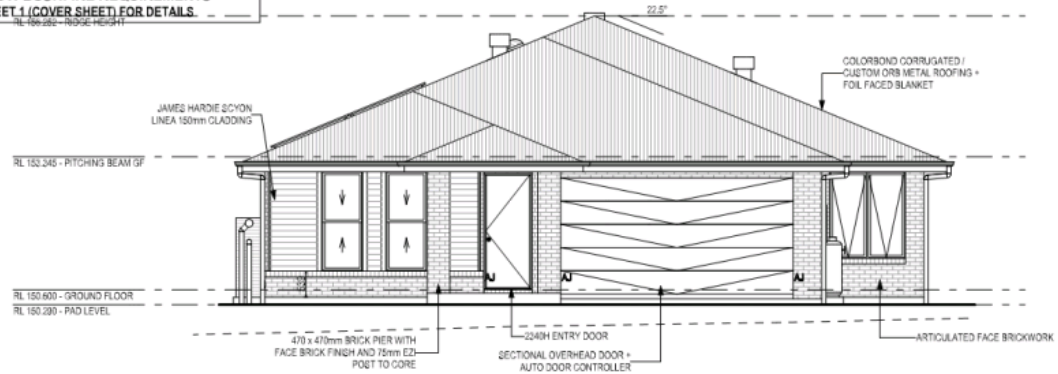
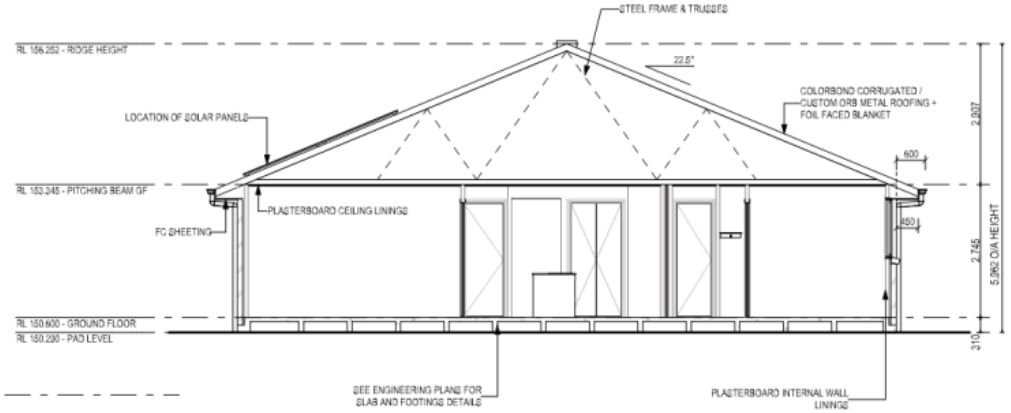
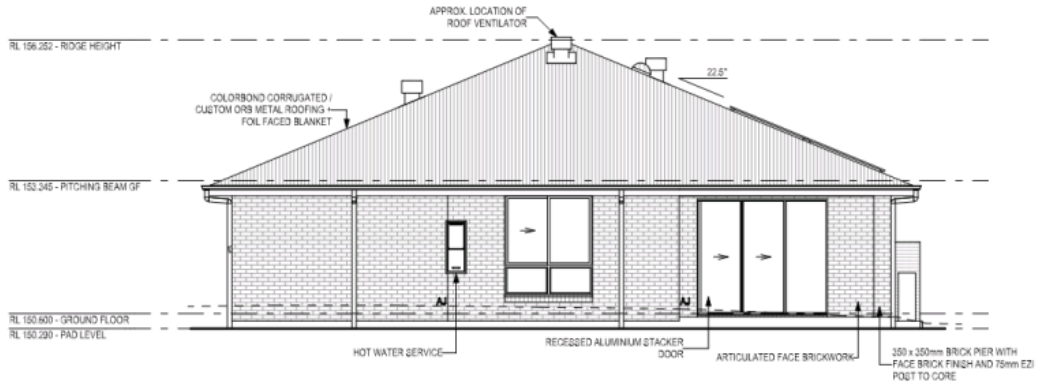
BAL-LOW BUSHFIRE REQUIREMENTS
SEE SHEET 1 (COVER SHEET) FOR DETAILS.



FRONT ELEVATION (WEST)
SCALE: 1:100



SECTION A-A
SCALE: 1:100



REAR ELEVATION (EAST)
SCALE: 1:100

REFER TO SHEET 1 (COVER SHEET) FOR ALL BUILDING INFORMATION REGARDING:
- SUSTAINABILITY REQUIREMENTS
- SITE CLASSIFICATION
- GENERAL BUILDING INFORMATION

SOME DETAILS ON THIS SHEET ARE INDICATIVE ONLY FOR EXAMPLE BRICKWORK AND CLADDING (EXPANSION JOINTS, ORIENTATION AND LAYOUT) AND ARE SUBJECT TO CHANGE.

SH = SNAP HEADER SILL

SUBJECT TO NCC 2022
(1 OCT 2023 + 7 STAR BASIX)
WATERPROOFING & PLUMBING
CONDENSATION MANAGEMENT
ENERGY EFFICIENCY

GLASS TYPE LEGEND
CLEAR | OBSCURE

WINDOW TYPE LEGEND
AWNING | DOUBLE HUNG | FIXED | LOUVRE | SLIDING

PLAN ACCEPTANCE BY OWNER
SIGNATURE: DATE:
SIGNATURE: DATE:
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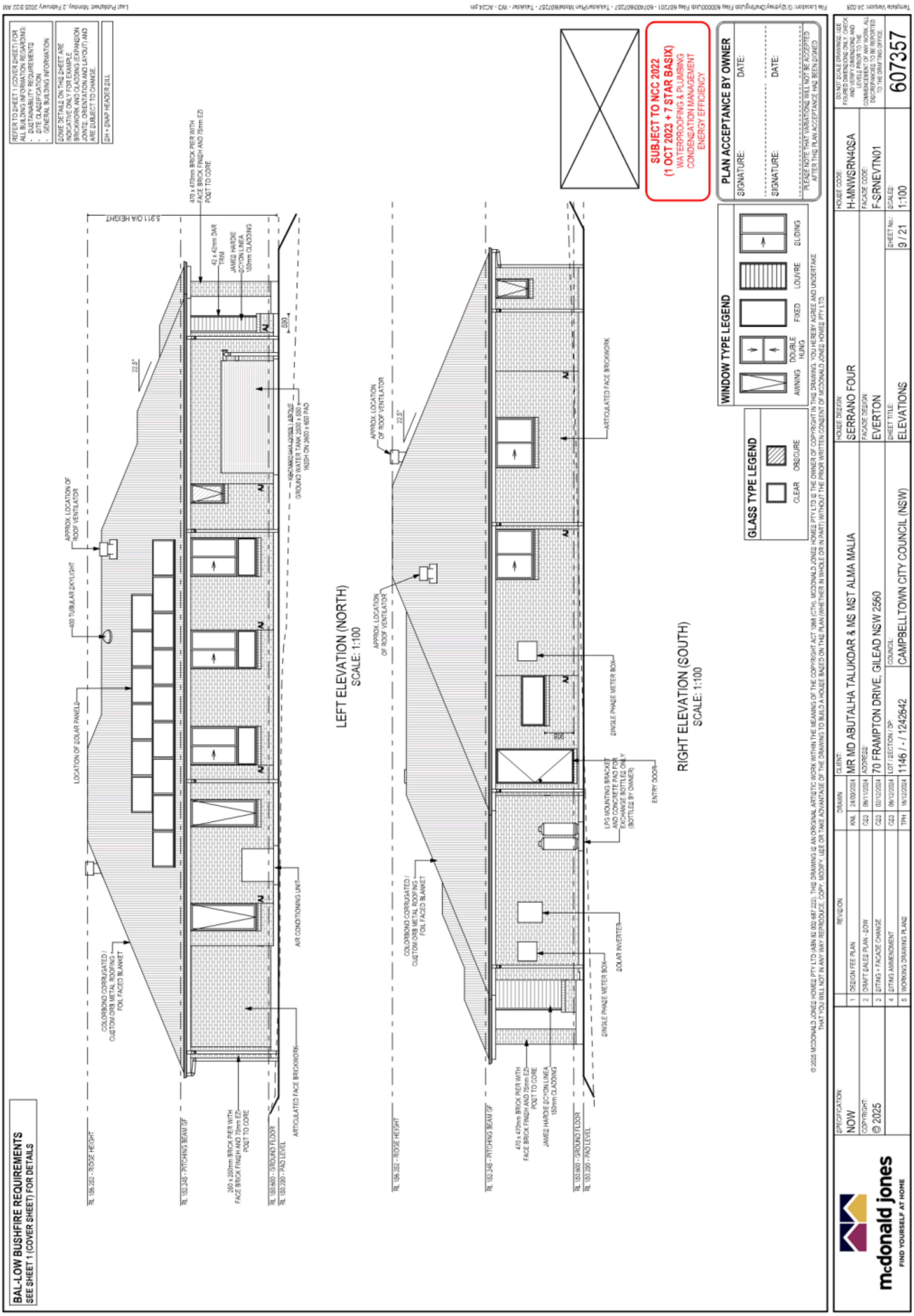
COPYRIGHT: © 2025	1	DESIGN FEE PLAN	KNL 24/09/2024	ADDRESS: 70 FRAMPTON DRIVE, GILEAD NSW 2560		FACADE DESIGN: EVERTON		FACADE CODE: F-SRNEVTN01	
	2	DRAFT SALES PLAN - SOW	CS3 06/11/2024						
	3	SITING + FACADE CHANGE	CS3 02/12/2024						
	4	SITING AMMENDMENT	CS3 06/12/2024	LOT / SECTION / DP: 1146 / - / 1242642	COUNCIL: CAMPBELLTOWN CITY COUNCIL (NSW)	SHEET TITLE: ELEVATIONS / SECTION	SHEET No.: 8 / 21	SCALES: 1:100	607357
	5	WORKING DRAWING PLANS	TPH 16/12/2024						


BAL-LOW BUSHFIRE REQUIREMENTS
SEE SHEET 1 (COVER SHEET) FOR DETAILS
LEFT ELEVATION (NORTH)
SCALE: 1:100
RIGHT ELEVATION (SOUTH)
SCALE: 1:100
SUBJECT TO NCC 2022
(1 OCT 2023 + 7 STAR BASIX)
WATERPROOFING & PLUMBING
CONDENSATION MANAGEMENT
ENERGY EFFICIENCY
PLAN ACCEPTANCE BY OWNER
SIGNATURE:
DATE:
WINDOW TYPE LEGEND
AWNING
DOUBLE HUNG
FIXED
LOUVRE
SLIDING
GLASS TYPE LEGEND
CLEAR
OBSCURE
H-MNWSRN40SA
F-SRNEVTN01
SERRANO FOUR
EVERTON
ELEVATIONS
MR MD ABUTALHA TALUKDAR & MS MST ALMA MALIA
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9 / 21
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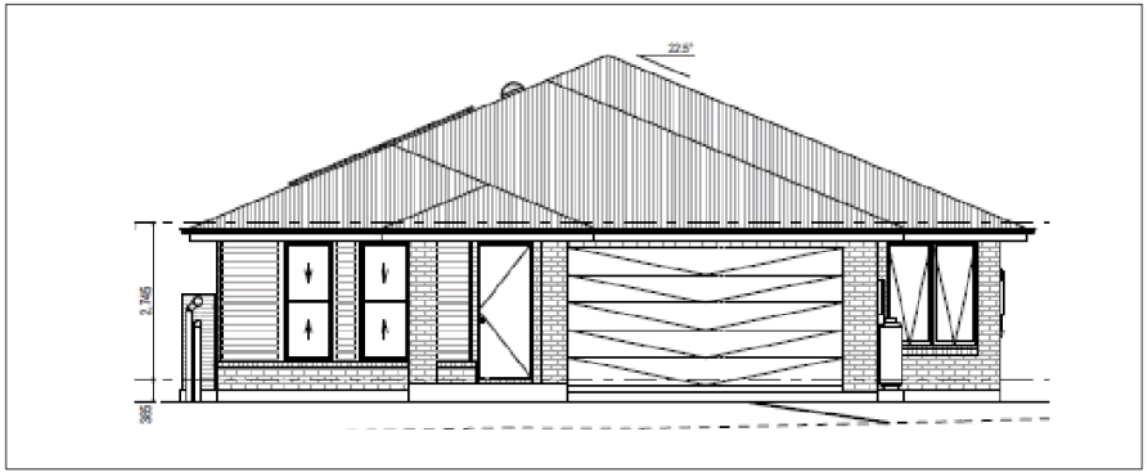
External Palette

Job Number and Surname: 607357 – Talukdar & Malia
MyChoice Style: Urban



Brick Colour: Everyday Life Range, Leisure

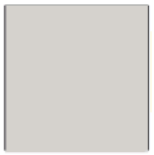
Roof & Gutter : Colorbond Bluegum

Fascia & Garage Door: Colorbond Southerly

Driveway (by owner), colour to match Monument'

Front Door: Taubmans Stain " Whisky"

Windows: Monument



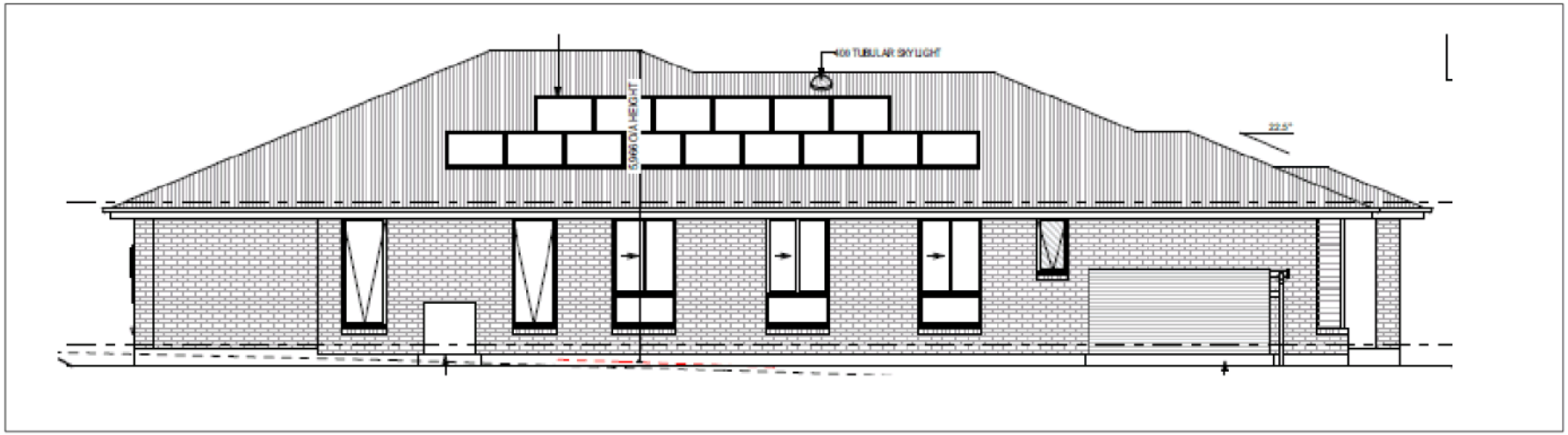
Cladding: Taubmans Southerly

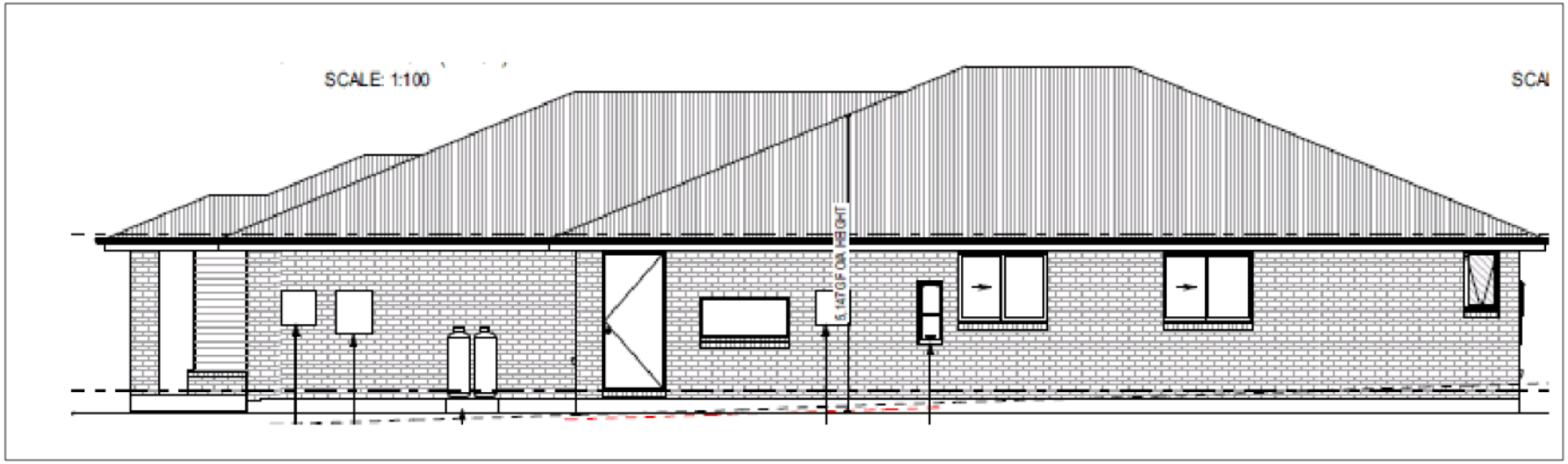
Render: Taubmans Smuggler

mcdonald jones
FIND YOURSELF AT HOME

MY CHOICE DESIGN STUDIO

External Palette





mcdonald jones
FIND YOURSELF AT HOME

MY CHOICE DESIGN STUDIO

External Palette

mcdonald jones
FIND YOURSELF AT HOME

MY CHOICE DESIGN STUDIO

External Palette

Please note colours are not exact/true and should only be used as a guide.

It is the clients responsibility to ensure that codes, colours ad finishes specified within this palette are exactly what you want and have been reflected/the same as your signed MyChoice documents.

Client Signature: ..... Date: .....

Client Signature: ..... Date: .....

mcdonald jones
FIND YOURSELF AT HOME

MY CHOICE DESIGN STUDIO

LEGEND:

- SELECTED FRONT SEMI ADVANCED TREE
- SELECTED REAR SEMI ADVANCED TREE
- GATE TO MATCH FENCING
- LETTERBOX. REFER TO NOTE 2.
- BIN STORE
- BRICK EDGING
- SELECTED AUSTRALIAN NATIVE, DROUGHT TOLERANT PLANTS
- 1.8m LYSAGHT 'SMARTASCREEN' FENCING TO SIDE, REAR BOUNDARIES AND BLOCK-OFF IN COLORBOND COLOUR 'WOODLAND GREY'
- TURF (SIR WALTER BUFFAO)
- PERMEABLE PEBBLE AND SUBSTRATA
- MULCH

LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE CAMPBELLTOWN COUNCIL & FIGTREE HILL HOME DESIGN GUIDELINES.

DEEP SOIL AREA	
TOTAL SITE AREA:	512.0m²
TOTAL DEEP SOIL AREA: (EXCLUDES HARD SURFACES)	157.03m² 30.66%
MIN. DEEP SOIL AREA:	20%

**DEEP SOIL AREA > 3000mm WIDE

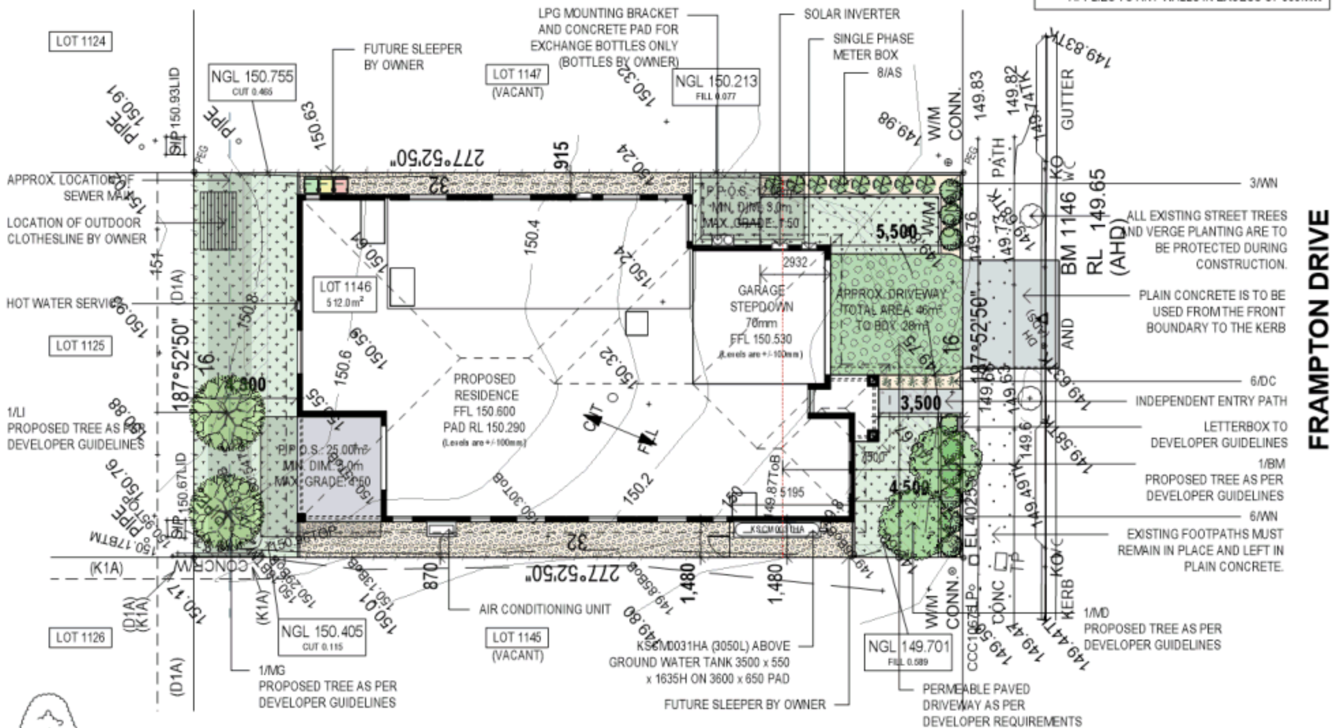
IMPERVIOUS AREA FRONT OF BUILDING LINE	
TOTAL AREA:	72.0m²
TOTAL IMPERVIOUS AREA:	6.25m² 8.68%
MAX. REQUIRED:	30%

FIGTREE HILL REQUIREMENT: minimum of 50% of your front yard must be landscaped (NO MINIMUM WIDTH) Total Landscape area: 65.74m² - 91.30%

RETAINING WALLS VISIBLE FROM THE STREET SHOULD BE CONSTRUCTED OF; NATURAL STONE, COLOURED CONCRETE SLEEPERS AND RENDERED OR FEATURE BLOCK WALLS. THIS RULE ALSO APPLIES TO ANY WALLS IN EXCESS OF 900MM.

PLANT SCHEDULE:

CODE	BOTANICAL NAME	COMMON NAME	NATIVE OR EXOTIC	No.	POT SIZE	MATURE HEIGHT
TREES						
BM	*Backhousia myrtifolia*	Grey Myrtle	NATIVE	1	30L	4-6m
MD	*Melaleuca decora*	White feather Honey Myrtle	NATIVE	1	30L	4-6m
MG	*Magnolia grandiflora* 'Little Gem'	Magnolia Little Gem	EXOTIC	1	30L	4-6m
LI	*Lagerstroemia indica* 'Natchez'	White Crepe Myrtle	EXOTIC	1	30L	4-6m
SHURBS						
WN	*Westringia Naringa*	Coastal Rosemary	NATIVE	9	200mm	2.0m hedged
AS	*Acmena smithii* 'Sublime'	Lilly Pilly	NATIVE	8	250mm	0.6-1.0m
GROUNDCOVERS						
DC	*Dianella caerulea* 'Breeze'	Native Flax	NATIVE	6	150mm	0.7m
TURF						
	Stenotaphrum secundatum 'Sir Walter'	Sir Walter Buffalo Turf				



BUSH FIRE MAINTENANCE AND PROTECTION PROCEDURES

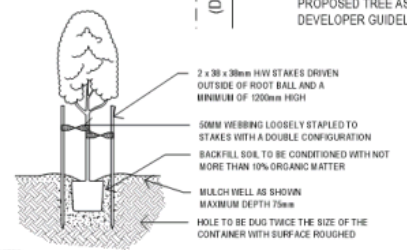
1. BUSH FIRE PRONE LAND HAS LANDSCAPE PLANTING DESIGNED TO SUIT NSW RURAL FIRE SERVICE CATEGORY GUIDELINES.
2. IN ACCORDANCE WITH BUSHFIRE PROTECTION, ALL LAWNS AGAINST THE HOUSE ARE TO BE LOW CUT.
3. WITH COUNCIL PERMISSION, TREES AND VEGETATION ARE TO BE TRIMMED BACK TO AVOID BRANCHES OVERHANGING THE HOUSE AND OVERHANGING POWER/TOWER LINES.
4. GARDEN BEDS TO BE CLEAR OF LEAF LITTER, TWIGS AND OTHER DEBRIS.

MAINTENANCE PROCEDURES

1) LAWN TO BE FERTILISED TWICE A YEAR IN THE WARM MONTHS, MOWING WEEKLY IN SUMMER MONTHS AND FORTNIGHTLY OR MONTHLY AS REQUIRED IN THE WINTER MONTHS.
2) PLANTS TO BE FERTILISLED A MINIMUM OF TWICE A YEAR AT THE SAME TIME OF PRUNING, TO DO THIS USE A COMPLETE FERTILISER. KEEP MULCH CLEAR OF TREE TRUNK AREA. AFTER PLANT/SHURBS AND TREES ARE PLANTED CONTINUE TO WATER WELL ONCE A WEEK.
3) PRUNE HEDGE PLANTS A MINIMUM OF 2 - 3 TIMES A YEAR, IN THE WARMER MONTHS. WAIT FOR AT LEAST 10MM OF NEW GROWTH BEFORE PRUNING AGAIN TO PROMOTE HEALTHY NEW GROWTH.

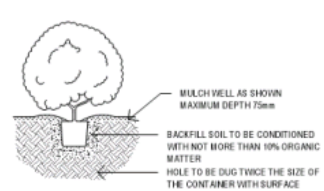
NOTES:

1) SIDE & REAR BOUNDARY FENCING SHOULD BE LYSAGHT 'SMARTASCREEN' OR EQUIVALENT PROFILE IN WOODLAND GREY COLORBOND COLOUR. GATES TO MATCH FENCE MATERIALS.
2) LETTERBOX PROVIDED TO AUSTRALIA POST REQUIREMENTS CLEARLY DISPLAYING HOUSE NUMBER.
3) ALL LANDSCAPED AREAS TO HAVE A MINIMUM 1:100 FALL TOWARDS STORM WATER DRAINS. OR AWAY FROM THE BUILDING FOR POSSIBLE OVERLAND WATER DRAINAGE.
4) A TREE PROTECTION ZONE (TPZ) SHALL BE ESTABLISHED FOR THE DURATION OF ANY WORKS NEAR ANY EXISTING TREES, AS PER THE METHOD OUTLINED IN THE CURRENT AS4970-2009. PERMISSION FROM THE COUNCIL ARBORIST IS REQUIRED FOR ACTIVITIES THAT DO NOT COMPLY WITH THE CURRENT AUSTRALIAN STANDARDS.
5) DRIVEWAY LAYOUT TO BE CONSTRUCTED FROM ARCHITECTURAL CONSTRUCTION DRAWINGS.
6) RETAINING WALLS ALONG SIDE BOUNDARIES BETWEEN LOTS TO BE FINALISED ON SITE AFTER BENCHING.
7) ALL RETAINING WALLS VISIBLE FROM THE STREET TO BE MASONRY WITH COLOURS MATCHING THOSE ON THE FRONT FACADE OF THE DWELLING.
8) ALL IMPORTED SOIL TO GARDEN AREAS TO BE OF PREMIUM GARDEN MIX STANDARD AT 300MM DEPTH.
9) TURF TO BE LAID ON A 150MM MINIMUM BASE OF 80% SAND 20% SOIL MIX. REFER TO DETAIL.
10) ALL GARDEN AREAS TO BE COVERED WITH A MINIMUM OF 75MM OF 14MM PINE BARK MULCH.
11) GARDEN EDGING IS TO BE INSTALLED BETWEEN ALL ADJOINING SOFT LANDSCAPE FINISHES. REFER TO DETAIL.
12) ALL TREES AND SHRUBS ARE TO BE SELECTED AND PLANTED IN ACCORDANCE WITH THE PLANTING SCHEDULE. SUBSTITUTES REQUIRED DUE TO AVAILABILITY OR QUALITY MUST BE CONSISTENT WITH THE DESIGN INTENT.



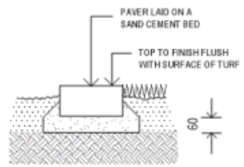
NOTES:
1) AFTER PLANTING WATER IN PLANT WELL USING FOUR TIMES THE PLANT CONTAINER CAPACITY OF WATER.
2) FOR TREES 50L AND ABOVE INSERT A 60mm DIA AG PIPE UNDER PLANT IN BACKFILL TO PROMOTE GOOD AERATION IN SOIL.
3) TREES SHALL NOT BE TIED UNLESS SUPPORT IS ESSENTIAL.

TYPICAL TREE PLANTING DETAIL
SCALE: N.T.S.

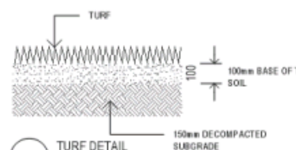


NOTES:
1) AFTER PLANTING WATER IN PLANT WELL USING FOUR TIMES THE PLANT CONTAINER CAPACITY OF WATER.
2) FOR TREES 50L AND ABOVE INSERT A 60mm DIA AG PIPE UNDER PLANT IN BACKFILL TO PROMOTE GOOD AERATION IN SOIL.

TYPICAL SHRUB PLANTING DETAIL
SCALE: N.T.S. Tube, 150mm, 200mm, 250mm Pot Size



BRICK GARDEN EDGE DETAIL
SCALE: N.T.S.



TURF DETAIL
SCALE: N.T.S.

THIS LANDSCAPING PLAN COMPLIES WITH BUT NOT LIMITED TO AUSTRALIAN STANDARDS AS4419, AS4454 AND AS4373.

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REV	ISSUE / DESCRIPTION	DATE	CHECKED
A	Initial design for DA	14.02.25	KR
B	Revision	03.04.25	KR

myard LANDSCAPE DESIGN

MYARD PTY LTD
ABN 83 602 735 777
info@myard.com.au
www.myard.com.au
P 02 8801 1825
Unit 2, 63 Glendenning Road, Glendenning NSW 2761

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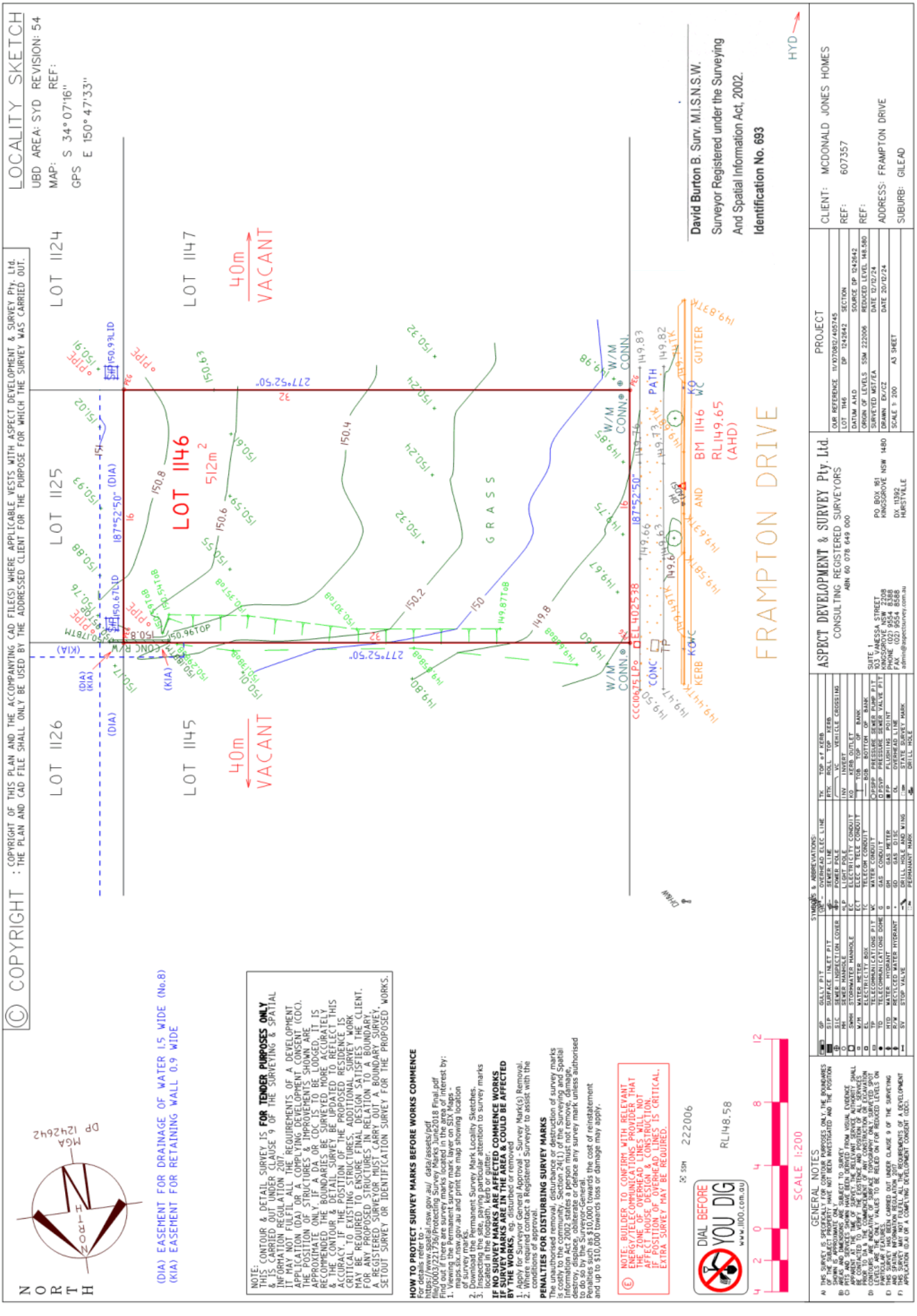
GENERAL NOTES:
Prior to being used for construction, the Principal Contractor must ensure that they are in possession of a Construction Certificate and all other required Council approvals. All works are to comply with B.C.A. Statutory Authorities and relevant Australian Standards.
Contractors must verify all dimensions on site before commencing fabrication or preparation of workshop drawings, and verify all errors and ommissions with the Architect. Use figured dimensions only. Do not scale from drawings. Position of all services on site to be confirmed prior to commencement of construction.

PLAN DRAWINGS PREPARED FOR DEVELOPMENT APPLICATION ONLY. PLAN IS NOT TO BE USED FOR CONSTRUCTION PURPOSES

SCALE: 1:200@A3	DRAWING NO. LP-26319	REVISION B	DRAWING TITLE: DA LANDSCAPE PLAN
CLIENT NO: 607357	COUNCIL: CAMPBELLTOWN	NORTH	CLIENT: MCDONALD JONES HOMES
DRAWN: AVS	PAGE NO: 1/1		ADDRESS: LOT 1146, DP 1242642, NO.70 FRAMPTON DRIVE, GILEAD NSW 2560


LOCALITY SKETCH
UBD AREA: SYD REVISION: 54
MAP: REF:
GPS S 34° 07'16"
E 150° 47'33"
© COPYRIGHT : COPYRIGHT OF THIS PLAN AND THE ACCOMPANYING CAD FILE(S) WHERE APPLICABLE VESTS WITH ASPECT DEVELOPMENT & SURVEY Pty. Ltd. : THE PLAN AND CAD FILE SHALL ONLY BE USED BY THE ADDRESSED CLIENT FOR THE PURPOSE FOR WHICH THE SURVEY WAS CARRIED OUT.
LOT 1126
LOT 1125
LOT 1124
LOT 1147
LOT 1145
LOT 1146
512m²
40m VACANT
40m VACANT
FRAMPTON DRIVE
GRASS
CONC
KERB
GUTTER
PATH
BM 1146
RL149.65
(AHD)
277°52'50"
187°52'50" (DIA)
(DIA)
(KIA)
(DIA) EASEMENT FOR DRAINAGE OF WATER 1.5 WIDE (No.8)
(KIA) EASEMENT FOR RETAINING WALL 0.9 WIDE
NORTH
MGA Dp 1242642
NOTE:
THIS CONTOUR & DETAIL SURVEY IS FOR TENDER PURPOSES ONLY & IS CARRIED OUT UNDER CLAUSE 9 OF THE SURVEYING & SPATIAL INFORMATION REGULATION 2017.
IT MAY NOT FULFIL ALL THE REQUIREMENTS OF A DEVELOPMENT APPLICATION (DA) OR A COMPLYING DEVELOPMENT CONSENT (CDC).
THE POSITION OF STRUCTURES & IMPROVEMENTS SHOWN ARE APPROXIMATE ONLY. IF A DA OR CDC IS TO BE LODGED, IT IS RECOMMENDED THE BOUNDARIES BE SURVEYED MORE ACCURATELY & THE CONTOUR & DETAIL SURVEY BE UPDATED TO REFLECT THIS ACCURACY. IF THE POSITION OF THE PROPOSED RESIDENCE IS CRITICAL, IT IS RECOMMENDED THAT ADDITIONAL SURVEY WORK MAY BE REQUIRED TO ENSURE FINAL SURVEY WORK. FOR ANY PROPOSED STRUCTURES IN RELATION TO A BOUNDARY A REGISTERED SURVEYOR MUST CARRY OUT A BOUNDARY SETOUT SURVEY OR IDENTIFICATION SURVEY FOR THE PROPOSED WORKS.
HOW TO PROTECT SURVEY MARKS BEFORE WORKS COMMENCE
For details refer to :
https://www.spatial.nsw.gov.au/ data/assets/pdf_file/0003/221736/Protecting Survey Marks June2018 Final.pdf
Find out if there are survey marks located in the area of interest by:
1. Viewing the Survey Infrastructure Map (SIX Maps) at: maps.six.nsw.gov.au and print the map showing location of survey marks.
2. Download the Permanent Survey Mark Locality Sketches.
3. Inspecting the site, paying particular attention to survey marks associated with the boundaries.
IF NO SURVEY MARKS ARE AFFECTED COMMENCE WORKS
IF SURVEY MARKS ARE IN THE AREA & COULD BE AFFECTED BY THE WORKS, eg. disturbed or removed
1. Apply for Surveyor General Approval - Survey Mark(s) Removal.
2. Where required contact a Registered Surveyor to assist with the conditions of approval.
PENALTIES FOR DISTURBING SURVEY MARKS
The unauthorised removal, disturbance or destruction of survey marks is prohibited under the Surveying & Spatial Information Act 2002. Under the Surveying & Spatial Information Act 2002 states a person must not remove, damage, destroy, displace, obliterate or deface any survey mark unless authorised to do so by the Surveyor-General.
Penalties such as $10,000 towards the cost of reinstatement and up to $10,000 towards loss or damage may apply.
NOTE: BUILDER TO CONFIRM WITH RELEVANT ENERGY/TELECOMMUNICATIONS PROVIDER THAT THE ZONE OF OVERHEAD LINES WILL NOT AFFECT HOUSE DESIGN & CONSTRUCTION. IF POSITION OF OVERHEAD LINES IS CRITICAL. EXTRA SURVEY MAY BE REQUIRED.
SSM 222006
RL148.58
DIAL BEFORE YOU DIG
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SCALE 1:200
SYMBOLS & ABBREVIATIONS:
GENERAL NOTES
A) THIS SURVEY IS SPECIFICALLY FOR CONTOUR PURPOSES ONLY. THE BOUNDARIES SHOWN IS APPROXIMATELY. THEY HAVE NOT BEEN INVESTIGATED AND THE POSITION IS SUBJECT TO FURTHER SURVEY.
B) AREAS AND DIMENSIONS ARE SUBJECT TO SURVEY FROM VISUAL EVIDENCE ONLY. ALL SERVICES SHOWN ARE APPROXIMATE ONLY. ALL SERVICES APPARENT AT THE TIME OF SURVEY. THE RELEVANT SERVICE AUTHORITY SHALL BE CONTACTED TO VERIFY THE EXISTENCE AND POSITION OF ALL SERVICES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.
C) CONTOURS ARE INDICATIVE OF SURFACE TOPOGRAPHY ONLY. SURVEYED SPOT LEVELS ARE THE ONLY VALUES TO BE RELIED ON FOR REDUCED LEVELS ON THIS PLAN.
D) THIS SURVEY HAS BEEN CARRIED OUT UNDER CLAUSE 9 OF THE SURVEYING AND SPATIAL INFORMATION REGULATION 2017. REQUIREMENTS OF A DEVELOPMENT APPLICATION (DA) OR A COMPLYING DEVELOPMENT CONSENT (CDC).
E) THIS SURVEY IS SUBJECT TO RESTRICTIONS AND/OR POSITIVE COVENANTS IF ANY AFFECTING THE LAND SHOWN HEREON. SEARCHES OF THE TITLE DOCUMENTS HAVE NOT BEEN SIGHTED.
F) THIS PLAN IS FOR THE EXCLUSIVE USE OF THE ADDRESSED CLIENT FOR THE PURPOSE OF A DEVELOPMENT APPLICATION (DA) OR A COMPLYING DEVELOPMENT CONSENT (CDC).
David Burton B. Surv. M.I.S.N.S.W.
Surveyor Registered under the Surveying
And Spatial Information Act, 2002.
Identification No. 693
ASPECT DEVELOPMENT & SURVEY Pty. Ltd.
CONSULTING REGISTERED SURVEYORS
ABN 60 078 649 000
SUITE 1
103 VANESSA STREET
KINGSGROVE NSW 2208
PHONE (02) 9554 8388
FAX (02) 9554 8588
PO BOX 161
KINGSGROVE NSW 1480
DX 11392
HURSTVILLE
admin@aspectsurvey.com.au
PROJECT
OUR REFERENCE 11/1070812/405745
LOT 1146 DP 1242642 SECTION
DATUM AHD SOURCE DP 1242642
ORIGIN OF LEVELS SSM 222006 REDUCED LEVEL 148.580
SURVEYED MET/EA DATE 12/12/24
DRAWN EK/CZ DATE 20/12/24
SCALE 1: 200 A3 SHEET
CLIENT: MCDONALD JONES HOMES
REF: 607357
REF:
ADDRESS: FRAMPTON DRIVE
SUBURB: GILEAD

BUSHFIRE CONSULTANCY AUSTRALIA

www.bushconaustralia.com.au - Email-info@bushconaustralia.com.au

PO Box 363 Balgowlah, NSW, 2093

Bush Fire Assessment Report

In relation to a proposed development at:

70 Frampton Drive, Gilead, NSW

This assessment has been prepared and certified by: Matthew Toghill. BPAD certified practitioner FPAA Accreditation No: BPAD31642 Report No: 70Fra-01 Date: 18/03/2025	

Contents

This report has been prepared and submitted by M. Toghill, FPA Australia certified practitioner.
Accreditation No: BPAD31642

Executive Summary

The purpose of the report is to determine the category of bushfire attack and subsequent construction standard for the proposed new Class 1a dwelling at No. 70 Frampton Drive, Gilead, NSW.

The site had been identified as 'bush fire prone land' for the purpose of Section 146 of the *Environmental Planning and Assessment Act 1979* and the Legislative requirements for building on bush fire prone lands are applicable.

The proposed development is in infill development as defined within Chapter 7 of *Planning for* Bushfire *Protection 2019* and this report has been prepared in accordance with the requirements of Section 4.14 of the Environment Planning and Assessment Act.

This assessment includes an analysis of the hazard, threat and subsequent risk of the development proposal and provides recommendations that satisfy the Objective and Performance requirements of the Building Code of Australia, Planning for Bushfire Protection 2019 [PBP] and Australian Standard AS3959, 2018.

Following a site assessment, it was determined the distance of the development from the closest hazard would keep the Bushfire Attack Level (BAL) to BAL-Low, in accordance with the methodology described in PBP and AS3959-2018. The development also meets performance criteria as set out in chapter 7 of PBP in relation to APZ's, siting and design, construction standards, access and egress requirements, water and utility services and landscaping.

This report has been prepared and submitted by M. Toghill, FPA Australia certified practitioner.
Accreditation No: BPAD31642

1. Description of the subject property

- No. 70 Frampton Drive, Gilead, NSW
- Lot 1146/-/DP1242642
- Local Government Area: Campbelltown
- Zoned R2: Low Density Residential

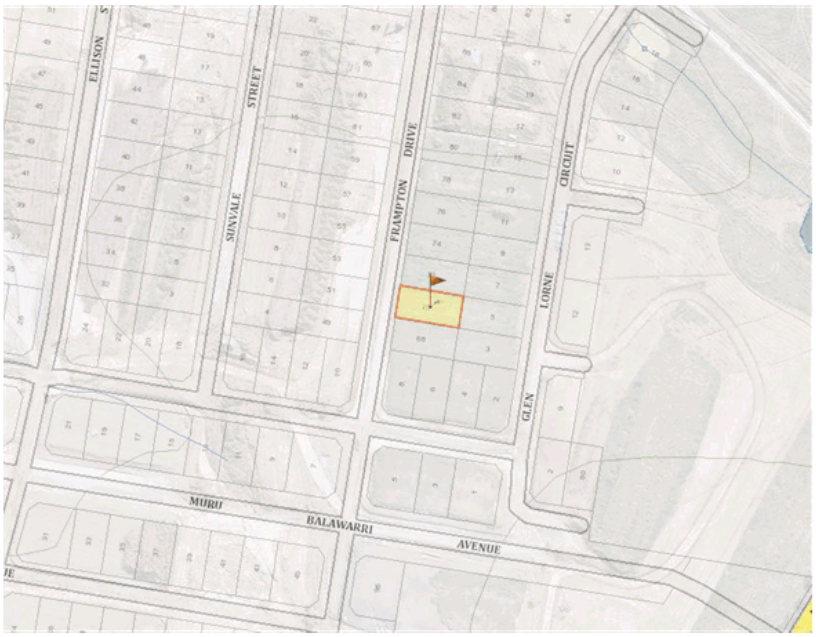

Figure 1: Location of the subject site

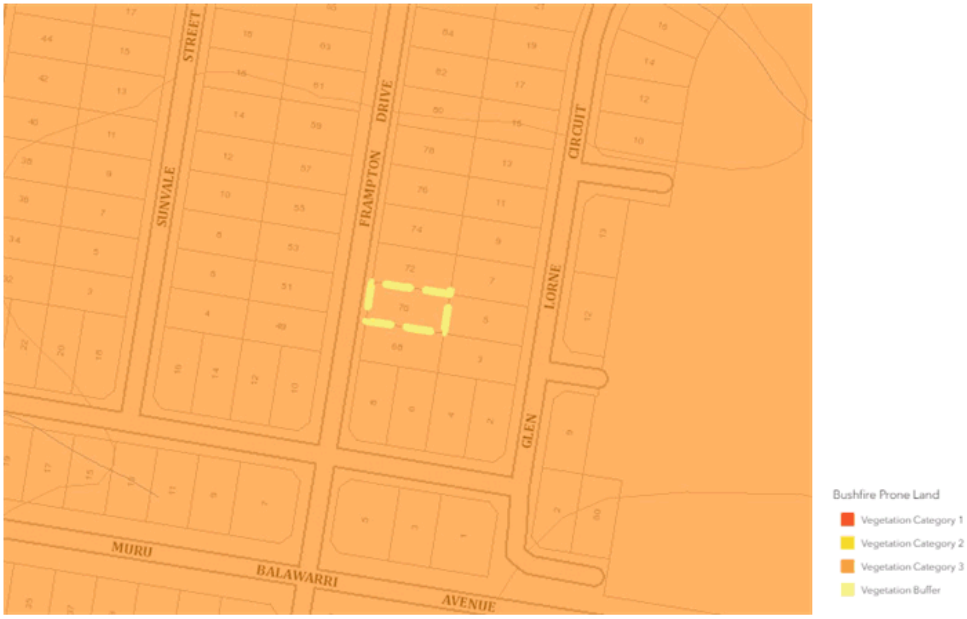

Figure 2: Bushfire prone land map (Source: NSW Planning Portal)

2. Development Proposal and Building Classification

The development proposal is for the construction of a new Class 1a dwelling.

Architectural plans provided by:	***McDonald Jones Homes*** ***Job No: 607357*** ***Dated: 16.12.2024 (Rev 5)***

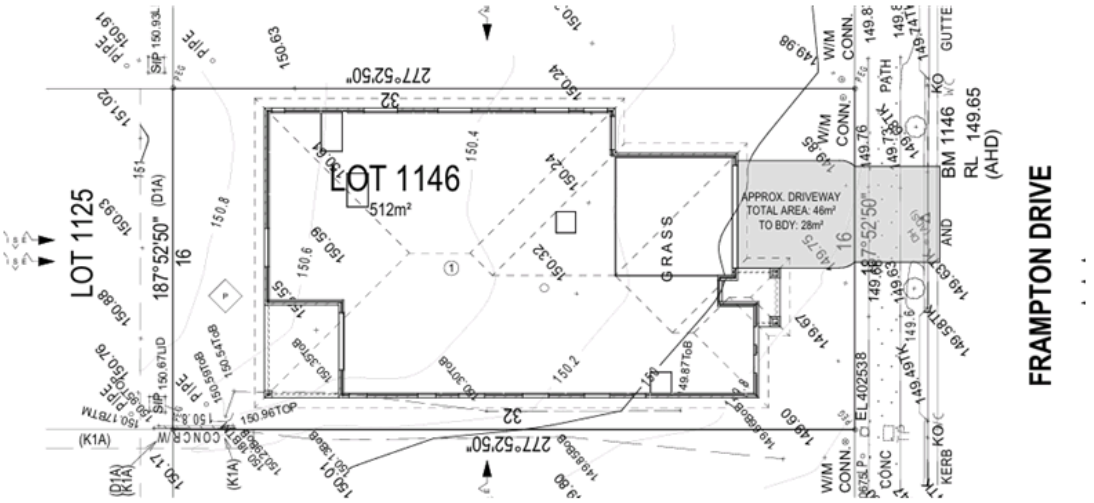

Figure 3: Site plan.

Image removed for confidentiality reasons

Figure 4: Floor plan

3. Classification of the Vegetation on and surrounding the site

For the purpose of a Bush Fire Risk Assessment, vegetation within 140m of the development is assessed and classified. In this instance, the site and surrounding area have been cleared for new residential subdivision and there is no remaining vegetation with 140m of the subject site.

Figure 5: Aerial photo showing vegetation within 140m of the site.

4. Assessment of effective slope

N/A (No vegetation for >140m)

5. Access and Egress

The site has direct access to Frampton Drive, which is a public road, access and egress for emergency vehicles appears adequate. *Planning for Bushfire Protection 2019* requires no specific access requirements in an urban area where a 70m, unobstructed path can be demonstrated between the most distant external part of the dwelling and the nearest part of the public access road (where the speed limit is not greater 70kph) that supports operational use of emergency firefighter vehicles. As such, there are no formal property access requirements.

6. Adequacy of water supply

The area has reticulated water supply and hydrants are spaced at a regular distance along Frampton Drive and surrounding residential streets. No additional water supply will be required.

7. Features that may mitigate the impact of a high intensity bushfire

There are no significant features on or adjoining the site that may mitigate the impact of a high intensity bushfire on the proposed development.

8. Environmental impact of any proposed bushfire protection measures.

A review of the NSW Planning Portal shows parts of the site being identified on the Biodiversity Values map. However, the scope of this report is not to assess the environmental values of the property. This report does not authorise the clearing of any vegetation, nor does it include an assessment of potential ecological impacts of any clearing for the purpose of an APZ. Approvals necessary for the clearing of vegetation should be obtained prior to the establishment of any APZ. All protection measures are either within the boundaries of the allotment or part of the constructed building.

9. Bushfire Attack level (BAL) Assessment

Table 1; Determination of the category of bushfire attack for the dwelling, and subsequent required building standards (Reference: Table A1.12.5 *Planning for Bush Fire Protection 2019).*

Transect	Distance to classified vegetation	Vegetation Classification	Assessment of effective slope	FDI	Bushfire Attack Level
T1	>100m	N/A	N/A	100	BAL-Low

Summary: AS 3959-2018 does not provide construction requirements for buildings assessed in bushfire prone areas, in accordance with section two, as being BAL-LOW. There would be minimal attack from radiant heat and flame due to the distance of the site form the vegetation. Although some attack from burning debris is possible, there is insufficient threat to warrant specific construction requirements.

10. The extent to which the construction conforms or deviates from Chapter 7 of 'Planning for Bushfire Protection 2019'.

Performance Criteria	How this development meets acceptable solutions
The intent may be achieved where:	
In relation to APZ's: -Defendable space is provided onsite. -An APZ is provided and maintained for the life of the building.	Defendable space is provided on all sides of the building. Asset protection zones are provided for on-site and by adjoining development and public roads.
In relation to construction standards: It is demonstrated that the proposed building can withstand bushfire attack in the form of wind, smoke, embers, radiant heat and flame contact.	Construction standards have been recommended in accordance with the requirements of *Planning for Bushfire Protection 2019* and *AS 3959-2018 Construction of buildings in bushfire prone areas*.
In relation to access requirements: Safe operational access is provided [and maintained] for emergency service personnel in suppressing a bushfire while residents are seeking to relocate, in advance of a bushfire.	This site has direct access to public roads, and the access and egress for emergency vehicles and evacuation appears to be adequate.
In relation to water and utility services: -Adequate water and electrical services are provided for fire fighting operations.	The area has reticulated water supply and the nearest street hydrant is within the minimum required distance from the most distant point of the subject site in accordance with the requirements of PBP and AS2419.1 2005.
In relation to landscaping: It is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind driven embers to cause ignition.	All new landscaping should Appendix 4 of *Planning for Bushfire Protection 2019* which outlines the requirements for landscaping and property maintenance.
In relation to emergency and evacuation planning	It is advised the residents should complete a *Bushfire Survival Plan* as formulated by the NSW Rural Fire Service and Fire and Rescue NSW.

11. Assessment of the extent to which the development can conform to the Aim and Objectives of 'Planning for Bush Fire Protection 2019' (PBP).

Aim	**Meets Criteria**	**Comment**
The aim of PBP is to provide for the protection of human life and minimise the impacts on property from the threat of bushfire, while having due regard to development potential, site characteristics and the protection of the environment.	Yes	This threat assessment has determined that the category of bushfire attack for the proposal is BAL-Low and not within the Flame Zone. Construction standards BAL- Low have been recommended. Landscaping, defendable space, access and egress, emergency risk management and construction standards are all in accordance with the requirements of PBP 2019 and the aim has been achieved.
Objectives	**Meets Criteria**	**Comment**
Afford building and their occupants protection from exposure to bushfire.	Yes	This threat assessment has determined that the category of bushfire attack for the proposal is BAL-Low and not within the Flame Zone. Construction standards BAL- Low have been recommended.
Provide for a defendable space to be located around buildings	Yes	Defendable space can be provided on all sides of the buildings.
Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to other buildings	Yes	Appropriate separation can be provided by a combination of onsite APZ and adjoining developed sites and public roads.
Ensure that appropriate operational access and egress for emergency services personnel and occupants is available.	Yes	This site has direct access to public roads, and the access and egress for emergency vehicles and evacuation appears to be adequate.
Provide for ongoing management and maintenance of BPM's	Yes	All BPM's are provided within the subject site or adjoining managed residential properties and public roads. BPM's can be managed and maintained by the occupants.
Ensure that utility services area adequate to meet the needs of firefighters	Yes	Utility services can be provided in accordance with Table 7.4a of PBP

12. Recommendations

The following recommendations are made for the bushfire protection measures for the proposed new Class 1a dwelling at No. 70 Frampton Drive, Gilead, NSW and are based upon the relevant provisions of the NSW RFS guideline entitled *Planning for Bushfire Protection 2019.*

1) Construction standard.	AS 3959-2018 does not provide construction requirements for buildings assessed in bushfire prone areas, in accordance with section two, as being BAL-LOW. There would be minimal attack from radiant heat and flame due to the distance of the site form the vegetation. Although some attack from burning debris is possible, there is insufficient threat to warrant specific construction requirements.

13. Summary

This report consists of a bushfire risk assessment for the proposed new Class 1a dwelling at No. 70 Frampton Drive, Gilead, NSW.

The report concludes that the proposed development is on designated bushfire prone land and the legislative requirements for development of bushfire prone areas are applicable. The proposed development will be constructed to the minimum standard required in accordance with the guidelines of *Planning for Bushfire Protection 2019* and *AS 3959-2018 Construction of buildings in bushfire prone areas.*

This report has considered all of the elements of bushfire attack and provided the proposed development is constructed in accordance with the recommendations of Section 12 of this report, it is my considered opinion that the development satisfies the Objectives and Performance requirements of the *Building Code of Australia, Planning for bushfire Protection 2019 and Australian Standard AS3959, 2018.*

Note: Not with standing the precautions adopted, it should always be remembered that bushfires burn under a wide range of conditions and 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 a bushfire attack on every occasion. This report is a Bushfire Hazard Assessment that provides the required information to assist Local Councils and the Rural fire Service in determining compliance in accordance with Planning for Bushfire Protection 2019 and AS3959, 2018. The local Council is the final consenting authority and the construction of the building must comply with the recommendations included in the council's conditions of consent.

Matthew Toghill- Bushfire Consultant
Accreditation No: BPAD31642
Grad Cert in Bushfire Protection, UWS 2012
Certificate IV Building and Construction
Certificate III in Public Safety (firefighting and emergency operations)

BPAD Bushfire Planning & Design Accredited Practitioner Level 2

14. References

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Fire Safety Engineering Guidelines
Edition 2001
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D. Drysdale D. [1998]
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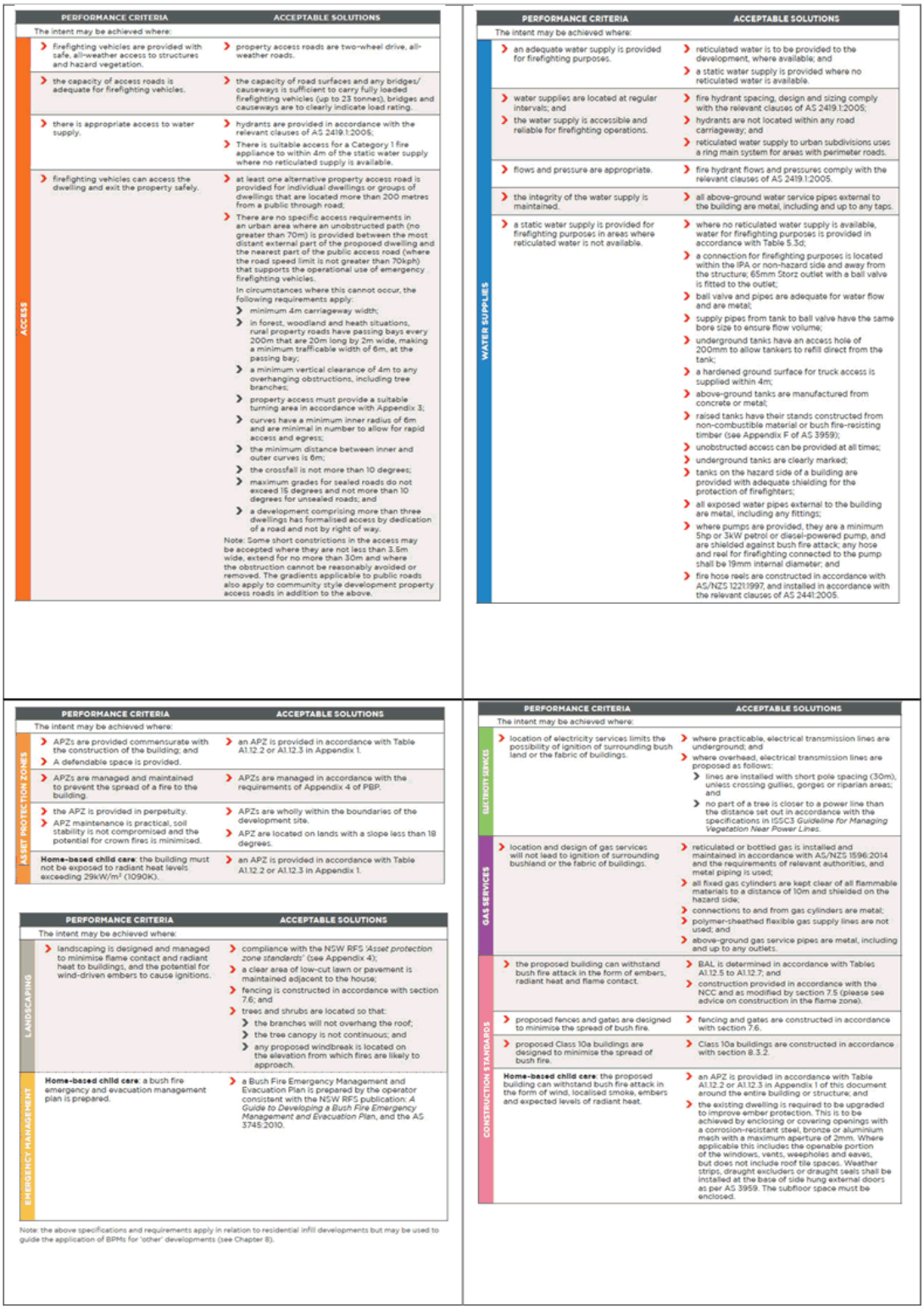
Part 79BA-Consultation and development consent- Certain bushfire prone land
NSW Government Printer

Planning for Bushfire Protection 2019
A guide for Councils, Planners, Fire Authorities and Developers
This document provides the necessary planning considerations when developing areas for residential use in residential, rural residential, rural and urban areas when development sites are in close proximity to areas likely to be affected by bushfire events and replaces Planning for Bushfire Protection 2006.
This document is essential reading. Download a copy from the RFS website or purchase a copy through the NSW Government online shop or phone 9228 6333.

Ramsay C & Rudolph L [2003]
Landscape and building design for bushfire prone areas
CSIRO Publishing

Standards Australia [2018]
Australian Standards 3959
Australian Building Code Board

Appendix 1: Performance criteria and acceptable solutions as per Table 7 *Planning for bushfire Protection 2019*



PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
The intent may be achieved where:	
ACCESS	
firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation.	property access roads are two-wheel drive, all-weather roads.
the capacity of access roads is adequate for firefighting vehicles.	the capacity of road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes), bridges and causeways are to clearly indicate load rating.
there is appropriate access to water supply.	hydrants are provided in accordance with the relevant clauses of AS 2419.1:2005; There is suitable access for a Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available.
firefighting vehicles can access the dwelling and exit the property safely.	at least one alternative property access road is provided for individual dwellings or groups of dwellings that are located more than 200 metres from a public through road; 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. In circumstances where this cannot occur, the following requirements apply: minimum 4m carriageway width; in forest, woodland and heath situations, rural property roads have passing bays every 200m that are 20m long by 2m wide, making a minimum trafficable width of 6m, at the passing bay; a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches; property access must 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 formalised access by dedication of a road and not by right of way. 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.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
The intent may be achieved where:	
WATER SUPPLIES	
an adequate water supply is provided for firefighting purposes.	reticulated water is to be provided to the development, where available; and a static water supply is provided where no reticulated water is available.
water supplies are located at regular intervals; and the water supply is accessible and reliable for firefighting operations.	fire hydrant spacing, design and sizing comply with the relevant clauses of AS 2419.1:2005; hydrants are not located within any road carriageway; and reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.
flows and pressure are appropriate.	fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2005.
the integrity of the water supply is maintained.	all above-ground water service pipes external to the building are metal, including and up to any taps.
a static water supply is provided for firefighting purposes in areas where reticulated water is not available.	where no reticulated water supply is available, water for firefighting purposes is provided in accordance with Table 5.3d; a connection for firefighting purposes is located within the IPA or non-hazard side and away from the structure; 65mm Storz outlet with a ball valve is fitted to the outlet; ball valve and pipes are adequate for water flow and are metal; supply pipes from tank to ball valve have the same bore size to ensure flow volume; underground tanks have an access hole of 200mm to allow tankers to refill direct from the tank; a hardened ground surface for truck access is supplied within 4m; above-ground tanks are manufactured from concrete or metal; raised tanks have their stands constructed from non-combustible material or bush fire-resisting timber (see Appendix F of AS 3959); unobstructed access can be provided at all times; underground tanks are clearly marked; tanks on the hazard side of a building are provided with adequate shielding for the protection of firefighters; all exposed water pipes external to the building are metal, including any fittings; where pumps are provided, they are a minimum 5hp or 3kW petrol or diesel-powered pump, and are shielded against bush fire attack; any hose and reel for firefighting connected to the pump shall be 19mm internal diameter; and fire hose reels are constructed in accordance with AS/NZS 1221:1997, and installed in accordance with the relevant clauses of AS 2441:2005.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
The intent may be achieved where:	
ASSET PROTECTION ZONES	
APZs are provided commensurate with the construction of the building; and A defendable space is provided.	an APZ is provided in accordance with Table A1.12.2 or A1.12.3 in Appendix 1.
APZs are managed and maintained to prevent the spread of a fire to the building.	APZs are managed in accordance with the requirements of Appendix 4 of PBP.
the APZ is provided in perpetuity. APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised.	APZs are wholly within the boundaries of the development site. APZ are located on lands with a slope less than 18 degrees.
Home-based child care: the building must not be exposed to radiant heat levels exceeding 29kW/m² (1090K).	an APZ is provided in accordance with Table A1.12.2 or A1.12.3 in Appendix 1.

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
The intent may be achieved where:	
LANDSCAPING	
landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions.	compliance with the NSW RFS *'Asset protection zone standards'* (see Appendix 4); a clear area of low-cut lawn or pavement is maintained adjacent to the house; fencing is constructed in accordance with section 7.6; and trees and shrubs are located so that: the branches will not overhang the roof; the tree canopy is not continuous; and any proposed windbreak is located on the elevation from which fires are likely to approach.
EMERGENCY MANAGEMENT	
Home-based child care: a bush fire emergency and evacuation management plan is prepared.	a Bush Fire Emergency Management and Evacuation Plan is prepared by the operator consistent with the NSW RFS publication: *A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan*, and the AS 3745:2010.

Note: the above specifications and requirements apply in relation to residential infill developments but may be used to guide the application of BPMs for 'other' developments (see Chapter 8).

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
The intent may be achieved where:	
ELECTRICITY SERVICES	
location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings.	where practicable, electrical transmission lines are underground; and where overhead, electrical transmission lines are proposed as follows: 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*.
GAS SERVICES	
location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.	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; polymer-sheathed flexible gas supply lines are not used; and above-ground gas service pipes are metal, including and up to any outlets.
CONSTRUCTION STANDARDS	
the proposed building can withstand bush fire attack in the form of embers, radiant heat and flame contact.	BAL is determined in accordance with Tables A1.12.5 to A1.12.7; and construction provided in accordance with the NCC and as modified by section 7.5 (please see advice on construction in the flame zone).
proposed fences and gates are designed to minimise the spread of bush fire.	fencing and gates are constructed in accordance with section 7.6.
proposed Class 10a buildings are designed to minimise the spread of bush fire.	Class 10a buildings are constructed in accordance with section 8.3.2.
Home-based child care: the proposed building can withstand bush fire attack in the form of wind, localised smoke, embers and expected levels of radiant heat.	an APZ is provided in accordance with Table A1.12.2 or A1.12.3 in Appendix 1 of this document around the entire building or structure; and the existing dwelling is required to be upgraded to improve ember protection. This is to be achieved by enclosing or covering openings with a corrosion-resistant steel, bronze or aluminium mesh with a maximum aperture of 2mm. Where applicable this includes the openable portion of the windows, vents, weepholes and eaves, but does not include roof tile spaces. Weather strips, draught excluders or draught seals shall be installed at the base of side hung external doors as per AS 3959. The subfloor space must be enclosed.

Appendix 2: 7.5.2 NSW State Variations under G5.2(a)(i) and 3.10.5.0(c)(i) of the NCC

Certain provisions of AS 3959 are varied in NSW based on the findings of the Victorian Bush Fires Royal Commission and bush fire industry research.

The following variations to AS 3959 apply in NSW for the purposes of NSW G5.2(a)(i) of Volume One and NSW 3.10.5.0(c)(i) of Volume Two of the NCC; clause 3.10 of AS 3959 is deleted and any sarking used for BAL-12.5, BAL-19, BAL-29 or BAL-40 shall:

- be non-combustible; or
- comply with AS/NZS 4200.1, be installed on the outside of the frame and have a flammability index of not more than 5 as determined by AS 1530.2; and
- clause 5.2 and 6.2 of AS 3959 is replaced by clause 7.2 of AS 3959, except that any wall enclosing the subfloor space need only comply with the wall requirements for the respective BAL; and
- clause 5.7 and 6.7 of AS 3959 is replaced by clause 7.7 of AS 3959, except that any wall enclosing the subfloor space need only comply with the wall requirements for the respective BAL; and
- fascias and bargeboards, in BAL-40, shall comply with:
- clause 8.4.1(b) of AS 3959; or
- clause 8.6.6 of AS 3959.

The interpretation of this variation is:

Enclosed subfloors: For subfloor supports there are no requirements for supporting posts, columns, stumps, stringers piers and poles for subfloor supports for BAL 12.5 and BAL 19 when the subfloor space is enclosed with a wall that complies with the determined BAL level for the site.
Unenclosed subfloors: For unenclosed subfloor supporting posts, columns, stumps, stringers piers and poles the requirements are upgraded from BAL 12.5 and BAL 19 to BAL 29 level.
Enclosed verandas: There are no requirements for supporting posts, columns, stumps, stringers piers and poles for verandas, decks, steps and landings when the subfloor space is enclosed with a wall that complies with the determined BAL level for the site.
Unenclosed verandas: The requirements for supporting posts, columns, stumps, stringers piers and poles for verandas, decks, steps, and landings are upgraded from BAL 19 and BAL 12.5 to BAL 29 level.

For unenclosed subfloors of the main building or verandas, decks, steps and landings for BAL 12.5, 19 and BAL29 supporting posts, columns, stumps, stringers piers and poles shall be:

1. A non-combustible material; or
2. A Bushfire resistant timber; or
3. A combination of 1 and 2

Acceptable timber species:
Black-butt, Turpentine, Silver Top Ash, Spotted Gum, Red Iron Bark, Kwila, Red River Gum

Sarking: To comply with the NSW State variation any sarking used for BAL 12.5 shall:

- Be Non-combustible; or
- Comply with AS/NZ 4200.1 be installed on the outside of the frame and have a flammability index of not more than 5 as determined by AS1530.2

Appendix 3: Asset Protection Zones (APZ's)

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 defendable 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.

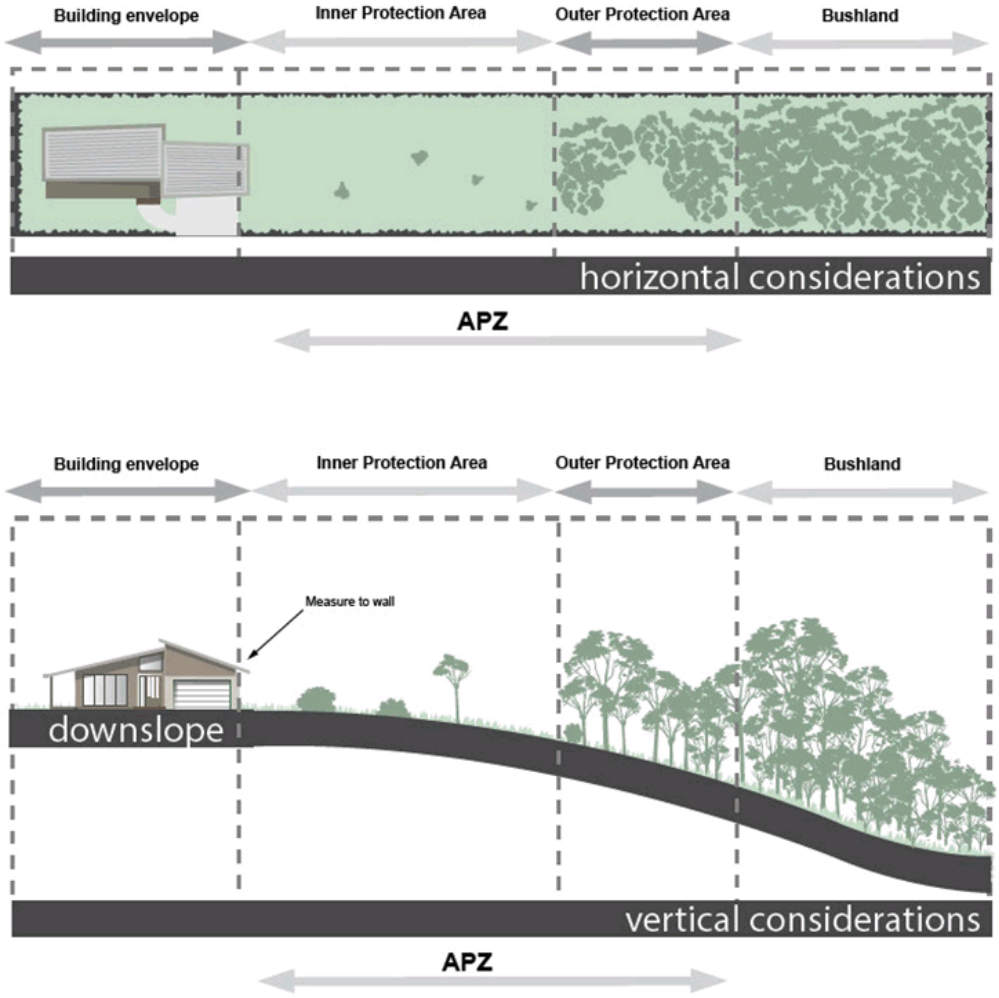
Grass

- 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.

Figure A4.1

Typical Inner and Outer Protection Areas.



Abbreviations and definitions

AS 3959	Australian Standard AS 3959:2018 *Construction of buildings in bush fire-prone areas*
AS 2419.1:2005	Australian Standard AS 2419.1:2005 *Fire hydrant installations System design, installation and commissioning*
AS 2441:2005	Australian Standard AS 2441:2005 *Planning for emergencies in facilities*
APZ	Asset Protection Zone
BAL	Bushfire Attack Level
BFPL	Bushfire prone land
BRPL Map	Bushfire prone land map
BPM's	Bushfire protection measures
BFSA	Bushfire safety authority
DA	Development application
DCP	Development Control Plan
EP&A Act	*Environmental Planning and Assessment Act 1979*
FDI	Fire Danger index
FFDI	Forest Fire Danger Index
IPA	Inner Protection Area
kW/m2	Kilowatts per metre squared
LGA	Local government area
NASH	Nation Association of Steel Framed Housing Steel Framed Construction in Bushfire Areas 2021
NCC	National Construction Code
OPA	Outer Protection Area
PBP	*Planning for Bush Fire protection 2019*
RF Act	*Rural Fires Act 1997*
RF Reg	*Rural Fires Regulation 2013*
NSW RFS	NSW Rural Fire Service
SEPP	State Environmental Planning Policy
SFPP	Special Fire protection Purpose
SFR	Short fire run

Asset Protection Zone: A fuel reduced area surrounding a built asset or structure which provides a buffer zone between a bush fire hazard and an asset. The APZ includes a defendable space within which firefighting operations can be carried out. The size of the required APZ varies with slope, vegetation and FFDI.

Bush Fire Attack level (BAL): A means of measuring the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact. IN the NCC, the BAL is used as the basis for establishing the requirements for construction to improve protection of building elements.

Bush fire: An unplanned fire burning in vegetation, also referred to as wildfire.

Bush fire prone land (BFPL): An area of land that can support a bush fire or is likely to be subject to bush fire attack, as designated on a bush fire prone land map.

Bush fire prone land map: A map prepared in accordance with the NSW RFS requirements and certified by the Commissioner of the NSW RFS under EP&A Act s.10.3(2).

Bush fire protection measures (BPMs): A range of measures used to minimise the risk from a bushfire that need to be complied with. BPM's include APZ's, construction provisions, suitable access, water and utility services, emergency management and landscaping.

Bush fire safety authority (BFSA): An approval by the commissioner of the NSW RFS that is required for a subdivision for residential or rural residential purpose or for a SFPP development listed under section 100B of the RF Act.

Consent authority: As identified in the EP&A Act, in relation to development consents, usually the local council.

Defendable space: An area adjoining a building that is managed to reduce combustible elements free from constructed impediments. It is a safe working environment in which efforts can be undertaken to defend the structure, before and after the passage of a bush fire.

Effective slope: The land beneath the vegetation which most significantly effects fire behaviour, having regard to the vegetation present.

Fire Danger Index (FDI): The chance of a fire starting, its rate of spread, its intensity and the difficulty potential for its suppression, according to various combinations of air temperature, relative humidity, wind speed and both the long- and short-term drought effects.

Inner protection Area (IPA): The component of a APZ which is closest to the asset (measured form unmanaged vegetation). It consists of an area maintained to minimal fuel loads so that a fire path is not created between the hazard and the building.

Managed land: Land that has vegetation removed or maintained to a level that limits the spread and impact of bush fire. This may include developed land (residential, commercial or industrial), roads, golf course fairways, playgrounds, sports fields, vineyards, orchards, cultivated ornamental gardens and commercial nurseries. Most common will be gardens and lawns within curtilage of buildings. These areas are managed to meet the requirements of an APZ.

Outer Protection Area (OPA): The outer component of an APZ, where fuel loads are maintained at a level where the intensity of an approaching bush fire would be significantly reduced. Applies to Forest vegetation only.

Special Fire Protection Purpose (SFPP) developments: Developments where the vulnerable nature of the occupants means that a lower radiant heat threshold needs to be accommodated for in order to allow for the evacuation of occupants and emergency services.

Vegetation classification: Vegetation types identified using the formations and classifications within *Ocean Shores to Desert Dunes: The Native Vegetation of New South Wales and ACT (Keith, 2004).*

Item 15

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Acoustic Report

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LENDLEASE COMMUNITIES

MOUNT GILEAD DEVELOPMENT
MT GILEAD SUBDIVISION STAGE 1 DA
ACOUSTICS ASSESSMENT

JANUARY 2018

wsp

Question today
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Mount Gilead Development
Mt Gilead Subdivision Stage 1 DA
Acoustics Assessment

Lendlease Communities

WSP
Level 27, 680 George Street
Sydney NSW 2000
GPO Box 5394
Sydney NSW 2001

Tel: +61 2 9272 5100
Fax: +61 2 9272 5101
wsp.com

REV	DATE	DETAILS
A	7/12/2017	Draft Issue 1
B	19/01/2018	Final

	NAME	DATE	SIGNATURE
Prepared by:	C. Lillis / M. Saralertsophon	19/01/2018	
Reviewed by:	K. Lloyd	19/01/2018	
Approved by:	K. Lloyd	19/01/2018	

2113521-EV-REP-015_RevB_Subdivision_Stage 1_Acoustics

December 2017

TABLE OF CONTENTS

1 INTRODUCTION

WSP Australia Pty Ltd (WSP) has been commissioned by Lendlease Communities to conduct an acoustic assessment of the potential noise impacts of the proposed Stage 1subdivsion of the Mount Gilead Residential Estate (the proposal).

This report presents a noise assessment of the proposal. The aspects covered are:

- review and assessment of noise impact from existing industrial noise on the proposed housing lots;
- review and assessment of potential emission due to the proposal; and
- review and assessment of noise impact due to future traffic volume on the proposed housing lots.

The noise impact from future traffic volumes generated by the development onto existing sensitive receivers is understood to be assessed as part of the Appin Road upgrade and as such will not be assessed as part of this report.

The road traffic noise levels employed to assess impact onto the proposal have been provided by the Appin Road upgrade project based on the proposed traffic volume data for year 2031 (design year).

The noise impact assessment has been carried out with reference to the relevant policies and guidelines:

- Campbelltown City Council Development Control Plan (DCP, 2015);
- NSW State Environmental Planning Policy (Infrastructure) 2007;
- NSW Department of Planning Development Near Rail Corridors and Busy Roads – Interim guideline (interim guideline, 2008); and
- NSW EPA Noise Policy for Industry (NPfI, 2017).

1.1 ASSESSMENT METHODOLOGY

The potential noise impact (ingress and egress) were assessed by employing the following methods:

- Determine potential noise sources impacting on the proposal;
- Determine location of sensitive receivers surrounding the Subdivision and the proposal;
- Review existing noise level to determine background noise levels representative to the sensitive receivers surrounding the Subdivision;
- Establish design criteria for noise ingress and egress;
- Predict and assess traffic noise impact to the proposal based on future traffic volumes provided
- Assess potential mechanical plant noise emission from the proposal; and
- Determine mitigation required to achieve the design criteria for the proposal and the sensitive receivers surrounding the Subdivision.

2 PROJECT DESCRIPTION AND SITE OVERVIEW

2.1 MOUNT GILEAD ESTATE

The Mount Gilead Estate is located on the southern edge of the Campbelltown. It is located within a large development corridor surrounded by rural area in the Campbelltown local government area. The area of the Estate is shown in Figure 2.1.

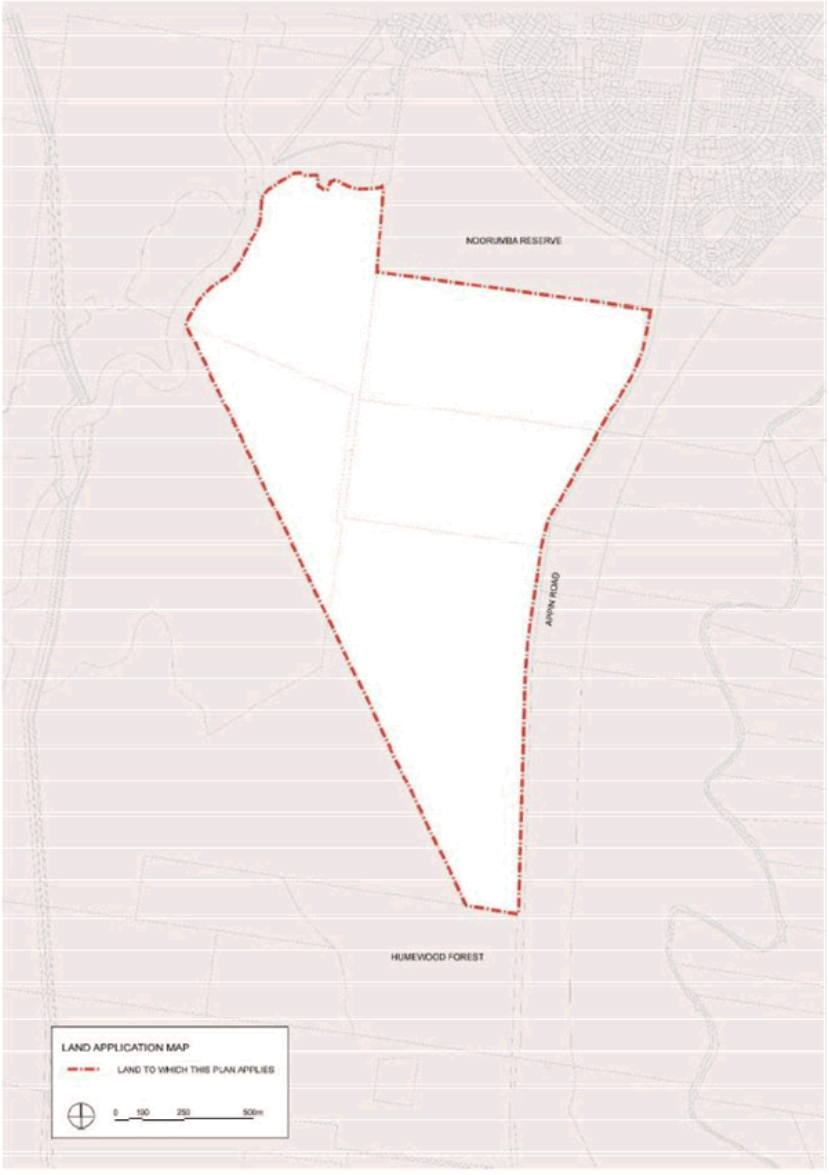


Figure 2.1 Mt Gilead Subdivision area (Campbelltown Development Control Plan, Volume 2 Part 7, 2016)

The potential noise sources immediate to the Estate are:

- Appin Road to the east,
- Hume Highway approximately 3km to the west,
- AGL, Rosalind Park Gas approximately 1.1km to the west,
- Menangle Park Quarry at 33 Medhurst Road, Menangle Park approximately 900m to the east, and
- Leafs Gully Gas Fired Power Station (decommissioned).

The nearest existing sensitive receivers are located north of the Estate, residential receivers along Theseus Circuit, Campbelltown, Mount Gilead Estate (residential age care facility) and single dwellings east of Appin Road (901 Appin Road, Gilead) and west of Appin Road (894 Appin Road, Gilead and 880 Appin Road, Gilead).

The project will be constructed in stages over a five-year timeframe, commencing in 2018 and finishing in 2023. At the same time, Appin Road, which is an arterial road located along the eastern boundary of the development, will be upgraded to accommodate two additional lanes. Two new intersections on Appin Road will be constructed to provide access to the Subdivision.

The closest residential boundary of the Estate would be approximately 16m west of Appin Road and the furthest dwelling would be approximately 1.4km west of Appin Road.

Reference noise studies undertaken previously undertaken for the Subdivision are as follows:

- Wilkinson Murry report - Mt Gilead Rezoning Noise assessment, No. 13136 Version D, dated September 2014; and
- SLR Consulting Report - Mt Gilead Project Acoustic Services, Report No. 610.16875-R01, dated 30 January 2017.

2.2 THE PROPOSAL - STAGE 1 SUBDIVISION

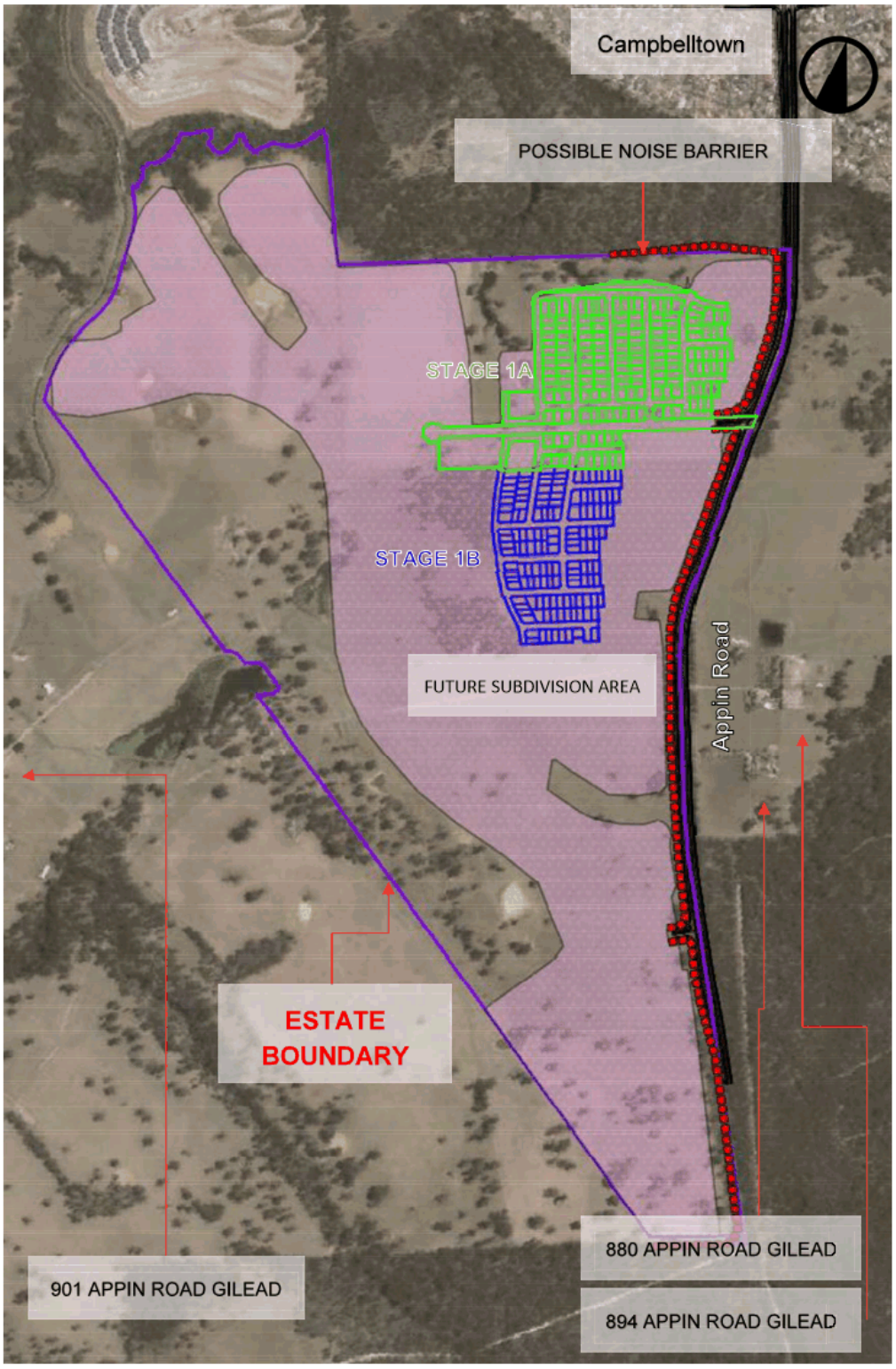
The proposed Stage 1 Subdivision is located within the northern access of the Subdivision and is divided into two parts;

- Stage 1A - up to 168 lots in the northeast corner of the Subdivision boundary; and
- Stage 1B - up to 138 lots to the south of Stage 1A.

Layout of the proposal (stage 1A and Stage 1B) with reference to Appin Road and the surrounding sensitive receivers are presented in Figure 2.2.

The closest residential boundary of the stage 1 subdivision would be approx. 70m west of Appin Road and the furthest dwelling would be approximately 550m west of Appin Road.

It should be noted that future residential subdivision will be carried out between Appin Road and the eastern extent of Stage 1 Subdivision.



1: Figure not to scale

Figure 2.2 Site locality

3 EXISTING ENVIRONMENT

Baseline noise monitoring surveys of the Subdivision were undertaken as part of the previous studies of the site:

- Wilkinson Murry report - Mt Gilead Rezoning Noise assessment, No. 13136 Version D, dated September 2014; and
- SLR Consulting Report - Mt Gilead Project Acoustic Services, Report No. 610.16875-R01, dated 30 January 2017.

To supplement this data, a recent survey has been carried out by WSP. This survey was carried out at 901 Appin Road, Gilead. Details of the noise monitoring are presented in Table 3-1.

Table 3-1 Noise monitoring details

ADDRESS	MONITORING DATES	MANUFACTURER AND TYPE NO.	SERIAL NO.
901 Appin Road, Gilead	12/09/2017 – 20/09/2017	SVAN 959 Type 1 noise logger	11225

Observations made at the time of deployment of the noise loggers indicated that road traffic was the main (continuous) source of ambient noise, with no contribution from any nearby industrial sources.

3.1 SUMMARY OF MEASUREMENT RESULTS

Table 3-2 summarises the unattended long-term noise monitoring results. The data are reported as the average equivalent continuous average sound levels ($L_{eq(15min)}$) and rating background levels (RBL) as defined in the INP (EPA, 2000).

Table 3-2 Unattended noise monitoring results

Location ID	Reference	Measured noise level, dBA					
		Ambient Noise Level $L_{eq(period)}$			RATING BACKGROUND LEVEL (RBL) $L_{90(15minute)}$		
		Day	Evening	Night	Day	Evening	Night
BG01	WSP (2017)	71	68	48	45	39	32
Logger	Wilkinson Murry (2014)	-	-	-	45	42	32
Location 1	SLR Consulting (2017)	55	53	51	43	40	32
Location 2	SLR Consulting (2017)	48	48	44	41	39	32
Location 3	SLR Consulting (2017)	44	43	42	35	35	32

Noise survey locations from the three surveys are presented in Figure 3.1.

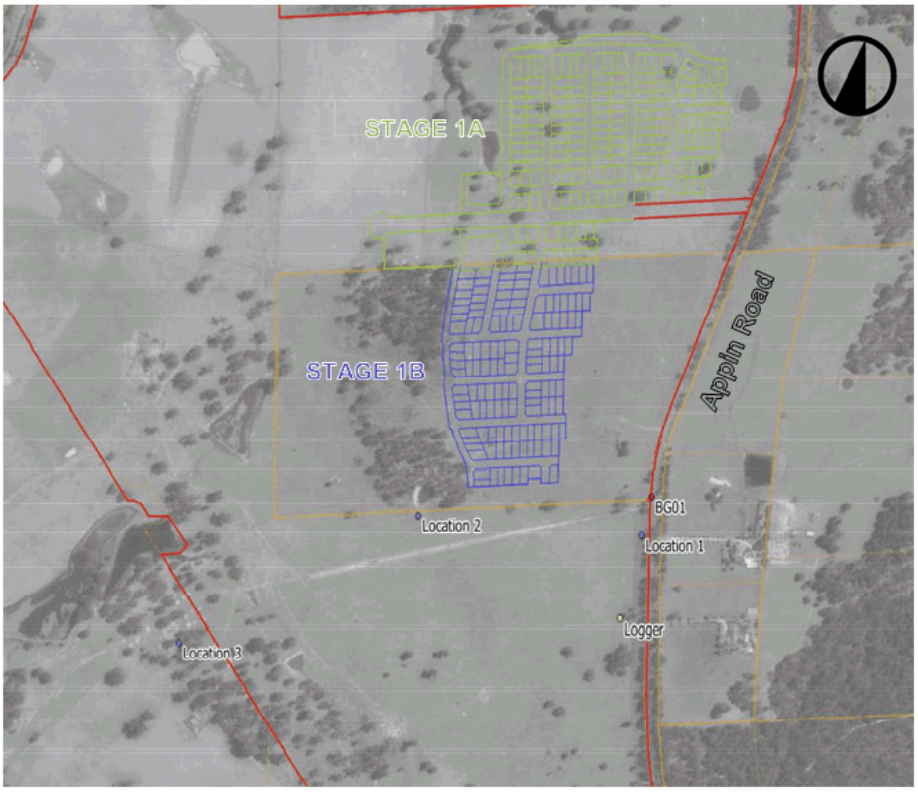


Figure 3.1 Noise Logging location

3.2 POTENTIAL NOISE SOURCES

A survey of noise levels to determine feasibility the Subdivision site has been conducted and reported by Wilkinson Murray (detailed in Mt Gilead Rezoning Noise assessment, No. 13136 Version D, dated September 2014 – herein referred to as the Feasibility Report). The noise levels from the surrounding sources identified within the Feasibility Report and in this report Section 2.1 are summarised in Table 3-3. Road traffic noise from Appin Road is discussed separately in Section 3.2.1.

Table 3-3 Summary of noise ingress – Feasibility report (Wilkinson Murray, 2014)

SOURCE	MEASURED $L_{eq(15minute)}$, dBA NOISE LEVEL AT SUBDIVISION BOUNDARY		
	DAYTIME	EVENING	NIGHT-TIME
Rosalind Park Gas Plant	37	36	36
Menangle Park Quarry	Inaudible	- [1]	- [1]
Leafs Gully Gas Fired Power Station	- [2]	- [2]	- [2]

1: Quarry only operates during the daytime period
2: The power station has been decommissioned

3.2.1 APPIN ROAD

The Subdivision is subject to road traffic noise impact from Appin Road. With the expectation of potential growth on Appin Road due to general traffic increase, the introduction of the Subdivision and future road widening, the road traffic noise levels adopted for assessment are based on the ultimate design year of the Subdivision and additional Appin Road,

Mt Gilead widening at 2031. Whilst the Infrastructure SEPP does not formally require an assessment of a future traffic growth scenario, the project traffic flows used in the noise modelling reflect the anticipated design for the year 2031 (consistent with the RNP timeframe 2 assessment year at opening year of 2021 plus 10).

Given the growth rate, it is considered appropriate that these future traffic flows be used as the basis for predictions in this project.

The assessment of road traffic noise impact on existing sensitive receivers due increase in volumes as a result of the Subdivision is being addressed in the Appin Road, Mt Gilead Review of Environmental Factors (Appin Road REF). The assessment of road traffic noise impact from Appin Road to the proposed subdivision is presented in Section 5.

4 CRITERIA/GUIDELINES AND PROJECT SPECIFIC NOISE LEVELS

The following sections detail the noise criteria for the Subdivision site based on the following relevant guidelines and policies:

- Campbelltown City Council Development Control Plan (DCP), 2015;
- NSW State Environmental Planning Policy (Infrastructure), 2007;
- NSW Department of Planning Development Near Rail Corridors and Busy Roads – Interim guideline (interim guideline), 2008; and
- NSW EPA Noise Policy for Industry (NPfI), 2017.

4.1 NOISE INGRESS

4.1.1 CAMPBELLTOWN CITY COUNCIL DEVELOPMENT CONTROL PLAN

Section 3.4.3.1 of the DCP sets out the following requirements for acoustic privacy:

> ***Objective***
>
> *Provide adequate visual and acoustic privacy for residents of new and existing development.*
>
> ***Design Requirements***
>
> *a) Development that adjoins significant noise sources, (such as main roads, commercial/industrial development, public transport interchanges and railways) shall be designed to achieve acceptable internal noise levels, based on recognised Australian Standards and any criteria and standards regulated by a relevant State Government Authority.*
>
> *b) Development shall incorporate noise attenuation measures that are compatible with the scale, form and character of the street.*
>
> *d) Multi dwelling housing and attached dwellings near railway corridors and major roads shall demonstrate to Council's satisfaction compliance with the requirements under the Guidelines entitled Development Near Rail Corridors and Busy Roads – Interim Guideline, 2008)*

4.1.1.1 SITE SPECIFIC - MOUNT GILEAD DCP 2017 (VOLUME 2, PART 7)

The site specific DCP provided by the Campbelltown City Council for the Mount Gilead development states that, for land adjacent to Appin Road (Section 3.5.6), the development must ensure residential dwellings are not adversely impacted by traffic noise. The development must comply with the requirements under the Guidelines entitled Development Near Rail Corridors and Busy Roads – Interim Guideline, 2008.

4.1.2 INFRASTRUCTURE SEPP 2007

NSW Government's State Environmental Planning Policy (Infrastructure) 2007 (the SEPP) was introduced to facilitate the delivery of infrastructure across the State by improving regulatory certainty and efficiency.

In accordance with the SEPP, the NSW Department of Planning and Infrastructure's guideline document entitled *Development near Rail Corridors and Busy Roads – Interim Guideline* (the DOP Guideline) of December 2008, provides noise criteria for residential and non-residential buildings. Table of the DOP Guideline is presented in Table 4-1.

Table 4-1 DOP Noise Criteria, Residential Buildings

TYPE OF OCCUPANCY	NOISE LEVEL dBA	APPLICABLE TIME PERIOD
Sleeping areas (bedroom)	35	Night 10 pm to 7 am
Other habitable rooms (excl. garages, kitchens, bathrooms and hallways)	40	At any time

The DOP also states:

> *The night-time "sleeping areas" criterion is 5 dB(A) more stringent than the "living areas" criteria to promote passive acoustic design principles. For example, designing the building such that sleeping areas are less exposed to road or rail noise than living areas may result in less onerous requirements for glazing, wall construction and acoustic seals. If internal noise levels with windows or doors open exceed the criteria by more than 10 dB(A), the design of the ventilation for these rooms should be such that occupants can leave windows closed, if they so desire, and also to meet the ventilation requirements of the Building Code of Australia."*

A standard construction for building envelope (with proprietary window glazing of 4mm nominal thickness) will attenuate noise ingress by up to 20 dB when sealed (window closed position) and up to 10 dB when unsealed (window open to allow for natural ventilation). Based on the above, the external design noise levels can be derived using 35 dBA or 40 dBA + 10 dB for attenuation due to structure during open window, or + 20 dB for attenuation due to structure when window closed.
Summary of the external noise design levels for a dwelling with standard construction to comply with the internal noise levels outlined in Table 4-1 above detailed in Table 4-2

Table 4-2 External noise design levels

TYPE OF OCCUPANCY	EXTERNAL NOISE LEVELS (dBA)			
	WINDOWS OPEN		WINDOWS CLOSED	
	DAYTIME	NIGHT-TIME	DAYTIME	NIGHT-TIME
Bedrooms	50	45	60	55
Other areas	50	50	60	60

1: Daytime Leq(15hour) between 7:00am and 10:00pm and night-time Leq(9hour) between 10:00pm and 7:00am.

A dwelling with external noise levels exceeding the above design levels during 'windows open' condition by more than 10 dB will require alternative ventilation arrangements to allow windows and doors to be closed.

A dwelling with external noise levels exceeding the above design levels during 'windows closed' condition will require alternative ventilation arrangements and upgrade from the standard construction.

4.2 NOISE EGRESS

4.2.1 *NOISE POLICY FOR INDUSTRY*

The proposed development has the potential to contribute to the existing environment. Noise assessed under the NSW Noise Policy for Industry (NPfI) relevant to the proposal are mechanical services for the future residential properties.

Noise emissions from the proposed development must be designed to comply with relevant policy and legislation to ensure that nearby noise sensitive receivers are not adversely affected.

The NPfI process involves the determination of *project noise trigger levels*, which can then be adopted by the Responsible Authority as prescribed noise limits that can be nominated as a permit condition for a project. The project noise trigger level provides a benchmark which, if exceeded, indicates a potential noise impact. The project noise trigger level in each relevant time period (daytime, evening and night-time) is the lower value (i.e. more stringent) of the project intrusiveness noise level (based on existing background noise level) and the project amenity noise level (based on land use).

The NPfI includes a maximum noise level assessment to consider sleep disturbance. The need for this assessment is triggered depending on the type of industry being assessed and the night time noise levels at a residential location.

4.2.1.1 PROJECT NOISE TRIGGER LEVEL

In assessing the noise impact of the proposed development on surrounding residential receivers, both the intrusiveness and amenity criterion must be considered. In most cases, only one criterion will become the limiting criterion and form the project noise trigger levels for the industrial source under assessment. A summary of all relevant criteria, including the project noise trigger level for each time period is presented in Table 4-3.

The criteria presented in Table 4-3 applies to environmental noise emissions from the proposed redevelopment including mechanical plant. Environmental noise criteria are applicable at the property boundary of the nearest residence to the proposed development site.

Table 4-3 Summary of environmental noise criteria

RECEIVER TYPE	PERIOD	RBL dBA	INTRUSIVE CRITERIA dBA $L_{eq,\ 15min}$	PROJECT AMENITY NOISE LEVEL[1] $L_{eq\ 15\text{-}MINUTE}$, dBA	PROJECT NOISE TRIGGER LEVEL $L_{eq\ 15\text{-}MINUTE}$, dBA
Residential	Day *7am to 6pm Monday to Saturday* *8am to 6pm Sundays and public holidays*	35	40	53	40
	Evening *6pm to 10pm all days*	35	40	43	43
	Night *All other times*	32	37	38	37

1: Project amenity noise level (ANL) is suburban ANL (Table 2.1) minus 5 dB plus 3 dB to convert from a period level to a 15-minute equivalence level.

4.2.1.2 SLEEP DISTURBANCE

The potential for sleep disturbance from maximum noise level events from premises during the night-time period needs to be considered. Sleep disturbance is considered to be both awakenings and disturbance to sleep stages.

Where the subject development/premises night-time noise levels at a residential location exceed the following, a detailed maximum noise level event assessment should be undertaken.

- $L_{eq,15min}$ 40 dB(A) or the prevailing RBL plus 5 dB, whichever is the greater, and/or
- L_{Fmax} 52 dB(A) or the prevailing RBL plus 15 dB, whichever is the greater.

4.2.2 CAMPBELLTOWN CITY COUNCIL DCP

Section 3.4.3.1 of the DCP sets out the following requirements for acoustic privacy:

Design Requirements

c) On-site noise generating sources including, but not limited to, plant rooms and equipment, air conditioning units, pool pumps, and recreation areas shall be designed and located to ensure that the noise levels generated by such facilities do not exceed 5 dBA above background levels at the property boundary.

This criteria is reflective of the NPfI Intrusiveness criteria and is taken into account in the criteria determined in Table 4-3.

5 NOISE INGRESS

The controlling noise source of the proposal has been determined to be from Appin Road (refer to Section 3.2). As such, this section discusses the prediction of traffic noise levels from Appin Road impacts to the proposal.

5.1 NOISE MODELLING METHOD

The predicted noise impacts expected once the proposal is operation were calculated using supplied information on the road alignment, the existing conditions and a number of conservative assumptions.

An operational noise model was created using the SoundPLAN software (version 7.4). Calculation of Road Traffic Noise (CoRTN) (UK Department of Transport, 1988) algorithms were used to develop the model. The model predicted the road traffic noise generated as a result of changes to traffic volumes and composition, vehicle speed, road gradient, pavement surface, ground absorption and shielding, and reflections from topography, buildings and barriers.

The predictive model assumed four-lanes of traffic in each direction on Appin Road for the build and no-build scenarios to account for the planned widening work. The modelling considered two scenarios in the design year of Appin Road (2031) with the proposal built and traffic operating on the new roads.

The modelling predicted the noise emissions at three heights to represent the various class of heavy vehicles that would use the proposed road. Table 5-1 summarises the modelling conditions.

Table 5-1 Noise modelling parameters

ITEM	ASSUMPTIONS
Calculation method	CoRTN (1988) with variations as described in this report. Low traffic correction not used.
Ground topography	From a combination of supplied 3D drawings and survey data and existing topographical maps provided by NSW Lands and Property Information.
Pavement surfaces	Existing and proposed pavement surfaces DGA. No correction applied
Traffic volumes and mix	Supplied by project Traffic Consultant for all project related roads.
Existing structures and barriers	Buildings, fences and noise barriers defined from aerial photography and site surveys. Existing solid fences included in model where they are located between a road source and a receiver point.
Sources heights and correction	Model assumes three sources heights: Light vehicles at 0.5m with 0 dB correction Heavy vehicles at 1.5m with a -0.6 correction and at 3.6m with a -8.6 dB correction
Vehicle speeds	Proposed designs set at existing posted speeds (80 km/h) Average speed was adopted for model validation.
Road gradient	Gradient calculated from supplied topographical and road design data
Ground absorption	Set at 75% soft ground for grass, wooded areas and park land Set at 50% soft ground for residential land use Set at 25% soft ground for commercial land uses
Receiver locations	Assessed at 1 metre from the façade at heights of 1.5m for ground floor and 4.5m for first floor receivers. Free-field receivers set at 1.5m.

ITEM	ASSUMPTIONS
Future Structures and barriers	A 5 dB reduction to the predicted noise is applied to account for future buildings to be constructed in between Appin Road and the Subdivision. A 7 dB reduction to the predicted noise is applied to account for the future buildings and the construction of a 3 m barrier with density of ≥19 kg/m^2 along Appin Road,
Angle of view	In accordance with CRTN method, a reduction is applied to the facades for angle of view: — 0dB reduction is applied to facades directly facing the road — 3dB reduction is applied to facades at 90° to the road — A conservative reduction of 5dB is applied to facades not facing the road
Façade correction	+2.5 dB
ARRB correction	-1.7 dB for façade noise levels and -0.7 dB for free-field noise levels
L_{10} to L_{eq} correction	-3dB

The noise model was validated using the traffic noise levels measured in 2017 and the corresponding existing traffic flows for Appin Road.

5.2 TRAFFIC NOISE MODELLING – APPIN ROAD

5.2.1 FUTURE TRAFFIC VOLUME - 2031

Traffic volumes on Appin Road presented in Table 5-2 were supplied by the WSP Traffic Engineering who are working as part of the Appin Road, Mt Gilead Review of Environmental Factors (Appin Road REF) project team and are used in the model prediction.

Table 5-2 Traffic volumes - design year (2031)

ROAD	DIRECTION	BUILD						
		Peak AM	Peak PM	15 Hour (Day)		9 Hour (Night)		Speed (km/h)
				Total Volume	Heavy Vehicle	Total Volume	Heavy Vehicle	Posted
Btwn Brian Road to Access road south	NB	730	977	11,075	654	1,827	127	80
	SB	690	1,247	11,332	587	1,313	111	80
Btwn south access road to north access road	NB	1,124	1,056	11,971	707	1,975	137	80
	SB	768	1,247	11,332	587	1,313	111	80
Btwn north access to Kellerman Drive S	NB	1,814	1,192	15,909	939	2,625	182	80
	SB	906	1,937	17,603	912	2,039	173	80

5.3 PREDICTED TRAFFIC NOISE LEVELS

The predicted daytime and night-time noise levels from Appin Road is presented in Figure 5.1 and Figure 5.2 respectively. The noise levels are façade corrected (i.e. with additional 2.5 dB correction applied).

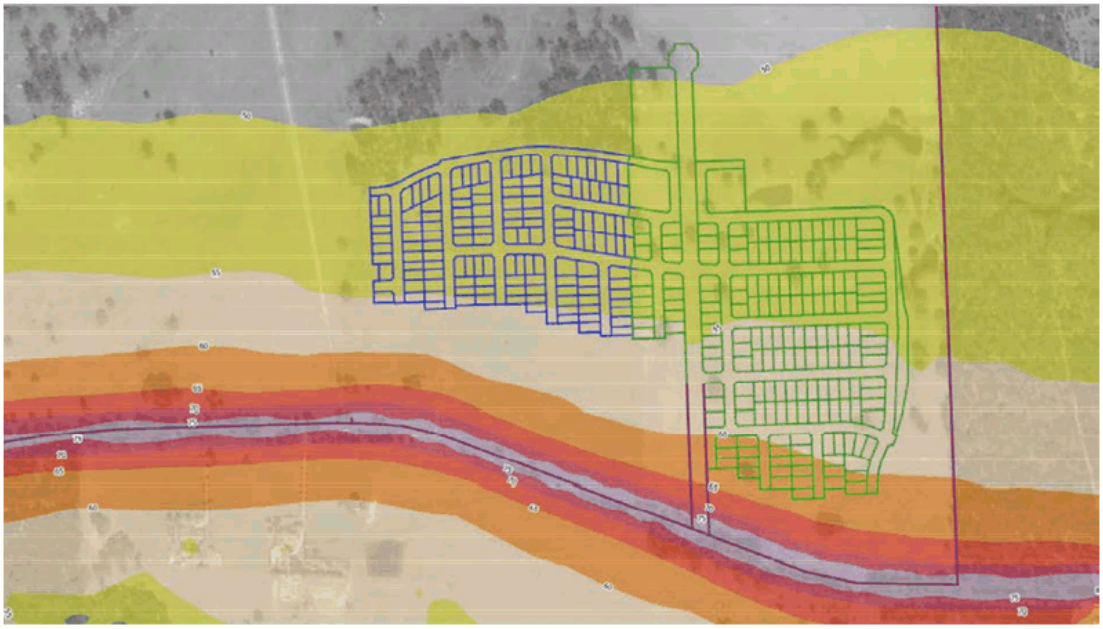


Figure 5.1 Noise contour at 1.5m – Daytime dBA, $L_{eq(15hr)}$ traffic noise levels

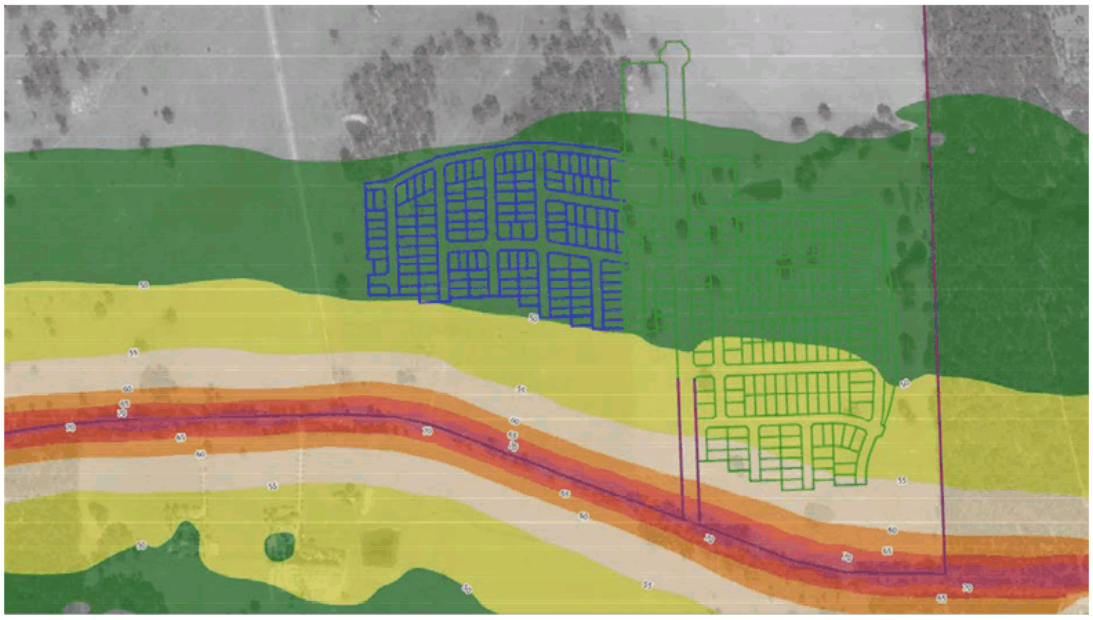


Figure 5.2 Noise contour at 1.5m – Nigh-time dBA, $L_{eq(9hr)}$ traffic noise levels

Based on the noise prediction above, the most affected scenario is the daytime period. As such, the proposal areas have been divided up into 4 sections. This enables analysis of the variation of noise with respect to the distance from the roads. The different sections are presented in Figure 5.3.

To consider noise propagation across the subdivision, two future build scenarios have been assessed. These scenarios include:

1 Considering future built subdivision of the estate

2 Considering future built subdivision of the estate, and a 3m high noise barrier along the estate boundary.

Table 5-3 and **Error! Reference source not found.** detail the predicted levels of the affected areas based on these assessment scenarios.

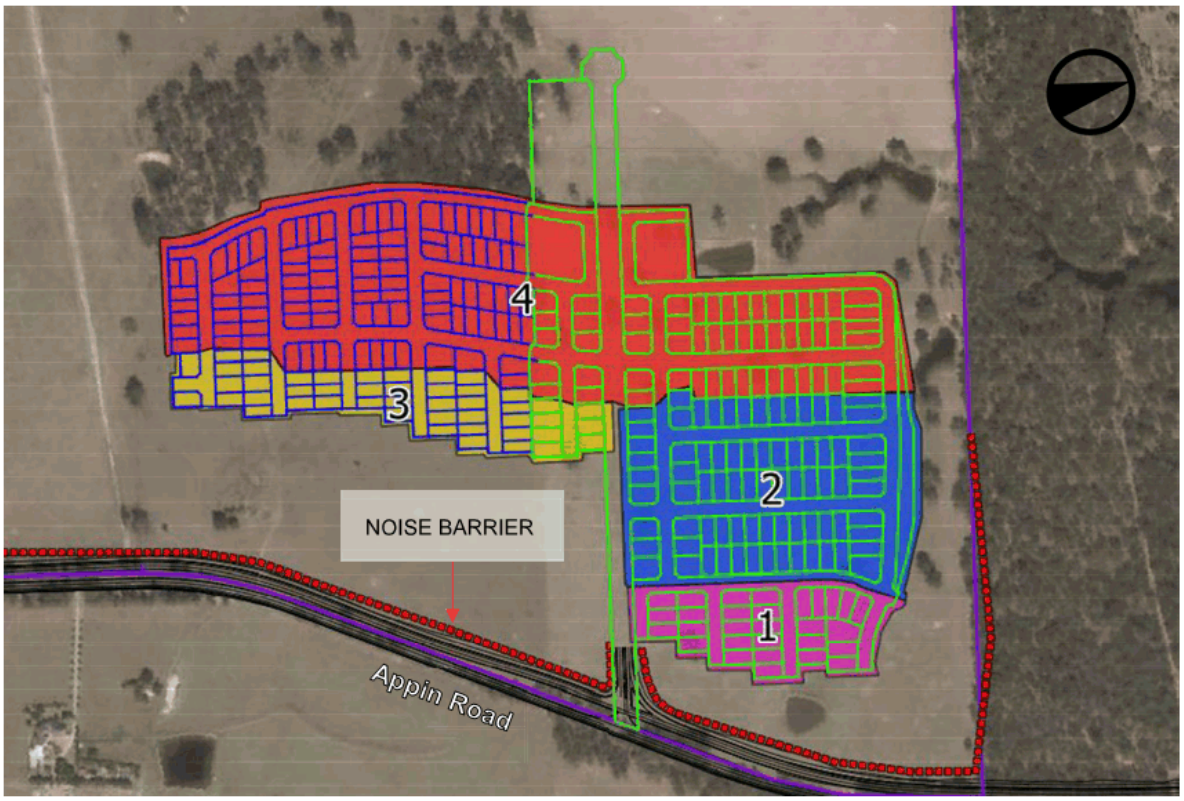


Figure 5.3 Proposal affected areas

Table 5-3 Summary of predicted noise levels at façade (ground floor) Stage 1 – Scenario 1

AFFECTED AREA	TIME PERIOD	NOISE LEVELS AT FAÇADE, (dBA)			
		NORTH	EAST	SOUTH	WEST
Area 1	D	57	60	57	55
Area 1	N	52	55	52	50
Area 2	D	52	55	52	50
Area 2	N	47	50	47	45
Area 3	D	52	55	52	50
Area 3	N	42	45	42	40
Area 4	D	47	50	47	45
Area 4	N	42	45	42	40

Note: A 5 dB reduction to the predicted noise levels is applied to all facades to account for future housing development shielding

Table 5.4 Summary of predicted noise levels at façade (ground floor) Stage 1 – Scenario 2

AFFECTED AREA	TIME PERIOD	NOISE LEVELS AT FAÇADE, (dBA)			
		NORTH	EAST	SOUTH	WEST
Area 1	D	55	58	55	53
Area 1	N	50	53	50	48

AFFECTED AREA	TIME PERIOD	NOISE LEVELS AT FAÇADE, (dBA)			
		NORTH	EAST	SOUTH	WEST
Area 2	D	50	53	50	48
Area 2	N	45	48	45	43
Area 3	D	50	53	50	48
Area 3	N	40	43	40	38
Area 4	D	45	48	45	43
Area 4	N	40	43	40	38

Note : A 7 dB reduction to the predicted noise levels is applied to all facades due to shielding from future housing development and noise barrier.

5.4 NOISE INGRESS ASSESSMENT

5.4.1 *INDICATIVE REQUIREMENTS*

The interim guideline provides guidance to determine building façade treatment for buildings adjacent to roadways of varying condition (speed, volume and building setback). These recommendations are presented as category numbers, with Category 1 and Category 6 noise mitigation treatments being the least and most onerous, respectively.

Construction to these recommendations is classified as 'deemed to comply' and no further assessment would be required. However, alternative treatments could be recommended (by a suitably qualified acoustic engineer) to allow ventilation for windows closed condition. It is likely that a detailed assessment would result in less acoustic treatment than the 'deemed-to-comply' design as a this would consider the prevailing levels of road traffic noise and the orientation shape and size of the individual building elements.

5.4.2 *ASSESSMENT SUMMARIES*

Based on the predicted noise levels presented in Table 5-3, the assessment of road traffic noise impacts to the proposal are presented in Table 5-4. Where exceedances are predicted within Stage 1 the following typical noise reductions detailed in Table 5-4 are likely to be required. The details are provided for single storey dwellings.

Table 5-4 Summary of indicative acoustical facade noise reduction requirements

AFFECTED AREA	TIME PERIOD[1]	SCENARIO 1- PREDICTED NOISE LEVEL RANGE, dBA	SCENARIO 2 - PREDICTED NOISE LEVEL RANGE, dBA	INTERNAL DESIGN CRITERIA, dBA	SCENARIO 1 - REQUIRED R_w [2]	SCENARIO 2 - REQUIRED R_w [2]
Area 1	D	50-60	48-58	40	26	24
Area 1	N	45-55	43-53	35	26	24
Area 2	D	45-55	43-53	40	21	19
Area 2	N	40-50	38-48	35	21	19
Area 3	D	50-55	48-53	40	21	19
Area 3	N	40-45	38-43	35	16	14
Area 4	D	45-50	43-48	40	16	14
Area 4	N	35-45	33-43	35	16	14

1: (D) Daytime noise level descriptor $L_{eq(15hr)}$ and (N) night-time noise level descriptor $L_{eq(9hr)}$

2: Estimated weighted sound reduction index (R_w) requirement as per Australian Standard 3671-1989 Road traffic noise intrusion – building sitting and construction.

5.5 NOISE CONTROL TREATMENT AND RECOMMENDATIONS

Based on the required weighted sound reduction index (R_w) detailed in Table 5-4, the following 'deemed to comply' design as per the Interim guideline has been selected. As glazing is typically the weakest element of the faced. The building construction category is selected based on the glazing performance. Figure 5.4 detailed Acoustic performance of building elements as per the Interim guideline.

Category of Noise Control Treatment	R_w of Building Elements (minimum assumed)				
	Windows/Sliding Doors	Frontage Facade	Roof	Entry Door	Floor
Category 1	24	38	40	28	29
Category 2	27	45	43	30	29
Category 3	32	52	48	33	50
Category 4	35	55	52	33	50
Category 5	43	55	55	40	50

Figure 5.4 Acoustic performance of building elements (Interim guideline Appendix C)

5.5.1 AFFECTED AREAS AND TREATMENT

Based on the required attenuation detailed in Section 5.4.2 are presented in Table 5-5.

Table 5-5 Summary of Building construction requirement (of first row of residences directly fronting the roadway) – Scenario 1

AFFECTED AREA	TIME PERIOD[1]	REQUIRED R_W [2]	ALTERNATIVE VENTILATION	INDICATIVE CATEGORY OF NOISE TREATMENT[3]
Area 1	D	26	Yes	Category 2
Area 1	N	26	Yes	Category 2
Area 2	D	21	No	Category 1
Area 2	N	21	No	Category 1
Area 3	D	21	Yes	Category 2
Area 3	N	16	No	Category 1
Area 4	D	16	No	Category 1
Area 4	N	16	No	Category 1

1: (D) Daytime noise level descriptor $L_{eq(15hr)}$ and (N) night-time noise level descriptor $L_{eq(9hr)}$

2: Estimated weighted sound reduction index (R_w) requirement as per Australian Standard 3671-1989 Road traffic noise intrusion – building sitting and construction.

3: Indicative treatments determined based on the glazing performance from the Interim guideline.

Table 5-6 Summary of Building construction requirement (of first row of residences directly fronting the roadway) – Scenario 2

AFFECTED AREA	TIME PERIOD[1]	REQUIRED R_W [2]	ALTERNATIVE VENTILATION	INDICATIVE CATEGORY OF NOISE TREATMENT[3]
Area 1	D	24	No	Category 1
Area 1	N	24	No	Category 1
Area 2	D	19	No	Category 1
Area 2	N	19	No	Category 1
Area 3	D	19	No	Category 1
Area 3	N	14	No	Category 1
Area 4	D	14	No	Category 1
Area 4	N	14	No	Category 1

1: (D) Daytime noise level descriptor $L_{eq(15hr)}$ and (N) night-time noise level descriptor $L_{eq(9hr)}$

2: Estimated weighted sound reduction index (R_w) requirement as per Australian Standard 3671-1989 Road traffic noise intrusion – building sitting and construction.

3: Indicative treatments determined based on the glazing performance from the Interim guideline.

5.5.2 INDICATIVE BUILDING CONSTRUCTION

The 'deemed to comply' construction details are presented in Figure 5.5, Figure 5.6 and Figure 5.7.

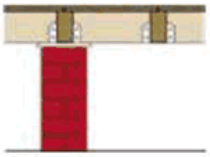
Category No.	Building Element	Standard Constructions	sample
1	**Windows/Sliding Doors**	Openable with minimum 4mm monolithic glass and standard weather seals	
	Frontage Facade	**Timber Frame or Cladding:** 6mm fibre cement sheeting or weatherboards or plank cladding externally, 90mm deep timber stud or 92mm metal stud, 13mm standard plasterboard internally	
		Brick Veneer: 110mm brick, 90mm timber stud or 92mm metal stud, minimum 50mm clearance between masonry and stud frame, 10mm standard plasterboard internally	
		Double Brick Cavity: 2 leaves of 110mm brickwork separated by 50mm gap	
	Roof	Pitched concrete or terracotta tile or metal sheet roof with sarking, 10mm plasterboard ceiling fixed to ceiling joists, R1.5 insulation batts in roof cavity.	
	Entry Door	35mm solid core timber door fitted with full perimeter acoustic seals	
	Floor	1 layer of 19mm structural floor boards, timber joist on piers	
		Concrete slab floor on ground	

Figure 5.5 Deemed-to-Comply Construction Details – Category 1 (Interim guideline Appendix C)

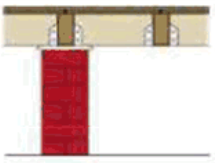
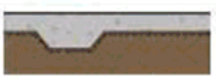
Category No.	Building Element	Standard Constructions	sample
2	**Windows/Sliding Doors**	Openable with minimum 6mm monolithic glass and full perimeter acoustic seals	
	Frontage Facade	**Timber Frame or Cladding Construction:** 6mm fibre cement sheeting or weatherboards or plank cladding externally, 90mm deep timber stud or 92mm metal stud, 13mm standard plasterboard internally with R2 insulation in wall cavity.	
		Brick Veneer Construction: 110mm brick, 90mm timber stud frame or 92mm metal stud, minimum 50mm clearance between masonry and stud frame, 10mm standard plasterboard internally.	
		Double Brick Cavity Construction: 2 leaves of 110mm brickwork separated by 50mm gap	
	Roof	Pitched concrete or terracotta tile or metal sheet roof with sarking, 10mm plasterboard ceiling fixed to ceiling joists, R2 insulation batts in roof cavity.	
	Entry Door	40mm solid core timber door fitted with full perimeter acoustic seals	
	Floor	1 layer of 19mm structural floor boards, timber joist on piers	
		Concrete slab floor on ground	

Figure 5.6 Deemed-to-Comply Construction Details – Category 2 (Interim guideline Appendix C)

Category No.	Building Element	Standard Constructions	sample
3	**Windows/Sliding Doors**	Openable with minimum 6.38mm laminated glass and full perimeter acoustic seals	
	Frontage Facade	**Brick Veneer Construction:** 110mm brick, 90mm timber stud or 92mm metal stud, minimum 50mm clearance between masonry and stud frame, 10mm standard plasterboard internally.	
		Double Brick Cavity Construction: 2 leaves of 110mm brickwork separated by 50mm gap	
	Roof	Pitched concrete or terracotta tile or sheet metal roof with sarking, 1 layer of 13mm sound-rated plasterboard fixed to ceiling joists, R2 insulation batts in roof cavity.	
	Entry Door	45mm solid core timber door fitted with full perimeter acoustic seals	
	Floor	Concrete slab floor on ground	

Figure 5.7 Deemed-to-Comply Construction Details – Category 3 (Interim guideline Appendix C)

5.5.3 *ARCHITECTURAL LAYOUT*

GENERAL PRINCIPLE

The location and orientation of buildings and the internal layout should be considered as part of the design. Positioning sensitive spaces such as bedrooms away from the source is an effective method of reducing the impact road traffic noise.

Examples of residential building layouts to shield sensitive sleeping and living areas from road traffic noise are shown in the Interim guideline. An extract from the guideline document is presented in Figure 5.8 and Figure 5.9.

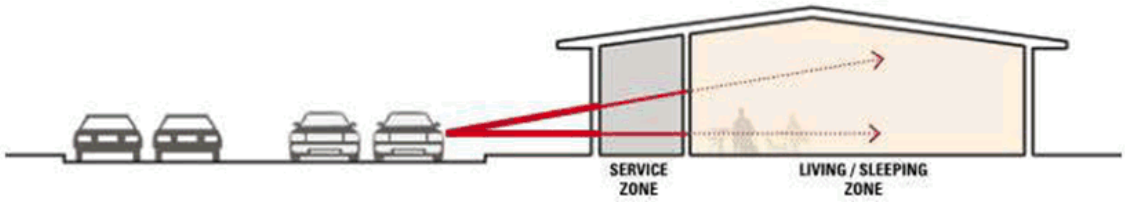


Figure 5.8 Single Dwellings – locating noise sensitive rooms away from road noise (elevation view) (Interim guideline Figure 3.5)

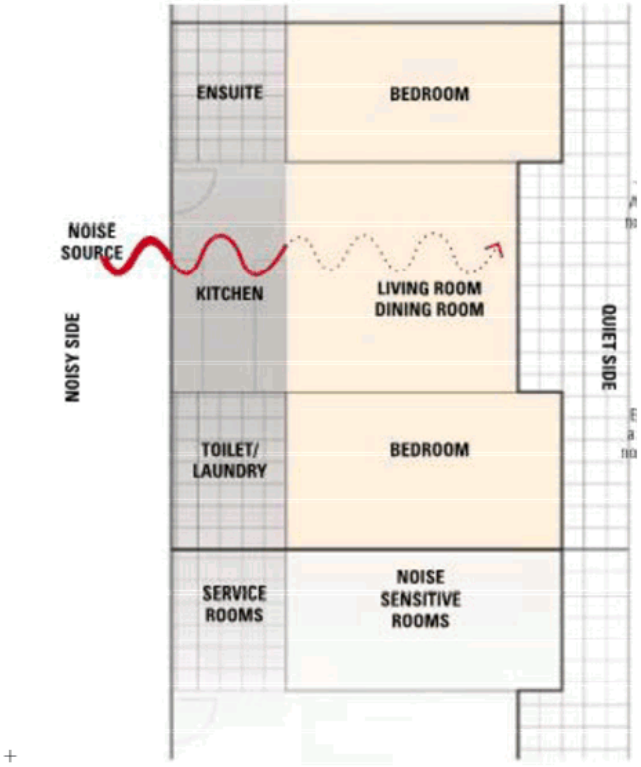


Figure 5.9 Single Dwellings – locating noise sensitive rooms away from road noise (plan view) (Interim guideline Figure 3.5)

5.5.4 MECHANICAL VENTILATION

An acceptable noise reduction provided by the average facade when windows and/or doors are open for naturally ventilated dwellings is typically 10 dB. Where the internal noise goal within dwellings is expected to exceed by 10 dB or more with windows and/or doors open, an alternative ventilation system would be required to enable sealing of the external facade (closing windows or doors) during noisy periods whilst maintaining the ventilation requirements.

5.5.5 BOUNDARY FENCES

Solid boundary fences can provide additional reduction to road traffic noise (internal and external areas of the property that are directly exposed to the roadways. A natural barrier such as trees or shrubs is not considered an effective noise control. The boundary fence should be continuous with no gaps between panels or underneath panels.

6 NOISE EGRESS

Total noise emissions from the site shall be designed to be no louder than the noise impact requirements stated in the NSW Noise Policy for Industry: 2014 (NPfI). The project specific limits relevant for the proposal site are detailed in Section 4.2

6.1 BUILDING SERVICES

Plant equipment at each residential site within the proposal will be designed as part of each residential development. However, it can be expected that noise emitting equipment may consist of outdoor condenser units or extract fans.

The total noise emissions from each residence within the proposal will be designed to be no louder than the project noise trigger levels stated in Table 4-3 at the nearest residential boundary.

6.1.1 SLEEP DISTURBANCE

Criteria set out in Section 4.2.1.2 provides maximum noise levels for events occurring in the night-time to control sleep disturbance. These criteria state the following:

- $L_{Aeq,15min}$ 40 dB(A) or the prevailing RBL plus 5 dB, whichever is the greater, and/or
- L_{AFmax} 52 dB(A) or the prevailing RBL plus 15 dB, whichever is the greater.

The potential noise sources identified for the proposal residential properties (extract fans and outdoor condenser units) will operate over a period of time greater than 15 minutes and cannot be considered intermittent sources. The project noise trigger levels criteria stated in Table 4-3 is the more onerous criteria for continuous sources. Therefore, in meeting the project specific criteria, the sleep disturbance criteria are also achieved.

6.2 MITIGATION

Design of building services shall be undertaken with careful consideration in the selection, design and placement of all mechanical equipment that emit noise to check that emissions do not exceed the project noise trigger levels stated in Table 4-3. Where equipment is in excess of these criteria, acoustic mitigation will be necessary. These measures may include, but are not limited to:

- Acoustic shrouds/enclosures;
- Attenuators;
- Noise barriers;
- Acoustic louvres; and
- Acoustic absorption.

7 CONCLUSION

WSP Australia Pty Ltd (WSP) has been commissioned by Lendlease Communities to conduct an acoustic assessment of the potential noise impacts of the proposed subdivision of the Mount Gilead Residential Estate.

The noise impact assessment has been carried out with reference to the relevant policies and guidelines:

- Campbelltown City Council Development Control Plan (2015);
- NSW State Environmental Planning Policy (Infrastructure) 2007;
- NSW Department of Planning Development Near Rail Corridors and Busy Roads – Interim guideline (2008); and
- NSW EPA Noise Policy for Industry (2017).

Noise from mechanical services plant noise shall not exceed the requirements set out in the NSW Noise Policy for Industry. Mechanical services shall be controlled to within these limits using typical attenuation measures such as; noise barriers, acoustic louvres, acoustic absorption, attenuators, and acoustic shrouds.

An assessment of road traffic noise impact to the proposal has been conducted based on the future traffic volumes on Appin Road at the design year (2031). The impacts on the dwellings have been determined and recommended constructions have been proven to comply with the NSW Department of Planning Development Near Rail Corridors and Busy Roads – Interim guideline.

In line with the interim guideline, building construction requirements may be used to appropriately manage traffic noise. However, an additional modelling scenario utilising a noise barrier along the estate boundary indicates that additional attenuation may be provided to the residences, and allow for a lower category of building construction to achieve appropriate noise levels internally. As the final treatment of Appin Road is being refined by Lendlease, the details of the road design and mitigation measures are subject to change. Therefore, final at building controls would be determined pending the final design of Appin Road.

ABOUT US

WSP is one of the world's leading engineering professional services consulting firms. We are dedicated to our local communities and propelled by international brainpower. We are technical experts and strategic advisors including engineers, technicians, scientists, planners, surveyors, environmental specialists, as well as other design, program and construction management professionals. We design lasting Property & Buildings, Transportation & Infrastructure, Resources (including Mining and Industry), Water, Power and Environmental solutions, as well as provide project delivery and strategic consulting services. With 36,000 talented people in more than 500 offices across 40 countries, we engineer projects that will help societies grow for lifetimes to come.

GEOTECHNICS PTY LTD
CONSULTING GEOTECHNICAL ENGINEERS

14/1 Cowpasture Place, Wetherill Park, NSW 2164, Australia
(PO Box 6989, Wetherill Park, NSW 2164, Australia)
T +61 2 9756 2166 | **F** +61 2 9756 1137
www.stsgeo.com.au | enquiries@stsgeo.com.au
ABN 45 636 179 729 | **ACN** 636 179 729

January 13, 2025
Project No. 30055/9987
Report No. 25/0105
LL/ms

SUMMARY SHEET

Client: McDonald Jones Homes
Address: Lot 1146, 70 Frampton Drive, Gilead
Reference: 607357/016/01

SITE CLASSIFICATION	P/M	AS2870-2011
WIND CLASSIFICATION	N1	AS4055-2021
EXPOSURE CLASSIFICATION	A2	AS2870-2011

This summary sheet must be read in conjunction with the full report.

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14/1 Cowpasture Place, Wetherill Park, NSW 2164, Australia
(PO Box 6989, Wetherill Park, NSW 2164, Australia)
T +61 2 9756 2166 | **F** +61 2 9756 1137
www.stsgeo.com.au | enquiries@stsgeo.com.au
ABN 45 636 179 729 | **ACN** 636 179 729

January 13, 2025
Project No. 30055/9987
Report No. 25/0105
LL/ms

SITE INVESTIGATION REPORT

Client: McDonald Jones Homes
Address: Lot 1146, 70 Frampton Drive, Gilead
Proposed Development: Residential dwelling

Site Description

Approx. area (m^2): 512
Approx. fall: 1 metre to the west, reasonable site drainage
Vegetation: Grass and a tree in the footpath
Improvements: Vacant

Geology, Fieldwork Details and Subsurface Conditions

The Wollongong-Port Hacking geological series sheet at a scale of 1:100,000 shows the site is underlain by Triassic Age Ashfield Shale of the Wianamatta Group. Rocks within this formation comprise laminite and dark grey siltstone.

Two boreholes were drilled, and two Dynamic Cone penetrometer (DCP) tests were carried out on December 13, 2024, at the locations shown on Drawing No. 25/0105. The subsurface conditions encountered are shown on the attached borehole logs. Explanation sheets and notes relating to geotechnical reports are also attached.

When assessing the subsurface conditions across a site from a limited number of boreholes, there is the possibility that variations may occur between test locations. The data derived from the site investigation programme are extrapolated across the site to form a geological model and an engineering opinion is rendered about overall subsurface conditions and their likely behaviour regarding the proposed development. The actual condition at the site may differ from those inferred, since no subsurface exploration programme, no matter how comprehensive, can reveal all subsurface details and anomalies.

The subsurface conditions consist of fill overlying silty clays. The fill is present to depths of 0.5 and 0.7 metres. Very stiff natural silty clays underlie the fill to the depth of drilling, 2.5 metres.

No groundwater was observed in the boreholes during the fieldwork.

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Wind Classification

The classification given below has been prepared to assist the designer in accordance with the guidelines set out in AS4055-2021 "Wind loads for housing". This assessment has been undertaken and verified using a commercially available software CHECKWINDv7.3.7 by Revolutio. Final designs should be verified by an experienced qualified structural engineer to accurately determine the appropriate Wind Classifications in accordance with the Building Code of Australia.

Region	A
Terrain Category	TC2.5
Topographic Classification	T1
Shielding	PS
Rating	**N1**

Laboratory Testing

To assist with determining the site classification, one shrink/swell test was carried out on representative sample retrieved from the site. The detailed test report is attached and summarised below:

Location	Depth (m)	Material Description	Shrink/Swell Index (% per ΔpF)
BH1	0.8-1.0	Silty Clay, grey red	2.7

Site Classification

The classification has been prepared in accordance with the guidelines, site maintenance and performance expectations set out in the "Residential Slabs and Footings" Code, AS2870 – 2011

Due to the presence of greater than 400mm of fill, the site is classified a *Problem Site (P)*. However, provided the recommendations given below are adopted and the fill has written certification that it was placed as controlled engineering fill, the site may be re-classified *Moderately Reactive (M)*. After cutting and filling the classification remains unchanged provided the fill is placed in a controlled manner and is non-reactive.

Foundation design and construction consistent with this classification shall be adopted as specified in the above referenced standard and in accordance with the following design details.

Foundation Design and Construction

Pad and/or strip footings founded fill certified in writing it has been placed as controlled engineered fill, may be proportioned using an allowable bearing pressure of 100kPa. The minimum depth of founding must comply with the requirements of AS2870. The growth of the tree on the footpath needs to be considered in the foundation design.

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Piers founded in very stiff natural silty clays, may be proportioned using an allowable end bearing pressure of 300 kPa, provided their depth to diameter ratio exceeds a value of 4. An allowable adhesion value of 20 kPa may be adopted for the portion of the shaft below a depth of 0.5 metres.

To ensure the bearing values given can be achieved, care should be taken to ensure the base of the excavations is free of all loose material prior to concreting. To this end, it is recommended that all excavations be concreted as soon as possible, preferably immediately after excavating, cleaning, inspecting and approval. Pier excavations should not be left open overnight. The possibility of groundwater inflow needs to be considered when drilling the piers and pouring concrete.

The site is considered suitable for slab on ground construction provided due regard is given to the ground surface slope and the fill is certified as being placed in a controlled manner. Otherwise, piers will be required to suspend the slab.

During foundation construction, should the subsurface conditions vary to those inferred in this report, a suitably experienced geotechnical engineer should review the design and recommendations given above to determine if any alterations are required.

Soil Aggressiveness

The exposure classification for the concrete has been determined for the onsite soils. The exposure classification is obtained from Tables 5.1 and 5.2 of AS2870-2011. Regarding the electrical conductivity, the laboratory test results have been multiplied by the appropriate factor to convert the results to EC_e.

Detailed test reports are attached and summarised below, together with the exposure classification.

Sample No.	Electrical Conductivity (dS/m)		pH	Sulfate (ppm)	Exposure Classification
	$EC_{1:5}$	EC_e			
S1/9987	0.095	0.9	5.3	40	A2

The minimum concrete strength and reinforcement cover required for the various exposure classifications are given in Tables 5.3 and 5.4 of AS2870-2011 (see attached).

Additional Comments

Attention is drawn to Appendix B of AS2870 - 2011 regarding the need to properly maintain the foundations. Surface drainage should be provided to avoid the possibility of water ponding near the building and the finished ground surface should fall at least 50 mm over one metre away from the building.

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The above classification has been made assuming that all footings will bear in either natural ground or in controlled filling. Prior to the placement of any filling the existing surface should be stripped of all vegetation and topsoil.

If excavations for rainwater or detention tanks are to be made within 6 metres of the building foundations, advice should be sought regarding their effect on the foundations.

Placing absorption trenches on the high side of the property may create abnormal moisture conditions for the foundations (Refer to Section 1.3.3 of AS2870). This could have a negative effect on the foundation performance and more than likely alter the site classification provided above.

This report has been prepared assuming that no trees other than those noted will be present on the site. If future tree planting is planned, eg. there is a landscaping plan, their effect on the foundation performance must be considered.

This report has been prepared assuming the site development will be limited to one or two storey residential buildings. The information and interpretation may not be relevant if the design proposal changes (e.g., to a five-storey building involving major cuts during the site preparation). If changes occur, we would be pleased to review the report and advise on the adequacy of the investigation.

Yours faithfully,

Lucky Ly
Geotechnical Engineer
STS Geotechnics Pty Limited

T1

Image removed for confidentiality reasons

Borehole and Penetrometer Locations

14/1 Cowpasture Place, Wetherill Park, NSW 2164, Australia
(PO Box 6989, Wetherill Park, NSW 2164, Australia)
T +61 2 9756 2166 | F +61 2 9756 1137
www.stsgeo.com.au | enquiries@stsgeo.com.au
ABN 45 636 179 729 | ACN 636 179 729

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Client:	McDonald Jones Homes	**Project NO.** 30055/9987	**Date:** December 13, 2024
Site Address:	Lot 1146, 70 Frampton Drive, Gilead	**Drawing NO.** 25/0105	**Scale:** Unknown
Work:	Site Investigation	**Revision NO.** 0	

Important Information

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INTRODUCTION

These notes have been provided to outline the methodology and limitations inherent in geotechnical reporting. The issues discussed are not relevant to all reports and further advice should be sought if there are any queries regarding any advice or report. When copies of reports are made, they should be reproduced in full.

GEOTECHNICAL REPORTS

Geotechnical reports are prepared by qualified personnel on the information supplied or obtained and are based on current engineering standards of interpretation and analysis.

Information may be gained from limited subsurface testing, surface observations, previous work and is supplemented by knowledge of the local geology and experience of the range of properties that may be exhibited by the materials present. For this reason, geotechnical reports should be regarded as interpretative rather than factual documents, limited to some extent by the scope of information on which they rely.

Where the report has been prepared for a specific purpose (eg. design of a three-storey building), the information and interpretation may not be appropriate if the design is changed (eg. a twenty storey building). In such cases, the report and the sufficiency of the existing work should be reviewed by STS Geotechnics Pty Limited in the light of the new proposal.

Every care is taken with the report content, however, it is not always possible to anticipate or assume responsibility for the following conditions:

- Unexpected variations in ground conditions. The potential for this depends on the amount of investigative work undertaken.
- Changes in policy or interpretation by statutory authorities.
- The actions of contractors responding to commercial pressures.

If these occur, STS Geotechnics Pty Limited would be pleased to resolve the matter through further investigation, analysis or advice.

UNFORSEEN CONDITIONS

Should conditions encountered on site differ markedly from those anticipated from the information contained in the report, STS Geotechnics Pty Limited should be notified immediately. Early identification of site anomalies generally results in any problems being more readily resolved and allows re-interpretation and assessment of the implications for future work.

Rev.0, April 2023

SUBSURFACE CONDITIONS

Logs of a borehole, recovered core, test pit, excavated face or cone penetration test are an engineering and/or geological interpretation of the subsurface conditions. The reliability of the logged information depends on the drilling/testing method, sampling and/or observation spacings and the ground conditions. It is not always possible or economic to obtain continuous high quality data. It should also be recognised that the volume or material observed or tested is only a fraction of the total subsurface profile.

Interpretation of subsurface information and application to design and construction must take into consideration the spacing of the test locations, the frequency of observations and testing, and the possibility that geological boundaries may vary between observation points.

Groundwater observations and measurements outside of specially designed and constructed piezometers should be treated with care for the following reasons:

- In low permeability soils groundwater may not seep into an excavation or bore in the short time it is left open.
- A localised perched water table may not represent the true water table.
- Groundwater levels vary according to rainfall events or season.
- Some drilling and testing procedures mask or prevent groundwater inflow.

The installation of piezometers and long term monitoring of groundwater levels may be required to adequately identify groundwater conditions.

SUPPLY OF GETEOECHNICAL INFORMATION OR TENDERING PURPOSES

It is recommended tenderers are provided with as much geological and geotechnical information that is available and that where there are uncertainties regarding the ground conditions, prospective tenders should be provided with comments discussing the range of likely conditions in addition to the investigation data.

Exposure Classification and Concrete Requirements

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TABLE 5.1 FROM AS2870-2011

EXPOSURE CLASSIFICATION FOR CONCRETE IN SALINE SOILS

Saturated Extract Electrical Conductivity (EC_e), dS/m	Exposure Classification
<4	A1
4-8	A2
8-16	B1
>16	B2

NOTES:

1. Guidance on concrete in saline environments can be found in CCAA T56.
2. Exposure classifications are from AS3600.
3. The currently accepted method of determining the salinity level of the soil is by measuring the extract electrical conductivity (EC) of a soil and water mixture in deciSiemens per metre (dS/m) and using conversion factors that allow for the soil texture to determine the saturated extract electrical conductivity (EC_e).
4. The division between a non-saline and saline soil is generally regarded as an EC_e value of 4 dS/m, therefore no increase in the minimum concrete strength is required below this value.

TABLE 5.2 FROM AS2870-2011

EXPOSURE CLASSIFICATION FOR CONCRETE IN SULFATE SOILS

Exposure Conditions			Exposure Classification	
Sulfates (expressed as SO_4)*		pH		
In Soil ppm	In Groundwater ppm		Soil Conditions A†	Soil Conditions B‡
<5000	<1000	>5.5	A2	A1
5000-10 000	1000-3000	4.5-5.5	B1	A2
10 000-20 000	3000-10 000	4-4.5	B2	B1
>20 000	>10 000	<4	C2	B2

* Approximately 100 ppm SO_4 = 80 ppm SO_3.

† Soil conditions A – high permeability soils (eg. Sands and gravels) that are in groundwater.

‡ Soil conditions B – low permeability soils (eg. Silts and clays) or all soils have groundwater.

Exposure Classification and Concrete Requirements

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TABLE 5.3 FROM AS2870-2011

MINIMUM DESIGN CHARACTERISTIC STRENGTH (f'_c) AND CURING REQUIREMENTS FOR CONCRETE

Exposure Classification	Minimum f'_c MPa	Minimum Initial Curing Requirement
A1	20	Cure continuously for at least 3 days
A2	25	
B1	32	Cure continuously for at least 7 days
B2	40	
C1	≥50	
C2	≥50	

TABLE 5.4 – FROM AS2870-2011

MINIMUM REINFORCEMENT COVER FOR CONCRETE

Exposure Classification	Minimum Cover in Saline Soils* (mm)	Minimum Cover in Sulfate Soils† (mm)
A1	See Clause 5.3.2	40
A2	45	50
B1	50	60
B2	55	65
C1	‡	70
C2	‡	85

* Where a damp-proofing membrane is installed, the minimum reinforcement cover in saline soils may be reduced to 30 mm.

† Where a damp-proofing membrane is installed, the minimum reinforcement cover in sulfate soils may be reduced by 10 mm.

‡ Saline soils have a maximum exposure classification of B2 as per Table 5.1.

GEOTECHNICAL LOG - NON CORE BOREHOLE

GEOTECHNICS PTY LTD
CONSULTING GEOTECHNICAL ENGINEERS

Client: McDonald Jones Homes
Project: Lot 1146, 70 Frampton Drive, Gilead
Location: Refer to Drawing No. 25/0105

Project Number: 30055/9987
Date : December 13, 2024
Logged: MB Checked By: MT

BOREHOLE NO.: BH1

Sheet 1 of 1

WATER TABLE	SAMPLES	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT Soil Name, grain size /plasticity, colour; secondary constituents (Inc. Description) , minor constituents including other remarks	SYMBOL	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	MOISTURE
			FILL: SILTY CLAY: low plasticity, brown, with gravel	CL	APPEARS COMPACTED	<PL
	S1	0.5				
			SILTY CLAY: medium plasticity, orange brown mottled grey, trace of gravel	CI	VERY STIFF	=PL
	U50	1.0				
		1.5				
		2.0				
		2.5	BOREHOLE DISCONTINUED AT 2.5 M			

D - disturbed sample
U - undisturbed tube sample
B - bulk sample
WT - level of water table or free water
N - Standard Penetration Test (SPT)
S - jar sample

NOTES: See explanation sheets for meaning of all descriptive terms and symbols

Contractor: STS
Equipment: Christie
Hole Diameter (mm): 100
Angle from Vertical (o): 0
Drill Bit: Spiral

Form: I1 Date of Issue: 1/11/22 Revision: 2

GEOTECHNICAL LOG - NON CORE BOREHOLE

GEOTECHNICS PTY LTD
CONSULTING GEOTECHNICAL ENGINEERS

Client: McDonald Jones Homes
Project: Lot 1146, 70 Frampton Drive, Gilead
Location: Refer to Drawing No. 25/0105

Project Number: 30055/9987
Date : December 13, 2024
Logged: MB Checked By: MT

BOREHOLE NO.: BH2

Sheet 1 of 1

WATER TABLE	SAMPLES	DEPTH (m)	DESCRIPTION OF DRILLED PRODUCT Soil Name, grain size /plasticity, colour; secondary constituents (Inc. Description) , minor constituents including other remarks	SYMBOL	CONSISTENCY (cohesive soils) or RELATIVE DENSITY (sands and gravels)	MOISTURE
		0.5	FILL: SILTY CLAY: low plasticity, brown, with gravel	CL	APPEARS COMPACTED	<PL
		1.0	SILTY CLAY: medium plasticity, orange brown mottled grey, trace of gravel	CI	VERY STIFF	<PL
		1.5				
		2.0				
		2.5	BOREHOLE DISCONTINUED AT 2.5 M			

D - disturbed sample
U - undisturbed tube sample
B - bulk sample
WT - level of water table or free water
N - Standard Penetration Test (SPT)
S - jar sample

NOTES: See explanation sheets for meaning of all descriptive terms and symbols

Contractor: STS
Equipment: Christie
Hole Diameter (mm): 100
Angle from Vertical (o): 0
Drill Bit: Spiral

Form: I1 Date of Issue: 1/11/22 Revision: 2

STS GEOTECHNICS PTY LTD
CONSULTING GEOTECHNICAL ENGINEERS

STS Geotechnics Pty Ltd
14/1 Cowpasture Place, Wetherill Park NSW 2164
Phone: (02)9756 2166 | Email: enquiries@stsgeo.com.au

NATA Accredited for Compliance with ISO/IEC 17025 - Testing No. 2750

Dynamic Cone Penetrometer Test Report

Project: Lot 1146, 70 Frampton Drive, Gilead
Client: McDonald Jones Homes
Address: 62 Norwest Boulevard, Baulkham Hills
Test Method: AS 1289.6.3.2

Project No.: 30055/9987
Report No.: 25/0104
Report Date: 10/1/2025
Page: 1 of 1

Site No.	P1	P2				
Location	Refer to Drawing No. 25/0105	Refer to Drawing No. 25/0105				
Date Tested	13/12/2024	13/12/2024				
Starting Level	Surface Level	Surface Level				
Depth (m)	**Penetration Resistance (blows / 150mm)**					
0.00 - 0.15	6	8				
0.15 - 0.30	10	8				
0.30 - 0.45	6	11				
0.45 - 0.60	7	11				
0.60 - 0.75	8	13				
0.75 - 0.90	10	19				
0.90 - 1.05	13	19				
1.05 - 1.20	23+	23+				
1.20 - 1.35	Discontinued	Discontinued				
1.35 - 1.50						
1.50 - 1.65						
1.65 - 1.80						
1.80 - 1.95						
1.95 - 2.10						
2.10 - 2.25						
2.25 - 2.40						
2.40 - 2.55						
2.55 - 2.70						
2.70 - 2.85						
2.85 - 3.00						
3.00 - 3.15						
3.15 - 3.30						
3.30 - 3.45						
3.45 - 3.60						
3.60 - 3.75						

Remarks: * Pre drilled prior to testing

Approved Signatory.....

Technician: MB

Mrigesh Tamang

STS GEOTECHNICS PTY LTD
CONSULTING GEOTECHNICAL ENGINEERS

STS Geotechnics Pty Ltd
14/1 Cowpasture Place, Wetherill Park NSW 2164
Phone: (02)9756 2166 | Email: enquiries@stsgeo.com.au

NATA Accredited for Compliance with ISO/IEC 17025 - Testing No. 2750

Shrink Swell Index Report

Project: Lot 1146, 70 Frampton Drive, Gilead
Client: McDONALD JONES HOMES
Address: PO BOX 7994, BAULKHAM HILLS 2153
Test Method: AS1289.7.1.1,2.1.1

Project No.: 30055/9349D-L
Report No.: 25/0027
Report Date: 6/01/2025
Page: 1 of 1

Sampling Procedure: AS 1289.1.3.1 Clause 3.1.3.2 - Thin Walled Sampler

STS / Sample No.		9987/1					
Sample Location		BH1					
Material Description		Silty CLAY, grey red					
Depth (m)		0.8 - 1.0					
Sample Date		13/12/2024					
Shrink	Moisture Content (%)	17.2					
	Soil Crumbling	Nil					
	Extent of Cracking	Fine Cracks					
	Strain (%)	2.7					
Swell	Moisture Content Initial (%)	17.7					
	Moisture Content Final (%)	21.9					
	Strain (%)	4.4					
Inert Inclusions (%)		<20					
Shrink Swell Index (%)		**2.7**					

Remarks:

Approved Signatory.... .....

Technician: DS

Mrigesh Tamang - Manager

Form: RPS41 Date of Issue: 31/05/21 Revision: 2

CERTIFICATE OF ANALYSIS

Work Order	: **ES2441141**	Page	: 1 of 4
Client	: **STS Geotechnics**	Laboratory	: Environmental Division Sydney
Contact	: ENQUIRES STS	Contact	: Customer Services ES
Address	: Unit 14/1 Cowpasture Place Wetherill Park 2164	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	32952, 30055, 30060	Date Samples Received	16-Dec-2024 13:39
Order number	: 2024-494	Date Analysis Commenced	: 17-Dec-2024
C-O-C number	: ----	Issue Date	: 19-Dec-2024 14:58
Sampler	: MB, TB		
Site	: ----		
Quote number	EN/222		
No. of samples received	: 6		
No. of samples analysed	6		

Accreditation No. 825
Accredited for compliance with ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Page	: 3 of 4
Work Order	: ES2441141
Client	: STS Geotechnics
Project	: 32952, 30055, 30060

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	32952/S1	30055/ 9980	30055/ 9985	30055/ 9987	30055/9988
			Sampling date / time	14-Dec-2024 00:00	16-Dec-2024 00:00	16-Dec-2024 00:00	16-Dec-2024 00:00	16-Dec-2024 00:00
Compound	CAS Number	LOR	Unit	ES2441141-001	ES2441141-002	ES2441141-003	ES2441141-004	ES2441141-005
				Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	8.4	5.9	5.5	5.3	6.2
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	80	24	50	95	129
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	1.6	16.8	13.2	14.4	9.5
ED040S : Soluble Sulfate by ICPAES								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	10	<10	60	40	20
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	70	----	----	----	----

Page	: 4 of 4
Work Order	: ES2441141
Client	: STS Geotechnics
Project	: 32952, 30055, 30060

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	30060/ 2015	----	----	----	----
				Sampling date / time	16-Dec-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2441141-006	-------	-------	-------	-------	
				Result	---	---	---	---	
EA002: pH 1:5 (Soils)									
pH Value	----	0.1	pH Unit	**5.3**	----	----	----	----	
EA010: Conductivity (1:5)									
Electrical Conductivity @ 25°C	----	1	µS/cm	**114**	----	----	----	----	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%	**13.6**	----	----	----	----	
ED040S : Soluble Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	10	mg/kg	**40**	----	----	----	----	

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EXPLANATION OF NOTES, ABBREVIATIONS & TERMS USED ON BOREHOLE AND TEST PIT LOGS

DRILLING/EXCAVATION METHOD

HA	Hand Auger	**ADH**	Hollow Auger	**NQ**	Diamond Core - 47 mm
DT	Diatube Coring	**RT**	Rotary Tricone bit	**NMLC**	Diamond Core - 52 mm
NDD	Non-destructive digging	**RAB**	Rotary Air Blast	**HQ**	Diamond Core - 63 mm
AD*	Auger Drilling	**RC**	Reverse Circulation	**HMLC**	Diamond Core - 63 mm
***V**	V-Bit	**PT**	Push Tube	**EX**	Tracked Hydraulic Excavator
***T**	TC-Bit, e.g. AD/T	**WB**	Washbore	**HAND**	Excavated by Hand Methods

PENETRATION RESISTANCE

L	**Low Resistance**	Rapid penetration/ excavation possible with little effort from equipment used.
M	**Medium Resistance**	Penetration/ excavation possible at an acceptable rate with moderate effort from equipment used.
H	**High Resistance**	Penetration/ excavation is possible but at a slow rate and requires significant effort from equipment used.
R	**Refusal/Practical Refusal**	No further progress possible without risk of damage or unacceptable wear to equipment used.

These assessments are subjective and are dependent on many factors, including equipment power and weight, condition of excavation or drilling tools and experience of the operator.

WATER

Standing Water Level — **Partial water loss**

Water Seepage — **Complete Water Loss**

GWNO	GROUNDWATER NOT OBSERVED - Observation of groundwater, whether present or not, was not possible due to drilling water, surface seepage or cave-in of the borehole/ test pit.
GWNE	GROUNDWATER NOT ENCOUNTERED - Borehole/ test pit was dry soon after excavation. However, groundwater could be present in less permeable strata. Inflow may have been observed had the borehole/ test pit been left open for a longer period.

SAMPLING AND TESTING

SPT	Standard Penetration Testing to AS1289.6.3.3 2004
4,7,11 N=18	4,7,11 = Blows per 150mm. N = Blows per 300mm penetration following a 150mm seating drive
30/80mm	Where practical refusal occurs, the blows and penetration for that interval are reported, N is not reported
RW	Penetration occurred under the rod weight only, N<1
HW	Penetration occurred under the hammer and rod weight only, N<1
HB	Hammer double bouncing on anvil, N is not reported
Sampling	
S1	Jar sample – number indicates sample number
D	Disturbed Sample
B	Bulk disturbed Sample
U50	Thin walled tube sample - number indicates nominal sample diameter in millimetres
Testing	
PP	Pocket Penetrometer test expressed as instrument reading in kPa
DCP	Dynamic Cone Penetrometer (AS1289.6.3.1 1997)
PSP	Perth Sand Penetrometer (AS1289.6.3.2 1997)

GEOLOGICAL BOUNDARIES

———— = Observed Boundary (Position known)

– – – – – – – – – – = Observed Boundary (Position approximate)

– –?– –?– –?– – = Boundary (Interpreted or inferred)

ROCK CORE RECOVERY

TCR =Total Core Recovery (%)

$$= \frac{Length\ of\ core\ recovered}{Length\ of\ core\ run} \times 100$$

RQD = Rock Quality Designation (%)

$$= \frac{\sum Axial\ lengths\ of\ core > 100mm}{Length\ of\ core\ run} \times 100$$

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METHOD OF SOIL DESCRIPTION USED ON BOREHOLE AND TEST PIT LOGS

FILL

COUBLES or BOULDERS

GRAVEL (GP or GW)

ORGANIC SOILS (OL, OH or Pt)

SILT (ML or MH)

CLAY (CL, CI or CH)

SAND (SP or SW)

Combinations of these basic symbols may be used to indicate mixed materials such as sandy clay

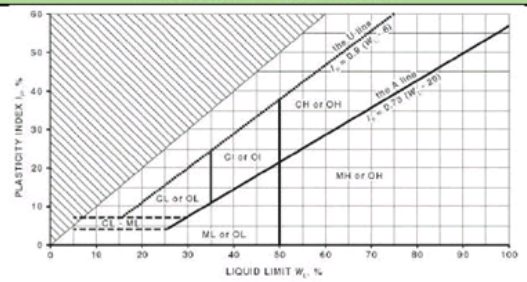
CLASSIFICATION AND INFERRED STRATIGRAPHY

Soil is broadly classified and described in Borehole and Test Pit Logs using the preferred method given in AS 1726:2017, Section 6.1 – Soil description and classification.

PARTICLE SIZE CHARACTERISTICS

Fraction	Components	Sub Division	Size mm
Oversize	BOULDERS		>200
	COBBLES		63 to 200
Coarse grained soil	GRAVEL	Coarse	19 to 63
		Medium	6.7 to 19
		Fine	2.36 to 6.7
	SAND	Coarse	0.6 to 2.36
		Medium	0.21 to 0.6
		Fine	0.075 to 0.21
Fine grained soil	SILT		0.002 to 0.075
	CLAY		<0.002

PLASTICITY PROPERTIES



GROUP SYMBOLS

Major Divisions		Symbol	Description
COARSE GRAINED SOILS More than 65% of soil excluding oversize fraction is greater than 0.075mm	GRAVEL More than 50% of coarse fraction is >2.36mm	GW	Well graded gravel and gravel-sand mixtures, little or no fines, no dry strength.
		GP	Poorly graded gravel and gravel-sand mixtures, little or no fines, no dry strength.
		GM	Silty gravel, gravel-sand-silt mixtures, zero to medium dry strength.
		GC	Clayey gravel, gravel-sand-clay mixtures, medium to high dry strength.
	SAND More than 50% of coarse fraction is <2.36 mm	SW	Well graded sand and gravelly sand, little or no fines, no dry strength.
		SP	Poorly graded sand and gravelly sand, little or no fines, no dry strength.
		SM	Silty sand, sand-silt mixtures, zero to medium dry strength.
		SC	Clayey sand, sandy-clay mixtures, medium to high dry strength.
FINE GRAINED SOILS More than 35% of soil excluding oversized fraction is less than 0.075mm	Liquid Limit less < 50%	ML	Inorganic silts of low plasticity, very fine sands, rock flour, silty or clayey fine sands, zero to medium dry strength.
		CL, CI	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, medium to high dry strength.
		OL	Organic silts and organic silty clays of low plasticity, low to medium dry strength.
	Liquid Limit > than 50%	MH	Inorganic silts of high plasticity, high to very high dry strength.
		CH	Inorganic clays of high plasticity, high to very high dry strength.
		OH	Organic clays of medium to high plasticity, medium to high dry strength.
Highly Organic soil		PT	Peat muck and other highly organic soils.

MOISTURE CONDITION

Symbol	Term	Description
D	Dry	Non- cohesive and free running.
M	Moist	Soils feel cool, darkened in colour. Soil tends to stick together.
W	Wet	Soils feel cool, darkened in colour. Soil tends to stick together, free water forms when handling.

Moisture content of cohesive soils shall be described in relation to plastic limit (PL) or liquid limit (LL) for soils with higher moisture content as follows: Moist, dry of plastic limit (w < PL); Moist, near plastic limit ($w \approx$ PL); Moist, wet of plastic limit (w < PL); Wet, near liquid limit ($w \approx$ LL), Wet, wet of liquid limit (w > LL),

CONSISTENCY

Symbol	Term	Undrained Shear Strength (kPa)	SPT "N" #
VS	Very Soft	≤ 12	≤ 2
S	Soft	>12 to ≤ 25	>2 to ≤ 4
F	Firm	>25 to ≤ 50	>4 to 8
St	Stiff	>50 to ≤ 100	>8 to 15
VSt	Very Stiff	>100 to ≤ 200	>15 to 30
H	Hard	>200	>30
Fr	Friable	-	

DENSITY

Symbol	Term	Density Index %	SPT "N" #
VL	Very Loose	≤ 15	0 to 4
L	Loose	>15 to ≤ 35	4 to 10
MD	Medium Dense	>35 to ≤ 65	10 to 30
D	Dense	>65 to ≤ 85	30 to 50
VD	Very Dense	>85	Above 50

In the absence of test results, consistency and density may be assessed from correlations with the observed behaviour of the material. # SPT correlations are not stated in AS1726:2017, and may be subject to corrections for overburden pressure, moisture content of the soil, and equipment type.

MINOR COMPONENTS

Term	Assessment Guide	Proportion by Mass
Add 'Trace'	Presence just detectable by feel or eye but soil properties little or no different to general properties of primary component	Coarse grained soils: ≤ 5% Fine grained soil: ≤ 15%
Add 'With'	Presence easily detectable by feel or eye but soil properties little or no different to general properties of primary component	Coarse grained soils: 5 - 12% Fine grained soil: 15 - 30%
Prefix soil name	Presence easily detectable by feel or eye in conjunction with the general properties of primary component	Coarse grained soils: >12% Fine grained soil: >30%

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TERMS FOR ROCK MATERIAL STRENGTH AND WEATHERING

CLASSIFICATION AND INFERRED STRATIGRAPHY

Rock is broadly classified and described in Borehole and Test Pit Logs using the preferred method given in AS1726 – 2017, Section 6.2 – Rock identification, description and classification.

ROCK MATERIAL STRENGTH CLASSIFICATION

Symbol	Term	Point Load Index, $Is_{(50)}$ (MPa) #	Field Guide
VL	Very Low	0.03 to 0.1	Material crumbles under firm blows with sharp end of pick; can be peeled with knife; too hard to cut a triaxial sample by hand. Pieces up to 30 mm can be broken by finger pressure.
L	Low	0.1 to 0.3	Easily scored with a knife; indentations 1 mm to 3 mm show in the specimen with firm blows of pick point; has dull sound under hammer. A piece of core 150 mm long by 50 mm diameter may be broken by hand. Sharp edges of core may be friable and break during handling.
M	Medium	0.3 to 1	Readily scored with a knife; a piece of core 150 mm long by 50 mm diameter can be broken by hand with difficulty.
H	High	1 to 3	A piece of core 150 mm long by 50 mm diameter cannot be broken by hand but can be broken with pick with a single firm blow; rock rings under hammer.
VH	Very High	3 to 10	Hand specimen breaks with pick after more than one blow; rock rings under hammer.
EH	Extremely High	>10	Specimen requires many blows with geological pick to break through intact material; rock rings under hammer.

 # Rock Strength Test Results

▼ Point Load Strength Index, $Is_{(50)}$, Axial test (MPa)

● Point Load Strength Index, $Is_{(50)}$, Diametral test (MPa)

Relationship between rock strength test result ($Is_{(50)}$) and unconfined compressive strength (UCS) will vary with rock type and strength, and should be determined on a site-specific basis. However UCS is typically 20 x $Is_{(50)}$.

ROCK MATERIAL WEATHERING CLASSIFICATION

Symbol		Term	Field Guide
RS		Residual Soil	Soil developed on extremely weathered rock; the mass structure and substance fabric are no longer evident; there is a large change in volume but the soil has not been significantly transported.
XW		Extremely Weathered	Rock is weathered to such an extent that it has soil properties - i.e. it either disintegrates or can be remoulded, in water.
DW	HW	Distinctly Weathered	Rock strength usually changed by weathering. The rock may be highly discoloured, usually by iron staining. Porosity may be increased by leaching, or may be decreased due to deposition of weathering products in pores. In some environments it is convenient to subdivide into Highly Weathered and Moderately Weathered, with the degree of alteration typically less for MW.
	MW		
SW		Slightly Weathered	Rock slightly discoloured but shows little or no change of strength relative to fresh rock.
FR		Fresh	Rock shows no sign of decomposition or staining.

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ABBREVIATIONS AND DESCRIPTIONS FOR ROCK MATERIAL AND DEFECTS

CLASSIFICATION AND INFERRED STRATIGRAPHY

Rock is broadly classified and described in Borehole and Test Pit Logs using the preferred method given in AS1726 – 2017, Section 6.2 – Rock identification, description and classification.

DETAILED ROCK DEFECT SPACING

Bedding Thickness*
(Spacing between bedding partings)

Term	Spacing (mm)
Thinly laminated	<6
Laminated	6 – 20
Very thinly bedded	20 – 60
Thinly bedded	60 – 200
Medium bedded	200 – 600
Thickly bedded	600 – 2,000
Very thickly bedded	> 2,000

ABBREVIATIONS AND DESCRIPTIONS FOR DEFECT TYPES

Defect Type	Abbr.	Description
Joint	JT	Surface of a fracture or parting, formed without displacement, across which the rock has little or no tensile strength. May be closed or filled by air, water or soil or rock substance, which acts as cement.
Bedding Parting	BP	Surface of fracture or parting, across which the rock has little or no tensile strength, parallel or sub-parallel to layering/ bedding. Bedding refers to the layering or stratification of a rock, indicating orientation during deposition, resulting in planar anisotropy in the rock material.
Contact	CO	The surface between two types or ages of rock.
Sheared Surface	SSU	A near planar, curved or undulating surface which is usually smooth, polished or slickensided.
Sheared Seam/ Zone (Fault)	SS/SZ	Seam or zone with roughly parallel almost planar boundaries of rock substance cut by closely spaced (often <50 mm) parallel and usually smooth or slickensided joints or cleavage planes.
Crushed Seam/ Zone (Fault)	CS/CZ	Seam or zone composed of disoriented usually angular fragments of the host rock substance, with roughly parallel near-planar boundaries. The brecciated fragments may be of clay, silt, sand or gravel sizes or mixtures of these.
Extremely Weathered Seam/ Zone	XWS/XWZ	Seam of soil substance, often with gradational boundaries, formed by weathering of the rock material in places.
Infilled Seam	IS	Seam of soil substance, usually clay or clayey, with very distinct roughly parallel boundaries, formed by soil migrating into joint or open cavity.
Vein	VN	Distinct sheet-like body of minerals crystallised within rock through typically open-space filling or crack-seal growth.

NOTE: Defects size of <100mm SS, CS and XWS. Defects size of >100mm SZ, CZ and XWZ.

ABBREVIATIONS AND DESCRIPTIONS FOR DEFECT SHAPE AND ROUGHNESS

Shape	Abbr.	Description	Roughness	Abbr.	Description
Planar	PR	Consistent orientation	Polished	POL	Shiny smooth surface
Curved	CU	Gradual change in orientation	Slickensided	SL	Grooved or striated surface, usually polished
Undulating	UN	Wavy surface	Smooth	SM	Smooth to touch. Few or no surface irregularities
Stepped	ST	One or more well defined steps	Rough	RO	Many small surface irregularities (amplitude generally <1mm). Feels like fine to coarse sandpaper
Irregular	IR	Many sharp changes in orientation	Very Rough	VR	Many large surface irregularities, amplitude generally >1mm. Feels like very coarse sandpaper

Orientation: **Vertical Boreholes –** The dip (inclination from horizontal) of the defect.
Inclined Boreholes – The inclination is measured as the acute angle to the core axis.

ABBREVIATIONS AND DESCRIPTIONS FOR DEFECT COATING

Coating	Abbr.	Description
Clean	CN	No visible coating or infilling
Stain	SN	No visible coating but surfaces are discoloured by staining, often limonite (orange-brown)
Veneer	VNR	A visible coating of soil or mineral substance, usually too thin to measure (< 1 mm); may be patchy

DEFECT APERTURE

Aperture	Abbr.	Description
Closed	CL	Closed.
Open	OP	Without any infill material.
Infilled	-	Soil or rock i.e. clay, silt, talc, pyrite, quartz, etc.

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5. CONFIDENTIAL ITEMS

5.1 Planning Proposal - Review of Permissible Land Uses in the RE1 Public Recreation Zone

Reason for Confidentiality

This report is **CONFIDENTIAL** in accordance with Section 10A(2)(f)) of the *Local Government Act 1993*, which permits the meeting to be closed to the public for business relating to the following:
-

details of systems and/or arrangements that have been implemented to protect council, councillors, staff and Council property.

PO Box 57, Campbelltown NSW 2560
T 02 4645 4000
F 02 4645 4111
W campbelltown.nsw.gov.au