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Bushfire Protection Assessment

Residential Subdivision and Built Form – Stage 2

53A & 53B Warriewood Road, Warriewood

Sekisui House Services (NSW) Pty Limited

DOCUMENT TRACKING

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LIMITATIONS

The bushfire protection measures recommended in this report do not completely remove the risk to life and property, and they do not guarantee that a development will not be impacted by a bushfire event. This is substantially due to the degree of vegetation management, the unpredictable nature and behaviour of fire, and extreme weather conditions.

ACKNOWLEDGEMENTS

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Template 2.1.4

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Abbreviations

| Abbreviation | Description |
|--------------|---|
| AS 3959 | <i>Australian Standard AS 3959:2018 'Construction of buildings in bushfire-prone areas'</i> |
| APZ | Asset Protection Zone |
| BAL | Bushfire Attack Level |
| BFPL | Bush fire prone land |
| BPM | Bushfire protection measures |
| BFSA | Bush Fire Safety Authority |
| DA | Development Application |
| DtS | Deemed-to-Satisfy |
| EP&A Act | <i>Environmental Planning and Assessment Act 1979</i> |
| FDI | Fire Danger Index |
| IPA | Inner Protection Area |
| NASH | <i>National Association of Steel-framed Housing</i> |
| NCC | National Construction Code |
| PBP | 'Planning for Bush Fire Protection 2019' and 'Addendum to Planning for Bush Fire Protection 2022' |
| RF Act | <i>Rural Fires Act 1997</i> |
| RFS | NSW Rural Fire Service |
| SA | Standards Australia |

1. Property and Proposal

Table 1 identifies the subject property and outlines the type of development proposed.

Table 1: Subject site and development proposal summary

| | |
|-------------------------------|--|
| Street address: | 53A & 53B Warriewood Rd, Warriewood |
| Postcode: | 2102 |
| Lot/DP no: | Lot 2 and Lot 3 DP1115877 |
| Local Government Area: | Northern Beaches Council |
| Fire Danger Index (FDI) | 100 |
| Current land zoning: | R3 – Medium Density Residential |
| Type of development proposed: | Residential subdivision and Built Form |

1.1 Description of Proposal

The proposed development relates to a Development Application (DA) for the subdivision of super lot (under DA2024/1079) into eight (8) lots and construction of four (4) semi-detached dwellings and four (4) detached dwellings. The proposed development creates proposed Lots 13-20 contained within the super lot boundary as proposed under DA2024/1079 (Figure 1 and Figure 2).

This Integrated DA will be lodged concurrent to the community title subdivision (DA2024/1079) which also addressed the broader requirements for subdivision including access, Asset Protection Zones (APZ), and utility connections. DA2024/1079 was lodged 26 August 2024 and seeks consent for the five (5) lot Community Title Subdivision of the site, including the future public reserve, the extension of Lorikeet Grove, an internal road, stormwater works, associated landscaping and tree removal to facilitate the future residential development of the site. This DA is for Stage 2 and is the second (2nd) of the three (3) separate subdivision and built form DAs which uses consistent subdivision plan from DA2014/1079. Revisions to the original DA from the Council assessment process have been finalised and submitted to the council and accord with this subject DA to ensure alignment.

The parent subdivision (DA2024/1079) is partially located on land identified as bush fire prone land (BFPL) within the ePlanning Spatial Viewer¹ however, Stage 2 of the development is not.

1.2 Assessment Process

The proposal was assessed in accordance with Section 100B of the *Rural Fires Act 1997*, Clause 45 of the *Rural Fires Regulation 2022*, *Planning for Bush Fire Protection* (RFS 2019) and *Addendum to Planning for Bush Fire Protection* (RFS 2022), herein collectively referred to as PBP.

This assessment is based on the following information sources:

- Background documentation provided by Sekisui House;

¹ <https://www.planningportal.nsw.gov.au/spatialviewer/#/find-a-property/address>

- Information contained within the site plan provided by Sekisui House, completed by YSCO Geomatics ref: 6321/18C, 'Plan of proposed community scheme subdivision of Lot 2 in unreg. DP. Being 53A&B Warriewood Rd. Warriewood. Northern Beaches LGA', dated 15 October 2024;
- Information contained within the site plan provided by Sekisui House, completed by Shawood, Architectural Drawings – 53A & 53B Warriewood Road, Warriewood – Proposed lots 13-20, Rev. 02, dated 16 April 2025;
- Lot 13-20 Engineers plans in DWG format sent via email by Max Chipchase from Sekisui House on 22 April 2025;
- Eco Logical Australia (ELA) 2024. Bushfire Protection Assessment – Residential Subdivision – 53A & 53B Warriewood Rd, Warriewood, dated August 2024.
- GIS analysis including online spatial resources (i.e. Google Earth, SIX Maps, Nearmap and the NSW Government Planning Portal);
- Nearmap aerial imagery dated 4 February 2025; and
- Site inspection undertaken on 2 March 2023

Table 2 identifies the bushfire protection measures assessed and whether an acceptable or performance based solution is proposed.

Table 2: Summary of bushfire protection measures assessed

| Bushfire Protection Measure | Acceptable Solution | Performance Solution | Report Section |
|-----------------------------|-------------------------------------|-------------------------------------|----------------|
| Asset Protection Zones | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 3.1 |
| Landscaping | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3.2 |
| Construction standard | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3.3 |
| Access | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3.4 |
| Water supply | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3.5 |
| Electrical services | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3.6 |
| Gas services | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3.7 |

1.3 Significant Environmental Features

An assessment of significant environmental features, threatened species, populations or ecological communities under the *Biodiversity Conservation Act 2016* that may potentially be affected by the proposed bushfire protection measures has not been undertaken in this report as it is covered by other parts of the DA process.

The impact footprint of the bushfire protection measures (e.g. APZ) is identified within this report and therefore capable of being assessed by a suitably qualified person. Northern Beaches Council is the determining authority for this development; they will assess more thoroughly any potential environmental issues.

1.4 Aboriginal Cultural Heritage

An assessment of any Aboriginal cultural heritage objects (within the meaning of the *National Parks and Wildlife Act 1974*) that may potentially be affected by the proposed bushfire protection measures has not been undertaken in this report as it is covered by other parts of the DA process.

The impact footprint of the bushfire protection measures (e.g. APZ) is identified within this report and therefore capable of being assessed by a suitably qualified person. Northern Beaches Council is the determining authority for this development; they will assess more thoroughly any potential Aboriginal cultural heritage issues.

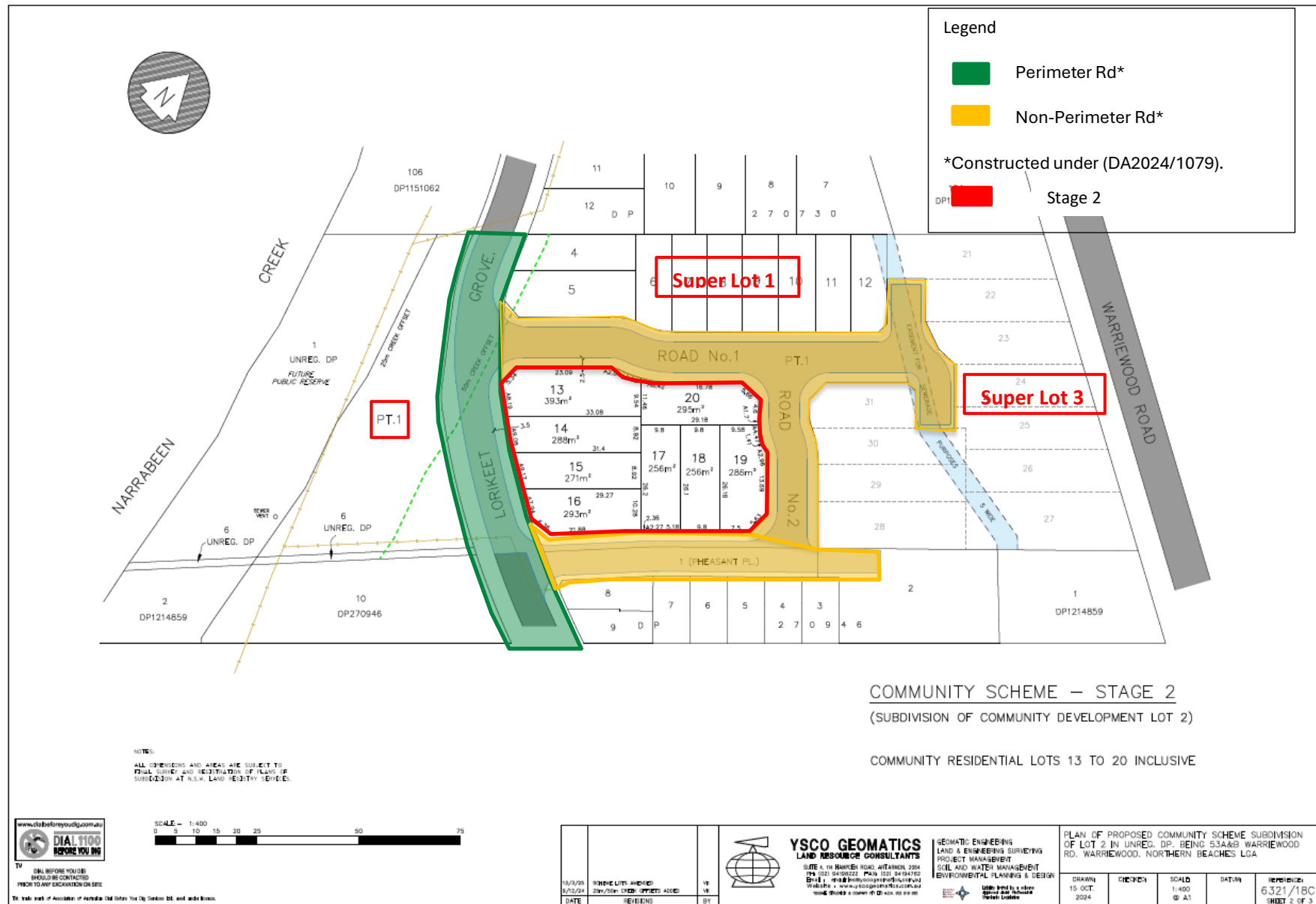


Figure 1: Subdivision Layout

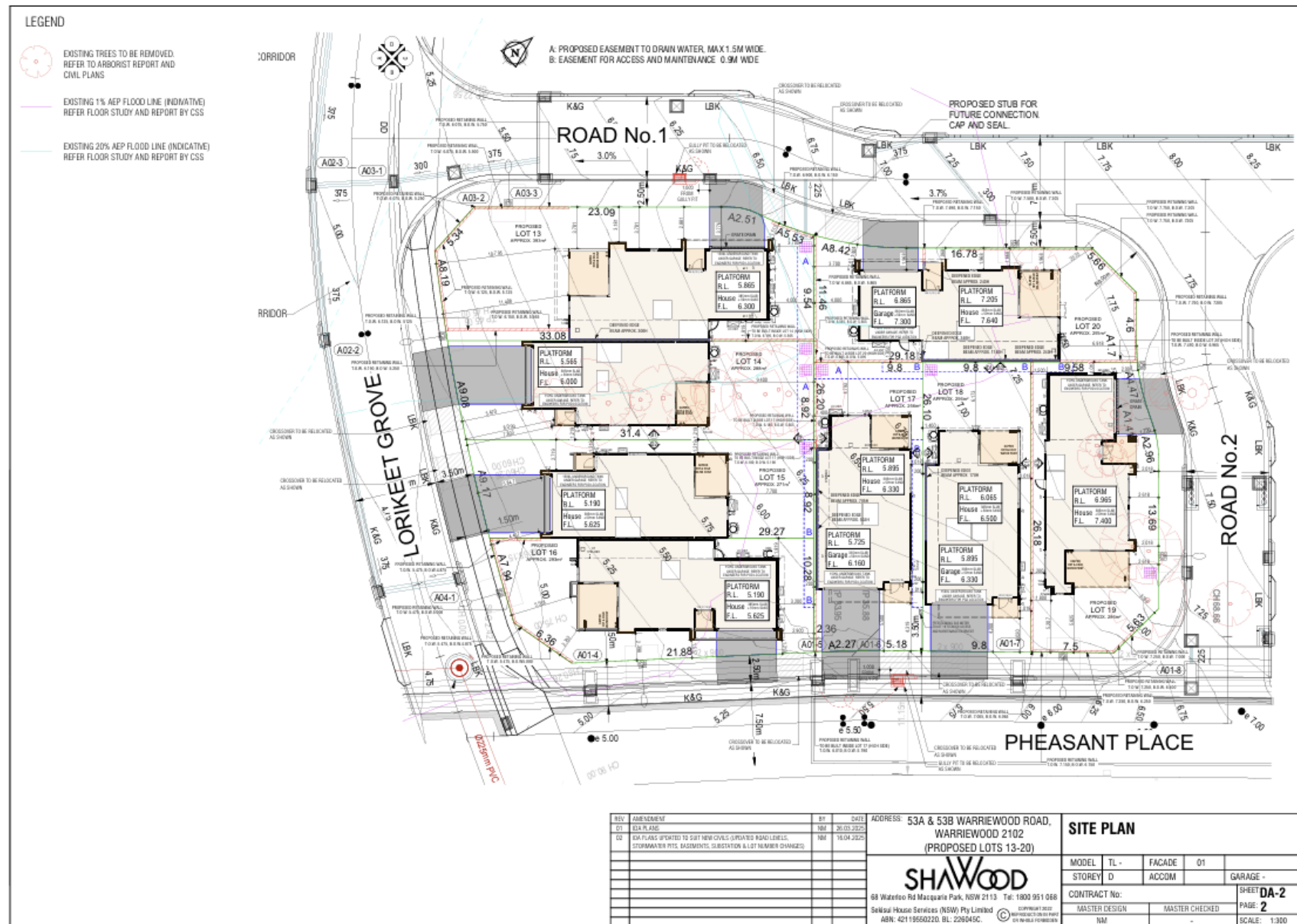


Figure 2: Stage 2 Built Form Plan

2. Bushfire Hazard Assessment

2.1 Process

The site assessment methodology from Appendix 1 of PBP has been applied in this assessment to determine the required APZ for the subdivision development.

Figure 2 and Table 3 show the effective slope and predominant vegetation representing the highest bushfire threat potentially posed to the subdivision from various directions.

2.2 Vegetation Assessment

In accordance with PBP, the predominant vegetation formation has been assessed for a distance of at least 140 m from the subject land in all directions.

The predominant vegetation has been determined from the State Vegetation Type Map (SVTM; DCCEEW 2020) and verified by a site assessment completed in March 2023.

2.3 Slope Assessment

In accordance with PBP, the slope that would most significantly influence fire behaviour was determined over a distance of 100 m from the boundary of the proposed development under the classified vegetation.

The effective slope has been determined from 2 m contour data.

2.4 Summary of Assessment

The predominant vegetation west to south-east of the proposed subdivision (Figure 3) is identified as 'Northern Paperbark-Swamp Mahogany Saw-sedge Forest' (DCCEEW 2020) which falls within the 'Coastal Swamp Forest' vegetation class (Keith 2004) and is classified as 'Forest' by PBP. The site inspection confirmed the vegetation is predominantly highly disturbed and scattered forested wetland vegetation forming part of Narrabeen Creek riparian corridor however, has been conservatively assessed as 'forest' in line with state vegetation mapping (DCCEEW 2020). The effective slope under the hazard to the west (T1) and south-west (T2-3) falls into the PBP category of '>0-5 degrees downslope' and 'all upslopes and flat land' to the south-east (T4).

The vegetation to the east (Figure 3) has recently been cleared however, it is unknown if this land will be developed in the near future or managed to Inner Protection Area (IPA) specifications therefore, conservatively assessed as 'grassland' under PBP. The effective slope under this hazard falls into the slope category of 'all upslopes and flat land'. The effective slope under the vegetation to the east falls into the slope category of '>0-5 downslope'.

The assessment considers the remainder of the site to be managed as a temporary APZ to IPA standards in accordance with PBP (Appendix A), until all stages under the parent subdivision (DA2024/1079) are developed and constructed to ensure the surrounding land does not become a hazard during development. Refer to Figure 3 which depicts the temporary APZ in Yellow.

In all other directions, there are managed lands in the form of existing residential development and road reserves connecting to the subdivision development.

Table 3: Bushfire hazard assessment and APZ requirements

| Transect # | Slope | PBP Vegetation Formation | Required APZ | Proposed APZ | Bushfire Attack Level (BAL) | Comments |
|-----------------------------|---------------------------|--------------------------|--------------|--------------|---|---|
| T1 – T3 West/ south-west | >0° to 5° downslope | Forest | 29 m | ≥29 m | BAL-29: 29 - <40 m BAL-19: 40 - <54 m BAL-12.5: 54 - <100 m | APZ provided by public road infrastructure (Lorikeet Grove) and unregistered lot in Figure 1 denoted as PT.1. |
| T4 South-east | All upslope and flat land | Forest | 24 m | ≥24 m | BAL-29: 24 - <33 m BAL-19: 33 - <45 m BAL-12.5: 45 - <100 m | APZ provided by residential development and public road infrastructure. |
| T5 East | >0° to 5° downslope | Grassland | 12 m | ≥12 m | BAL-29: 12 - <17 m BAL-19: 17 - <25 m BAL-12.5: 25 - <50 m | As per above. |
| All other directions | Managed Land | | | | | |



Figure 3: Bushfire Hazard Assessment

3. Bushfire Protection Measures

3.1 Asset Protection Zones

Table 3 shows the dimensions of the required APZ and where relevant, information on how the APZ is to be provided is included for Stage 2. The other stages of the broader development are to be managed as a temporary APZ to IPA requirements in accordance with (Appendix A), until all stages under the parent subdivision (DA2024/1079) are developed and constructed to ensure the surrounding land does not become a bushfire hazard during development. The footprint of the APZ is shown on Figure 2.

The compliance of the proposed APZ with Section 5.3.1 of PBP is documented in Table 4.

Table 4: APZ requirements and compliance (adapted from Table 5.3a of PBP)

| Performance Criteria | Acceptable Solutions | Compliance Notes |
|---|---|---|
| The intent may be achieved where: | | |
| Potential building footprints will not be exposed to radiant heat levels exceeding 29 kW/m ² on each proposed lot. | APZs are provided in accordance with Tables A1.12.2 and A1.12.3 based on the FDI. | Complies APZ provided in accordance with Table A1.12.2 as shown in Table 3 and Figure 2. |
| APZs are managed and maintained to prevent the spread of a fire towards the building. | APZs are managed in accordance with the requirements of Appendix 4 of PBP. | To comply APZ to be managed in accordance with PBP. Fuel management specifications provided in Appendix A. |
| The APZ is provided in perpetuity. | APZs are wholly within the boundaries of the development site. | Satisfies Performance Criteria APZ contained within the development site from the west to the south-west and APZ at the south-east and east are contained in the adjoining road reserve and residential development adjacent to the subject land. |
| APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised. | APZs are located on lands with a slope less than 18 degrees. | Complies APZ is not located on slopes greater than 18°. |

3.2 Landscaping

The compliance of the proposed landscaping with Section 5.3.1 of PBP is documented in Table 5.

Table 5: Landscaping requirements and compliance (adopted from Table 5.3a of PBP)

| Performance Criteria | Acceptable Solutions | Compliance Notes |
|--|--|--|
| The intent may be achieved where: | | |
| Landscaping is managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions. | Landscaping is in accordance with Appendix 4 of PBP; and | To comply APZ / Landscaping is to be designed and managed in accordance with PBP. Landscaping specifications provided in Appendix A. |

| Performance Criteria | Acceptable Solutions | Compliance Notes |
|----------------------|---|--|
| | Fencing is constructed in accordance with Section 7.6 of PBP. | To comply Fencing to be constructed in accordance with Section 7.6 of PBP (see Section 3.3.4 for further details). |

3.3 Construction Standards

The building construction standard for the proposed eight (8) lots (Lots 13-20) and construction of four (4) semi-detached dwellings and four (4) detached dwellings is determined by their Bushfire Attack Level (BAL) and then applying the appropriate construction specifications. The separation distances for different BALs are provided in Table 3 and Figure 4.

The compliance of the proposed construction of dwellings with Section 7.4 of PBP is documented in Table 6.

Table 6: Construction requirements (adapted from Table 7.4a of PBP)

| Performance Criteria | Acceptable Solutions | Compliance Notes |
|---|---|--|
| The intent may be achieved where: | | |
| 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 of PBP. | Complies BALs determined in accordance with Table A1.12.5 of PBP. |
| | Construction provided in accordance with the National Construction Code (NCC) and as modified Section 7.5 of PBP. | To comply Construction in accordance with <i>AS 3959 OR NASH</i> standard as modified by Section 7.5 of PBP is required. |
| Proposed fences and gates are designed to minimise the spread of bush fire. | Fencing and gates are constructed in accordance with Section 7.6 of PBP. | To comply Specification detailed in Section 3.3.4 of this report. |
| 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 of PBP. | Not applicable No class 10a structures proposed as part of this DA. |

3.3.1 Bushfire Attack Level (BAL) – Lots 13 to 20

The building construction standard is based on the determination of the BAL in accordance with Appendix 1 of PBP. The BAL is based on known vegetation type, effective slope and managed separation distance between the development and the bushfire hazard.

BALs within the proposed development range from BAL-19 to BAL-12.5 as identified in Table 7 and Figure 4.

The final BAL exposure is dependent upon the assessment of the NSW Rural Fire Service (RFS) and the provided BAL mapping (Figure 4) in this report is not to be relied upon for final BAL determination unless conditioned by the RFS.

3.3.2 Construction requirements

The Deemed-to-Satisfy (DtS) provisions of the NCC for construction requirements for buildings in designated bush fire prone areas are specified in:

- *AS 3959:2018 Construction of buildings in bushfire prone areas* (SA 2018); and
- *NASH NS 300 – NASH Standard for Steel Framed Construction in Bushfire Areas 2021* (NASH 2021).

Construction shall comply with Sections 3 (General requirements) and 5 (BAL-12.5) of *AS 3959:2018* or *NASH Standard (NS300)* for Lot 17 to 20. Construction for Lot 13 to 16 shall comply with Sections 3 (General Requirements) and Section 6 (BAL-19) of *AS 3959:2018* or *NASH Standard (NS300)* as appropriate. Refer to construction specifics for each lot in below Table 7.

Table 7: Bushfire Attack Level

| Stage | Lot # | Elevation | | | | | |
|-------|-------|-----------|-----------|-------|----------|------|------|
| | | Roof | Sub-floor | North | South | East | West |
| 2 | 13 | | | | BAL-19 | | |
| 2 | 14 | | | | BAL-19 | | |
| 2 | 15 | | | | BAL-19 | | |
| 2 | 16 | | | | BAL-19 | | |
| 2 | 17 | | | | BAL-12.5 | | |
| 2 | 18 | | | | BAL-12.5 | | |
| 2 | 19 | | | | BAL-12.5 | | |
| 2 | 20 | | | | BAL-12.5 | | |

3.3.3 Additional Construction Requirements

Additional construction measures over and above that required under *AS 3959:2018* and *NASH*, including ember protection provisions, are identified in Section 7.5 of PBP, and may apply.

3.3.4 Fences and Gates

To comply with Section 7.6 of PBP, all fencing and gates (if installed) are to be constructed of hardwood or non-combustible material.

3.3.5 Class 10a Buildings (sheds etc.)

To comply with Section 8.3.2 of PBP, future Class 10a structures (if installed) within 6 m of any proposed dwelling must be constructed in accordance with the NCC. Where the structure is greater than 6 m, no bushfire requirements apply.

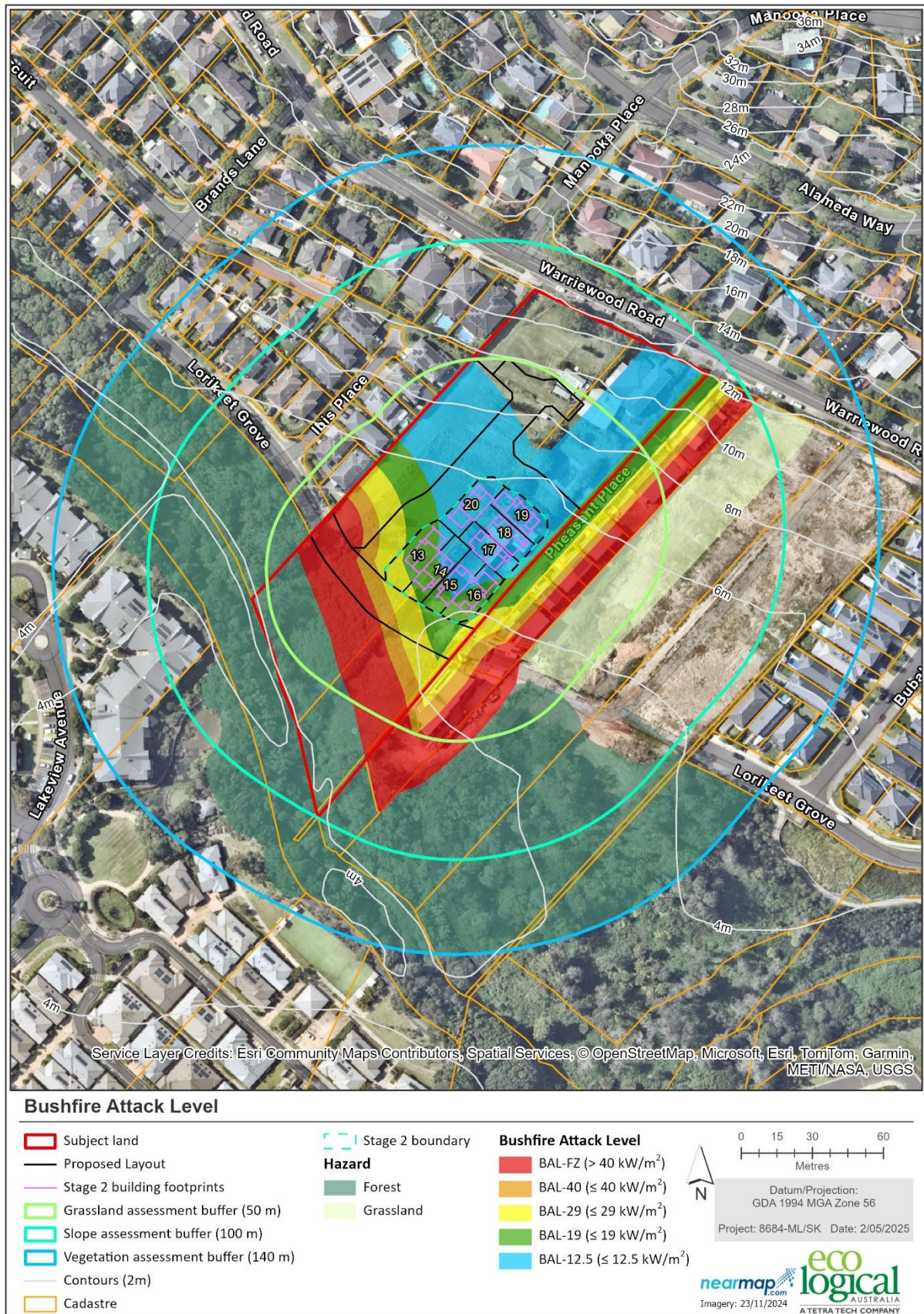


Figure 4: Bushfire Attack Level (BAL)

3.4 Access

Public road access to the subdivision is via Lorikeet Grove, Road No.1, Road No.2 and Pheasant Place as shown in Figure 2. No new public roads are proposed as part of the Stage 2 works as they are captured by the parent subdivision works under DA2024/1079 and the associated bushfire assessment (ELA 2024).

No additional public roads are proposed as access to the proposed dwellings is via a standard residential driveway off Lorikeet Grove, Road No.1, Road No.2 and Pheasant Place. A fire tanker or pumper would attend to a fire at the property from the hardstand surface of Lorikeet Grove or Road No.1 which is within 70 m of the furthest point of the proposed dwellings. Additional access provisions for bushfire protection are not required to support this proposal as per Table 5.3b of PBP (extract below):

Note: There are no specific access requirements in an urban area where an unobstructed path (no greater than 70 m) 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 70 kph) that supports the operational use of emergency firefighting vehicles.

3.5 Water Supplies

The compliance assessment of the proposed water supply with Section 5.3.3 of PBP is documented in Table 8.

Table 8: Assessment of requirements for the supply of water services (adapted from Table 5.3c of PBP)

| Performance Criteria | Acceptable Solution | Compliance Notes |
|--|---|--|
| Adequate water supplies is provided for firefighting purposes. | <ul style="list-style-type: none"> Reticulated water is to be provided to the development where available; A static water supply and hydrant supply is provided for non-reticulated developments or where reticulated water supply cannot be guaranteed; and Static water supplies shall comply with Table 5.3d of PBP. | To comply Proposal to be serviced by a reticulated water supply. |
| Water supplies are located at regular intervals; and The water supply is accessible and reliable for firefighting operations. | <ul style="list-style-type: none"> Fire hydrant, spacing, design and sizing complies with the relevant clauses of <i>AS 2419.1:2021 Fire hydrant installations – System design, installation and commissioning</i> (SA 2021); 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. | To comply The advice of a relevant authority or suitably qualified professional should be sought, for certification of design and installation in accordance with relevant legislation, Australian Standards and Table 5.3c and Table 5.3d of PBP. |
| Flows and pressure are appropriate. | <ul style="list-style-type: none"> Fire hydrant flows and pressures comply with the relevant clauses of <i>AS 2419.1:2021</i> (SA 2021). | |
| The integrity of the water supply is maintained. | <ul style="list-style-type: none"> All above-ground water service pipes are metal, including and up to any taps; and Above-ground water storage tanks shall be of concrete or metal. | To comply |

3.6 Electricity Services

The compliance assessment of the proposed supply of electricity services with Section 5.3.4 of PBP is documented in Table 9.

Table 9: Assessment of requirements for the supply of electricity services (adapted from Table 5.3c of PBP)

| Performance Criteria | Acceptable Solution | Compliance Notes |
|--|---|---|
| Location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings. | <p>Where practicable, electrical transmission lines are underground;</p> <p>Where overhead, electrical transmission lines are proposed as follows:</p> <ul style="list-style-type: none"> Lines are installed with short pole spacing (30 m), 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 <i>ISSC3 Guide for the Management of Vegetation in the Vicinity of Electricity Assets</i> (ISSC3 2016). | <p>Complies</p> <p>Electricity services to the subject site are located underground.</p> <p>N/A</p> |

3.7 Gas Services

The compliance assessment of the proposed supply of gas services (reticulated or bottle gas) with Section 5.3.4 of PBP is documented in Table 10.

Table 10: Assessment of requirements for the supply of gas services (adapted from Table 5.3c of PBP)

| Performance Criteria | Acceptable Solution | Compliance Notes |
|---|---|--|
| Location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings. | <p>Reticulated or bottled gas is installed and maintained in accordance with <i>AS/NZS 1596:2014 The Storage and handling of LP Gas</i> (SA 2014), the requirements of relevant authorities, and metal piping is used;</p> <ul style="list-style-type: none"> All fixed gas cylinders are kept clear of all flammable materials to a distance of 10 m and shielded on the hazard side; Connections to and from gas cylinders are metal; Polymer-sheathed flexible gas supply lines are not used; and Above-ground gas service pipes are metal, including and up to any outlets. | <p>To comply (if proposed)</p> <p>The advice of a relevant authority or suitably qualified professional should be sought, for certification of design and installation in accordance with relevant legislation, Australian Standards and Table 5.3c of PBP.</p> |

3.8 Staged Development

The development and construction within this Stage 2 forms part of a broader three (3) stage development. Detailed assessment of future stages will be undertaken for the subsequent future built form DAs, noting bushfire assessment was undertaken for DA2024/1079 (ELA 2024).

The other stages of the broader development are to be managed as a temporary APZ to IPA standards in accordance with PBP (Appendix A), until all stages under the parent subdivision (DA2024/1079) are developed and constructed to ensure the surrounding land does not become a hazard during development.

4. Conclusion

The proposed subdivision has been assessed against the specifications and requirements of PBP, as outlined in Table 11.

Table 11: Development bushfire protection measures and associated recommendations

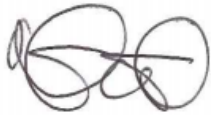
| Bushfire Protection Measures | Recommendations | Acceptable Solution | Performance Solution | Report Section |
|------------------------------|---|-------------------------------------|-------------------------------------|----------------|
| Asset Protection Zones | APZ dimensions are detailed in Table 3 and shown in Figure 3. All the developable lots (Unregistered Lot denoted PT.1, Super lot 1 and Super lot 3 (Figure 1) are to be managed as a temporary APZ in accordance with Appendix A. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 3.1 |
| Landscaping | Any future landscaping is to meet the requirements of PBP listed in Appendix A. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3.2 |
| Construction standard | <i>Lots 13 to 20</i> The proposed dwellings on Lots 13 to 20 within the subdivision are to be constructed to BALs identified in Table 3 and Table 7 specifically and Figure 4; based on the construction specifications detailed in either <i>AS 3959-2018</i> or the <i>NASH standard</i> , including additional ember provisions detailed in Section 7.5 of PBP as required. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3.3 |
| Access | No access requirements as dwellings will be accessed by a standard residential driveway. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3.4 |
| Water supply | Development will be connected to a reticulated water supply. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3.5 |
| Electricity service | Electricity supply located underground. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3.6 |
| Gas service | Gas services (If installed) are to be installed and maintained in accordance with AS/NZS 1596:2014. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3.7 |

5. Recommendations

It is recommended that the subdivision be issued a Bush Fire Safety Authority.



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6. References

Eco Logical Australia (ELA) 2024. *Bushfire Protection Assessment – Residential Subdivision – 53A & 53B Warriewood Rd, Warriewood*. August 2024, ELA, Newcastle

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Appendix A - Asset Protection Zone and Landscaping Standards

The APZ (permanent and temporary) specified in Table 3 and shown in Figure 2 are to be managed to IPA specifications Table 12. The identified APZs are to be maintained in perpetuity and management undertaken on an annual basis (as a minimum) and prior to the commencement of the bushfire season.

These APZ management specifications should be considered for any future landscaping and maintenance.

Further details on APZ implementation and management can be found on the NSW RFS website (<https://www.rfs.nsw.gov.au/resources/publications>).

Table 12: APZ management specifications

| Vegetation Strata | Inner Protection Area (IPA) |
|-------------------|---|
| Trees | <ul style="list-style-type: none"> • 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 2 m above ground; • Canopies should be separated by 2 to 5 m; and • Preference should be given to smooth barked and evergreen trees. |
| Shrubs | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • Should be kept mown (as a guide grass should be kept to no more than 100 mm in height); and • Leaves and vegetation debris should be removed. |

