

Bushfire Hazard Assessment

4 Suttor Avenue Caerleon 2850 (Lot 407/-/DP1272614).



Project Details			
Assessed as:	Residential Subdivision		
Assessed by	Matthew Noone (BPAD Accreditation No. BPAD-PD 25584)		
Highest BAL on any facade	BAL-LOW		
Planning for Bushfire Protection (2019) Compliance	The development conforms to the relevant specification and requirements of Planning for Bushfire Protection (2019). This report has addressed the requirements of Clause 44 of the Rural Fire Regulation (2013).		
Project Description	Residential Subdivision and Construction of a Dual Occupancy Dwelling.		
Report Number	BR-464222-A		
Date of Issue	23/02/2022	Report Validity:	1 year from date of issue



It is a breach of copyright for this document to be used to support a development application or any other purpose for any persons other than those for whom this document was prepared. Subject to the conditions prescribed under the Copyright Act no part of this document may in any form nor by any means be reproduced or transmitted without the prior written permission of the company Bushfire Planning & Design.



BUSHFIRE RISK ASSESSMENT CERTIFICATION

Development Address	4 Suttor Avenue Caerleon 2850.
Parcel number	(Lot 407/-/DP1272614).
Development description	Residential Subdivision and Construction of a Dual Occupancy Dwelling.
Architectural Drawings Reviewed.	Attached to report BR-464222.
Assessed Bushfire Attack Level	BAL-LOW
Does the assessment rely on alternate solutions?	No.
Assessed by Matthew Noone BPAD Accreditation Scheme No.	FPA No. BPAD-PD 25584
Certificate Number:	BR-464222-A

I hereby certify, in accordance with s.4.14 of the Environmental Planning and Assessment Act 1979 that;

1	I am a person recognised by the NSW Rural Fire Service as a qualified consultant in bushfire risk assessment; and
2	Subject to the recommendations contained in the attached Bushfire Risk Assessment Report the proposed development conforms to the relevant specifications and requirements*

* The relevant specifications and requirements being; specifications and requirements of the document entitled Planning for Bush Fire Protection prepared by the NSW Rural Fire Service in co-operation with the Department of Planning and any other document as prescribed by s.4.14 of the Environmental Planning and Assessment Act 1979.

I am aware that the Bushfire Assessment Report, prepared for the above mentioned site is to be submitted in support of a development application for this site and will be relied upon by Council as the basis for ensuring that the bushfire risk management aspects of the proposed development have been addressed in accordance with Planning for Bushfire Protection (2019).

The following have been provided and or included in our assessment.

- Bushfire Risk Assessment Report.
- Recommendations.
- Statement of vegetation impact in relation to APZ.

DATE	ISSUED TO	REV.	Comments
23/02/2022	Lynch Building Group	A	Issued to support Development Application

DISCLAIMER and TERMS OF USE

Bushfire Planning & Design cannot be held liable for the loss of life or property caused by a bushfire event. This report has considered the relevant planning instruments, bushfire constructions codes and practices applicable at the time of writing. Should additional information be provided after this report has been issued, we reserve the right to review and if necessary modify our report. Bushfire Planning and Design has no control over workmanship, buildings degrade over time and vegetation if not managed will regrow. In addition legislation and construction standards are subject to change. Due to significant variance of bushfire behaviour, we do not guarantee that the dwelling will withstand the passage of bushfire even if this development is constructed to the prescribed standards.

AS3959 (2018) states *“It should be borne in mind that the measures contained in this Standard cannot guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the degree of vegetation management, the unpredictable nature of behaviour of fire, and extreme weather conditions.”*

The information and material contained herein is general in nature and is intended for your use and information. This report relates only to the specific development described within and cannot be used to support any other future development. Bushfire Planning and Design disclaims, to the extent permitted by law, all warranties, representations or endorsements, express or implied, with regard to the material contained herein. Bushfire Planning and Design does not warrant or represent that the material contained herein is free from errors or omissions, or that it is exhaustive.

Bushfire Planning and Design disclaims any liability (including but not limited to liability by reason of negligence) to the users of the material for any loss, damage, cost or expense whether direct, indirect, consequential or special, incurred by, or arising by reason of, any person using or relying on the material and whether caused by reason of, any error, omission or misrepresentation in the material or otherwise.

This report has been prepared by Matthew Noone trading as Bushfire Planning and Design. Matthew Noone holds a BPAD Level 2 accreditation with the Fire Protection Association of Australia. Under the BPAD accreditation scheme a BPAD Level 2 consultant can provide advice and undertake all types assessments with the exception of alternate solutions. In the event that alternate solution is proposed it will be undertaken outside of our accreditation. Alternate solutions are considered a deviation from the prescribed standards and as per s.4.14 of the Environmental Planning and Assessment Act (1979) are required to be required to be referred to the New South Wales Rural Fire Service (RFS) for review.

This report has been based on our interpretation of Planning for Bushfire Protection (2019), AS3959 (2018) and the methodology for site specific bushfire assessment. As a consultant, our view can be subjective. Our opinions may differ from the opinions provided by you the Client (or Client Representative), the Council, the RFS or another bushfire consultant. The Rural Fire Service (RFS) has a higher authority and can upon their review, increase a nominated BAL-rating or entirely reject a development proposal. Any such recommendations made by the RFS take precedence. Our role is intermediary between our Client (or Client Representative) and the consenting authority. We apply our knowledge of the relevant bushfire protection standards to provide the best possible outcome for our Client (or Client Representative), both from a bushfire safety and financial perspective. Should the RFS modify our recommendations or reject the proposal to which this report relates to we will not be held liable for any financial losses as a result. By using this document, you the Client (or Client Representative) agree to and acknowledge the above statements.

Bushfire Planning and Design accepts no liability or responsibility for any use or reliance upon this report and its supporting material by any unauthorized third party. The validity of this report is nullified if used for any other purpose than for which it was commissioned. Unauthorized use of this report in any form is deemed an infringement of our intellectual property. By using this document to support your development you the Client (or Client representative) agree to these terms.

Page No.

SECTION 01 - BACKGROUND AND BRIEFING NOTES

05 1.1 BUSHFIRE PRONE LAND

06 1.2 DEVELOPMENT PROPOSAL

06 1.3 REGULATORY FRAMEWORK

07 1.4 SITE LOCATION AND DESCRIPTION

08 1.5 LAND USE, ZONING AND PERMISSIBILITY

08 1.6 SIGNIFICANT ENVIRONMENTAL FEATURES

08 1.7 DETAILS OF ANY THREATENED SPECIES, POPULATIONS, ECOLOGICAL COMMUNITIES OR CRITICAL HABITATS

08 1.8 DETAILS OF ABORIGINAL HERITAGE

SECTION 02 - BUSHFIRE ATTACK LEVEL (BAL) ASSESSMENT

09 2.0 INTRODUCTION

09 2.1 SLOPE DETERMINATION

09 2.2 PREDOMINANT VEGETATION CLASS

10 2.2.1 VEGETATION PHOTOS

11 2.3 BUSHFIRE ATTACK LEVEL (BAL) ASSESSMENT.

11 2.4 RECOMMENDED ASSET PROTECTION ZONES (APZs).

11 2.4 RECOMMENDED ASSET PROTECTION ZONES (APZs).

SECTION 03 - ASSET PROTECTION ZONES (APZs)

13 3.0 APZ PERFORMANCE CRITERIA (PBP 2019)

14 3.1 - INNER APZ (IPA) GUIDELINES

14 3.2 - OUTER APZ (OPA) GUIDELINES

15 SECTION 04 - CONSTRUCTION

16 SECTION 05 - ACCESS

18 SECTION 06 - WATER

18 SECTION 07 - ELECTRICITY & GAS

19 SECTION 08 - DEVELOPMENT RECOMMENDATIONS

20 SECTION 09 - CONCLUSION

21 SECTION 10 - REFERENCES

21 SECTION 11 - APPENDICES

SECTION 01 - BACKGROUND AND BRIEFING NOTES

The subject site whether in whole or part is recorded as bushfire affected on a relevant map certified under Section 10.3 (2) of the Environmental Planning and Assessment Act 1979. The development relates to the subdivision of bushfire prone land and therefore must address the legislative requirements stipulated in Clause 4.46 of the EP&A Act 1979 and 100B of the Rural Fire Act 1997. The project is considered to be an integrated development and is required to be referred to the RFS for their approval and issuance of a Bushfire Safety Authority (BFSA).

1.1 BUSHFIRE PRONE LAND

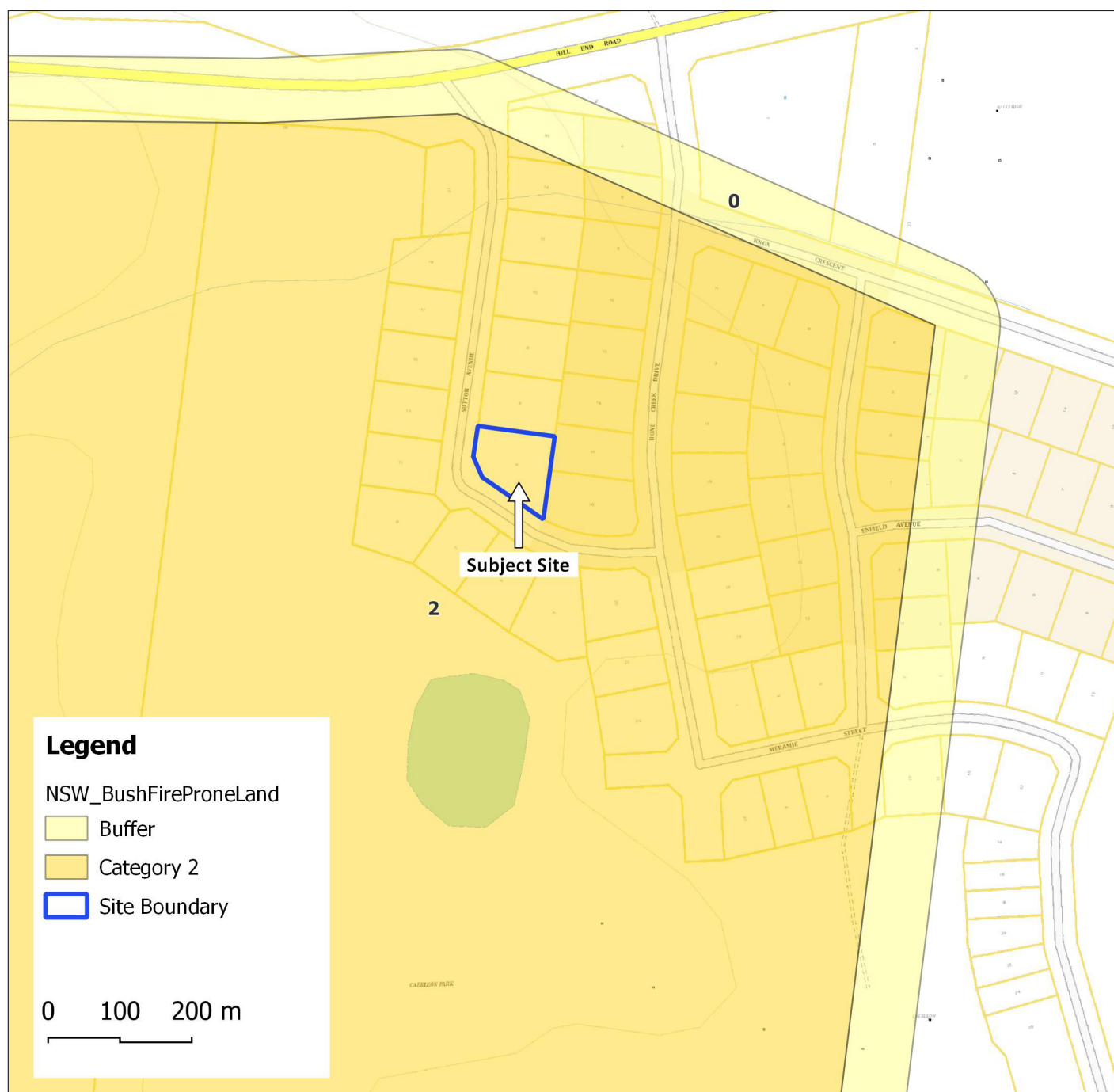


Figure 1.1: Bushfire Prone Land Map (NSW Planning Portal (2021) found at <https://www.planningportal.nsw.gov.au>) accessed 23/02/2022.

1.2 DEVELOPMENT PROPOSAL

The development relates to the subdivision of Lot 407 into two allotments. A detached dual occupancy dwelling will also be constructed.

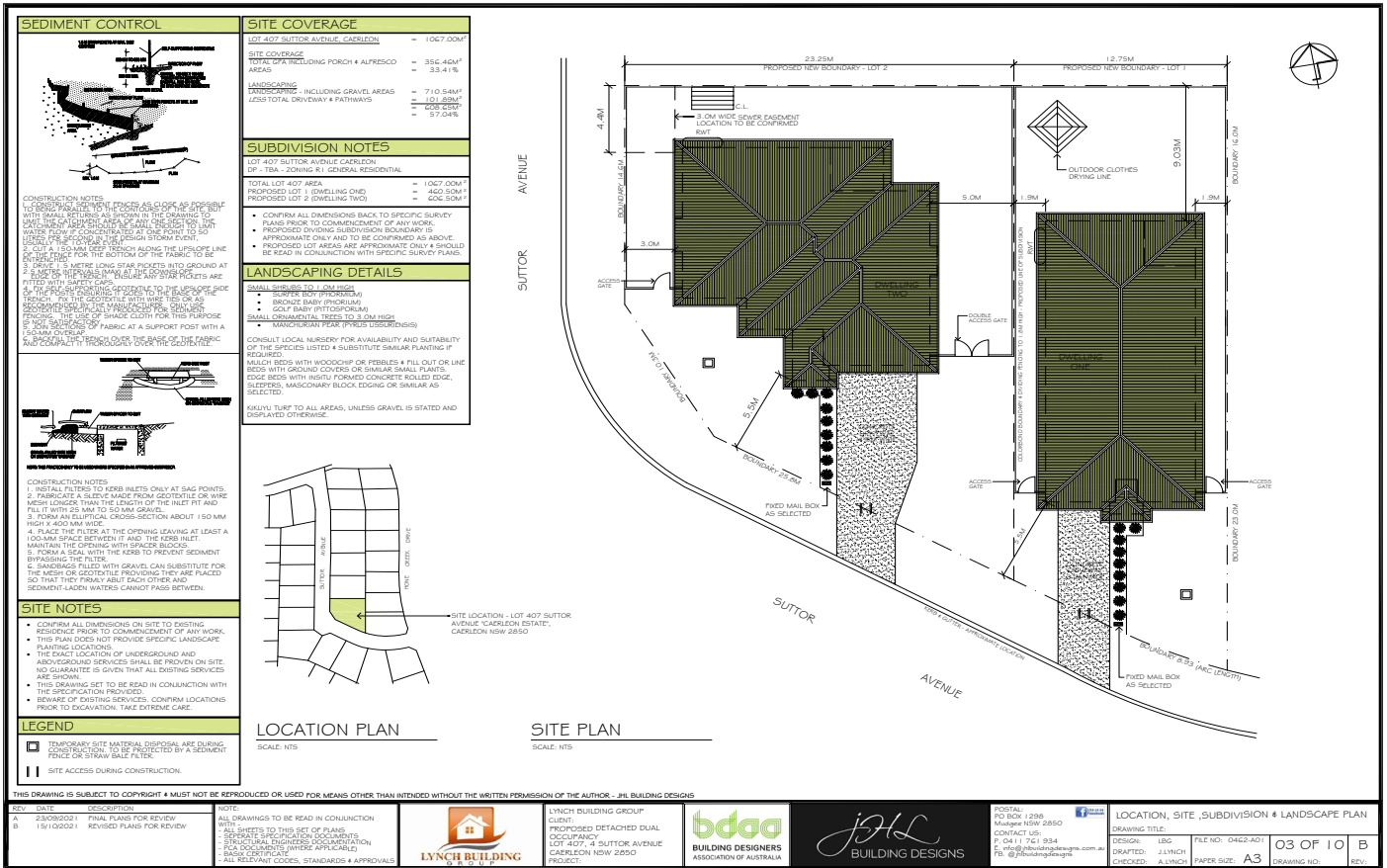


Figure 1.2: Architectural Concept Image

1.3 REGULATORY FRAMEWORK

The main legislation, planning instruments, development controls and guidelines that are related to this project are as follows; 100B of the Rural Fires Act 1997, Clause 46 of the Rural Fires Regulation 2013, Clause 44 of the Rural Fire Regulation 2013, The New South Wales RFS document Planning for Bushfire Protection (PBP 2019) and the National Construction Code (NCC 2019).

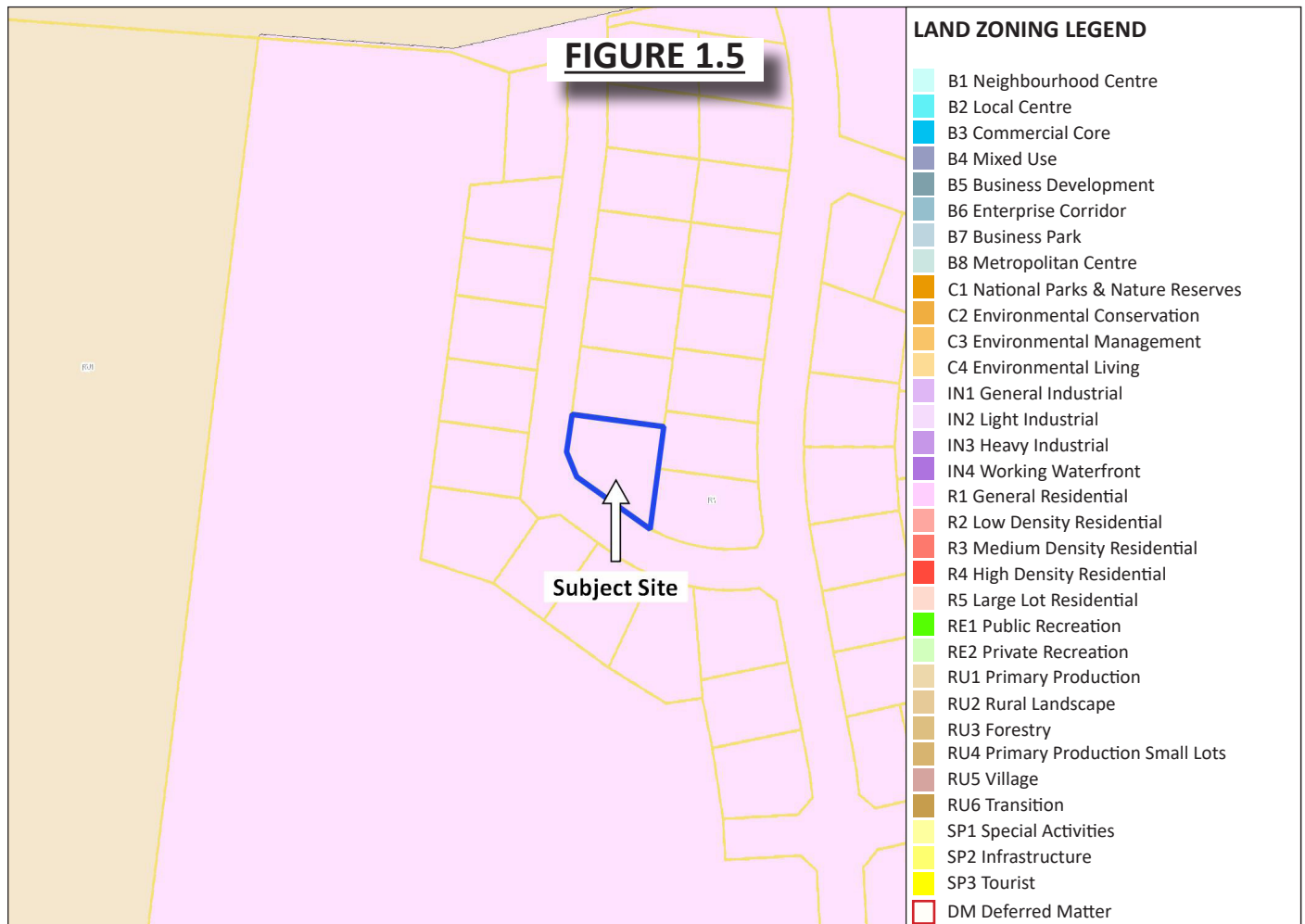
1.4 SITE LOCATION AND DESCRIPTION

The subject site is located in Caerleon which is within the Mid-Western Regional Local Government Area (LGA). The site is located in a recent subdivision and will be surrounded by managed residential curtilage in the near future. Grassland is located to the south of the subdivision and Woodland is located to the west of the subdivision. There is no Grassland within 50m and no other bushfire prone vegetation within 100m of the subject site.



1.5 LAND USE, ZONING AND PERMISSIBILITY

The subject site and surrounding allotments are zoned R1 General Residential.



1.6 SIGNIFICANT ENVIRONMENTAL FEATURES

There are no significant environmental features within the subject site.

1.7 DETAILS OF ANY THREATENED SPECIES, POPULATIONS, ECOLOGICAL COMMUNITIES OR CRITICAL HABITATS

To our knowledge there are no threatened species, populations, ecological communities or critical habitat within the subject site.

1.8 DETAILS OF ABORIGINAL HERITAGE

To our knowledge the site is not associated with any items of Aboriginal heritage.

2.0 INTRODUCTION

For the purpose of this bushfire assessment, the vegetation is required to be described to a distance of 140m from the boundary and the slope to 100m from boundary. Vegetation type and slope under vegetation are the factors that will significantly affect bushfire behaviour.

'Research has shown that 85% of buildings are lost in the first 100m from bushland and that ember attack is a significant form of attack on properties' (RFS 2006).

2.1 SLOPE DETERMINATION

The effective slope has been assessed for a distance of at least 100m from the proposed development. The slope data has been calculated from a 1m LiDAR Digital Elevation Model (DEM). The source data sets have been captured to standards that are generally consistent with the Australian ICSM LiDAR Acquisition Specifications with require a fundamental vertical accuracy of at least 0.30m (95% confidence) and horizontal accuracy of at least 0.80m (95% confidence). The slope arrows indicated in figure A represent the slope calculated across the length of the arrow direct from the digital elevation model. The calculated slope as shown in Figure A has not been manipulated or modified in any way.

2.2 PREDOMINANT VEGETATION CLASS

This assessment includes vegetation both within and external to the site boundaries. Where mixes of vegetation formations are located together, the vegetation formation providing the greater hazard shall be used for the purpose of assessment. The combination of vegetation and slope that yields the worst case scenario shall be used (A1.2 PBP 2019).

Space left intentionally blank.

2.2.1 VEGETATION PHOTOS



Photo 1: Grassland transition to Woodland to the west.



Photo 2: Grassland to the south/south west.

2.3 BUSHFIRE ATTACK LEVEL (BAL) ASSESSMENT.

To clarify the findings below, there is no grassland within 50m and no other bushfire prone vegetation within 100m of the proposed development.

Based on the parameters identified in table 1 below and as depicted in Figure A, the proposed development is assessed as BAL-LOW as specified in AS3959 (2018).

TABLE 1 (To be read in conjunction with Figure A).						
LGA = Mid-Western Regional Council				Forest Fire Danger Index = FDI 80		
ASPECT ¹	Vegetation Class ²	Max Effective Slope ³	Site slope ³	Required APZ ⁴	Proposed APZ / EML ⁵	BAL-Rating
N, S, E, W	No bushfire threat within 100m / No un-managed grass within 50m					BAL-LOW
AOD	Managed residential land					

Abbreviations		
AOD All other directions	EML Extent of managed land	NVC Narrow vegetation corridor

¹	<i>Cardinal direction from each proposed building facade based on grid north.</i>
²	<i>Vegetation Classifications are as described in PBP (2019) A1.2.</i>
³	<i>Site slope is calculated from 1m LiDAR contours.</i>
⁴	<i>Minimum APZ required stated as Acceptable Solutions within Table 1.12.2 and A1.12.5. PBP (2019).</i>
⁵	<i>Actual dimensional setback from the face of the building to the assessed vegetation. Achieved Asset Protection Zone (APZ) or extent of managed land (EML).</i>
⁶	<i>Where the direct line of sight between the proposed building and assessed vegetation is obstructed (by a wall or building) the assessed rating can be lowered by one BAL-rating (PBP 2019, s. A1.8).</i>
⁷	<i>Remnant bushland and narrow vegetation corridors (NVC) as stated in PBP (2019) s.A1.11 can be assessed as rainforest as a simplified approach or be assessed as Short Fire Run using method 2 (AS3959).</i>
⁸	<i>Deeming provisions for grassland s.7.9 PBP (2019).</i>
⁹	<i>BAL-rating determined via method 2 (AS3959)</i>

2.4 RECOMMENDED ASSET PROTECTION ZONES (APZs).

As there is no un-managed grassland within 50m and no other bushfire prone vegetation within 100m of the development there is insufficient threat to warrant any specific asset protection zones (APZ) or level of construction with regards to the construction of a building in a bushfire prone area. We recommend that the subject site be managed as an inner asset protection zone for perpetuity.

Refer to Section 3 for recommendations relating to APZ provision.

BUSHFIRE PLANNING AND DESIGN

bpad.matthew.noone@gmail.com
0406077222

FIGURE A

VEGETATION KEY (solid)

- Forest
- Grassland
- Managed Land
- Under Development
- Woodland

LEGEND BAL (dashed)

- BAL-FZ
- BAL-40
- BAL-29
- BAL-19
- BAL-12.5
- BAL-LOW



No un-managed grassland within 50m and no bushfire prone vegetation within 100m.
Insufficient threat to warrant any bushfire requirements.

50m Offset 100m Offset Site Hydrant

SECTION 03 - ASSET PROTECTION ZONES (APZs)

Intent of measures: to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting fire fighting activities.

3.0 APZ PERFORMANCE CRITERIA (PBP 2019)

- APZs are to be provided commensurate with the construction of the building.
- A defensible space is to be provided.
- APZs are to be managed and maintained to prevent the spread of a fire to the building.
- The APZ is to be provided in perpetuity.
- APZ maintenance is to be practical, soil stability is not compromised and the potential for crown fires is minimised.

The asset protection zones (APZ) requirements have been derived from the methodology of A1.12.2 or A1.12.3 in Appendix 1 of PBP (2019). Asset protection zones and in particular the Inner Asset Protection Zones are critical for providing defensible space and reducing flame length and rate of spread (PBP 2019). APZs are designed to provide sufficient open space for emergency workers to operate and for occupants to egress the site safely. They are divided into Inner and Outer Asset Protection Zones (IPAs and OPAs) and are required to be maintained for the life of the development. The IPA provides for defensible space and a reduction of radiant heat levels at the building line and the OPA provides for the reduction of the rate of spread and filtering of embers.

GENERAL RECOMMENDATIONS

•	The APZ should be located completely within the boundary of the site. The required APZ will often be satisfied by surrounding managed land.
•	Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions (refer to Section 3.1 and 3.2).
•	The APZ should not be located on slopes greater than 18° unless terracing is introduced.
•	Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions
•	A clear area of low-cut lawn or pavement is maintained adjacent to the asset requiring protection.

3.1 - INNER APZ (IPA) GUIDELINES

The Inner APZ (IPA) is the managed area closest to the asset (eg. dwelling). The IPA is managed to minimal fuel conditions and aims to mitigate the impact of direct flame contact and radiant heat on the development. The IPA also aims to provide defensible space.

TREES

- Canopy cover should be less than 15% (at maturity) within the Inner APZ.
- Trees (at maturity) should not touch or overhang the building.
- Lower limbs should be removed up to a height of 2m above ground.
- Canopies should be separated by 2 to 5m.
- 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.
- Shrubs should not be located under trees shrubs should not form more than 10% ground cover.
- Clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.

GRASS

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

3.2 - OUTER APZ (OPA) GUIDELINES

The Outer APZ (OPA) is the part of the APZ that is located between the IPA and the bushfire vegetation threat. The reduction in the available fuels and canopy connections in the OPA aims to mitigate the intensity of an approaching fire and restricts the pathways to crown fuels thus reducing the level of direct flame, radiant heat and ember attack on the IPA and asset (dwelling).

TREES

- Canopy cover should be less than 30% (at maturity) within the Outer APZ.
- Trees should have canopy separation canopies should be separated by 2 to 5m.

SHRUBS

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

SECTION 04 - CONSTRUCTION

PERFORMANCE CRITERIA (PBP 2019)

It must be demonstrated that the proposed building can withstand bush fire attack in the form of wind, smoke, embers, radiant heat and flame contact. The BAL construction requirements has been determined in accordance with the appropriate table from A1.12.2 to A1.12.7 (PBP 2019) and in accordance with the NCC and as modified by section 7.5.

The proposed development is assessed as BAL-LOW as indicated in Figure A and as specified in AS3959 (2018). As there is no bushfire threat within 100m of the proposed development there is insufficient threat to warrant any specific level of construction with regards to the construction of building in a bushfire prone area.

- There are no bush fire protection requirements for Class 10 structures located more than 6m from a dwelling in bush fire prone areas. Where a Class 10 structure is located within 6m of a dwelling it must be constructed in accordance with the NCC.
- For a dwelling or structure that is assessed as BAL-LOW there are no requirements for fencing.

Space left intentionally blank.

SECTION 05 - ACCESS

Intent of measures: To provide safe operational access for emergency services personnel in suppressing a bush fire, while residents are accessing or egressing an area.

PERFORMANCE CRITERIA (PBP 2019)

- | | |
|---|--|
| • | Fire-fighting vehicles are provided with safe, all-weather access to structures and hazard vegetation. |
| • | The capacity of access roads is adequate for fire-fighting vehicles. |
| • | There is appropriate access to water supply. |
| • | Fire-fighting vehicles can access the dwelling and exit the property safely. |

PUBLIC ROADS

Suttor Avenue is a sealed public road. The public road system is deemed to be adequate for emergency services appliances. Figure 5.1 shows the road systems in the area.

PROPERTY ACCESS

The nearest bushfire prone vegetation is located more than 100m from the proposed development. There is insufficient threat to warrant provision for RFS access.

FIGURE 5.1



LEGEND

- Roads
- Subject Site

0 50 100 m

SECTION 06 - WATER

Intent of measures: To provide adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building.

PERFORMANCE CRITERIA (PBP 2019)

- An adequate water supply is to be provided for fire-fighting purposes.
- Water supplies are to be located at regular intervals.
- The water supply is to be accessible and reliable for fire-fighting operations.
- Flows and pressure are to be appropriate
- The integrity of the water supply is to be maintained.
- A static water supply is to be provided for fire-fighting purposes in areas where reticulated water is not available.

COMMENTS IN RELATION TO THE PROVISION OF ELECTRICITY AND GAS.

ACCEPTABLE SOLUTION

The nearest bushfire prone vegetation is located more than 100m from the proposed development. There is insufficient threat to warrant the provision of additional water for fire fighting.

SECTION 07 - ELECTRICITY & GAS

PERFORMANCE CRITERIA (PBP 2019)

- Location of electricity services is to limit the possibility of ignition of surrounding bush land or the fabric of buildings.
- Location and design of gas services is not to not lead to the ignition of surrounding bushland or the fabric of buildings.

ELECTRICITY AND GAS - SPECIFIC REQUIREMENTS

The proposed development can comply with the PBP (2019) with regards to electricity and gas requirements. The following points are to be adhered to (where applicable) for the provision of electricity and gas services where applicable.

COMMENTS IN RELATION TO THE PROVISION OF ELECTRICITY AND GAS.

ACCEPTABLE SOLUTION

The nearest bushfire prone vegetation is located more than 100m to the west of the proposed works. There is insufficient threat to warrant any specific bushfire requirements for the provision of electrical and gas supply.

SECTION 08 - DEVELOPMENT RECOMMENDATIONS

The following points are recommended for inclusion in the DA conditions of consent;

1.	Construction	None.
2.	APZs	Manage the site as an Inner APZ (Section 3).
3.	Access	None.
4.	Services	None.
5.	In the event that Council or the NSW Rural Fire Service modifies our recommendations then this report should no longer be referred to. The bushfire requirements as stated in the DA Consent conditions will take precedence.	
6.	We strongly recommend that the applicant cross references the bushfire requirements within the DA consent conditions and our report and alert us to any discrepancies.	

Space left intentionally blank.

SECTION 09 - CONCLUSION

The development relates to the subdivision of Lot 407 into two allotments. A detached dual occupancy dwelling will also be constructed.

For the purpose of bushfire assessment and pursuant of clause 4.46 of the EP&A Act 1979 and 100B of the Rural Fire Act 1997, this project is considered to be an integrated development and is required to be referred to the RFS for their approval and issuance of a Bushfire Safety Authority (BFSA).

The subject site is located in Caerleon which is within the Mid-Western Regional Local Government Area (LGA). The site is located in a recent subdivision and will be surrounded by managed residential curtilage in the near future. Grassland is located to the south of the subdivision and Woodland is located to the west of the subdivision. There is no Grassland within 50m and no other bushfire prone vegetation within 100m of the subject site.

As there is no un-managed grassland within 50m and no other bushfire prone vegetation within 100m of the development there is insufficient threat to warrant any specific asset protection zones (APZ) or level of construction with regards to the construction of a building in a bushfire prone area. We recommend that the subject site be managed as an inner asset protection zone for perpetuity.

The proposed development is assessed as BAL-LOW as indicated in Figure A and as specified in AS3959 (2018) the Australian Standard for the Construction of Buildings in a Bushfire Prone Area. There is insufficient threat to warrant any specific level of construction with regard to the construction of a building in a bushfire prone area.

The project complies with the performance requirements of the BCA. The objectives and performance requirements of PBP (2019) are also achieved.

Site access, including access via the public road system is suitable for emergency response vehicles. The development complies with PBP (2019) with regards to the provision of water. The requirements for electricity and gas can also be complied with.

Should Council or the NSW Rural Fire Service have any objection to any part of this report, please get in contact to discuss.

SECTION 10 - REFERENCES

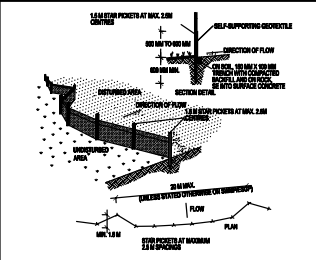
AS3959 (2018)	Australian Standard, Construction of buildings in bushfire-prone areas, AS 3959, Third edition 2018 Standards Australia International Ltd, Sydney.
BCA (2019)	Building Code of Australia 2019, Building Code of Australia, Australian Building Codes Board, Canberra 2019.
EPA Act (1979)	Environmental Planning and Assessment Act 1979, NSW Government, NSW, legislation found at www.legislation.nsw.gov.au
PBP (2019)	Planning for Bushfire Protection, a Guide for Councils,Planners, Fire Authorities, Developers and Home Owners. Rural Fire Service 2019, Australian Government Publishing Service, Canberra.
RFS (2015)	Rural Fire Service, Guide For Bush Fire Prone Land Mapping, Version 5b.

SECTION 11 - APPENDICES

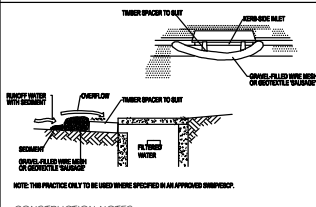
Appendix A - Architectural Drawings.

APPENDIX A - ARCHITECTURAL DRAWINGS

SEDIMENT CONTROL



CONSTRUCTION NOTES
 1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND WITH THE DESIGN STORM EVENT. USUALLY THE 10-YEAR EVENT.
 2. CUT A 150-MM DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTERED.
 3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
 4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
 5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150-MM OVERLAP.
 6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.



CONSTRUCTION NOTES
 1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
 2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET FIT AND FILL IT WITH 25 MM TO 50 MM GRAVEL.
 3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150 MM HIGH X 400 MM WIDE.
 4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100-MM SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
 5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
 6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDED THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

SITE NOTES

- CONFIRM ALL DIMENSIONS ON SITE TO EXISTING RESIDENCE PRIOR TO COMMENCEMENT OF ANY WORK.
- THIS PLAN DOES NOT PROVIDE SPECIFIC LANDSCAPE PLANTING LOCATIONS.
- THE EXACT LOCATION OF UNDERGROUND AND ABOVEGROUND SERVICES SHALL BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.
- THIS DRAWING SET TO BE READ IN CONJUNCTION WITH THE SPECIFICATION PROVIDED.
- BEWARE OF EXISTING SERVICES. CONFIRM LOCATIONS PRIOR TO EXCAVATION. TAKE EXTREME CARE.

LEGEND

- ☐ TEMPORARY SITE MATERIAL DISPOSAL ARE DURING CONSTRUCTION TO BE PROTECTED BY A SEDIMENT FENCE OR STRAW BALE FILTER.
- || SITE ACCESS DURING CONSTRUCTION.

SITE COVERAGE

LOT 407 SUTTOR AVENUE, CAERLEON	= 1067.00M ²
SITE COVERAGE	
TOTAL GFA INCLUDING PORCH & ALFRESCO AREAS	= 356.46M ²
	= 33.41%
LANDSCAPING	
LANDSCAPING - INCLUDING GRAVEL AREAS	= 710.54M ²
LESS TOTAL DRIVEWAY & PATHWAYS	= 101.89M ²
	= 608.65M ²
	= 57.04%

SUBDIVISION NOTES

LOT 407 SUTTOR AVENUE CAERLEON	
DP - TBA - ZONING R1 GENERAL RESIDENTIAL	
TOTAL LOT 407 AREA	= 1067.00M ²
PROPOSED LOT 1 (DWELLING ONE)	= 460.50M ²
PROPOSED LOT 2 (DWELLING TWO)	= 606.50M ²

- CONFIRM ALL DIMENSIONS BACK TO SPECIFIC SURVEY PLANS PRIOR TO COMMENCEMENT OF ANY WORK.
- PROPOSED DIVIDING SUBDIVISION BOUNDARY IS APPROXIMATE ONLY AND TO BE CONFIRMED AS ABOVE.
- PROPOSED LOT AREAS ARE APPROXIMATE ONLY & SHOULD BE READ IN CONJUNCTION WITH SPECIFIC SURVEY PLANS.

LANDSCAPING DETAILS

- SMALL SHRUBS TO 1.0M HIGH
 - SURFER BOY (PHORMIUM)
 - BRONZE BABY (PHORMIUM)
 - GOLF BABY (PITOSPORUM)
 - SMALL ORNAMENTAL TREES TO 3.0M HIGH
 - MANCHURIAN PEAR (PYRUS USSURIENSIS)
- CONSULT LOCAL NURSERY FOR AVAILABILITY AND SUITABILITY OF THE SPECIES LISTED & SUBSTITUTE SIMILAR PLANTING IF REQUIRED.
 MULCH BEDS WITH WOODCHIP OR PEBBLES & FILL OUT OR LINE BEDS WITH GROUND COVERS OR SIMILAR SMALL PLANTS.
 EDGE BEDS WITH INSITU FORMED CONCRETE ROLLED EDGE, SLEEPERS, MASCONARY BLOCK EDGING OR SIMILAR AS SELECTED.
 KIKIYU TURF TO ALL AREAS, UNLESS GRAVEL IS STATED AND DISPLAYED OTHERWISE.

NOTE: THE PRACTICE ONLY TO BE USED WHERE SPECIFIED IN AN APPROVED SUBSPEC.

CONSTRUCTION NOTES

1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET FIT AND FILL IT WITH 25 MM TO 50 MM GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150 MM HIGH X 400 MM WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100-MM SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDED THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

SITE NOTES

- CONFIRM ALL DIMENSIONS ON SITE TO EXISTING RESIDENCE PRIOR TO COMMENCEMENT OF ANY WORK.
- THIS PLAN DOES NOT PROVIDE SPECIFIC LANDSCAPE PLANTING LOCATIONS.
- THE EXACT LOCATION OF UNDERGROUND AND ABOVEGROUND SERVICES SHALL BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.
- THIS DRAWING SET TO BE READ IN CONJUNCTION WITH THE SPECIFICATION PROVIDED.
- BEWARE OF EXISTING SERVICES. CONFIRM LOCATIONS PRIOR TO EXCAVATION. TAKE EXTREME CARE.

LEGEND

- ☐ TEMPORARY SITE MATERIAL DISPOSAL ARE DURING CONSTRUCTION TO BE PROTECTED BY A SEDIMENT FENCE OR STRAW BALE FILTER.
- || SITE ACCESS DURING CONSTRUCTION.

THIS DRAWING IS SUBJECT TO COPYRIGHT & MUST NOT BE REPRODUCED OR USED FOR MEANS OTHER THAN INTENDED WITHOUT THE WRITTEN PERMISSION OF THE AUTHOR - JHL BUILDING DESIGNS

REV	DATE	DESCRIPTION
A	23/09/2021	FINAL PLANS FOR REVIEW
B	15/10/2021	REVISED PLANS FOR REVIEW

NOTE:
 ALL DRAWINGS TO BE READ IN CONJUNCTION WITH -
 - ALL SHEETS TO THIS SET OF PLANS
 - SEPARATE SPECIFICATION DOCUMENTS
 - STRUCTURAL ENGINEERS DOCUMENTATION
 - PCA DOCUMENTS (WHERE APPLICABLE)
 - BASIX CERTIFICATE
 - ALL RELEVANT CODES, STANDARDS & APPROVALS

LYNCH BUILDING GROUP

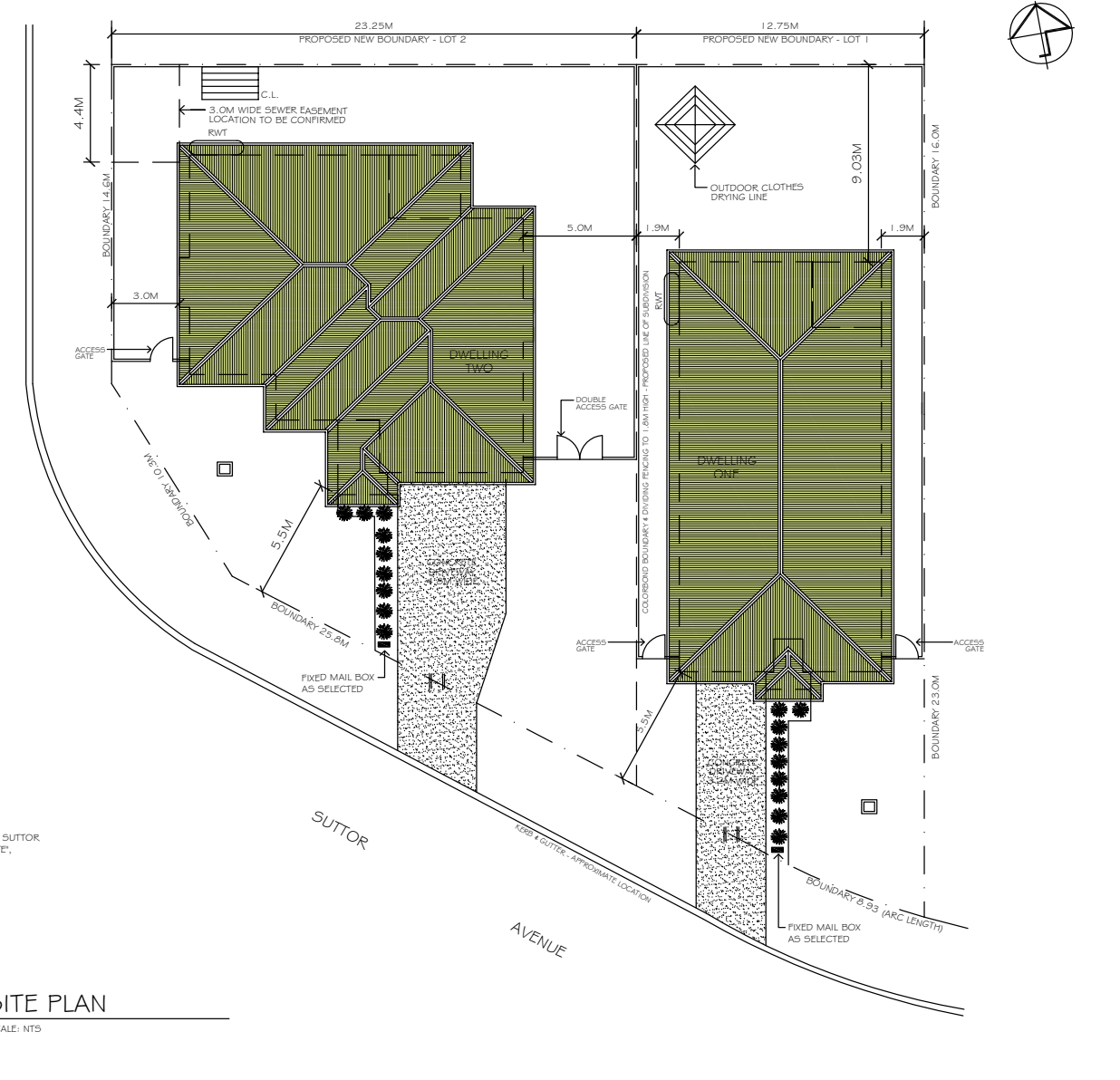
LYNCH BUILDING GROUP
 CLIENT: PROPOSED DETACHED DUAL OCCUPANCY LOT 407, 4 SUTTOR AVENUE CAERLEON NSW 2850
 PROJECT:

bdaa
 BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

JHL BUILDING DESIGNS

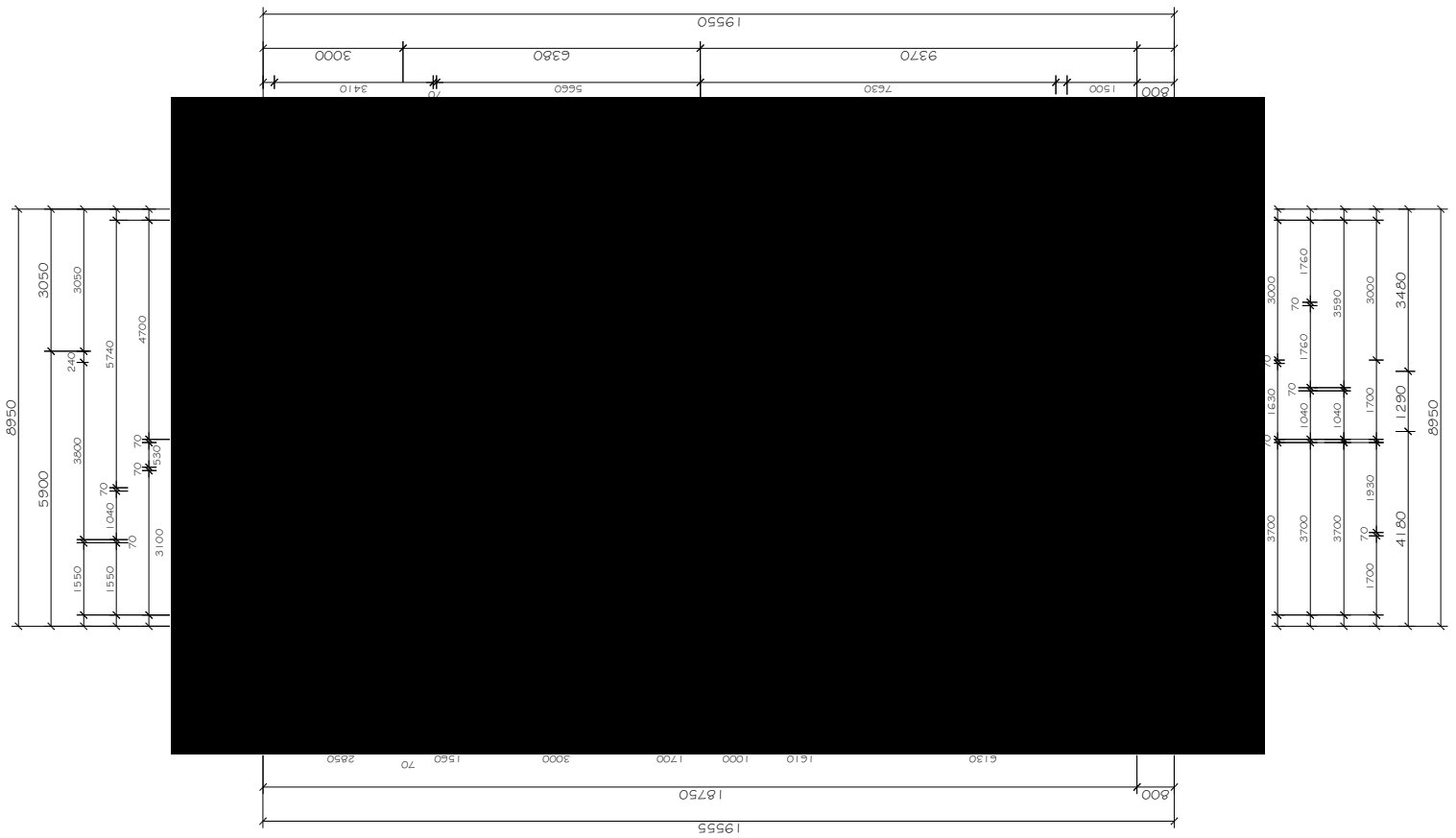
POSTAL: PO BOX 1298 Mudgee NSW 2850
 CONTACT US: P: 0411 761 934 E: info@jhlbuildingdesigns.com.au FB: @jhlbuildingdesigns

LOCATION, SITE, SUBDIVISION & LANDSCAPE PLAN
 DRAWING TITLE:
 DESIGN: LBG FILE NO: 0462-A01
 DRAFTED: J.LYNCH PAPER SIZE: A3
 CHECKED: A.LYNCH DRAWING NO: 03 OF 10
 REV: B



LOCATION PLAN
 SCALE: NTS

SITE PLAN
 SCALE: NTS



FLOOR PLAN - DWELLING ONE

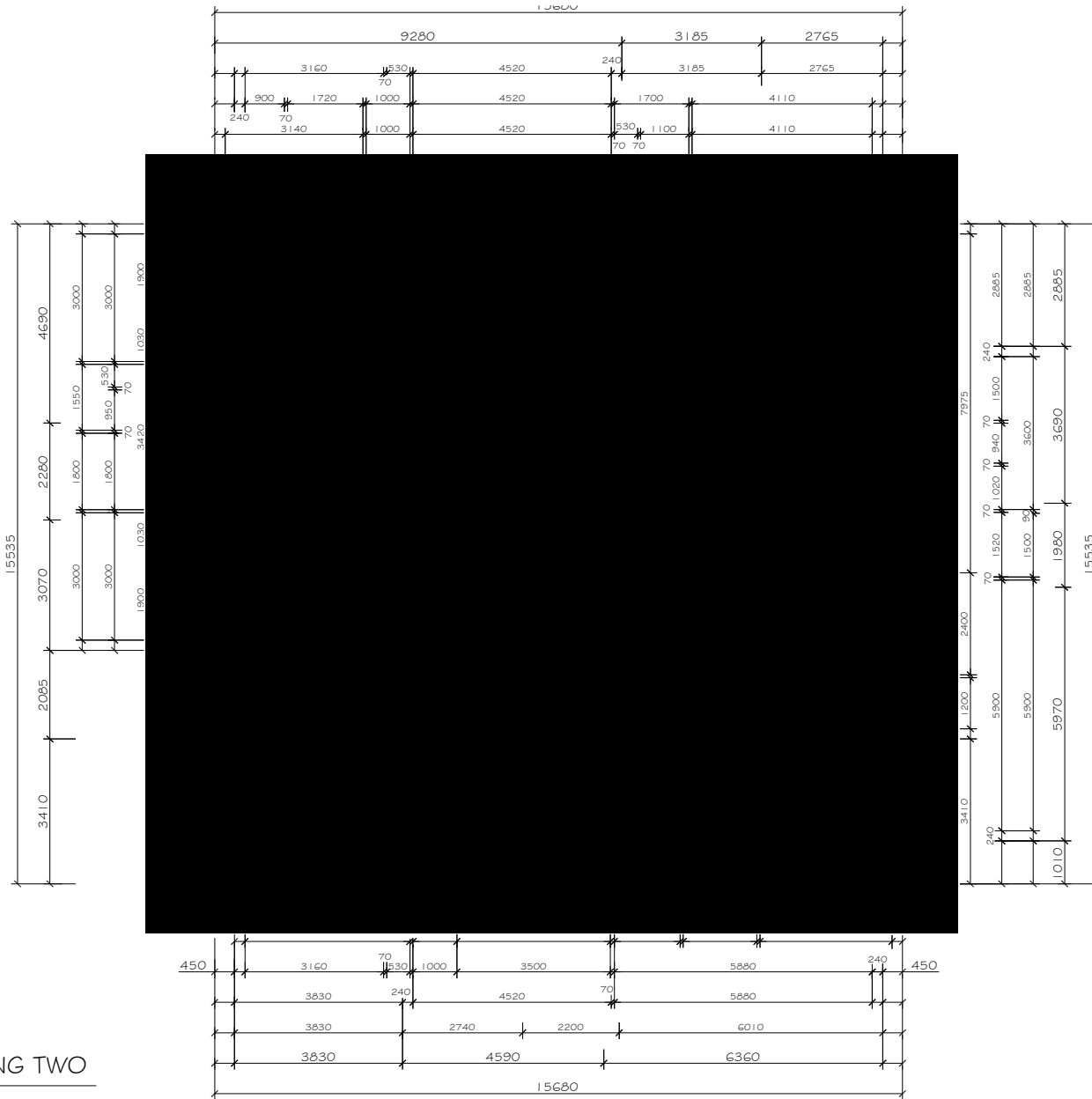
SCALE: 1:100

FLOOR AREAS	
PROPOSED RESIDENCE - DWELLING ONE	
- LIVING	= 131.26 M ²
- GARAGE	= 25.45 M ²
TOTAL	= 156.71 M ²
- ALFRESCO	= 09.15 M ²
- PORCH	= 3.52 M ²
TOTAL GFA - DWELLING ONE	= 169.38 M ²

- NOTES**
- PORCH & ALFRESCO POST POSITIONS (MAY BE MODIFIED BY ARCHITECTS DURING CONSTRUCTION)
 - ☑ M.H. = MAN HOLE LOCATION
 - ==== ALL OPENINGS ARE SHOWN WITH WIDTH DISPLAYED ON FLOOR PLAN. HEAD HEIGHTS SHALL BE NO LESS THAN 2.2M FROM F.F.L. UNLESS STATED OTHERWISE

THIS DRAWING IS SUBJECT TO COPYRIGHT & MUST NOT BE REPRODUCED OR USED FOR MEANS OTHER THAN INTENDED WITHOUT THE WRITTEN PERMISSION OF THE AUTHOR - JHL BUILDING DESIGNS

<p>REV. NO. DATE REVISIONS</p> <p>A. 23/09/2021 FINAL PLAN FOR REVIEW</p> <p>B. 15/10/2021 REVISED PLAN FOR REVIEW</p>	<p>NOTES</p> <p>ALL DRAWINGS TO BE MADE IN CONJUNCTION WITH SHEETS TO THIS SET OF PLANS.</p> <p>THIS DRAWING IS THE PROPERTY OF LYNCH BUILDING GROUP AND IS NOT TO BE REPRODUCED OR USED FOR MEANS OTHER THAN INTENDED WITHOUT THE WRITTEN PERMISSION OF THE AUTHOR - JHL BUILDING DESIGNS</p>	<p>LYNCH BUILDING GROUP</p> <p>10/10/2017, 4 SUITE, RAE AVENUE, DUAL OCCUPANCY</p> <p>bdag BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA</p>	<p>JHL BUILDING DESIGNS</p>	<p>DRAWING TITLE: FLOOR PLAN - DWELLING ONE</p> <p>DESIGNER: J.LYNCH</p> <p>DATE: 15/10/2021</p> <p>FILE NO: ONEZ-001</p> <p>04 OF 10 E</p>
--	--	--	-----------------------------	---



FLOOR AREAS	
DWELLING TWO	
- LIVING	= 133.13 M ²
- GARAGE	= 38.11 M ²
TOTAL	= 171.24 M²
- PORCH	= 6.66 M ²
- ALFRESCO	= 9.18 M ²
TOTAL DWELLING TWO	= 187.08 M²

FLOOR PLAN - DWELLING TWO

SCALE: 1:100

THIS DRAWING IS SUBJECT TO COPYRIGHT & MUST NOT BE REPRODUCED OR USED FOR MEANS OTHER THAN INTENDED WITHOUT THE WRITTEN PERMISSION OF THE AUTHOR - JHL BUILDING DESIGNS

REV	DATE	DESCRIPTION
A	23/09/2021	FINAL PLANS FOR REVIEW
B	15/10/2021	REVISED PLANS FOR REVIEW

NOTE:
 ALL DRAWINGS TO BE READ IN CONJUNCTION WITH -
 - ALL SHEETS TO THIS SET OF PLANS
 - SEPERATE SPECIFICATION DOCUMENTS
 - STRUCTURAL ENGINEERS DOCUMENTATION
 - PCA DOCUMENTS (WHERE APPLICABLE)
 - BASIX CERTIFICATE
 - ALL RELEVANT CODES, STANDARDS & APPROVALS



LYNCH BUILDING GROUP
 CLIENT:
 PROPOSED DETACHED DUAL
 OCCUPANCY
 LOT 407, 4 SUTOR AVENUE
 CAERLEON NSW 2850
 PROJECT:



POSTAL:
 PO BOX 1298
 Mudgee NSW 2850
 CONTACT US:
 P: 0411 761 934
 E: info@jhlbuildingdesigns.com.au
 FB: @jhlbuildingdesigns

FLOOR PLAN - DWELLING TWO			
DRAWING TITLE:	DESIGN: LBG	FILE NO: 0462-A01	05 OF 10
DRAFTED: J.LYNCH	CHECKED: A.LYNCH	PAPER SIZE: A3	DRAWING NO:
			REV: B