




Reference number 3575

Member of the Fire Protection Association of Australia

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## **Lot 1, DP 1132852, 18-20 Sturdee Lane, Lovett Bay, NSW 2105.**

Friday, 27 August 2021

Prepared and certified by:	Matthew Willis <b>BPAD – Level 3 Certified Practitioner</b> Certification No: BPD-PA 09337		27/08/2021
Can this proposal comply with AS3959-2018 (inc section 7.5, 7.5.1, 7.5.2, 7.5.3, 7.5.4 (where applicable) of the Rural Fire Services document Planning for Bushfire Protection 2019)?	<b>Yes</b>		
What is the recommended AS 3959-2018 level of compliance?	<b>BAL-19 and BAL-12.5</b>		
Is referral to the RFS required?	<b>No</b>		
Can this development comply with the requirements of PBP?	<b>Yes</b>		
Plans by "James De Soyres and Associates" (Appendix 1) dated.	<b>12/7/2021</b>		

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# **Bushfire Risk Assessment**

***Friday, 27 August 2021***

### **Contact**

*James de Soyres*

*James De Soyres and Associates*

*PO Box 657*

*Newport NSW 2106*

*9979 1823*

### **Subject Property**

*Lot 1, DP 1132852*

*18-20 Sturdee Lane*

*Lovett Bay NSW 2105*

## BUSHFIRE RISK ASSESSMENT CERTIFICATE

**THIS FORM IS TO BE COMPLETED BY A RECOGNISED CONSULTANT IN BUSHFIRE RISK ASSESSMENT IN ACCORDANCE WITH SECTION 79BA 1(b) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 NO 203**

Property Address	Lot 1, DP 1132852, number 18-20 Sturdee Lane Lovett Bay
Description of the Proposal	Alterations and additions to an existing dwelling
Plan Reference	12/7/2021
BAL Rating	BAL-19 and BAL-12.5
Does the Proposal Rely on Alternate Solutions?	<b>No</b>

I, **Matthew Willis of Bushfire Planning Services Pty Ltd** have carried out a bushfire risk assessment on the above-mentioned proposal and property. A detailed Bushfire Assessment Report is attached which includes the submission requirements set out in Planning for Bushfire Protection 2019 together with recommendations as to how the relevant Specifications and requirements are to be achieved.

I hereby advise, in accordance with Section 4.14 of the Environmental Planning and Assessment Act 1979 No 203:

1. That I am a person recognised by the NSW Rural Fire Service as a qualified consultant in bushfire risk assessment; and

2. That 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 Section 4.14 of the Environmental Planning and Assessment Act 1979 No 203.

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 Northern Beaches 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.

<b>REPORT REFERENCE</b>	Friday, 27 August 2021
<b>REPORT DATE</b>	Friday, 27 August 2021
<b>CERTIFICATION NO/ACCREDITED SCHEME</b>	FPA A BPAD A BPD-PA 09337

### Attachments:

- Bushfire Risk Assessment Report
- Recommendations

**SIGNATURE:** ---  ----- **DATE:** -----Friday, 27 August 2021

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# 1 Executive Summary.

Bushfire Planning Services has been requested by Mr James de Soyres from James De Soyres and Associates to supply a bushfire compliance report on lot 1, DP 1132852, 18-20 Sturdee Lane, Lovett Bay.

The works proposed for the subject lot are for the alterations and additions to an existing dwelling, see attached plans for details.

As part of a previous Development Application, the RFS was consulted with regards to the works proposed at the time. This current development is further from the hazard and can achieve a lower BAL due to this increased separation distance.

The previous RFS advice (see appendix 2) has been incorporated into this new assessment and modified to suit the new setbacks, apart from the BAL level, the recommendations of this assessment are the same as the previous advice from the RFS.

The subject lot is on the northern side of Sturdee Lane and at its closest point to the hazard the proposed new work has a separation distance to the south of approximately 37.5m.

The vegetation that is considered to be the hazard to this proposal is situated on land that slopes up slope away from the property at an angle of approximately 11.86°.

For the purposes of this assessment this vegetation is considered to be Forest.

The remaining vegetation within the study area is contained within the boundaries of established allotments and is managed land and of low threat to this proposal.

The calculations and assumptions outlined in this report show that the development will be required to comply with the construction requirements of AS 3959-2018 BAL-19 on its exposed western, southern and eastern aspects, and BAL-12.5 on the northern aspects and any additional construction requirements contained within section 7.5, 7.5.1, 7.5.2, 7.5.3, 7.5.4 (where applicable) of the Rural Fire Services document Planning for Bushfire Protection 2019.

The following table is a summary of the pertinent findings of this assessment.

Aspect	North	East	South	West
<b>Vegetation type</b>	Managed land	Managed land	Managed land/forest	Managed land
<b>Slope</b>	N/A	N/A	All Upslope and Flat Land	N/A
<b>Setback within lot 1</b>	N/A	N/A	37.5m	N/A
<b>Setback outside lot 1</b>	N/A	N/A	0m	N/A
<b>Total setback</b>	N/A	N/A	37.5m	N/A
<b>Bal level</b>	N/A	N/A	BAL-19	N/A

*Note: The above table is a summary of the significant variables used to determine the highest BAL for this proposal. THIS TABLE IS NOT INTENDED FOR CONSTRUCTION!*

Aspect	North	East	South	West
<i>Only the highest BAL level is shown, aspects marked as N/A will still have a BAL. Refer to section 11 for construction requirements for these other aspects.</i>				

## 2 General.

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This proposal relates to the alterations and additions to an existing dwelling on the subject lot and its ability to comply with the rules and regulations for building in a bushfire prone area.

The methodology used on this report is based on Planning for Bushfire Protection 2019 (PBP) as published by the New South Wales Rural Fire Service.

Any wording that appears in *blue italics* is quotes from Planning for Bushfire Protection 2019. Some of the measurements used in this report have been taken from aerial photographs and as such are approximate only.

## 3 Block Description.

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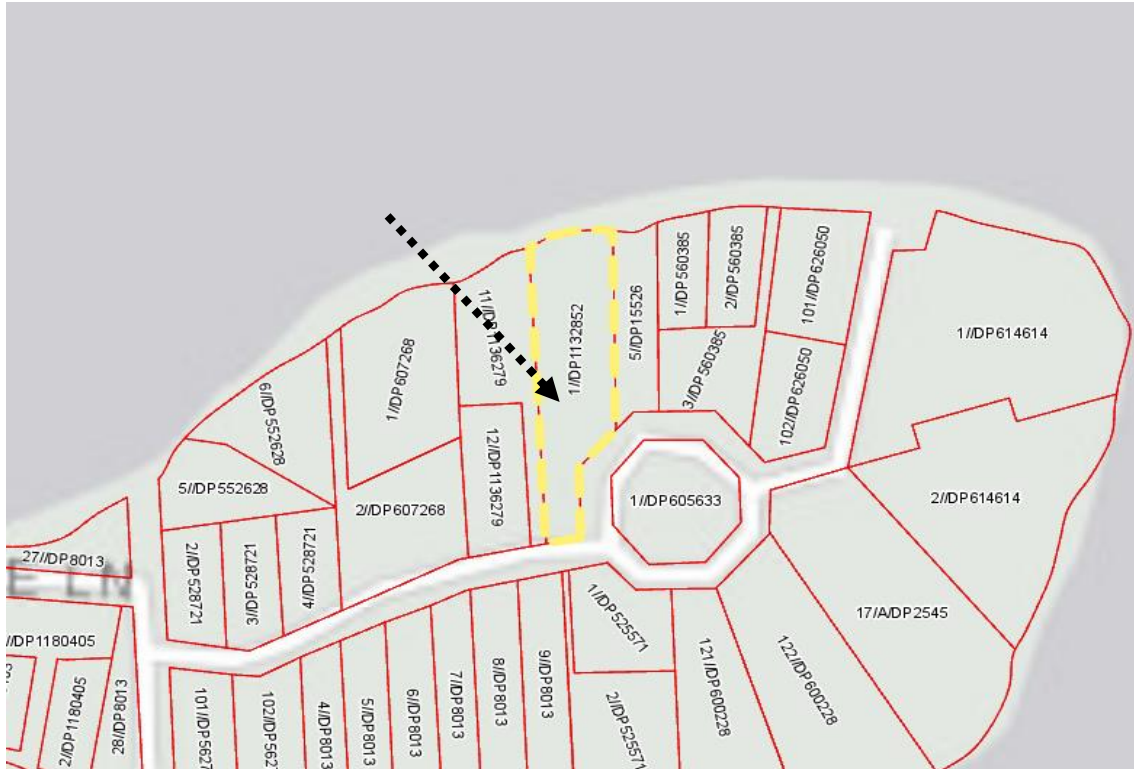
The subject block is situated on the northern side of Sturdee Lane in an established area of Lovett Bay.

The lot currently contains a multi-level class 1 dwelling and outbuilding.

The lands surrounding the proposed site on the subject lot to a distance of at least 37.5m will contain existing development or land that is otherwise not considered to be a significant bushfire hazard.

- Lot; 1
- DP; 1132852.
- LGA; Northern Beaches.
- Area; 2538m2.
- Address; 18-20 Sturdee Lane, Lovett Bay.

*This section has been left blank.*



Map 1 shows the cadastral layout around the subject lot.



Map 2 is an extract from the councils' bushfire prone land map. The map shows lot 1 to contain category 1 bushfire vegetation.

## 4 Vegetation.

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The study area for the vegetation is 140m surrounding the subject block.

The major potential hazard to this development is the vegetation within an area of undeveloped land to the south.

For the purpose of this assessment and compliance with Planning for Bushfire Protection this area of undeveloped land is considered to be Forest and is the hazard to this proposal.



*Photo 1 - An overview of the vegetation within the general area.*

*This area has been left intentionally blank.*



*Photo 2 is a closer view of the vegetation in the area.*

Table 1 outlines the vegetation orientation and distance from the development area.

Aspect	North	East	South	West
<b>Vegetation type</b>	Managed land	Managed land	Managed land/forest	Managed land
<b>Setback within lot 1</b>	N/A	N/A	37.5m	N/A
<b>Off-site setback</b>	N/A	N/A	0m	N/A
<b>Total setback</b>	N/A	N/A	37.5m	N/A

*Table 1 - Any aspect marked with "N/A" in the table above indicates that it is considered there is none or only a secondary hazard in that direction.*

*This area has been left intentionally blank.*

## 5 Known constraints on subject block.

The site is constrained by vegetation.

## 6 Slope.

The slope of the land beneath the hazard that is most likely to influence bushfire behaviour has been calculated by topographical map analysis to a distance of 100m from the subject lot.

An extract of the topographical map for the area is shown below and the relevant slope analysis is shown in Table 2.



Table 2 shows the slope beneath the hazard.

Aspect	North	East	South	West
Slope	N/A	N/A	All Upslope and Flat Land	N/A

*Table 2 - Any aspect marked with "N/A" in the table above indicates that it is considered there is no hazard in that direction.*

## 7 Utilities.

### 7.1 Water.

The subject block will not be serviced by a reticulated water supply.

### 7.2 Electricity

Main's electricity is available to the block.

### 7.3 Gas

It is unknown if bottled gas is to be altered or installed in this proposal.

## 8 Access/Egress.

There is limited vehicle access around the general area however here is direct waterfront access to the lot.

### *Analysis of development and recommendation.*

## 9 Compliance with Planning for Bushfire Protection setbacks.

Based on the development design, vegetation classification, effective slope estimates and setback distance already outlined in this report the subject development will be required to comply with the deemed to satisfy construction requirements of AS 3959-2018 BAL-19 and the RFS requirements on all fire prone aspects.

The following table is an extract from table A1.12.5 of Planning for Bushfire Protection 2019. This table is used to calculate the BAL for a proposal in an area with an FDI of 100.

The variables that have already been outlined in this assessment are highlighted in red with the highest BAL highlighted in yellow.

ALL UPSLOPE AND FLAT	Keith Vegetation Formation	BUSHFIRE ATTACK LEVEL (BAL)				
		BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
	Arid-Shrublands (acacia and chenopod)	< 5	5 -< 6	6 -< 9	9 -< 14	14 -< 100
	Forest (wet and dry sclerophyll) including Coastal Swamp Forest, Pine Plantations and Sub-Alpine Woodland	< 18	18 -< 24	24 -< 33	33 -< 45	45 -< 100
	Forested Wetland (excluding Coastal Swamp Forest)	< 7	7 -< 10	10 -< 14	14 -< 21	21 -< 100
	Freshwater Wetlands	< 4	4 -< 5	5 -< 7	7 -< 11	11 -< 100
	Grassland	< 8	8 -< 10	10 -< 15	15 -< 22	22 -< 50

Grassy and Semi-Arid Woodland (including Mallee)	< 9	9 -< 12	12 -< 18	18 -< 26	26 -< 100
Rainforest	< 8	8 -< 11	11 -< 16	16 -< 23	23 -< 100
Short Heath	< 7	7 -< 9	9 -< 14	14 -< 20	20 -< 100
Tall Heath	< 12	12 -< 16	16 -< 23	23 -< 32	32 -< 100

For the purpose of this assessment the southern aspect has been chosen as the most potentially hazardous aspect due to the effective slope, potential run of fire and the prevailing fire weather of the area.

## 10 Siting.

The current site provides adequate separation between the proposed building and surrounding vegetation for a compliant structure to be built.

### Recommendation;

Nil.

## 11 Construction and design.

All new work is to be undertaken in accordance with the relevant requirements of the NCC and AS3959 2018. The following recommendations are a minimum level of construction. Constructing the proposal to a higher level than that recommended is allowable under AS3959.

### Recommendation; all new work to the western, southern and eastern aspects.

1. New construction on the western, southern and eastern aspects shall comply with the requirements of section 3 of Australian Standard AS3959-2018 "Construction of buildings in bush fire-prone areas" and,
2. New construction on the western, southern and eastern aspects shall also comply with the requirements of BAL-19 Australian Standard AS3959-2018 "Construction of buildings in bush fire-prone areas" or NASH Standard "National Standard Steel Framed Construction in Bushfire Areas" and any additional construction requirements contained within section 7.5, 7.5.1, 7.5.2, 7.5.3, 7.5.4 (where applicable) of the Rural Fire Services document Planning for Bushfire Protection 2019.

### Recommendation; all new work to the northern aspect.

3. New construction on the northern aspects shall comply with the requirements of section 3 of Australian Standard AS3959-2018 "Construction of buildings in bush fire-prone areas" and,
4. New construction on the northern aspects shall also comply with the requirements of and BAL-12.5 Australian Standard AS3959-2018 "Construction of buildings in bush fire-prone areas" or NASH Standard "National Standard Steel Framed Construction in Bushfire Areas" and any additional construction requirements contained within section 7.5, 7.5.1, 7.5.2, 7.5.3, 7.5.4 (where applicable) of the Rural Fire Services document Planning for Bushfire Protection 2019.

5. New roofing valleys and guttering should be fitted with a non-combustible leaf protection to stop the accumulation of debris.

*AS-3959 2018 is available as PDF from;*

[https://infostore.saiglobal.com/en-au/standards/as-3959-2018-122340\\_saig\\_as\\_as\\_2685241/](https://infostore.saiglobal.com/en-au/standards/as-3959-2018-122340_saig_as_as_2685241/)

## 12 Utilities.

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### 12.1 Water.

The proposed development will not have access to a reticulated water supply. (per previous RFS advice)

#### Recommendation;

6. The provision of water, electricity and gas must comply with the following in accordance with Table 5.3c of Planning for Bush Fire Protection 2019:
  - A 10,000-litre minimum capacity static water supply must be provided on site;
  - a connection for firefighting purposes is located within the IPA or non-hazard side of 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.
  - 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;
  - 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;
7. Where Lovett Bay is instead utilised as the static water supply it must comply with the following:
  - A petrol or diesel pump capable of delivering adequate water for firefighting purposes including head
  - height and delivery distance shall be made available to the water supply.
  - A suitable suction hose shall be supplied to access Lovett Bay at all tide heights.
  - 65mm Storz outlet with a ball valve is fitted to the outlet;
  - Delivery hoses/pipes shall be long enough to reach all external walls of structures on the site from the location of the pump.

## 12.2 Electricity and Gas.

Recommendation; (per previous RFS advice)

8. Any new electricity connections are to comply with the requirements of table 7.4a of Planning for Bushfire Protection.
9. 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

## 13 Asset Protection Zone (APZ).

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The Asset Protection Zone is *“An area surrounding a development managed to reduce the bushfire hazard to an acceptable level. The width of an APZ will vary with slope, vegetation and construction level”*.

Recommendation; (per previous RFS advice)

10. From the start of building works, and in perpetuity, the property must be managed for a distance of 37.5 metres from the proposed works as follows:
  - Minimal fine fuel at ground level (i.e. twigs, leaves, woodchip and branches to be removed at regular intervals);
  - All flammable shrubs (and trees < 2 metres in height) removed, and no new shrubs planted,
  - Grass can be retained if kept to < 10 cm,
  - Tree canopies pruned to ensure they are not overhanging, or within 2 metres of, the building as far as possible without endangering the health of the tree; and,
  - Lower limbs of trees removed up to a height of 2 metres above the ground.

## 14 Landscaping.

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Recommendation;

11. Any new fencing is to be constructed in accordance with section 7.6 of Planning for Bushfire Protection 2019.
12. Any new landscaping to the site is to comply with the principles of Appendix 4 and section 3.7 of Planning for Bush Fire Protection 2019. In this regard the following

landscaping principles are, where applicable, to be incorporated into the development<sup>1</sup>:

- Suitable impervious areas being provided immediately surrounding the building such as courtyards, paths and driveways;
- Grassed areas/mowed lawns/ or ground cover plantings being provided in close proximity to the building;
- Restrict planting in the immediate vicinity of the building which may over time and if not properly maintained come in contact with the building;
- Maximum tree cover should be less than 30%, and maximum shrub cover less than 20%;
- Planting should not provide a continuous canopy to the building (i.e. trees or shrubs should be isolated or located in small clusters);
- When considering landscape species consideration needs to be given to estimated size of the plant at maturity;
- Avoid species with rough fibrous bark, or which retain/shed bark in long strips or retain dead material in their canopies;
- Use smooth bark species of trees species which generally do not carry a fire up the bark into the crown;
- Avoid planting of deciduous species that may increase fuel at surface/ ground level (i.e. leaf litter);
- Avoid climbing species to walls and pergolas;
- Locate combustible materials such as woodchips/mulch, flammable fuel stores away from the building;
- Locate combustible structures such as garden sheds, pergolas and materials such timber garden furniture way from the building; and
- Use of low flammability vegetation species.

## 15 Constraints on the subject block.

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None known.

Recommendation;

Nil

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<sup>1</sup>Refer to referenced documents for a complete description.

## 16 Access/Egress.

All roads in the area are considered to be capable of handling emergency service vehicles. Access from the roadway onto the property is also considered to be adequate for firefighting purposes.

### Recommendation

Nil

## 17 Compliance or non compliance with the specifications and requirements for bushfire protection measures.

<b>APZ</b> A defensible space is provided onsite. An APZ is provided and maintained for the life of the development.	Achievable with the implementation of the recommendations in section 13
<b>SITING AND DESIGN:</b> Buildings are sited and designed to minimise the risk of bush fire attack.	Achievable with the implementation of the recommendations in section 10
<b>CONSTRUCTION STANDARDS:</b> It is demonstrated that the proposed building can withstand bush fire attack in the form of wind, smoke, embers, radiant heat and flame contact.	Achievable with the implementation of the recommendations in section 11
<b>ACCESS</b> Safe, operational access is provided (and maintained) for emergency services personnel in suppressing a bush fire while residents are seeking to relocate, in advance of a bush fire, (satisfying the intent and performance criteria for access roads in sections 4.1.3 and 4.2.7).	Achievable with the implementation of the recommendations in section 16
<b>WATER AND UTILITY SERVICES:</b> <ul style="list-style-type: none"> <li>adequate water and electricity services are provided for firefighting operations</li> <li>Gas and electricity services are located so as not to contribute to the risk of fire to a building.</li> </ul>	Achievable with the implementation of the recommendations in section 12
<b>LANDSCAPING:</b> <ul style="list-style-type: none"> <li>it is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind driven embers to cause Ignitions.</li> </ul>	Achievable with the implementation of the recommendations in section 14

## 18 Conclusions.

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Based on the above report and with the implementation of the recommendation contained within this report the consent authority should determine that this development can comply with the requirements of AS 3959-2018 and 'Planning for Bushfire Protection' guidelines.

The recommendations contained within this report are to be implemented in their entirety. Changing one aspect may have an adverse effect on the rest of the recommendations.

Bushfires are affected by many external influences such as climactic conditions, vegetation type, moisture content of the fuel, slope of the land and human intervention to name a few and are difficult to predict.

This report does not intend to provide a guarantee that the subject property will survive if a bushfire should impact the surrounding area. The purpose of this report is to show the developments level of compliance or in some cases non-compliance with the New South Wales legislation regarding building in bushfire prone areas.

Where non-compliance is found measures will be suggested that should make the building less susceptible to the various attack mechanisms of a bushfire and comply with the performance requirements of the Building Code of Australia.

The opinions expressed in this report are based on the writers' experience and interpretation of the relevant guidelines and standards. Notwithstanding the above, these guidelines and standards are open to interpretation. All care has been taken to ensure that the opinions expressed in this report are consistent with past successful outcomes.

Some of the information used in the compilation of this assessment has been provided by the proponent or the proponent's representatives. While we believe this information to be true and have accepted the information in good faith however this company or its representatives will not accept any responsibility if the provided information is determined to be incorrect.

This document is to assist the consenting authorities with their assessment of this proposal. The recommendations contained in this assessment reflect the normal conditions that are typically applied by the consent authority for a proposal such as this however the conditions of consent for the proposal will be supplied by the certifying authority on approval of the development and may not necessarily be the same as the recommendations of this assessment.

The recommendations in this assessment are for planning guidance only, construction details and compliance with all building requirements are the responsibility of the Architect/Designer, Builder and Certifier.

To avoid confusion, unless specifically referenced by the consenting authority, it is strongly recommended that once this proposal has been approved that this document is no longer referenced and that only the official conditions of consent as reflected in documentation by the certifying body are used for construction guidance.

If any further clarification is required for this report, please do not hesitate to contact me using the details above.

Yours Sincerely



**Matthew Willis**

Grad Dip Planning for Bushfire Prone Areas  
Bushfire Planning Services Pty Limited

## 19 References.

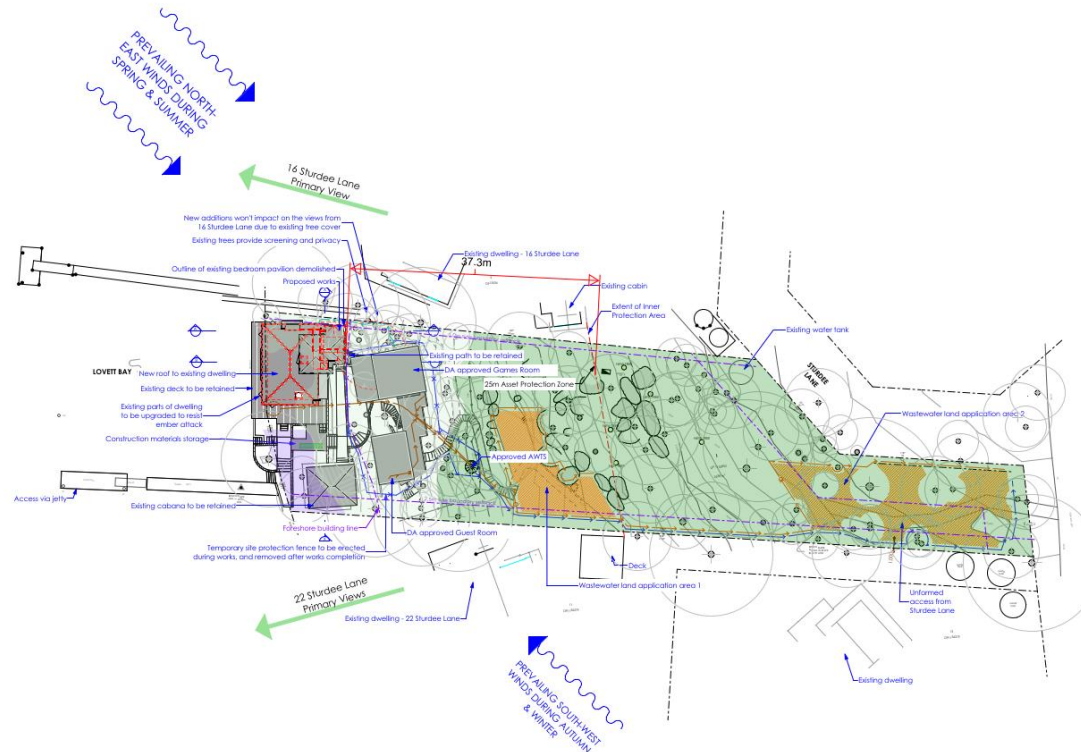
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- Ramsay, C and Rudolph, L (2003) *"Landscape and Building Design for Bush fire Areas"*. CSIRO Publishing, Collingwood.
- Resources and Energy NSW (2016). *ISSC 3 Guide for the Managing Vegetation in the Vicinity of Electrical Assets*. NSW Government
- Rural Fire Service NSW (2005) *"Standards for Asset Protection Zones"*
- Standards Australia (2018). *"AS 3959, Construction of buildings in bush fire prone areas"*.
- Standards Australia (2018). *"AS/NZS 1530.8.1 Methods for fire tests on building materials, components and structures - Tests on elements of construction for buildings exposed to simulated bush fire attack - Radiant heat and small flaming sources"*.
- Standards Australia (2018). *"AS/NZS 1530.8.2 Methods for fire tests on building materials, components and structures - Tests on elements of construction for buildings exposed to simulated bush fire attack - Large flaming sources"*.
- Standards Australia (2014). *"AS/NZS 1596 The storage and handling of LP Gas"*.

## 20 Appendix 1 - Plans .

**FOR DEVELOPMENT  
APPLICATION  
PURPOSES ONLY  
NOT FOR CONSTRUCTION**

Notes: Do not scale from drawings.  
ALL NEW CONSTRUCTION TO BAL-40  
EXISTING HOUSE TO BE UPGRADED TO RESIST  
EMBER ATTACK  
NO EXPOSED TIMBER CONSTRUCTION



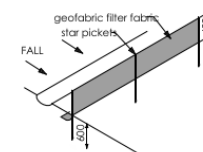
Nominated Architect: Reg. No. 6769  
PO Box 657, Newport Beach, NSW 2106  
(02) 9979 1823  
contact@jdsd.com.au  
www.jdsd.com.au

*James de Soyres*  
+ Associates  
architects

Additions & Alterations  
at 18-20 Sturdee Lane, Lovett Bay NSW 2105  
for A & F Loader

**PRELIMINARY** DEVELOPMENT APPLICATION  
Site and Site Analysis Plan

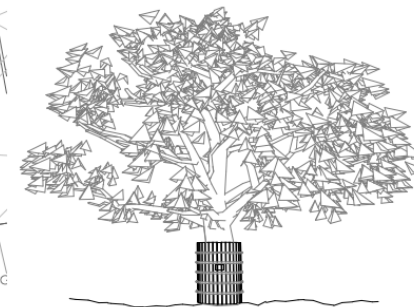
Scale: 1:500  
Date of drawing: 12/07/2021  
Project No: 1708b  
Drawing No: DA-01



Notes: Do not scale from drawings  
ALL NEW CONSTRUCTION TO BAL-40  
EXISTING HOUSE TO BE UPGRADED TO RESIST  
EMBER ATTACK  
NO EXPOSED TIMBER CONSTRUCTION

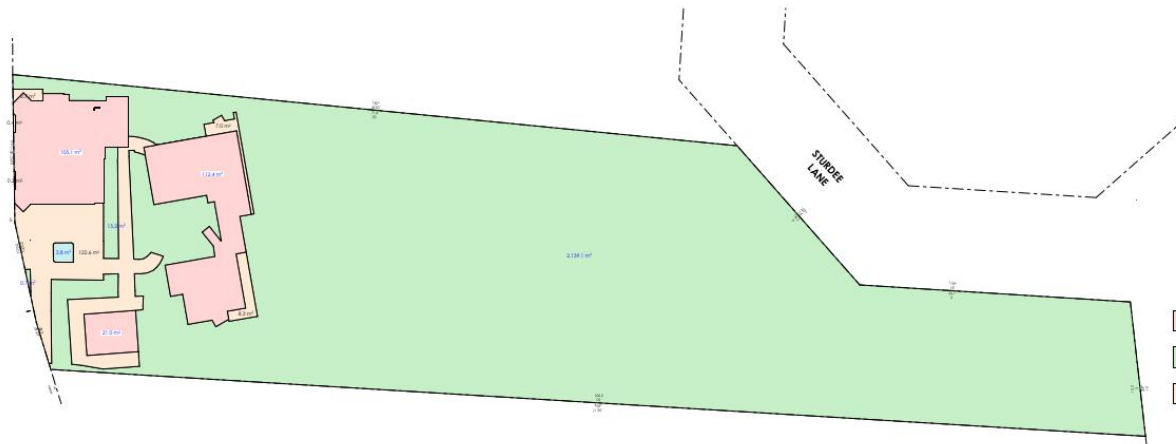
**SEDIMENT CONTROL FENCE - TYPE 1**  
1.2m stirracket posts to be driven in a minimum of 600mm at a maximum of 1800mm centres.  
Self-supporting geotextile fabric to be securely fastened to the upslope side of each picket with tie wires and turned upslope in a trench at least 200mm deep.  
Void joints in the filter fabric if possible but if necessary, joints are to be taped.  
Minimum 150mm overlap of fabric, securely stitched together with both ends fixed to the post.  
Backfill the trench over the toe of the fabric.  
Inspect for any sagging, undercutting or overlapping after rain and repair as necessary.

TREE PROTECTION FENCE  
 Wrap tree with orange hessian  
 90x45mm timber planks  
 2.4m high above ground level.  
 Timber to be wrapped with  
 hoop iron.  
 Tree protection signage  
 to be mounted onto fencing.



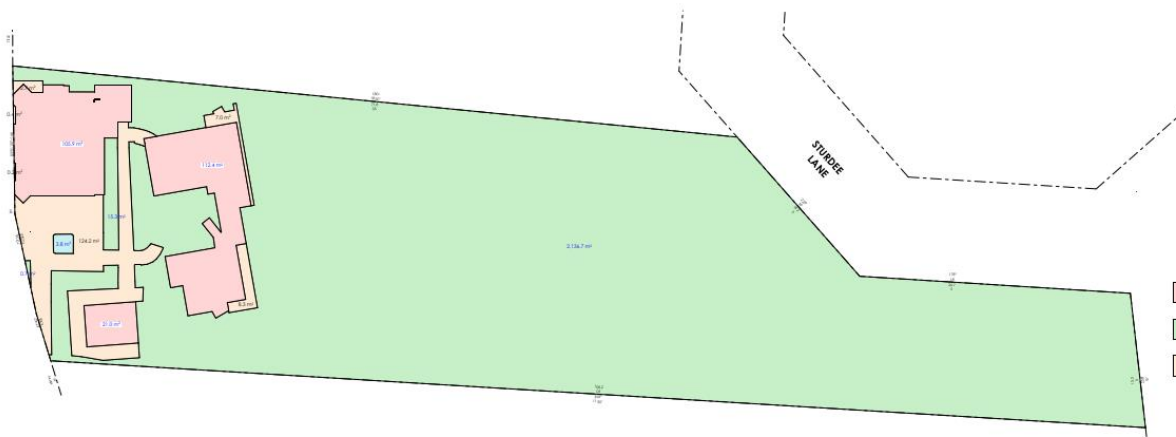
**FOR DEVELOPMENT  
APPLICATION  
PURPOSES ONLY  
NOT FOR CONSTRUCTION**

Notes: Do not scale from drawings  
ALL NEW CONSTRUCTION TO BAL-40  
EXISTING HOUSE TO BE UPGRADED TO RESIST  
EMBER ATTACK  
NO EXPOSED TIMBER CONSTRUCTION



SITE AREA:	2538.0 m <sup>2</sup>
Proposed Area not Landscaped:	242.3 m <sup>2</sup>
Proposed Landscaped Area:	2155.0 m <sup>2</sup> (84.9%)
Landscape Amenity Treatment:	141.2 m <sup>2</sup> (5.6%)
Total Landscaped Area:	2296.2 m <sup>2</sup> (90.5%)

1 Landscaped Area (Proposed)



SITE AREA:	2538.0 m <sup>2</sup>
Existing Area not Landscaped:	243.1 m <sup>2</sup>
Existing Landscaped Area:	2152.7 m <sup>2</sup> (84.8%)
Existing Landscape Amenity	142.8 m <sup>2</sup> (5.6%)
Total Existing Landscaped Area:	2294.9 m <sup>2</sup> (90.4%)

2 Landscaped Area (Existing)

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+ Associates  
architects

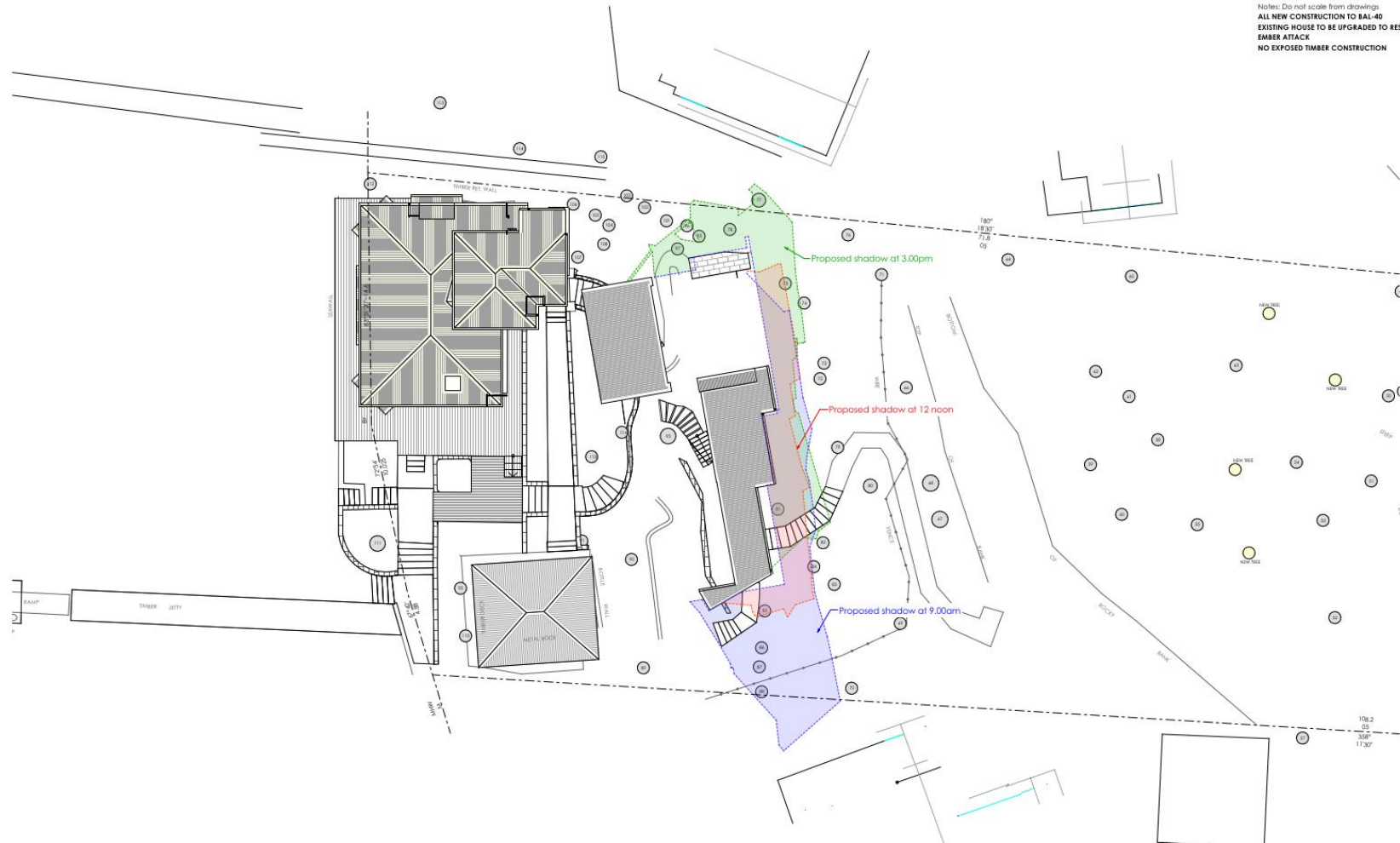
Additions & Alterations  
at 18-20 Sturdee Lane, Lovett Bay NSW 2105  
for A & F Loader

**PRELIMINARY** DEVELOPMENT APPLICATION  
Landscaped Areas

Scale: 1:400  
Date of printing: 12/07/2021  
Project No: 1708b  
Drawing No: DA-03

**FOR DEVELOPMENT  
APPLICATION  
PURPOSES ONLY  
NOT FOR CONSTRUCTION**

Notes: Do not scale from drawings  
ALL NEW CONSTRUCTION TO BAL-40  
EXISTING HOUSE TO BE UPGRADED TO RESIST  
EMBER ATTACK  
NO EXPOSED TIMBER CONSTRUCTION



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Additions & Alterations  
at 18-20 Sturdee Lane, Lovett Bay NSW 2105  
for A & F Loader

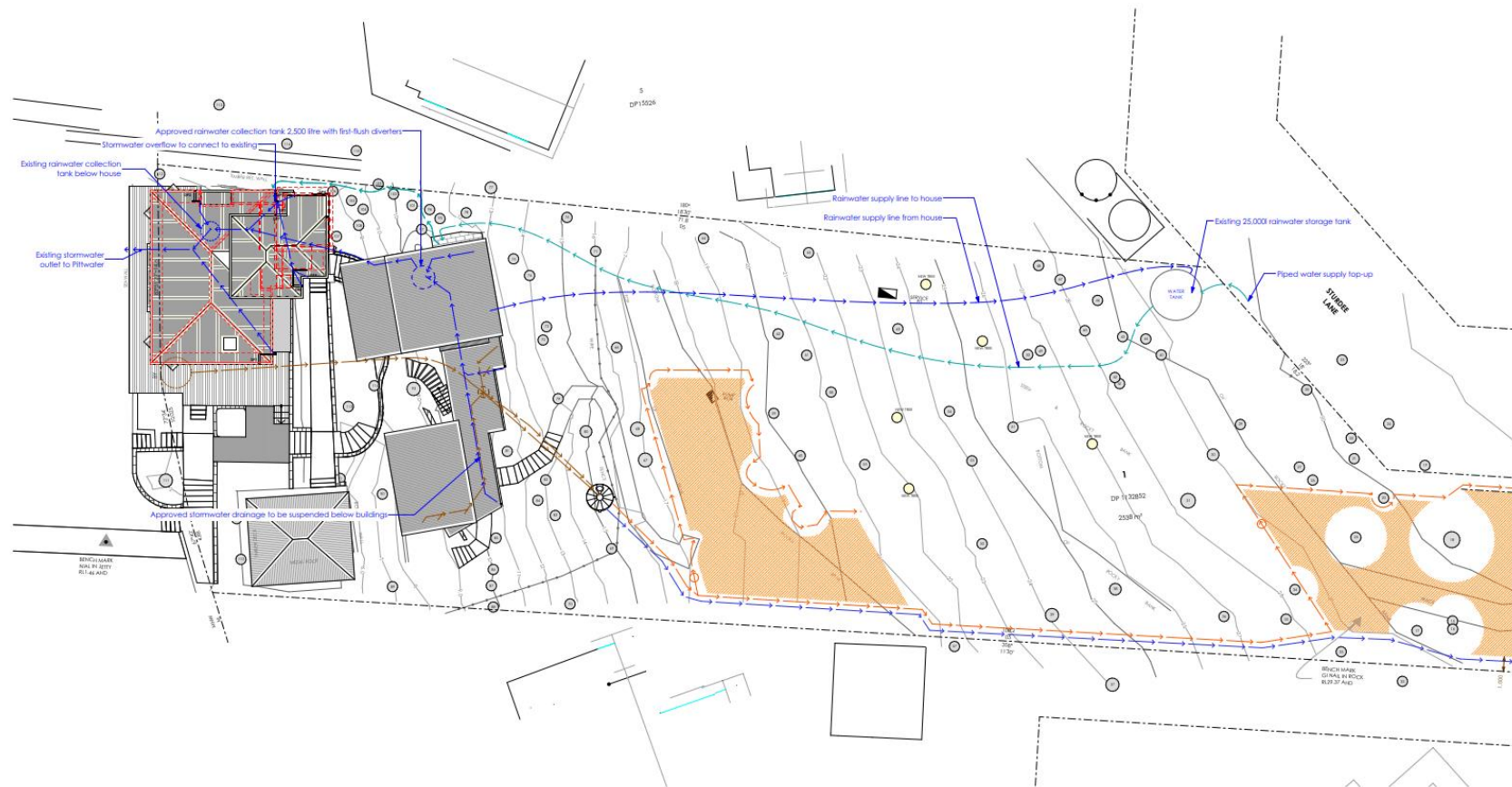
**PRELIMINARY**

DEVELOPMENT APPLICATION  
Shadow Diagrams

Scale: 1:200  
Date of printing: 12/07/2021  
Project No: 1708b  
Drawing No: DA-04

**FOR DEVELOPMENT  
APPLICATION  
PURPOSES ONLY  
NOT FOR CONSTRUCTION**

Notes: Do not scale from drawings  
ALL NEW CONSTRUCTION TO BAL-40  
EXISTING HOUSE TO BE UPGRADED TO RESIST  
EMBER ATTACK  
NO EXPOSED TIMBER CONSTRUCTION



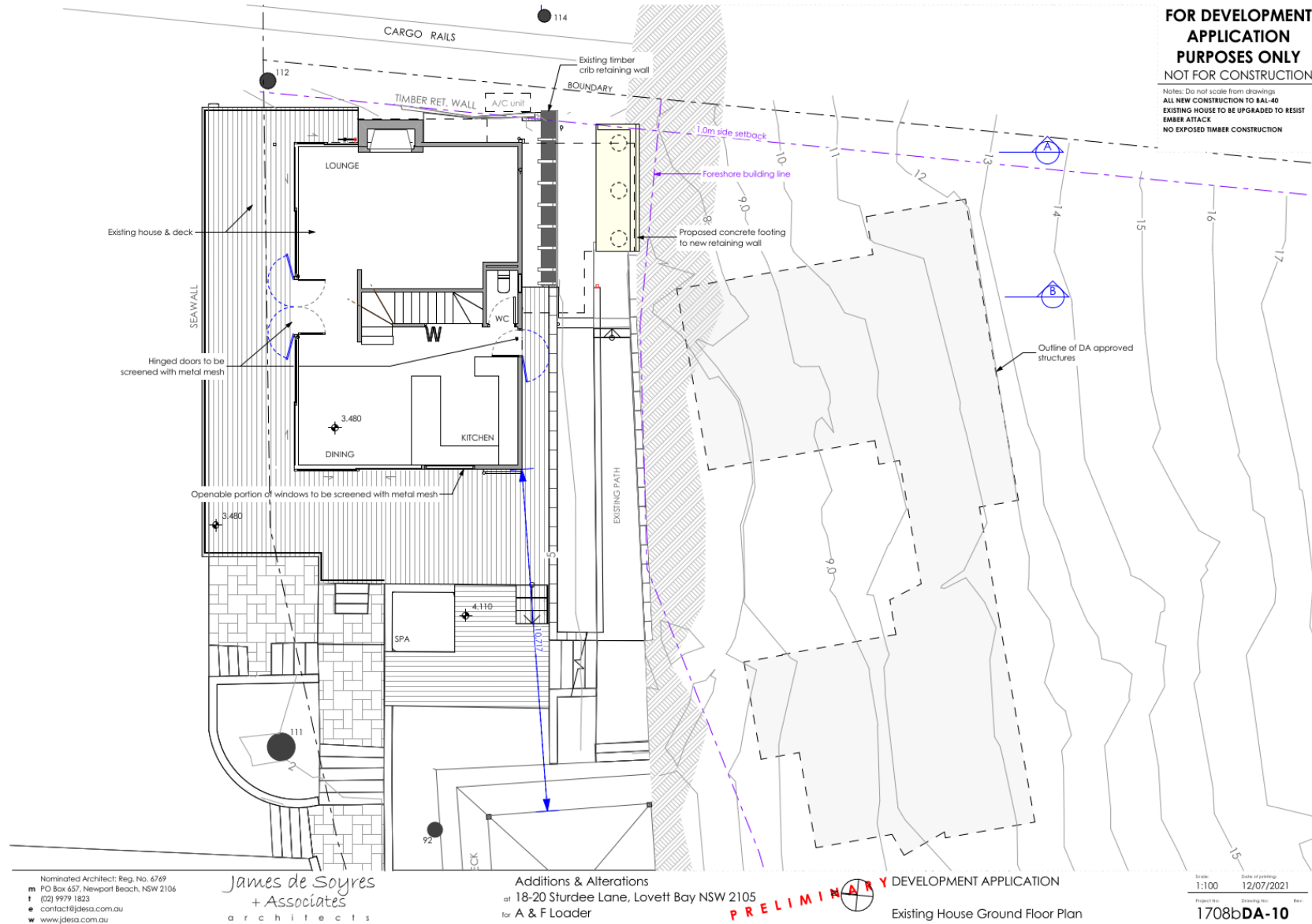
Nominated Architect: Reg. No. 6769  
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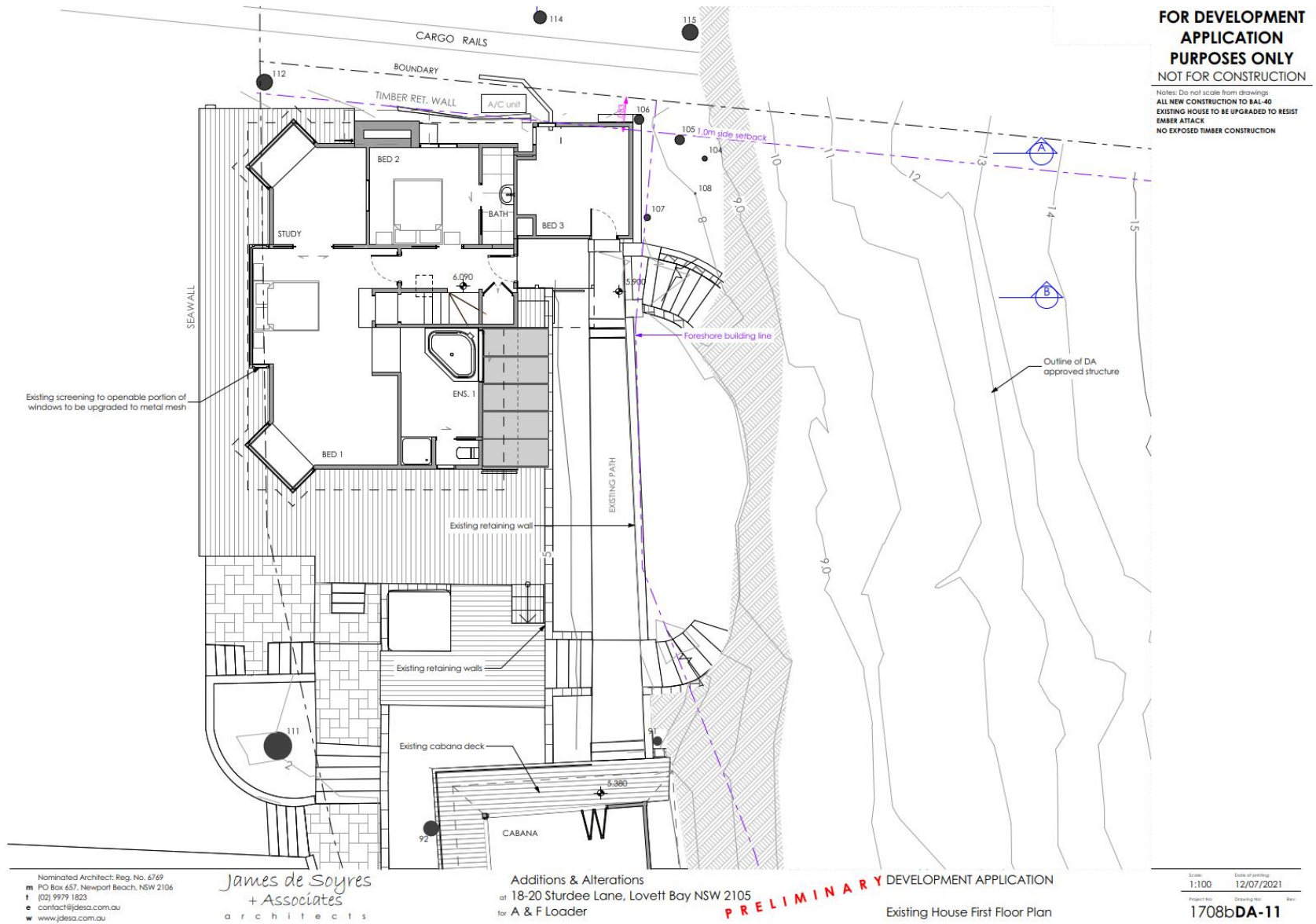
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architects

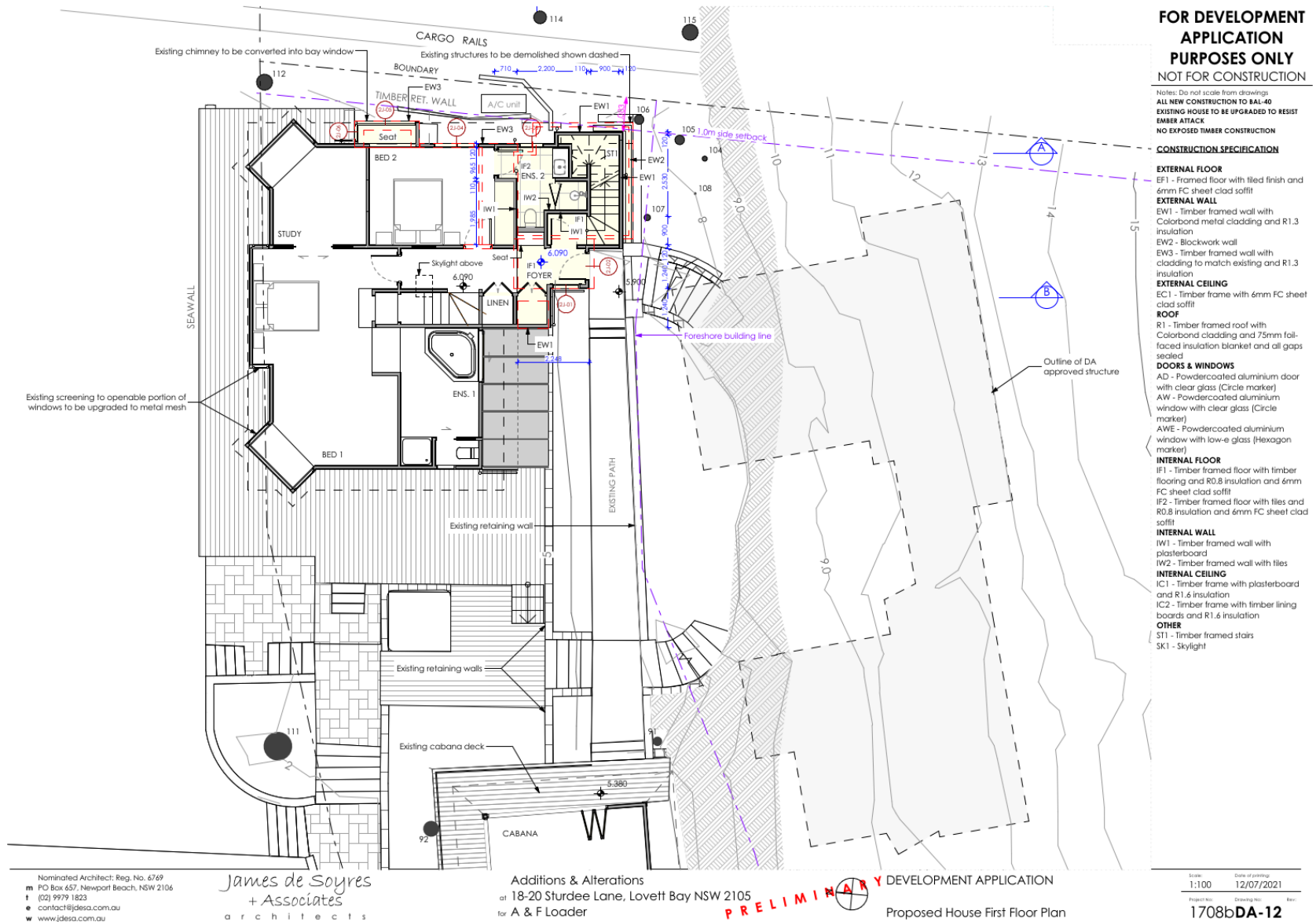
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at 18-20 Sturdee Lane, Lovett Bay NSW 2105  
for A & F Loader

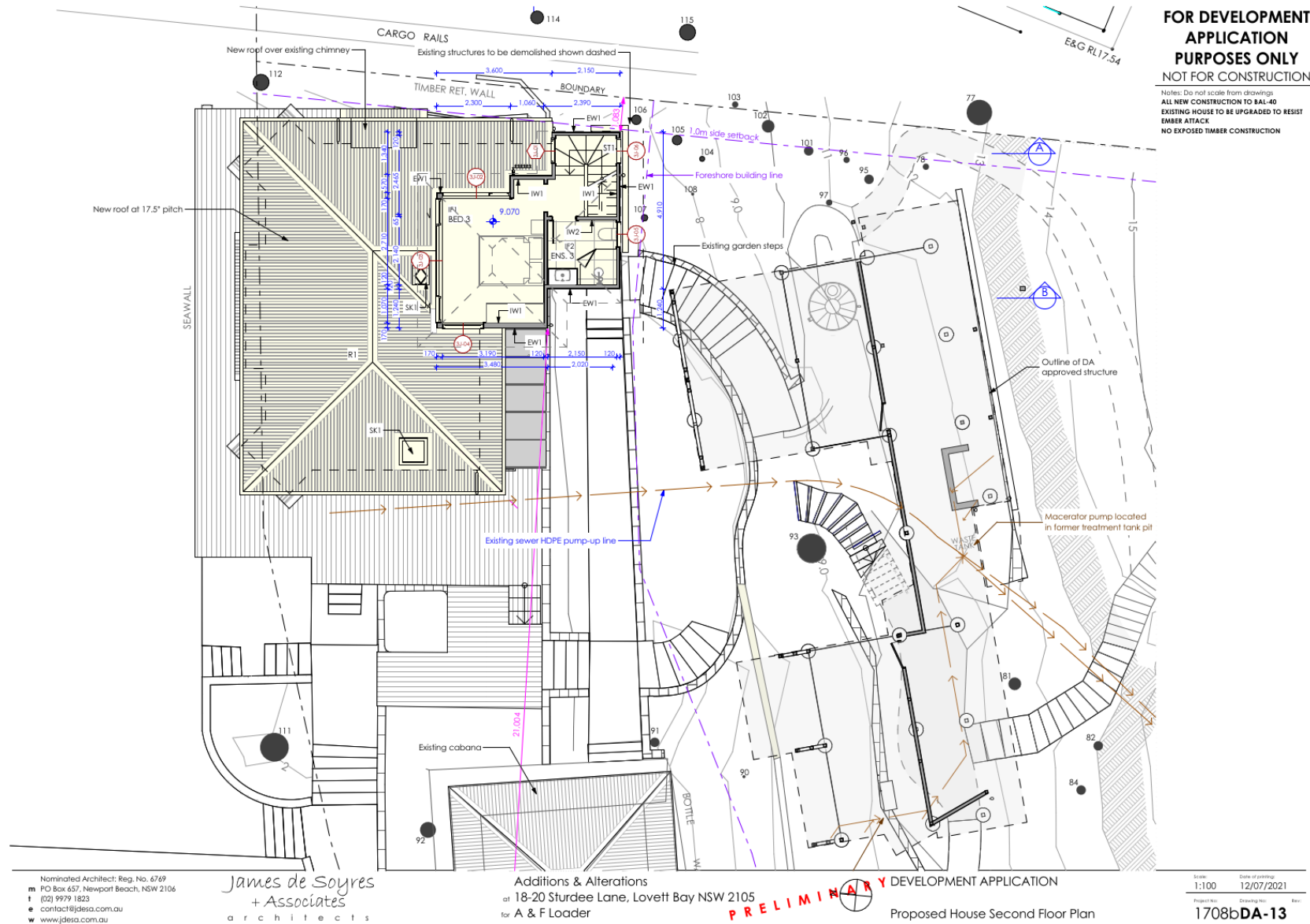
**PRELIMINARY** DEVELOPMENT APPLICATION  
Water Management Plan

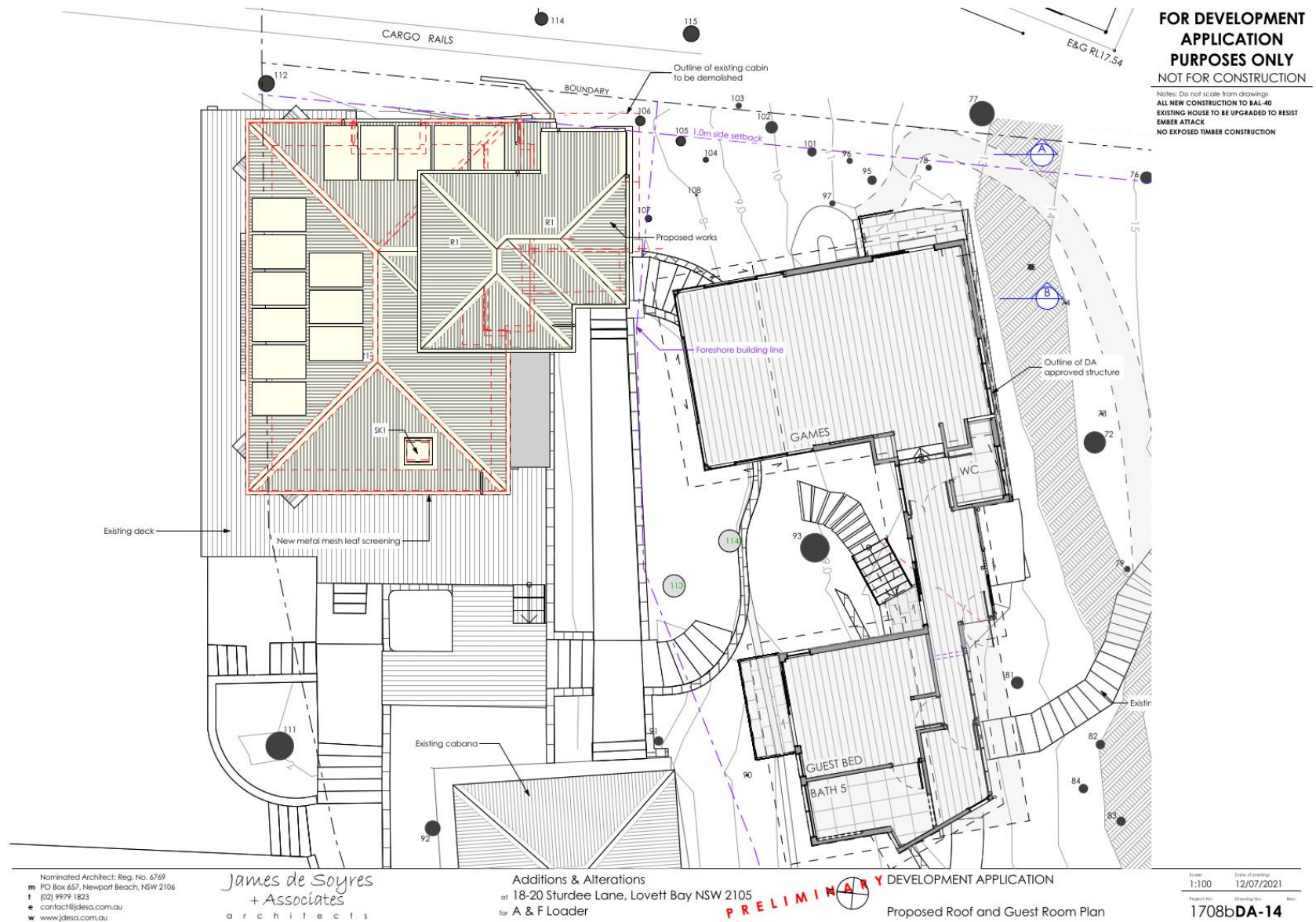
Scale: 1:250  
Date of printing: 12/07/2021  
Project No: 1708bDA-05













**FOR DEVELOPMENT  
APPLICATION  
PURPOSES ONLY  
NOT FOR CONSTRUCTION**

Notes: Do not scale from drawings  
ALL NEW CONSTRUCTION TO BAL-40  
EXISTING HOUSE TO BE UPGRADED TO RESIST  
EMBER ATTACK  
NO EXPOSED TIMBER CONSTRUCTION



EW1  
WALL CLADDING  
COLORBOND  
'Monument'

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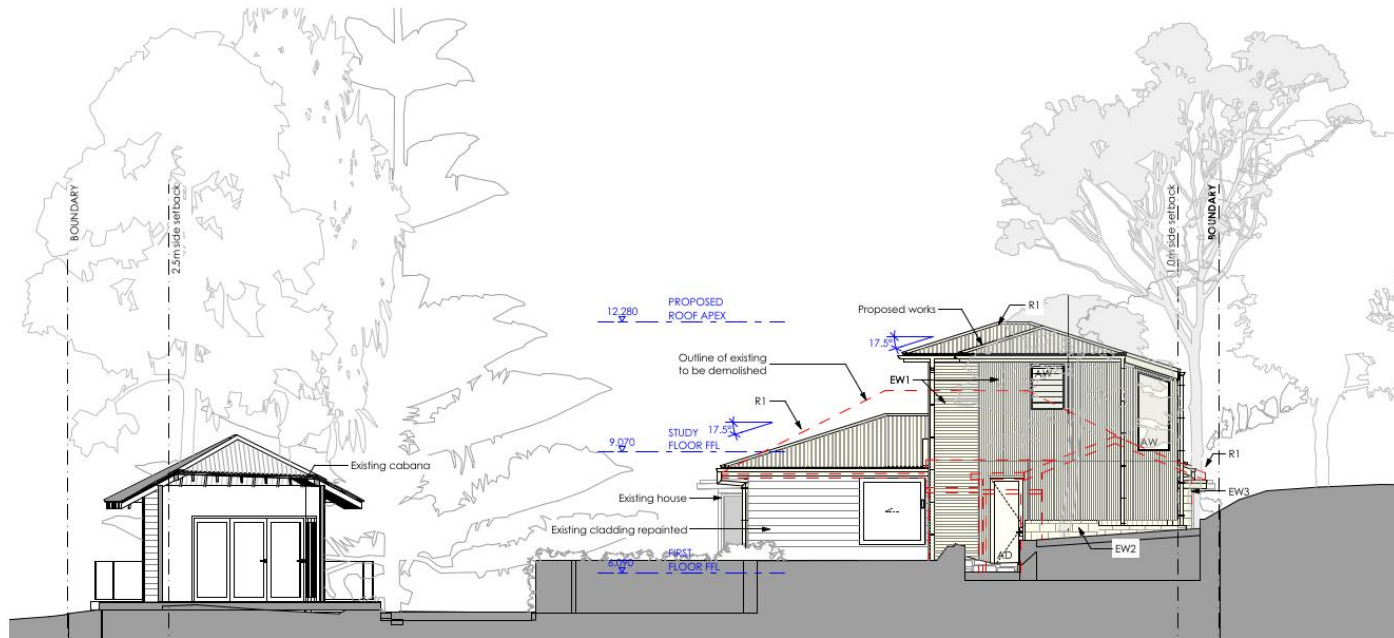
Additions & Alterations  
at 18-20 Sturdee Lane, Lovett Bay NSW 2105  
for A & F Loader

**PRELIMINARY** DEVELOPMENT APPLICATION  
North Elevation from Pittwater

Scale: 1:100 Date of printing: 12/07/2021  
Project No: 1708bDA-20

**FOR DEVELOPMENT  
APPLICATION  
PURPOSES ONLY  
NOT FOR CONSTRUCTION**

Notes: Do not scale from drawings  
ALL NEW CONSTRUCTION TO BAL-40  
EXISTING HOUSE TO BE UPGRADED TO RESIST  
EMBER ATTACK  
NO EXPOSED TIMBER CONSTRUCTION



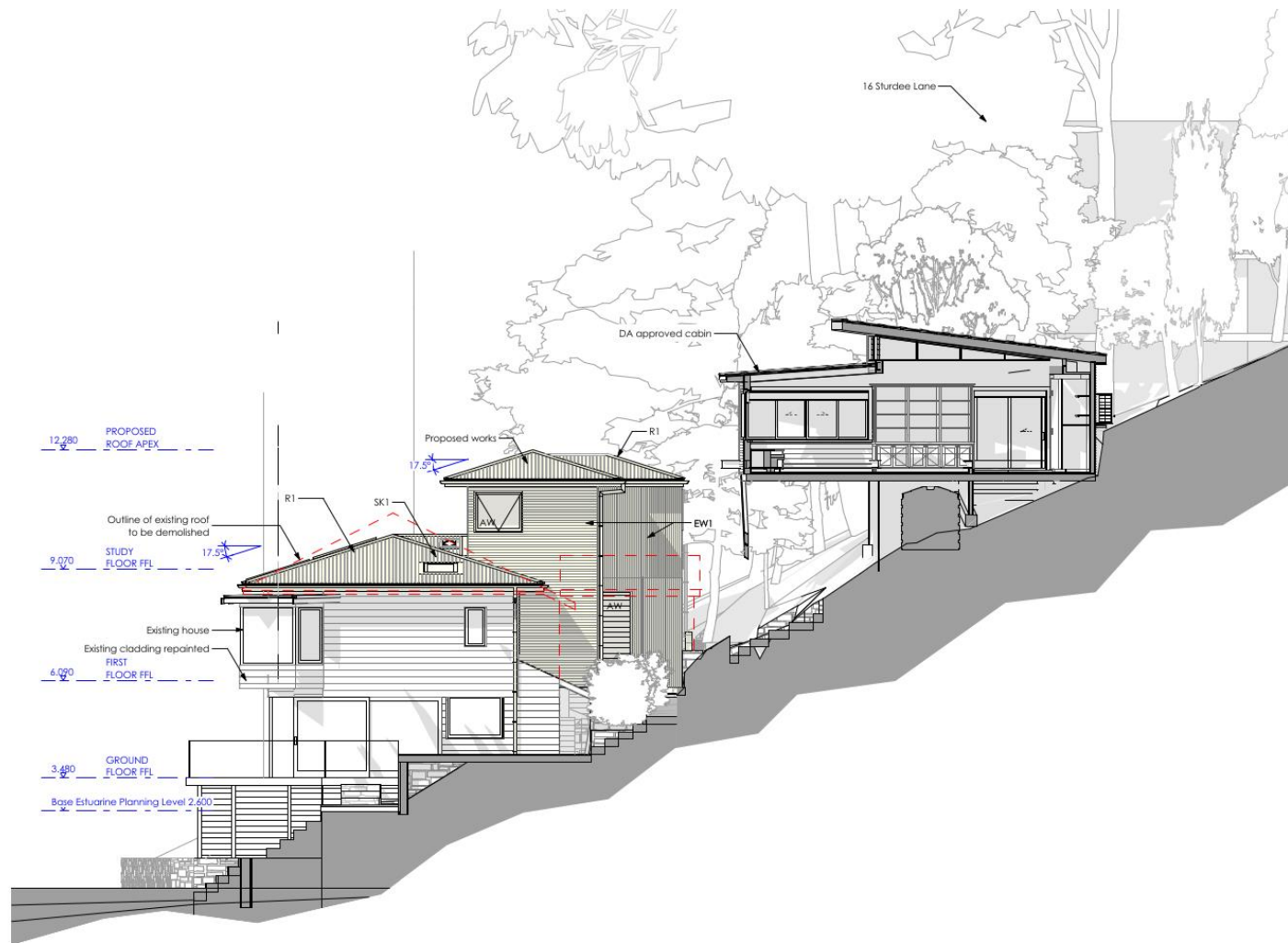
Nominated Architect: Reg. No. 6769  
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Additions & Alterations  
at 18-20 Sturdee Lane, Lovett Bay NSW 2105  
for A & F Loader

**PRELIMINARY** DEVELOPMENT APPLICATION  
South Elevation

Scale: 1:100 Date of printing: 12/07/2021  
Project No: 1708bDA-21



**FOR DEVELOPMENT  
APPLICATION  
PURPOSES ONLY  
NOT FOR CONSTRUCTION**

Notes: Do not scale from drawings  
ALL NEW CONSTRUCTION TO BAL-40  
EXISTING HOUSE TO BE UPGRADED TO RESIST  
EMBER ATTACK  
NO EXPOSED TIMBER CONSTRUCTION

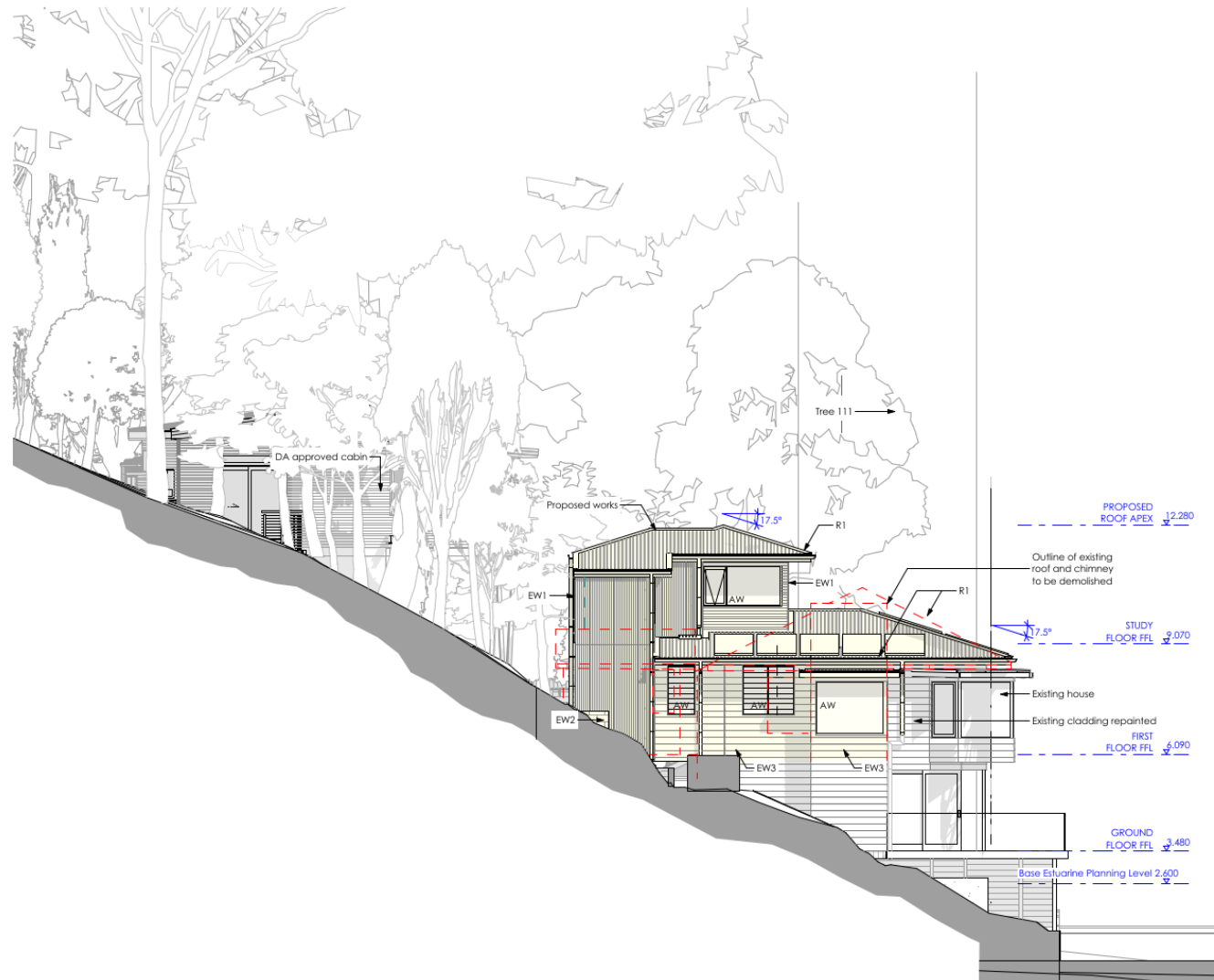
Nominated Architect: Reg. No. 6769  
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Additions & Alterations  
at 18-20 Sturdee Lane, Lovett Bay NSW 2105  
for A & F Loader

**PRELIMINARY** DEVELOPMENT APPLICATION  
West Elevation

Scale: 1:100 Date of printing: 12/07/2021  
Project No: 1708bDA-22



**FOR DEVELOPMENT  
APPLICATION  
PURPOSES ONLY  
NOT FOR CONSTRUCTION**

Notes: Do not scale from drawings  
ALL NEW CONSTRUCTION TO BAL-40  
EXISTING HOUSE TO BE UPGRADED TO RESIST  
EMBER ATTACK  
NO EXPOSED TIMBER CONSTRUCTION

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Additions & Alterations  
at 18-20 Sturdee Lane, Lovett Bay NSW 2105  
for A & F Loader

**PRELIMINARY** DEVELOPMENT APPLICATION  
East Elevation

Scale: 1:100 Date of printing: 12/07/2021  
Project No: 1708bDA-23

**FOR DEVELOPMENT  
APPLICATION  
PURPOSES ONLY  
NOT FOR CONSTRUCTION**

Notes: Do not scale from drawings  
ALL NEW CONSTRUCTION TO BAL-40  
EXISTING HOUSE TO BE UPGRADED TO RESIST  
EMBER ATTACK  
NO EXPOSED TIMBER CONSTRUCTION



PROPOSED



EXISTING



R1/EW2  
ROOF / WALL CLADDING  
COLORBOND  
'Basalt'



EW1  
WALL CLADDING  
COLORBOND  
'Monument'

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Additions & Alterations  
at 18-20 Sturdee Lane, Lovett Bay NSW 2105  
for A & F Loader

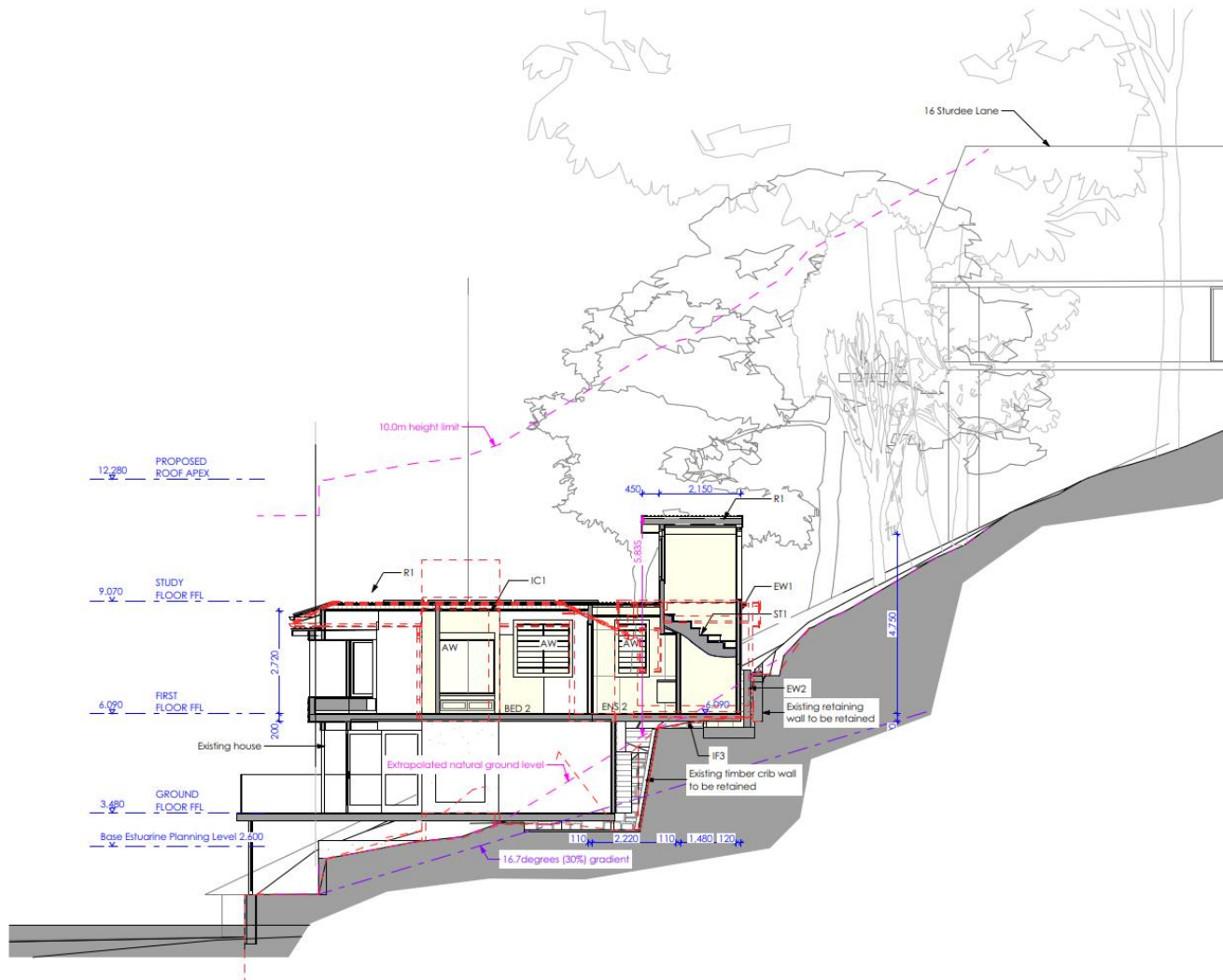
**PRELIMINARY** DEVELOPMENT APPLICATION

Photomontage and Exterior Finishes Schedule

Scale: 1:1  
Date of printing: 12/07/2021  
Project No: 1708b  
Drawing No: DA-24

**FOR DEVELOPMENT  
APPLICATION  
PURPOSES ONLY  
NOT FOR CONSTRUCTION**

Notes: Do not scale from drawings  
ALL NEW CONSTRUCTION TO BAL-40  
EXISTING HOUSE TO BE UPGRADED TO RESIST  
EMBER ATTACK  
NO EXPOSED TIMBER CONSTRUCTION



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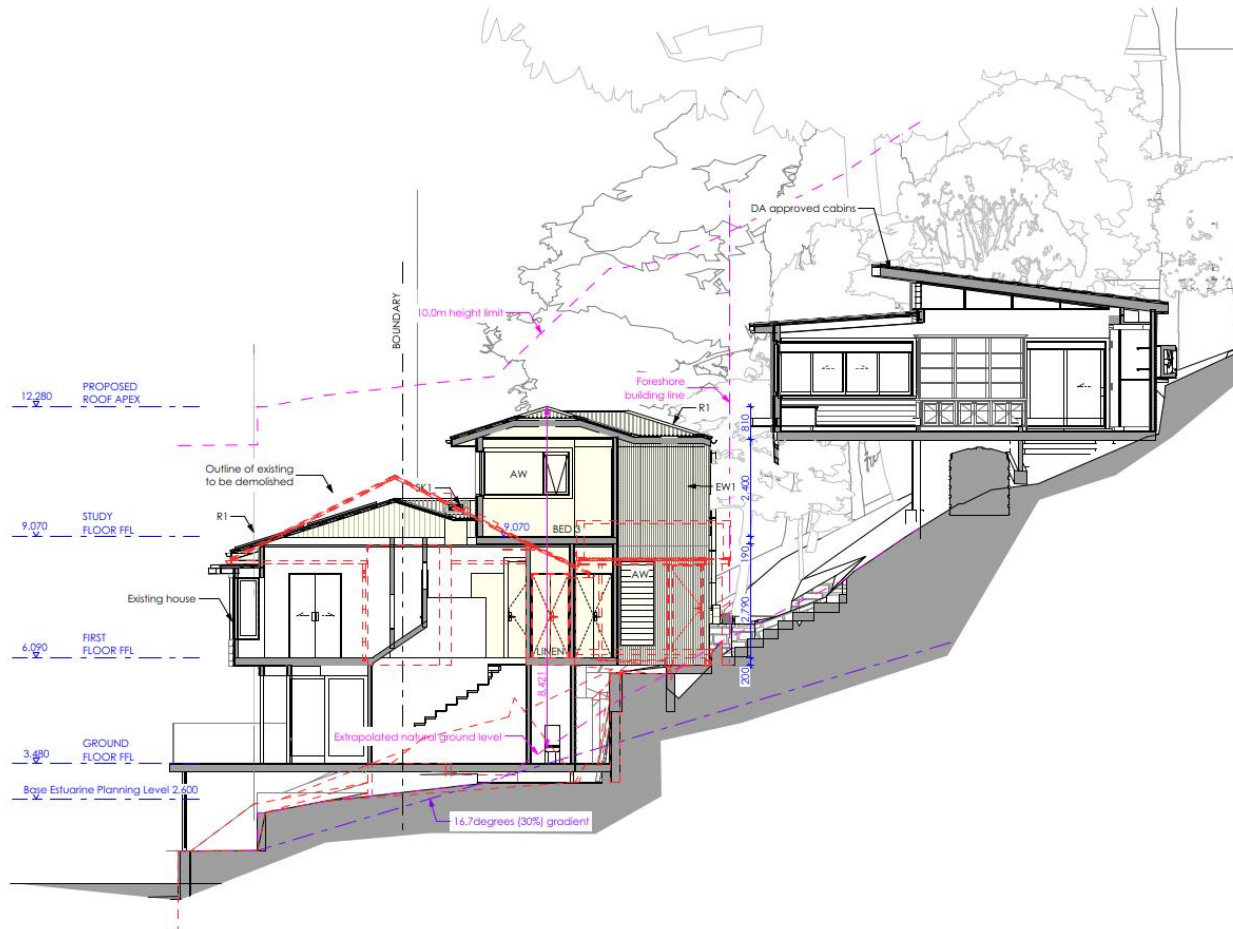
Additions & Alterations  
at 18-20 Sturdee Lane, Lovett Bay NSW 2105  
for A & F Loader

**PRELIMINARY** DEVELOPMENT APPLICATION  
Section A-A

Scale: 1:100  
Date of printing: 12/07/2021  
Project No: 1708b  
Drawing No: DA-30

**FOR DEVELOPMENT  
APPLICATION  
PURPOSES ONLY  
NOT FOR CONSTRUCTION**

Notes: Do not scale from drawings  
ALL NEW CONSTRUCTION TO BAL-40  
EXISTING HOUSE TO BE UPGRADED TO RESIST  
EMBER ATTACK  
NO EXPOSED TIMBER CONSTRUCTION



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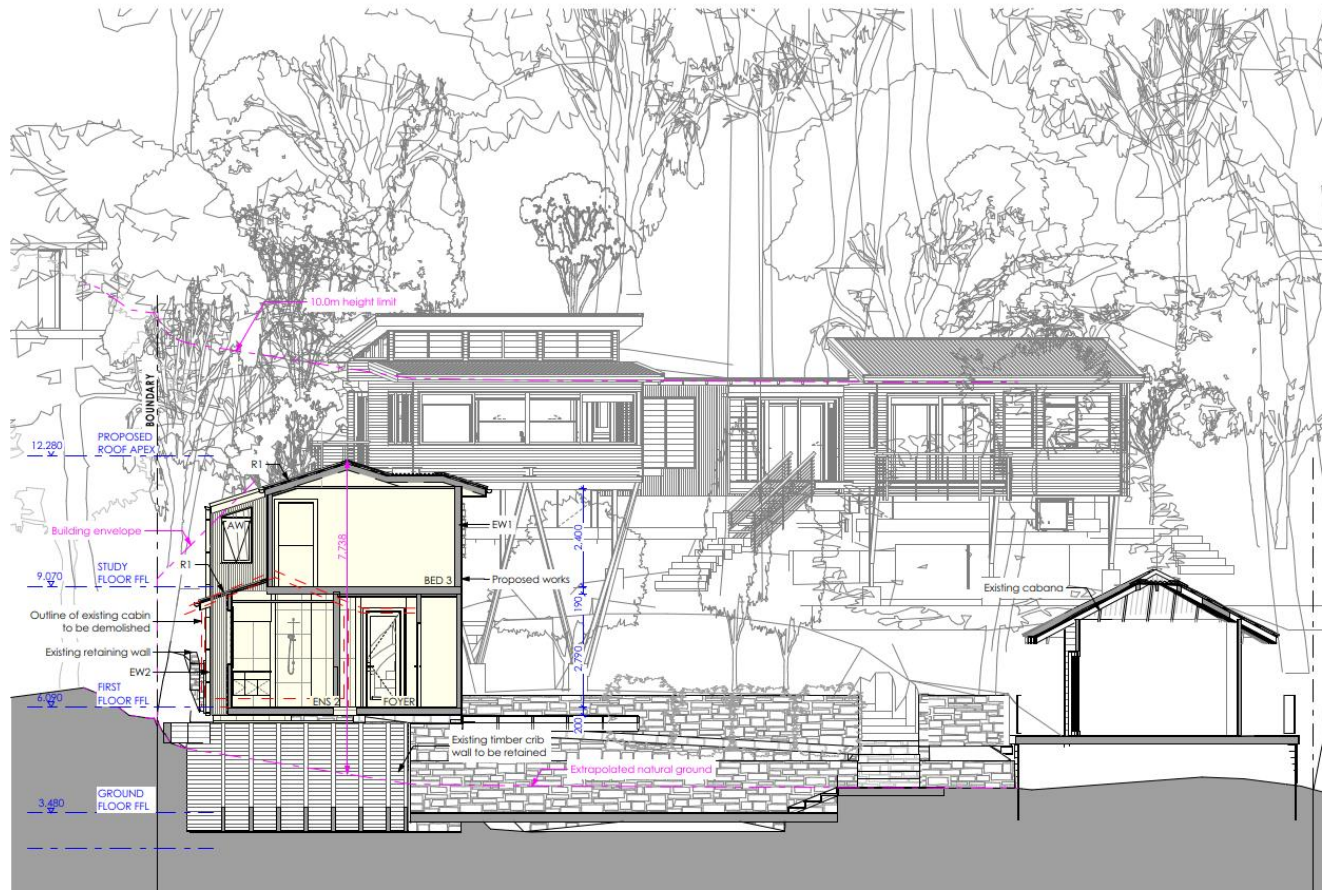
Additions & Alterations  
at 18-20 Sturdee Lane, Lovett Bay NSW 2105  
for A & F Loader

**PRELIMINARY** DEVELOPMENT APPLICATION  
Section B-B

Scale: 1:100 Date of printing: 12/07/2021  
Project No: 1708bDA-31

**FOR DEVELOPMENT  
APPLICATION  
PURPOSES ONLY  
NOT FOR CONSTRUCTION**

Notes: Do not scale from drawings  
ALL NEW CONSTRUCTION TO BAL-40  
EXISTING HOUSE TO BE UPGRADED TO RESIST  
EMBER ATTACK  
NO EXPOSED TIMBER CONSTRUCTION



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for A & F Loader

**PRELIMINARY** DEVELOPMENT APPLICATION  
Section X-X

Scale: 1:100  
Date of printing: 12/07/2021  
Project No: 1708bDA-32

## 21 Appendix 2. Previous RFS advice.



**NSW RURAL FIRE SERVICE**

Northern Beaches Council  
PO Box 882  
MONA VALE NSW 1660

Your reference: Mod2021/0040 (CNR-18299)  
Our reference: DA20200210000493-S4.55-1

**ATTENTION:** Northern Beaches Council

Date: Wednesday 17 March 2021

Dear Sir/Madam,

**Development Application**  
**s4.14 - Other - Single Dwelling - Alterations & Additions**  
**18 Sturdee Lane Lovett Bay NSW 2105, 1//DP1132852**

I refer to your correspondence dated 16/02/2021 seeking advice regarding bush fire protection for the above Development Application in accordance with s4.55 of the *Environmental Planning and Assessment Act 1979*.

The New South Wales Rural Fire Service (NSW RFS) has considered the information submitted and provides the following recommended conditions:

### **Asset Protection Zones**

***The intent of measures is to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting fire fighting activities. To achieve this, the following conditions shall apply:***

1. From the start of building works, and in perpetuity, the property must be managed for a distance of 25 metres from the proposed works as follows:

- Minimal fine fuel at ground level (i.e. twigs, leaves, woodchip and branches to be removed at regular intervals);
- All flammable shrubs (and trees < 2 metres in height) removed, and no new shrubs planted within 25 m of any building;
- Grass can be retained if kept to < 10 cm;
- Tree canopies pruned to ensure they are not overhanging, or within 2 metres of, the building as far as possible without endangering the health of the tree; and,
- Lower limbs of trees removed up to a height of 2 metres above the ground.

### **Construction Standards**

1

#### **Postal address**

NSW Rural Fire Service  
Locked Bag 17  
GRANVILLE NSW 2142

#### **Street address**

NSW Rural Fire Service  
4 Murray Rose Ave  
SYDNEY OLYMPIC PARK NSW 2127

T (02) 8741 5555  
F (02) 8741 5550  
[www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au)



***The intent of measures is that buildings are designed and constructed to withstand the potential impacts of bush fire attack. To achieve this, the following conditions shall apply:***

2. New construction must comply with Sections 3 and 8 (BAL 40) Australian Standard "AS3959-2009 Construction of buildings in bush fire-prone areas" or NASH Standard (1.7.14 updated) "National Standard Steel Framed Construction in Bushfire Areas – 2014" as appropriate and section A3.7 "Addendum Appendix 3 of Planning for Bush Fire Protection 2006".

3. The existing building must be upgraded to improve ember protection. This must be achieved by enclosing all openings (excluding roof tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum aperture of 2mm. Where applicable, this includes any sub floor areas, openable windows, vents, weepholes and eaves. External doors are to be fitted with draft excluders.

4. All gutters on the proposed and existing buildings must be protected by non-combustible gutter guards.

#### **Water and Utility Services**

***The intent of measures is to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting fire fighting activities. To achieve this, the following conditions shall apply:***

5. The provision of water, electricity and gas must comply the following in accordance with Table 5.3c of *Planning for Bush Fire Protection 2019*:

- A 10,000 litre minimum capacity static water supply must be provided on site;
- a connection for firefighting purposes is located within the IPA or non-hazard side of 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.
- 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;
- 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
- 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.

Where Lovett Bay is instead utilised as the static water supply it must comply with the following:

- A petrol or diesel pump capable of delivering adequate water for firefighting purposes including head height and delivery distance shall be made available to the water supply.
- A suitable suction hose shall be supplied to access Lovett Bay at all tide heights.
- 65mm Storz outlet with a ball valve is fitted to the outlet;

- Delivery hoses/pipes shall be long enough to reach all external walls of structures on the site from the location of the pump.

**General Advice - Consent Authority to Note**

This advice is in response to additional information submitted and supersedes our previous advice dated 28 June 2020.

For any queries regarding this correspondence, please contact Marc Ellwood on 1300 NSW RFS.

Yours sincerely,

Kalpana Varghese  
**Team Leader, Dev. Assessment & Planning**  
**Planning and Environment Services**

