

9 December, 2019

Adam and Fiona Loader
C/- James de Soyres and Associates Pty Ltd
Attn: James de Soyres
By email

Dear James,

RE: ONSITE WASTEWATER MANAGEMENT: ALTERATIONS & ADDITIONS DEVELOPMENT APPLICATION FOR – 18-20 STURDEE LANE, LOVETT BAY, NSW

We understand that a development application (DA) for alterations and additions to the above property is being prepared for assessment by the Northern Beaches Council (Council). The proposal includes the demolition of the existing 1 bedroom / 1 bathroom cabin upslope of the main house and replacement with two new pavilions, one of which contains a bedroom and the other a games room with associated bathroom. This letter has been prepared for Council, on behalf of the client, to confirm details of required wastewater management for the proposed DA.

1.0 Review of Previous Wastewater Assessment Report

An Onsite Wastewater Assessment report (ref: P1806643JR01V01, dated, April 2019) was previously prepared by Martens and Associates (MA) to support the upgrade of the wastewater management system for the existing dwelling and cabin. The report assessed site and soil suitability for onsite wastewater management and presented the following results and recommendations:

- o Site contained loamy sand topsoils, with an adopted design irrigation rate (DIR) of 2.5 mm/day.
- o Wastewater generation rate of 120 L/person/day was adopted based with on-site roof tank water supply (AS/NZS 1547, 2012).
- o Design site occupancy of 7 people was based on a 3 bedroom dwelling, study and cabin with provision for an additional bedroom.
- o Design wastewater load of 840 L/day
- o Wastewater from dwelling and cabin to be collected in a well and pumped upslope to a newly installed aerated wastewater treatment system (AWTS) for treatment.
- o Required effluent management area (EMA) was 336 m² (840 L/day / DIR of 2.5 mm/day), to be constructed as a surface drip irrigation system.

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2.0 Wastewater Management Requirements for DA

Based on the DA plans (James de Soyres & Associates (2019) *Additions & Alterations at 18-20 Sturdee Lane, Lovett Bay NSW 2015 DA-11A*) the DA includes the retention of the main house (3 bedrooms and one study), demolition of the existing cabin and addition of two new pavilions containing 1 bedroom and 1 games room. As a result, the proposal will have effectively 6 bedrooms, which equates to a design occupancy of 7 persons for effluent management purposes. Subsequently, there will be no change in hydraulic load from the previous wastewater assessment and the recommendations in MA (April 2019) report still stand.

The new pavilions will require a collection well with a wastewater pump system capable of transferring wastewater upslope as seen in plans (DA-06A) *Water Management Plan*. The pump can be located in the former treatment tank pit below the pavilion.

3.0 Conclusion

As the number of bedrooms and associated site occupancy numbers for this DA have not changed compared to our previous wastewater report (MA, 2019), the existing AWTS and EMA are acceptable and no changes to the management system are required. The new pavilions will require a collection well and macerator pump to convey wastewater generated from these buildings to the AWTS.

If you require further information, please contact our office are required.

For and on behalf of

MARTENS & ASSOCIATES PTY LTD

RICHARD KIGHTLEY

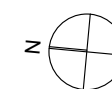
Environmental Scientist

Attachments:

DA plans

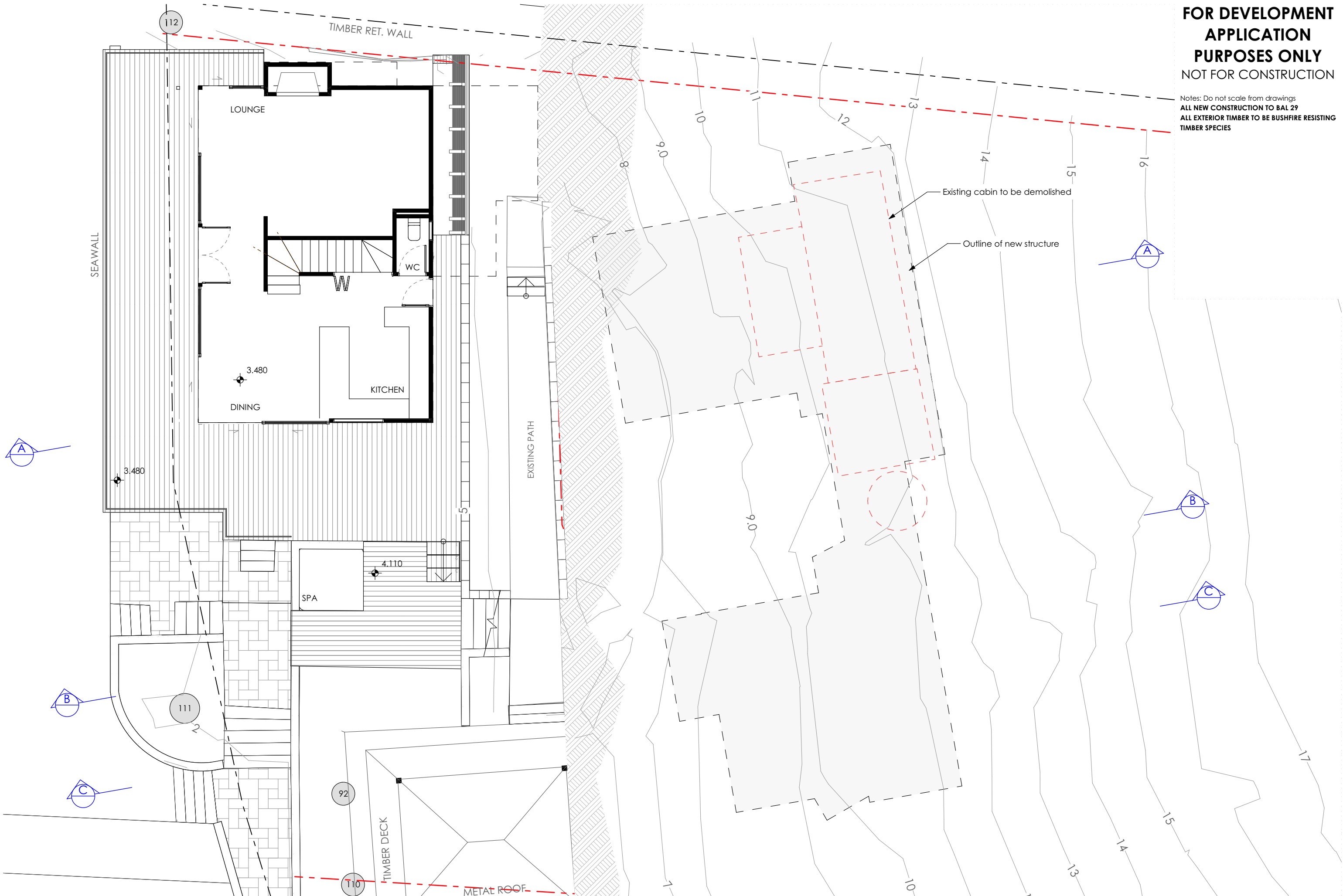
**FOR DEVELOPMENT
APPLICATION
PURPOSES ONLY
NOT FOR CONSTRUCTION**

Notes: Do not scale from drawings
ALL NEW CONSTRUCTION TO BAL 29
ALL EXTERIOR TIMBER TO BE BUSHFIRE RESISTING
TIMBER SPECIES



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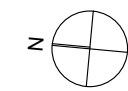
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Nominated Architect: Reg. No. 6769
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James de Soyres
+ Associates
a r c h i t e c t s

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

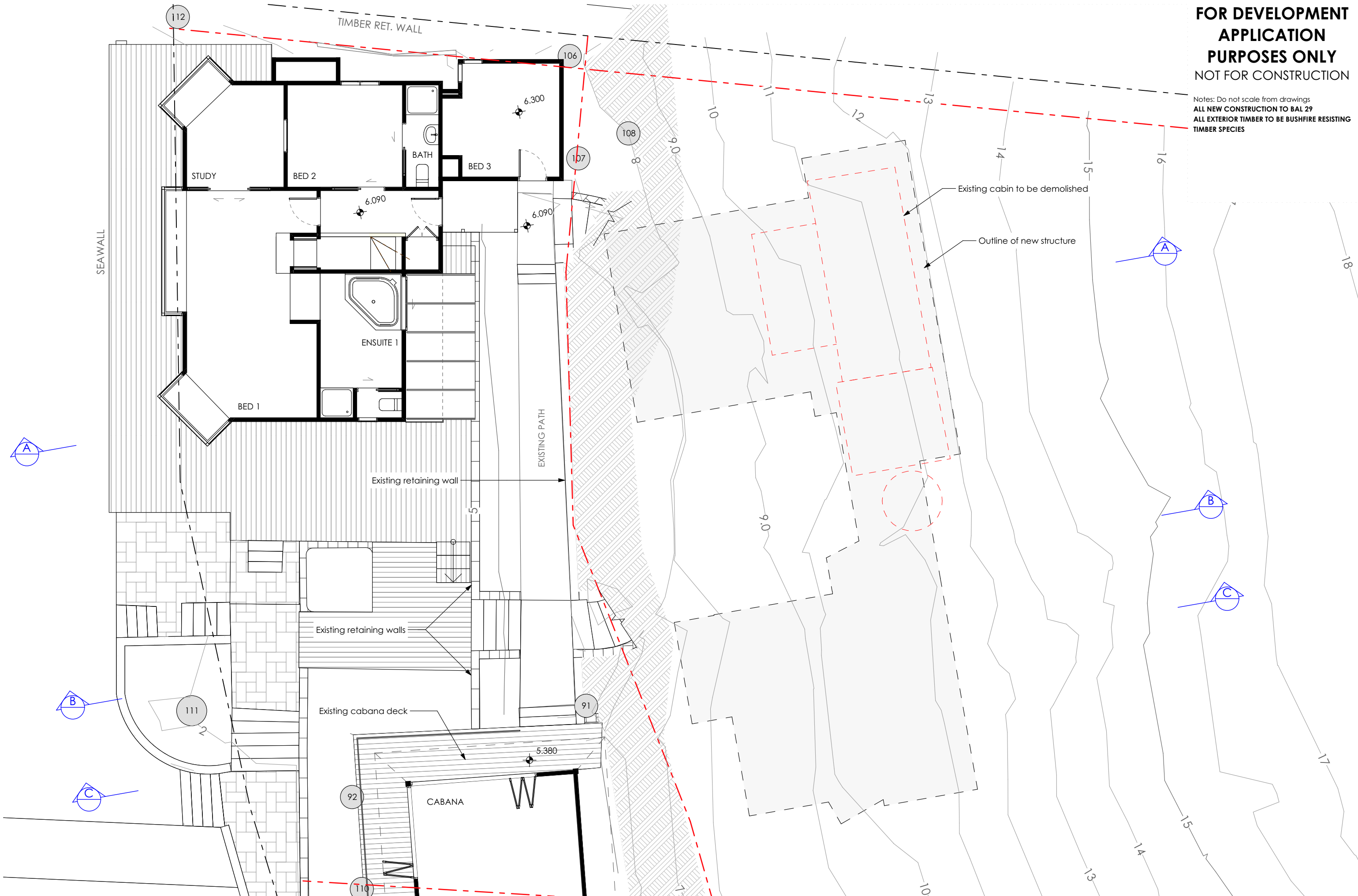


DEVELOPMENT APPLICATION
Existing House Ground Floor Plan

Scale: 1:100
Date of printing: 25/11/2019
Project No: 1708
Drawing No: DA-10
Rev: A

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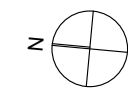
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DEVELOPMENT APPLICATION
Existing House First Floor Plan

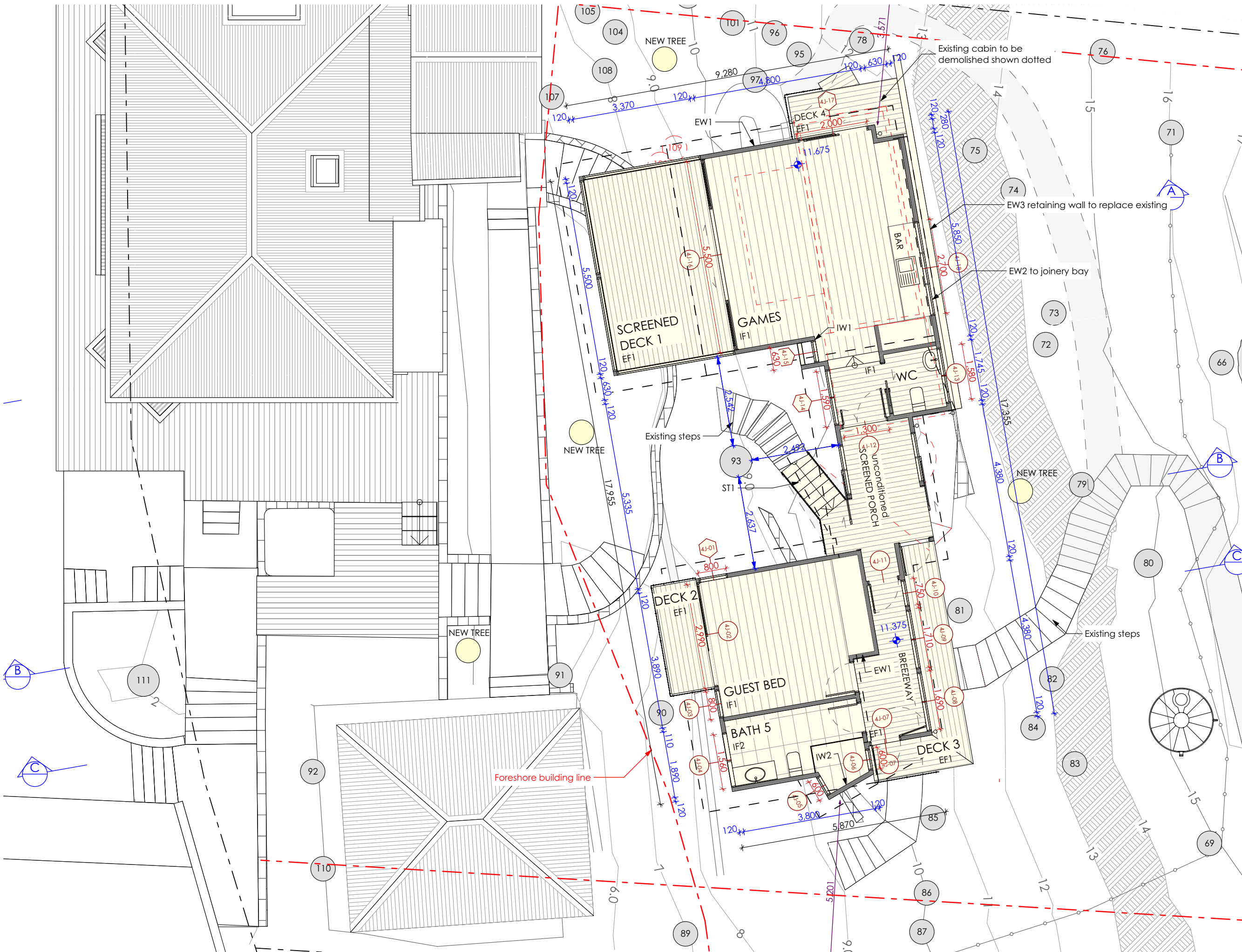
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Date of printing: 25/11/2019
Project No: 1708
Drawing No: DA-11 A
Rev:

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Notes: Do not scale from drawings
ALL NEW CONSTRUCTION TO BAL 29
ALL EXTERIOR TIMBER TO BE BUSHFIRE RESISTING TIMBER SPECIES

CONSTRUCTION SPECIFICATION

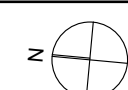
- EXTERNAL FLOOR**
EF1 - Framed floor with timber decking
- EXTERNAL WALL**
EW1 - Timber framed wall with HW timber cladding and R1.3 insulation
EW2 - Timber framed wall with Colorbond metal cladding and R1.3 insulation
EW3 - Blockwork wall
- EXTERNAL CEILING**
EC1 - Timber frame with timber lining boards
- EXTERNAL BALUSTRADE**
EB1 - Wire balustrade with handrail
- ROOF**
R1 - Timber framed roof with Colorbond cladding and 75mm foil-faced insulation blanket
- DOORS & WINDOWS**
AD - Dark grey aluminium door with clear glass (Circle marker)
AW - Dark grey aluminium window with clear glass (Circle marker)
AWE - Dark grey aluminium window with low-e glass (Hexagon marker)
- INTERNAL FLOOR**
IF1 - Timber framed floor with timber flooring and R0.8 insulation
IF2 - Timber framed floor with tiles and R0.8 insulation
- INTERNAL WALL**
IW1 - Timber framed wall with plasterboard
IW2 - Timber framed wall with tiles
- INTERNAL CEILING**
IC1 - Timber frame with plasterboard and R1.6 insulation
IC2 - Timber frame with timber lining boards and R1.6 insulation
- OTHER**
ST1 - Timber framed stairs
SC1 - Steel column



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



DEVELOPMENT APPLICATION

Guest Bedroom and Games Room Floor Plan

Scale: 1:100
Date of printing: 25/11/2019
Project No: 1708
Drawing No: DA-13 A
Rev: