

**HALINA CONSULTING**

QUAKERS HILL NSW

ABN: 25 586 347 009

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Our Reference: 704-SL01\_A.doc

Saturday, 14 December 2019

**Mr. Timothy Cools****Attn: Mr. Timothy Cools**35 Warraba Road  
NORTH NARRABEEN NSW 2101

Dear Sir,

**Re: Sizing Beam to replace load bearing walls**  
**At 35 Warraba Road, NORTH NARRABEEN NSW 2101**  
**Structural Engineering Report**

As requested, the undersigned inspected the above job on 14/12/2019 and would advise that the owner can remove the internal timber stud walls and brick walls of the house at the above-mentioned address by adding beams as shown on the attached sketch.

The beams have been designed as per below design parameters:

**1) Loading**

General principles of loading calculation and loading combinations to Australian Loading Code AS1170.0-2002 and other relevant codes as below:

- a) Dead Load
  - i) Self-weight of the tile roof and ceiling (max 0.7kPa).
- b) Roof Live Load
  - i)  $1.8/A + 0.12\text{kPa}$  but not less than 0.25kPa or 1.1kP point load to AS1170.1-2002.
- c) Wind Load
  - i) N2 to AS4055-2012.

**2) Design Standard**

- a) Timber Structures: AS1720-2010.

**3) General Requirements**

- a) The owner/builder to design and take responsibility for temporary support during replacement process if required.
- b) The owner/builder to reconnect all roof timber members to the proposed beam in accordance with AS1684.

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- c) All workmanship and materials shall be in accordance with AS1684.1-1999 and AS1684.2-2010.
- d) Use LVL beam (Hyspan or equivalent) with below design parameters:  
 $E = 11,000\text{MPa}$  or higher  
 $F'b = 32\text{MPa}$  or higher.

**4) Notes**

- a) The owner/builder to add new brick piers to support the new posts with concrete pad footing 450x450mm, 500mm depth mass concrete to support the posts where marked.
- b) During construction site, if something is different from what I advise or builders feel not safe, please stop working immediately and advise the engineer for further action.

If you have any further enquiries regarding this matter, please do not hesitate to contact the undersigned.

Yours faithfully

**HALINA CONSULTING**

Ha Nguyen  
BE (Hons) PhD MIEAust CPEng NER 4188792  
Structural Engineer/Director

*Encl.: Sketch + photo*

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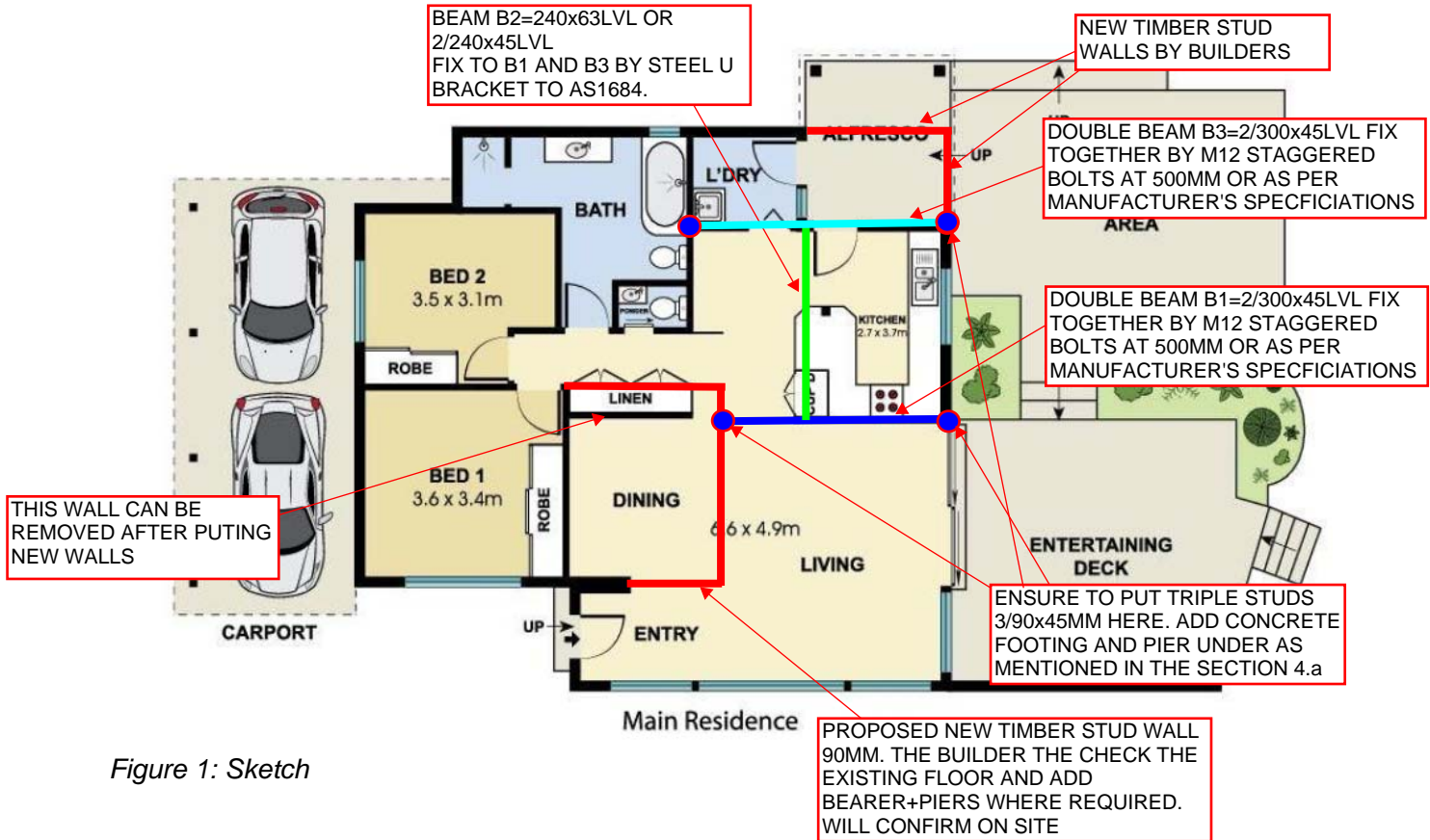
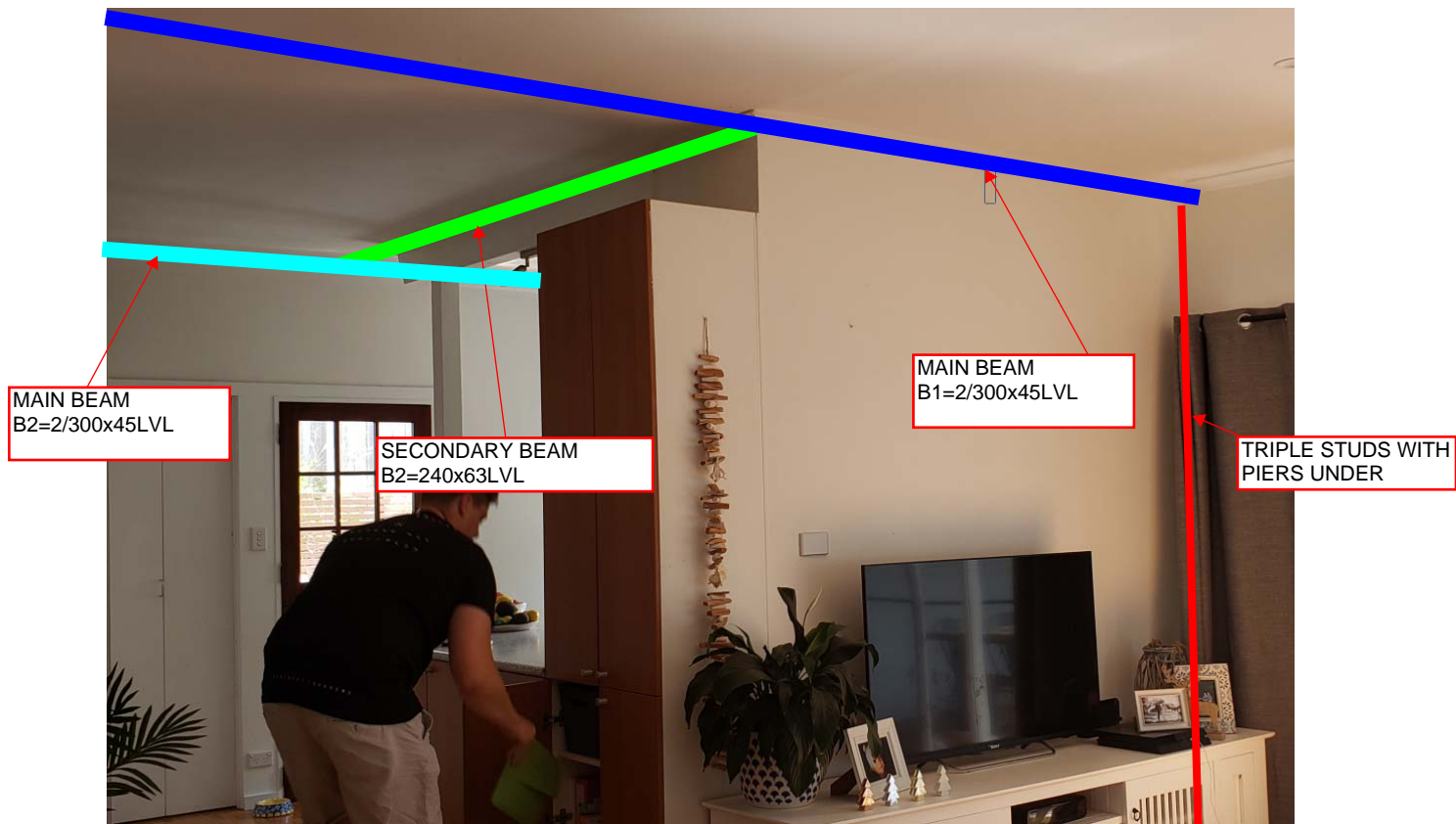


Figure 1: Sketch

NOTE: ALL CONNECTIONS TO AS1684 BY BUILDERS. THE ENGINEER WILL CHECK AND CERTIFY ON SITE.



*Figure 2: The proposed walls and beam to be removed.*