

|                               |                        |                 |            |
|-------------------------------|------------------------|-----------------|------------|
| Vara Consulting Engineers Ltd |                        | Pages           | 25         |
| CALCULATION PAD               |                        | Date            | July '2011 |
| Job Title                     | 7c GRINSBROUGH GARDENS | Client Job Ref  | 11/026.    |
|                               |                        | VCE Job Ref     | 10/24a     |
|                               |                        | Calculations by | mv         |

### 13.0 FLOOR TRIMMERS:

Ⓒ 2nd floor level left Conversion.

L.R.S BEAM = 2.20m.

Consider Gravitational Loading

L.C.M Beam = 1.50m

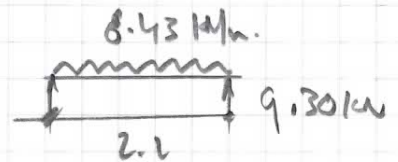
Conditions only.

$$\therefore \text{WUL Floor} = 1.5 \times \left( \begin{array}{l} \text{Floor} \\ 2.0 \text{ kN/m}^2 \times 0.5 \times 2.32 + \end{array} \begin{array}{l} \text{Roof beam} \\ 1.5 \text{ kN/m}^2 \times 2.2 \end{array} \right)$$

$$\text{S.S Beam} = 8.43 \text{ kNm.}$$

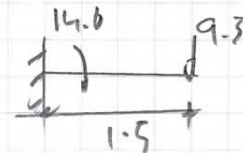
$$\therefore M_{\text{S.S Beam}} = \frac{8.43 \times 2.2^2}{8}$$

$$= 5.10 \text{ kNm.}$$



$$M_{\text{cant}} = 9.3 \times 1.5$$

$$= 14.01 \text{ kNm.}$$



By inspection provide Nom. Beam 152.89, 16 UB (S275)  
with Nom. Conn.

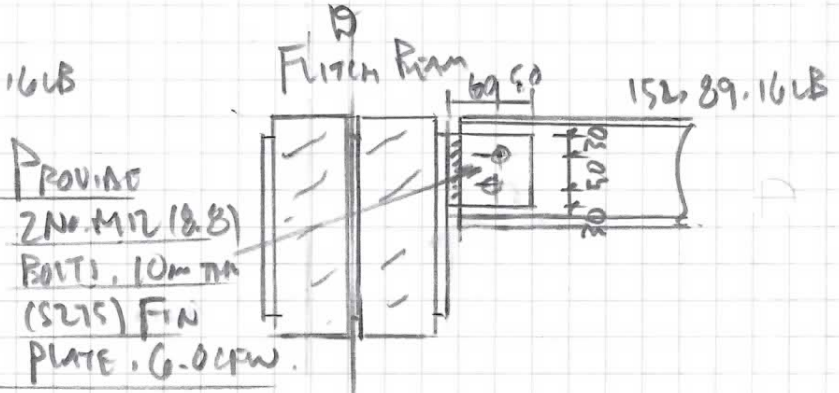
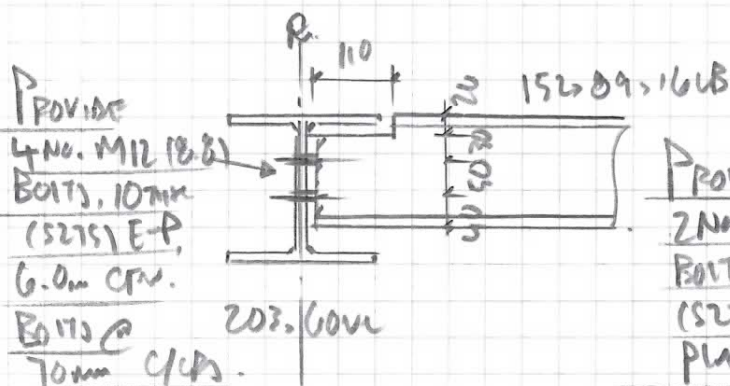
### 14.0 CONNTS:

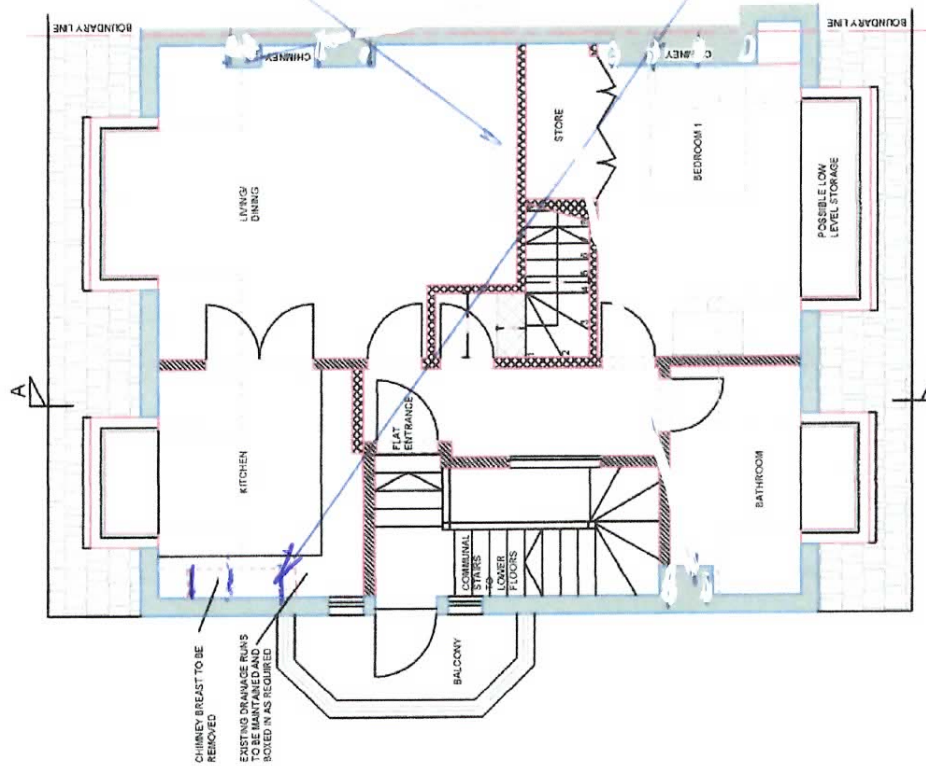
(1) Conn Type (C)

Beam to Beam

OR

Beam to Fitch Beam





AN NEW WAY TO BE  
CONSTRUCTED USING TIMBER  
STUDWORK IN ALTERNATE  
WITH APERT SPE.

CHIMNEY STACK  
TO BE REMOVED AND SUPPORTED  
WITHIN LOFT SPACE USING  
GALVAN BRACKETS AS DETAILLED  
C MAX 500mm CENTRES  
(USE ONE M12 FISHER FISU  
BOLTS)

SKETCH SHEET NO.

10124a / SK01 / REV A.

SECOND FLOOR PLAN



# NOTE

1. PASTSTONE (PI) - PROVIDE MIN 300 KG - 150 MM - 45 DP GRADE C20 CONC.

2. Floor Joists

- PROVIDE 175x75 GRADE C16 JOIST @ 400mm CENTRES

3. Existing 125x75 (2x300) GRADE C16

RAFTERS ARE TO BE RETAINED WITH PROVISION

OF ADDITIONAL INTERMEDIATE RAFTERS @ 175mm CENTRES, ELSE PROVIDE 175x75 GRADE C16 RAFTERS @ 300mm CENTRES.

4. CONCRETE DETAIL (C1) & (C2)

PREFER TO ATTACHED SHEETS.

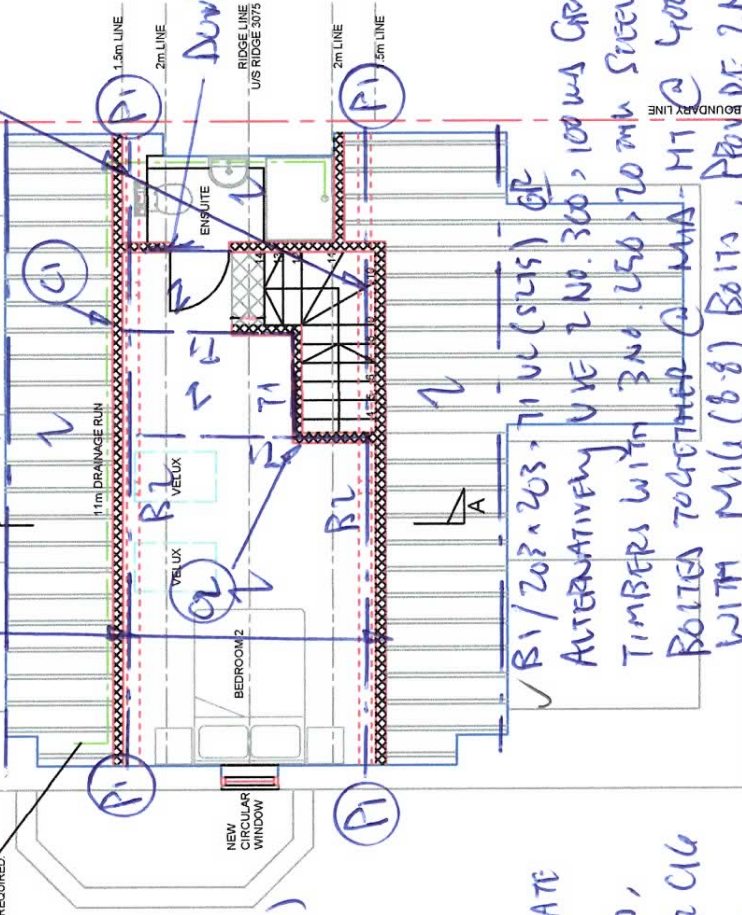
5. AN TRIMMER T1 - 152x89x160 (S275)

# LOAD BEARING

INTERMEDIATE STRUCTURE WALLS 100x50 S.W. GRADE C16 STUD @ 400mm CENTRES TRIMMING 7 & B SOLE PLATES

A B1 - AS BELOW

ENSUITE DRAINAGE RUNS TO CONNECT TO EXISTING PIPES BELOW WITH PIPE WITH A MIN 100mm COVER AS REQUIRED



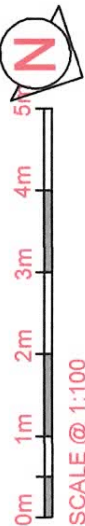
DOUBLE JOISTS UNDER PARTITIONS.

B2/203x203x600 (S275) OR ALTERNATIVE PUMPED FURTH BEAMS AS SPECIFIED FOR BEAM B1.

B1/203x203x710 (S275) OR ALTERNATIVE USE 2 NO. 300x100 WAS GRADE D40 TIMBERS WITH 3 NO. 250x20mm STEEL PLATES (S275) BOLTED TOGETHER @ 400mm HORN CENTRES WITH M16 (8.8) BOLTS, PROVIDE 2 NO BOLTS @ SUPPORTS.

# PROPOSED

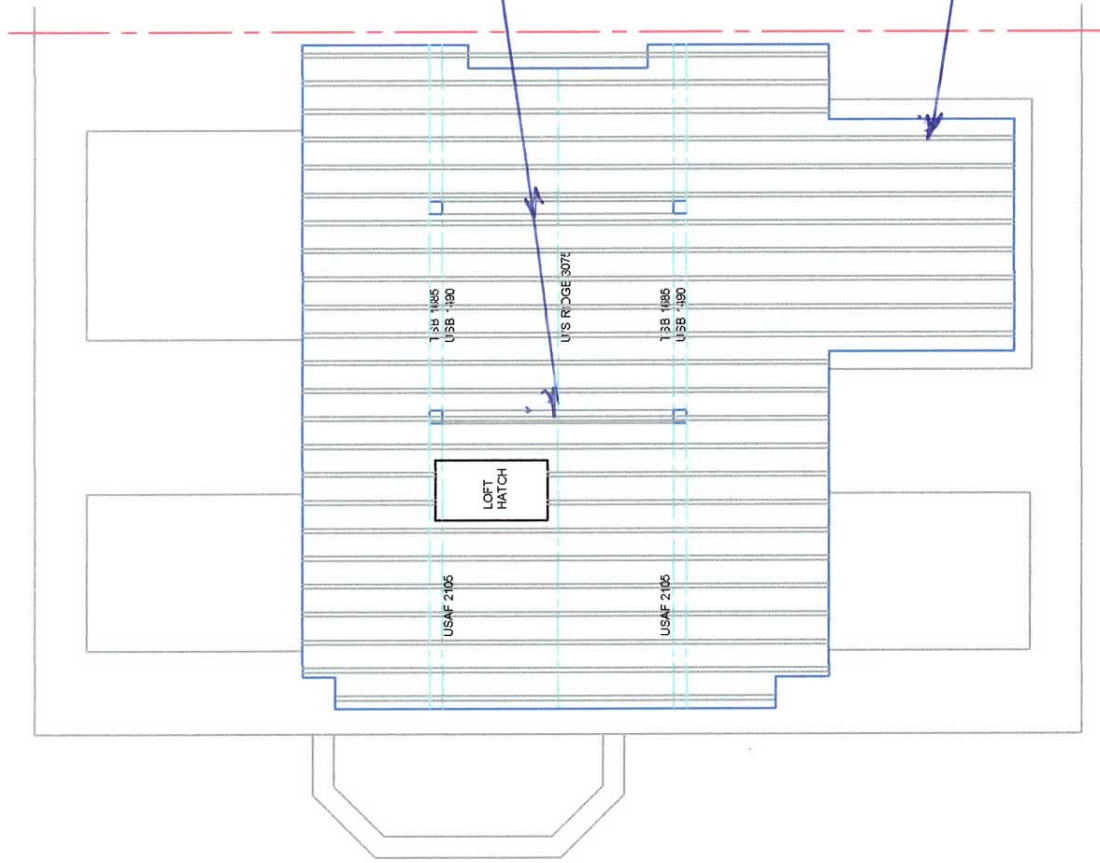
# LOFT FLOOR PLAN



SHEET 14 SMITH NO.

VCE/10124a/5K02



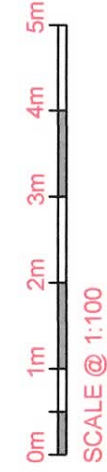


✓ EXISTING CHORDS  
OF "HOWE'S" ROOF  
TRUSS STRUCTURE TO  
BE REMOVED.

✓ EXTENT OF FLOOR CANNOT  
EXTEND AS PROPOSED INTO  
EXTG DORMER LEFT SPACE  
DUE TO INADEQUACY OF GLAZED  
WALLS FRAME CONIT.

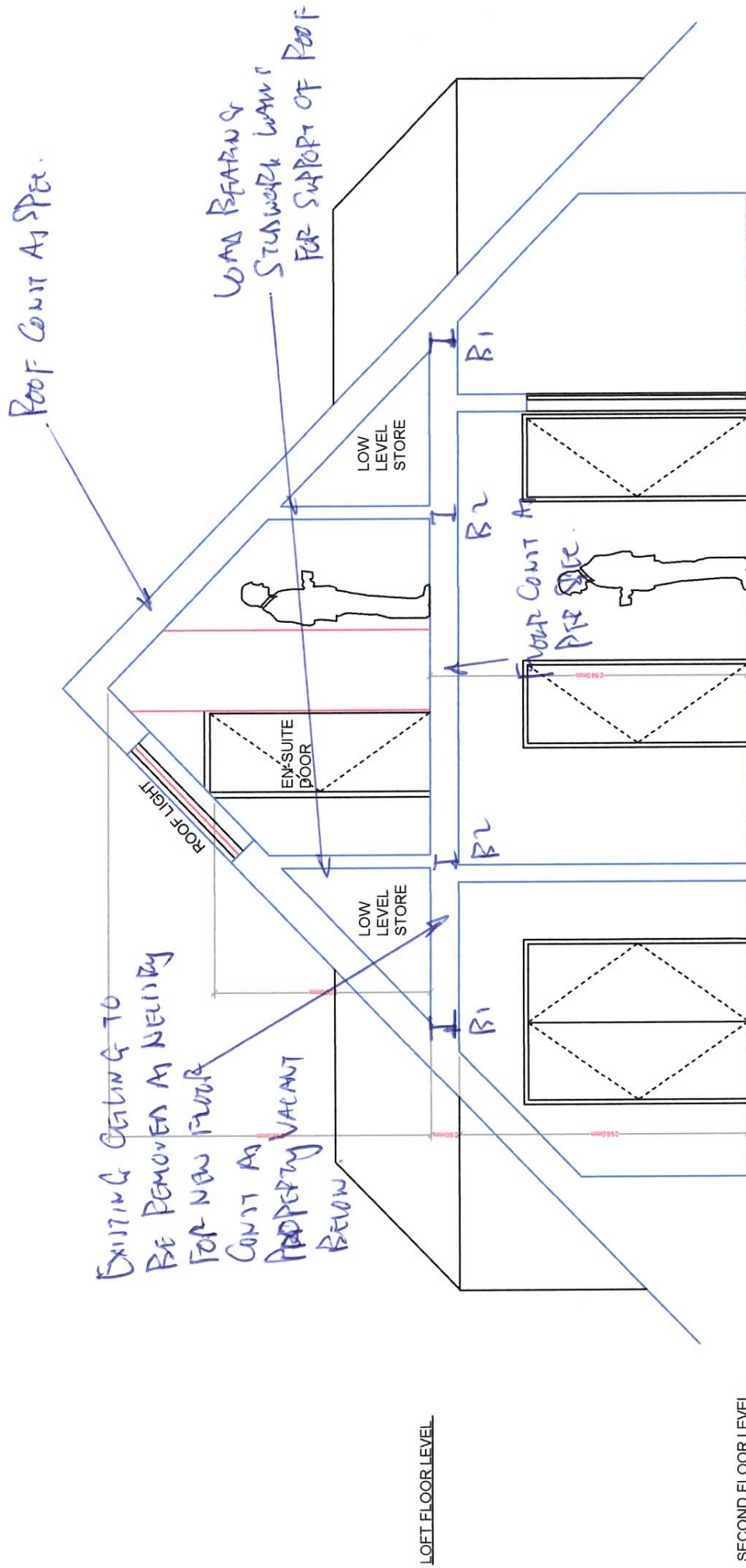
Existing

LOFT FLOOR PLAN



SKETCH SHEET NO.

VCE/10124a / SK04



Typical

SHEET NO. 1014a / SK03