

STATES OF GUERNSEY
E - DOCS RECEIVED

APPENDIX 3

Additional Structural Engineering submission:

11 NOV 2020

E-mail received: Wed 28th October 2020

REF

From: James Seymour, CBL Consulting Ltd

STATES OF GUERNSEY
RECEIVED

11 NOV 2020

PLANNING SERVICE

REF

Hi Colin,

1 -In terms of the floor I've attached calculations confirming that they are adequate in terms of strength. The deflection is marginal but as this is a serviceability issue building control should have no input into this. This is for full modern floor loads including ceilings insulation etc throughout. If you installed a separate ceiling below then there would be no issue at all. Calculations also appended for these.

There is something to be said for reducing the live load provision at the eaves (where less than about 1.2metres headroom) but I have not done that.

The structural changes required would therefore be limited to altering the trimming around any new stair (as you can see from the attached (poor quality) photograph, where current good practice is to double trimmers around an opening. However, if you removed the stair, and extended the joist across the opening this would be a "repair" rather than anything major). So the joists themselves are adequate in their current condition for domestic load, and upgrade would only be required if a non structural ceiling was required to be fixed to the joists.

Installation of any new stair would require this new construction to be in compliance with current standards, but if it is not to be undertaken immediately then the existing structure is demonstrably adequate for a loft with limited access, as is currently the case.

If you decided to replace the floor boards, then these joists, with a typical 18.5mm ply composite deck as used in many domestic projects across the island, would then only deflect something like 2/3 of the unsheathed joists. It should be noted too that decent insitu tongue and grooved boarding fitted properly (as is currently provided) will also have a restraining effect which is generally ignored for calculation purposes.

2 – In terms of the foundation construction to the middle section this was referred to in our original report, and this is the area noted in photograph 3 of the original photograph appendix where we undertook the calculation demonstrating that GBP was less than 100kN/sq metre. The projection from the solid blockwork wall is 120mm (from my original site notes) This loading comprises approx. 4.25 metres roof at 2kN/sq metre for modern roof construction, approx. 4.25 metre first floor at 2.25kN/sq metre (including an allowance for stud partitions) and 5 metres height of masonry at 5kN/sq metre for 215mm solid blockwork) With the projection, the foundation width is nominally 450mm to give a ground bearing pressure of circa 95kN/sq metre which is less than the typically assumed 100kN/sq metre on the raised beach deposits in this part of the island.

3 – As you confirm below, there is only an infill wall (which you built) above the intersection between areas and the concrete slab runs through

Trust that this makes sense but if you want anything more formal please let me know.

Regards,

James

James Seymour MEng CEng MStructE MICE
Director
for and on behalf of CBL Consulting

CBL Consulting
Fort Complex

Les Tracheries

St. Sampson
Guernsey

GY2 4SN

Tel:- +44(0)1481 244433

<mailto:jseymour@cblconsulting.gg>

www.cblconsulting.gg

PLEASE NOTE:

This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender. This e-mail has been scanned by current virus software, however it is the responsibility of the recipient to ensure that this e-mail is virus free and no responsibility is accepted by CBL Consulting, for any loss or damage arising in any way from receipt or use of it.

Details of our privacy policy are available here: www.cblconsulting.gg/privacy-statement

CBL Consulting Ltd is registered in Guernsey. No: 43601