



**WHINBARROW DESIGN  
SERVICES LIMITED**  
CIVIL & STRUCTURAL  
ENGINEERS

**Whinbarrow House  
Aspatria, Cumbria,  
CA7 2PJ.**

Our Ref: WDS/05/4415/LETT007

29<sup>th</sup> June 2021

Avison Young  
No.4 St Pauls Square,  
Old Hall Street,  
Liverpool,  
L3 9SJ

For the attention of Mrs O Harker

**RE: Site Survey, Seascale Hall Farmhouse. Internal Remedial Works**

Dear Madam

As requested we carried out a further structural inspection at Seascale Hall Farmhouse and have outlined our comments below:-

1. The brick masonry partition wall between the hall and living room can be retained. I would however recommend that the wall is tied into the front wall and return hall wall. This can be achieved by fitting Helifix Ltd Helibar System with bars grouted into the bed joints at 325mm maximum vertical centres. The works should be carried out in accordance with Helifix Ltds approved specification.
2. There is a blocked up doorway in the hall wall noted above which is framed in timber. The masonry infill is inadequately tied to the framing and moves when pushed. With this we recommend that the infill masonry is removed and the door infilled with timber framing comprising 100x47 studs at 400mm centres max with similar section noggins at 600mm vertical centres. The studs should be built off a sole plate located at floor level on a DPC and fixed at the head to the exiting timber framing. The studs should also be side fixed to the vertical framing elements. The studs can then be boarded in plasterboard and skimmed. We recommend that the tie in works noted in section 1.0 above are complete prior to removing the masonry infill.
3. The timber beam exposed when the kitchen/hall partition wall was removed is prone to excessive deflection. It is probable that the deflection was originally limited by some limited support offered by the recently demolished partition wall. We recommend that to reduce excessive deflection a 152 UC 37kg/m Grade S355 steel beam is located centrally beneath the existing timber beam with the timber beam full packed up off the steel section over the full width of the timber section using slate/steel/hardwood packing. The new steel should be given 200mm end bearing and sat on

350x215x100mm deep concrete padstones. The steel should be shot blast and primed and boarded in fire board.

4. The new single door opening between the living room and rear extension at ground floor level should be located 910mm from the gable wall. This coincides with a vertical joint in the existing masonry. The lintels over should comprise 140x100 Ibstock Ltd Supreme R15A precast concrete lintels given 150mm end bearing, number to suit the wall thickness. We would recommend that the crack and corner masonry tie in works as previously recommended are complete prior to the opening being formed.
5. The floor joists to the bedroom floor to the right of the main stair are inadequate. The sections have also been compromised by previous electrical and plumbing works which have notched out excessive timber from the joists which has further compromised the timber joists structural capacity. We recommend that the joists are replaced with 145x47 C24 sections at the same centres as the existing joists. The joists will need noggins at third points and can be notched to allow bearing in the existing walls where the original joists were located. There is a cupboard set in the inner wall with a timber lintel over onto which the joists sit. This is inadequate and should be replaced with a 140x100 pc lintel as noted above.

I hope you find the above acceptable however should you have any queries please do not hesitate to contact me.

Yours Faithfully

Mr Tom Short B. Eng. (Hons), C. Eng., MICE  
For WDS Limited  
Cc Mr S Brown