

24th September 2019

Our Ref: EG/404231/eg

J Lovejoy
Glebe Farm
High Street
Angmering
West Sussex

Dear Jonathan

**RE: Structural survey of the existing buildings at Glebe Farm,
Angmering**

1.0 INTRODUCTION

- 1.1 A structural survey was requested by the client to Cowan Consultancy to be issued with a proposed planning application and to ascertain any structural issues on the above building. The primary reason for the survey was to assess the existing structures in respect of condition but also their suitability for renovation / conversion.
- 1.2 The structural inspection was carried out on Wednesday 21st August. The weather at the time of the inspection was sunny with no significant recent rain. The project was discussed with the Client during the survey to discuss possible structural and building fabric solutions discussed within this report. Access was available to all areas of the buildings with the exception of the internal areas of building 2, however some observations were able to be undertaken through the windows.
- 1.3 This report is based upon observations made and no opening up works were carried out. No inspections have been made of woodwork or other materials which are covered, unexposed or otherwise inaccessible and I am therefore unable to report that such items are free from defect. Inspections for the presence of asbestos are specifically excluded and it is recommended that if suspected a specialist report is obtained. The inspection was generally made from ground level externally and a full internal inspection was carried out.

2.0 DESCRIPTION OF THE STRUCTURE

- 2.1 The buildings on site consist of 2 main structures. See the site plan in the Appendix of this report.
- 2.2 The geological map covering this area was studied. It was found that the likely subsoil underlying the buildings consists of River Terrace deposits (Sand, silt and clay) overlaying Lewes Nodular Chalk Formation (Chalk).
- 2.3 Building 1 appears to be the second oldest on the site. It has a mixture of flint and brickwork walls with a timber roof structure that is slate covered.
- 2.4 Building 2 is of a similar age to building 1 but perhaps even older. It again consists of flint and brickwork walls. A timber roof structure with slate roof coverings.

3.0 OBSERVATIONS

Existing workshop / store building (Building 1)

- 3.1 The roof of this building is constructed of timber trusses and timber support beams. There are some undulations present to the roof structure when viewed externally but this is not unusual in a building of this age and type. Some roof works maybe required during any renovation works to replace rotted or damaged timbers. There are some slates missing or slipped which again will need to be replaced as part of the renovation works.
- 3.2 The building walls appear in fair condition and there is a slate DPC present within the lower courses of the walls. There are also some cracks that will need to be repaired as part of any proposed renovation works. These are on the Western rear wall. There is also some cracking to the lintels over the windows. Some areas will also need to be repointed where weather damage has damaged the wall finish.
- 3.3 Guttering and downpipes will need to be replaced as part of the renovation works as they are in poor condition and missing in some areas. This is also true for the other buildings on the site.
- 3.4 The ground floor in this building appears to be a ground bearing concrete slab. This is likely to be uninsulated. The slab is in fair condition and appears suitable for continued use but will require some repairs as part of the proposed renovation works.
- 3.5 The timber work to doors, doorframes, and windows, window frames on this and other buildings, are in a poor state of repair and will need to be replaced as part of the renovation works.

Existing workshop (Building 2)

- 3.6 This building is constructed in a similar manner to building 1 but is perhaps slightly older. It has some large timber feature trusses internally. The roof coverings are in very poor condition with numerous previous por repairs having been carried out. This building will need completely new roof coverings.
- 3.7 There appears to be no DPC within the external walls of this building. The walls appear in sound condition but some works maybe necessary to ensure this lack of DPC does not become an issue when the building is renovated. Some of the flint work to the external walls has been badly repaired in the past and needs proper repair during the renovation works.
- 3.8 The walls, timber purlins and steel beams appear in sound condition and only some minor crack repairs will be required to the existing external walls.

External areas generally

- 3.9 There are some concrete hardstanding areas around the site which are in poor condition however it is likely that these will be removed and replaced with a more permeable surface as part of the renovation works.

4.0 PROPOSED RENOVATIONS

- 4.1 The proposed renovations involve creating residential habitable areas within the existing buildings, See proposed plans appended to this report. As part of the planning conditions it is likely that as much of the existing structures must be retained as possible. The survey observations have shown that this approach is certainly feasible.
- 4.2 Below we have proposed solutions that the renovations/redevelopment of the existing structures should follow and include the issues of re-using and retaining the existing structures, these have been discussed with the Architect who has schemed up the proposed renovations to the existing buildings. It has been agreed that these proposals are feasible, though will require working up to working details at construction stage.
- 4.3 The walls of all buildings are generally single skin masonry / flint and on the newer building brickwork with numerous wider strengthening brick piers. These walls are structurally stable and able to support the existing roof loading. If the roof loading is increased during the renovation works then the structure may require some minor strengthening to aid in the lateral stability of the wall. A method for providing this strengthening would also allow an insulated inner wall to be constructed which would provide the external walls with the required thermal requirements that the building regulations would require. We have provided a basic section of the proposed wall strengthening detail appended to this report. These inner (or outer walls) could be of masonry or timber frame construction.

4.4 The ground floor in all units appears to be an uninsulated concrete ground bearing slab. We suspect that the floor slab is supported directly on the subsoil. The solution here would be to add a new DPC and insulation directly over the existing concrete slab with a shallow screed constructed upon the insulation layer. Again this has been shown on the appended section and would also allow for the floor surface to be made completely level.

5.0 CONCLUSIONS

5.1 The buildings on site were found to be in generally sound condition. There are some minor signs of movement to walls most likely caused by seasonal movement due to a lack of proper building sealing, heating and their existing condition. The defects observed are not structurally threatening but they would benefit from some minor repairs which the proposed renovation works would allow to be carried out.

As this is the case we would propose that the existing building renovation proposals are required, and within the short term if possible.

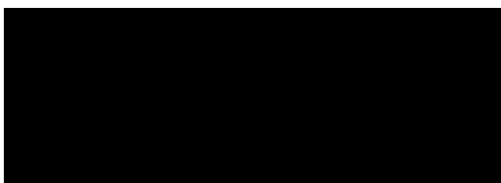
6.0 RECOMMENDATIONS

6.1 An asbestos survey should be carried out on the structures before any renovation or removal works are carried out.

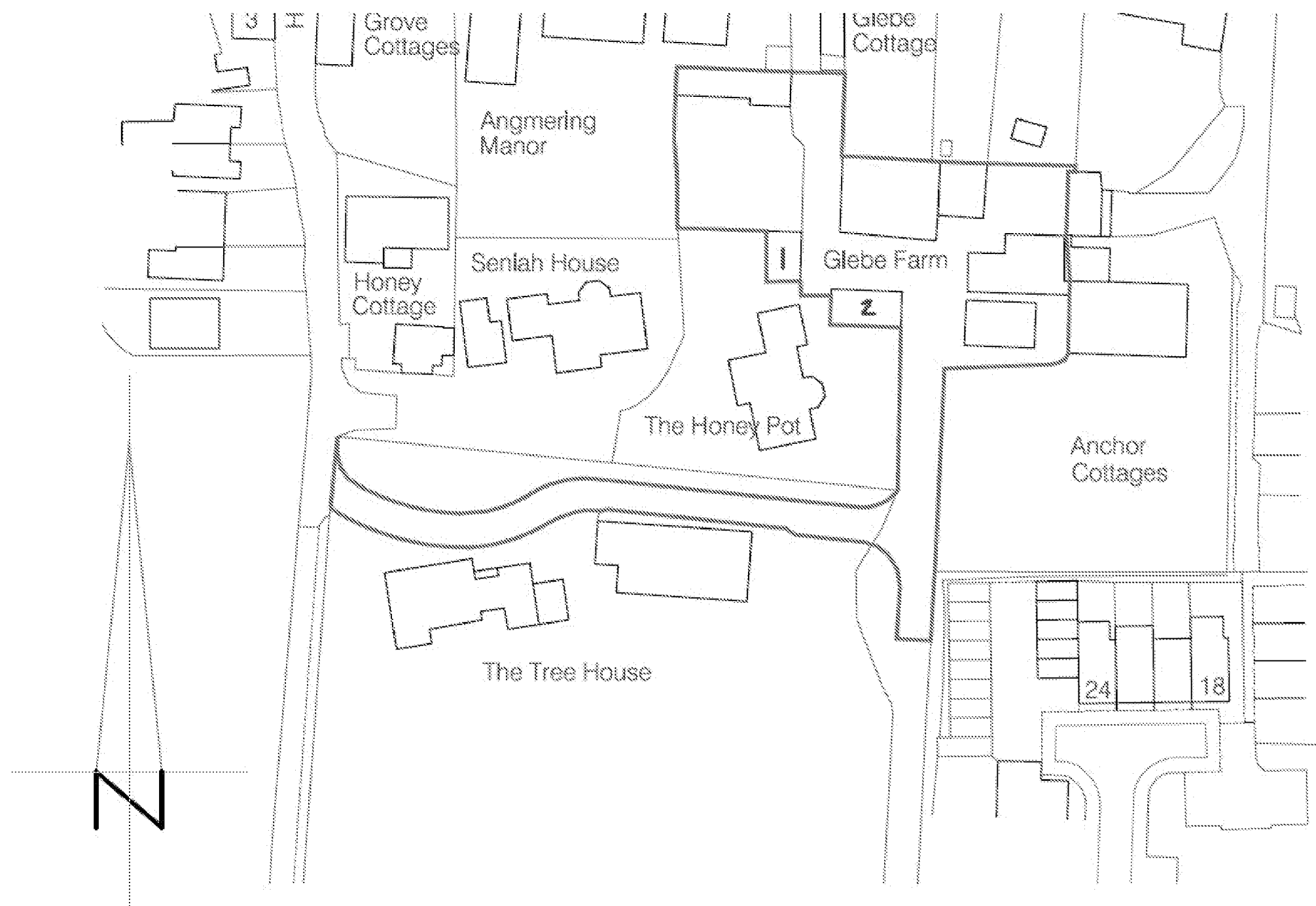
6.2 The details in section 4.0 and the appended section would provide a feasible solution to provide adequate stability to existing walls, provide the required thermal properties to the existing walls and ground.

Hopefully the above information is sufficient for your needs at this time. However please feel free to contact me if you wish to discuss anything in more detail or require any further information.

ELVIN GOMERY B.Eng HONS



DAVID BUTTON B.Sc CEng MICE
For and on behalf of Cowan Consultancy Ltd.



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Existing site plan showing building locations 1 and 2



External view of Building 1



Internal view of Building 1



External view of Building 2



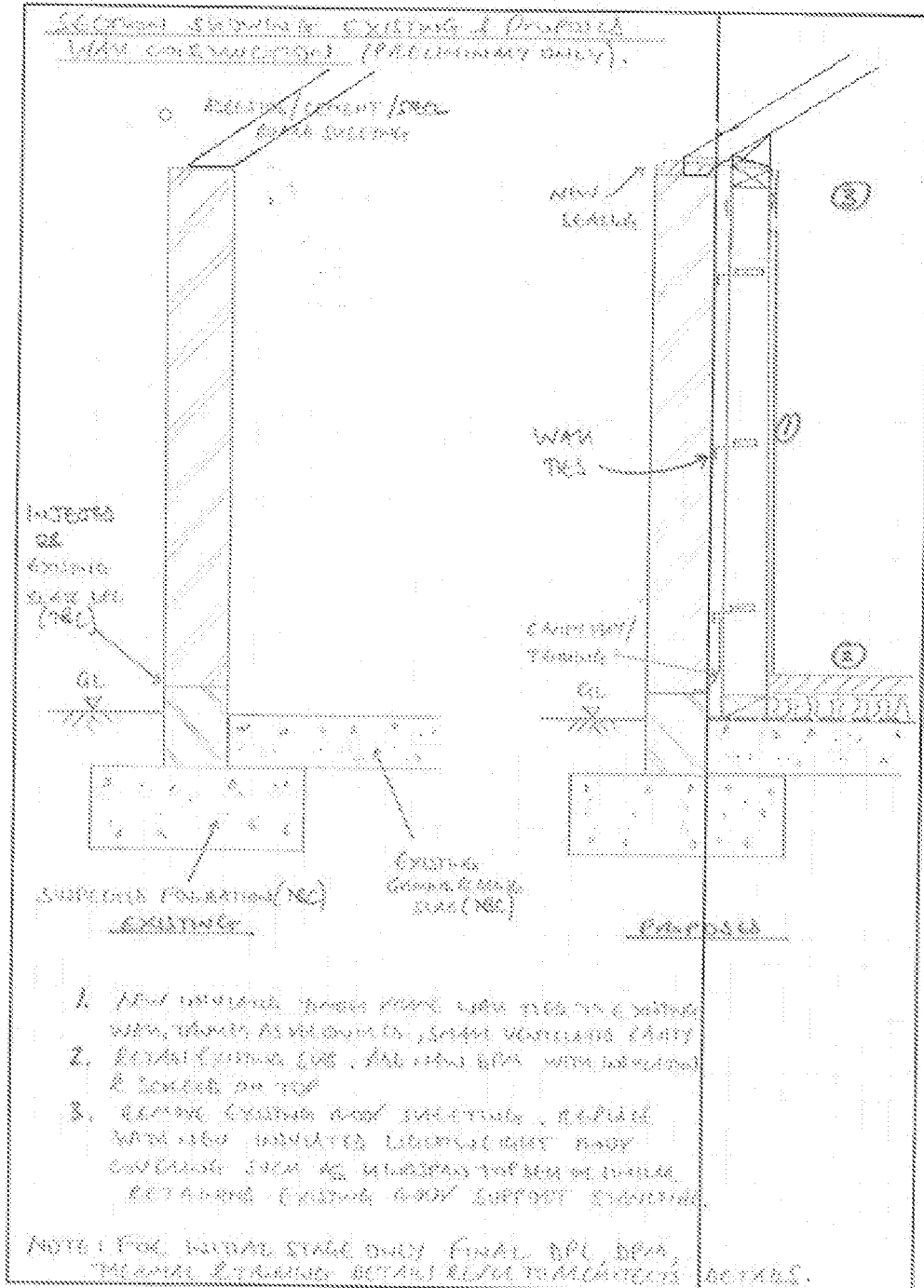
Internal view of Building 2

Doc No.	Sheet 1	Date 8/10
Job	By EG	Checked

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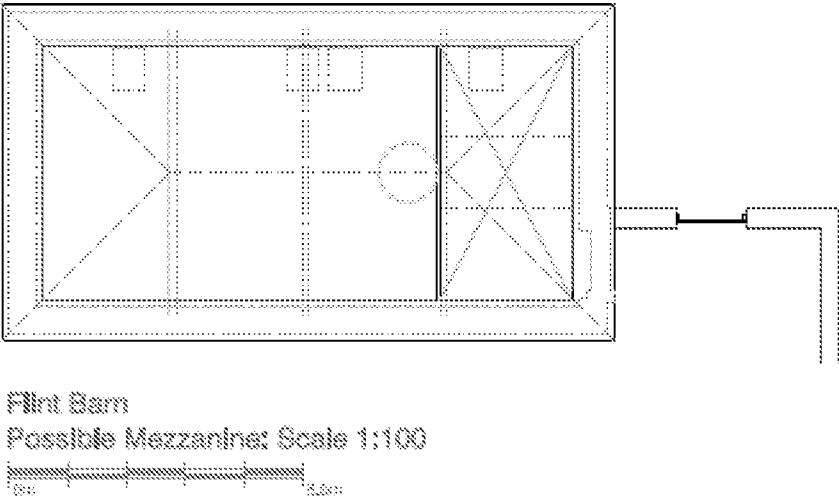
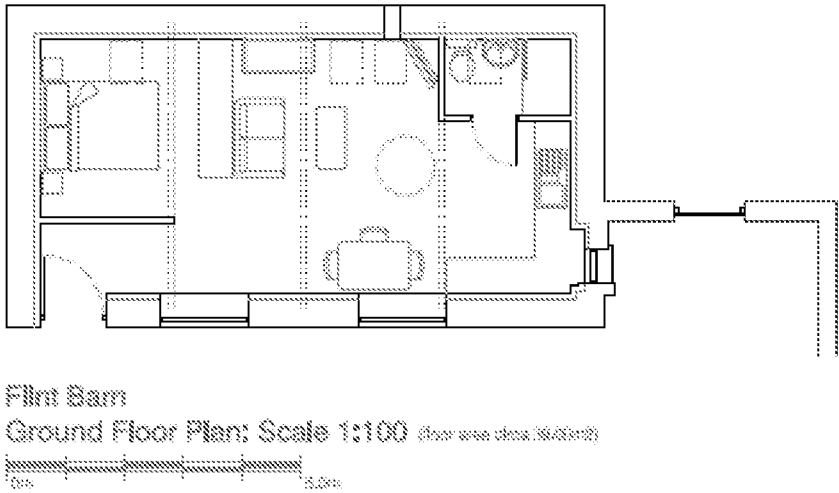
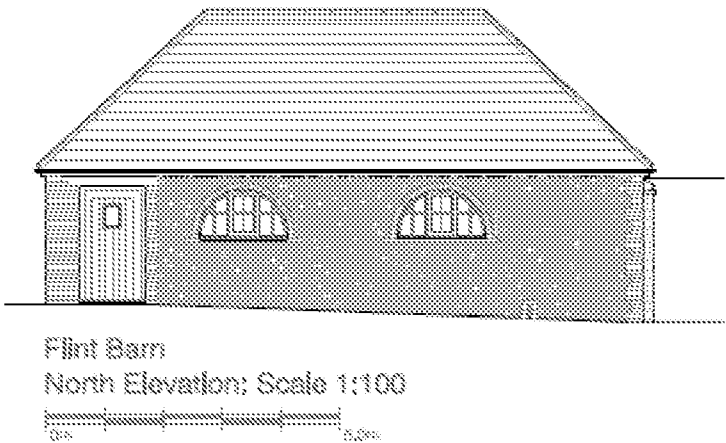
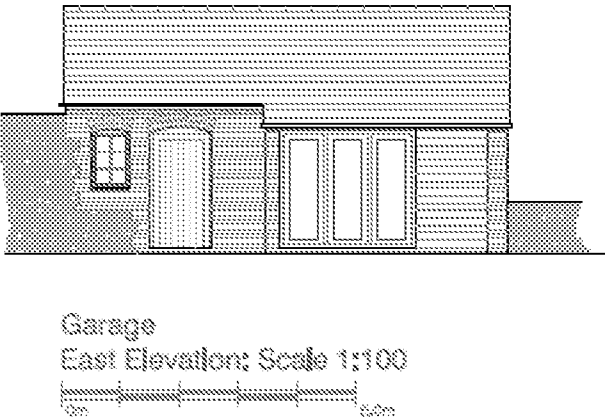
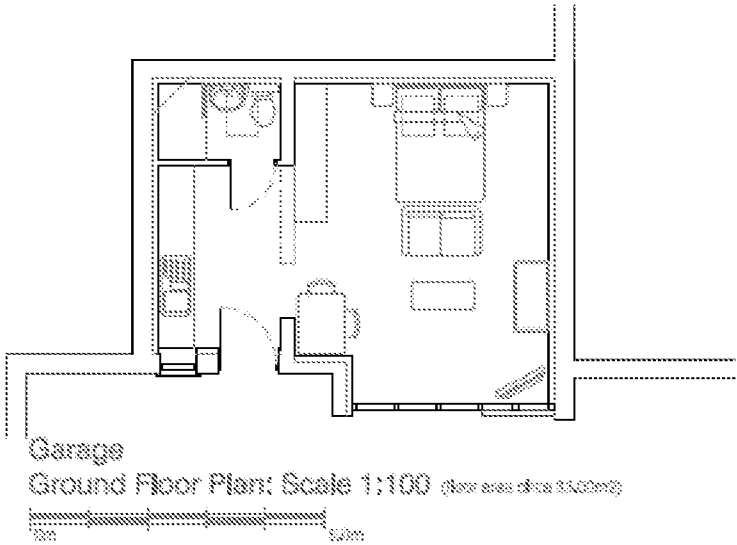
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Proposed remedial section

Glebe Farm | High Street | Angmering | West Sussex | BN16 4AG
Prepared by RDV a Design for Mr Jonathan Loveloy



Notes

1. The plans are intended to provide a general indication of the proposed development and are not to be used for any other purpose.

2. The plans are subject to the approval of the relevant authorities.

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10. The plans are subject to the approval of the relevant authorities.

RDV a Design		
91 Oak Road Angmering West Sussex		
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Project		
Glebe Farm		
High Street Angmering		
West Sussex		
Drawing		
Flint Barn and Garage		
Indicative Floor Plans and Elevations		
Scheme A		
Scale	Date	
1:100	@ A3	July 2019
Drawn	Checked	Rev
18148	01/04	-

Proposed plans Building 1 and 2