

Manor House, 5 East Street, Crowland: Method Statement for Lifting of Floorboards

Site Note 3. July 2025, job no. 438-44

CONTENTS

- 1 Introduction
- 2 Staff on site and contacts
- 3 Purpose and scope
- 4 Pre-work requirements: preparation
- 5 Removal
- 6 Storage
- 7 Reinstatement
- 8 Monitoring and reporting
- Attachments
 - A Plans: floor plans with room numbering
 - B Plans: Floorboards
 - C SPAB Guidance

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1 INTRODUCTION

1.1 AUTHORITY AND REFERENCE

Hutton+Rostron Environmental Investigations Limited have been prepared a method statement for the removal of floorboards. H+R are appointed is in accordance with instruction received from Mr Iain Smedley by email dated 25 October 2024 [07:12].

1.2 AIM

The aim of the method statement is to support an application for listed building consent that is seeking consent to remove and reinstate historic floorboards within three rooms within the Manor House to facilitate structural investigations

2 STAFF ON SITE AND CONTACTS

2.1 H+R STAFF ON SITE

Katie McAndrew

2.2 PERSONNEL CONTACTED

Barendina Smedley – client
Iain Smedley – client

3 PURPOSE AND SCOPE

This method statement outlines the procedures for the temporary removal, storage, and reinstatement of floorboards within three principal rooms (G6, G10 and F9) at Manor House, 5 East Street, Crowland. These rooms are identified on referenced floor plans in attachment A.

This work will facilitate essential structural investigations of underlying fabric for the purpose of understanding precisely the building's construction, its structural defects and the nature of past remedial works

The extent of floorboard removal will be subject to the Structural Engineer's guidance. While the scope may allow for the removal of all the floorboards in each room of the stated rooms (G6, G10 and F9) the intention is to adopt an approach of minimal intervention and remove only what is necessary to investigate underlying fabric and understand precisely the building's construction, its structural defects and the nature of past remedial works

4 PRE-WORK REQUIREMENTS: PREPERATION

Authorisation: With consideration to Manor House's grade II* listed status, removal and storage of the floorboards requires listed building consent approval. The appointed contractor shall ensure they have been provided with a copy of the listed building consent document approving removal and storage of the floorboards before works commence.

ACMs: Obtain a copy of the Asbestos Survey and confirm working area is free of ACMs

Briefing: With consideration to Manor House's grade II* listed status, the appointed contractor shall ensure all personnel/operatives/craftspeople involved in the removal, storage and reinstatement of the floorboards are aware of the building's listed status and what that means, the provenance of the fabric, the requirement for care when handling the historic fabric. Ensure those parties have reviewed the brief and are aware of associated floorboard plans, labelling processes and storage arrangements

Fabric protection: Within panelled rooms and through routes where floorboards may be carried to storage allow to protect floors, fireplaces, doors, door architraves with task specific temporary protection to ensure no damage comes to other internal features or the floorboards. This may include but not limited to installing protective floor coverings, wrapping features in padded sheeting or soft flannel or using foam edge/corner protectors. Review Historic England Guidance '*Temporary Protection of Historic Features During Building Works*'

Personnel: Work to be undertaken by craftspeople/operatives familiar and experienced working with historic joinery

Risk assessment: Complete risk assessment prior to commencement. Identify potential hazards including manual handling, sharp edges, dust, and falling material. Implement safety measures including ensuring operatives are wearing appropriate PPE

Storage location: Designate clean, dry, secure storage area with appropriate temporary racking and shelving in place

Storage methods: ensure racking, shelving, labels, protective wrapping of acid-free, nonabrasive waterproof, breathable protection type (i.e Tyvek [Product spotlight - Tyvek as a packaging solution – Conservation Resources \(UK\) Ltd](#)) and labels are accessible on site ahead of works

Supervision: Ensure there is a qualified historic building specialist involved to review all stages of work

Tools: Ensure appropriate hand tools (screwdrivers, pry bars, etc.) and small power tools as required (cordless preferred) are accessible on site ahead of works and consider if lifting equipment is necessary

Working area: With consideration to Manor House being an empty and unoccupied building, clear work area (panelled room and designated storage) of furniture and non-essential equipment. Identify any services concealed below floors and ensure electrical services are isolated with panelled rooms and provide independent task specific lighting and electric supply

5 LIFTING

5.1. GENERAL MATTERS

Instruction: Applying the principle of minimum intervention, the contractor shall be guided by the Structural Engineer on the areas of floorboards to be removed in each room. These areas are to be agreed on site, marked up on plans in attachment b and plans made available to all operatives and the historic building specialist

Examine: Examine floorboards to determine fixing method

Record: Fully photograph each floor of each room on the day of floorboard removal and before works start. As floorboards are removed photograph any identified damage or defects. Fully photograph floor of each room at the end of floor board removal

5.2 LIFTING

Lifting: No floorboards shall be cut to facilitate lifting and there is a presumption to avoid damage to the historic floorboards which will all be put back and re-laid following investigations. Floorboards shall be lifted with due regard to the SPAB guidance in attachment C. Use traditional hand tools where possible to avoid damage to historic fabric. Retain historic nail fixings

Handling historic fabric: Use two-person lift parts exceeding safe manual handling limits.. Support floorboards adequately during removal to prevent stress or damage

Inspect: Inspect each floorboard as removed for damage or defects and photograph if necessary

Protection: Wrap floorboards in protective wrapping (i.e Tyvek as detailed above or similar material as its removed from the wall)

Labelling: Label each floorboard immediately as lifted. This may be in the form of writing on labelling stickers/tape stuck to the protection or tags. Boards should be labelled before the next board is taken up and taken to the storage area. Label floorboards in accordance with the referencing on the detailed measured drawings in attachment A stating room name and reference, and floorboard number as follows:

- Dining Room (G6), 1

Check: If unidentified asbestos-containing materials (ACM) are suspected, stop work and seek specialist advice

Temporary flooring: If required, install access route of temporary sheet boarding over floor joists to facilitate access to rooms for inspection.

6 STORAGE

6.1 STORAGE LOCATION

Store: As identified at preparation stage.

Environment: Protect from weather if temporary external storage required. Manage stable environmental conditions (45-65% RH, 16-20°C) with background heating where required to minimize fluctuations in temperature and humidity. Ensure adequate ventilation while avoiding draughts. Protect from direct sunlight and artificial UV sources

Pests: Implement pest management protocols

6.2 STORAGE METHODS

Protection and labelling: Floorboards wrapped in acid-free, nonabrasive waterproof, breathable protection and labelled at point of removal as identified in removal stage above

Storage: Keep floorboards off ground using bearers or pallets or temporary shelving. Floorboards should never be left leaning unsupported. Store fixings and hardware in labelled containers

Organisation: Maintain clear identification system correlating to established labelling system from plans under attachment b

7 REINSTATEMENT

7.1 CONDITION ASSESSMENT

Examination: Re-examine for damage prior to reinstatement

Repair: Undertake any necessary conservation repairs using appropriate materials and techniques. Gently clean floorboards brushing down if necessary.

Record: Photograph and document any interventions

7.2 REINSTATEMENT PROCESS

Sequence: Reinstall in reverse i.e. last floorboards up will be first parts back in each room. Reinstall in accordance with wall plan referencing in attachment b with floorboards in their original positions

Fixing: Follow traditional fixing methods where structurally appropriate. Avoid modern adhesives or fixings that may cause future deterioration

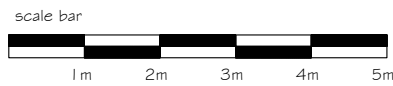
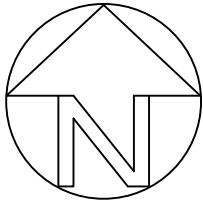
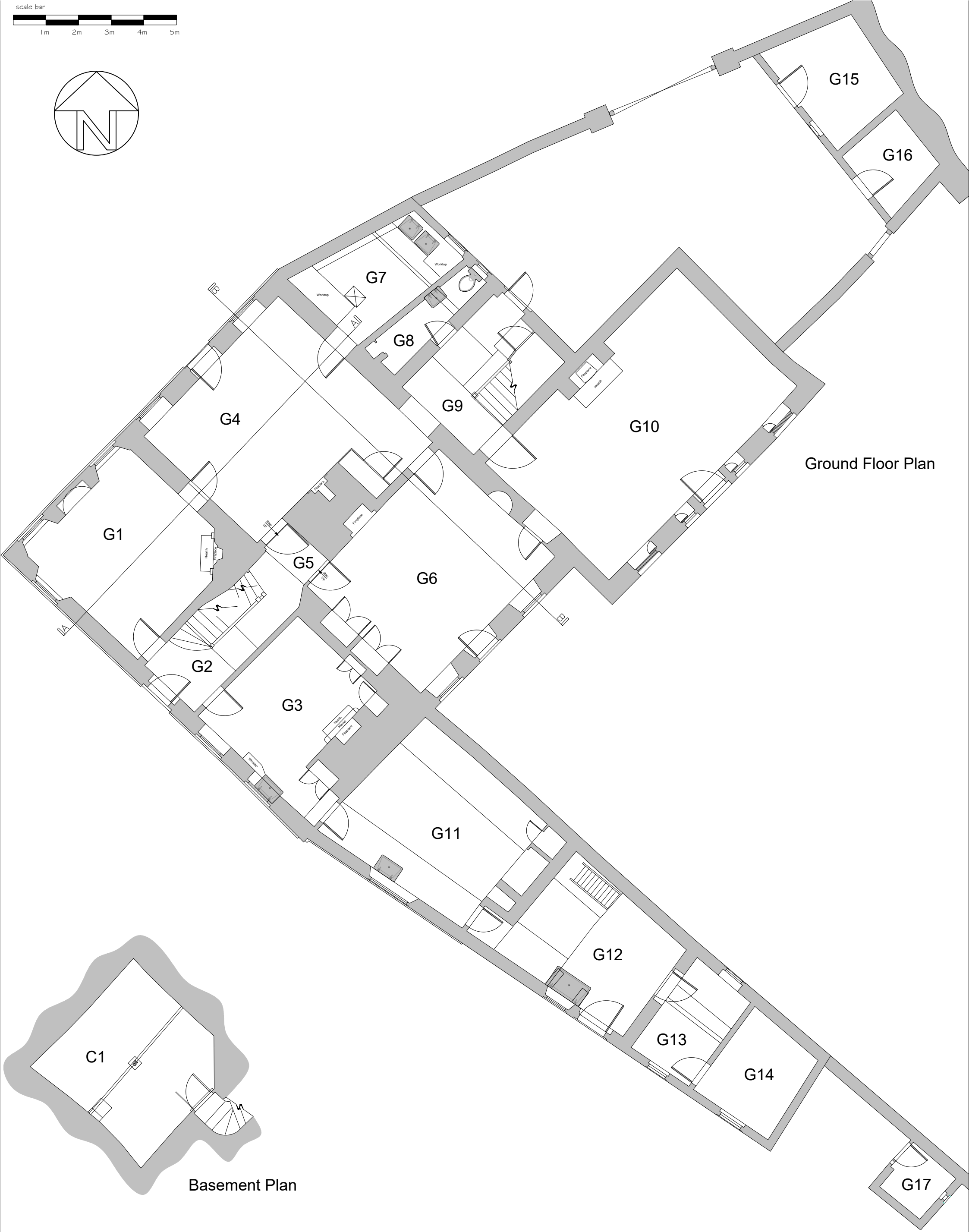
Finishing: Remove all debris and clean workspace

8. MONITORING AND REPORTING

Documentation: Maintain site records throughout the process collating all photographs taken through the process in one document. Photographs identified by room name and number and floorboard number if required. Final report documenting methodology and any discoveries

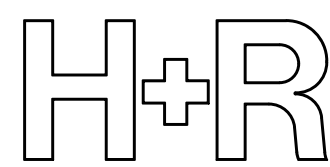
Quality Control and Final Inspection: Historic building specialist to inspect at key stages. Contractor to conduct visual inspection of completed installation alongside historic building specialist.

Attachment A



Ground Floor Plan

Basement Plan



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Project

The Manor House, East Street,
Crowland, PETERBOROUGH
PE6 0EN

Purpose of Issue

Planning

Drawing Title

Existing basement and
ground floor plans

Drawing Number

438-44.P02

Scale

1:100 @ A3

Date

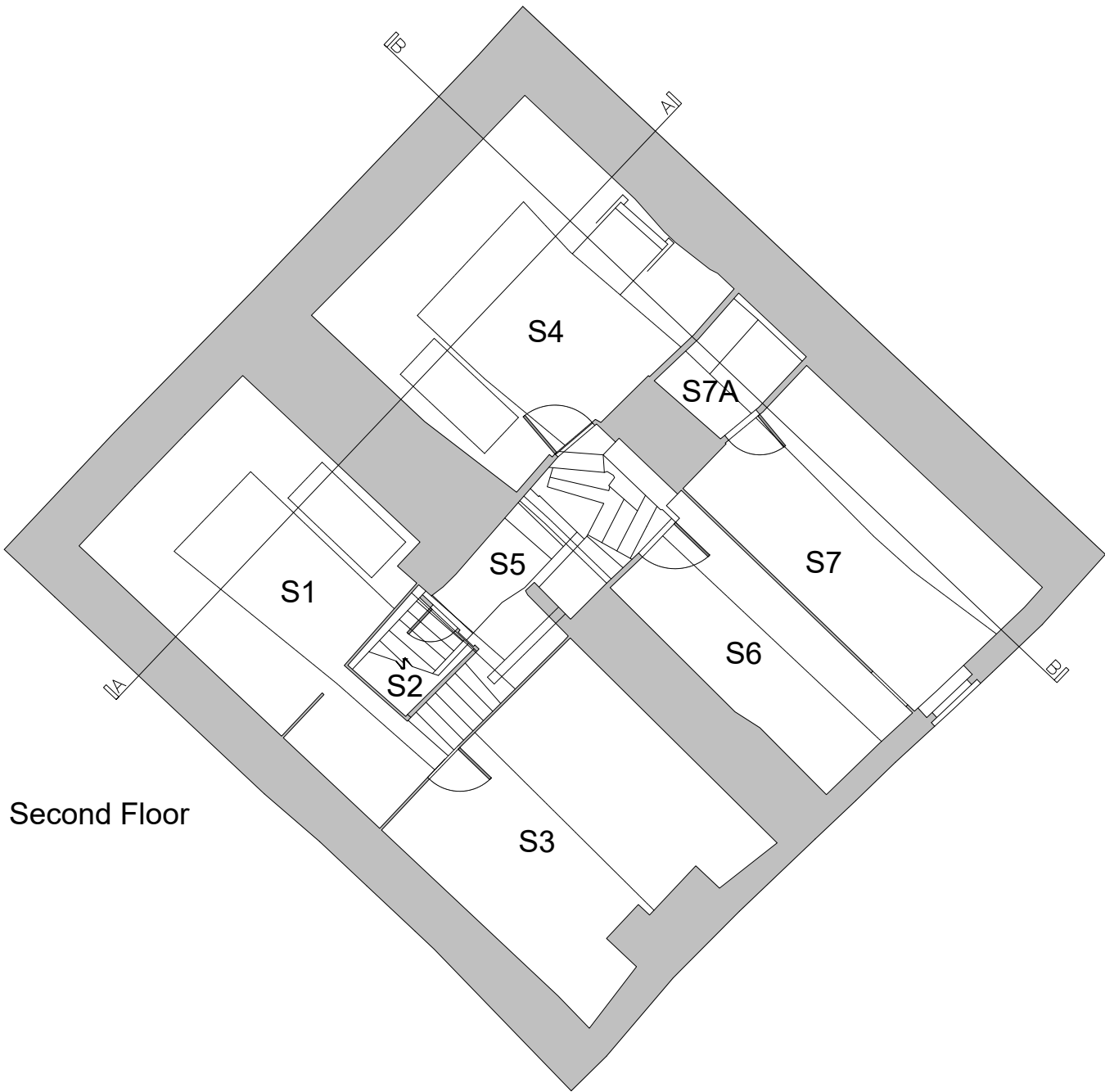
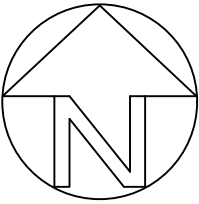
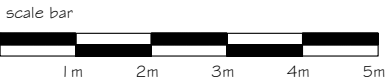
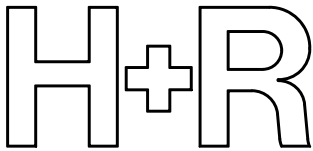
May 2025

Notes

Original survey undertaken by Rigour
Surveys, rigoursurveys.com,
01603558213

Drawing produced for the purposes of
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Do not scale from this drawing



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Project
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PE6 0EN

Purpose of Issue
Planning

Drawing Title
Existing first and second
floor plans

Drawing Number
438-44.P03

Scale
1:100 @ A3

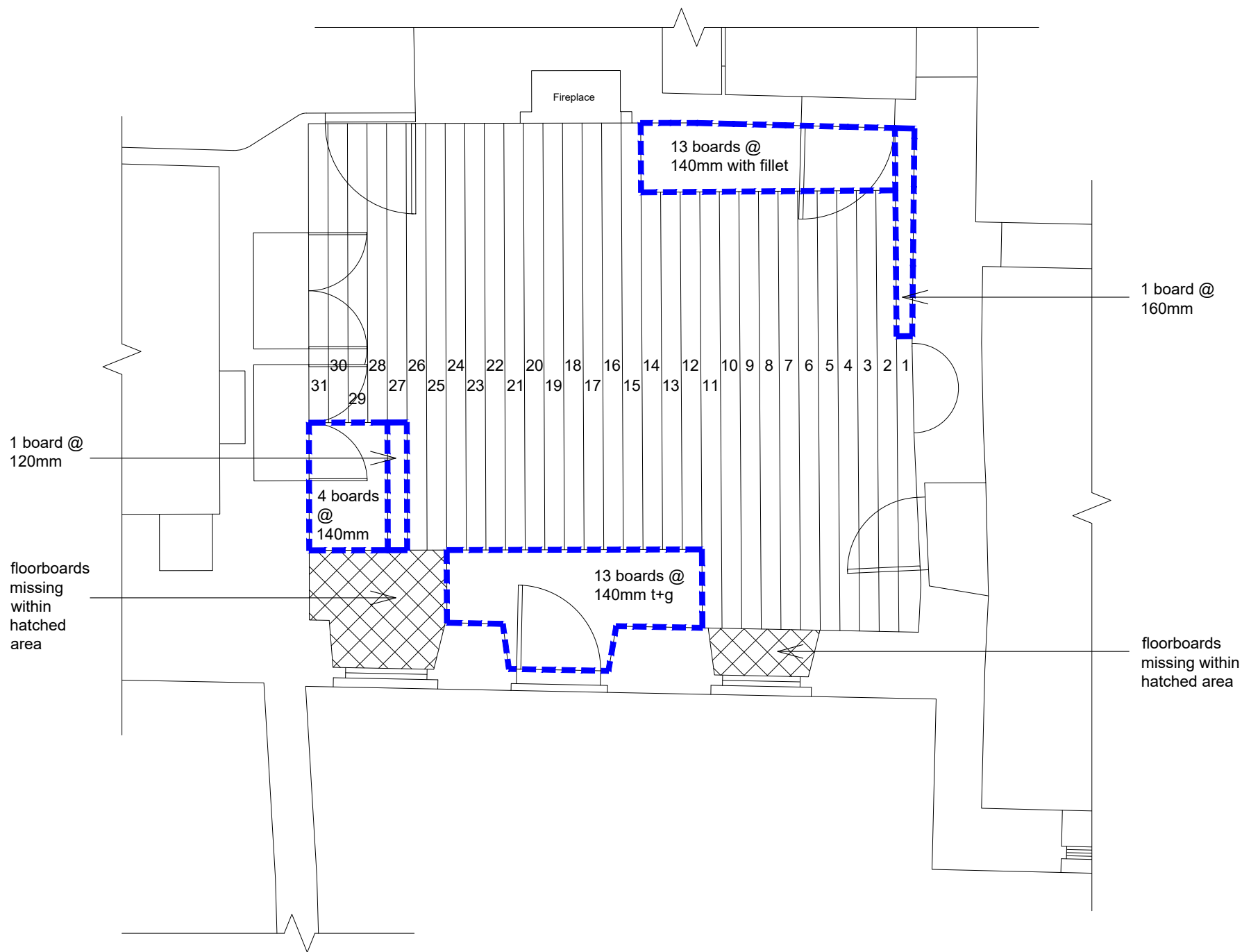
Date
May 2025

Notes
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Attachment B

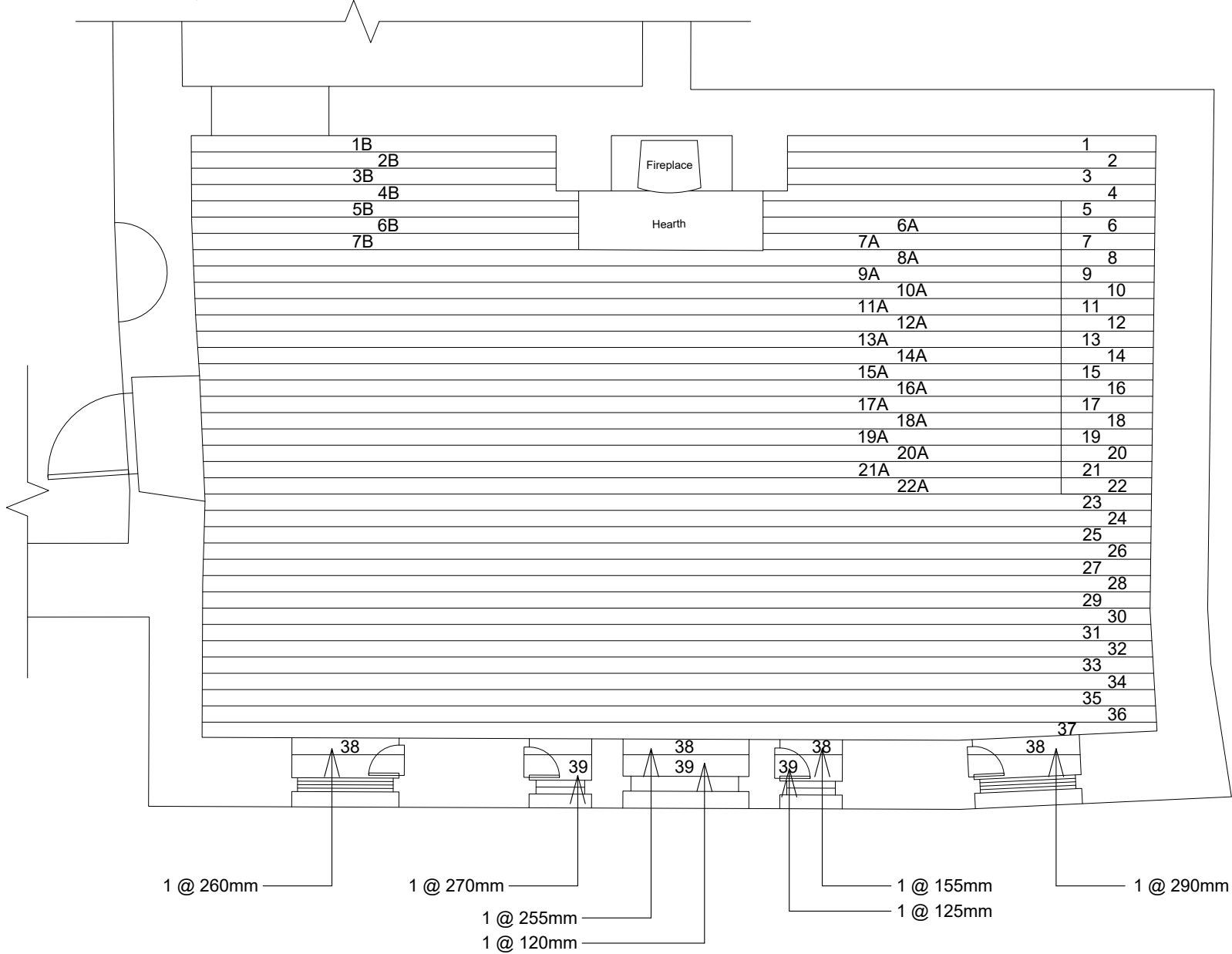


The Drawing Room (G6)
Floorboard layout

Floorboard Schedule

Number	Width	Note
1	170	
2	140	
3	140	
4	135	
5	210	
6	190	
7	190	
8	210	
9	220	
10	190	
11	210	
12	190	
13	170	
14	150	
15	220	
16	215	
17	180	
18	210	
19	210	
20	190	
21	170	
22	200	
23	170	
24	190	
25	180	
26	210	
27	200	
28	175	
29	190	
30	155	
31	130	

The Great Room (G10)
Floorboard layout



Floorboard Schedule

Number	Width	Note
1	140	
2	140	
3	140	
4	140	
5	140	
6	140	
7	140	
8	140	
9	140	
10	140	
11	140	
12	140	
13	140	
14	140	
15	140	
16	140	
17	140	
18	140	
19	140	
20	140	
21	140	
22	140	
23	140	
24	140	
25	140	
26	140	
27	140	
28	140	
29	140	
30	140	
31	140	
32	140	
33	140	
34	140	
35	140	
36	140	
37	140	
38	varies	see adjacent drawing
39	varies	see adjacent drawing

Number	Width	Note
1B	150	
2B	125	
3B	145	
4B	150	
5B	145	
6B	150	
7B	150	

Number	Width	Note
6A	125	
7A	140	
8A	130	
9A	150	
10A	160	
11A	130	
12A	120	
13A	150	
14A	150	
15A	125	
16A	125	
17A	120	
18A	160	
19A	160	
20A	125	
21A	125	
22A	150	



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Purpose of Issue

Planning

Drawing Title

Existing floorboard layout
The Great Room G10

Drawing Number

438-44.D05

Scale

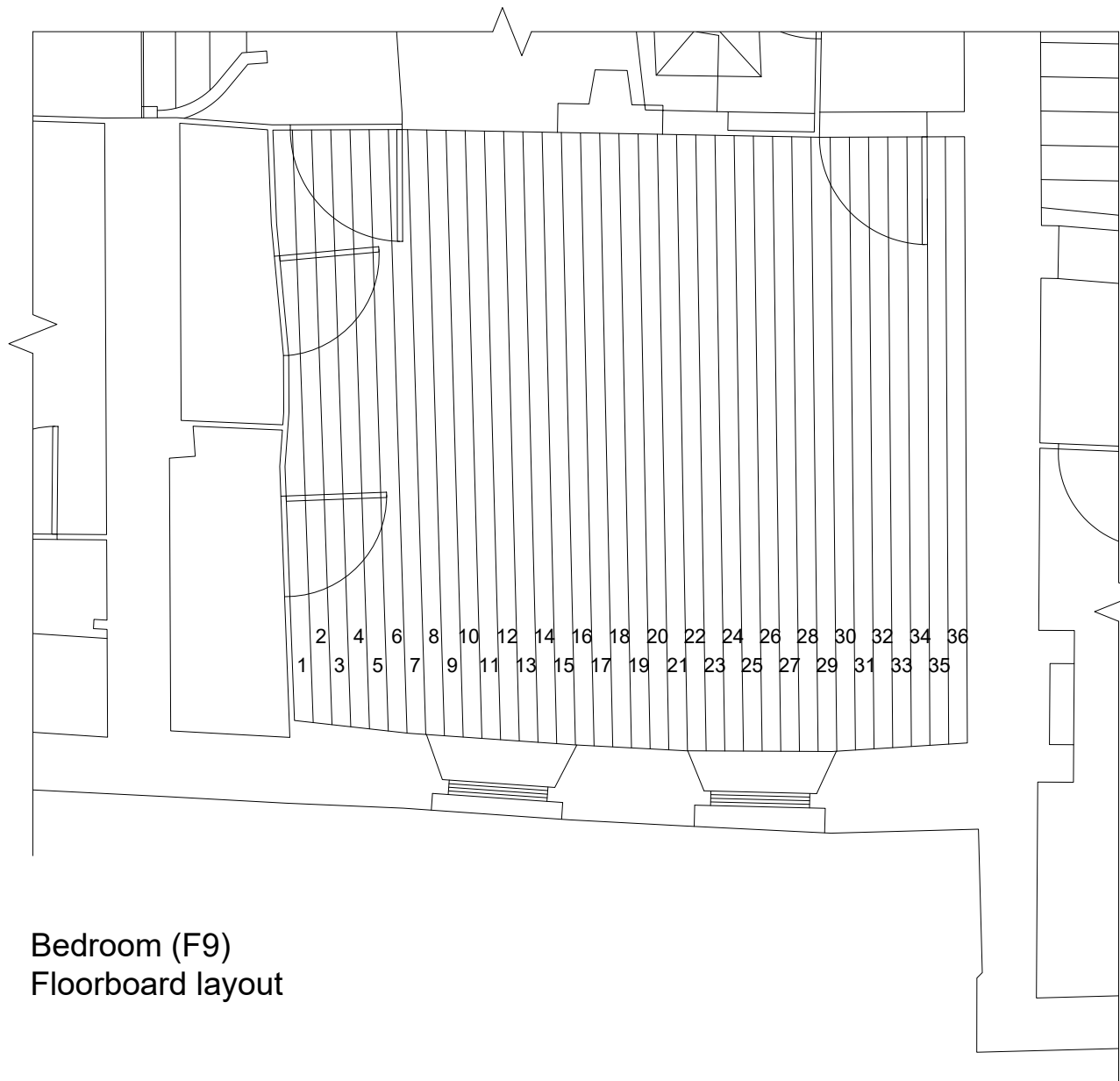
NTS

Date

July 2025

Notes

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Floorboard Schedule

Number	Width	Note	Number	Width	Note
1	125		19	140	
2	125		20	140	
3	125		21	140	
4	125		22	140	
5	125		23	140	
6	125		24	140	
7	140		25	140	
8	140		26	140	
9	140		27	140	
10	140		28	140	
11	140		29	140	
12	140		30	140	
13	140		31	140	
14	140		32	140	
15	140		33	140	
16	140		34	140	
17	140		35	140	
18	140		36	140	

Bedroom (F9)
Floorboard layout

Attachment C

PATCHING OLD FLOORBOARDS

by Philip Hughes



Warmth and richness of a well-repaired old floor.



Inappropriate use of narrow softwood boards to replace a wide elm board damaged during the installation of central heating. Couldn't the board have been repaired?

Introduction

An old floor of wide boards—scrubbed or polished for generations and uneven with wear—adds considerable richness to any room in an old building. A floor is one of the principal surfaces of a room, yet ancient boards are often badly abused. Bodge attempts to replace boards are common and even when this is done well the result will not always be visually satisfactory. In addition, complete replacement of floors often takes place unnecessarily.

This information sheet aims to alleviate the problem by suggesting a number of ways in which old boards may be patched or repaired. It is written with butt-jointed boards in mind and the advice given will not necessarily be suitable for tongued and grooved boards. The ancient method of fixing boards to the joists was with riven timber and where these or any other unusual feature is found, specialist advice should be sought.

Causes of Deterioration of Floorboards

A full examination of causes is outside the scope of this sheet but the principal areas include:

1. Beetle attack.
2. Fungal decay.
3. Careless lifting of weakened boards (particularly by electricians, plumbers and heating engineers).
4. Careless replacement of lifted boards.
5. Natural seasoning, shrinkage, and warping of boards originally laid "green".
6. The effects of furniture (particularly castors) when positioned on the edge of an old board.

It is relatively unusual to find that boards affected in any of the above ways are beyond repair. For example, although a



Damage to board caused by a castor. This can be particularly serious when the castor is positioned over the edge of a board.

board may be suffering from beetle attack and have many "worm holes" (actually beetle "flight" holes) its strength may not have been reduced significantly.

In such a case treatment against beetle attack may be all that is necessary.

Lifting Floorboards

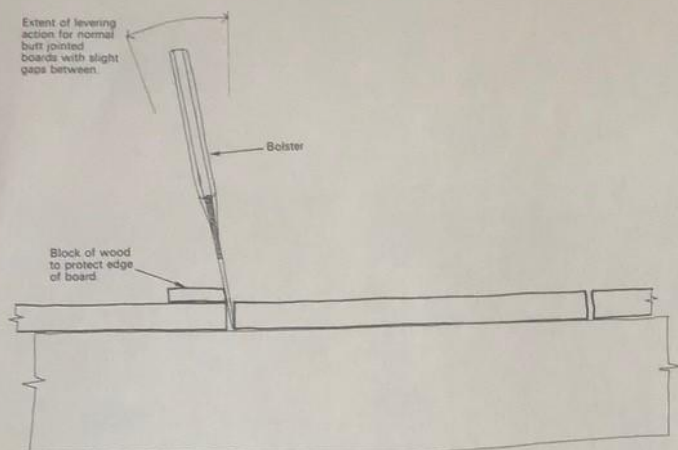
It is extremely easy to cause serious damage to floorboards by attempting to lift them—particularly when the board is decayed. Despite the pitfalls, there are numerous techniques for successfully lifting floorboards. Lifting the first board without damage is usually much more difficult than the remainder. It is not an operation which should be rushed into—it requires ingenuity, preparation, care and patience! If there is an opportunity to choose which board to lift first, select with care! The ideal is a shortish board, with at least one end in relatively good condition, *not* against a wall, and preferably with a gap big enough for the bolster to fit between boards.

The necessary tools are likely to include: a 6" bolster (preferably two of these); wooden blocks of various thicknesses; a flat hardened steel plate; a hammer; a $\frac{1}{2}$ " batten about 8" longer than the width of the board; nail punches; a hacksaw; and a crowbar.

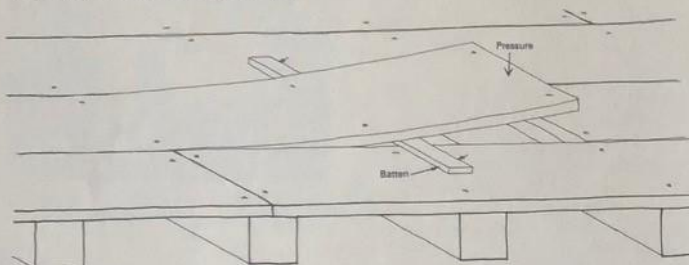
1. Using a block of wood (or the steel plate) to protect the edge of the adjoining board work around the board to be lifted with the bolster, levering from side to side slightly, to try to loosen the board.



Board damaged by careless lifting and relaying during installation of central heating and wiring runs (pipes and wires just visible in gap between boards).



The first stage in lifting a butt-edged floorboard.



Easing up the first board.

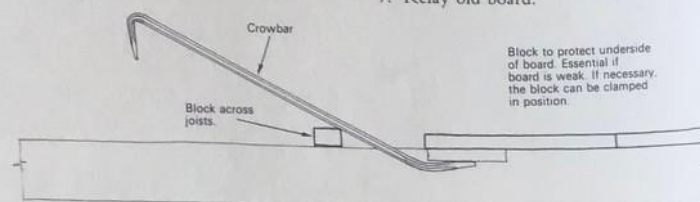
2. Starting over a joist (by a nail) about a third of the way down the board (to avoid splitting the end), lever more vigorously with a pumping action one side of the board then the other, to raise the board by up to one third of its thickness. Ensure the edge of the adjacent board is protected. Moving towards the middle then back towards the end repeat the process until one end of the board comes free. If this does not seem to be working or if the board is very decayed resort to the nail punch and try to drive the nails down.
3. When one end has been freed, try placing the $\frac{1}{2}$ " batten under it spanning the two adjacent boards and gradually move this towards the next set of nails with gentle pressure applied on the free part of the board. The amount of pressure will depend on the condition of the board. This will normally ease the nails slightly out of the joists. Remove the batten and allow the board to drop to its original position to give access to the nail heads. If it does not succeed, try the bolster again or perhaps the crowbar—levering (pump action again) under the board near the position of the nail, but away from the edge of the board.
4. Particular care needs to be taken with the nails at the end of the board as it is easy to split an old board unless these are removed gently.
5. Once the board is free, pull out the nails—pincers, hammer or crowbar.

The levering process using the bolster against the side of the board is probably the one most likely to cause damage by

bruising neighbouring boards or splitting away part of the board being lifted. It is usually possible to avoid this process when lifting the second and subsequent boards as it is possible to place a block across the joists and to lever against the underside of the board with a crowbar. Once the board has started to lift the bolster or crowbar can be inserted between board and joist and levering with a pumping action resumed. Again it is wise to start about one third of the way along a board and work to the middle and back to the end.

Where a board (or part) is very fragile, it may be necessary to cut the nails using a hacksaw.

Ingenuity and care are the keys to success.



Lifting second and subsequent boards.

Undulating floors and gaps between boards

It is sometimes suggested that all the floorboards are lifted in order to shuffle them up to close gaps or to level up a sloping or undulating floor. In general such proposals should be resisted for various reasons unless there is special need, e.g. to carry out repairs. In particular, there is a danger that lifting floorboards will cause damage. Also the undersides of many old boards are shaped because either the board or the joists are uneven and in such circumstances they must be replaced in their original position exactly.

Deflection in a floor is often reflected by movement elsewhere in the structure but provided that the structure is still sound it may be best to leave well alone. A levelled floor can look extremely out of place in an old cottage or house where the walls, windows and doors have deflected and where the ceiling slopes on a similar angle to the old floor.

Gaps between boards must be expected in an old house. Normally these will be unobtrusive and cause little problem but where gaps approach $\frac{1}{4}$ " or more it may be worth considering the introduction of slips of matching timber between the boards. This will, of course, avoid the need to lift and possibly damage the old boards. Papier mache is also sometimes used to fill gaps between boards.

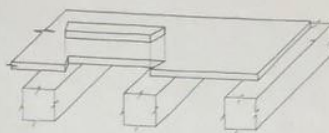
Reducing unevenness in a warped or twisted board

An uneven board can rarely be made perfectly straight but any twist or warp can usually be reduced to acceptable levels.

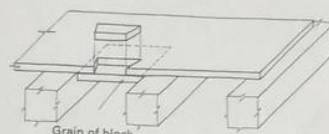
1. Lift board.
2. Immerse and soak board in water (note: this is likely to spoil any finishes which have been applied to the board).
3. Lay board out to dry on battens and apply weights to overcome twisting. There is a tendency for boards to partially revert to original twist when weights are removed and this should be compensated for by over weighting.
4. Allow board to dry slowly whilst under pressure for at least one week.
5. If serious warping is still present try applying wet rags to selected areas of the board and re-weighting. The dampened areas will swell slightly—helping to straighten a board. If it is held flat while drying then the warping is likely to be reduced. The process can be repeated.
6. Treat underside of board (and joists, etc. if necessary) against beetle attack.
7. Relay old board.

Repairing a split board

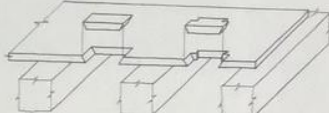
1. Lift board.
2. Mark joist position on board.
3. Clean out crack.
4. Remove warp/twist (if necessary).
5. Glue and clamp. Ensure use of blocks to protect edges and that board remains true.
6. Treat underside of board and joists etc., if necessary.
7. Screw on fixing blocks but do not glue. If split has been caused by maltreating the board ensure blocks are of similar timber to board, well-seasoned and with grain running in same direction as board. If split has been caused by natural movement of the timber the blocks should be fixed with slotted screws and with grain running across the board.
8. Relay board.



Dovetail splice—ends supported on joists.



Dovetail splice—supported on block screwed to underside of board.



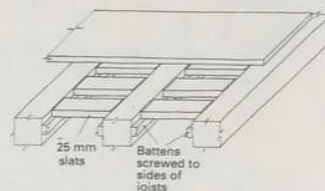
Tapered splices

Note: This type of splice is fairly weak but can be useful for boards at edges of floors—particularly for making good holes left by pipes, etc.

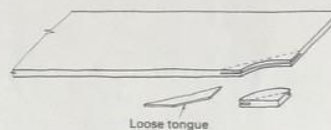
6. Form new section to fit old, glue and clamp in position.
7. Carefully pare down new section to follow undulations of old. Do not pare down surface or edges of old board.
8. Treat underside of board, and joists etc. if necessary.
9. Relay board.

Strengthening a weak board

1. Lift board (if necessary).
2. Screw battens to sides of joists over area affected.
3. Lay 25 mm thick slats on battens under weakened board.



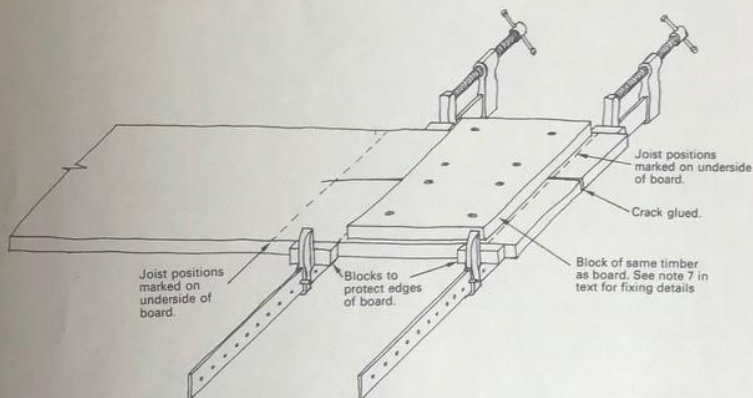
Giving additional support to a weak board.



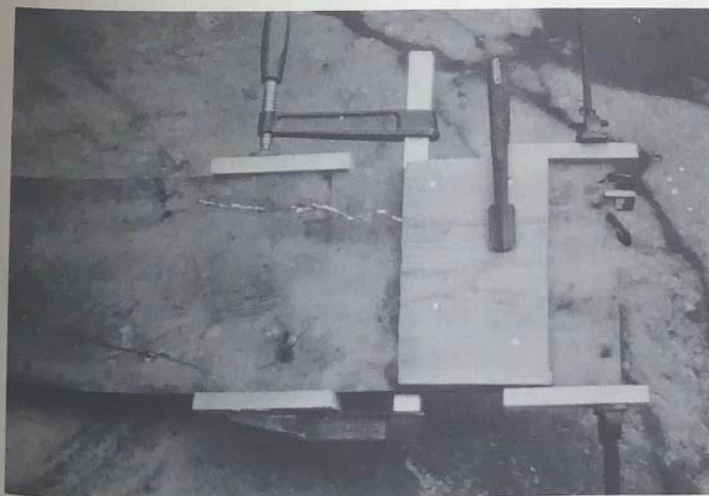
Repairing a broken corner.

Repairing a broken edge

1. Lift board.
2. Choose repair type.
3. Mark joist positions on underside of board.
4. Select seasoned timber of same variety and match grain.
5. Cut out around broken edge of board.



Repairing a split board.



Repairing a split board.



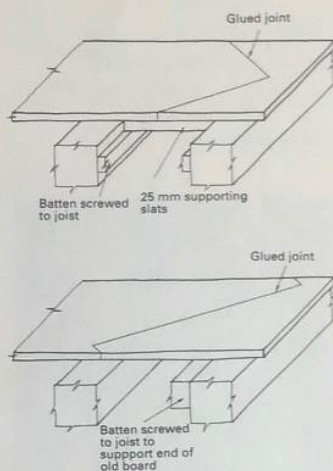
Patch poorly selected—grain does not match and patch is of different timber. Despite being old the patch will never 'age in'.

4. Treat board, slats and battens against beetle attack. Note: Treatment must be undertaken before any wax is applied.
5. Impregnate weakened areas of board with beeswax. (If board has become extremely fragile it may be necessary to use resins.)
6. Relay board.

Note: It may be necessary to strengthen or fill some areas with wood glue and sawdust—e.g. around nail holes.

Splicing a broken end

If the end of a board is so decayed that it cannot be saved then it is usual for the board to be cut back to the next joist and a short board pieced in. However, this can often mean that much more of a board is removed than is strictly necessary and in some floors a new short board can look completely out of place. In such circumstances it may be appropriate to splice a new end on to a board. The most appropriate type of splice to use will depend on a number of factors including the grain of the wood and the width of the board. Billiard cue jointing is sometimes used but two simpler types of splice joint are illustrated.



Splicing the end of a board at the edge of a floor (both illustrations).

Relaying old boards

Considerable care needs to be taken when relaying old floorboards. In general, it is easier to nail floorboards down but there are a number of occasions when this should be avoided and screws used instead. For example:

1. Over a decorative plaster ceiling or ceiling painting which might be disturbed by nailing.
2. Over a lath and plaster or reed and plaster ceiling where the plaster key is suspect.
3. Over service runs, etc. where frequent lifting and relaying of the board will be necessary.

Iron screws will eventually rust and become extremely difficult to remove (even if greased). In general, brass screws should be used, and these should be



The surface of timber is usually left relatively intact following beetle attack. If the surface is removed by planing or sanding, as has happened here, the decayed interior becomes exposed.

lightly greased before fitting to aid removal. Where a board is likely to be lifted and relaid every few years (e.g. over service runs), brass cups should be used to protect the board from damage caused by the screw head.

Surface treatment of floorboards

This is really a suitable subject for an information sheet on its own, but it is perhaps worth mentioning a few points here.

Old boards should never be sanded. If a board has suffered at all from beetle attack sanding will remove the smooth surface of the board and leave a ragged mess of worm-ridden timber beneath.

If it is necessary to remove a paint, stain or varnish on the surface of the board reference should be made to Information Sheet 5 (Paint Removal). Stains will have soaked into the surface of the timber, and although poulticing may reduce the effect of the stain it is unlikely to remove it entirely. Repeated poulticing may help.

In general, old boards that have not been polished will have been scrubbed. Minimum water should be used when scrubbing boards. If the board has suffered from beetle attack in the past, scrubbing may remove the surface in the same way as sanding. In such cases it is

probably best to treat the board with timber preservative and then polish with beeswax—trying to get this to soak into the board to consolidate the weakened timber surface.

Before polishing boards, thought should be given to the serious danger of slipping. Loose rugs should never be laid over polished floors.

Modern varnishes and finishes should be avoided as they tend to give an unsympathetic appearance. Linseed oil should also be avoided as it is slightly sticky, attracts the dirt, and darkens with age.

Conclusion

As one of the principal surfaces of a room, the overall treatment of a floor needs to be carefully considered in relation to: the appearance of the room as a whole; the context of the building; and the function of the floor. Simple straightforward repair of existing floorboards as described in this Information Sheet should substantially enhance the quality and appearance of the interior of the building. When repairs have been well executed, there should not normally be any need to try to tone them in as they will demonstrate the care and craftsmanship that has been lavished on the building.

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