

Tottenham House: Condition investigation of prescribed areas to timber structures

Site note B15 for 21 May 2025, job no. 446-49

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1 INTRODUCTION

1.1 AUTHORITY AND REFERENCES

Hutton + Rostron Environmental Investigations Limited carried out site visits to Tottenham House on 21 May 2025 in accordance with instructions from Paz Horn-Robinson of Corrigan Gore by email dated 19 May 2025 (14:20). Drawings provided by Size Group were used for the identification of structures. For the purpose of orientation in this report, the main entrance to the building was taken as facing west

1.2 AIM

The aim of this survey was to investigate prescribed outstanding areas of various timber structures for their construction and condition throughout the main house and north courtyard as per instruction document reference '2025-05-07 *Timber Investigations – outstanding items*'. Where applicable remedial advice has been provided

2 STAFF ON SITE AND CONTACTS

2.1 H+R STAFF ON SITE

Andrew Ellis
Martha Raymer
Sam Clayson

2.2 PERSONNEL CONTACTED

Paz Horn-Robinson – Corrigan Gore
Lucia Davighi – ABA
Alex Montague-Smith – Adam Architecture
Tristan Way – Size Group

For limitations that apply to this site note please see section 8

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3 OBSERVATIONS AND RECOMMENDATIONS

3.1 SUMMARY

Note: see attached schedule, photographs, and drawings for detailed information on each of the specified areas within the scope of survey

3.1.1 Methodology

Structural timber roofs, floors, lintels and embedded bonding elements were examined using a combination of targeted decay detection drilling and deep-moisture probing to determine the extent of decay that may be present within the timber cores, and to identify the moisture content levels to verify the vulnerability to further decay. Lengths of decay were recorded at the time of survey as well as likely loss of cross-section where applicable

3.1.2 Timber decay

- 1 General: A number of timbers were found to be structurally decayed on inspection, typically in areas adjacent to or in contact with external walls, or in areas subject to historic long-term issues of water penetration due to defective roof coverings. In many instances, relatively recent remedial works had rectified the decay using steel shoes/plates/brackets, although there were also areas where no remedial works had been implemented, or the previous remedial works had been inappropriately implemented, either structurally or in regard to correct building pathology
- 2 Dry rot (*Serpula lacrymans*): Dry rot (*Serpula lacrymans*) is a geophilic fungus that lives in damp masonry subject to chronic water penetration, and decays softwood timber elements built in contact with or in close proximity to the infected masonry. Dry rot mycelium can also grow behind impermeable surfaces, such as polythene or linoleum flooring and into unventilated building voids with high relative humidities. Dry rot infection can persist in infected masonry for many decades or even centuries and will spread or die back depending on the environmental condition. When stressed, the fungus produces 'fruiting bodies' and many millions of fine light brown spores which spread to new locations through the atmosphere. However, very few spores ever germinate and grow to result in further infection. Dry rot in buildings is therefore almost always found associated with chronic problems of water penetration from defective roof drainage; but may persist or spread locally due to water penetration from other sources, such as defective ground and surface drainage, or failure of damp-proofing and plumbing leaks. Problems with dry rot are therefore often found 12 to 24 months after refurbishment of previously infected structures, even when 'chemical remedial or preservative treatments' have been undertaken, as a result of water penetration during works and inadequate provision for ventilation and drying of affected structures
- 3 Wood-boring beetle infestation: There was widespread evidence of wood-boring beetle activity both historic and active. For the most part, moisture content readings were well below the level required to sustain ongoing infestation; however, in areas of elevated moisture content readings conditions were suitable for active infestation. Flighthole diameters across the building were typically consistent with both Common furniture beetle (*Anobium punctatum*, small ~1-2mm), and Deathwatch beetle (*Xestobium rufovillosum*, larger ~3-5mm). Unless already decayed by fungal organisms, wood-boring beetles cannot consume the heartwood of hardwood timber (oak) due to the levels of toxins deposited within the heartwood during the natural growing process, and as such are mostly found limited to the sapwood content of the timber which is usually removed during the initial timber conversion process

See attached schedule for specific remedial recommendations; however, typically, decayed timbers should be cut back to sound material and replaced, or partner

repaired by through-bolting new material to existing historic timbers at centres determined by the Structural Engineer. New timber should be fully isolated from damp, or potentially damp masonry using continuous lengths of damp-proof material, through-ventilated air gaps, or cut back and re-supported on brackets or hangers. Decayed embedded bonding timbers and/or wall plates should ideally be cut-out in hit-and-miss fashion and the cavity infilled in suitable masonry

No chemical remedial treatment of timber or wall irrigations are either required or recommended in relation to fungal decay organisms or wood-boring beetle infestation. Controlling moisture content of the timber is key to controlling beetle activity, therefore ventilation and isolation are crucial to preventing subsequent infestation and decay

*No chemical remedial treatment or wall irrigations required in relation to dry rot (*Serpula lacrymans*). Dry rot treatment should include full isolation of all structural and non-structural timbers, whether found to be decayed or not, from dry rot infected masonry walls using lengths of damp-proof material, through-ventilated air gaps, and/or cut back and re-supported on brackets or hangers. In areas where lath and plaster finishes are present, this should include full strip-out of all internal linings to remove embedded grounding timbers from behind the finishes. On refurbishment, lined walls should include ventilation detailing at the head and base of the void to provide clear air pathways behind the internal finishes. H+R can provide further advice if required*

3.1.3 Moisture content readings

Moisture content readings taken from timber elements at the time of survey, within the areas specified in the scope of works, were for the most part well below the level required to sustain fungal decay organisms or wood-boring beetle infestation. However, there were localised cases of elevated readings revealed during the inspection that suggested ongoing issues with water penetration. These were generally found at lower ground floor level, and at external wall conditions where timbers were either in contact with or in proximity to damp or historically damp affected masonry

See attached schedule and plans for an indication of specific areas of elevated or high moisture readings suggestive of active water penetration. To prevent timber decay, all existing and new timbers in contact with damp or potentially damp masonry should be fully isolated using the isolation detailing described in 3.1.2 above. Every effort should be given to preventing further moisture ingress into the building

4 H+R WORK ON SITE

- 4.1** H+R inspected all accessible structural timbers within the specified areas by deep drilling and probing, as necessary, so as to determine their decay state and deep moisture content

5 PROPOSED ACTION BY H+R

- 5.1** H+R will advise on repair and conservation of timber elements, so as to minimise the risk of decay after refurbishment if instructed
- 5.2** H+R will advise on remedial detailing, so as to minimise the risk of damp and decay problems after refurbishment if instructed
- 5.3** H+R will advise on conservation of original fabric with regard to damp, decay and salt damage, as necessary and if instructed
- 5.4** H+R will review proposed remedial details as these become available if instructed
- 5.5** H+R will return to site to inspect sample remedial details if instructed
- 5.6** H+R will liaise with conservation and historic building authorities, if instructed, so as to ensure the cost-effective conservation of original fabric
- 5.7** H+R will liaise with building guarantors, as necessary, so as to ensure the issuing of collateral warranties and building guarantees at practical completion, if required
- 5.8** H+R will return to site to inspect other buildings on site for structurally significant decay; and advise on timbers at risk of decay during the latent defect period due to water penetration before and during refurbishment if instructed

6 INFORMATION REQUIRED BY H+R

- 6.1** H+R require up-to-date copies of project programmes, as these become available
- 6.2** H+R require copies of up-to-date lists of project personnel and contact lists as these become available
- 6.3** H+R require copies of proposed remedial details for comment as these become available
- 6.4** H+R should be informed as a matter of urgency if further significant water penetration occurs onto site; so that advice can be given on cost-effective remedial measures, to minimise the risk of cost or programme overruns and so as to minimise the risk of damp or decay problems during the latent defect period

7 ADMINISTRATION REQUIREMENTS

- 7.1** H+R require formal instructions for further investigations and consultancy on this project
- 7.2** H+R require confirmation of distribution of digital and printed copies of reports and site notes

8 LIMITATIONS

8.1 GENERAL

This survey was confined to the accessible structures. Only where described herein, concealed materials and cavities have been investigated by the use of high-powered fibre optics. The condition of concealed materials may be deduced from the general condition and moisture content of the adjacent structure. Only demolition or exposure work can enable the condition of materials to be determined with certainty, and this destroys what it is intended to preserve. Specialist investigative techniques are therefore employed as aids to the surveyor. No such technique can be 100 per cent reliable, but their use allows deductions to be made about the most probable condition of materials at the time of examination. Structures were not examined in detail except as described in this report, and no liability can be accepted for defects that may exist in other parts of the building. We have not inspected any parts of the structure which are covered, unexposed or inaccessible and we are therefore unable to report that any such part of the property is free from defect or in the event that such part of the property is not free from defect it will not contaminate and/or affect any other part of the property. Investigation of moisture distribution has been made only where applicable and to the extent described herein

8.2 CDM

The sample remedial details and other recommendations in this report are included to advise and inform the design team appointed by the client. The contents of this report do not imply the adoption of the role of Principal Designer by H+R for the purposes of the Construction (Design and Management) (CDM) Regulations 2015

8.3 BUILDING SAFETY ACT AND BUILDING REGULATIONS

H+R should not be considered as a designer under the Building Safety Act 2022 or the Building Regulations as amended. The client and design team should ensure that appropriate arrangements have been made where the Building Regulations apply and that the appropriate duty holders are in place and applications are made for Building Regulations approval

8.4 FIRE SAFETY

H+R have not carried out any risk assessments, surveys, investigations or analysis of fire safety risk, including compartmentation and structural fire performance of materials. It is recommended that the client and design team seek the guidance of appropriately qualified fire engineers or fire risk assessors as applicable

8.5 PLANNING PERMISSION AND LISTED BUILDING CONSENT

Listed buildings have statutory protection and works or alterations that may include fabric removal, some repairs, extension and demolition will require listed building consent. It is the responsibility of the client to ensure listed building consent is obtained where this is necessary. Where works to any building, listed or otherwise, constitute development requiring planning permission it is the responsibility of the client to ensure planning permission is obtained where this is necessary

Attachment A

SCHEDULE OF OBSERVATIONS AND RECOMMENDATIONS

REFERENCE	ITEM	ABA/AA/Size Group OBSERVATIONS	H+R OBSERVATIONS	RECOMMENDATIONS	CLIENT COMMENTS
SNB15.1 ADDITIONAL AREAS RAISED BY ABA/AA/Size Group					
SNB15.1.1	S16 Wall plate: Roof void north side	Severely decayed plate observed on site. Flight holes are large and suggest potential death watch beetle activity. Timber specialist to confirm that the infestation is no longer active and confirm that the infestation has not spread to other timber elements within the roof void. As well confirm the extent of decay	Construction: Rafter plate forming the north and east perimeter to area S16. Corner connection strengthened via a corner tie. Corner tie providing structural bearing to the north perimeter secondary beams east end Condition: Structural decay from historic wet rot and death watch beetle activity noted to multiple timber structures in contact to the north and east perimeter walls. All deep moisture contents too dry to suggest active infestation. Decayed items included; north perimeter rafter plate for the full span of the room at ~3.8m. Structural decay to the east perimeter rafter plate from the north-east corner for up to ~750mm. Structural decay to the corner ties north bearing end for up to ~200mm. Structural decay to the north perimeter secondary beams east bearing end (where it meets the corner tie) for up to ~400mm	<i>No chemical treatment required in relation to fungal decay or wood-boring beetle infestation</i> <i>Structural Engineer to comment</i> <i>The decayed sections of rafter plates should be cut back to sound material and replaced with new to match existing. The decayed corner tie should be replaced entirely in like-for-like. Allow for structural partnering to the decayed secondary beam under the direction of the SE. All new timber in contact with the masonry wall head should be fully isolated using continuous lengths of standard plastic damp-proof material</i>	
SNB15.1.2	F11 Roof truss: North bearing end of roof truss within south roof void adjacent to proposed C34 chimney stack	Truss observed to be hollowed towards northern end. Timber specialist to review and confirm the extent of decay and percentage loss of section	Construction: Principal room truss running in north-south orientation over the F11 passageway. Truss tie beam providing structural support to the adjacent east and west secondary ceiling beams. Multiple embedded bonding timbers identified within masonry wall directly beneath truss end bearing Condition: Structural decay from historic wet and dry rot activity noted to multiple timber structures in contact to the internal north wall. All deep moisture contents too dry to suggest active infestation. Decayed items included; truss tie beams north bearing end subject to structural decay for ~480mm from the face of the wall. 2no. adjacent (east and west) secondary beams tenoned into the tie beam also structurally decayed for their tenons + ~100mm. Structural decay also detected to 3no. embedded oak bonding timbers set beneath the truss end for their full extents at ~600mm	<i>No chemical treatment required in relation to fungal decay or wood-boring beetle infestation</i> <i>Structural Engineer to comment</i> <i>The decayed bearing end of the tie beam and secondary beams to be cut back to sound material and replaced/supported under the direction of the SE. Allow for cutting out approximately <1800mm linear of decayed bonding timbers in a hit-and-miss fashion and infilling with suitable masonry</i>	
SNB15.1.3	F17 Primary beam: Stiffened primary beam within F17	Allow for time to review stiffened primary beam within F17 and confirm whether the existing timber has decayed. Previously not noted as being decayed within first floor timber specialist report, however allow for time to confirm during next visit	Construction: Primary beam spanning north-south supporting F17 floor structures. Primary beam of 2no. softwood main chords encapsulating a strengthening truss of oak lengths with iron stops and bolts. Primary beam recently strengthened with a flat steel plate to its upper face for the full length minus bearing/embedded sections Condition: East and west bearing ends deep drilled and moisture probed. No structural decay detected. Deep moisture contents recorded as dry at <10 per cent. Beam subject to significant historic sag/deflection to its middle span which may relate to its length versus ineffective triangulation method/execution. Beam movement not apparently related to decay issues	<i>No chemical treatment required in relation to fungal decay or wood-boring beetle infestation</i> <i>Structural Engineer to comment</i> no decay	
SNB15.1.4	G40/43: South west corner truss bearing	H+R to confirm the extent of decay within the south west corner, not previously accessible	Construction: South-west corner roof structures to roof over G40-43. Components inspected included the south perimeter parapet gutter rafter plate, the west wall embedded ceiling wall plate and the south purlin	<i>No chemical treatment required in relation to fungal decay or wood-boring beetle infestation</i> <i>Structural Engineer to comment</i>	

REFERENCE	ITEM	ABA/AA/Size Group OBSERVATIONS	H+R OBSERVATIONS	RECOMMENDATIONS	CLIENT COMMENTS
SNB15.1.4	G40/43: South west corner truss bearing	H+R to confirm the extent of decay within the south west corner, not previously accessible	Construction: South-west corner roof structures to roof over G40-43. Components inspected included the south perimeter parapet gutter rafter plate, the west wall embedded ceiling wall plate and the south purlin	No chemical treatment required in relation to fungal decay or wood-boring beetle infestation Structural Engineer to comment	
			Condition: Structural decay from historic and active wet and wood-boring beetle activity noted to multiple timber structures in contact to the external south and west perimeter walls/parapet gutters. Deep moisture contents recorded as highly elevated at ~20%, which is high enough to support wood-boring beetle infestation and almost high enough to support wet rot decay organisms. Decayed items included; south pitch purlins west bearing end structurally decayed for ~150mm from the face of the wall, also the purlin timber pad beneath for its total length/section. Structural decay to the west perimeter wall embedded ceiling beam for ~2.1m. Structural decay also to the south perimeter parapet gutter rafter plate for ~300mm to its south end	The decayed bearing end of the purlin to be cut back to sound material and replaced/supported under the direction of the SE. Allow for the decayed sections of rafter plate to be cut back to sound material and replaced with new to match existing. Allow for cutting out approximately 2100mm linear of decayed embedded ceiling plate in a hit-and-miss fashion and infilling with suitable masonry. All new timber in contact with the masonry should be fully isolated using continuous lengths of standard plastic damp-proof material	
SNB15.1.5	South Pavilion Portico: South pavilion portico roof structure	H+R to confirm the extent of decay and percentage loss of section to all timber elements within portico roof structure	Construction: A flat roof structure forming the south portico to the south pavilion. Roof structure supported via 1no. central north-south orientated primary beam which in turn supported perpendicular 3no. secondary beams. Historic ceiling joists were fixed to the underside of the secondaries in north-south orientation. Modern flat roof joists spanned north-south and were supported onto the upper face of the secondary beams with additional lateral strength provided from sarking boards. The following items and their dimensions were recorded; Primary beam ~330x140mm Secondary beams ~230x75mm Modern ceiling joists ~70x45mm at ~380mm centres Flat roof joists ~ 200x50mm at ~380mm centres Ceiling joists ~ 55x300mm Sarking - Condition: Condition: Widespread structural decay from historic wet rot and wood-boring beetle activity noted to multiple timber structures. In particular in contact to the internal north elevation. in contact to the north and east perimeter walls. All deep moisture contents too dry to suggest active infestation. Decayed items included; i) Primary beam north bearing end structurally decayed for ~1.3m from the face of the wall ii) ~14-20no. ceiling joists subject to either excessive decay margins or from insufficient structural bearing/excessive deflection, principally along the north perimeter elevation iii) North-east secondary beam subject to loss of section at ~20% from wood-boring beetle activity for up to ~1m to its east area. Also, its east end structurally decayed to the bearing end only iv) Central secondary beam to the east bay subject to loss of section at ~20% from wood-boring beetle activity for up to ~1.5m to its central span. Also, its east end partially decayed for bearing end only v) South-east secondary beam subject to partial decay to its underside face for <30% of its section at ~2m	No chemical treatment required in relation to fungal decay or wood-boring beetle infestation Provisionally allow for repair/replacement for up to ~35 per cent of existing historic ceiling joists. Also allow for structural repair or replacement to 5no. (of the 6no. total) secondary beams under the SE. Also allow for structural repair or replacement to the decayed primary beam under the direction of the SE New timber in contact with masonry should be fully isolated using continuous lengths of damp-proof material, air gaps, or cut back and re-supported on brackets/hangers as applicable	

REFERENCE	ITEM	ABA/AA/Size Group OBSERVATIONS	H+R OBSERVATIONS	RECOMMENDATIONS	CLIENT COMMENTS
			vi) <i>North-west secondary beam structurally decayed to its west bearing end for ~2m. Also underlying pad decayed for total length at ~300mm</i> vii) <i>South-west secondary beams west bearing end structurally decayed for its point of bearing only</i>		
SNB15.1.6	B64 Roof: Tie beams (bottom chord of main trusses throughout room)	H+R to confirm the extent of decay and percentage loss of section to all tie beams, following removal of existing steel partnered plates. Note - Plates must only be removed once temporary works are in place and LBC consent is approved. The removal of the plates is not yet consented <i>"Item... may not be yet ready for inspection. Further opening up/consents/temporary works are first required before inspection can take place by timber specialist"</i>	No access at the time of investigation	<i>Further investigations by H+R pending subject structural propping of trusses, removal of steel plates and the introduction of safe working platforms at tie beam level</i>	
SNB15.1.7	Lintels: Main house general	Further exposure at lintel bearings is currently under viewing by planning officers, refer to 1896/10/TJ rec C "Statement to support lintel investigations". Once this has received planning approval, SG to remove finishes to enable H+R review	Construction: Lintels were predominantly of timber construction, primarily in oak (<i>Quercus spp</i>) and spanned between brick piers forming window and door apertures. Timber lintels commonly were supplemented with relieving arches. Occasionally internal lintels were of brick flat gauged construction and featured no timber element. Some timber lintels were also supported onto timber pads embedded into the apertures, however, limited exposure to historic plaster could not verify this as a common construction detail Condition: The following lintels were identified as high risk; i) S6 west- no timber lintel present. Internal façade face lintel formed of shallow brick arch <i>no decay</i> construction ii) S13 east- no timber lintel present. Internal <i>no decay</i> façade face lintel formed of shallow brick arch construction iii) S13 south- no timber lintel present. Internal <i>no decay</i> façade face lintel formed of shallow brick arch construction iv) S26 west- no timber lintel present. Internal <i>no decay</i> façade face lintel formed of shallow brick arch construction v) S32 north- no access due to repaired plaster finishes vi) F5 east- timber lintel structurally decayed to its south bearing end from excessive wood-boring beetle. Timber pad beneath also structurally decayed. Also, a further 5no. embedded bonding timbers beneath the lintel subject to structural decay vii) F6 north- timber lintel structurally decayed to its east bearing end. Also, significant structural cracking to local brick and plaster adjacent to	<i>No chemical treatment required in relation to fungal decay or wood-boring beetle infestation</i> <i>Under the direction of the Structural Engineer, allow for the replacement of 4no. structurally decayed lintels to be replaced in like-for-like oak and separated from the potentially damp masonry via a damp proof membrane/ventilated air-gap or for replacement in a suitable solid variant. Alos allow for the further exposure to plasterwork local to lintel F6 north to determine condition of brick arch above and for any further decay to local bonding members</i> <i>Also, allow for cutting out of approximately 7-10no. decayed bonding timbers in a hit-and-miss fashion and infilling with suitable masonry</i> SG to confirm	

Attachment B



Fig 1:

South Pavillion, north-east corner;
showing decayed ceiling joists and
decay to the easternmost secondary
beam



Fig 2:

South Pavillion, west wall; showing
ceiling joist bearing ends



Fig 3:

South Pavillion, north wall; showing the middle secondary beam which was sat on a timber pad in the north wall



Fig 4:

South Pavillion, north wall; showing the westernmost secondary beam which was found to be decayed at its bearing end



Fig 5

South Pavillion, north-east corner;
showing decayed secondary beam
bearing end and ceiling joists



Fig 6

South Pavillion, wide view of north-
east corner; showing decayed ceiling
joists, with a section of one missing



Fig 7

South Pavillion, 5th and 6th ceiling joists from north in east wall; showing decay to ceiling joists



Fig 8

South Pavillion, 6th and 7th ceiling joists from north in east wall; showing decay to the ceiling joist lengths and bearing ends



Fig 9

South Pavillion, looking from north to south; showing deflection, splitting, and decay to the ceiling joist below the primary beam central to the area



Fig 10

South Pavillion, north half of west wall; showing notching to the bearing end of a ceiling joist



Fig 11

South Pavillion, west bearing ends of ceiling joists looking south from central area; showing the construction of the roof and ceiling



Fig 12

South Pavillion, looking south across ceiling joists; showing the construction of the roof and ceiling



Fig 13

South Pavillion, middle secondary beam in southern half of pavillion; showing loss of cross-section due to partial decay to the underside



Fig 14

South Pavillion, north end of decayed section of western secondary beam, central area; showing a broken ceiling joist, the connection detail of newer joists, and decay to the secondary beam



Fig 15

South Pavillion, south end of western secondary beam; showing partial decay to the secondary beam to which the newer ceiling joists are hung



Fig 16

South Pavillion, north-east corner of south half of pavillion; showing deflection and notching to a ceiling joist



Fig 17

South Pavillion, south-west corner; showing the easternmost secondary beam, with new partner timbers either side, but decay to its bearing end and ~10% cross-section loss along its length



Fig 18

South Pavillion, south-east corner; showing roof beam over ceiling joists with new timber arrangement



Fig 19

South Pavillion, south-east corner;
showing connection detail and air gaps



Fig 20

South Pavillion, south-east corner;
showing air gaps at wall



Fig 21

S16, north wall; showing a general view of the section of wall with decayed wall plate



Fig 22

S16, north wall; showing the western connection detail for the perimeter joist



Fig 23

S16, north wall; showing decay to the wall plate



Fig 24

S16, north wall; showing decay to the wall plate



Fig 25

S16, north wall; showing decay to the wall plate



Fig 26

S16, north wall; showing the limited access to the wall plate, and the constructional nature of the ceiling



Fig 27

S16, north-east corner; showing the limited access to the wall plate - decay was detected through drilling



Fig 28

F11, north wall; showing decay to the tie beam ~480mm, and to the secondary beams which were tenoned in. The eastern beam was decayed at its bearing end, the western at its bearing end plus ~100mm



Fig 29

F11, north wall; showing decayed embedded bonding timbers. These were decayed ~600mm, their full extents



Fig 30

S13, south-east corner; showing 2no. Lintels for investigation. These were not of timber but were of flat brick arches



Fig 31

S13, east wall; showing 1no. lintels for investigation which was not of timber but were of flat brick arches



Fig 32

S6, west wall; showing the lintel to be of brick not timber



Fig 33

F5, east wall; showing decay to the underside of the lintel and the timber pad due to wood-boring beetle



Fig 34

F5, east wall; showing further detail of the lintel decay



Fig 35

F5, east wall; showing further detail of the lintel decay



Fig 36

F5, east wall; showing decayed embedded bonding timbers



Fig 37

F5, west wall; showing decayed embedded bonding timbers which were decayed ~3.2m, ~2.5m, ~2m from top to bottom - timbers behind the floor and cornice were anticipated to follow this pattern



Fig 38

F5, west wall; showing further detail of decayed embedded bonding timbers



Fig 39

F5, west wall; showing further detail of decayed embedded bonding timbers



Fig 40

F5, west wall, north half; showing decayed embedded bonding timbers ~2m, ~300mm, ~500mm from top to bottom



Fig 41

F6, north wall; showing cracking to the brick and plaster around the lintel, the brick arch above which was found to have no bearing - Structural Engineer to comment



Fig 42

F6, north wall; showing cracking to the brick and plaster around the lintel, the brick arch above which was found to have no bearing - Structural Engineer to comment



Fig 43

G19; showing mycelium to the void in which the lintel was contained



Fig 44

G19; showing mycelium to the void in which the lintel was contained



Fig 45

G19; showing mycelium to the void in which the lintel was contained



Fig 46

G19; showing extent of decay to the lintel



Fig 47

G40 west gable; showing decayed embedded purlin pad and purlin. The pad is decayed to full length and purlin is decayed to 150mm



Fig 48

G40 west gable; showing embedded rafter plate with decay to 300mm of it's length



Fig 49

G40 south-west corner; showing embedded wall plate with decay to 2.1m along it's length



Fig 50

B53; showing general view of south windows. No decay present



Fig 51

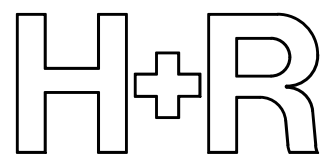
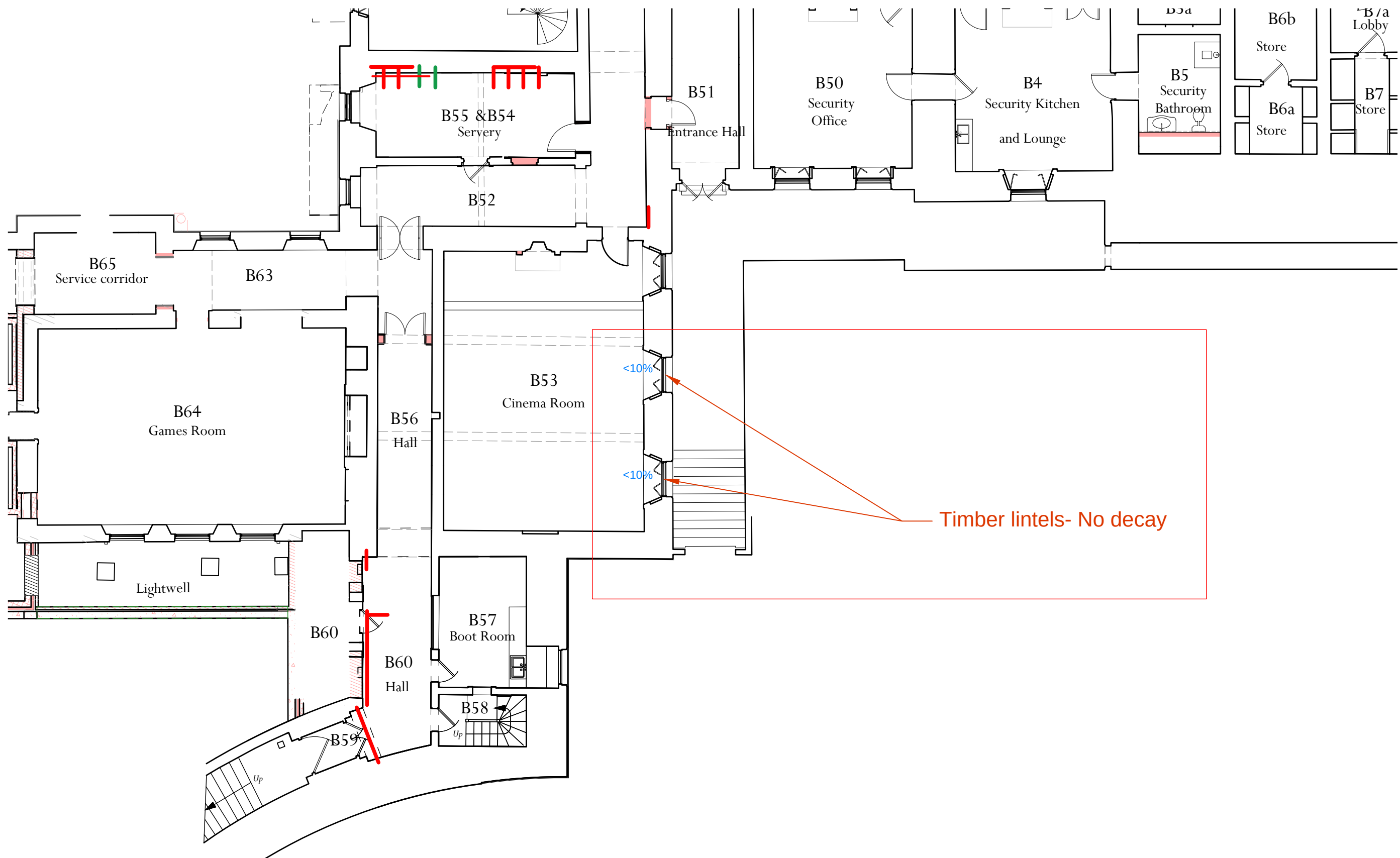
B17 north-west window; showing oak timber lintel in good condition. No decay present



Fig 52

G24 north wall; showing decay to the west bearing end. No access to the lintels pads or it's full condition

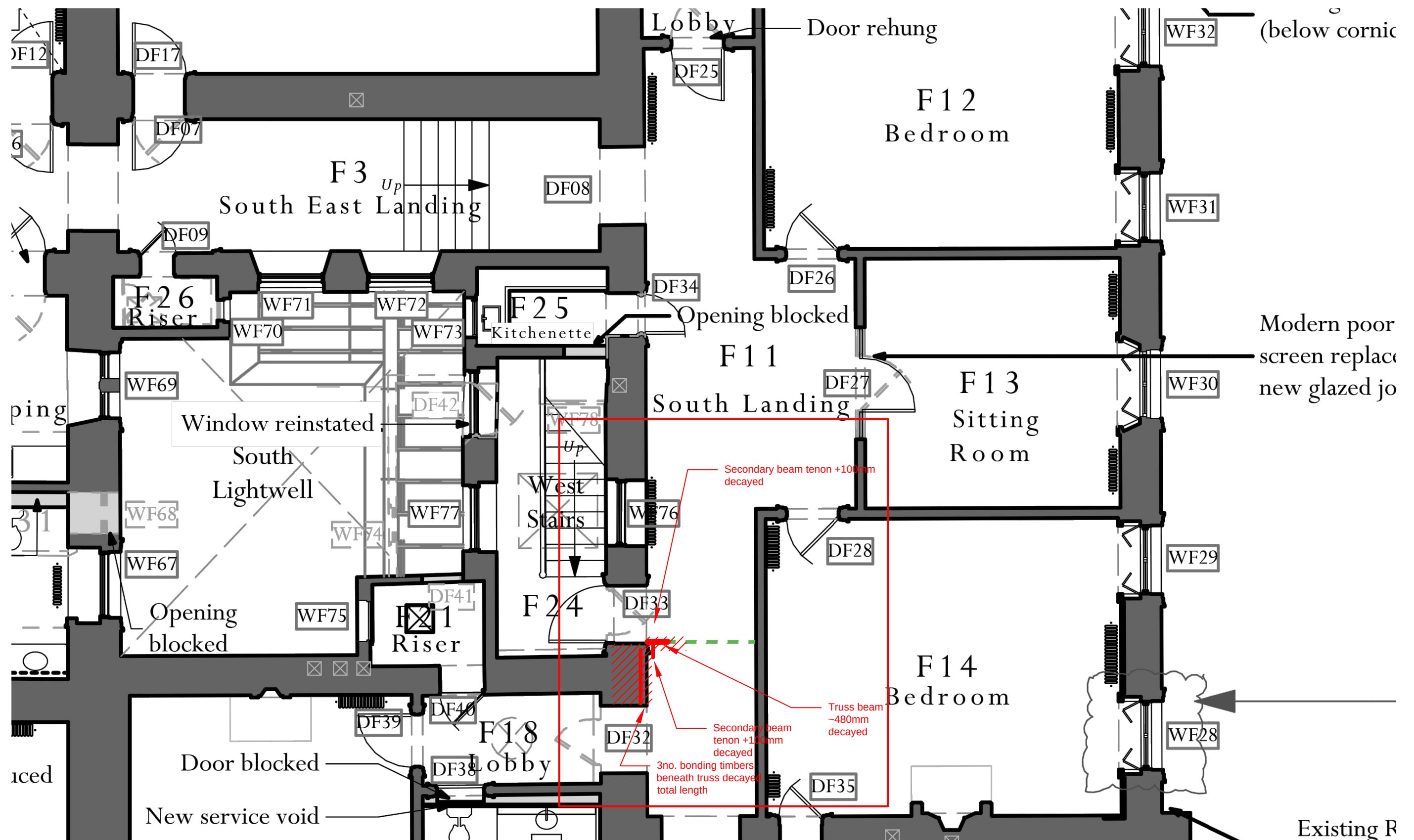
Attachment C



Tottenham House - Main House - Ground floor NW Area (seen from Lower Ground Floor Plans)
 Timber condition investigation of prescribed areas
 21 May 2025

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 446-49 Site Note B15 -Not to scale- © Copyright Hutton+Rostron 2025

- Key:**
- Primary structural timber element (beam)
 - Secondary structural timber elements
 - Decayed timber element
 - <12% Deep moisture content reading (w/w%)
 - /// Area of decay (dry/wet rot infection)
 - e Structural engineer to comment



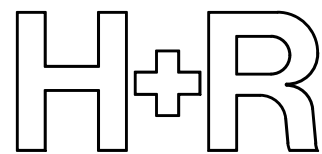
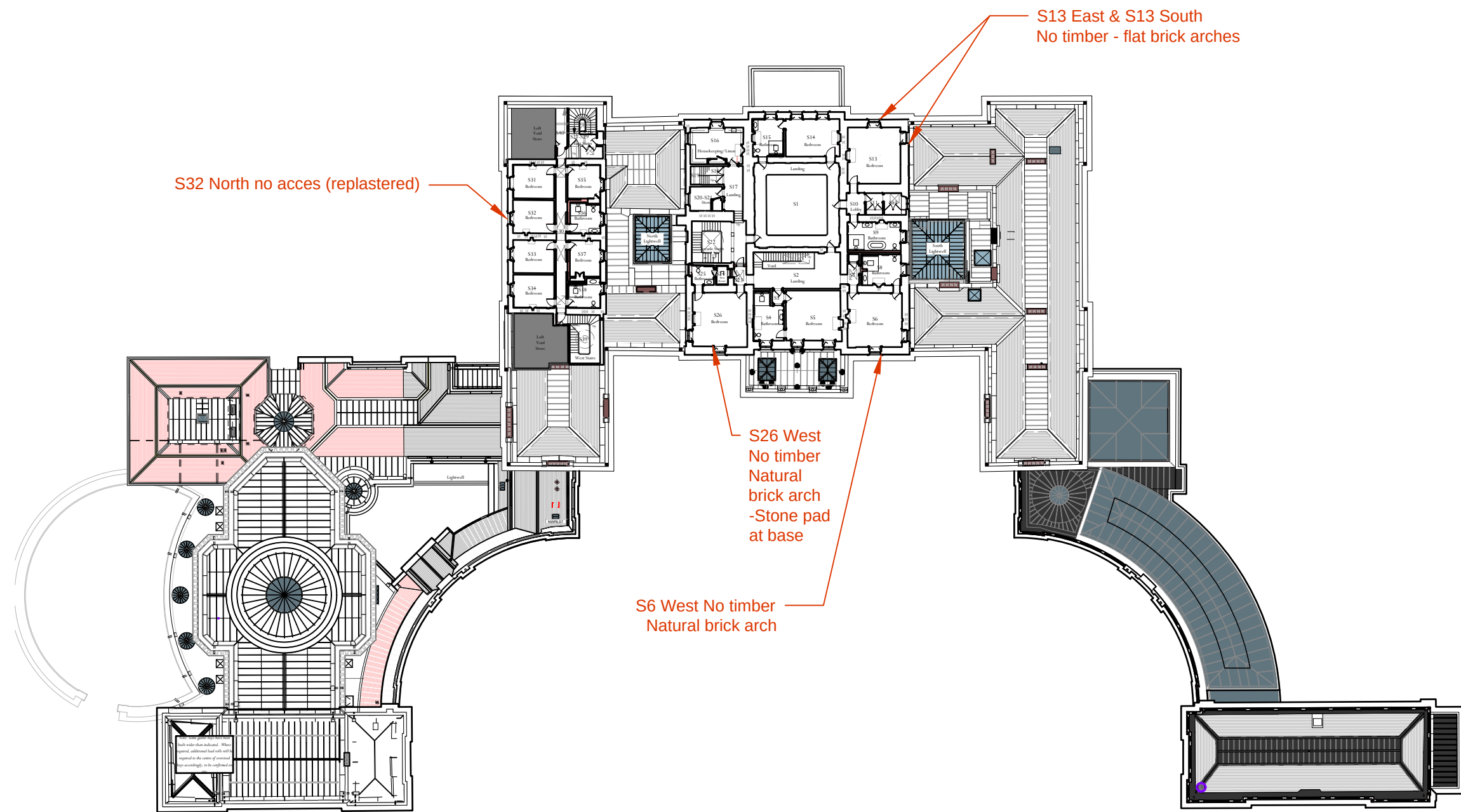
H+R

Tottenham House - Main House - First Floor - Room F11
 Timber condition investigation of prescribed areas
 21 May 2025

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 Netley House, Gomshall, Surrey, GU5 9QA Tel: 01483 203221
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Key:

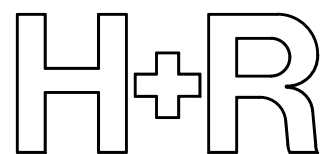
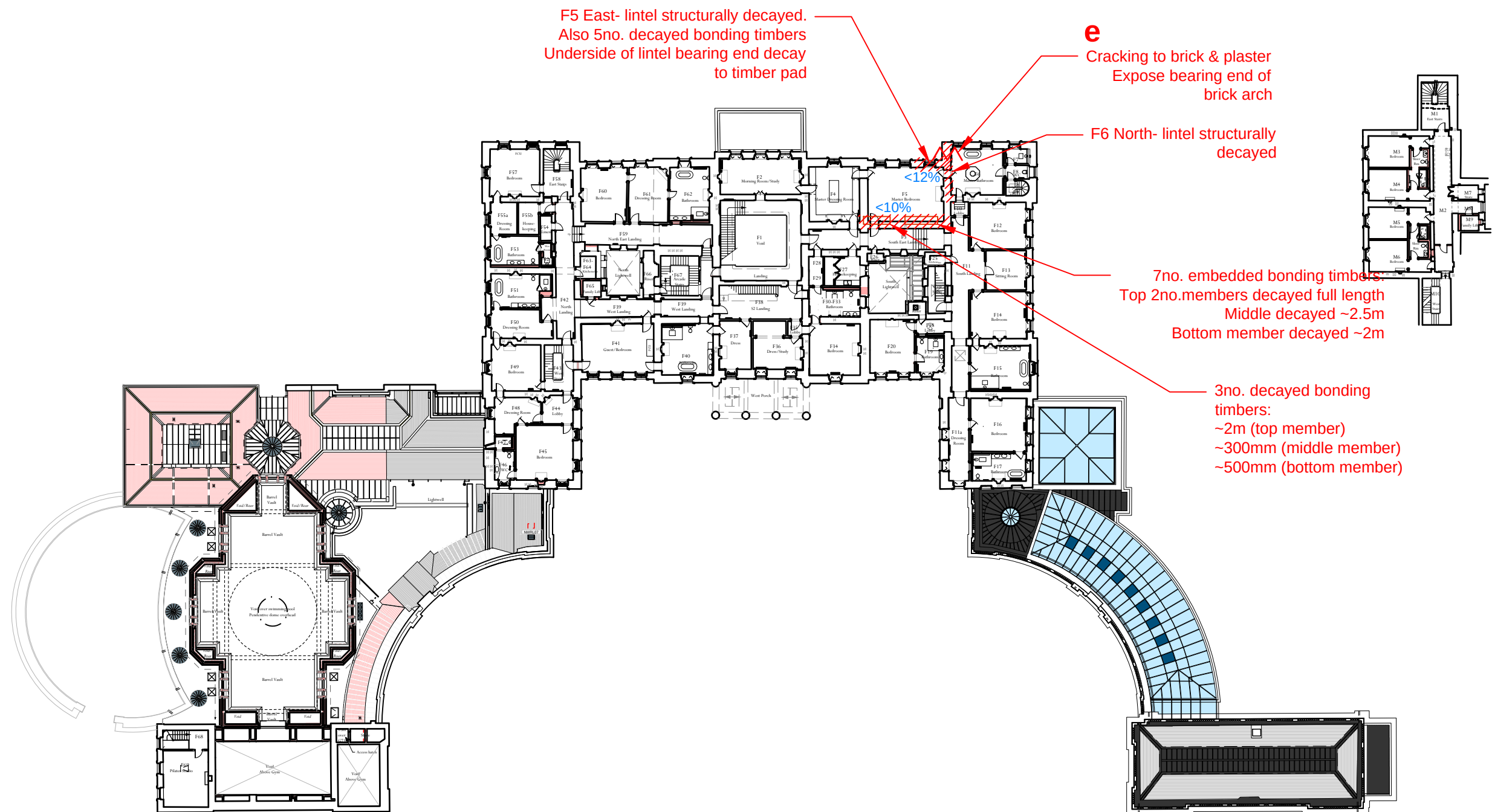
- Primary structural timber element (beam)
- Secondary structural timber elements
- Decayed timber element
- <12% Deep moisture content reading (w/w%)
- /// Area of decay (dry/wet rot infection)
- e Structural engineer to comment



Tottenham House - Main House - Second Floor
 Timber condition investigation of prescribed areas
 21 May 2025

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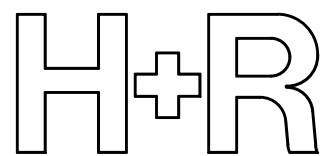
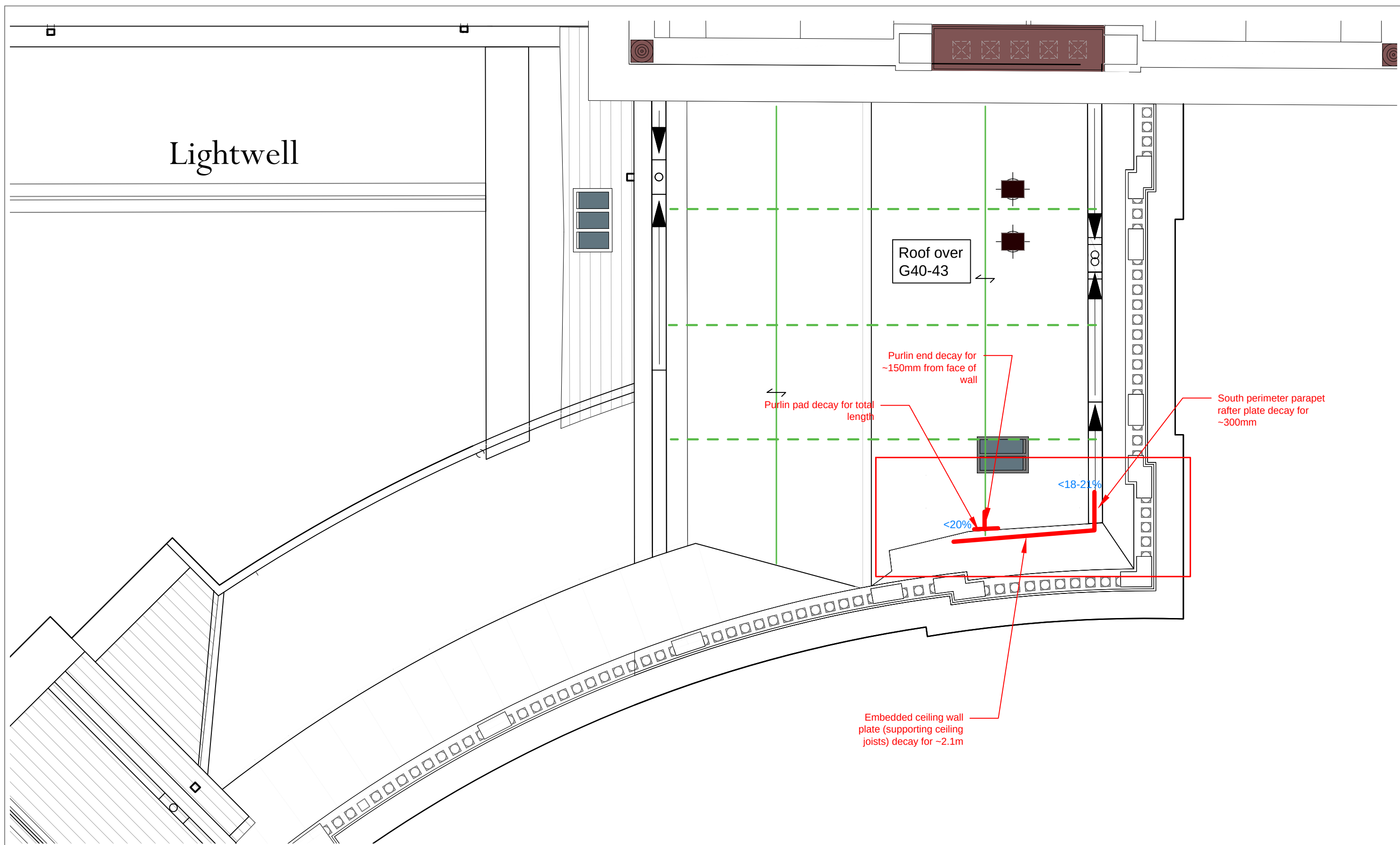
Key:	---	Primary structural timber element (beam)
	—	Secondary structural timber elements
	---	Decayed timber element
	<12%	Deep moisture content reading (w/w%)
	///	Area of decay (dry/wet rot infection)
	e	Structural engineer to comment



Tottenham House - Main House - First Floor
 Timber condition investigation of prescribed areas
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Key:	---	Primary structural timber element (beam)
	---	Secondary structural timber elements
	---	Decayed timber element
	<12%	Deep moisture content reading (w/w%)
	///	Area of decay (dry/wet rot infection)
	e	Structural engineer to comment



Tottenham House - Main House - Roof over G40-43 and B59
 Timber condition investigation of prescribed areas
 21 May 2025

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Key:	---	Primary structural timber element (beam)
	---	Secondary structural timber elements
	---	Decayed timber element
	<12%	Deep moisture content reading (w/w%)
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