



## **Condition Survey**

In respect of

**Threshing Barn at  
Highover Farm  
Highover Way  
Hitchin  
SG4 0RQ**

For

**Gill-Hudson Homes Limited**

Report produced by

**Scott Enders**

FOR AND ON BEHALF OF

**Heritage Consulting**

Date of Report

**16<sup>th</sup> June 2025**



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**Address:** Threshing Barn at Highover Farm, Higover Way, Hitchin, SG4 0RQ

Signature:  \_\_\_\_\_

Scott Enders MCIOB Assoc RICS BSc (Hons) MSc

**FOR AND BEHALF OF HERITAGE CONSULTING**

Date of Report: 16<sup>th</sup> June 2025

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## **1. ABOUT THE REPORT**

### **1.1 Address of Property Surveyed (The Property)**

Threshing Barn at  
Highover Farm  
Highover Way  
Hitchin  
SG4 0RQ

### **1.2 Brief**

Instructions were received from James Gill to undertake a Condition Survey of the Threshing Barn at Highover Farm. Conversion is proposed to the barn and this survey aims to provide an overview of the condition of the and the works required.

The report should be construed as a comment on the overall condition of the building and is not an inventory of every single defect. The report is not a Schedule of Condition which would list every defect, both major and minor. The report does not intend to act as a specification of works but provides an overview of the works that are required; it is strongly advised that you seek professional advice when carrying out repairs, alterations etc. to the property.

This report has been prepared to support the planning and listed building consent application. It is not intended to serve as a specification for tendering or for use during the execution of works on site. A full detailed specification of works should be prepared at the appropriate stage, once full access, opening-up, and further investigation have been undertaken.

### **1.3 Date & Circumstances of the Survey**

The Survey was carried out on the 6<sup>th</sup> June 2025. At the time of the survey, the weather was warm, with clear skies and dry underfoot. The building was vacant at the time of the survey.

Comments on mechanical and electrical services and underground drainage is excluded from this report.

### **1.4 Surveyor who Inspected the Property (The Surveyor)**

Scott Enders MCIOB Assoc RICS BSc (Hons) MSc

### **1.5 Details of the Surveyors Company**

Heritage Consulting – a trading name of RHRW Limited – Company Number 7943489 – The Forge, Brightling, East Sussex, TN32 5HD

### **1.6 Report produced for (You/The Client)**

Gill-Hudson Homes Limited

## 2. **BUILDING OVERVIEW**

The Threshing Barn is located along the north-western boundary of the Highover Farm site. The barn was given Grade II listing status on the 2nd May 2018.

The barn was originally constructed in the late 16th or early 17th century. The structure is primarily of oak frame construction, clad externally with horizontal weatherboarding, and is supported on a brick and flint plinth. The building has a pitched roof covered with natural slates.

Outshot porches were added to the south-east elevation, either side of the porch, in the mid-19<sup>th</sup> century according to the listing description, however, these have since been lost. A small lean-to to the north-west remains with a corrugated iron roof and is generally in poor condition and the lean-to will be removed as part of the proposals.

The barn is arranged in a T-shaped plan, aligned on a south-west to north-east axis, with a central projecting porch located on the south-east elevation. An aisle is present along the north-west elevation.

Architectural features include simple bargeboards to the gable ends, catslide roofs over the aisle, a small lean-to addition to the north-west corner, and double-leaf plank doors serving both the south-east porch and north-west elevation.

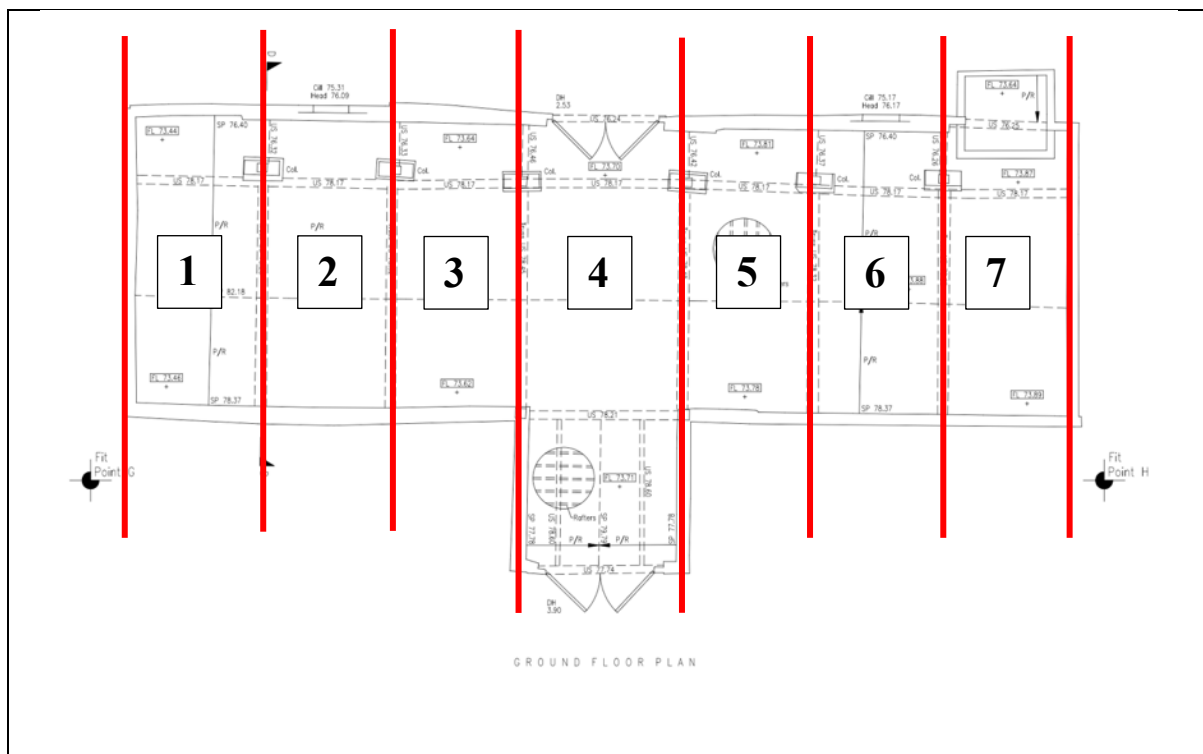
Internally, the barn is formed of seven bays. The roof structure is of queen-post design, incorporating clasped purlins, diagonal bracing, common and principal rafters. The barn retains a good amount of what appears to be original framing.

The Historic England listing description for the barn can be viewed here:

<https://historicengland.org.uk/listing/the-list/list-entry/1452743?section=official-list-entry>

The listing description provides good information on the significance of the barn and the history of Highover Farm and therefore will not be reproduced in this report.

The bays have been numbered as per below for ease of reference:



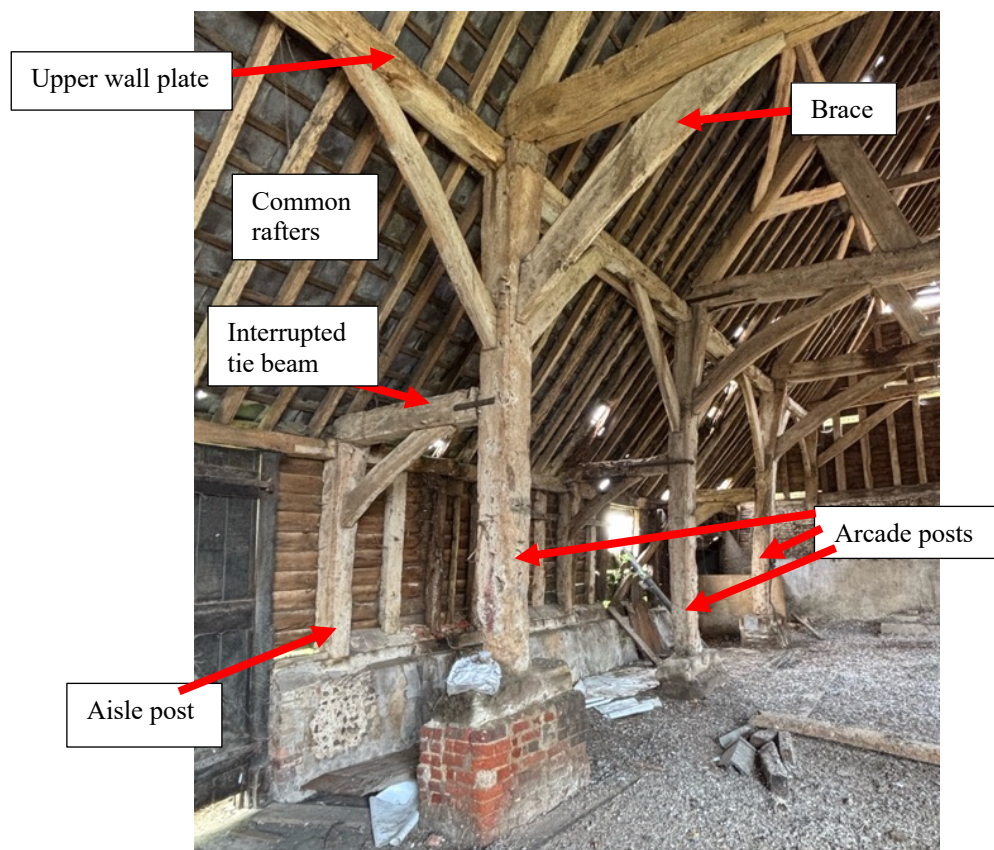


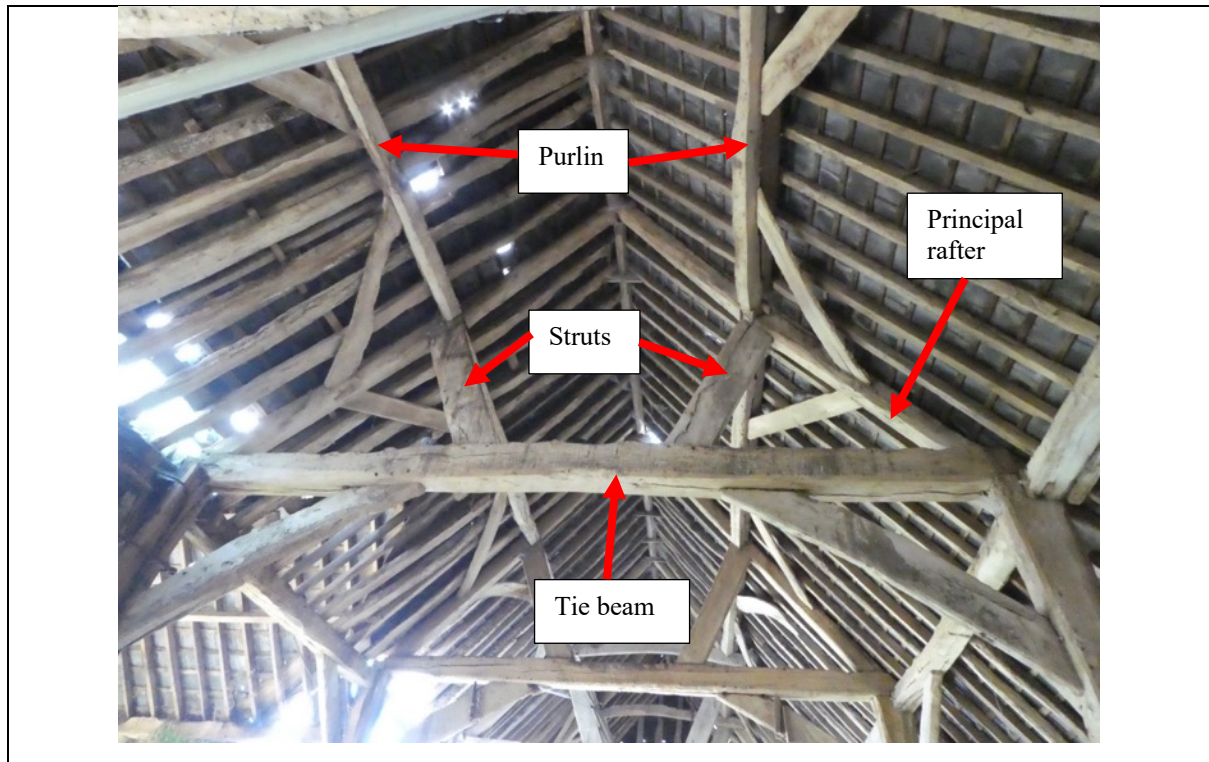
South-east (front) elevation



North-west (rear) elevation

### 3. TIMBER FRAME TERMINOLGY





#### 4. **BUILDING EXTERIOR**

##### 4.1 **Roof Coverings**

The barn is covered with natural slates on a pitched roof. There is no membrane beneath the slates. The roof is in very poor condition, with numerous slipped, broken, and missing slates. This has resulted in significant water ingress, which is visibly contributing to decay within the underlying timber frame and roof structure.

It is understood that as part of the proposed conversion works, a new steel frame is to be erected in front of the existing timber frame and over the existing roof structure. New roof coverings are then to be installed over this new steel framework.

|                                                                                      |                                                                                                                             |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|   | <p>North-west corner – large amount of missing slates resulting in water ingress and decay to the timber frame beneath.</p> |
|  | <p>Many holes in the roof allowing water ingress...and pigeons.</p>                                                         |

## 4.2 Rainwater Goods

The barn does not currently have any rainwater goods installed. As a result, rainwater is discharged directly from the roof onto the external walls and ground below. This is contributing to moisture penetration and deterioration at the base of the structure, particularly affecting the masonry plinth upon which the timber frame sits. Lack of rainwater goods is also contributing to decay to the timber frame in various locations.

The north-west elevation previously had a UPVC gutter and downpipes, though most of this has since fallen away. A small section of the UPVC gutter and one downpipe remain, but they are no longer functional.

## 4.3 Weatherboards

The exterior of the timber frame is clad with horizontal timber weatherboards. While many of these boards appear to be historic, they are generally in very poor condition. There is widespread decay, with numerous boards loose, missing, or having already fallen away from the frame.

It is understood that as part of the proposed conversion, the new steel frame will be externally clad with new weatherboarding. Given the poor condition of the existing boards, the retention of isolated historic boards where they remain intact is not considered viable. Blending a small number of retained, aged weatherboards with new is unlikely to be successful either visually or practically. The contrast between the weathered historic boards and new timber would appear disjointed and inconsistent, detracting from the overall finish. In addition, isolated reuse of aged boards may result in ongoing maintenance issues due to their degraded condition. Furthermore, the process of removing the existing weatherboards is likely to cause further damage to them, due to their existing condition.

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|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
|  | <p>Weatherboards in poor condition. vegetation growing up walls of the porch on the south side.</p> |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|

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|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>South part of the south-east elevation has a visible bulge in the wall due to outward movement of the frame beneath the weatherboards.</p> |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|

#### 4.4 Masonry

The masonry plinths and walls to the gable end elevations requires a number of works.

##### External Observations:

The exterior timber frame sits on a plinth constructed of a mixture of flint and brick, bed and pointed in a lime mortar. To the north-east and south-west elevations, the plinths are very high, whereas the other elevations, the plinths are low.

On the northern part of the south-east elevation, there are many frost-damaged bricks that require replacement. Some bricks have previously been repaired with cement mortar smudged over the damaged faces. This is not considered an acceptable repair, as cement mortar can trap moisture within the bricks, accelerating their deterioration. Additionally, this mortar is prone to cracking, spalling, and falling out over time. These bricks will also require replacement.

Also, on the northern part of the south-east elevation, adjacent to the porch, there is an area where a large amount of flint work has fallen out. A patch repair will be required in this location.

The majority of the southern part of the south-east elevation is concealed by a sheet of tarpaulin and vegetation, and only a small section could be inspected. Where visible, the flintwork is generally in poor condition, and another section of flintwork has fallen away and will require patch repair. Additionally, a band of cement render is present at the base of the wall here. This will need to be removed, though removal is likely to cause damage to the underlying flintwork and further repairs are likely to be required.

On the southern part of the north-west plinth, the plinth is leaning outward when viewed internally, but not externally. There are various areas where cement mortar has been used to fill voids and areas of missing flintwork. Additionally, a localised area of deterioration was noted to the mortar joints, attributed to water ingress from leaks.

The majority of the exterior of the north-west elevation plinth is concealed by vegetation and could not be properly inspected. However, at one point towards the southern end of this elevation, it was noted that some of the brickwork has been replaced with modern fletton bricks, likely dating to the early 20th century. From the exterior, the plinth does not appear to lean forward, whereas internally it does. It is

possible that additional brickwork was added externally at some point to address the lean and act as a buttress. This will require further assessment once the vegetation around the plinth has been cut back to allow full inspection.

On the north-east elevation, there is a series of vertical cracks to the flintwork, but these do not show up internally. Additionally, there is a slight outward lean along the course of the top of the wall and some bulging in the north-west corner.

#### Internal Observations:

On the south-west wall, there is vertical cracking in several places in the south-east corner, where the wall has experienced movement. This is particularly evident between sections of flintwork and brickwork, which are not properly tied together. There are also a number of loose and missing bricks in this area. In addition, vertical cracking is present in the flintwork a short distance from this location, spanning almost from bottom to top, which may also be due to movement in this corner. This area will require repairs.

The southern part of the north-west plinth is leaning outward. There are various areas where cement mortar has been used to fill voids and areas of missing flintwork. Additionally, a localised area of deterioration was noted to the mortar joints, attributed to water ingress from leaks.

On the northern part of the north-west plinth, a non-vapour-permeable cement render has been applied. This render has cracked in many places and is likely trapping moisture, causing deterioration to the underlying flintwork. It is recommended that this render be removed. From the interior, the northern part of the plinth to the north-west wall also appears to lean forward.

On the south-east wall, the bottom half has been covered with a cement render, which should be removed. Vertical cracking was noted in the flintwork in the north-west corner, which will need to be repointed. Cracks were also observed between the brick piers at both corners; these too will require repointing.

The mortar joints to the plinth internally are in fair condition and considered acceptable for the barn's current use. However, as the building is intended for conversion, the condition of the mortar may not be suitable going forward. In several areas, the mortar is crumbling and brittle when probed, and is likely to continue breaking down, leading to loose material falling onto the floor on a periodic basis. We have not been advised of the proposed internal finish. If there is a desire to leave the plinth exposed internally, repointing is likely to be the preferred option to stabilise the surface and reduce ongoing deterioration. Alternatively, it may be appropriate to plaster the internal face of the plinth.

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|--------------------------------------------------------------------------------------|------------------------------------------------------------------------|
|  | <p>Deteriorated bricks 'repaired' with cement – south-east corner.</p> |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------------|

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|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
|    | <p>Area of missing flintwork to south-east elevation.</p>                                     |
|   | <p>Another area to same elevation, towards south end.</p>                                     |
|  | <p>Much elevation concealing the plinth to the southern half of the south-east elevation.</p> |

|                                                                                      |                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>Exterior side of the south-west wall is unknown as it is concealed by the single storey building attached to it, however, the small exposed section at the corner is covered with cement render which will need removing.</p> |
|   | <p>North-east elevation – various cracks present to flintwork and some leaning to the top of the wall at the north-west corner.</p>                                                                                              |
|  | <p>South-west elevation has various cracking to flintwork and between brick corner pier, all of which will require repairs.</p>                                                                                                  |

|                                                                                      |                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>North-west plinth has noticeable lean internally but not noticeable externally.</p>                                                                                                                 |
|   | <p>Area of significant water ingress to north-west elevation has caused localised deterioration to plinth. An inappropriate patch repair with cement has been undertaken which will need removing.</p> |
|  | <p>Cement render to northern half of the north-west elevation plinth needs removing.</p>                                                                                                               |

#### 4.5 Timber Frame (External Observations)

Much of the exterior face of the timber frame is concealed by weatherboards, but where weatherboards are missing, the following observations were made:

Part of the jowl post between bays 5 and 6 is exposed and is in poor condition. There is a large vertical split on the outer face. Internally, much more deterioration is evident. This post requires replacement.

On the north-west elevation, some of the timber studs, posts and a small section of the soleplate are visible due to missing weatherboards. The base of several studs shows signs of decay, and one section of the visible soleplate exhibits significant decay.

On the northern part of the north-west elevation, a substantial length of soleplate is visible from the outside, though not directly accessible due to vegetation. Where visible, this section did not appear to be significantly decayed.

At the north-west corner of the barn, the wall plate is significantly decayed, as are the ends of the rafter feet in this area. This is visible externally where a large number of slates are missing which is causing water ingress and subsequent decay.

On the southern part of the south-east elevation, some sections of the timber frame are exposed. The soleplate in the southern part adjacent to the porch appears to be significantly decayed, as does the wall plate above this area and one of the jowl posts. A large opening in this section of wall was noted, with no visible studwork present — it appears that the studs have fallen out at some point. The wall plate above this opening has completely snapped in one location, and the remainder of the frame in this area appears to be leaning outward, evidenced by a noticeable bulge in the weatherboarding. The wall plate along this stretch of elevation generally appears to be significantly decayed, as does the soleplate beneath it.

On the northern part of the south-east elevation, a fair amount of the soleplate is visible, including to the adjacent porch. This section generally appears to be in reasonable condition, though there are isolated areas of decay and voids present which will require timber splice repairs.

|                                                                                      |                                                                                                                                               |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Vertical split to jowl post between bays 5 and 6 on the south-east elevation. This post is in poor condition and requires replacement.</p> |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                      |                                                                       |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
|    | <p>Localised decay to sole plate to south-east elevation – bay 7.</p> |
|   | <p>Studs completely missing from south-east wall of bay 3.</p>        |
|  | <p>Wall plate to south-east of bay 3 has completely snapped.</p>      |

|                                                                                     |                                                                               |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
|   | <p>Significant decay noted to sole plate to south-east wall of bay 2.</p>     |
|  | <p>Significant decay to wall plate and rafter feet – north-west of bay 7.</p> |

#### 4.6 Doors

The external timber doors to the south-east and north-west elevations are in poor condition. It is unclear if these are to be retained or replaced. If the former, they will require removing and full overhaul and redecoration.

#### 4.7 Lean-to

There is a small lean-to attached to the north-west corner of the barn. This structure is in poor condition and it is understood the proposal is to remove this. much of the framing is decayed and internally, there is a large amount of standing water as the ground inside this area is much lower than the internal floor of the barn and the external ground levels.

## 5. **BUILDING INTERIOR**

### 5.1 **Timber Frame (Internal Observations)**

The frame viewed from inside has been assessed and is discussed on an elevation-by-elevation basis. We have marked up the drawings you provided prior to the survey to indicate proposed replacement timbers and those considered repairable based on the current inspection.

It should be noted that much of the survey was carried out from ground level, and many of the high-level timbers were not physically accessed or probed. As such, these drawings represent preliminary, outline repairs and remain subject to further detailed inspection once safe access is available and as works progress on site. Additional deterioration may be identified during these subsequent inspections.

The marked-up drawings should not be regarded as a final specification of works.

#### **Key**

#### **Red = Timber to be replaced like-for-like**

This indicates timbers that are considered to require **full replacement**.

- The existing member is to be entirely removed and replaced with a new section of matching dimensions and species.
- This typically applies where:
  - Decay or structural failure affects the majority or entire length of the member.
  - The integrity of the member is compromised to the extent that partial repair is not viable.
  - The connection between adjoining members cannot be adequately restored through repair alone

#### **Green = Timber to be repaired**

This indicates timbers that are considered suitable for **localised repair**, retaining as much of the original material as possible.

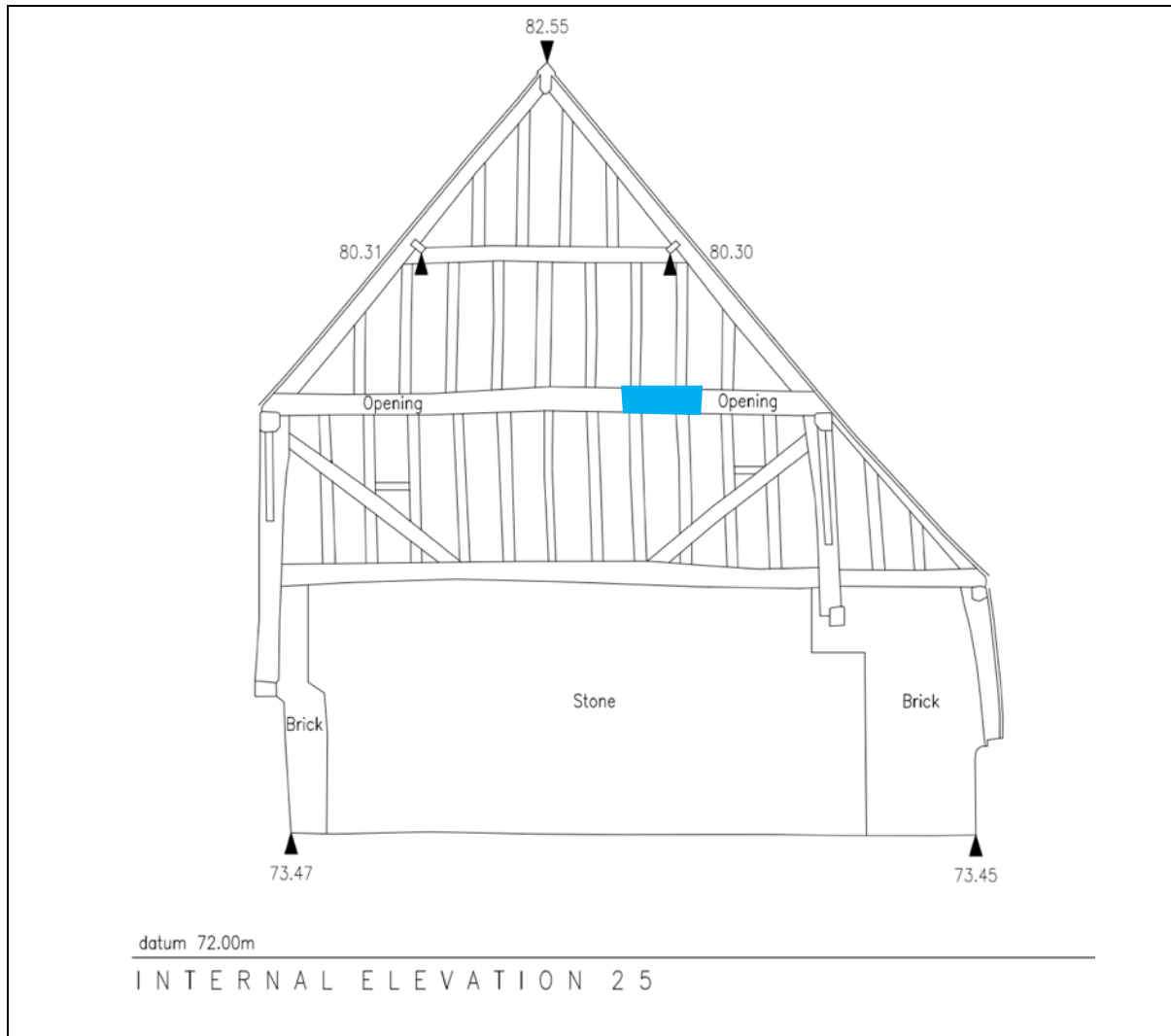
- Repair methods may include:
  - Scarf repairs,
  - Splice repairs,
  - Face repairs,
  - Slip tenons,
  - Consolidation and strengthening techniques,
- These repairs typically address:
  - Decay or damage limited to one end or part of the timber.
  - Localised loss of cross-section.
  - Decay at joints or mortise and tenon connections.
  - Defects which do not warrant full replacement of the entire member.
  - Extensive partial replacement of individual sections of timber (e.g. replacement of part of a sole plate, tie beam, or stud where sufficient sound timber remains to justify retention of the unaffected portion).

#### **Blue = Possible decay present – requires further inspection.**

Indicates areas where **decay may be present but could not be confirmed** due to access restrictions during the survey.

- Further inspection will be required once safe access is available (e.g. after scaffolding is erected or roof coverings removed).
- The need for repair or replacement will be confirmed at that stage.

### 5.1.1 Internal Elevation 25

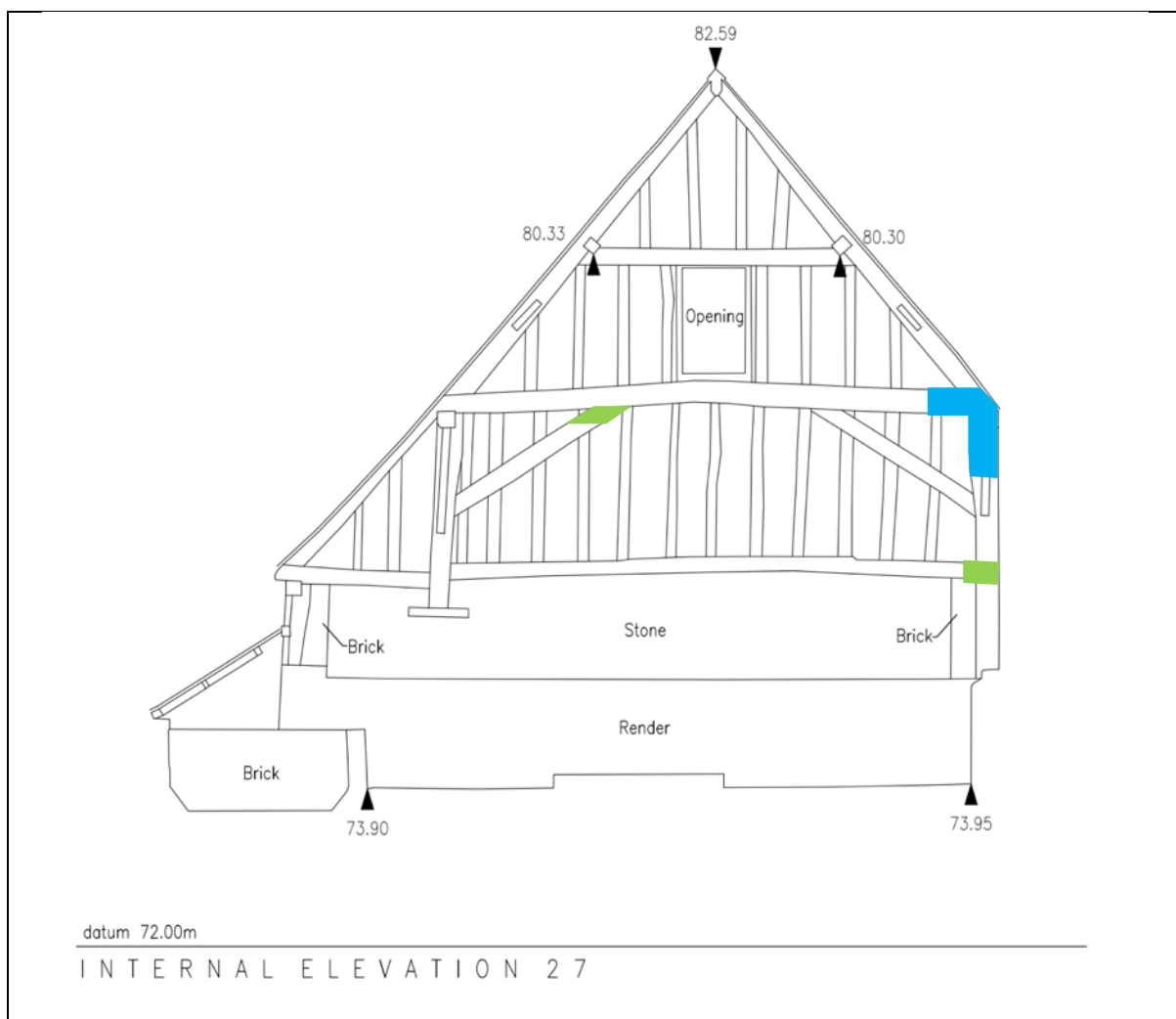


The timber frame to this elevation appears to be in reasonable order, with no areas of significant decay noted. However, a large stain was observed on the tie beam at the south-west corner. This is located directly beneath an area of missing slates on the roof, and it is likely that water ingress is occurring at this location. Due to the height, it was not possible to confirm the condition of the timber from ground level. The extent of any decay to the tie beam could not be determined, particularly to its upper surface, which was not visible. Further inspection will be required once safe access is available via scaffolding.

Aside from this area, no major issues were noted with the frame to this elevation.



### 5.1.2 Internal Elevation 27



Visible decay and active water ingress were noted at the north-east corner of this elevation, due to roof leaks. As a result, the tie beam, jowl post, principal rafter, and adjacent wall plate (to internal elevation 26) are visibly wet. While the full extent of decay could not be determined at the time of inspection, it is likely that decay is present in these components, and repairs will be required.

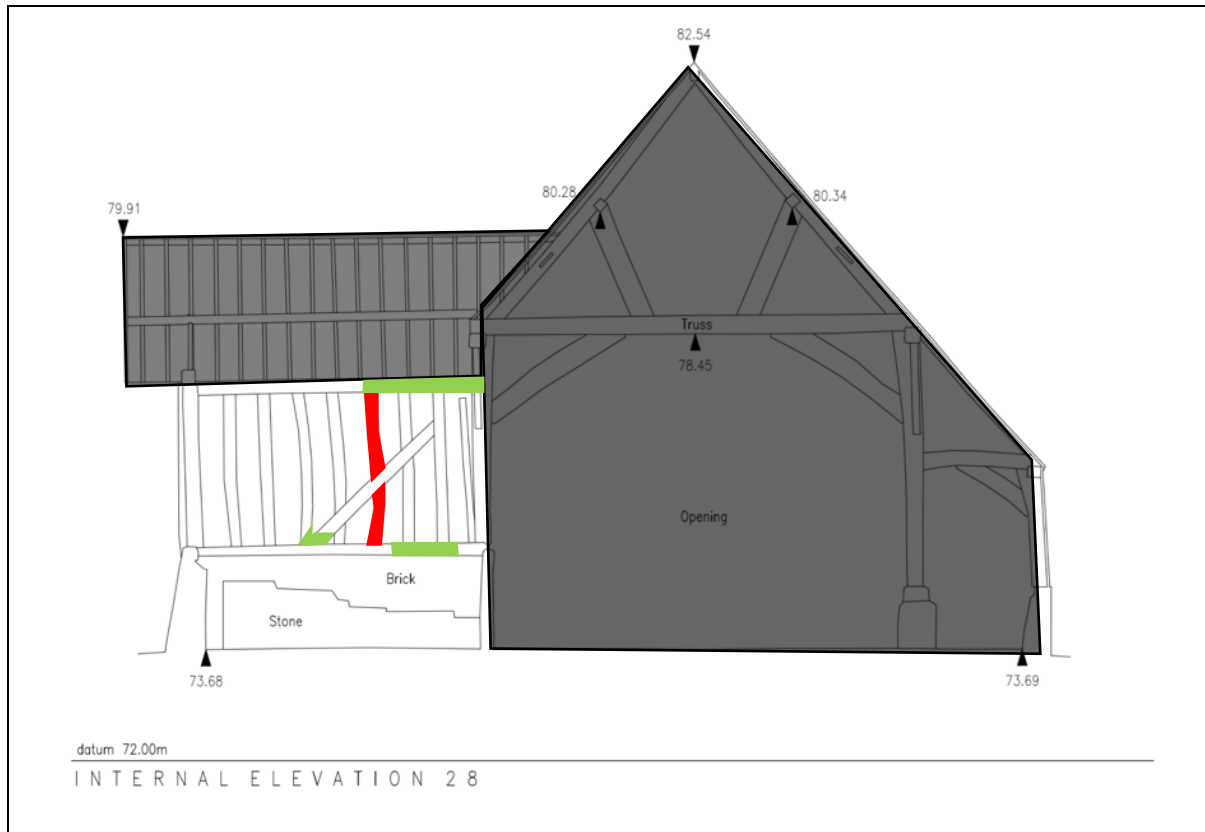
Elsewhere along this elevation, no signs of decay were observed to the timber frame.

It was also noted that the soleplate has pulled out of the mortise joint of the jowl post at the north-east corner. A metal strap will need to be installed to reconnect and secure these components.

Additionally, the left-hand diagonal brace has partially pulled out of the mortise joint beneath the tie beam. This area will require further assessment to determine whether the brace is loose and whether remedial action is needed, such as refitting the brace, re-pegging it, and possibly installing a new tenon.

|                                                                                      |                                                                                                 |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
|   | <p>Roof leaks in north-east corner have caused much staining, and probably localised decay.</p> |
|  | <p>Partially disconnected brace.</p>                                                            |

### 5.1.3 Internal Elevation 28



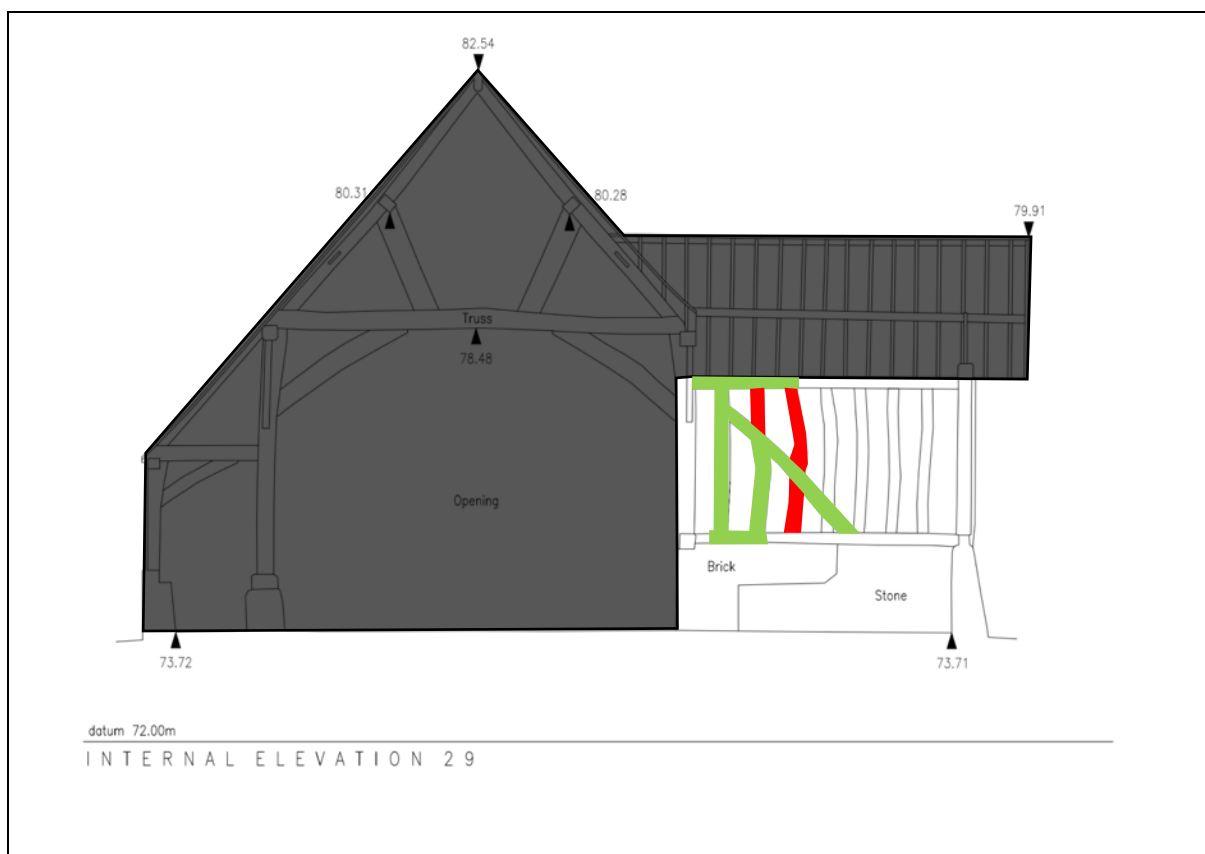
The wall plate has become completely disconnected from the jowl post of the main part of the barn. The wall plate also shows significant decay to its outer face and top section, caused by water ingress at the roof valley. As a result, several of the studs are no longer properly connected to the wall plate, and decay is present to a number of the studs as well as the diagonal brace.

The soleplate appears largely free of decay when viewed from the interior. However, a large amount of mortar has been applied to the base of the plate, possibly to fill voids. It will be necessary to remove this mortar to inspect the condition of the timber underneath and determine whether repairs are required. The soleplate was noted to be wet in multiple areas due to roof leaks, and while some decay is present, it did not appear to be extensive.

As noted, the base of the diagonal brace is decayed. Additionally, the jowl post at the south-east corner is split, and it is recommended that the gap be filled with timber inserts to restore proper integrity at this joint.



#### 5.1.4 Internal Elevation 29

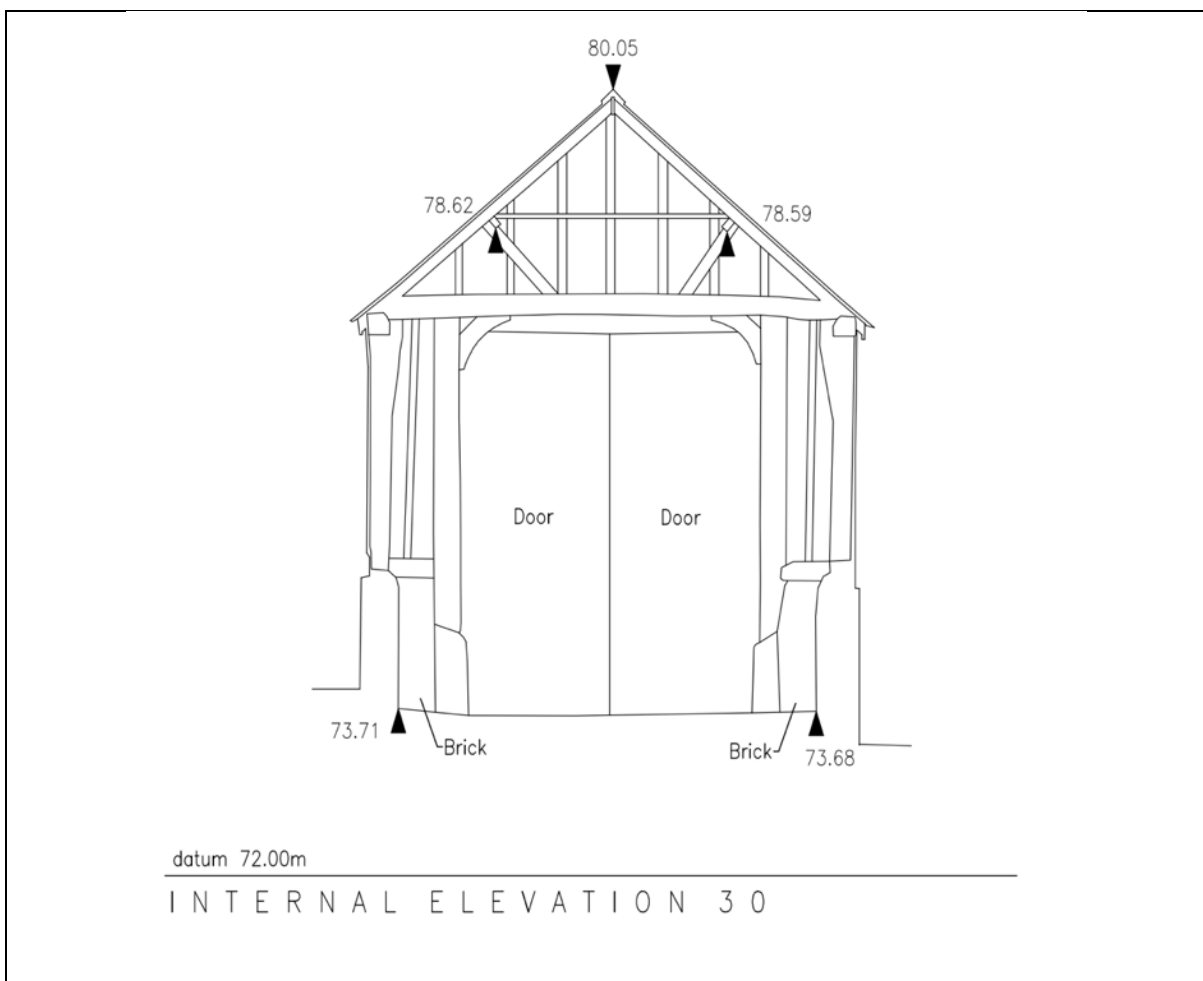


There is localised decay to the inner face of the soleplate, as well as decay to the sides and outer faces of four studs. Decay is also present to the diagonal brace, and the top of the wall plate appears to be heavily decayed in one area.

All of this deterioration is attributed to ongoing water ingress from the roof above.



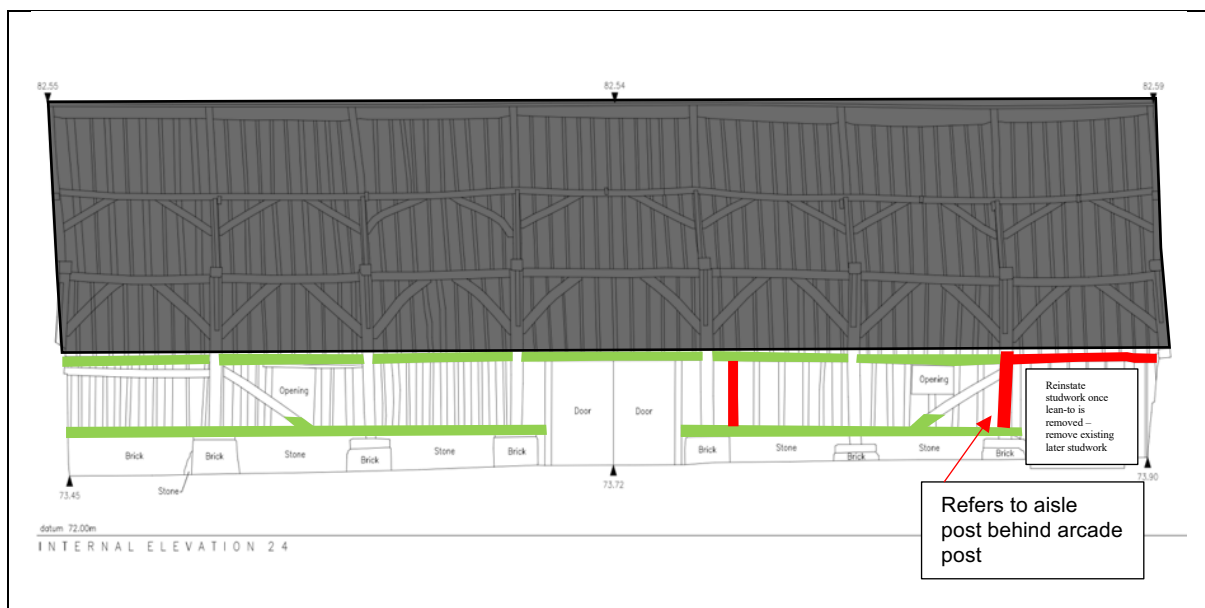
#### 5.1.5 Internal Elevation 30



The framing to this elevation is in reasonable condition, though it was noted that there is a split to the top of the jowl post adjacent to the south door. There is also gaps between the top of the jowl post and the tie beam and adjacent wall plate. As a precaution it is suggested that a metal strap be installed which laps onto all three components, providing additional restraint.



#### 5.1.6 Internal Elevation 24



On the southern part of this elevation, the soleplate is heavily decayed at mid-span and is almost entirely missing in one area. In many other areas along this elevation, the outer face of the soleplate has also significantly decayed. While some sections may be capable of being retained, a large proportion will need to be cut out, replaced, and scarfed into the existing sound sections. Although the full outer face of the soleplate could not be fully inspected, visible signs of decay suggest that face repairs are also likely to be required.

In the northern part of the elevation, there is an area that is significantly wet and decayed due to roof leaks. The soleplate in this location has rotated outwards, indicating likely decay to its outer face. At the north-west corner, another section of the soleplate is both significantly decayed and wet. This portion will also require cutting out and replacement.

The wall plate along this elevation is significantly rotten at various intervals and will require sectional replacement. The decay is due to water ingress from roof leaks, particularly in areas above the window openings.

The studs along this elevation require numerous repairs. In many cases, scarf repairs will be needed at the base where the timbers are decayed and no longer connected to the soleplate. In some areas, the studs are too short and do not reach the wall plate. While a few studs will require full replacement, it is thought that the majority can be retained with localised repairs. The primary issue is the loss of connection at the base where decay has occurred.

The aisle post between bay 6 and 7, in the north-west corner adjacent to the lean-to, is significantly decayed and requires full replacement. Water ingress from holes in the roof have caused this.

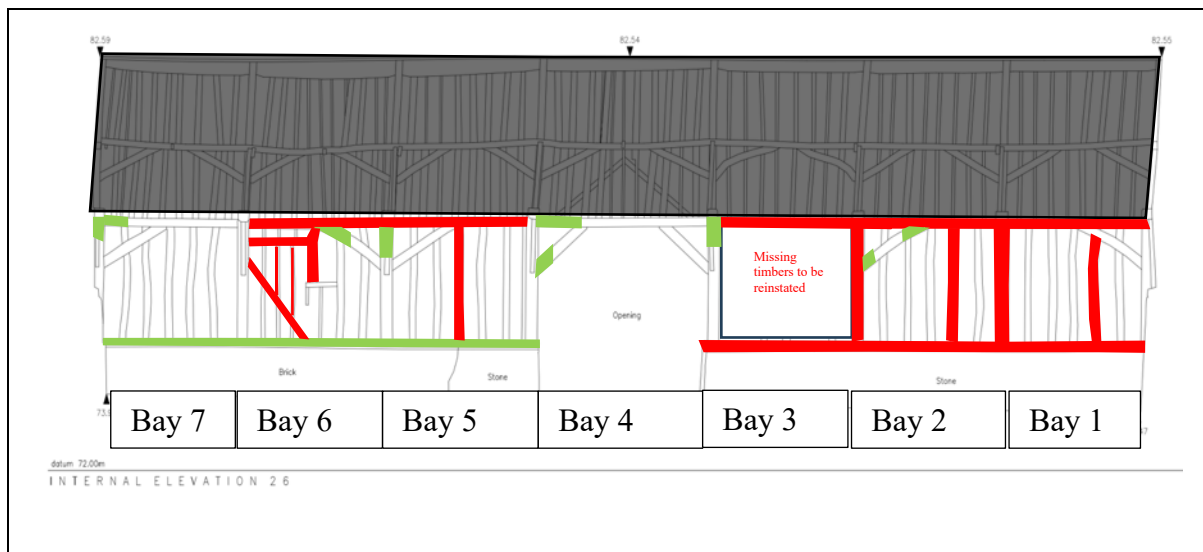
Repairs to the bases of studs are not individually marked on this elevation drawing. The majority of studs require base repairs (e.g. scarf repairs) due to localised decay and becoming disconnected from the sole plate, and marking each individually would not provide additional clarity. These repairs are instead addressed within the general repair strategy at the end of this report and the full extent of repairs when the works commence, when weatherboards are removed etc.

The interrupted tie beams and braces which connect into the aisle posts are discussed later in the report as they are not shown on the elevation drawings.

|                                                                                      |                                                                                             |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
|   | <p>Many of the studs no longer connected to the sole plate.</p>                             |
|  | <p>Significant decay to sole plate – has resulted in one section becoming disconnected.</p> |

|                                                                                      |                                                                                                                                                             |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>Outer face of the sole plate has decayed in many places; as a result, the plate has rolled outwards, causing the studs to become disconnected.</p>       |
|   | <p>Leaks from the roof causing localised decay to the wall plates and studs.</p>                                                                            |
|  | <p>Aisle post between bays 6 and 7 significantly decayed and requires full replacement. Adjacent timbers in this area also decayed and require repairs.</p> |

### 5.1.7 Internal Elevation 26



#### Bays 1, 2 and 3:

The jowl post between bays 1 and 2 is significantly decayed. The jowl post will require full replacement. The soleplate across bays 1, 2, and 3 is significantly decayed in numerous areas, and wholesale replacement is recommended along this stretch.

The jowl post between bays 2 and 3 is also significantly decayed and split in various places. It has become disconnected from the wall plate. The wall plate spanning across bays 1 to 3 is significantly decayed in multiple areas and has snapped at one point above bay 3, close to where it adjoins the jowl post. Full replacement of the wall plate is required. Studs in this section require various repairs; most can be retained with scarf or face repairs, though a few will need full replacement. The base of many studs is decayed. The brace in bay 2 has decayed and is partially disconnected from the jowl post.

The jowl post between bays 3 and 4 appears to be salvageable but requires repair at the top, where roof leaks have led to decay. The end of the tie beam in this area also appears to be decayed. The studs and braces to this bay are missing and have fallen out. These will need to be reinstated.

#### Bay 4:

The jowl post between bays 4 and 5 appears to be restorable but will require repair at the top where decay is present, again due to water ingress. A section of the wall plate above bay 4, directly over the diagonal brace, is decayed and will need to be cut out and replaced. The brace itself is also decayed and will require replacement.

#### Bay 5 to Bay 7:

The condition of the soleplate varies, but a large portion, particularly between bays 6 and 7, is in poor condition and will need to be replaced. In other areas, the soleplate appears to be in a salvageable condition. The wall plate spanning bays 5 and 6 is in very poor condition and will require full replacement. The main post between bays 5 and 6 is significantly decayed and will also need to be fully replaced. Studs and braces along this stretch require various repairs. As with earlier bays, some full replacements will be necessary, but the majority can be addressed through face and scarf repairs.

As previously noted, widespread stud base repairs are anticipated. These have not been individually marked on this drawing.

|                                                                                     |                                                                                       |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|   | <p>Jowl post between bays 1 and 2 significantly decayed and requires replacement.</p> |
|  | <p>The same also applies to the jowl post between bays 2 and 3.</p>                   |

|                                                                                      |                                                                          |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
|    | <p>Wall plate above bay 3 completely snapped due to extensive decay.</p> |
|   | <p>Studs to bay 3 have fallen out and laying on the ground.</p>          |
|  | <p>Sole plate to bays 1-3 extensively decayed and beyond repair.</p>     |

|                                                                                    |                                                                                        |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
|  | <p>Water ingress to bay 6 causing localised decay, particularly to the wall plate.</p> |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|

#### 5.1.8 Tie Beams, Interrupted Tie Beams, Upper Wall Plates & Arcade Posts

These components have been reported on separately as they do not show on the elevation drawings provided. Each bay is discussed individually. Although the arcade posts sit between bays, for the purpose of reporting, the right-hand post will be attributed to the bay on its left. For example, the right-hand arcade post in Bay 1 will be reported as part of Bay 1, the next as part of Bay 2, and so on. The same applies to the main tie beams and interrupted tie beams.

##### Bay 1:

Staining was noted to the upper wall plate, particularly on the west side. Further inspection will be required to determine the condition of the timber.

On the west side, the diagonal brace has become disconnected from the tie beam at the top. A metal strap has since been installed to secure the brace back to the tie beam. It is evident that the original mortice beneath the tie beam had rotted away, allowing the disconnection to occur. This arrangement should be closely reviewed when safe access is available to determine whether the current strapping is sufficient or if the brace should be properly reconnected using a slip tenon and repairs made to the mortice.

On the east side, there is significant staining to the end of the tie beam, caused by roof leaks. Some decay is visible at the end of the beam. The top and underside of the tie beam appear friable when viewed from ground level, with sections of the top edge visibly missing. This area should be closely assessed once accessed to determine whether decayed timber needs to be cut out and replaced.

The east brace has become disconnected at its base from the jowl post. This is due to the main post being heavily decayed and having moved, which caused the separation. When the main post is replaced, the brace will need to be reconnected.

It was noted that the arcade post is leaning to the east. This is further discussed under bay 3.

##### Bay 2:

Similar to Bay 1, the brace on the west side was previously disconnected but has since been strapped back to the tie beam. This arrangement should be closely reviewed when access is possible to determine if the connection is adequate or if further repair is needed.

The brace on the east side has split along the centre of its length. This should also be assessed closely when access is available to determine whether repair or replacement is required. The east end of the tie beam is decayed due to roof leaks and will require repair. As with Bay 1, the centre of the tie beam appears very friable, and sections of the top edge are missing. This should be inspected closely to assess whether splice repairs are necessary.

The east jowl post in this bay requires replacement due to decay, as discussed previously. Once replaced, the east brace will need to be reconnected to the new post.

Additionally, the arcade post in Bay 2 is leaning to the east, like in Bay 1. This is further discussed under bay 3.

The bottom of the brace has pulled partially out of the aisle post, likely due to movement of the arcade post.

#### Bay 3:

There appears to be some historic decay to the upper wall plate, which will require further assessment when the roof coverings are stripped. One of the diagonal braces has become disconnected at the base from the arcade post and will need to be reconnected.

The connections between the tops of the diagonal braces and the tie beam appear inadequate. The mortices look to be very open, and it is unclear whether the braces are fully secured. This should be closely inspected when access is available. Scantling timbers have been added in this area, possibly as a means of fixing or supporting the braces at their connection to the tie beam.

The east end of the tie beam is decayed as a result of roof leaks and will require repair. Additionally, there is a significant amount of splitting to the underside of the tie beam, forming voids which will need to be filled.

The aisle post is leaning, like the other bays. It would be reasonable for one to assume initially that this has been caused by outward movement of the east wall where significant decay to the frame is present, however, the presence of a metal strap fixing the interrupted tie beam to the aisle post suggests that the leaning of the arcade posts may have occurred a long time ago. It was noted that the interrupted tie beam has partially pulled out from the arcade post.

#### Bay 4:

The tie beam generally appears to be in fair condition, as do the braces. However, there is some minor decay to the east end of the tie beam, caused by roof leaks. Splitting is present to the underside of the tie beam, which needs closely inspecting and may need to be filled with timber packing pieces. It is recommended that the braces be checked to confirm that they remain tight within their mortises beneath the tie beam as the splitting extends up to the mortices and has opened them up.

Similar to the other bays, the arcade is leaning and has been previously strapped to the interrupted tie beam with a small metal strap, smaller than the one present in bay 3.

#### Bay 5:

There is significant decay to the east end of the tie beam. The diagonal brace on this side has become fully disconnected from the main post, which has moved outward due to significant decay.

When the main post is replaced, the decayed end of the tie beam will need to be repaired, and the brace reconnected to the new post.

On the west side, several metal straps are present, securing the tie beam to the jowl post and the upper wall plate. However, the west arcade post is leaning to the east, likely as a result of frame racking caused by the decayed main post. This movement may also have contributed to partial disconnection of the tie beam and the previously noted disconnection of the brace.

There is a leak from the roof above the interrupted tie beam and brace beneath this which has resulted in significant decay. These two components will require replacement.

Again, the arcade post is leaning.

#### Bay 6:

There is extensive staining to the tie beam in several areas, caused by roof leaks. The extent of decay is currently unknown and will need to be assessed once access is available. Repairs are likely to be required.

On the west side, the diagonal brace has partially become disconnected from the tie beam and will need to be reconnected. On the east side, an additional brace has been installed alongside the original. The original brace has partially pulled out from its joint and will need to be inspected to determine whether it is loose and whether remedial work is required.

The tie beam on the east side is significantly stained, and decay is likely present due to ongoing water ingress. This area will also require repair. The arcade post is leaning like the other posts.

The end of the interrupted tie beam and base of the brace beneath are significantly decayed due to roof leaks. as discussed, The aisle post here requires replacement, during which the interrupted tie beam and brace will require repairing.

#### Bay 7:

There is no interrupted tie beam or arcade post in this bay. The tie beam in the north-east elevation has already been reported on.

The arcade posts sit on timber blocks which are subsequently sat on brick padstones. These appear free from decay, but are damp in places as they have sucked up moisture from the padstones. Additionally, there is a split to the block in bay 1 and it is suggested this be repaired using a metal strap.

|                                                                                      |                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>Strapping between interrupted tie beams and arcade posts, thought to have been installed when the leaning of the arcade posts occurred. Note the tie beam has partially pulled out of the arcade post – bay 3.</p> |
|   | <p>As above but smaller strap which is not adequate – bay 4.</p>                                                                                                                                                      |
|  | <p>Significant decay to interrupted tie beam and brace – bay 5. These are beyond repair and will require replacement.</p>                                                                                             |

|                                                                                      |                                                                                                  |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
|    | <p>Typical staining to main tie beams – requires close inspection to assess extent of decay.</p> |
|   | <p>Friable timber to underside of tie beam in bay 1.</p>                                         |
|  | <p>Splitting to underside of tie beam – bay 4.</p>                                               |

|                                                                                      |                                                                                                  |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
|    | <p>Typical decay to tie beam ends.</p>                                                           |
|   | <p>As above.</p>                                                                                 |
|  | <p>Staining to tie beam ends in places and the extent of decay is unclear from ground level.</p> |

### 5.1.9 Brick Padstones to Arcade Posts

The brick padstones supporting the arcade posts were inspected from south to north:

#### Padstone 1:

This padstone has experienced movement and is leaning slightly to the west. The brickwork is very old, and while no significant structural cracking was noted, several bricks are deteriorated. In some areas, mortar has been smudged over the faces of the bricks.

#### Padstone 2:

This padstone is generally in reasonable condition, though some bricks are deteriorated.

#### Padstone 3:

There is visible deterioration to parts of the brickwork and use of cement mortar in a number of joints. Cracking is present on the east side, and the west side also shows signs of cracking. A large amount of cement mortar has been applied to the surface of the deteriorated bricks.

#### Padstone 4:

This padstone is in similar condition to padstone 3, with cracking, deteriorated bricks, and areas of cement mortar present.

#### Padstone 5:

This is a very low padstone, consisting of just a few courses of bricks. The bricks are damp and show clear signs of deterioration. The padstone as a whole is in poor condition.

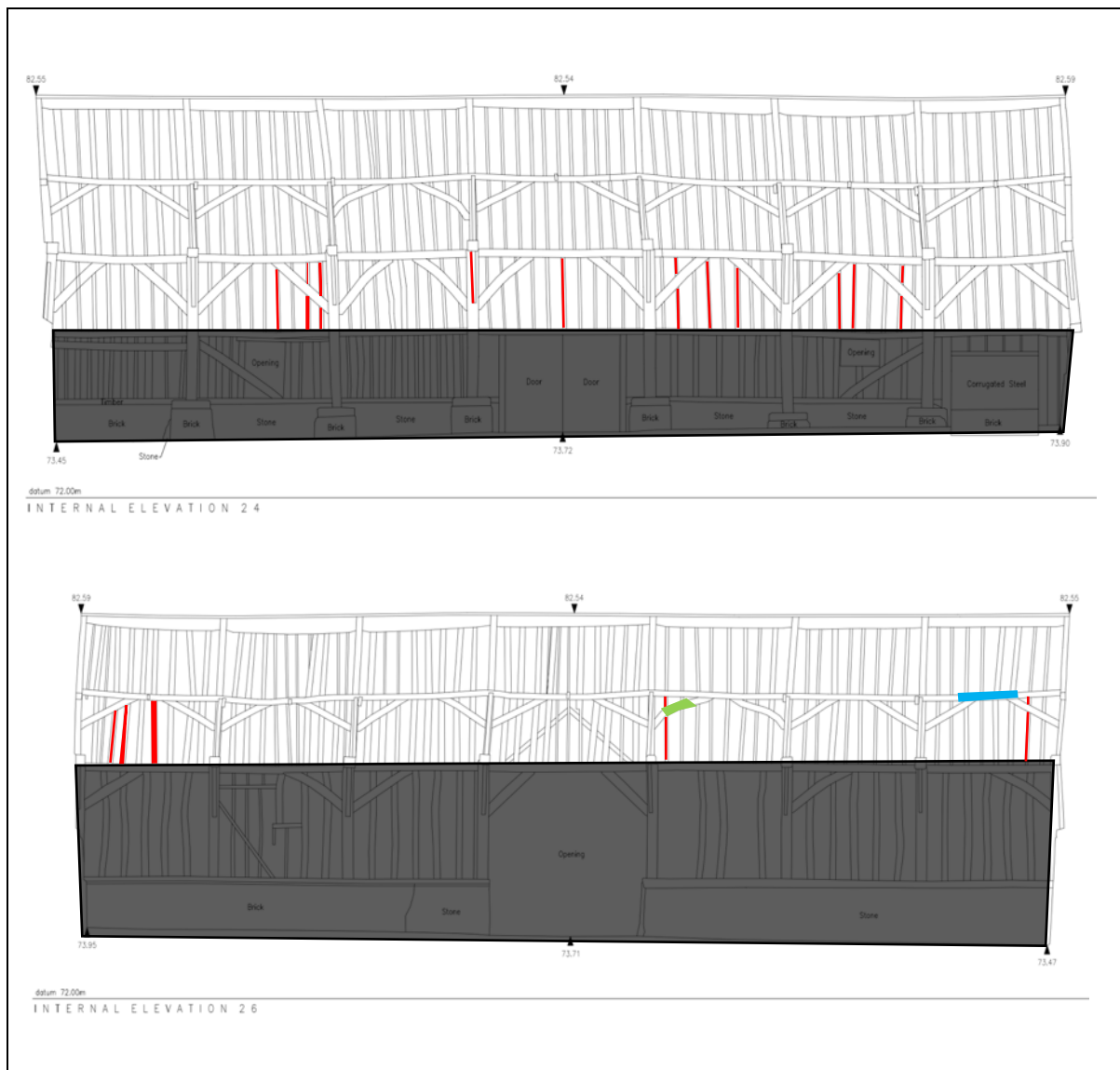
#### Padstone 6:

Also, a low padstone, made up of four courses of bricks. It is in similar condition to padstone 5 — very damp, with visible deterioration to some bricks. Again, in poor condition.

As discussed in the previous section, the timber blocks on top of the padstones are drawing moisture up in places, mostly to the padstones in bays 5 and 6.

|                                                                                      |                                          |
|--------------------------------------------------------------------------------------|------------------------------------------|
|    | <p>Cracking to padstone 3.</p>           |
|   | <p>Padstone 5 only a short padstone.</p> |
|  | <p>Padstones 1-3</p>                     |

## 5.2 Roof Structure



The roof structure is in need of a number of repairs, primarily to the feet of the rafters. The majority of rafter feet appear to be decayed and will require cutting out and replacement. New rafter feet should be scarfed into the existing rafters and securely connected back to the wall plates.

In addition, some localised replacement of rafters will be required. The extent of this does not currently appear to be excessive and is mainly confined to areas where the roof is no longer watertight.

Staining and potential decay were noted to a number of the purlins. These are likely to require repairs, although the full extent will need to be confirmed once the roof coverings are stripped, and full access is available.

Most of the roof braces appear to be intact, though their condition will need to be checked when accessed. One of the braces to the east side of Bay 3 has become partially disconnected from one of the principal rafters, and a large amount of decay was noted to this brace. Repair will be required.

The ridge plate appears to be intact, and no obvious signs of decay were observed from the underside. However, this will also need to be checked once the roof coverings are stripped. It is likely that the tops of the rafters will need to be refixed to the ridge plate in various areas.

It was noted that the roof structure above the porch has been rebuilt, probably in the 19th century.

Where rafters appear intact, it should be noted that only the inner sides were visible for inspection. Once roof coverings and battens are stripped, decay or insect damage may be revealed to the external faces, and further repairs or replacements may be necessary as a result.

|                                                                                      |                                                                     |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------|
|   | <p>Decay to purlin – bay 1, north-west elevation.</p>               |
|  | <p>Example of disconnected brace – north west elevation, bay 5.</p> |

|                                                                                      |                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>Decayed rafter – south-east elevation, bay 5.</p>                                                                                                                               |
|   | <p>Decayed brace – north-west elevation, bay 5.</p>                                                                                                                                |
|  | <p>Typical decay to rafter feet. The majority of the rafters require repairs at their base, and similar to the studs, these have not been individually marked on the drawings.</p> |

### 5.3 Floor

The barn has a modern concrete floor other than in bay 4 where a cobbled floor is present. Presumably the floors are to be broken out, removed, and a new floor slab laid. Limecrete is recommended over concrete as limecrete is vapour permeable and allows moisture to escape. Concrete is impervious and will tend to push moisture to the perimeters, introducing dampness to the base of the external walls.

### 5.4 Pigeon Guano

The barn is home to a large population of pigeons, and there is a significant accumulation of pigeon guano within the building. Large quantities of guano are present on the floor throughout the barn, with more limited amounts present on the timbers and masonry plinth. The accumulation of guano presents both a health hazard and potential material degradation risks.

Pigeon guano contains a variety of bacteria, fungal spores, and other biological agents which may present risks to health, particularly through inhalation of airborne particles during disturbance. In addition, guano can contain acidic compounds which, over time, may contribute to the deterioration of building materials, including timber and masonry.

#### Recommendations for Removal:

- The removal of pigeon guano should be carried out by a competent contractor with appropriate experience in biohazard cleaning.
- Full respiratory protection (RPE), personal protective equipment (PPE), and control measures should be used to prevent exposure during removal.
- Dust suppression methods (such as light misting) should be employed prior to and during clearance to minimise airborne contamination.
- Waste material should be disposed of in accordance with relevant waste regulations.

Guidance on the safe removal and handling of pigeon guano is provided by the Health and Safety Executive (HSE) in the publication:

**"Bird droppings and health risks" — HSE Advice and Guidance INDG84 (rev2).**

Reference should be made to this document, and all works should be carried out in accordance with current health and safety legislation.

## 6. **WOOD BORING INSECTS**

Wood-boring insects are a group of beetles whose larvae bore into timber, causing structural damage over time as they feed on the wood. Historic infestations are often identified by the presence of exit holes in the timber surface, which are created when the mature adult insects emerge from the wood. Signs of an active or live infestation can include the presence of frass — a fine, powdery dust that is ejected from the tunnels created by the larvae as they feed.

The most common species encountered in buildings in the UK include:

- Common Furniture Beetle (*Anobium punctatum*): The most widespread species, typically attacking softwoods and some hardwoods with elevated moisture content.
- Wood-Boring Weevil (*Pentarthrum huttoni* and others): Often associated with timber that has previously suffered from fungal decay, as they prefer damp, decayed wood.
- Deathwatch Beetle (*Xestobium rufovillosum*): Primarily affecting hardwoods such as oak, particularly in older historic buildings.
- House Longhorn Beetle (*Hylotrupes bajulus*): More geographically limited but potentially highly destructive, especially to softwood roof timbers.

It is important to note that chemical treatment for wood-boring insect infestation is rarely necessary where the building fabric is kept dry and well ventilated. These insects are typically attracted to timber with an elevated moisture content, often above 20%. In most domestic buildings, central heating and ventilation help to control moisture levels and limit insect activity.

However, barns, outbuildings, and other unheated structures—such as this building prior to conversion—are particularly vulnerable. During the colder months, these buildings can remain cold and damp for extended periods, raising the moisture content in the structural timbers and creating favourable conditions for infestation. Prolonged dampness caused by roof leaks, ground moisture or poor ventilation further increases the risk.

During the course of our survey, no obvious evidence of active significant wood-boring insect activity was noted, but it is clear that the timbers have been attacked in the past as there are many exit holes present on the timbers. However, given the current unheated condition of the building and the presence of roof leaks leading to many areas of wet and decayed timber, it is highly probable that some localised active infestation is present in isolated areas.

As part of the planned conversion, and to satisfy both warranty requirements and provide peace of mind to future occupants, it is recommended that a precautionary chemical treatment is undertaken. This will help to ensure that any existing or dormant infestation is treated, and will offer long-term protection to the structural timbers as the building is brought into habitable use.

## **7. SUMMARY & RECOMMENDATIONS**

The survey of the Threshing Barn has shown that the overall condition of the barn is very poor, and the timber frame requires a significant number of repairs. Prolonged leaks from the roof have been the main contributor to the excessive decay currently present to the timber frame. However, the proposed conversion works present a valuable opportunity to comprehensively address these issues and ensure the long-term preservation and stability of the Grade II listed building.

### **General Scope of Repairs**

The full extent of repairs required will not be fully established until further opening-up works and full access inspections are carried out. This includes stripping of the roof coverings, removal of external weatherboarding, cutting back of vegetation, erection of scaffolding, etc. This report provides a detailed overview of the known defects and proposes preliminary repairs, but these should be regarded as provisional pending further inspection once works commence on site. Realistically, the need for additional repairs not outlined in this document are likely to be revealed as the works progress. This is typical when working on historic timber framed barns which are in a poor condition.

### **Timber Frame Condition Summary by Elevation**

#### **South-East Elevation:**

This is the elevation in the poorest condition and requiring the greatest level of intervention. Significant replacement of both wall plates and sole plates is required, particularly across bays 1–3. Repairs to posts, braces, and studs are also required along this elevation. To the front of bay 3, all of the studwork is missing as it has fallen out and will need reinstating.

#### **North-West Elevation:**

This elevation also requires a fair amount of remedial work, with multiple sections of the wall plates and sole plates requiring replacement, together with associated repairs to posts, studs, aisle posts, and braces.

#### **Gable Ends (South-West and North-East Elevations):**

Repairs to these elevations are more limited. Only isolated repairs are needed to the timber frame.

#### **Tie Beams**

Repairs are needed to many of the tie beams, particularly at their ends where they have decayed. A number of braces have also become disconnected from the beams.

### **Roof Structure**

The overall roof structure remains generally intact and capable of largescale retention. However, there are isolated rafters that will require replacement due to decay, particularly where roof coverings have failed. The feet of the majority of the rafters are decayed and not connected to the wall plates and therefore require cutting back and repair using scarf joints, with the new rafter feet spliced into sound timber and reconnected to the repaired wall plates.

Staining and potential decay have been observed to several purlins, which will require closer inspection once roof coverings are removed. Localised repairs will be necessary.

The majority of the roof braces appear sound but should be fully inspected once access permits; some however have become disconnected and localised decay is present in places. The ridge plate appears generally sound but will also require full inspection, with rafter connections to the ridge likely requiring strengthening or reinstatement in some locations.

### **Masonry Plinth**

The masonry plinth requires a fair amount of work across all elevations. Once vegetation is fully removed, a full re-assessment will be required. Areas of cracked, spalled, frost-damaged, poorly bonded, and heavily repointed brickwork and flintwork have been identified. Areas previously repaired in cement-based mortars will need careful removal and repointing using lime mortar. The use of HeliBar (reinforcement stainless steel bars embedded within the mortar joints along the length of vertical cracks at various intervals) will be a suitable repair method for many of the cracks.

A decision should be made on the desired finish of the plinth internally. If the plinth is to be left exposed, full repointing internally is recommended to prevent dust, debris etc. regularly falling off of the plinth and onto the ground.

### **Brick Padstones to Arcade Posts**

The brick padstones supporting the arcade posts are generally in poor condition. Deteriorated bricks, failed mortar joints, areas of cracking, movement, and areas where cement mortars have been applied have been identified. In addition, many of the padstones are heavily soiled and have accumulated significant dirt and staining over time. Cleaning will be required to remove surface contaminants as part of the repair process.

The padstones to bays 1-4 will require careful repair, with consideration given to whether they are left exposed and repointed or plastered over as part of the final specification. The padstones to bays 5 and 6 are very shallow, in poor condition, very damp and it is recommended that these be rebuilt incorporating a damp proof course.

As the padstones are built directly into the ground, a degree of dampness is to be expected and will need to be accepted as part of the ongoing building performance. These elements are unlikely to remain entirely dry, and complete dryness should not be expected even following the conversion. If, however, this is not acceptable then an alternative is to also rebuild padstones 1-4 and incorporating a damp proof course in them and reusing as many of the existing bricks as possible.

Furthermore, as the floor slab is to be excavated to facilitate the installation of insulation and a new limecrete floor, this excavation may disturb the ground surrounding the barn and beneath the existing padstones, potentially affecting their stability. In such circumstances, underpinning of the padstones may be necessary to ensure that adequate support to the arcade posts is maintained during and after excavation works.

### **Arcade Post Movement**

The arcade posts have leaned towards the east; this may have been caused by the outward movement of the south-east wall where various frame members have become disconnected over time, though the presence of a number of old metal straps to the arcade posts in several locations suggests this movement occurred a long time ago. It is recommended that, as a precautionary measure, metal straps are installed to all of the arcade posts. These straps will be fixed to the interrupted tie beams and lapped over the wall plates to provide lateral restraint and assist in preventing any further movement of the arcade posts. Several straps are present already present but these are considered inadequate and new ones are recommended which lap over the wall plate on the north-west elevation.

## Repairs to Timber Frame

The full and definitive extent of repairs to the timber frame cannot be specified at this stage and will require further investigation following removal of weatherboarding and the erection of scaffolding. The marked-up drawings provided within this report serve as a preliminary repair outline, identifying areas currently assessed for replacement or repair based on the accessible inspection. However, these remain subject to further confirmation once full access is available and the structure is opened up. The proposed repairs will generally comprise traditional timber frame repair methods, which typically include:

- Localised cutting out of decayed timber and insertion of new face patch repairs.
- Face half-scarf repairs.
- Compression joints and half-scarf joints to the base of posts and studs.
- Edge half-scarf and splayed scarf joints to sole plates and wall plates.
- Installation of metal straps, brackets, or plates to strengthen connections where historic movement has occurred at joints, but where the members remain broadly in their correct position and retain sufficient integrity. These straps will provide additional restraint and limit any further movement, while allowing retention of original fabric without full dismantling. Straps should be designed to minimise visual impact and be fixed in a reversible manner wherever possible, in accordance with good conservation practice.
- Checking of all existing joints and connections to ensure they remain tight and secure, with repairs to failed or loose joints where required.
- Use of stainless steel fixings, epoxy resin, and glues to secure repairs and reinstate structural integrity.
- Use of metal straps, brackets, and plates to strengthen weakened or previously disconnected connections at sole plates, tie beams, wall plates, rafters, posts, and braces.
- Renewal of timber pegs where necessary.
- All replacement timbers to be air-dried and match the original in section, species, and appearance.

All repair methods to follow recognised good conservation practice and be consistent with Historic England guidance.

## Floor

The barn currently has a modern concrete floor. It is understood that this is to be broken out and removed as part of the conversion works. A new floor slab will be required, and it is strongly recommended that a limecrete slab is used in preference to a new concrete floor. Limecrete is vapour-permeable, allowing moisture to migrate and disperse naturally through the floor, which helps to reduce moisture build-up at the base of the external walls. In contrast, a new concrete floor slab would tend to drive moisture laterally into the base of the walls, increasing the risk of dampness within the structure.

As part of the excavation works for the new floor construction and insulation layers, it is presumed that underpinning of the masonry plinth will be required to maintain support where the internal ground level is lowered.

### **Rainwater Goods and Roof Coverings**

Replacement rainwater goods and new roof coverings will be required. It is understood that these works form part of the planned conversion and have already been allowed for within the overall scheme.

### **Wood-Boring Insects**

Numerous historic exit holes from wood-boring insects were observed throughout the timber frame, indicating previous infestations. Although no definitive evidence of active infestation was noted during the survey, the presence of roof leaks, wet and decayed timbers, and the cold, unheated nature of the barn suggest that localised active infestation is possible. As a precaution, and to satisfy future warranty or lender requirements, a full chemical treatment is recommended as part of the conversion to ensure long-term protection of the structural timbers.

### **Pigeon Guano**

A large quantity of pigeon guano has accumulated within the barn, predominantly on the floor but also on some of the timbers and plinth. This should be removed by a suitably experienced contractor following appropriate biohazard control procedures. Reference should be made to the Health and Safety Executive (HSE) publication "Bird droppings and health risks" – HSE INDG84 (rev2) for safe handling and removal guidance.

### **Further Inspection and Specification**

It is strongly recommended that, once the weatherboarding, roof coverings, internal linings and floor slab have been removed, and once full scaffolding and safe access have been erected, a comprehensive secondary inspection of the entire timber frame and masonry structure is undertaken. This will allow all concealed areas to be fully assessed and for any previously hidden decay, insect damage or further structural deficiencies to be identified. All defective timber should be fully exposed and routed out to establish the true extent of deterioration before repair extents are finalised.

Given the extent of concealed areas and the need for further inspection once opening-up works have commenced, it is recognised that full repair specifications cannot be provided prior to tendering. As such, tendering will likely need to proceed on the basis of the information contained within this report and the accompanying marked-up drawings, which outline the currently identified areas of repair and replacement. The appointed contractor should allow appropriate provisional sums and contingencies within their tender to account for additional works that may become apparent during the full opening-up, inspection, and repair process.

This report provides a preliminary repair schedule sufficient for planning and listed building consent purposes and for the initial tender stage. However, it does not constitute a full and final specification of works, which will need to be prepared following full access and further investigation once works commence on site.

## **Appendix A – Terms of Engagement**

1. The Surveyor will undertake a visual, non-destructive, inspection of so much of the exterior and interior of the property as is accessible safely and without undue difficulty (unless agreement for invasive inspections are gained – see point 2 below). Accordingly, the report will cover all that part of the property, which is visible whilst standing at the various floor levels. The Surveyor will open trap doors where accessible and possible with safety and without undue difficulty. However he/she will be under no obligation to raise floorboards or to inspect those areas of the property that are covered, unexposed, or are not readily accessible with safety and without undue difficulty.
2. The Surveyor has no authority to cause damage to any part of the building in order to further his/her investigation. However, the Surveyor may recommend if he/she considers it advisable to open up and expose parts of the property for a more detailed inspection. The surveyor will by prior agreement of the property owner open up and make invasive inspections where deemed necessary.
3. The inspection will include, subject to reasonable accessibility with safety and without undue difficulty, the roof space(s) without moving insulation material. Inspection of the roof space is confined to details of design and basic construction; individual timbers are not specifically examined although, where defects are observed as part of the general examination, such defects will be noted in the report. It is not possible to report on the condition of flues or the presence of flue liners. The report will not advise upon whether or not any chimneys can be used.
4. The outer surfaces of the roofs will be inspected from ground level, or with close inspection if they can be readily accessed from a 3 metre (10ft) ladder.
5. Except where the contrary is stated, woodwork, foundations and other parts of the structure which are covered, unexposed or inaccessible, will not be inspected and the Surveyor will be unable to report that such parts of the property are free from rot, beetle or other defects. The report will not purport to express an opinion about or to advise upon the condition of uninspected parts and should not be taken as making any implied representation or statements about such parts.
6. Visual inspections will be made of the services. An assessment of the suitability, method of installation, condition, efficiency and capacity of any central heating system, boiler or other equipment can only be made by specialist testing. The safety, standard of workmanship, and state of repair of the gas and electrical installations are also outside the scope of this report.
7. Comments on attached garages and other attached outbuildings are limited to significant defects only. Detached out buildings and grounds are excluded unless by prior specific agreement.
8. The report is provided for the sole use of the named client and is confidential to the client and his/her professional advisers only. No responsibility is accepted to others. The Surveyor accepts responsibility to the client alone for the stated purposes that the report will be prepared with the skill, care and diligence reasonably to be expected of a competent Surveyor. No responsibility will be accepted to any person other than the client, and any such person relies upon the report at his/her own risk.
9. The report has been prepared by the Surveyor ('the Employee') on behalf of Heritage Consulting, a trading name of RHRW Limited, company number **07943489** ('the Employer'). The statements and opinions expressed in this report are expressed on behalf of the Employer, who accepts full responsibility for these. Without prejudice and separately to the above, the Employee will have no personal liability in respect of any statements and opinions contained in this report, which shall at all times remain the sole responsibility of the Employer to the exclusion of the Employee. To the extent that any part of this notification is a restriction of liability within the meaning of the Unfair Contract Terms Act 1977, it does not apply to death or personal injury resulting from negligence.
10. Clients are strongly advised to obtain competitive quotations from reputable contractors for any works recommended within the report, prior to exchange of contracts, in order that they are fully aware of their total financial commitment. Repair costs and general costings are not provided as part of the report unless by separate agreement.
11. Reinstatement Costs and property Valuation are not provided as part of this report.
12. The client will pay Heritage Consulting, a trading name of RHRW Limited, the agreed fee for the survey within 14 days of issue of invoice.
13. Complaints Handling Procedure: Any complaints will be considered by a senior member of staff. If the complaint cannot be resolved, it will be referred to an independent redress scheme; the property ombudsman service. Heritage Consulting, a trading name of RHRW Limited may be required to disclose the Building Survey report to RICS Regulation to ensure that RICS professional standards are being maintained.
14. Liability Cap: Our aggregate liability arising out of, or in connection with this instruction, whether arising from negligence, breach of contract, or any other cause whatsoever, shall in no event exceed the lesser amount of 100 times the net fee paid or £1,000,000.00 This clause shall not exclude or limit our liability for actual fraud, and shall not limit our liability for death or personal injury caused by our negligence.
15. The survey excludes any flood risk assessment or any advice in respect of future flood risk. Clients are advised to engage a solicitor to undertake searches and to advise on flood risk.
16. The survey excludes any inspection or advice on Japanese Knotweed.

**In making the report, the following assumptions will be made:**

- That no high alumina cement concrete or calcium chloride additive or other deleterious material was used in the construction of the property. Neither will comment be made on any assumed health risk related to any structural or cavity fill material which may be covered and unapparent from the inspection or any ground released gasses or other contamination or noxious seepage.
- That the property is not subject to any unusual or especially onerous restrictions, encumbrances or outgoings and that good title can be shown.
- That the property and its value are unaffected by any matters which would be revealed by a Local Search and Replies to the Usual Enquiries, or by a Statutory Notice, and that neither the property, nor its condition, nor its use, nor its intended use, is or will be unlawful.
- That the inspection of those parts which have not been inspected would neither reveal material defects nor cause the Surveyor to materially alter his opinion.