

Barn to the Rear of Porch Cottage

Design, Access & Heritage Statement



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Submitted Documents

This Design and Access Statement should be read in conjunction with the following documents:

2057_P001 Location Plan
2057_P002 Existing & Proposed Site Plans
2057_P003 Existing Plans & Elevations
2057_P004 Existing Sectional Elevations
2057_P005 Proposed Plans & Elevations
2057_P006 Proposed Sectional Elevations

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1.0 | Overview

1.1 | Introduction & Overview of Proposals

This application is for a change of use of the barn to the rear of Porch Cottage, a grade II listed building located in Little Rissington, into residential accommodation. The barn is curtilage-listed and is located within the Little Rissington Conservation Area which lies within the Cotswolds area of Outstanding Natural Beauty.

The owner of Porch Cottage acquired the barn when they purchased the house in 2020. There is currently a planning approval and listed building consent for the change of use to create a single dwelling which was granted in 2018 (17/04706/FUL & 17/04707/LBC). This approval has established the principle of residential conversion, however the design didn't meet the current owner's requirements therefore they approached design storey architects to review the design in context of their new brief and explore revised proposals for the change of use.

The objectives of the revised design are as follows:

- Create a contemporary house that celebrates the architectural qualities and fabric of the listed barn
- Ensure that new interventions into the barn are legible and sympathetic to the historic building fabric
- Ensure that new services, eg bathrooms & kitchens, are well integrated
- Create an outside garden area to the rear on land acquired from the neighbouring property, Wisteria Cottage
- Create an ensuite bathroom for bedroom 1

The main changes from the original permissions are as follows:

1. Reconfiguration of the partitions of the two storey barn to create an ensuite bedroom and utility room on the ground floor.
2. Redesign of the glazing to the front elevation to ensure it is more minimal and sympathetic to the historic barn
3. Insertion of the "lost" padstones to the front elevation in order to address the leaning trusses
4. Insertion of a new lightweight 'screen' and raised area to create a bootroom in the single-storey barn
5. Re design of the openings on the north west elevation, creating two arrow-slit windows.

The following items represent areas where the design has been refined from the current permissions:

6. Proposed interior and exterior material palette that is sympathetic to the historic building
7. Careful integration of services

These changes to the application are minor and could typically be dealt with under a non-material amendment to the existing permission however as this is a listed building it is not possible to vary the permissions therefore a new application is required. In addition, since the original approvals, there has been additional information discovered regarding the species and number of bats in the building. The revised ecological appraisal is included as part of this submission. Finally, this submission also addresses some of the unanswered questions in the previous application in terms of structural strategy, integration of services and bat mitigation. It is hoped that as the principle of development has already been established under the previous application some of the conditions could be addressed during the course of the application to limit the amount of conditions.

2.0 | The Setting & Significance of the Barn

2.1 | Listed Building Description

LITTLE RISSINGTON , LITTLE RISSINGTON VILLAGE

SP 1819-1919 8/241

Porch Cottage and outbuildings at rear (now incorporating 25.8.60 building formerly listed as Cottage (resembling dovecot) etc) GV II One of a pair of cottages, (originally one house), formerly partly a dovecote. Late C17-early C18. Cottage; coursed roughly squared and dressed limestone. Dovecote/cottage; bands of orange and cream coloured limestone, coursed and roughly squared with dressed stone quoins, further outbuildings at right angles adjoining Wisteria Cottage (q.v.). Stone slate roof to main body, concrete tile and corrugated asbestos to the extensions at the rear. Ashlar stack and stump of ashlar stack; C20 artificial stone stack. Rectangular plan with lean-to extension with concrete tile roof at rear. Cottage; 2 storeys. Dovecote; 1 1/2 storeys with forward facing gable. Single double-chamfered, 3-light stone-mullioned casement with stopped hood to the cottage. Similar 3-light casement to gable and ground floor of the dovecote/cottage. Two C20 glazed doors to the ground floor. Open-sided C20 porch with weatherboarded gable (porch with stone pillars modelled on turned woodwork mentioned in previous list description removed c1950). Three-light wooden casement between the two doorways. Blocked pigeon holes and projecting landing platforms to forward facing gable, similar holes and landing platforms to the left gable end. Blocked window towards the apex of the left-hand gable. Two-storey extension at right angles at rear formerly used to house bull. Stable type door with timber lintel to the ground floor, small shuttered opening with a timber lintel to upper right. Single-storey store with early vertical planking with fillets at the front to left. The early plank boarding at the front of these outbuildings is a rare survival. Interior of house not inspected.

2.2 | The Setting within the Conservation Area

The barn is located to the rear of Porch Cottage in the centre of the Conservation Area. The barn is not visible from the main road but does contribute to the rural character of the area due its agricultural history.



Little Rissington Conservation Area Map
(Source: Cotswold District Council)

2.0 | The Setting & Significance of the Barn

2.3 | The Significance of the Barn

The heritage statement, submitted as part of the approved submission, describes the significance as follows:

“The buildings form one side of what was once a traditional three-sided farmyard although, when the former agricultural use ceased, their ownership was tied to occupation of Porch Cottage, with ‘Hunters Mead’ taking ownership of the adjacent barns to the north/north- western side of the yard. The enclosed farmyard area is of traditional concrete with a dividing fence defining property boundaries, although part now forms the residential curtilage to the adjacent barns which have recently been converted to residential use.

The buildings are currently used for the storage of various materials and equipment. However, their use as such use is limited by their overall condition and lack of security.

The listing description makes specific reference to historic use of the double height element as a bull pen, together with its stable type door and small shuttered opening, and to the plank boarding evident to the front of the single-storey element. Whilst these features contribute to the building’s heritage significance, the structural survey report highlights various issues and some associated repairs undertaken over the years which have served to erode the overall significance of the buildings. These include degradation of the timbers to the front of the single-storey element and unsympathetic repairs to some of the stonework, with use of modern cementitious mortar. The report also identifies further remedial maintenance works to be undertaken as part of the proposals and that will be necessary to prevent further degradation.

The buildings are located within Little Rissington Conservation Area, which includes both the main built-up area of the village in addition to a large area of undeveloped land to the north. Whilst the conservation area also represents a designated heritage asset, the existing buildings do not represent a feature of particular heritage significance within it.”

3.0 | The Existing Building

3.1 | The Condition of the Existing Building

The building could be said to be in poor condition and has not been well-maintained in recent years. Over the years the barn has been adapted and repaired and this has been done in an “ad hoc” manner. Some alterations, such as those to the roof structure of the bull house, have been carried out without consideration of the impact of these alterations on the overall structure of the building. Other alterations and repairs, such as those to the pointing and stonework have been carried out to a poor standard. Both the single storey barn and bull house are now in need of a comprehensive program of maintenance and repair to ensure that they are preserved for the future.

In terms of the structural condition of the building, a survey has been carried out by a suitably qualified structural engineer, see section 3.5.

3.0 | The Existing Building

3.2 | External Photographs



Figure 1: View of the bull house from the yard



Figure 2: View of the single storey barn from the rear



Figure 3: View of the single storey barn from the yard

3.0 | The Existing Building

3.3 | Internal Photographs: Single-Storey Barn



Figure 4: View of the low eaves condition of the single



Figure 5: View of the single storey barn looking towards the Bull House

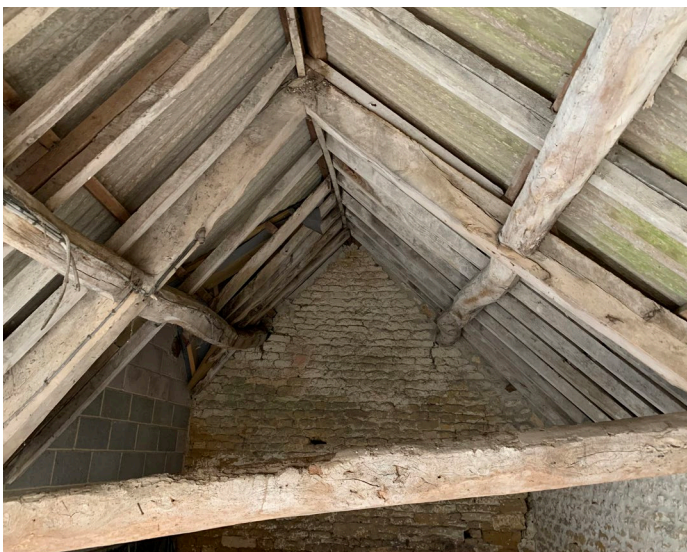


Figure 6: View of the single storey barn looking towards the north west

3.0 | The Existing Building

3.4 | Internal Photographs: Bull House



Figure 7: "Ad hoc" Roof Structure of the Bull House



Figure 8: View of the junction between the Bull House and Wisteria Cottage

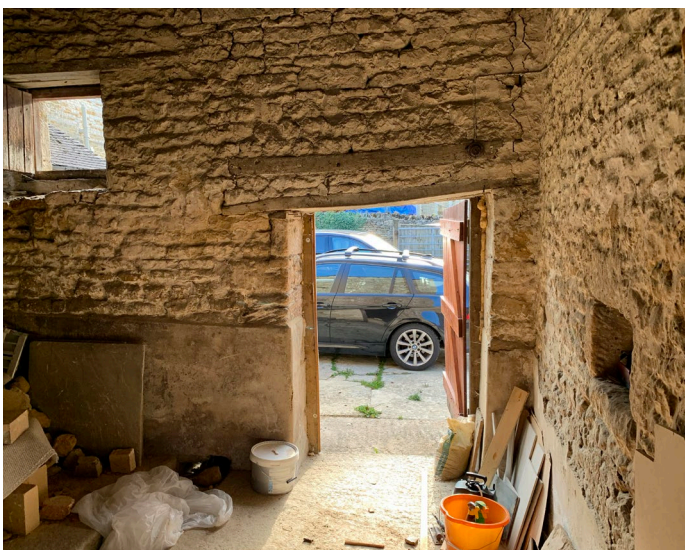


Figure 9: View of the Bull House showing the historic nook, door & window

3.0 | The Existing Building

3.5 | Summary Of Structural Observations

To determine the condition of the existing structure and the remedial works required, a structural engineer experienced in conservation, Neil Lancaster from Mann Williams Consulting Engineers, was consulted. The engineer's summary of his findings can be found below and included in Appendix A:

Two Storey Building

- Viewed externally the roof is severely dished; internally the reason for this is clear, the purlins are inadequate resistance to thrust, and ad-hoc ties have been added in an attempt to arrest lateral movement at the eaves.
- For the roof strengthening a very honest intervention is suggested – small steel sections alongside the purlins, carrying the roof loads. The existing purlins could be retained for historical context and visual interest. The addition of a ridge beam would enable the later ad-hoc ties to be removed, creating an open roof space.
- The first floor beam that remains is heavily decayed and cracked, and is inadequate for the load from a replacement first floor. If acceptable the beam could be replaced; alternatively the beam could be retained and strengthened.
- Part of the length of the front wall bows outwards heavily; to the extent that rebuilding is necessary. The remainder has a more modest lean and could be retained. The addition of a first floor structure would maximise the amount of masonry that could be retained in that the floor/wall junction could be detailed as to provide significant lateral restraint to the wall.
- Elsewhere local crack stitching would be beneficial along with repointing where the masonry is voided.

Single Storey Building

- The lean of the trusses towards the front elevation does not appear to be how it was built – possibly there were staddle stones or brick plinths under the truss support posts, that have since been lost. Any attempt to jack the trusses up would need to be carefully thought through and prepared to prevent damaging surrounding structure.
- Two of the trusses appear to be sound; the central truss however has decayed timber to the tie and the principal rafter shows decay and voiding. I suspect that the tie could be repaired; the principal could be replaced if acceptable; retention and strengthening could be complex.
- The purlins have local pockets of timber decay, some requiring strengthening, but in general appear to be sound. They would appear to be adequate for an increase in roof loading assuming clay tiles are to be added.
- The gable wall would benefit from a little extra restraint, as it appears to lean slightly and the purlin bearings need tidying up.
- The rear elevation has a significant inwards bulge in the end bay closest to the two storey building, where the ground externally is at its highest. It is suggested that this length of wall (4m approximately) is rebuilt. The remainder of the rear elevation appears to lean out slightly, but not significantly.
- Elsewhere local crack stitching would be beneficial along with repointing where the masonry is voided.

4.0 | Proposals

4.1 | Proposals in Detail

The client's brief was to ensure that the interventions into the existing building are clearly legible from the historic fabric, while ensuring that they are sensitive in terms of materials and design. The new partitions in the two storey addition, have been conceived as a freestanding 'pod' which houses the stair and screens the bathrooms and utility room from the bedrooms. The design of the pod has been carefully considered and is intended to read as a contemporary intervention that sits comfortably as a free-standing piece within the historic fabric of the barn. The pod will be clad in rough sawn timber which is a rustic and appropriate material for this sensitive context. A detailed description of the proposals can be found below:

- 1. Reconfiguration of the partitions of the two storey barn to create an ensuite bedroom and utility room on the ground floor.** The existing permissions had a single bathroom shared between the two bedrooms. By reducing the size of the bootroom and relocating the stair it is possible to insert two compact ensuites into the space. This ensures that the person staying in the guest bedroom has level access to a bathroom. It is argued that this design is less harmful to the heritage asset as the legibility of the existing structure is increased.
- 2. Redesign of the glazing to the front elevation to ensure the glazing is more minimal and sensitive to the historic barn.** The design of the glazing of the front elevation, as approved, is quite suburban in character and the windows are shown with quite heavy frames. An aluminium sliding door system is proposed in order to increase the amount of glazing to frame and ensure the glazing feels lightweight and minimal. It is proposed to locate the glazing behind the timber posts in order to create a 'layered façade' and increase the legibility of the timber structure. It is argued that this is more sensitive and legible intervention than the elevation treatment shown in the approved plans.
- 3. Reinstatement of the "lost" padstones to the front elevation in order to address the leaning trusses.** It is believed that there would have been padstones located under the posts that support the principal trusses along the front elevation. The trusses have all 'dropped' the same amount along this line, in addition stone padstones were typically used to ensure that the bottom of the posts were kept dry and free from moisture. The reinstatement of the padstones has a number of benefits; the structure can be correctly aligned and it will be elevated off the ground which will increase the longevity of the building.
- 4. Insertion of a new lightweight 'screen' and raised area to create a bootroom in the single-storey barn.** A new joinery screen is proposed to create a lightweight division between the bootroom and the main space of the single storey barn. This is to create privacy and to delineate the front entrance from the adjacent living areas. It is proposed that the top of the screen aligns with the underside of the trusses to ensure it remains a subservient and small-scale intervention. The screen will be constructed from timber reclaimed from the existing internal screens that currently sub-divide the single-storey barn.
- 5. Re design of the openings on the west elevation and creation of two arrow-slit windows.** The approved scheme proposes a single large opening on the north west elevation to provide light into the NW end of the barn. These proposals are for two smaller openings of an "arrow slit" design. The openings are narrow so their creation will involve less intervention to the historic building fabric. In addition, arrow slit style windows are often found in barns and therefore it is argued that these openings are more agricultural in style and therefore more sensitive to the historic structure than the previous proposals.

The following proposals relate to areas where additional information and clarity on the proposals has been provided which was missing from the approved application:

6. Proposed interior and exterior material palette that is sensitive to the historic building.

The approved scheme provided minimal information regarding the interior material palette and exterior finishes. These proposals have developed the interior palette in more detail and a number of finishes are suggested to create a palette that is sensitive with the historic building fabric. These include:

- Rough sawn timber cladding to clad the blockwork party wall and create a service void.
- Reclaimed elm to create screen between the bootroom and main barn.
- Rough cast plaster work to provide texture on the internal walls.
- Exposed rough sawn timber joists in two storey building.
- Slimline windows with aluminium frames, set back from the structure, in order to ensure the structure is more legible.

7. Sensitive integration of services.

The design strategy for the integration of services has been carefully considered to ensure that there is minimum impact on the historic building fabric. In summary:

- **Foul Water:** The bathrooms are both located on the north elevation. They will share an internal soil stack which will be vented to the roof and terminated with a tile vent. The kitchen waste and bathroom waste will gather together in a single soil pipe, which will be located under the two-storey portion of the barn, before connecting to the manhole in the yard.
- **Ventilation:** The bathrooms will be ventilated through a tile detail, which will be located on the rear elevation.
- **Heating:** It is proposed to heat the barn using underfloor heating on the ground floor and radiators at first floor level. The boiler will be located in the utility room in order that it can be flued to the rear elevation.
- **Electrical:** All plug sockets will be located in the new walls in order to limit intervention into the historic stone walls. The party wall between the neighbouring barn and single storey barn will be over clad and therefore will be used for any additional electrics in this space and the tv.
- **Log burner Flue:** It is proposed that this runs internally, with a small flue projecting externally to limit the impact on the exterior of the building.
- **Damp & Thermal Performance Strategy:** The walls are of solid wall construction and the building is embedded into a bank towards the north-east corner causing penetrating damp in this area. In order to address the damp issues, it is proposed to ensure all repairs to the solid walls would be carried out using lime mortars. The reduction in levels to the south east will improve drainage around the building's perimeter reducing damp. In terms of thermal performance, it is proposed to insulate the floor and roof, which it is hoped will offset the poor performance of the solid walls.

5.0 | Heritage Impact

5.1 | Conservation Officer's Comments on the Approved Scheme

The starting point for this revised scheme was to address a number of these comments to ensure the design has less impact on the heritage asset than the previously approved scheme. The conversion of a historic structure will always create some impact on fabric but this has been kept to a minimum and the proposals have been carefully considered to ensure the maximum amount of historic fabric is preserved. See below for an excerpt of the Conservation officer's comments:

"Whilst the principle of the conversion of some listed barns may be acceptable, the proposals in this application involve a considerable loss of historic fabric, and the alteration and removal of a number of features that contribute to the significance of this heritage asset. As such whilst this barn would certainly benefit from some positive intervention, what is proposed in this application would cause considerable harm to this listed building and is not acceptable. Particular concerns include:

1. The modification of the tie beams and insertion of additional steel supports. Whilst this might be seen as necessary to enable conversion, this proposal is highly invasive and involves the removal of a section of tie beam from each truss in the single storey section of the barn, alternative methods of support (steels or posts) are then inserted to provide the support that the truss can no longer provide. The trusses that are affected are considered to be an integral part of the historic primary roof structure, and the removal of sections of them would not only lead to a loss of valuable historic fabric, it would also compromise the structural form of the roof and the historic integrity of the listed building. This proposal would not be supported.
2. It is not just the cutting of the tie beams that is an issue, the proposed section drawings of the tie beams show them levelled out and at a higher position, than their current low sloped position. This is another substantial intervention, which it would appear, also involves alterations to the front and rear walls of the single storey range and to the roof. The proposed section drawings also show changes to the purlins, which would be another significant intervention and loss of historic fabric to the roof of this special building.
3. Whilst the existing section drawings do not show it, there are partitions underneath the tie beams within the single storey section of the barn, which also appear to be historic. Within the proposed section drawings these divisions have been removed or removed and replaced. The removal of these partitions would lead to a further loss of historic fabric as well as an alteration of the historic plan form of the building. The significance of this historic farm building would be further eroded.
4. It is also proposed that an opening is created between the bull house and the single storey range. Information on the location of the historic nook within the bull house has not been provided, and it is difficult to tell whether this significant historic feature would be affected by the proposed opening.
5. There are other concerns with the proposal to create an opening between the bull house and the single storey range. This proposal would not only lead to a loss of historic fabric, but also an alteration to the historic plan form; in effect combining one distinct section of the building with another. This change would impact on the significance of the listed building.
6. The proposal to relocate the wall opening in the bull house as well as alter the dimensions of the door, are further interventions in the fabric of this historic building.
7. The area which is identified as 'decayed timber cladding' in the 'existing' drawing has been reduced, and, in the 'proposed' drawing it states that this timber cladding will be reused where possible. The listing for this building refers in particular to the plank boarding (or cladding) at the front of this building as a 'rare survival' and as such it is of particular significance. Proposals that compromise, rather than conserve what remains of this boarding, cannot be supported.
8. It is not just what is being altered, removed or rebuilt in this application that is of concern, some of the proposed modern additions, in particular the glazed doors, are also inappropriate. Their overtly domestic appearance is out of character with the historic agricultural nature of this property.
9. The proposed insertion of five roof lights would also not be supported. New openings in historic farm buildings detract from the agricultural heritage of these historic buildings, and should be avoided; as such the insertion of five roof lights in what is a very modest structure is unjustified.
10. No details of flues, vents, SVPs or any damp treatments have been provided. These are all details which you would associate with a conversion and which could lead to further interventions in the historic building.

5.0 | Heritage Impact

5.2 | Impact of the Proposals In Response to the Conservation Officer's Comments

The below provides a narrative of how the above comments have been addressed in these proposals:

1. It is not proposed to modify the tie beams but to lower the floor in order to ensure there is enough headroom clearance to ensure it is possible to walk underneath the trusses.
2. As discussed above, the trusses do need to be levelled in order to ensure that the building is structurally sound, can be re-roofed and are high enough that it is possible to create an entrance in the main part of the barn.
3. It is proposed to retain the timber from the screen and reuse it in the proposed screen between the bootroom and main space. This ensures the fabric is retained with the building.
4. A more detailed survey was undertaken as part of this application, this shows the position of the nook in the bull house. In these proposals the opening between the two spaces is located further along the wall in order to ensure that the historic nook is retained and unaltered.
5. An opening is required to be made between these two spaces in order for the building to function as a single dwelling. This opening has been limited to a single doorway width with angled reveals to give the opening an agricultural, rather suburban, character.
6. It is proposed to retain the opening as existing and to raise the lintel over the door to match the higher lintel retained internally.
7. It is proposed to retain the maximum amount of the timber cladding to ensure the integrity of this significant feature is preserved.
8. The proposed design of the glazing in this application is minimal and contemporary, ensuring the design of the front elevation feels more agricultural in character and not suburban.
9. 5 rooflights are proposed in this application, the rooflights have been carefully positioned to avoid the existing purlins ensuring that their installation does not disturb the historic roof structure.
10. The service strategy for the building has been discussed in item 7 of section 4.1

6.0 | Other Considerations

6.1 | Landscaping & Trees

The front of the barn will be re-landscaped to form a private courtyard. To the rear, the applicant is in negotiations with the neighbouring property to purchase a small section of garden to act as a back patio. Both of these areas will be predominantly hard landscaping to reflect the agricultural setting of the barn.

6.2 | Amenity of Neighbouring Properties

The glass door facing the rear will not be required to be frosted, as in the approved scheme, due to the fact that the rear garden is now under the same ownership as the barn. Therefore, there is no impact on the amenity of the adjacent building.

6.3 | Access & Parking

There is no change to the access as a result of the proposals. Two parking spaces will be provided in the courtyard for the barn as per the approved scheme.

7.0 | Conclusion

This application is for the conversion of the barn to the rear of porch cottage into a two bedroomed house. The principle of conversion has already been established by the previously approved application, however this application was approved at committee as the conservation officer had raised a number of objections to the scheme.

This application proposes a new design which seeks to improve on the layout, materiality and detailing of the previous application and preserve more of the historic features of the barn. The new design also addresses several of the conservation officer's comments and provides more detail on the service & structural strategies as well as the bat mitigation strategy. In addition, it is proposed to retain a number of key features and areas of historic fabric. These are summarised below:

- It is proposed to retain the roof structure and “right it” by inserting padstones along the front elevation.
- It is proposed to reuse historic materials, such as the timber from the internal partitions, and re-purpose in the project
- It is proposed to retain the nook in the bull pen and relocate the opening between the two sides of the barn to limit harm to historic features
- It is proposed to retain as much historic fabric as possible, particularly the timber cladding on the front elevation
- It is proposed to leave the existing openings on the front elevation
- It is proposed to use contemporary glazing on the front elevation to ensure this elevation retains its agricultural feel and is not domesticated
- The services and thermal performance of the building have been carefully considered to minimise impact on the building.

The conservation officer acknowledged in their report that the barn would benefit from some “positive intervention” in order to ensure it is maintained and preserved. It is argued that there is less impact to the historic building fabric, when compared with the approved scheme, as a result of this revised application and therefore we so no reason while it should not be supported.

8.0 | Appendix A : Structural Survey

Structural Survey Summary of Findings by Mann Williams

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4. All dimensions to be checked on site and any discrepancies reported to the engineer before work commences.
5. Only figures in calculated dimensions should be used and no drawings, in any format should be scaled.

This drawing has been produced for discussion only

REV	DESCRIPTION	BY	DATE
P1	Preliminary	NL	2.11.20

P-PRELIMINARY
 PROJECT
Porch Cottage
Little Rissington

TITLE
Structural Survey
Summary of Findings
Ground Floor



DRAWN	CHKD	SIZE	SCALE	DATE
NL	A3	NTS		Oct 20

STATUS
Preliminary

PROJECT	DRAWING	REV
10605	01	P1

First floor beam heavily decayed and cracked; inadequate for first floor loading. Replace beam or retained and strengthen

This section of rear elevation has a significant inwards bulge, where the ground externally is at its highest. Rebuild approximately 4m length of wall.

Rear elevation over this length appears to lean out slightly, but not significantly. No remedial works necessary. External elevation requires local masonry consolidation

Local crack stitching/repointing required due to voiding and cracking



Local cracking requiring stitching and repointing on these two walls

Timber lintels require further investigation; decay evident. Possible replacement

This section of front wall bows outwards heavily; local rebuild required.

Slight lean of elevation.

The addition of a first floor structure would maximise the amount of masonry that could be retained if detailed to provide significant lateral restraint

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REV	DESCRIPTION	BY	DATE
P1	Preliminary	NL	2.11.20

P-PRELIMINARY
PROJECT
T-TENDER
CONSTRUCTION
**Porch Cottage
Little Rissington**

TITLE
**Structural Survey
Summary of Findings
Roof Structure**



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PROJECT	10605
DRAWING	02
REV	P1

Roof Structure

- Roof is severely dished due to inadequate purlins deflecting
- Purlins are very irregular, one purlin has been replaced with a purlin of inadequate size
- Roof has inadequate resistance to thrust, ad-hoc ties have been added to resist lateral eaves movement. Ties shown in pink.
- Strengthening required, possibly via small steel sections alongside existing retained purlins
- Insertion of ridge beam would enable later ties to be removed, creating an open roof space
- Rafters appear to be sound, although some rafter end repairs likely to be required



- Trusses lean heavily towards the front elevation - possible removal of saddle stones/brick plinths under the truss support posts? Consider jacking up trusses carefully or dismantling and re-erecting.
- Two outer trusses appear to be sound; the central truss has decayed timber tie and principal rafter shows decay and voiding. Repairs required to both possibly with steel face plates. Alternatively the principal could be replaced if acceptable.
- Purlins have local pockets of timber decay, some require strengthening, but in general appear to be sound.
- Roof structure appears to be adequate for an increase in roof loading from clay tiles or slate.
- Rafters appear to be sound, but some missing. Local rafter end repairs likely to be required

Gable wall at high level would benefit from additional restraint due to slight lean; tidy up purlin bearings and consider adding strapping.

General - purlin bearings poorly built in, pack and consolidate masonry