

DESIGN, ACCESS & HERITAGE STATEMENT

The repair of the existing farm building at Carrowbrough Farm.



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On behalf of: George Benson

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Title page images

Top, view northward with the farmhouse and byre. Left, view from southeast towards the eastern gable of the Byre. Right, view from north to the north elevation of the Byre.

Introduction

Carrowbrough Farm is a remote farm 70 meters south of Hadrian's Wall, within the parish of Newbrough, Northumberland. The farm is within the Northumberland National Park, and is within the Hadrian's Wall World Heritage Site Buffer Zone, to the west, north and south is the Hadrian's Wall and vallum Scheduled Monument. The house was listed (Grade II) in 1985, the listing notes that the farm buildings to the east are not of interest. It is considered that the byre is curtilage listed. It is owned by Mr. George Benson.

The farm buildings at Carrowbrough consists byre block constructed in traditional stone built single as a single storey building with a corrugated asbestos sheet roof, they range in date from the 18th Century.

The buildings are in use as part of the on-going farming operation on the site, seasonally being used for livestock, and as storage. The condition of the buildings is limiting its use for anything other than occasional storage.

The buildings have been identified for restoration work, which is to be part funded by Defra's Countryside Stewardship scheme, administered by Natural England.

Doonan Architects Ltd has been asked to prepare a Management Plan for the repair of these listed farm buildings, the purpose of the plan is to identify the works necessary to bring them back into a state of good repair, so they can continue to be used as part of the farming operation.

Tenders have been sought and the next phase of the grant, which is still to be agreed, is the delivery phase, i.e. to undertake the repairs on site. However, in order for the project to be assessed for the next phase of the grant, listed building approval for the repairs is required.

Description

Carrowbrough Farm house is thought to be dated around the 17th Century, during a time when the region was very unsettled due to its proximity with the border with Scotland and many buildings of this period were constructed with defence in mind. Many areas became deserted. Following this period, more peaceful times meant that it became easier to settle and conduct farming activities without fear of attack. During these more settled times there was a gradual occupation of these areas as the large areas of common were being enclosed at the end of the 18th Century, with commoners being awarded parcels of land in exchange for permanent settlement of these areas and improvement of the pastures.

The stone farm building at Carrowbrough was built during this more peaceful period, it is thought that the building was not the footprint of that which stands today. The northern portion of the byre is thought to be original with its southern extension probably made in the early 19th century, to provide a series of open hemmels or sheds, with their openings being walled up later in the century and a central doorway substituted, along with a pitching door in the eastern gable. Subsequent alterations are thought to have been made over time, notably the original form and construction of the roof.

The farm continued to develop, with a dutch barn appearing on the 1895 OS map, no longer present the barn adjoined the byre.

A full description and statement of significance is in Peter Ryder's Historic Building's Assessment, which is included with the application.

Listed Building Status & Significance

Carrowbrough Farm stands on a south facing slope approximately 70 meters south of Hadrian's Wall, 700 meters of the Roman fort of Carrawough or Brocalita. To the south of the farm is Newbrough, and it sits within the parish of Newbrough to the south of the B6318 (Military Road) which runs immediately to the south of Hadrian's Wall. The farm is within the Northumberland National Park, and is within the Hadrian's Wall World Heritage Site Buffer Zone, to the west, north and south is the Hadrian's Wall and vallum Scheduled Monument.

The house was listed (Grade II) in 1985, the listing notes that the farm buildings to the east are not of interest. It is considered that the byre is curtilage listed.

Listing description:

'House, late C17, altered C19. Rubble with stone dressings, much taken from Roman Wall nearby; slate roof with stone copings and kneelers, ashlar corniced stacks. T-plan with rear wing; side extensions. 2 storeys. Main 2-bay house and lower irregular right part. One-storey projecting gabled porches at left of each section. Early C19 sash windows, lost bars, with tooled lintels and sills but retaining earlier jambs (except for 1st floor left). C19 chamfered surrounds to doors in porches and to pitching door in right part. Small C17 window in left return of left porch; some C17 masonry in C20 lean-to garage at far left. C17 windows, some 2-light with mullions and some altered, in rear wing.

Interior shows old beams on ground floor; and Roman sculpture, said to be of Sun god, in passage wall.

Farm buildings further to right are not of interest.'

Proposed Works

The buildings have been subject to a thorough condition inspection, which has been undertaken by Tristan Spicer AABC of Doonan Architects. The condition of the buildings is detailed in the attached condition report. The report includes the following:-

Building: (i.e. farm building.)

Element: (i.e. roof coverings, rainwater goods, roof structure, walls, floors, joinery etc.)

Location of the defect: (i.e. orientation, elevation, and number linked to an identification plan.)

Photograph of the defect: (to ensure it is easily identified.)

Description of the defect: (a brief description and possible cause of the defect.)

Recommended proposed repair: (this is based upon a sound conservation approach to ensure the original character is maintained and to ensure the repair is carried out in a traditional manner using traditional materials, but is sufficient to secure the building and reduce the maintenance burden into the future.)

Quantity: (i.e. such as the area of repointing, or the number of slates to replace etc.)

Priority: (The repairs identified will be categorised in accordance with BS 7913:1988 'Guide to the principles of the conservation of historic buildings' into immediate (1-2 years), necessary (2-5 years) and desirable (5-10 years)).

Specification Reference: This refers to a specification for the various repairs. A copy of the specification document is included with the application.

Cost: (Our estimated cost of each repair element for budgetary purposes.)

The repairs are to be undertaken on a 'like for like' basis, however in a few instances the repairs will require alterations beyond a simple repair, for example the introduction of stainless steel bars across cracks, such a repair enables more of the original stonework to be retained by avoiding rebuilding large sections of masonry. However, there are areas beyond the scope of the insertion of reinforcement bars and these areas will require rebuilding. In addition, the corrugated sheet roofing is non-traditional and as asbestos can't be repaired it is therefore proposed this is replaced with slate to match the farmhouse.

In summary the repairs are as follows:-

1. ROOFS

In the past the roof has been recovered with asbestos sheeting along with some clear sheets. Whilst this is generally intact there are broken sections particularly to the northern elevation, there are missing sections of verge and a build-up of vegetation. The sheeting is nearing the end of its useful life and as an asbestos sheet it can't be repaired and the broken sheets represent a health hazard. It is therefore proposed this covering is removed to enable a new covering to be installed. It is proposed this is replaced with natural slate to match the existing farmhouse.

The rafters are often lost when replaced with sheet roof covering as it spans across purlins rather than purlins, however in this instance the original rafter are still in existence. There is distortion to some of these original timbers so they may require some packing up to properly support the battens for a new slate roof. The use of slate is appropriate given the adjacent farm house is entirely natural slate.

The roof structure, which has retained the rafters is generally okay. However, a few rafters ends are rotten and will require cutting out and renewal. The wall plate is missing in places, however once the wall heads are consolidated and rebuilt new sections of wall plate will be inserted to secure the rafter ends to the wall heads. There is evidence of woodworm in all of the timber roofs, although it does not appear to be extensive. It is unclear as to whether this is active or not. However it is proposed the roofs are sprayed with a suitable bat friendly insecticide to prevent any further woodworm.

2. RAINWATER GOODS

There are only remnants left of the original cast guttering and down pipes. The lack of guttering has prevented the effective removal of rainwater from the roof. This has allowed water to run down the face of the stonework that has washed out and caused decay of the mortar, which in turn has led to the displacement and structural deterioration of the walls. In addition, the water has been allowed to discharge into the ground at the base of the walls, causing softening of the ground and displacement of the walls.

In order to have efficient rainwater removal from the roofs new deep flow cast gutter with cast guttering is proposed. To ensure the water is removed from the bases of the walls the downcomers will discharge into a new gulley with underground pipework to a soakaway to the south. To the northern elevation which faces Hadrian's Wall the pipe can be installed and covered by extending a concrete

step and then discharge to the grassed paddock area without the need for excavation towards the Vallum and the pipework will remain outside of the schedule monument area of Hadrian's Wall.



Southern elevation: Note the corroded and ineffective rainwater goods, the masonry panels of differing condition. Northern Elevation. Note the lack of guttering, and the poor condition of the door.

3. WALLS

The walls are generally in a poor condition suffering from a combination of movement and cracking. The mortar is friable, cracked and missing in places. As with many stone rubble buildings of this age the repairs will include deep tamping and repointing. This improves the structural integrity of the walls together with improving the resistance to water penetration, therefore reducing the agents of decay, i.e. freeze/thaw and the crystallisation of salts as a result on on-going wetting and drying.

However, at Carrowbrough the walls will require more intervention to ensure they remain stable. There are a number of areas that have been subject to cracking. In order to reduce the amount of rebuilding it is proposed stainless steel stitches are introduced within the joints to reinforce these areas. This is a common technique which allows the masonry to remain in place rather than be rebuilt to improve the structural integrity of a cracked wall. However there are areas that have moved to such an extent that rebuilding is the only course of action, this is particularly to the east and southern elevations.

The northern wall is suffering from water penetration where the corrugated roofing is broken at the eaves. The wall has been repointed in places, however this has been undertaken with a cement based mortar, which is not suitable. There is some cracking towards the eastern corner. This wall will require a programme of removal of the cement pointing as this is detrimental to the long term condition of the stone, deep tamping and structural stitching across the cracks.

The east wall also has loose friable and cracked mortar. There are cracks at both the northern and southern ends of this wall. The northern end can be stitched while the southern will require rebuilding. There is a section to the north which has numerous cracks that will also require rebuilding.

There are loose stones along the verge which will require building up to the underside of the roof.



Eastern elevation: Note large crack indicating movement on the southern wall.

Southern elevation: Note the panels of masonry with washed out and missing mortar joints, and missing stone.

The southern wall consists of a number of piers that are connected with larger timber eaves beams/lintels, some of which are rotten. Beneath these the former openings have been blocked up with stone. This has left the wall as a series of unconnected panels that have been prone to displacement and movement as a result washed out joints and the wetting of the ground causing movement in the wall. A programme of renewing the timbers, rebuilding some of the panels, repointing and deep tamping will be required, together with tying the panels to the piers to ensure the wall is acting together will improve its structural integrity.

The mortar used in the repairs will be a naturally hydraulic lime with a sharp sand, in a 1:3 ratio. Samples will be prepared so the mix and application can be approved. The new mortar is to match the existing as closely as possible.

4. FLOORS

There is little works proposed to the floor as this appears to be mainly in situ modern concrete slabs. The only works being clearance of debris to improve the usefulness of the building.

5. WINDOWS, DOORS AND JOINERY

Given the water penetration into the walls and lack of protection from the rain offered by guttering the windows and doors are generally in a very poor state with rotten timbers, missing and broken glass and vents, and have been subject to numerous patch repairs over the years. As they are in such poor condition they are beyond feasible repair and therefore it is proposed these are renewed on a 'like for like' basis. They will follow the existing fenestration patterns of the traditional barn venting windows. The glass will be single glazed and secured with putty. The doors will be vertical boarded ledge and braced doors to match those existing doors. Whilst new doors are proposed, existing ironmongery will be stripped from the rotten doors and reused where possible. It is proposed Accoya timber is used in the fabrication of the new windows and doors as this treated timber has significant protection from rot.



East elevation: Note displaced boards and poor condition of the door.



Southern Elevation. Note repairs to the traditional venting window with low level ventilation slats, partially missing.

In summary, the repairs and alterations proposed will bring the building back into a state of good repair, they will improve the building's usefulness, encourage use and therefore promote maintenance which will improve the long term prospects of the building. The alterations are sympathetic using traditional materials to match the existing, as such will have an enhanced visual impact as the asbestos sheet roof is replaced. It is considered the repairs works do not harm the building. Indeed the repairs will be a positive enhancement to the building, which are currently in need of repair.

Design and Access

USE

The buildings are used as part of the farming operation. Given their poor condition their use is limited, however this will be improved by the works

AMOUNT

The works to the buildings will be maintained within the existing volume of the buildings. No new space is proposed.

LAYOUT

The works are to existing buildings, the form of which will not be changed by the repairs.

SCALE

The building range is scaled from single storey byres to two story byres. No additional space is to be created.

LANDSCAPE

The surfaces around the buildings will be maintained.

APPEARANCE

There are no significant changes to the buildings, only repairs carried out to the existing buildings. New doors are proposed but these are to match the existing.

ACCESS

Access to the site will be unchanged.

ECOLOGY

Emergence Bat and Barn Owl Surveys have been undertaken. Refer to Ruth Hadden's Report.

Although no bats were identified on the emergence survey it did identify Pipistrelle 45kHz, Pipistrelle 55kHz and Noctule bats foraging or commuting nearby.

The first survey identified a barn owl emerging from through the byre from the west end and exiting out of the east gable, flying to the south. On closer inspection of the building pellets and bird lime with a number of feathers were present

throughout the building. It is considered that there may be a cavity present adjoining the farmhouse providing a suitable nesting place for the owl. Also present was Jackdaw nesting material. The ecologists report identifies where barn owl access, boxes and cavities will be provided and maintained.

The proposals will affect the roof as the asbestos sheeting is to be removed, and timbers replaced/ repaired where appropriate. The timing of these destructive works is important to ensure that bat hibernation periods and breeding barn owls are avoided.

Stonework repairs and reconstruction works are proposed to the north, west and east walls. The timing of proposals is key to ensure that hibernating bats are not disturbed, additionally a method statement will be issued to contractors to ensure they adhere to the mitigation and procedures outlined in the ecologists report.

In addition, a number of mitigation measures will also be implemented, which include:-

- Further survey in May to confirm whether there is Barn Owl breeding on site.
- Any bird nests are to be left until nestlings have fledged.
- A pre-commencement barn owl check.
- The installation of a barn owl box.
- Avoid the bird nesting season (i.e. April to August)
- Sensitive timing of destructive works (removal of roof coverings) in autumn to avoid hibernating bats and possible breeding barn owls.
- Provide Method Statement to contractors.
- Advice given for the safe removal of any bats found from harm during the restoration.
- Any bird nest located to be left in-situ until the nestlings have fledged.
- Provision will be made for bats and access retained for barn owls.