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## SUMMARY

The barn surveyed at Hayrigg Farm, Pelutho comprised of three units: a cart shed, cow shed, and byre with dovecote. The barn was architecturally plain, constructed from local red sandstone and displaying few if any architectural embellishments that characterised vernacular style and consequently period.

Based on map regression, the extant building appears to be similar in plan to the structure recorded on the 1868 Ordnance Survey map.

Although the building is plain, its close association with a far larger adjacent barn, (probably used as a corn mill and constructed in 1853), suggests it was part of a suite of agricultural buildings in use by the mid-19<sup>th</sup> century.

## 1 INTRODUCTION

### 1.1 Project origins

The proposed scheme of improvement advocated by the client has the potential to affect the character and appearance of a building of special architectural and historic interest. Renovation will affect the character and appearance of the building and as a result, a programme of archaeological building recording has been initiated by the contractor prior to the amendments taking place.

In order to ascertain the historical and archaeological merits of the study building affected by this development, the contractor investigated known historical records through a rapid desk-based assessment and the survival of extant buildings via a programme of building recording equivalent to Level 2 as described by English Heritage: *Understanding Historic Buildings; A Guide to Good Recording Practice, 2006*.

The study building was located at NY 12579 50653 and is part of planning application 2/12/0083.

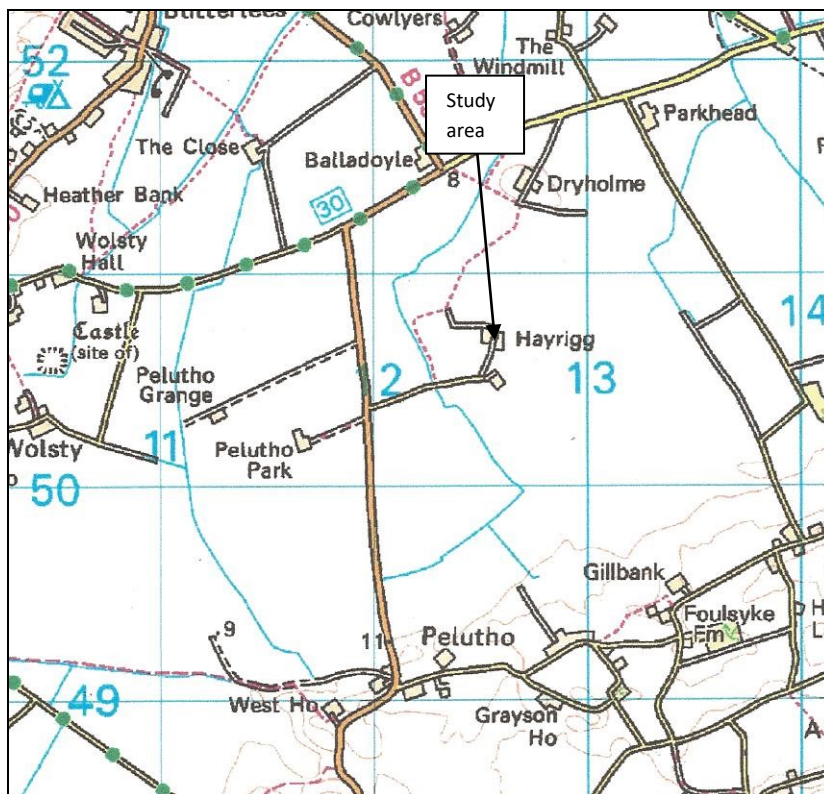


Figure 1. Location of survey. (OS copyright licence no. 100044205).

The desk-based assessment included visits to Carlisle Library and Cumbria Record Office, Carlisle. The objective of this exercise was to collate sufficient detail to identify the issues and potential for academic research and provide a historical context for targeted archaeological enquiry.

## 2 METHODOLOGY

### 2.1 Project Design

Gerry Martin Associates Ltd proposed a project design for the archaeological recording of an extant barn. This proposal outlined the contractors' professional suitability, a brief historical summary of the

study area, general objectives required of the project, the methodology and the resources needed for the successful implementation of this work.

Gerry Martin Associates Ltd was commissioned to undertake the desk-based assessment and an archaeological building survey by the client Mr Paul Sharp.

The following report has been assembled to the relevant standards and protocols of the Institute of Archaeologists, combined with accepted best practice and in accordance with the brief prepared by the client.

Fieldwork took place on July 31<sup>st</sup> 2013.

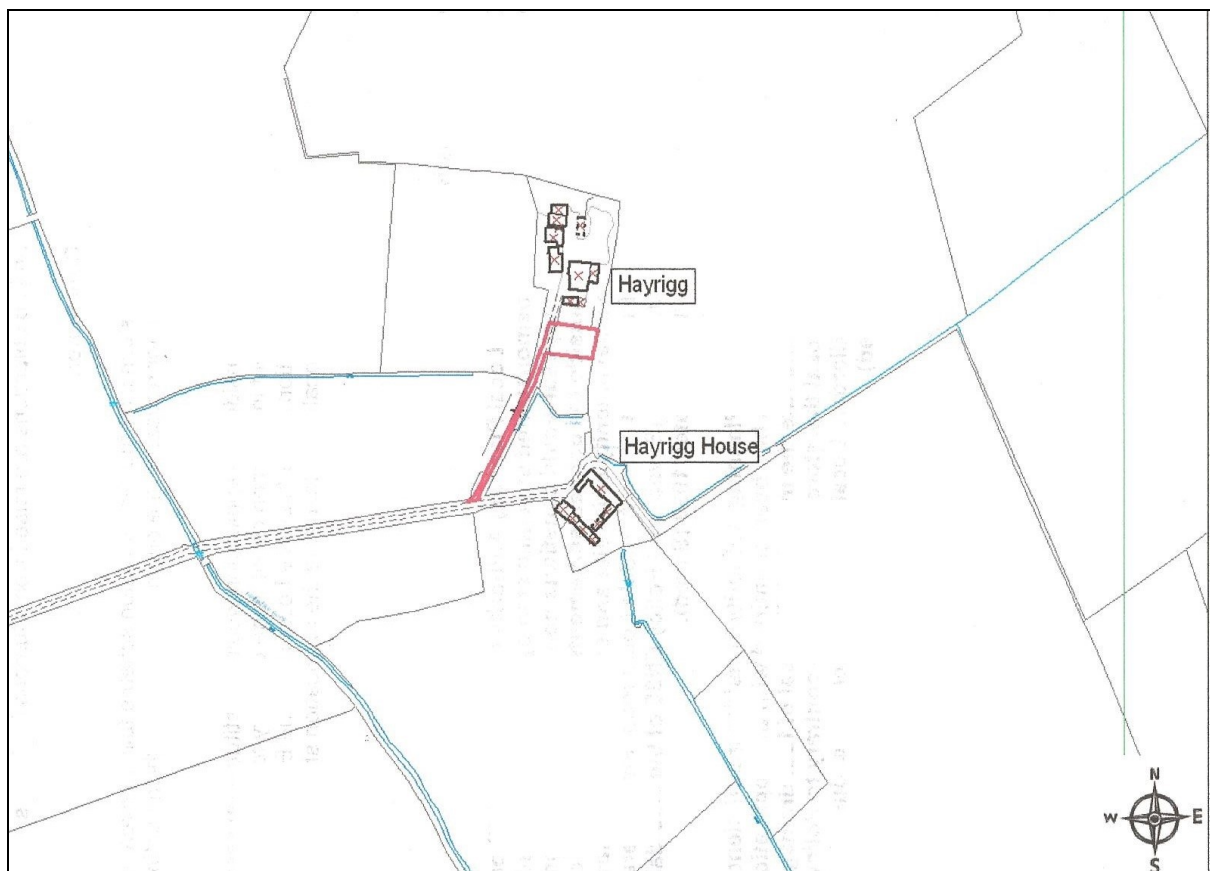


Figure 2. Location of study building (OS copyright licence no. 100044205).

## 2.2 Desk-based assessment

In accordance with the Brief, the rapid desk-based assessment investigated primary and secondary historical sources, maps and other literature in order to set the survey results into their past cultural, historical and topographic context.

The desk-based assessment comprised a search of three primary archival repositories.

- Carlisle Library provided sources for published works including newspaper articles, archaeological and antiquarian reports, photographs and journals.

- Cumbria Record Office, Carlisle was sought for details of landowners, occupiers and cartographic evidence.
- The Historic Environment Record, online, provided the Sites and Monuments Record describing previous archaeological reconnaissance and through electronic media showing the spatial distribution of these discoveries.

### **2.3 Archive**

The archive has been compiled in accordance with the project design and the guidelines set out by English Heritage (1991, 1996, 2006 and 2008) and the Institute of Archaeologists (2001).

The archive will be deposited with an appropriate repository, Tullie House, Carlisle and two copies of the report donated to the County Sites and Monuments Record, as is standard practice in Cumbria.

### **2.4 Walk-over survey**

A walkover of the study area on July 31<sup>st</sup> 2013 did not suggest any upstanding monuments such as derelict buildings, walls or tofts existed. The eastern part of the study building illustrated on the first edition Ordnance Survey map of 1868 had been removed during the 20<sup>th</sup> century.

## **3 BACKGROUND**

### **3.1 Location, topography and geology**

The site (NGR 12579 50653) lies within a low-lying area approximately 8.00m in height and roughly three kilometres from the sea directly to the north at Silloth

Land use is notable for a high propensity of deep ditches (approximately 2.00m deep) forming a series of rectangular plan fields used for both arable and pastoral farming. Within the sub-soil (Type: Clifton and Brickfield Association), is considerable evidence for inundation by flooding, a problem that is still present (pers comm. with a local farmer). This flood deposit develops into a series of interleaved pink and grey clays and alluvial sands that develops into a Devensian Till forming gentle low undulating ridges intersected by a predominantly northwest-southeast drainage system (Railton 2009, 11).

The underlying solid geology comprises Stanwix Shale.

## **4 HISTORICAL CONTEXT**

### **4.1 Historical background**

The earliest reference to the study area was the enclosure map of 1814 (QRE/1/148). The map is not to scale but the study area appears to be unoccupied (figure 3).

A track to the later Hayrigg Farm is illustrated on the map traversing the field owned by Edward Stephenson, an exceptionally large field for the pre-industrial period measuring 185 acres.

The study area lies within an L-shaped field owned by Eleanor Jolliffe measuring 199 acres and two roods, once more a very large unit by contemporary standards and far larger than the surrounding parcels of land.

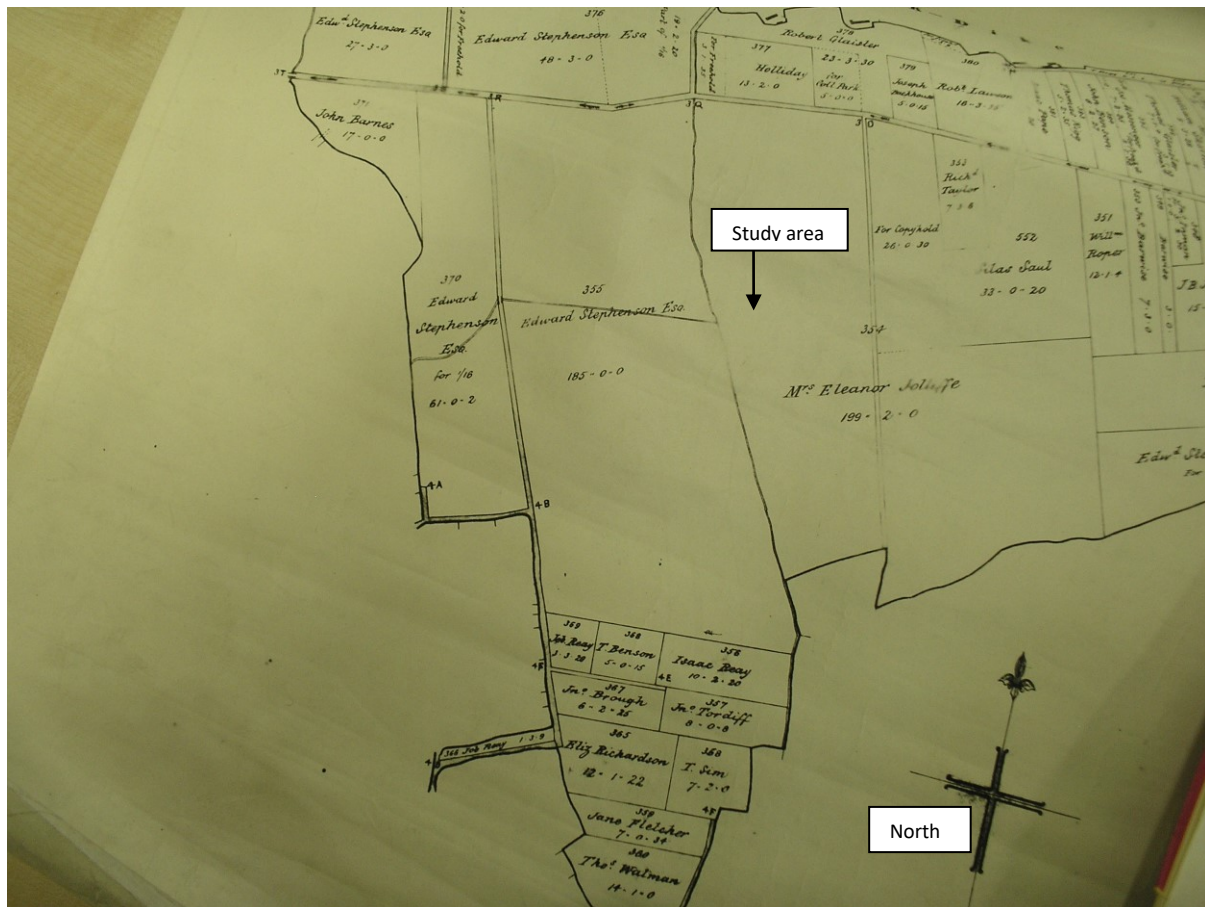


Figure 3. Enclosure map of 1814 QRE/1/148

Following enclosure, two large units were established at this location; Hayrigg Hall just to the south and Hayrigg Farm (figure 4).

Whilst Hayrigg Hall did not evolve significantly in a spatial sense, Hayrigg Farm and its environs underwent rapid change.

Hayrigg Farm is described on the First Edition Ordnance Survey map as Hayrigg Mill producing corn. It is listed in the Historic Environment Record as SMR entry 10130, documentary evidence for a Post-Medieval mill.

A large, rectangular plan, open building constructed from red sandstone was introduced in 1853 (figure 5) that probably served as a corn mill replacing a curiously triangular-shaped building illustrated on the tithe map (figure 4).

This building possessed a date-stone engraved 1853 and consisted of neatly dressed sandstone blocks, partly cement-rendered for weather-proofing. This building is depicted on the 1868 Ordnance Survey map (figure 6).





Figure 4. Tithe map of 1850 DRC/8/93/2 showing the study building



Figure 5. Probable corn mill built in 1853



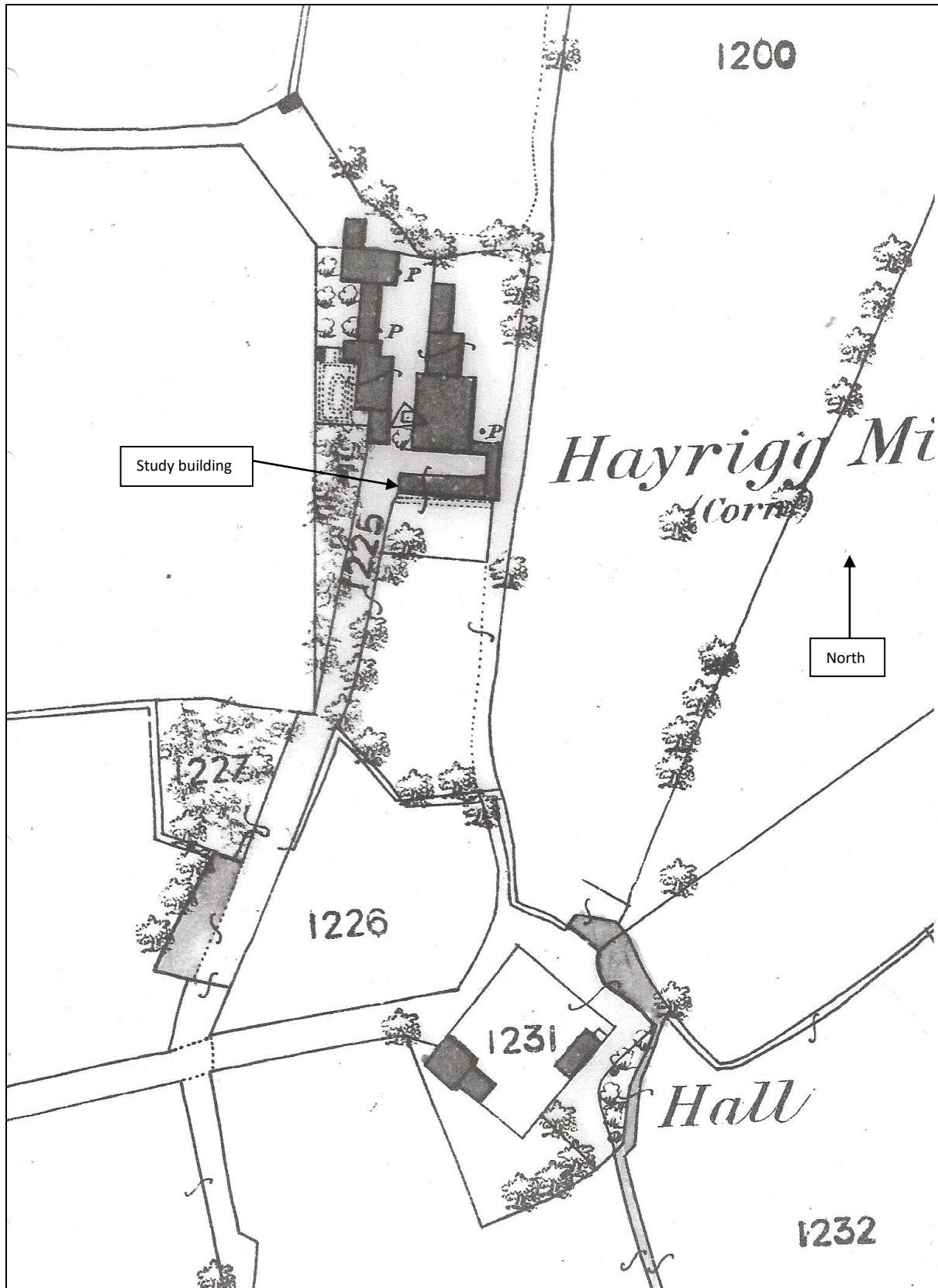


Figure 6. Location of the study building on the First Edition Ordnance Survey map 1868

## 5. SURVEY RESULTS

### 5.1 Methodology

The buildings in the study area were surveyed on July 31<sup>st</sup> 2013 by Gerry Martin with the use of tapes, a Laser Distance Measurement device and hand-held GPS equipment.

The buildings were fully accessible, although natural light was restricted within the study building, requiring occasional flash photography.

The survey comprised of scaled photographic recording of the interiors and elevations of all the buildings, with detailed photography of any worthy architectural elements.

Notations were undertaken regarding the characteristics of these farm buildings, including metrical data, thresholds, materials and building techniques employed.

The corpus of the report is formed from these notes and photographs.

The following report describes the study building that was divided into three units.

### 5.2 Ground floor internal lay-out

The stone barn (NY 40550 38525) was rectangular in plan, aligned east-west and measured 11.65m x 4.06m and consisted of three units: Cart shed, Cow shed and Byre with Dovecote (figure 7).

The building stood to a wall height of 4.50m, the roof being 6.00m in height comprising of Welsh slate with modern purlins and joists.

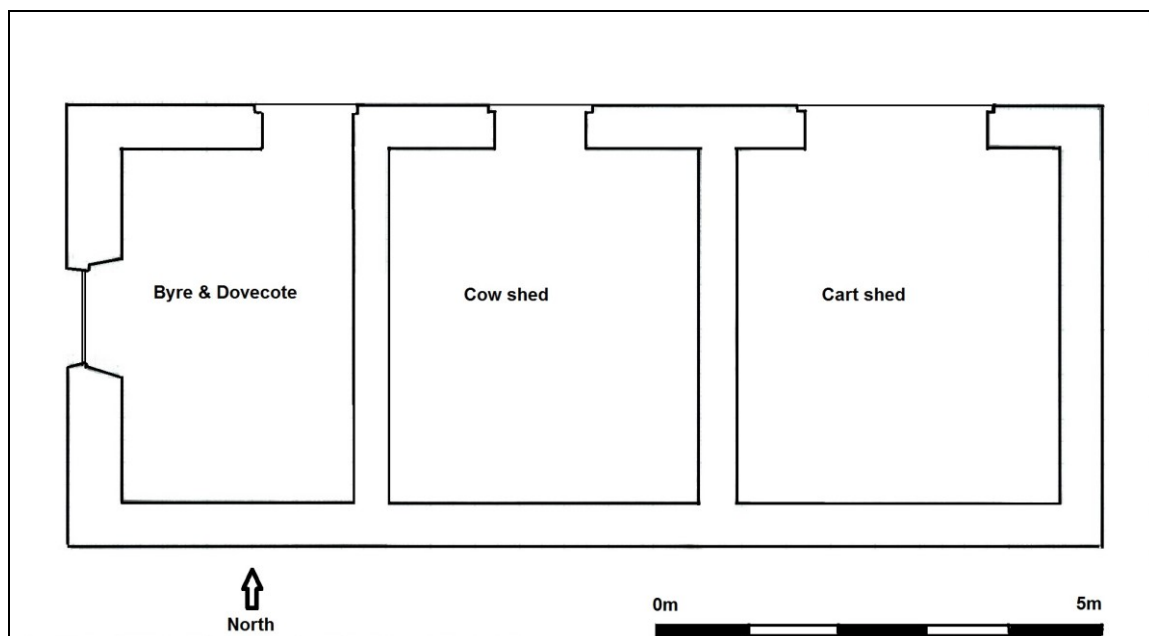


Figure 7. Floor plan of stone barn

*Cart shed*

The interior of the cart shed barn measured 3.64m x 4.06m and stood to a height of 5.77m to the apex of the hipped roof.

Former ceiling height had been 3.19m with walls 0.45m in thickness with rectangular recesses for ceiling joists.

The floor was concrete beneath decayed plaster.



Figure 8. Interior of the cart shed



Figure 9. Filled window (9)

The interior walls had been plastered but the plaster had been largely removed leaving a surface of dressed, rubble-stone bonded by a lime mortar (figure 8). The principal ingress was from the north through a large opening 2.20m in width.

On the southern wall was a filled window (9) measuring 1.20m x 1.20m possessing a decayed timber lintel with dressed red sandstone blocks forming the surround. The filled window was covered with cement render.

The eastern wall yielded a brick repair whilst the western wall possessed a chute that previously served a lost feeding trough.

A coarse rubble-stone partition wall between the cart shed and the cow shed stood to a height of 4.50m and formed a second floor above the cart shed. The partition wall was formed from dressed red sandstone rubble-stone and was overlain by coarse mortar with a lime whitewash.



### *Cow shed*

The interior of the cow shed measured 3.73m x 4.06m and stood to a height of 6.01m with walls 0.45m in thickness.

The cow shed possessed a concrete floor with a drinking trough in the south-west corner.

All the walls were lime-washed with two *ad hoc* cylindrical vents above the door and two *ad hoc* cylindrical vents to the west of the ingress.

Access to the dovecote was via a small first floor door (11) measuring 1.30m in height and 0.60m in width.

### *Byre and dovecote*

The interior of the byre and dovecote measured 2.70m x 4.00m and stood to a height of 5.96m with walls 0.45m in thickness finished with a lime plaster render and possessing a concrete floor.

The ground floor measured 2.30m in height separated from the first floor by a wooden floor with timber joists 0.20m in thickness.

The upper floor had bare sandstone walls painted white. The stonework was formed from regular dressed red sandstone blocks albeit of different sizes probably formed from two skins.

A series of stone offsets provided roosts for birds (figure 10) whilst an owl-hole (6) comprising of two ledges provided access for the birds (figure 11).



Figure 10. Roosts for birds



Figure 11. Owl-hole (6)

Within the upper storey was a defunct water tank.

### **5.3 Northern elevation**

The northern elevation (figure 12) measured 11.50m in length and was 5.50m in height and comprised of a single structural phase. It contained three rooms: the cart shed, the cow shed and the byre and dovecote. Both ends of the elevation were framed by red sandstone quoins.

Ad hoc interventions were two sets of air vents above door (2) and just before door (3).

The stonework forming the fabric comprised partially dressed red sandstone blocks, lain in concordant courses with neatly pointed lime mortar (figure 13).

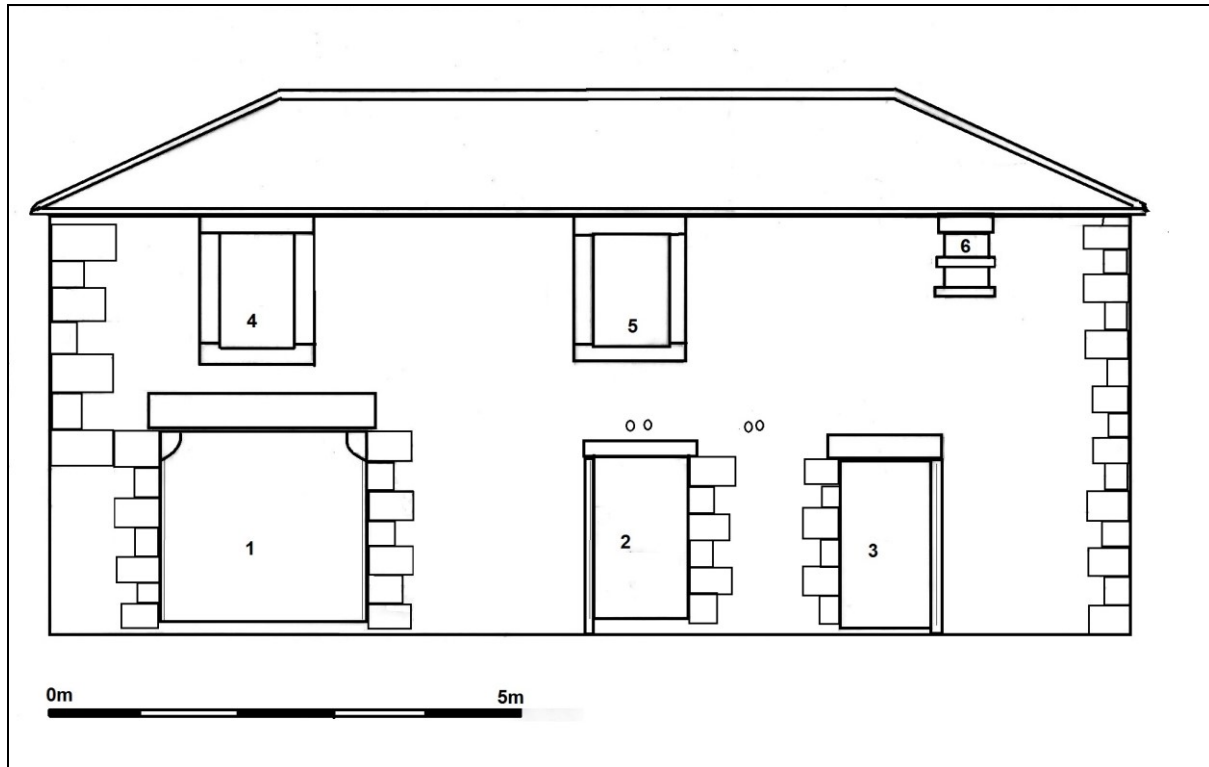


Figure 12. North elevation of subject building



Figure 13. Northern elevation of stone barn





Figure 14. Doorway (1)



Figure 15. Door (2)



Figure 16. Door (3)



Figure 17. Window (4)



Figure 18. Window (5)



Figure 19. Owl-hole (6)

Six architectural features were visible within the façade.

- A doorway (1) measuring 2.34m x 2.12m in height that provided the ingress into the cart shed. Lacking a door, it formerly held a double door with hinges on both sides of the door jamb that possessed a rebate 0.05m in width and 0.04m in depth. The doorway had two stone quadrants measuring 0.24m in radius and 0.30m in height located below a large stone lintel measuring 2.65m in length, 0.45m in height and 0.25m in thickness. A replacement

timber lintel was behind this feature. Framing the doorway were two sets of red sandstone quoins formed from blocks 0.65m x 0.34m x 0.30m in size (figure 14).

- A doorway (2) measuring 1.02m x 1.86m in height that provided the ingress into the cow shed (figure 16). Lacking a door, the feature possessed a red sandstone lintel measuring 1.39m x 0.40m x 0.25m and a door jamb with a rebate 0.05m in width and 0.05m in depth. The western jamb was formed from six stone quoins measuring 0.57m x 0.25m x 0.30m (figure 15).
- A door (3) measuring 1.00m x 1.85m in height complete with red sandstone lintel and complementing western red sandstone jamb 0.20m in thickness that serviced the byre. The eastern part of the jamb was formed from six stone quoins measuring 0.57m x 0.25m x 0.30m and bearing a slight rebate 0.02m in width and 0.05m in depth. The door consisted of a corrugated metal sheet (figure 16).
- Window (4) was 0.60m above door (1). No glazing was present within a window opening measuring 0.80m x 1.20m. The jamb and lintel were machine-sawn from red sandstone (figure 17).
- Window (5) was 1.05m above the lintel to door (2). No glazing was present within a window opening measuring 0.80m x 1.20m. The jamb and lintel were machine-sawn from red sandstone (figure 18).
- Owl-hole (6) measured 0.40m in width with two 0.25m deep apertures formed by two red sandstone ledges 0.80m in length and 0.08m in thickness (figure 19). This feature led into the dovecote above the byre.

#### 5.4 Western elevation

The western elevation measured 5.00m in width and 5.60m in height and was plain, finished in coarse red sandstone with flanking stone quoins (figure 20).

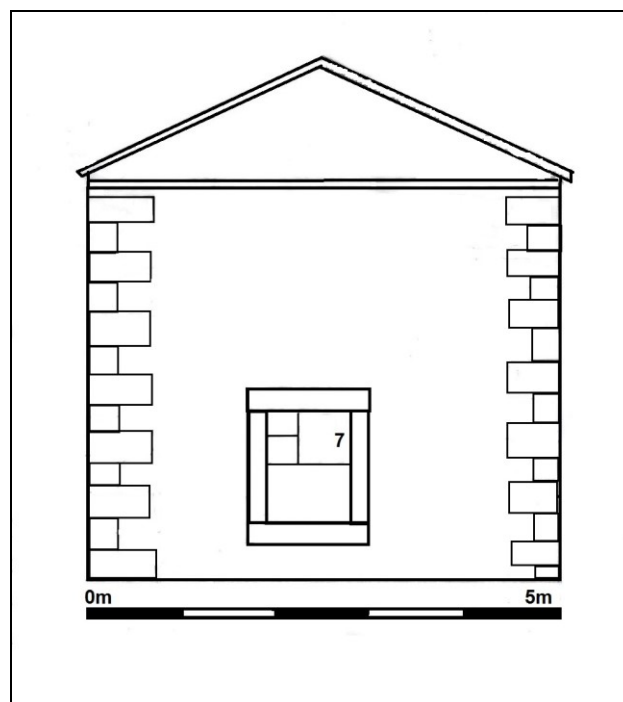


Figure 20. Western elevation



The walls comprised of small, concordant red sandstone blocks left with a coarse finish, bonded by limestone mortar. The southern end of the gable has a significant crack where the quoins met the stonework (figure 21).



Figure 21. West elevation of stone barn

A single architectural feature was visible within the façade.

- A window (7) measuring 0.85m x 1.25m in height possessing a red sandstone sill 0.12m in thickness and a red sandstone lintel 0.22m in thickness. Glazing had been broken and now only vestiges of the timber frame remains (figure 22).



Figure 22. Window (7)



Figure 23. Window (8)



## 5.5 Southern elevation

The southern elevation (figure 24) measured 11.70 in length and was 5.80m in height. It comprised of concordant, fairly neatly finished red sandstone blocks framed by larger red sandstone quoins at each end.

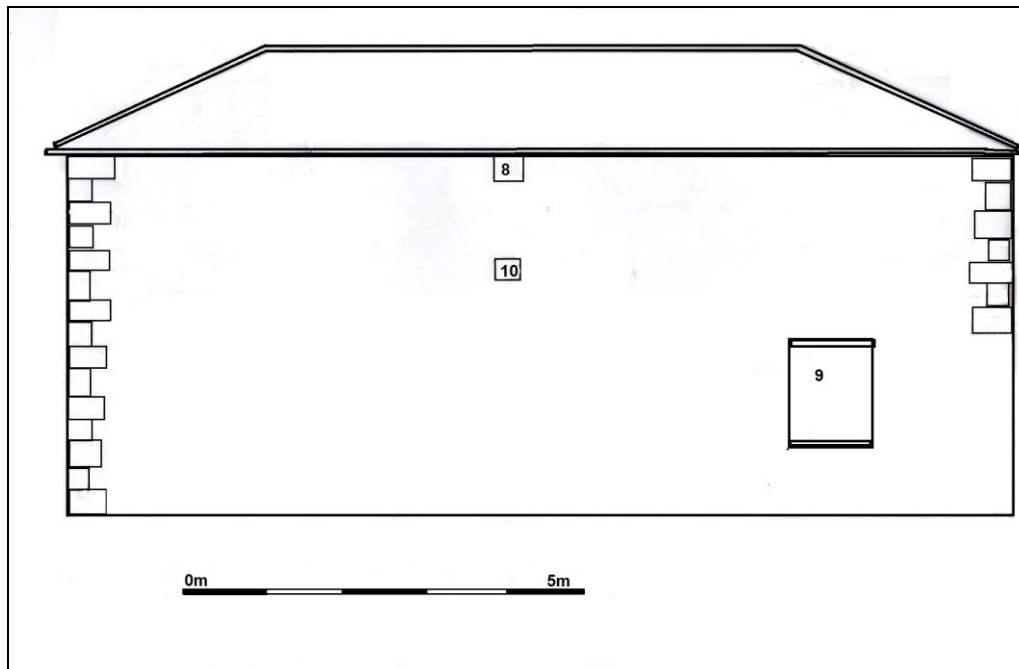


Figure 24. Southern elevation



Figure 25. Southern elevation of the barn

Three architectural features were visible within the façade (figure 25).

- A crude window (8) 0.60m in height and 0.40m in width servicing the former room above the cow shed (figure 23).
- A filled window (9) bearing a red sandstone lintel 1.20m x 0.10m and a sill 0.90m above the ground. This window serviced the ground floor to the cart shed (figure 26).
- A small *ad hoc* vent (10) measuring 0.30m in height and 0.15m in width servicing the cow shed (figure 25).

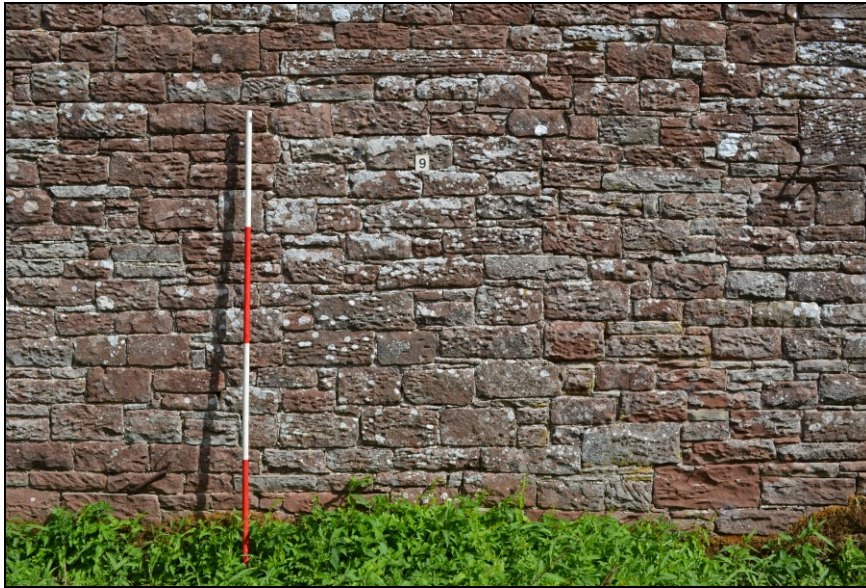


Figure 26. Filled window (9)

## 5.6 Eastern elevation

The eastern gable was formed from red sandstone rubble to form a wall 0.45m in thickness that measured 5.00m in width and stood to a height of 5.80m. The elevation was complemented by dressed sandstone quoins measuring between 0.30-0.60m in length and between 0.25-0.30m in thickness (figure 27).

A lean-to had been added to the eastern end of the barn (figure 28) comprising of a back wall 2.08m in height built from red sandstone blocks.

The joists belonging to the lean-to were still present, but the roofing fabric had been removed.

No architectural features were present within the elevation.



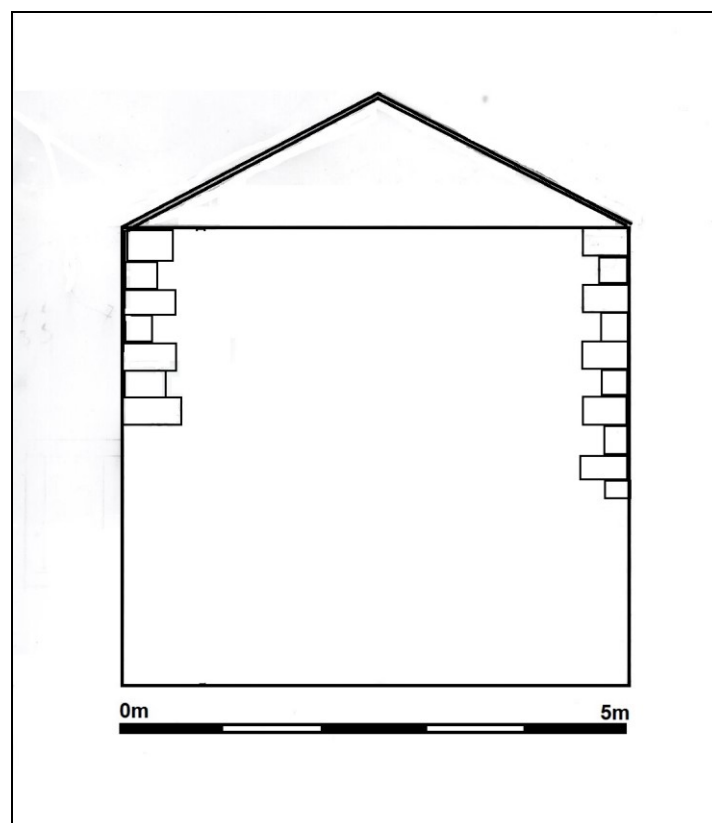


Figure 27. East elevation



Figure 28. Eastern elevation of stone barn

## 6. DISCUSSION

### 6.1 Academic merit

Past cultural settlement in Cumbria has been primarily rural, where agriculture has been the main economic driver and product. Increasingly, those features associated with past farming technique have been lost or converted for domestic use or for local tourism. Moreover, neglect has also contributed to a loss of building stock.

A challenge to historians, archaeologists and other researchers is to compile a record of those rural buildings and customs that reflected past agricultural practice and social conditions before their economic, agricultural and historic context is lost.

### 6.2 Discussion

The study building possessed very few architectural embellishments; primarily constructed for an agricultural purpose and probably serving as a store, small byre and dovecote with a loft for additional accommodation.

The stone barn was not illustrated on the 1850 Tithe Survey but is present on the 1868 Ordnance Survey map.

The lack of any chimney or hearths precludes use as a permanent dwelling, albeit the upper storey could have been utilised for seasonal, itinerant and casual labour.

There had been slight alterations to the use of the building during its lifetime, principally

1. The blocking of window (9) in order to provide greater security
2. Removal of the upper floor and its use as possible accommodation
3. Demise of the lean-to

The stone barn was almost certainly contemporary with a very large adjacent stone barn built in 1853 that probably served as a corn mill.

The suite of buildings at Hayrigg Farm indicates rapid commercialisation in agriculture during the mid-19<sup>th</sup> century.

In 1814, no farm existed in this location almost certainly because the wet, marshy conditions were unsuitable for sustained agricultural practice, the land possibly used as a common meadow. Improvements in drainage and increased demand meant that previously marginal land could be brought into production. The advantage of large fields (the study area was in a field encompassing 199 acres) also brought economies of scale especially at a time when many small Cumbrian farms could represent an area as little as 40 acres.

Development was enhanced by the effects of enclosure that rationalised farm holdings and scientific improvements in farming that lead to greater productivity and efficiency. This improvement was reflected in the farm buildings where simple forms developed into specialised structures,

culminating in designs of some ingenuity with architectural pretensions and at a considerable cost (Brunskill 2002, 95).

By the late 19<sup>th</sup> Century and during the 20<sup>th</sup> Century, Dutch barns, silage pits and on-site storage made specialised storage buildings superfluous.

Brunskill has identified three distinct phases of agricultural improvement:

- The second half of the 18<sup>th</sup> Century when demand increased from industrialising communities and transport improvements facilitated long distance trade
- The Napoleonic War 1793-1815, when there was nationally, a large rise in agricultural production and where protectionism maintained high prices
- 1815-1880 when increased mechanisation and scientific methods increased the efficiency of the Cumbrian farm (Brunskill 2002, 27-28)

The stone barn at Hayrigg Farm belongs to the third phase of agricultural improvement (1815-1880) used for adjunct services and temporary accommodation for farm labourers. Most probably the barn was constructed around 1853 due to the presence of an adjacent date-stone; its presence confirmed on the First Edition Ordnance Survey map (1868).

## 7 ARCHIVE

The archive for this project will be deposited with the appropriate curator, Tullie House, Carlisle. This archive has been assembled in accordance within the protocols of Management of Archaeological Projects (MAP2).

The report will be filed with the online *Oasis* archive of archaeological grey literature.

## 8 ACKNOWLEDGMENTS

I am grateful to Mr Paul Sharp for his assistance on the history of the barn and commissioning the work.

I would also like to thank the staff of Carlisle Library with my research into the local history of the area and the staff of Cumbria Record Office, Carlisle with the map regression and other documentary research.

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