HERON CORN MILL, BEETHAM,

CUMBRIA

Archaeological Watching Brief and Recording Survey

Oxford Archaeology North

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LAMBERT WALKER

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SUMMARY

A programme of repair and refurbishment of Grade II* Listed Heron Corn Mill, Beetham (NGR SD 49621 79969: Fig 1) is being undertaken by Lambert Walker on behalf of Alan Gardner Associates. Due to the historic significance of the site, Alan Gardner Associates asked Oxford Archaeology North (OA North) to undertake a site visit, watching brief and English Heritage building recording survey during the groundworks associated with the refurbishment. This was completed in accordance with standard OA North practices in July, August, and September 2013. The following report documents the results of the site visit and archaeological watching brief, and discusses them in their historical and archaeological context.

A visit to the site established that groundworks to the east of the mill building would not impact on any underlying archaeology. Further groundworks to the north-east and south-east of the barn also had low potential to impact on underlying archaeology. Excavations immediately adjacent to the barn remained within topsoil and were in an area of heavy root disturbance. In addition, this area had been the subject of an archaeological evaluation in 2006 and was found to have very low archaeological potential.

Two cable trenches excavated under watching brief conditions in the car park to the east of the mill complex were found to be almost wholly within the top gravel and hardcore layer of the car park and did not extend into the natural ground below. No finds were recovered during any of the site visits or watching brief.

The recording of the cobbled surface to the north-east of the mill revealed that the current visible limit of the surface probably represents its true extent. A subterranean passage with concrete roof to the north of the cobbles corroborates this. The surface is in reasonable condition and appears to have been patched and repaired several times.

The cobbles were probably locally from the adjacent River Bela upon which the mill stands. Three rows of squared cobbles marking the northern edge of the surface are squared and may have originated elsewhere. There was no indication of substrate below the cobbles and what they are bedded into remains unknown. The date of the installation of the cobbles was difficult to deduce, as there appear to be several phases of repair, but it is not unreasonable to assume they may have an origin in at least the eighteenth century.

No further works were recommended as it is likely that further archaeological recording would shed little further information on what has already been gathered.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank Alan Edwards at Lambert Walker for commissioning the project and also Stuart Hobbs at Heron Corn Mill for providing information about the mill and the project.

The watching brief was conducted by Kathryn Blythe and Karl Taylor. The Recording of the cobbles at the north-east side of the mill was undertaken by Karl Taylor. The report was compiled by Kathryn Blythe and Karl Taylor and the illustrations were produced by Mark Tidmarsh and Karl Taylor. The project was managed by Alan Lupton, who also edited this report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

1.1.1 A programme of repair and refurbishment of the Grade II* Listed Heron Corn Mill, Beetham (NGR SD 49621 79969: Fig 1), is being undertaken by Lambert Walker on behalf of Alan Gardner Associates. Due to the historic significance of the site, Alan Gardner Associates asked Oxford Archaeology North (OA North) to undertake a watching brief and recording of a cobble surface during the groundwork associated with the refurbishment; this work was commissioned by Lambert Walker. This was carried out in accordance with standard OA North practices in July, August and September 2013. The following report documents the results of the archaeological watching brief and building recording, and discusses them in their historical and archaeological context.

1.2 LOCATION, TOPOGRAPHY AND GEOLOGY

1.2.1 Heron Corn Mill is situated in the village of Beetham, which lies just over 1km to the south of the larger settlement of Milnthorpe. The mill is located at the northern extent of the village and is bounded to the north by Dallam Deer Park. The mill occupies the north-west bank of a bend of the river Bela, immediately below Beetham waterfalls, which have been utilised within the associated weir. The river Bela flows north to Milnthorpe and then joins the river Kent in the Kent estuary in the north-east corner of Morecambe Bay.

1.2.2 Heron Corn Mill and Beetham village lie within the valley of the river Bela at approximately 25mOD. To the north-west the land rises up to approximately 60mOD within the deer park, and to the east to Cappleside Hill at 55mOD.

1.2.3 The solid geology comprises Dinantian Limestone, which is overlain by deposits of glacial-derived gravel and boulder clay, which are known to be varied and convoluted in nature (Countryside Commission 1998). The soils around Milnthorpe are of the Denbigh 1 Series, which are typical brown earths (Soil Survey of England and Wales 1983), and form good agricultural land.

1.3 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

1.3.1 The following section presents a very brief summary of the historical and archaeological background of Heron Corn Mill in order to place the watching brief results within context.

1.3.2 Milling on or near the site of Heron Corn Mill has been documented since 1220, when rights to erect a corn mill at this location were granted to the Canons of Coningshead (http://www.lambertwalker.co.uk/projects/heron-corn-mill-beetham/). 'Heron Mill' is first mentioned in a document from 1609, the heronry from which it takes its name is believed to have been situated to the north of the mill (Simpson and Brown 2007, 11). The present mill was built in the eighteenth century, and appears to have been constructed in a single phase. The rear part of it is possibly on the site of the seventeenth century mill (AOC

2006a, 11). The current building is Grade II* listed and comprises the mill and internal machinery, grain kiln/dryer and mill race (launder). The mill machinery includes the rare survival of a lowder frame, with four pairs of millstones powered by a 14ft overshot water wheel. There is also a barn to the west of the mill thought to be of a similar date (http://heronmill.org/mill.shtml; http://www.lambertwalker.co.uk/projects/heron-corn-mill-beetham/).

1.3.3 The mill has had several owners, and was part of the Dallam Estate from the late 1860s until 1927, when it was taken over by W & J Pye millers of Lancaster. Flour milling ceased sometime before 1930, and for the last decades of its operation the mill was used for corn grinding. The mill was closed from the mid 1950s until 1973, when it was restored and opened to the public (http://heronmill.org/mill.shtml; AOC 2006a, 12-13).

1.3.4 The OS first edition map from 1859 (Fig 3) shows the mill and barn as they are today, with the current development area shown as unoccupied. The OS map from 1914 (Fig 4) shows four additional buildings adjacent to Mill Lane in the area of the current car park, and one building to the west of the barn. The footprints of these buildings (no longer extant) are outwith the current development area.

1.4 PREVIOUS ARCHAEOLOGICAL WORK

1.4.1 ***1974 Excavation Tom Clare:*** an excavation was carried out in 1974 by Tom Clare, the exact location of which is unknown. However, it is likely to have been situated on the bank of the river to the south-east of the barn, where one of the entrances to the cave which underlies this area can be found. The excavation is thought to have been carried out to establish whether an early mill had utilised the cave as a mill race prior to the raising of the weir (AOC 2006a, 12). Finds from the excavation comprised animal bone and post-medieval artefacts (*op cit*, 14).

1.4.2 ***2006 Evaluation, AOC:*** following a desk-based assessment (AOC 2006a) an evaluation was carried out in the area to the south of the barn. This comprised two machine-dug trenches and seven hand-dug test pits. Post-medieval potsherds were recovered from the topsoil in two of the test pits but no archaeological features associated with them were encountered (AOC 2006b).

2. METHODOLOGY

2.1 INTRODUCTION

2.1.1 All work adhered to standard OA North practices and was consistent with the relevant Institute for Archaeologists (IfA) and English Heritage (EH) guidelines (IfA 2008a, 2008b, 2012; EH 2006).

2.2 WATCHING BRIEF

2.2.1 The purpose of the site visits and watching brief was to identify, investigate and record any archaeological remains encountered during the groundworks. Accordingly, a permanent archaeological presence was maintained during excavation of two cable trenches in a car park to the west of the main mill complex. The other areas were assessed during the site visits and a permanent archaeological presence was not required, as the excavations would have low impact upon below ground archaeology.

2.2.2 A daily record of the nature, extent and depths of groundworks was maintained throughout the duration of the project. Any archaeological contexts were recorded on OA North's *pro-forma* sheets, using a system based on that of the EH former Centre for Archaeology. An indexed monochrome and digital photographic record was maintained throughout, and all remains of archaeological interest identified were recorded on scaled drawings.

2.2.3 Any finds recovered were exposed, lifted, cleaned and bagged in accordance with standard guidelines (UKIC 1998)

2.3 COBBLE SURFACE RECORDING

2.3.1 The cobble surface was recorded according to the Level 2 historic building recording specification published by English Heritage (English Heritage 2006). The work was also consistent with the relevant standards and procedures of the Institute for Archaeologists (IfA 2008a and 2012), and generally accepted best practice.

2.3.2 ***Descriptive Record:*** a visual inspection of the cobble surface was undertaken and written notes were made using OA North buildings *pro-forma* sheets. Details of any significant architectural or historical elements were also noted.

2.3.3 ***Site Drawings:*** architect's drawings were supplied by the client, and were annotated accordingly using a highly accurate hand-held Leica Disto distance measurer, accurate to +/- 1mm or hand tapes. The final drawings were produced using an industry-standard CAD package, and included a plan of the location and extents of the cobbles.

2.3.4 ***Photographs:*** photographs were taken with a Canon EOS 5D 'full-frame' digital SLR camera using a variety of lenses. Images were saved in both jpeg and Canon raw format CR2. The unprocessed raw images were then converted

to 8bit exif-tif files using Canon Digital Photo Professional software. The photographic archive consists of general images of the cobbles, together with scaled detail images.

2.4 ARCHIVE

2.4.1 A full professional archive has been compiled in accordance with current OA North, IfA and EH guidelines (EH 2006). The paper and digital archive will be deposited in the Cumbria Country Record Office (Kendal) on completion of the project. Copies of the report will be deposited with the Cumbria County HER in Kendal.

3. RESULTS

3.1 INTRODUCTION

3.1.1 The following section provides a summary of the results of the archaeological watching brief. Initially, two separate site visits were made, on the 16th July and 15th August 2013 to establish where there would be groundwork and to assess the potential impact on any underlying archaeology. Work was scheduled to be carried out in four main areas: on a pathway to the east of the mill; on a path north-east of the mill; in an area immediately north-east and south-east of the barn; and a car park beyond the eastern site boundary (Fig 2). Ultimately, only the excavations in the car park to the east of the barn were carried out under watching brief conditions.

3.2 SITE VISIT/WATCHING BRIEF RESULTS

3.2.1 ***East of the mill:*** a path which slopes down from east of the mill to the tail race is to be re-laid (Plate 1). The path currently comprises limestone rubble *c* 0.5m thick, which has been put down as part of relatively recent landscaping work. Excavation for the new path is not anticipated to extend beyond the limestone rubble and therefore no impact on any underlying archaeology is anticipated.

Plate 1: Path to be re-laid on the east side of the mill, looking west

3.2.2 ***North-east of the mill:*** a path which extends from the north corner of the south-eastern part of the mill building to the path bounding the mill complex to the north (Plate 2) is to be built up to provide level access into the building. This

comprises a stretch of cobbled surface, which is to be left intact, protected and buried. This cobbled surface was subject to English Heritage Level 2 recording (see *Section 3.4*). Three steps into the mill will also be protected and buried. No below ground works are anticipated in this area.

Plate 2: Path to north-east of mill, looking south-east

3.2.3 ***North-east and south-east of the barn:*** immediately north-east and south-east of the barn was an area that had already been stripped for a cable trench, path and retaining wall (Plate 3). This was the area of the 2006 evaluation trenching carried out by AOC (2006b), within which no finds of archaeological significance were made. The area was much disturbed with tree roots and a modern pipe was also visible just in front of the building (Plate 4). The cable trench was only excavated to *c* 0.3m in this area, as below this was bedrock, which overlay the cave. Concrete had already been put down in the trench for the retaining wall when the site was visited on the 16th July, but only root disturbed topsoil appeared to have been exposed. Further to the south-east was an area where a new path was being excavated and laid with gravel (Plate 5). Excavations for this were very shallow (*c* 0.2m max) and comprised topsoil overlying a layer of pale brown clay (Plate 6).

Plate 3: Excavations to the north-east of the barn, looking south

Plate 4: Excavations to the north-east of the barn, showing modern pipe, looking south

Plate 5: New path alongside south-east wall of the barn, looking west

Plate 6: Excavations for new path to the south-east of the barn, looking north

3.2.4 Further to the south-east is an area through which the proposed cable trench will extend from the barn to the car park. Some of this area has been recently excavated for the construction of the turbine building, and comprises a surface of hardcore, put down for the construction machinery for the turbine building, overlain by a layer of topsoil *c* 0.5m thick. The cable trench is not anticipated to be excavated beyond the depth of the hardcore, and therefore no underlying archaeology will be impacted. A small area immediately adjacent to the car park however, is believed to be undisturbed aside from it having been levelled up with topsoil.

3.2.5 ***Car park to the east of the east site boundary:*** two cable trenches skirting both the north and south sides of the car park were excavated under watching brief conditions (Fig 2) with a mini-digger to a depth of approximately 0.45m and width of approximately 0.6m. The southern cable trench curved around the southern extent of the car park running parallel with a small stream just on the edge of a patch of woodland (Plate 7). The trench was excavated to a length of approximately 30m. The trench was excavated through gravel that continued down to a depth of around 0.42m below which, topsoil was visible. This pattern continued for the whole length of the trench. No archaeological finds, features or deposits were encountered.

Plate 7: Cable trench excavation on the south side of the car park to the east of the barn, looking west

3.2.6 A further cable trench of the same dimensions was excavated at the north side of the car park across the access road to the north of the barn and along the north field boundary (Plate 8). The trench was, again, excavated into the gravel of the car park, which continued to a depth of 0.42m. Below this, was a layer of topsoil within which sections of compacted sub-base material was present. No archaeological finds, features or deposits were encountered. The trench

continued into an area of undisturbed ground at the northern edge of the car park, adjacent to a stone field boundary. This part of the trench consisted exclusively of topsoil and/or made ground (Plate 9).

Plate 8: Cable trench excavation on the north side of the car park, looking east

Plate 9: Cable trench at the north edge of the site, looking east

3.3 FINDS

3.3.1 No finds were recovered from any of the watching brief areas.

3.4 COBBLE SURFACE RECORDING RESULTS

3.4.1 The cobble surface at the north-east side of the main mill building had already been subject to watching brief prior to being recorded (see *Section 3.2.2*). The area was visited again on 11th September 2013 in order to carry out the recording to English Heritage Level 2 standard in advance of being covered and preserved *in situ* below a replacement walkway.

3.4.2 The area of cobbles is relatively small, covering an area between the mill building and a retaining wall, approximately 5.1m in length and a maximum of 3.2m wide (Fig 5). The cobbles form a walkway allowing access to and from a doorway on the north side of the mill building (Plate 10). It slopes towards a terracotta drainage pipe at the south end of the retaining wall close to the steps.

Plate 10: Cobbled area at the north-east side of the mill, looking south

3.4.3 The cobbles are mainly of random sizes, the largest being approximately 0.12m by 0.12m; many of which appear to be laid on edge, perpendicular to the wall of the mill building. The northern edge of the cobbles is defined by three rows of squared cobbles, the maximum size being 0.24m by 0.16m (Plate 11). The mortar is mainly cement-based and some areas appear to have been re-laid relatively recently. Most of the cobbles appear to be of riverine origin.

3.4.4 The doorway allowing access to and the mill is reached via two steps constructed of sandstone treads upon random sandstone risers (Plate 12). The lower tread is approximately 0.38m wide, the upper being 0.25m wide. All the

risers are approximately 0.2m high. The steps lead to a limestone threshold. The steps are clearly a later construction.

Plate 11: Plan view of cobbled surface at the north-east side of the mill

Plate 12: Steps leading to the mill door on the north-east side, looking south

3.4.5 The northern extent of the cobbled surface terminates before a subterranean passageway leading below the walkway to the mill building. The surface above the passageway is covered with modern gravel sub-base. The passageway has a concrete roof, indicating the cobbles do not continue beyond their current extent.

4. CONCLUSION

4.1 DISCUSSION

4.1.1 The site visit on 16th July 2013, established that groundworks to the east of the mill building would not impact on any underlying archaeology. Further groundworks to the north-east and south-east of the barn also had low potential to impact on underlying archaeology. Excavations immediately adjacent to the barn remained within topsoil and were in an area of heavy root disturbance. In addition, this area had been the subject of an archaeological evaluation in 2006 and was found to have very low archaeological potential.

4.1.2 The two cable trenches excavated in the car park were found to be almost wholly within the top gravel and hardcore layer of the car park. It was obvious that the depth of the trenches did not extend far enough through this modern material to potentially disturb any archaeological deposits. No finds were recovered during any of the site visits or watching brief.

4.1.3 The recording of the cobbled surface revealed that the current visible limit of the surface probably represents the true extent of this and that is does not extend below a modern layer of hardcore to the north. Inspection of a subterranean passage to the north of the cobbles corroborates this. The surface is in reasonable condition and appears to have been patched and repaired several times. The cobbles are scheduled to be preserved *in situ* and it is likely that they will survive this process relatively unscathed.

4.1.4 The cobbles appear to have been sourced locally, probably from the adjacent River Bela upon which the mill stands. Three rows of squared cobbles marking the northern edge of the surface are squared and may have originated elsewhere. There was no indication of substrate below the cobbles and what they are bedded into remains unknown. Two steps leading to the threshold of the doorway are of a later phase than the surrounding fabric. The date of the installation of the cobbles is difficult to deduce, as there appear to be several phases of repair, but it is not unreasonable to assume they may have an origin in at least the eighteenth century.

4.1.5 It is likely that further archaeological recording would shed little further information on what has already been gathered, therefore no further works are recommended.

5. ILLUSTRATIONS

6.1 FIGURES

6.2 PLATES

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Figure 1: Site location

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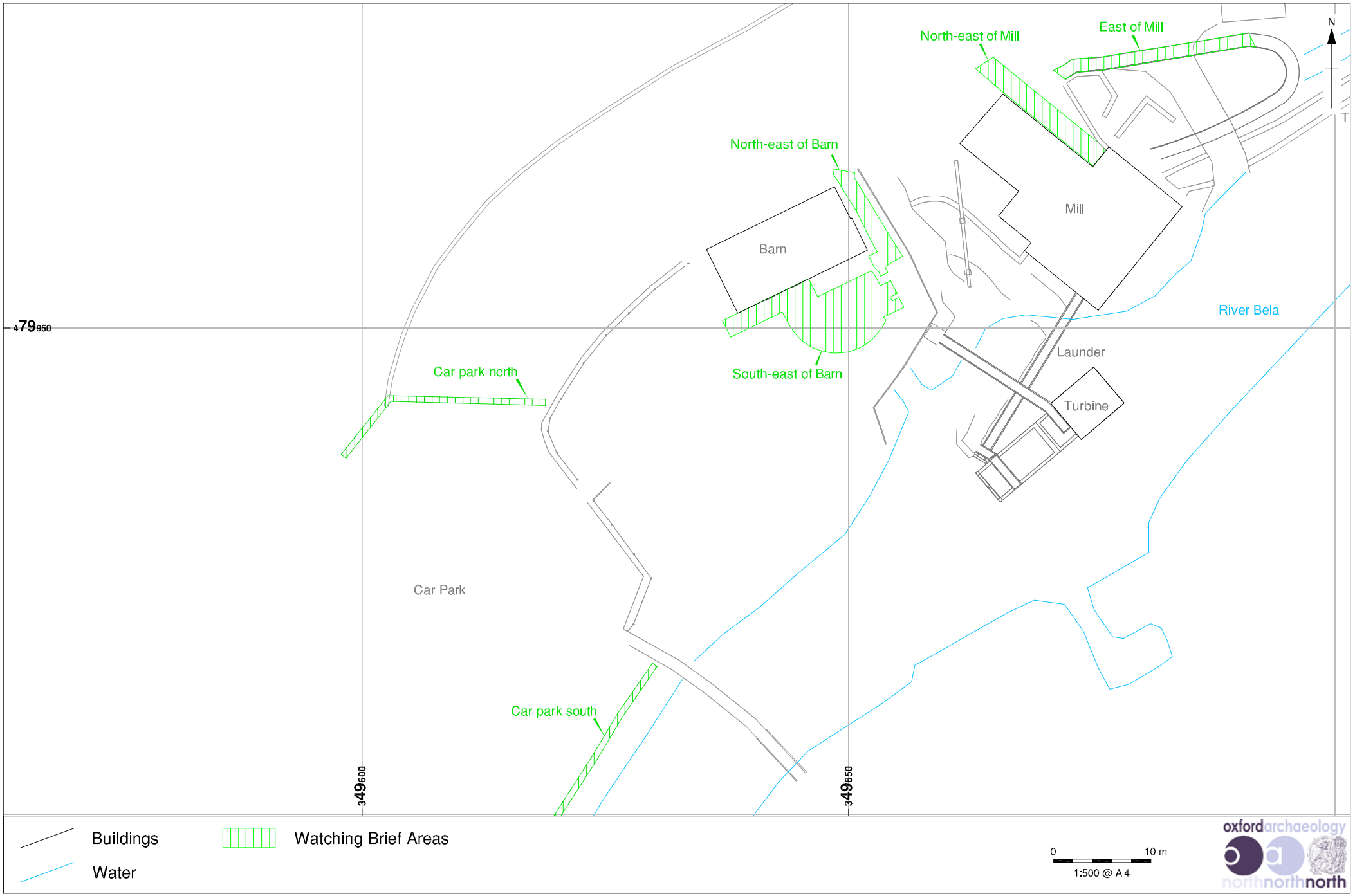

Figure 2: Plan showing location of watching brief areas

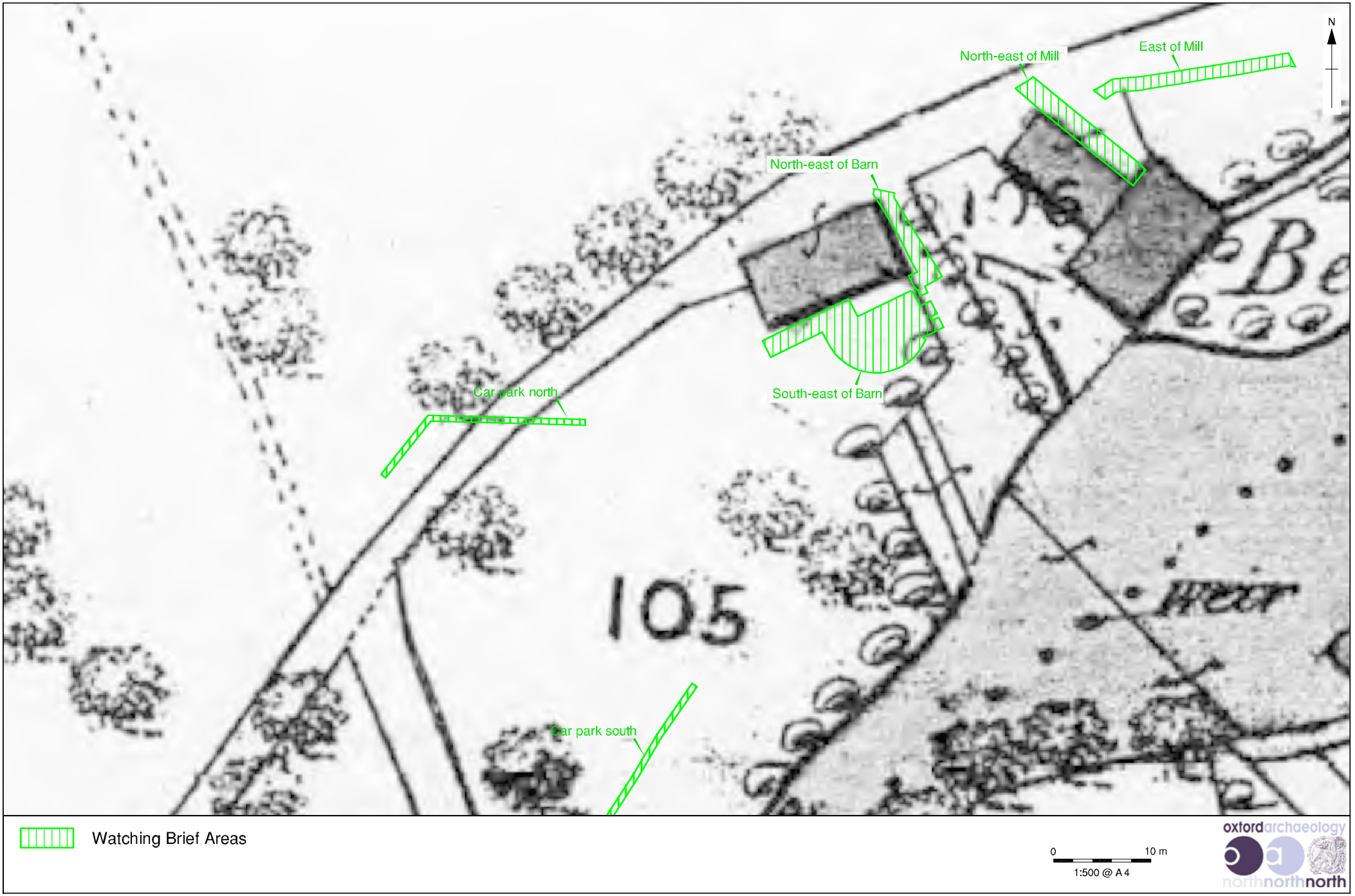

Figure 3: Watching brief areas superimposed on Ordnance Survey map of 1859

Figure 4: Watching brief areas superimposed on Ordnance Survey map of 1914

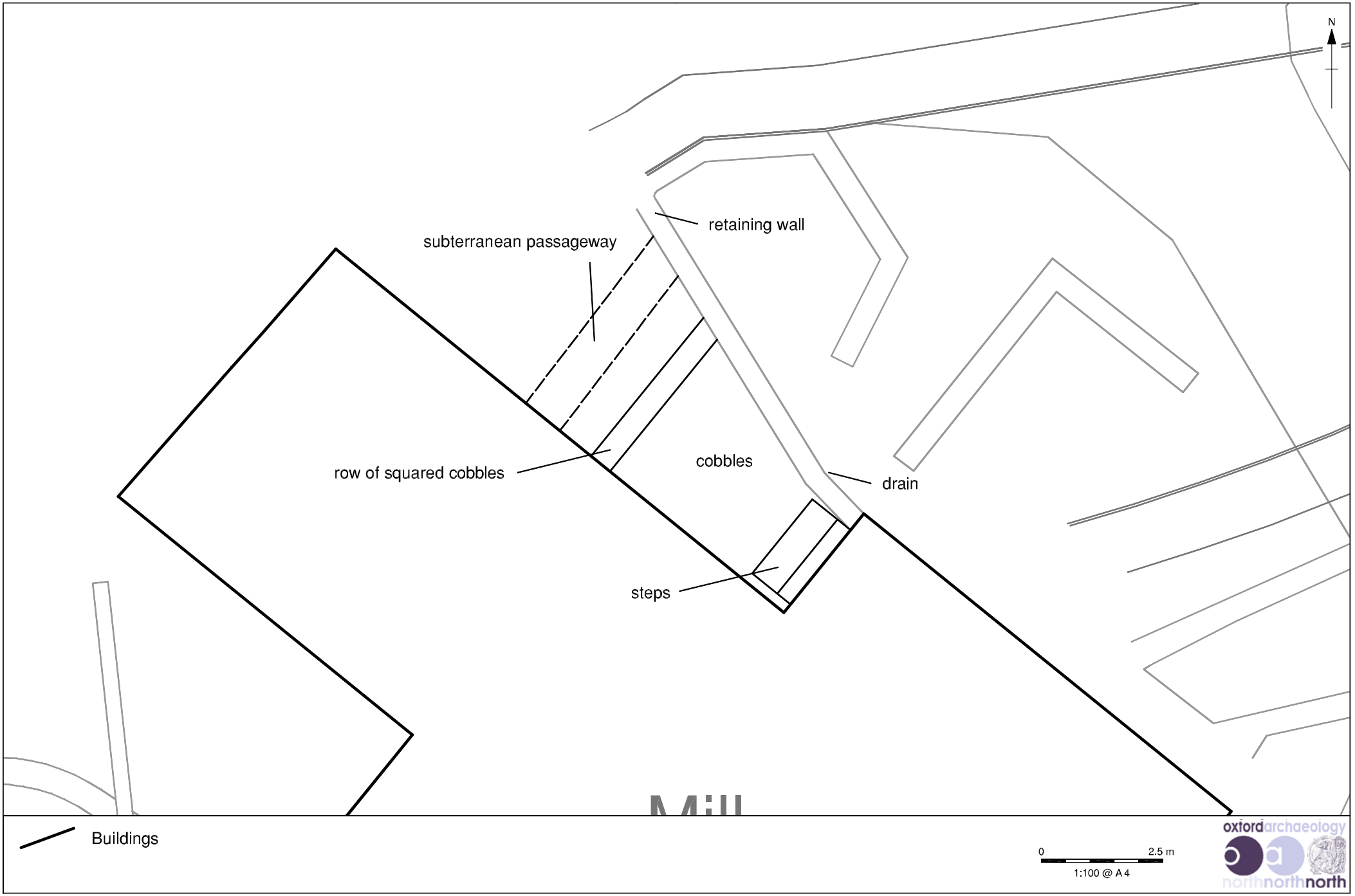

Figure 5: Plan of the extent of the cobble surface

5. BIBLIOGRAPHY

5.1 PRIMARY SOURCES

Ordnance Survey, First Edition, 6" to 1 mile, 1859

Ordnance Survey, 25" to one mile, 1914

Soil Survey of England and Wales, 1983 *Soils of Northern England*, 1:250000

5.2 SECONDARY SOURCES

AOC, 2006a *Heron Corn Mill and Museum of Papermaking, Beetham, Cumbria. Cultural Heritage Desk-based Assessment*, unpubl rep

AOC, 2006b *Heron Corn Mill and Museum of Papermaking, Beetham, Cumbria. Archaeological Evaluation Data Structure Report*, unpubl rep

Countryside Commission, 1998 *Countryside Character, Volume 2: North West*, Cheltenham

English Heritage, 2006 *Management of Research Projects in the Historic Environment* (MoRPHE) Swindon

Institute for Archaeologists (IfA), 2008a *Standard and Guidance for an Archaeological Watching Brief*, Reading

Institute for Archaeologists (IfA), 2008b *Standard and Guidance for the Creation, Preparation, Transfer and Deposition of Archaeological Archives*, Reading

IfA, 2012 *Code of Conduct*, Reading

Simpson and Brown, 2007 *Heron Corn Mill - Conservation Plan*, unpubl rep

UKIC, 1998 *First Aid for Finds*, London (new edition)

5.3 WEBSITES

http://heronmill.org/mill.shtml

http://www.lambertwalker.co.uk/projects/heron-corn-mill-beetham/