



**ARCHAEOLOGICAL TRIAL
TRENCH EVALUATION**

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**LAND EAST OF ROSE COTTAGE,
WARK-ON-TWEED**

NORTHUMBERLAND

prepared for

DB Joiners & Builders

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**LAND EAST OF ROSE COTTAGE, WARK-ON-TWEED,
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ARCHAEOLOGICAL TRIAL TRENCH EVALUATION

Summary

This report presents the results of an archaeological trial trench evaluation undertaken in support of a planning application for residential development (Application No. 15/00202/FUL) on land east of Rose Cottage, Blue Row, Wark-on-Tweed, Northumberland TD12 4RH (NGR NZ 8255 3867). The work was carried out between 13-24 June 2016, and was undertaken by Northern Archaeological Associates Ltd (NAA) on behalf of DB Joiners and Builders.

An earlier evaluation in 1997 identified the remains of walls and stone surfaces, thought to represent medieval and early post-medieval village deposits. Recognising that the proposed development had potential to impact or destroy significant archaeological remains, a number of planning conditions were attached to the consent in order to secure 'mitigation by avoidance' of archaeological remains through preservation in situ below formation and landscaping levels.

At a meeting on the 26th May 2016 held between the client, the Assistant County Archaeologist and NAA, it was agreed that a series of trenches be excavated to test the survival of archaeological remains on the site. Those trenches were to focus on the foundations of the north walls of the proposed houses and the proposed service runs, which form the first phases of development required for the housing scheme. The information from these excavations would then inform further excavations as necessary and/or mitigation through changes in the foundation design to allow preservation in situ of any archaeological remains.

Following machine-stripping of the trenches, hand-cleaning and limited excavation was undertaken in order to expose and characterise the archaeological remains present. Within the central and northern parts of the site, thick 'garden soil'-type post-medieval deposits overlay a distinctive mid-brown soil layer some 0.3m thick which in turn directly sealed structural remains including walls, floors and yard surfaces. The floor of one building was covered in a deposit of iron-working debris, and this structure has been interpreted as a medieval smithy. The extensive mid-brown soil layer had in turn been cut and overlain by a series of features

including pits, ditches and an extensive cobbled surface, which are thought to represent post-medieval activity across the area.

The small finds assemblage from the evaluation consisted primarily of medieval and post-medieval pottery, animal bone and metalworking debris. Most of this material was residual. At this stage basic processing of this material has been undertaken but no assessment has been carried out. As a result of the lack of excavation of features, no palaeoenvironmental samples were recovered; however, the potential of the site to contain important environmental remains is considered high.

The evaluation has confirmed the presence of complex, well-preserved stratified archaeological remains of medieval and post-medieval date surviving across much of the central and north-western parts of the site, including structures (one probably a medieval smithy), surfaces and cut features. These deposits are generally sealed by a considerable accumulation of medieval and post-medieval soil layers which have served to protect them from later use of the site for agriculture, gardens and housing. In these parts of the site significant archaeological remains, where identified, generally lie below the proposed formation levels for the development.

Around the south-eastern and southern margins of the site, the raised natural deposits of the Kaim are directly overlain by modern topsoil or post-medieval 'garden-soil' deposits. No certain surviving archaeological deposits were identified in these peripheral areas. However, post-medieval or undated structural features and surfaces are present at shallower depths a short distance down-slope towards the eastern and south-eastern sides of the area.

Without drawings of the proposed formation levels and foundation design for the proposed development, it is not currently possible to determine in detail any impacts that construction will have upon the archaeological deposits present within the site, particularly within the eastern half of the area. However, it is likely that the proposed footings and associated service trenches for the two eastern houses will impact upon post-medieval or undated remains.

On present knowledge, it is not considered that the new access roadway or drainage within other areas of the site is likely to have any significant impact upon archaeological remains.

It is likely that any construction impact on archaeological remains within the site could be mitigated by an archaeological watching brief during excavation of the footing trenches for the new buildings. Provision would need to be made within the construction programme for adequate investigation and recording of any significant archaeological remains encountered.

1.0 INTRODUCTION

- 1.1 This report presents the results of an archaeological trial trench evaluation undertaken in support of a planning application for residential development (Application No. 15/00202/FUL) on land east of Rose Cottage, Blue Row, Wark-on-Tweed, Northumberland, TD12 4RH (NGR NZ 8255 3867; Fig. 1).
- 1.2 The application site has been subject to a number of archaeological assessments undertaken in support of previous applications including trial trench evaluation undertaken in 1997 as part of a previous application (NAA 1997). This evaluation identified the remains of walls and stone surfaces, thought to represent medieval and early post-medieval village deposits. The upper surface of the remains was located from between 0.2m to 0.5m below existing ground level. A Heritage Statement (NAA 2013) undertaken to inform an earlier application of the site (13/02339/FUL) summarised the results of all previous phases of work and assessed the potential impact of the 2013 development proposal on the significance of the archaeological resource. Recognising that this proposed development had potential to impact or destroy significant archaeological remains, a number of planning conditions (Conditions 11, 12 and 13) were attached to this previous consent in order to secure 'mitigation by avoidance' of archaeological remains through preservation in situ below the foundations of the proposed dwellings.
- 1.3 Following a site visit on 10 March 2015 in connection with the 2015 application, Nick Best, Assistant County Archaeologist, was concerned that recent earthmoving activities had altered the ground levels within the site to the extent that archaeological levels may have been substantially compromised. Topographic survey by NAA compare the ground levels with those recorded in 2013 conclusively proved that only minor truncation had occurred on site, and that the archaeological remains should remain intact.
- 1.4 On the 26th May 2016, a further meeting was held between the client, the Assistant County Archaeologist, and NAA, to agree a further scope of works. A brief had previously been issued by Northumberland County Council (Best 2015) requiring an archaeological excavation of any areas which were likely to be impacted upon by the development. At the meeting it was agreed that, in the first instance, a series of trenches should be excavated to test the survival of archaeological remains on the site.

This evaluation was to focus on the foundations of the north walls of the proposed houses and the proposed service runs, which formed the first phase of development required for the housing scheme. The information from this evaluation would then inform further excavations as necessary and/or mitigation through changes in the foundation design to allow preservation in situ of any archaeological remains.

- 1.5 In accordance with paragraph 128 of the National Planning Policy Framework, the Assistant County Archaeologist recommended that these works should be undertaken and the results submitted prior to the determination of the application. A Written Scheme of Investigation for the works was prepared by NAA (2016) and agreed in writing with the Northumberland Conservation Team.
- 1.6 The evaluation trenching was carried out between 13-24 June 2016 and was undertaken by NAA on behalf of DB Joiners and Builders. The work complied with relevant standards and guidance published by English Heritage/Historic England (2008; 2015) and the Chartered Institute for Archaeologists (2014a; 2014b).

2.0 BACKGROUND

The proposed development

- 2.1 The proposal is for the construction of four residential units, with associated garages, paving, landscaping, services, drainage and a new access road (Fig. 2). The proposed road would enter the site from the minor road to the east and run along the southern part of the site, across the slope of the Kaim, linking the residential units which would be positioned in two blocks of two. It was proposed that there would be minimal ground disturbance for the road bed, restricted to a cut and fill with the southern side partially terraced into the slope and the northern half made up.
- 2.2 It was proposed that the residential units would be constructed with traditional foundation trenches with the floor slab, and therefore finished floor level, above existing ground level. Groundworks for these units are likely to involve a topsoil strip of the unit footprints. Foundation trenches are likely to range from 350mm to 600mm in width depending on the final engineering solution and will be approximately 900mm deep.

- 2.3 The planned garden levels will generally be higher than existing ground level reducing the need for significant excavations in these areas. If required, the topsoil from the unit footprints could be deposited in the garden areas in order to raise the levels. The build up for hard landscaping, such as footpaths, will be minor, for example 50mm slabs on 50mm sand bedding on 100mm to 150mm of hardcore. Therefore, even if in isolated areas the ground levels remain much the same as existing, excavation would be in the region of 200mm to 250mm. New tree planting and garden structures, such as sheds or greenhouses, are not proposed.

Location

- 2.4 The site is located at the eastern end of a green at the heart of the small village of Wark-on-Tweed (Fig. 1). At the opposite end of the green are the earthwork remains of Wark Castle, a scheduled monument, which dates from the early 12th century. The current village layout is based around a network of minor roads that form a circuit to the east of the castle, with access from the B6350 via two roads, one immediately south of the castle mound and the other to the south of the proposed development. The green space to the east of the castle is located in the centre of this road circuit and the proposed development is located within the south-east corner. Properties line the north and south sides of this circuit, facing on to the central green space.

Topography and geology

- 2.5 The topography of the site is undulating. The southern edge of the site is located on the crest of the Kaim, a narrow, steep-sided, glacial ridge, and the ground levels drop away sharply to the north. The site at the time of the evaluation had recently been cleared of grass and scrub vegetation. The site is bounded along the northern sides by wooden fences to an existing garden and car park. A minor road forms the boundary to the eastern and south-eastern edges of the site, while to the west lies an overgrown plot occupying the remainder of the green space. A public footpath crosses the site from the car park to the north to the south-east corner of the site.
- 2.6 The site is located at approximately 29m AOD at its highest point on the Kaim and drops sharply to the north at the foot of the Kaim to form a relatively level area at approximately 23-24m AOD.

- 2.7 The site lies on river terrace alluvium deposits (Institute of Geological Sciences 1977) and the solid geology comprises rocks of the Carboniferous Limestone Series (Institute of Geological Sciences 1979). The soils in the area are stoneless permeable coarse loam of the Alun association (Soil Survey of England and Wales 1983). A bank of river terrace gravel forms the Kaim ridge along the southern edge of the site.

3.0 SUMMARY ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 3.1 The archaeological and historical background to the site has been discussed at length in the Heritage Statement (NAA 2013), and is only summarised below.

Wark Castle

- 3.2 Wark Castle was one of the most fought-over castles in the country during the medieval and early post-medieval periods, lying as it did on the English side of one of the fords that crossed the River Tweed on a main road to Edinburgh. It hence plays an important part in our understanding of the long history of medieval and post-medieval border warfare. The development of the associated settlement has been entirely influenced by the fortunes of the castle, and after its abandonment in the 17th century the village has remained small and rather isolated.
- 3.3 The castle was first constructed in the early 12th century in the typical Norman motte and bailey form. The castle was located to make best use of the Kaim ridge with the motte, surmounted by a timber keep, built on the highest part and the bailey positioned on the lower ground between the Kaim and the river. Originally the bailey would have had an earth rampart surmounted by a timber palisade, and would have contained a wide range of ancillary buildings.
- 3.4 In 1128, presumably soon after it was built, the castle was captured by the Scottish King David, during the wars for the English throne between Stephen and Matilda. David re-took the castle in 1138 after three further sieges and destroyed it. Henry II ordered its re-fortification in 1158, and this may have been done partially in stone. Another Scottish attempt to capture the castle failed in 1174. The castle was burnt down again in 1216 as part of King John's campaign against the northern barons, but it was rebuilt shortly afterwards. It was used by Henry III in 1255 as a base for negotiations with the Scots, then in 1292 and 1296 it was visited by Edward I who used it as a base for his campaigns into Scotland. His son, Edward II used the castle as

the mustering point for his army to invade Scotland in 1314. A report of 1329 described the castle to be ruinous, but it must have been partially repaired by 1342 when Edward III visited the castle following yet another siege. Throughout the late 14th century, Wark suffered badly from the almost constant border wars and in 1390 the castle was again described as being in ruins. The castle and town were attacked by the Scots in 1399, resulting in the inhabitants being captured and ransomed, the houses being burnt and the castle walls being beaten down. The town and castle were taken once again by a Scottish army in 1460 during the Wars of the Roses.

- 3.5 During the 16th century, following its capture by the Scots in 1513 ahead of the Battle of Flodden, a review of the fortifications was ordered by Henry VIII in 1517. The repairs included accommodation for artillery. In 1523 the castle was attacked by the Duke of Albany, and a force of 2000 Frenchmen breached the outer ward but could not take the remainder of the castle before an English relief force arrived. In 1541 a report noted that the castle was again in a state of disrepair, and in 1543 a large sum of money was spent on modernising it. Border warfare subsided from the later 16th century and the castle was left to fall into a ruinous state, although a garrison and ordnance were kept at the castle until 1633, when it was finally abandoned. The castle was used for one last time in 1644 by a Scottish army that quartered there whilst invading England during the Civil War. The castle was then left to become a ruin, and provided a convenient source of local building stone well into the 19th century.

The Settlement

- 3.6 The first plans of Wark, drawn in the 16th century, place the village, which is labelled 'Warkes Towne', to the east of the castle, the location it still retains today (Fig. 3). The village is shown as a two-row settlement located either side of a road leading from the main gatehouse of the castle to a main gateway at the eastern end of the village. The plans depict a series of properties (tofts) alongside, but set back from the road with narrow plots of land (garths) stretching north to the town wall and south towards the river. The 16th century village was surrounded by a wall and ditch and in addition to the main gateway at its eastern end. there was a second gateway along its southern wall close to the junction with the castle on the Kaim. The large ditch that marks the eastern limit of the modern village may well be part of this circuit. The road along the

crest of the Kaim, immediately to the south of the proposed development area, is also likely to lie on the circuit wall that went around the south side of the medieval village.

- 3.7 The current development site is located at the south-east end of the green space in the heart of the village to the east of the castle. This green space has since the mid-19th century been utilised as small garden enclosures or garths to the south of the most northerly road through the village. It is likely that this is the same road shown on the 16th century plans of Wark, leading from the eastern gateway of the village to the main castle gateway and that, historically, houses would have fronted this road with garden plots and ancillary buildings behind.
- 3.8 The 1860 Ordnance Survey map hence provides a good indication of the medieval layout of the village with housing flanking this road to the north-west and north-east of the proposed development site (Fig. 4). The site has been undeveloped since at least 1860 but probably earlier; unfortunately the 1844 tithe map shows the village in schematic form without sufficient detail. On the 1860 Ordnance Survey plan the site is divided into small enclosures or garths associated with now demolished roadside properties. Historic mapping shows that some of these appear to have survived until the 1920s.

Does the development lie within the medieval castle or civilian settlement?

- 3.9 Contemporary descriptions and surveys of the castle indicate that there were three wards, with the town laying to the east defended by town walls and gates. There are two differing views regarding the location and extents of the castle wards. The Royal Commission on the Historical Monuments of England (RCHME), who surveyed the castle remains in 1992, suggested that the motte was the inner ward containing the keep, and that the middle ward extended north-east of the motte as far as the river, with the outer ward lying to the east of this middle ward and including much of the area of the present day village (Bowden 1992). If this interpretation is correct, then the current development site would sit within the eastern end of the castle outer ward and the large imposing outer ward gatehouse would lie at the south-east corner of the application area; however, no evidence for this structure was identified in 1997 Trench 1 which was targeted specifically to locate it (Fig. 5). In this model, the medieval town would presumably have lain to the east of the development site.

- 3.10 More recently, a different interpretation of the extent of the castle has been proposed by Wardle and Nolan (1997), which corresponds more closely with contemporary descriptions and 16th century plans. Their interpretation suggests a more compact castle complex entirely confined to the area defined as the inner and middle wards by the RCHME. This interpretation would place the development site within the former medieval settlement, rather than within the outer ward of the castle. However, Wark was one of a class of castles designed, and regularly used, for accommodating large military forces in transit, as at e.g. Berwick, Dunstanburgh and perhaps Norham. These normally have a strong point (the castle 'proper') together with a larger, less heavily defended area available for occasional encampment, and also serving as a refuge for people and moveable goods such as livestock. At Durham, although the North and South Baileys were filled with housing, leases included the requirement to accommodate troops and horses in time of war, and a large open area was also maintained on Palace Green. The inner and middle wards alone of the Wardle/Nolan model for Wark seem insufficient for this task.
- 3.11 The location and extent of the medieval settlement at Wark remains unknown. It is possible that it was accommodated within the original outer ward of the castle in response to the threat from the Scots, as is known to have been the case at Richmond in North Yorkshire (Cardwell 2001, 7), which would represent a compromise between the two models for the castle layout at Wark described above.

Previous archaeological investigation

- 3.12 The development site was subject to an archaeological evaluation in 1997 (NAA 1997). This consisted of six trenches located across the entire proposed development site as part of a previous planning application (Fig. 5). The archaeological remains in the trenches were not excavated but cleaned and recorded.
- 3.13 The results of this evaluation showed that archaeological remains are well-preserved at the site. These included cobble surfaces, possible timber wall lines and a number of linear stone features which may have represented building foundations. Stratified archaeological layers were recorded in several of the trenches and the uppermost parts of this sequence were dated to the post-medieval period.
- 3.14 One of the trenches (Trench 1) was positioned on the Kaim at the south-east corner of the proposed site in order to locate the outer ward gateway in the position suggested

by the RCHME survey (which was entirely conjectural), but no archaeological remains were present in this trench. It should be noted that, if the northern roadway in the village preserves the line of that shown on the 16th century plans, then the gateway would in fact lie either to the north of the development area (if the defended area east of the castle was subdivided into outer ward and town as the RCHME suggests), or 160m east of the site adjacent to the large linear hollow at the eastern end of the modern village if no such subdivision existed. The subdivision proposed by RCHME would have introduced an unnecessary acute-angled south-eastern corner to the enclosure, a weak spot in the defences normally avoided in castle design.

- 3.15 In Trench 2, which was an east to west aligned trench that was extended to the north, there were extensive cobble surfaces with an arrangement suggesting the presence of timber framed buildings. A trial pit was dug through the uppermost archaeological deposits to reveal a sequence of earlier archaeological layers dating from the medieval period. Trench 3 contained a sequence of possible metalled surfaces, the uppermost only 300mm below existing ground level, aligned south-west to north-east, not consistent with the modern road layout (but see section 6.4 below).
- 3.16 Within Trench 4, modern topsoil directly overlay the natural gravel of the Kaim within the southern and central parts of the trench, with a cobble layer and a stone spread of unknown function at the northern end. Trench 5 contained a possible linear stone feature sealed by a substantial stone spread c.500mm below the existing ground level. In Trench 6, a cobble surface lay c.400mm below then existing ground level, and a trial pit dug through this layer revealed a sequence of layers and cobble surfaces over a stone feature with an east to west alignment.
- 3.17 Dating evidence for the features within the trenches was scarce, but some of the upper cobble surfaces contained post-medieval pottery and some of the layers in the trial pits within Trenches 2 and 6 contained medieval pottery. Animal bone was also well-preserved and the assemblage was considered to be of significant interest.

4.0 AIMS AND OBJECTIVES

4.1 The main objectives of the 2016 evaluation as stated within the WSI (NAA 2016) were:

- to determine which areas within the footprint of the revised scheme require

archaeological mitigation in the form of preservation in situ, open area investigation in advance of construction, or monitoring of soil stripping during construction works;

- to establish the presence, nature, extent, preservation and significance of any other archaeological remains within the site;
- to prepare an illustrated report on the results of the evaluation to be submitted in support of the planning application and to be deposited with the Historic Environment Record (HER) held by Northumberland County Council (NCC) and the National Monuments Record (NMR); and
- to evaluate the potential for further unrecorded significant archaeological remains to be present within the site.

4.2 Upon submission of this report on the results of the trenching, the requirement for further mitigation will be agreed through consultation between the client and Northumberland County Council.

5.0 METHODOLOGY

5.1 In order to avoid confusion with the results of the earlier phase of evaluation (1997 Trenches 1-6), the new trenches were numbered from 7-13. Similarly, the earlier work used 3-digit context numbers (from **100**), whereas contexts in the recent work ran from **1-55**.

5.2 The WSI proposed excavation of a series of trenches following the proposed routes of drainage-runs across the site (Fig. 2, Trenches 8 and 9), one combining a drain-run and wall-line (Trench 10), together with another following a proposed wall-line within the eastern part of the site (Trench 7). Following stripping of these trenches it was apparent that those following proposed building foundations (Trenches 7A, 7B and 10) had not encountered archaeological deposits at the intended formation levels, and it was agreed at a site meeting on 15 June 2016 between Northumberland County Council, the client and NAA to backfill these two trenches and re-machine them on different alignments (Trenches 12A, 12B and 11) in order to avoid further disturbing the ground below the proposed footings, while still achieving the objectives of the evaluation. In addition, Trench 9, across the southern edge of the area, was extended

eastwards (as Trench 13) in order to examine the area of the proposed new access roadway into the site.

Machine Excavation

- 5.3 The trenches were set out by the client. All levels were tied in to Ordnance Datum.
- 5.4 The initial site works comprised stripping of topsoil and non-archaeological subsoils within each trench using a mechanical excavator fitted with a toothless ditching bucket. All soil removal was undertaken under archaeological supervision.
- 5.5 The mechanical excavator removed overburden down to a level at which significant archaeological deposits were identified or down to natural subsoil deposits, whichever were encountered first. Thereafter all archaeological work was undertaken by hand.

Hand excavation

- 5.6 Where structures, finds, soil features or layers of archaeological interest were exposed, these were cleaned, assessed and recorded as appropriate. Since such deposits as were identified mainly lay below proposed formation levels for the new development, they were retained in situ and only minimal excavation was undertaken in order to answer specific questions relating to the character of some deposits.
- 5.7 Where archaeological deposits were identified, all exposed surfaces were cleaned by hand. Only minimal hand-excavation was undertaken beyond this, with small sondages excavated in several locations in order to determine depths of archaeological deposits. Features were then photographed and planned (see below).

Recording

- 5.8 Recording was mainly undertaken by means of structure from motion photography (SfM). SfM involves taking a continuous series of overlapping vertical and/or oblique subject images with a high resolution camera. These images are then processed through software that reconstructs the original subject matter in three dimensions, thereby creating a point cloud of the scene. After filtering, this point cloud can be converted into a mesh based model of the scene over which the photo imagery can be draped. Georeferenced ground markers or scales are included in the photographs to establish suitable control for the resulting model, allowing scaled orthoimages to be

produced of plans or elevations. Depending on specification, distance between subject and camera will not exceed that necessary to achieve the required pixels per mm rate for the primary photographs. Where oblique images are included masks will be created for subject areas that fall outside these parameters. Accuracy levels for the output will vary depending upon the size of the area recorded, the number and quality of photographs taken and the number and type of ground control used but typically will range from a few mm to a few cm for larger areas. Information from the orthoimages was transferred to AutoCAD software and reproduced for incorporation within this report. All levels have been tied in to Ordnance Datum.

- 5.9 To augment this record, a measured plan of Trench 8 (which contained 'soil' deposits less easy to distinguish from the photographic record) was recorded at a scale of 1:20. Sections/profiles were drawn at a scale of 1:10 and their location accurately recorded using Global Positioning System (GPS) so that they could be identified on the appropriate trench plan.
- 5.10 Written descriptions of archaeological features/deposits were recorded on pro forma context sheets, employing standard archaeological recording conventions.
- 5.11 A photographic record of the site was made using digital photography.

Finds recording

- 5.12 All finds processing and storage was carried out in compliance with guidelines issued by the Institute for Archaeologists (ClfA 2014a). Finds were collected as bulk samples, with no significant individual artefacts identified. Finds have been appropriately recorded and processed, and appropriately packaged and stored under optimum conditions. Finds recovery and storage strategies were in accordance with published guidelines (English Heritage 1995; Watkinson and Neal 2001). With the agreement of Northumberland County Council the finds have not, at this stage, been submitted for post-excavation assessment.

Environmental sampling

- 5.13 Given the limited opportunity for hand-excavation, and after discussion with Northumberland County Council, no palaeoenvironmental samples were recovered during the evaluation.

General

- 5.14 Following recording, and with the agreement of Northumberland County Council, the evaluation trenches were immediately backfilled, but not otherwise reinstated.

6.0 RESULTS

- 6.1 In the description below, all levels are given as depth below the modern existing ground surface (bgl) and also as a height above Ordnance Datum (AOD).

Trench 7 (A and B)

- 6.2 This trench was located on fairly level ground within the eastern part of the site along the proposed line of the northern wall of the easternmost house. It was aligned from east-southeast to west-northwest and was 30.2m long overall, although a 4.4m section near the western end had to be left un-machined in order to maintain a public right of way across the site. Trench 7A to the east of this break was therefore 18m long (Plate 1) and Trench 7B to the west was 7.8m long (Plate 2). Both were 1.9m wide, and were excavated to depths of 0.60-0.77m. Both parts of the trench were sealed by 0.10-0.15m of dark brown silty sand topsoil (Context 1).
- 6.3 Within the eastern part of Trench 7A, a deposit of very 'clean' yellow-brown sandy clay was revealed in the base of the trench, which appeared to be a natural deposit. To the west of this, the base of the trench consisted of a layer of gravel in a mid-brown clayey sand matrix. This was initially considered to also be a natural deposit; however, subsequent investigation in Trench 12A showed that this was in fact an artificial surface (52).
- 6.4 Within the eastern end of Trench 7A, the natural clay was overlain by a series of dumps of sand, dark soil and large stones (context 2) observed in section within the southern trench edge. These extended 6.5m westwards into the trench and were up to 0.5m thick. A securely-stratified sherd of post-medieval (probably 18th century) pottery was observed in section near the base of this sequence, showing that it was post-medieval in origin. It seems likely that the stonier lenses in this material were what was interpreted as 'surfaces' in 1997 Trench 3 (Fig. 5); this trench was aligned along the dumps rather than across them (as in Trench 7A), impeding correct

interpretation. To the west of this dump, the gravel surface was overlain by up to 0.6m of mid-brown silty sand soil **3**.

- 6.5 Within Trench 7B, topsoil **1** overlay a 0.25m thick layer of dark brown silty sand soil **4** (equivalent to layer **3** in Trench 7A). This in turn overlay a deposit more than 0.35m thick of mid-brown silty clayey sand **5** (probably the same layer as context **9** in Trench 8 immediately to the west, see below) containing occasional gravel, larger stones and coal fragments. The base of this deposit was not seen in this trench.
- 6.6 At the site meeting on 15 June 2016 it was decided, at the request of the client, to backfill Trench 7. This was to avoid unnecessary ground disturbance compromising any subsequent building footings in this area. A replacement trench (Trench 12) was subsequently excavated to the north, in an area where no construction was planned, in order to fulfil the objectives of the evaluation.

Trench 8 (Figs. 6 and 7)

- 6.7 Trench 8 was positioned along the line of the proposed main drainage run bisecting the site from north to south. The trench was 22.5m long and intersected with Trench 9 to the south and Trench 10 midway along its western side, both running west. Trench 8 was 1.9m wide and up to 1.5m deep. The area of the trench sloped generally down to the north.
- 6.8 The area of the trench was sealed by topsoil (here numbered **6**) c.0.1m thick, although the recent history of topsoil movement within the site described above should be noted. This sealed a linear band 0-0.20m thick of mid-brown silty clayey sand, pebbles and pea-grit (**7**), which crossed the site from north to south and was also observed in section in Trenches 9 and 10. Beneath this was a 0.45m thick layer of dark brown silty sand soil **8** which contained numerous fragments of 18th and 19th century pottery, plant pot and clay tobacco pipe (not retained), and presumably represented a former garden soil. The garden soil sealed a deposit of mid-brown sandy silt clay (**9**) up to 0.3m thick, probably the same deposit as layers **5** and **41** (Trenches 7B and 12B) and **17** (Trench 11) to the east and north. The top of this deposit occurred at a level of c.0.75m bgl (c.23.55m AOD) towards the southern end of the trench, sloping down to c.1.15m bgl (c.22.55m AOD) at the northern end. A sherd of medieval pottery was recovered from this deposit during machine-stripping near the northern end of the trench.

- 6.9 Within the southern part of the trench, layer **9** directly overlay natural gravel forming the foot of the Kaim running along the southern edge of the site. Elsewhere to the north, layer **9** either sealed, or had been cut by, a series of archaeological features and deposits.
- 6.10 The southern limit of surviving archaeological deposits consisted of a possible wall footing **18** projecting 1.3m westwards into the trench. It was 0.40-0.45m wide and formed of small angular sandstone fragments and small cobbles. It was butted to the north by a layer (**20**) of pea-grit, small pebbles and reddish-brown coarse sand containing lumps of metalworking slag and areas of iron-staining. This deposit extended northwards for 1.5m before being truncated by later features, and extended across the full width of the trench. Loose slag from this context was recovered, and hammerscale was noted adhering to some pieces. A particularly dense concentration of slag (again associated with hammerscale) located within the area immediately west of footing **18** within a possible doorway was recorded separately as context **19**. Although the slag-rich layer was not excavated, in some areas where it was absent parts of a possible floor (**21**) of small pebbles and cobbles were observed (not illustrated). This group of features probably represented a small industrial structure such as a smithy.
- 6.11 To the north, the structure had been truncated by several features which had been cut from a higher level, either within or from the top of layer **9**. Context **22** consisted of a group of large unshaped stones projecting from the western trench edge, occupying an area measuring 1.1m from north to south and more than 0.95m wide, and standing 0.4m higher than the surrounding layer **20**. A very uncertain possible cut for a pit was observed around the southern and eastern sides of this group of stones, but the similarity of the matrix between them to layer **9** meant that no cut could be identified in section, and the depth of any pit was not determined. A similar, second possible pit, again represented by a discrete group of stones (**23**), lay within the eastern edge of the trench. The base of the possible pit lay on the surface of floor **21** but had removed the overlying layer **20**. A group of small bones **24**, possibly an animal burial, lay immediately adjacent to stones **23**, and may originally have been within the same pit.
- 6.12 Immediately to the north of the two pits, the trench was crossed from east to west by a 1.05m wide band of large stones (**25**) in a matrix of mid-brown silty clayey sand, presumably a small ditch. This again appeared to have been cut from a higher level

- within, or above, layer **9**. It had cut floor **21** to the south and footing **26** (below) to the north.
- 6.13 To the north of ditch **25**, the trench was crossed from north-east to south-west by a 0.45m wide band of cobbles and pebbles, possible another wall footing (**26**). To the north this constrained a clay surface **27**, presumably an internal floor. This consisted of compacted yellow-brown sandy clay containing occasional small pebbles. When damp it appeared slightly pink in colour in comparison to other clays observed within the site and may have been heat-affected, although to no great extent. The surface ran northwards for 1.9m before being obscured by a later wall (**28**); however, it appeared to continue beneath the wall with similar material visible in a small area to the north (layer **29**).
- 6.14 Wall **28** appeared to have been constructed directly onto surface **27/29** and crossed the trench from east to west. It was 0.7-0.75m wide and had a maximum surviving height of 0.25m (Plate 3). It was formed of two parallel lines of unbounded small unshaped boulders measuring up to 0.3m, with a core of smaller cobbles. A series of scratches on the top of some of the stones may have resulted from ploughing, suggesting that it had been demolished down to the surviving level in antiquity. The full height of the structure was butted on both sides by soil layer **9**.
- 6.15 To the north, wall **28** was respected by a surface of small cobbles and pebbles in a matrix of mid-brown clayey sand with frequent pea-grit (**30**). Adjacent to the wall, this appeared to overlie earlier clay floor **29**. Surface **30** extended northwards for at least 1.4m, before being probably overlain by a second surface **31**. This extended northwards for at least 8m, continuing beyond the northern end of the trench. This surface was also primarily formed of small cobbles and pebbles, but included quantities of heavily fractured, or crushed, green and yellow mudstones; these distinctive inclusions were not noted except as rare inclusions elsewhere.
- 6.16 At the northern end of the trench, part of surface **31** had been removed in error during machine-stripping, revealing part of an underlying soil layer **33**. This consisted of compact, mid to dark brown, silty sand extending over an area measuring more than 1.2m north-south by more than 1.0m east-west, and of unknown thickness.
- 6.17 Also at the northern end of the trench, and largely removed during machine-stripping, were the remnants of a shallow, mortared stone wall footing **32**. This crossed the

trench from east to west, was 0.5m wide and had a surviving height of up to 0.5m, and had been cut into the top of garden-soil layer **8**. The top of this structure lay at c.0.25m bgl, the base at c.0.75m bgl. The line of this wall may have been continued further to the west by wall **37** observed in Trench 11 (see below)

Trench 9

- 6.18 Trench 9 was excavated following a proposed drainage run. It was aligned from east to west along the western half of the southern edge of the site, at the foot of the steep slope leading up onto the Kaim. At its eastern end it intersected with the southern end of Trench 8, and it was subsequently extended eastwards to the eastern edge of the site as Trench 13.
- 6.19 The trench was 24.5m long (to the eastern edge of Trench 8), 1.9m wide and stripped to a depth of 0.6-0.8m. Topsoil **6** varied in thickness along the length of the trench, doubtless as a result of recent earth-moving activities in the area. At the eastern end of the trench (opposite Trench 8), the topsoil overlay layer **7** previously described above. Layer **7** was relatively narrow (c.4-5m wide from east to west) which, given its extent from north to south, perhaps suggests that it represented some sort of path or trackway, possibly that represented on the 1920 OS map (reproduced in NAA 2013, fig. 9). It was presumably a relatively modern feature since it overlay garden soil **8**. There is anecdotal evidence for there having formerly been a flight of steps immediately to the south of this feature running up the side of the adjacent Kaim. The western edge of deposit **7** was cut by a probable stone-filled drain or soak-away (**10**) lying within a vertical-sided trench 1.2m wide continuing below the excavated level. Again, there is anecdotal evidence for there having once been a pigsty in this area, with which the soakaway could have been associated.
- 6.20 Below layer **7** (and elsewhere the topsoil) the buried garden-soil layer **8** was observed throughout the length of the trench and corresponding to layer **501** recorded in 1997 Trench 5. Within the eastern part of the trench, this directly overlay natural gravel **10** which also continued northwards down-slope into Trench 8. To the west within Trench 9 the gravel was overlain by a layer of mid-brown silty sand **12** (analogous to layer **9** recorded in Trench 8) which gradually thickened to the west, being 0.3m thick at the western end of the trench. An area of stone rubble (not numbered) 5m from the western end of the trench lay above this layer and incorporated a brick, and was

hence interpreted as being relatively modern. It may have been associated with stone spread **502** recorded in 1997 Trench 5.

Trench 10

- 6.21 This was excavated westwards from Trench 8, and followed the proposed lines of a drainage run and house foundation. It was 23.5m long, 1.9m wide and 0.60-0.75m deep bgl. (Plate 4). In general, only topsoil **6** and garden soil **8** were removed. In a few small areas the top of the mid-brown soil layer **9** was revealed in the base of the trench. At the eastern end of the trench, the western edge of the possible trackway **7** was observed in section overlying the garden soil. A group of large stones **13** (not illustrated) within the base of garden soil **8**, located in the northern trench edge 4m from its western end, probably represented a post-medieval pit.
- 6.22 At the site meeting on 15 June 2016, it was decided at the request of the client to backfill this trench to avoid unnecessary ground disturbance compromising any subsequent building footings. A replacement trench (Trench 11) was subsequently excavated to the north in an area where no construction was planned in order to fulfil the objectives of the evaluation.

Trench 11 (Figs. 6 and 7)

- 6.23 Trench 11 was excavated as a replacement for Trench 10, as described above. The trench was located towards the northern edge of the site to the north of Trench 10, running from east-southeast to west-northwest. It was 20m long, 1.6m wide and was excavated to a maximum depth of 1.35m (Plate 5). Although no longer visible at the time of excavation, the remnants of a stone wall (demolished to ground level) had previously been noted crossing this area from east to west, approximating to a boundary shown on the 1860 OS map.
- 6.24 Most of the area of the trench was sealed by a tarmac surface **34**, formerly the southern edge of the carpark which remains to the north of the site. The tarmac was bedded onto a layer of crushed limestone **35**, which in turn sealed extensive modern layers (**36** and **38**) of stone rubble, mortar and soil. These presumably represented demolition and levelling of the site of the former cottages at the northern edge of the site.

- 6.25 Below these modern deposits was a layer up to 0.7m thick of dark brown sandy silt 'garden soil' **39**. This was present throughout the area of the trench, and was presumably the same layer recorded as context **8** in Trenches 8 and 10. It contained quantities of 18th-20th century pottery and other finds (not retained). Below this soil layer was a second extensive layer of mid-brown silty sand (**17**) analogous to layer **9** recorded in Trench 8 to the east. At the eastern end of the trench, the top of this deposit lay at a level of c.0.70m bgl (c.22.60m AOD), similar to the level of layer **9** at the northern end of Trench 8. It sloped down gently to the west, so that towards the western end of the trench it lay at a level of c.0.8m bgl (c.22.25m AOD). Three boxes were hand-excavated into layer **17**, showing that it was 0.35m thick at the eastern end of the trench and more than 0.4m thick at the western end. The only finds recovered from this layer were a small quantity of animal bones.
- 6.26 Within the box excavated at the eastern end of the trench, layer **17** directly overlay a surface (**14**) of pebbles and small stones (Fig. 7, Profile 11.2) at a depth of 1.05m bgl (c.22.2m AOD). This surface butted to a wall footing (**16**) observed within the south-eastern corner of the trench. Footing **16** ran from east to west and was observed over a length of 0.75m, continuing to the east but terminating to the west. It was at least 0.5m wide, had an observed height of 0.2m, and was formed from a line of unbounded large cobbles forming a neat face to the north, with smaller cobbles to the south. It was unclear whether the latter formed a second face or whether they were infill within the centre of a wider wall.
- 6.27 Located 0.85m north of, and running approximately parallel to, wall **16** was a second rather larger wall footing **15**. This crossed the trench obliquely so that a total length of 8.0m of the structure was observed. The un-mortared footing, which was up to 1.15m in width, comprised two parallel facing lines of large cobbles measuring up to 0.35m, with smaller cobbles forming the core between. The base of the footing was not observed. As a coherent structure it was observed to a height of 0.25m above the base of the trench; however, after machining a jumbled mass of stones was observed in section overlying this footing and extending up to as little as 0.1m bgl within the southern side of the trench. Since it seemed unlikely that the footing had been cut down from this level without leaving any sign of a cut through soil layer **17**, the conclusion was that the wall was an early and long-lived feature which the soil layers had subsequently accumulated against. Its line was still respected into the 19th century, since at the western end of its observed extent it was overlain by a smaller

mortared stone wall **37**. This ran on a similar but slightly differing alignment, partially overlying and bonded to wall **15**, although diverging slightly from it to the west. Assuming that wall **37** did indeed follow the line of the earlier wall, it may have been a continuation of wall **32** observed at the northern end of Trench 8 (see above), and corresponding to the demolished wall previously observed at ground level.

- 6.28 Excavation of a box into the mid-brown soil layer **17** near the centre of the trench to the west of wall **15** identified a short length of a third parallel stone footing **44**. This consisted of a single line of four large stones extending over a length of 1.3m and lying within the depth of layer **17** (Plate 6). Probing determined that no further stones were present to the east on this alignment within the area of the trench.
- 6.29 Towards its western end the trench was crossed from north to south by a post-medieval ditch **46**. This had uncertainly been cut through the garden soil deposit **39**, so that the upper 0.74m had probably been truncated during machine-stripping. At the stripped level it had a surviving width of 1.05m, so the top had originally been considerably wider and represented a significant boundary running across this part of the site. It was filled with dark greyish brown sandy silt soil (**47**) containing moderate small stones and sherds of 18th or 19th century pottery (not retained).
- 6.30 Partially overlying the line of ditch **46**, and hence of later post-medieval date, was another shallow mortared stone wall footing (**45**) running from northwest to southeast. Within the area of the trench it was removed by machine, but recording from the opposing trench sides showed that it was 0.45 wide and had survived to a depth of 0.6m.

Trench 12 (A and B)

- 6.31 This trench was excavated as a replacement for Trench 7 as described above, and was located slightly to the north (although the two intersected slightly). As with Trench 7, Trench 12 had to be excavated as two separate components, Trench 12A to the east and Trench 12B to the west, due to the need to maintain a public right of way across this part of the area. Trench 12A was 20.5m long and 1.8m wide, and was excavated to a maximum depth of 1.08m bgl. Trench 12B was 3.5m long, 1.5m wide and excavated to a maximum depth of 1.3m bgl.

- 6.32 Within Trench 12A, 0.25m of dark brown sandy silt topsoil **48** generally overlay 0.3m of a buried dark brown soil **49**. Within the eastern part of the trench, this directly overlay a very 'clean' mid reddish-brown silty sand (**50**) with occasional small gravel, which was interpreted as an undisturbed natural deposit. This deposit was cut by a modern feature at the eastern end of the trench equating to 1997 Trench 3 (NAA 1997), such that natural **50** equated to 1997 context 304.
- 6.33 Within the western half of the trench, the buried soil 49 overlay a thin layer up to 0.08m thick of reddish-brown clayey silt (**51**). Removal of this deposit produced a small assemblage of medieval and post-medieval pottery, glass, animal bones, several iron objects including a small horseshoe, and part of an 18th century copper-alloy belt buckle. This silt in turn overlay a pebble and pea-grit surface (**52**) previously misinterpreted as natural gravel in Trench 7, immediately to the south.
- 6.34 Surface **52** within Trench 12A lay at a level of c.0.5-0.6m bgl (c.23.00m AOD). It measured approximately 10m wide from east to west (Plate 7), although it appeared to be petering out and becoming patchy where seen in section at the western end of the trench. The width of the deposit makes it unlikely to have been a road, and it presumably represented an external yard surface. At the western end of the trench it had been machine-truncated, and a small box was hand-excavated against its surviving edge in order to investigate any underlying deposits (Plate 8). At this point, surface **52** was 0.15m thick, and overlay a 0.15m thick layer of mid reddish-brown sandy silt **53**, possibly a bedding layer for the pebble surface. Below this was a 0.3m thick layer of dark brown silty clay soil **55**, directly overlying a rough pebble and cobble surface (**54**) at a depth of c.1.08m bgl (c.22.4m AOD), which was not excavated. Layer **55** produced a small finds assemblage including five medieval potsherds, animal bones, a fragment of fired clay and an iron object (possibly a nail). No natural deposit was encountered.
- 6.35 In Trench 12B, 0.20m of modern topsoil **43** overlay 0.35m of dark brown silty sand 'garden soil' **42** which was observed to contain 18th-20th century pottery and was analogous to layer **8** in Trench 8 immediately to the west. Below this was a layer up to 0.45m thick of mid-brown silty sand (**41**). Although analogous to layer **9** in Trench 8, this layer produced some post-medieval pottery sherds together with one medieval. Within the base of the trench was dark brown silty clay (**40**) containing occasional charcoal flecks and animal bones. This was more than 0.33m thick, but hand

excavation was halted at a depth of 1.3m bgl (22.04m AOD) on safety grounds, and the deposit was not bottomed. The physical depth and stratigraphic relationship of this deposit (below layer **41/9**) perhaps suggests that it could perhaps have formed part of the same deposit as layer **33** observed a short distance away in the northern end of Trench 8.

Trench 13

- 6.36 Trench 13 was excavated eastwards from the south-eastern end of Trench 9 along the foot of the Kaim, in the area of the proposed new site access road (Plate 9). The trench extended the line of Trench 9 to the south-east for 18m before curving to the east for a further 6.5m. Along this line the trench was fairly level, but throughout its length it sloped down at the surface to the north-east or north towards the centre of the site. The natural slope of the underlying natural gravel kaim was even steeper, so that machine-stripping generally resulted in gravel being encountered along the southern (upslope) side of the trench but not along the northern (downslope) edge.
- 6.37 At the eastern end of the trench, the natural gravel was directly overlain by 0.3-0.35m of topsoil. To the north-west, the gravel was progressively sealed by a layer of mid-brown gritty silty sand and pea-grit. It was unlike the mid-brown soils seen in the trenches to the north and probably represented erosion of the matrix from between the natural gravels immediately upslope. A 3.5m long section of this material was removed down to the underlying gravel, supporting this hypothesis. Similar material was observed at the machined level throughout the remainder of the trench westwards, linking with the natural deposits observed at the eastern end of Trench 9.
- 6.38 Cleaning along this trench produced a small assemblage of post-medieval pottery, glass, animal bones and a fragment of slag. In addition, two medieval pottery sherds were recovered from the surface of the natural subsoil in the area of the bend in the trench.
- 6.39 The location of 1997 Trench 4 was identified as a dark soil-filled strip crossing the trench from north to south (Fig. 5). The results of both trenches corresponded at this location, with post-medieval soils overlying natural deposits. A cobbled surface and possible wall footing identified by Trench 4 will have lain to the north of the more recent investigation.

7.0 DISCUSSION

7.1 The evaluation has confirmed the presence of complex, well-preserved stratified archaeological remains of medieval and post-medieval date surviving across much of the area of the site, including structures (one probably a medieval smithy), surfaces and cut features. These deposits are generally sealed by a considerable accumulation of medieval and post-medieval soil layers which have served to protect them from later use of the site for agriculture, gardens and housing.

7.5 Due to the limited extent of both phases of evaluation trenching, and the limited opportunity to excavate the medieval remains exposed, it is not possible to determine whether, during the medieval period, the development site lay within either the castle outer ward, the defended medieval settlement, or both. Certainly by the 16th century, when the first plans of the castle become available, the settlement occupied its current position.

Deposit model

7.6 The two phases of evaluation (in 1997 and 2016) have demonstrated that substantial and well-preserved archaeological deposits survive across much of the area of the development footprint, although at greatly varying depths below the modern ground surface. The build-up of soil layers within the lower-lying parts of the site is remarkable and demonstrates the level of human activity which the site has seen over the last millennium.

7.7 Around the south-eastern and southern margins of the site, the raised natural deposits of the Kaim are directly overlain by modern topsoil or post-medieval 'garden-soil' deposits. Re-interpretation of the findings of 1997 Trench 3 suggests that a series of 'surfaces' probably reflected post-medieval dumping. A suggested cobble surface in 1997 Trench 5 equated to a rubble spread observed towards the western end of 2016 Trench 9 which included a post-medieval brick. This means that no certain surviving archaeological deposits were identified in these peripheral areas. Features recorded in 1997 Trench 4, a short distance to the north (downslope) of the area investigated by 2016 Trench 13, occurred at a level of c.24.35-24.41m AOD. Due to the natural slope and increasing accumulation of post-medieval soil layers, these features lay at a depth of 0.80-0.85m bgl compared to the current ground surface.

- 7.8 To the north and west, the topography of the site originally fell away more steeply into an extensive hollow of unknown depth. The hollow was presumably either a palaeochannel of the River Tweed or a glacial hollow flanked to the south by the Kaim and to the north by a ridge of higher ground bordering the river bank. This is likely originally to have been a wet area, perhaps explaining the dark soil observed at depth in Trench 8 (deposit **33**), Trench 12B (deposit **40**), and perhaps 1997 Trench 6 (deposit 605). Within the limited confines of the trenches, there was no evidence to suggest that this material represented the fill of an archaeological feature such as a defensive ditch. The top of this deposit was observed at a level of c.1.4m bgl (c.22.30m AOD) in Trench 8 and c.1.3m bgl (22.35m AOD) in Trench 12B.
- 7.9 In Trench 8 this dark soil layer was directly overlain by a horizon of archaeological deposits consisting of surfaces and remains of structures of probable medieval date. These occurred at a level of c.1.3m bgl (c.22.3m AOD) at the northern end of the trench and gradually sloping up to a level of c.1.2m bgl (c.23.1m AOD) towards the southern end of the trench. A stratigraphically comparable horizon in Trench 11, a short distance to the north-west, consisting of surface **14** and wall **16**, lay at a similar level to that in the northern end of Trench 8, at a depth of 1.0-1.1m bgl (22.2-22.3m AOD). In Trench 12A to the east, surface **54** was again encountered at a similar level of 1.08m bgl (c.22.4m AOD).
- 7.10 In Trenches 8 and 11 this archaeological horizon was sealed by a mid-brown soil (**9/17**), 0.3m thick in Trench 8 but thickening to the north-west (in Trench 11). The relationship of two of the walls recorded in Trench 11 to this layer was unclear and it is likely that they were constructed while this soil was accumulating. The contrasting lighter colour of this soil horizon (suggesting a significantly lower organic content) compared to the darker underlying soil and the darker post-medieval 'garden' soils suggests that it represents accumulation during the medieval period when the area contained buildings and extensive cobbled or gravelled surfaces. Such use would offer little scope for horticultural input of organic material, and there would presumably have been some attempt at disposal elsewhere of organic refuse. At Durham, it has been suggested that middens were heaped against the rear of the bailey rampart (Speed 2014 vol. 1, 84).
- 7.11 A number of later archaeological features (pits and ditches) in Trenches 8 and 11 had clearly been cut through the lighter soil layer. Although largely undated, it is

considered likely that these later features were post-medieval in date. The top of soil horizon **9/17** was recorded at a level of c.0.75m bgl (23.5m AOD) towards the southern end of Trench 8, and at c.1.1m bgl (c.22.5m AOD) at its northern end. In Trench 11 it was recorded at c.22.55m AOD within the eastern end, descending gradually to c.22.25mAOD towards its western end. Dark 'garden' soils overlying layer **9/17** were seen to contain quantities of post-medieval pottery.

- 7.12 In Trench 12A towards the eastern side of the site, gravel/cobble surface **52** and a possible bedding layer **53** lay above a 0.3m thick soil layer **55**. Although darker in colour, this layer was probably a continuation of layer 9/41 seen in Trenches 8 and 12B to the west. Layer **41** in Trench 12B included post-medieval potsherds, supporting the suggestion above that features cutting this general 'lighter brown' soil horizon were of post-medieval date. This in turn implies that surface **52** was also post-medieval in date, supported by the finds assemblage recovered while cleaning over its surface which included post-medieval material.

Potential impact of the development

- 7.13 Without drawings of the proposed formation levels and foundation design for the proposed development, it is not currently possible to determine in detail any impacts that construction will have upon the archaeological deposits present within the site; however, a number of general observations can be made at this stage. For purposes of clarity, the four proposed new houses are here numbered 1-4, running from east to west.

Eastern and southern parts of the area

- 7.14 Proposed development in these areas includes the new access roadway along the southern edge of the area, service runs and the footings for the Houses 1 and 2.
- 7.15 Around the southern and eastern periphery of the site, the steep slope of the natural deposits of the Kaim means that there has been some erosion and truncation of deposits, and no archaeological features were present in the areas investigated (Trenches 1, 9, 13, the southern part of Trench 4 and the eastern ends of Trenches 7A and 12A). However, it should be noted that the surface slopes in these areas will have been steeper in the past than they are now, making these areas less attractive for any building construction.

- 7.16 There is an intermediate zone around the southern and eastern sides of the site slightly further down-slope where the presence and depth of archaeological features is less certain. In this area the natural deposits continue to slope down towards the centre of the site, with gradually increasing thicknesses of overburden. In Trench 8, no archaeological remains were present in this zone.
- 7.17 Possible archaeological features in 1997 Trench 4 lay at a depth of 0.80-0.85m bgl and hence are likely to lie below the intended formation level of the new access roadway. Along the western part of the line of this roadway, no archaeological features were identified along the proposed line of the new drainage.
- 7.18 The new roadway is likely to have a shallow formation level, and the results from Trenches 13, 9 and 4 suggest that it is unlikely to impact upon any known archaeological deposits. Similarly, assuming that the proposed drainage along the southern edge of the site follows the line excavated as Trench 9 along the southern edge of the site, there should be no impact upon any known archaeological deposits
- 7.19 In Trenches 7A and 12A, the footings for the easternmost house (House 1) and the eastern end of the associated service run will impact on a post-medieval surface (52) located at a depth of c.0.5-0.6m bgl (c.23.0m AOD). At its western edge this was shown to overlie soil horizons, with a second surface (54) of likely medieval date lying at a level of 1.08m bgl (c.22.4m AOD). While at this point this surface lies below the proposed 900mm depth for footing trenches, given that the natural deposits in this area slope up to the east, it is possible that unseen medieval structural remains may survive at a higher level towards the eastern edge of the area, masked by the post-medieval surface, and could be impacted by the development.
- 7.20 A short distance to the south-west, 1997 Trench 2 encountered surfaces and possible structural remains at a level of 23.45-23.68m AOD (0.4-0.5m bgl). Given the level of the presumed medieval structural horizon in Trench 8 immediately to the west (at c.23.1m AOD, 1.2m bgl), it seems likely that the features encountered in 1997 were of post-medieval origin and perhaps associated with the adjacent surface 52 in Trenches 7A and 12A. The observed features lie in an area which will be impacted by the footings for House 2, which is also likely to truncate the western edge of surface 52.

Central and north-western parts of the area

- 7.21 Across much of the central and north-western part of the area (including the proposed location for Houses 3 and 4 and most of the service trenches), well-preserved medieval structural remains and deposits are present. The development proposals in these areas include construction of three houses, garages and installation of associated services and landscaping.
- 7.22 Where identified, the upper surface of the horizon of medieval structural remains in this part of the site typically occurs at a level of c.1.1-1.3m bgl, and hence lies below the proposed 900mm depth for foundation trenches. This horizon is generally directly overlain by a mid-brown soil layer typically 0.3m thick and of likely medieval/early post-medieval date, which was in turn cut by a series of cut features (pits and ditches) of likely post-medieval date. These could be slightly impacted by the proposed 900mm depth for foundation trenches. The soil layer (and associated cut features) was in turn sealed by a thick deposit of homogeneous post-medieval garden soil.
- 7.23 On-site discussion with the client has indicated that the line of the main north-south drainage run has already been archaeologically investigated (Trench 8) to a level below that which will be required for construction of the drain. The position of this service is fixed since it has to connect to an existing service out-with the site boundary to the north.
- 7.24 It is hence considered likely that, dependent upon final foundation design, development within this part of the site will have no impact upon known medieval archaeological deposits, and limited impact upon known post-medieval archaeological deposits. There remains, however, the possibility for unidentified archaeological features to be present in the areas between those examined in the trenches.

Mitigation

- 7.25 It is likely that any construction impact on archaeological remains within the site could be mitigated by an archaeological watching brief during excavation of the footing trenches for the new buildings. Provision would need to be made within the construction programme for adequate investigation and recording of any significant archaeological remains encountered.

BIBLIOGRAPHY

- Best, N (2015) *Land at Wark-on-Tweed, Northumberland: Brief for an Archaeological Excavation*. Northumberland County Council ref. B10/2: 22085
- Bowden, M C (1992) *NT 83 NW 5 Northumberland, Carham Berwick District: NT 8236 3869 Wark on Tweed Castle*. Unpublished Royal Commission on Historic Monuments (England) (RCHME) survey report
- Cardwell, P A (2001) 'The 11th Century: Richmond Castle', in Hatcher, J and Merlane, G (eds.), *Richmond: A Review of the Millennium*. Richmond: Richmond and District Civic Society, 3-9
- Chartered Institute for Archaeologists (2014a) Standard and guidance for the collection, documentation, conservation and research of archaeological materials
- Chartered Institute for Archaeologists (2014b) Standard and guidance for an archaeological field evaluation
- English Heritage (1995) *A Strategy for the Care and Investigation of Finds*
- English Heritage (2008) *MoRPHE Project Planning Note 3: Archaeological Excavations*
- Historic England (2015) *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' guide*
- Institute of Geological Sciences (1977) *Geological Survey Ten-Mile Map, North Sheet, Quaternary*
- Institute of Geological Sciences (1979) *Geological Survey Ten-Mile Map, North Sheet, Drift*
- NAA (1997) *Land to the West of Kaim Cottage and adjacent to Hill Crest, Wark on Tweed: An Archaeological Evaluation*. Unpublished Northern Archaeological Associates Report **97/63**
- NAA (2013) *Land at Wark-On-Tweed, Northumberland: Heritage Statement*. Unpublished Northern Archaeological Associates Ltd Report **13/86**

NAA (2016) *Land East of Rose Cottage, Wark-On-Tweed, Northumberland: Archaeological Trial Trench Evaluation Written Scheme of Investigation*. Unpublished Northern Archaeological Associates Ltd Report **16/65**

Soil Survey of England and Wales (1983) *Soils of England and Wales. Map Sheet 1: Northern England*. Southampton: Ordnance Survey

Speed, G (2014) *St John's College, 6 South Bailey, Durham University: Archaeological Investigations 2010-2012*. Unpublished Northern Archaeological Associates Report **13/83**

Watkinson, D and Neal, V (2001) *First Aid for Finds*. RESCUE/UKICAS

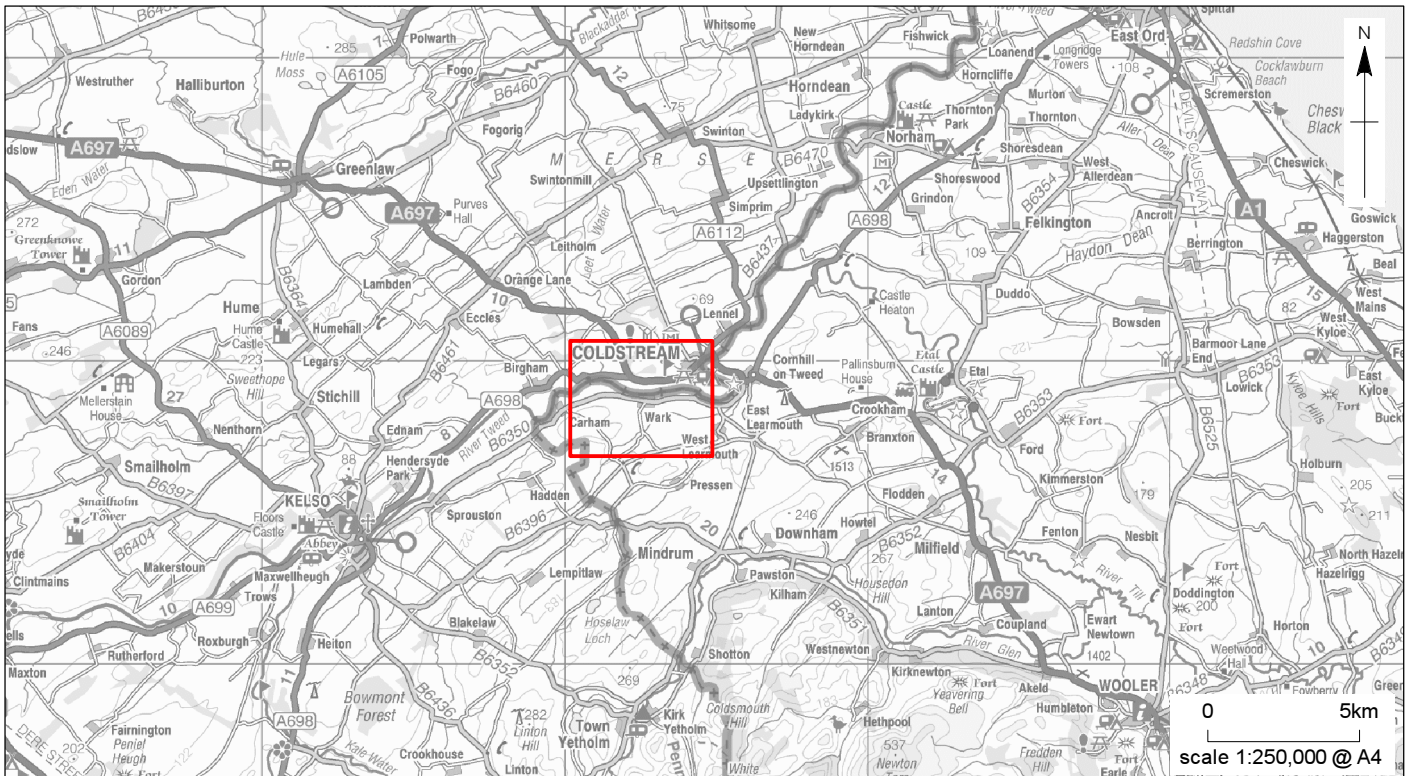
Wardle, S and Nolan, J (1997) *Wark Castle Archaeological Recordings*. Unpublished Newcastle City Archaeology Unit/Northern Counties Archaeological Services report. <http://www.pastperfect.org.uk/sites/wark/archive/wardlenolan.html#>, accessed 18.7.16

APPENDIX A
CONTEXT CATALOGUE

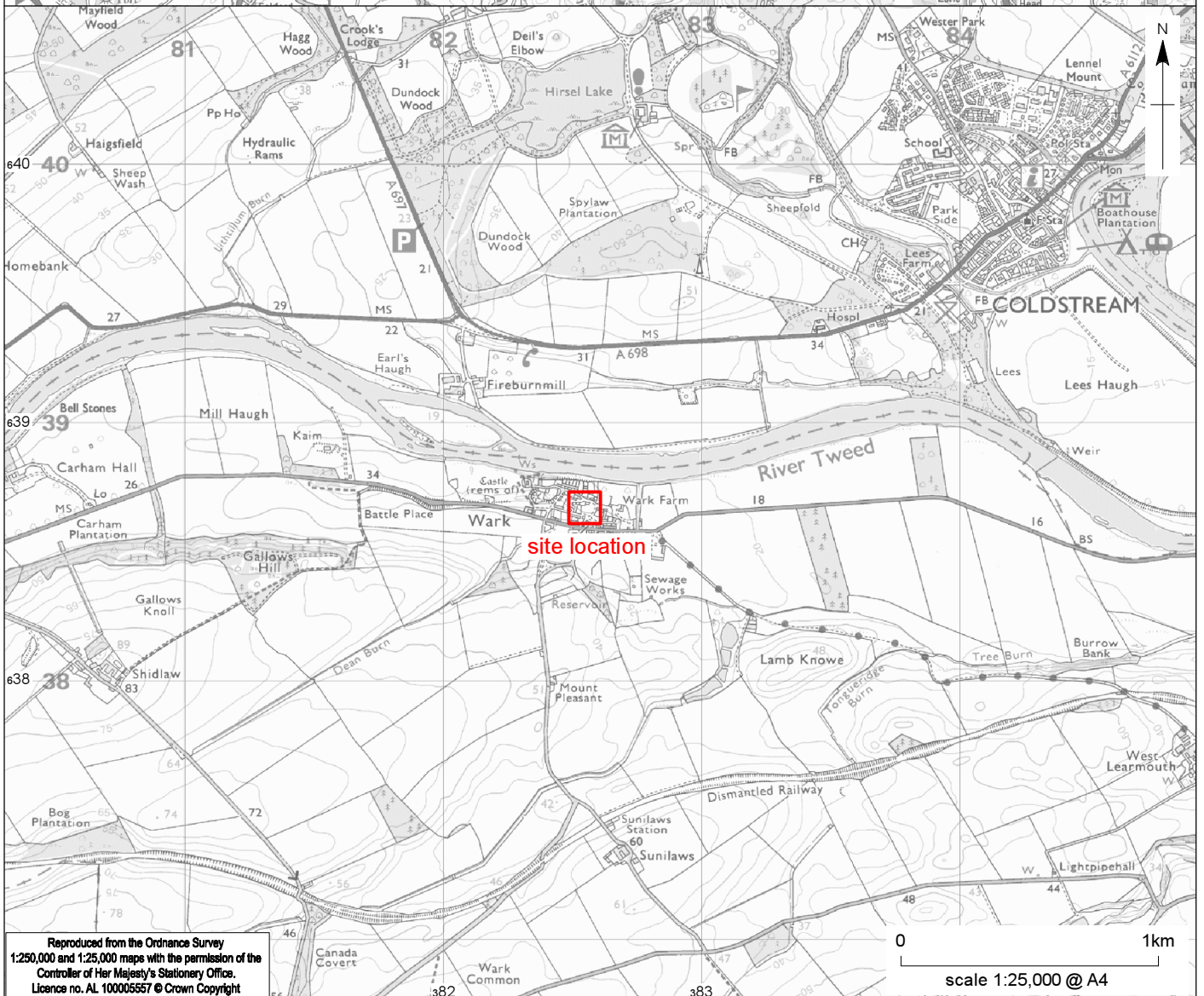
Context	Phase	Interpretative description	Relationships	Trench	Notes
1	Mod	Topsoil, Tr.7A + 7B	Above 3	7A, 7B	
2	PM	Dump	Above natural. Below 3	7A	
3	PM	Dark soil layer	Above ?52 and 2. Below 1	7A	Equivalent to 4 in Tr 7B. 'Garden soil'
4	PM	Dark soil layer	Above 5. Below 1	7B	Equivalent to 3 in Tr 7A. 'Garden soil'
5	?Med	Mid-brown layer	Below 4	7B	Equivalent to 9 in Tr 8
6	Mod	Topsoil Tr 8	Sealed 11	8	
7	Mod	Layer	Above 8. Cut by 11	8, 9, 10	N-S trackway?
8	PM	Dark soil layer	Above 9, 12. Sealed 22, 23, 25. Below 7. ?Cut by 13	8, 9, 10	Garden soil'
9	?Med	Mid-brown layer	Sealed 19, 31. Butted 28. Cut by 22, 23, 25	8, 9, 10	
10	Nat	Natural gravel		8, 9	Foot of Kaim
11	Mod	Soakaway	Cut 7. Sealed by 6	9	
12	?Med/PM	Mid-brown layer	Below 8	9	Observed at W end of trench
13	PM	?Pit	?Cut 8	10	Clump of rocks - possible pit
14	?Med	Surface	Butted 16. Sealed by 17	11	Sondage, E end of trench
15	?Med/PM	Wall footing	?Butted by 17 or 39. Below 37	11	Large wall footing
16	?Med	Wall footing	Butted by 14	11	Sondage, E end of trench
17	?Med/PM	Mid-brown layer	Contained 44. ?Butted 15. Sealed 14. Below 39	11	Analogous to layer 9 in Tr 8
18	Med	Wall footing	?Above 10. ?Butted by 21. Butted by 19, 20	8	S wall of 'smithy'
19	Med	?Layer	Butted 18. ?Contiguous	8	Concentration of slag in poss. doorway of

			with 20. Sealed by 9		'smithy'
20	Med	Layer	Above 21. ?Contiguous with 19. Sealed by 9	8	Layer of metalworking debris over floor 21 of 'smithy'
21	Med	Surface	?Butted 18. Below 20	8	Floor of 'smithy'
22	?PM	?Pit	Cut 9. ?Sealed by 8	8	Possible pit represented by clump of large stones
23	?PM	?Pit	Cut 9. ?Contained 24. Sealed by 8	8	Possible pit represented by clump of large stones
24	?PM	?Animal burial	?Within 23	8	Group of small animal bones
25	?PM	?Ditch	Cut 9, 20, 26. Sealed by 8	8	Possible ditch
26	Med	?Wall footing	Butted by 27. Cut by 25	8	Possible cobble footing defining S edge of floor 27
27	Med	Surface	Butted 26. ?Contiguous with 29. Below 28	8	Clay floor associated with ?footing 26
28	Med	Wall	Above 27/29. ?Butted by 30. Butted by 9	8	Stone wall overlying floor 27/29
29	Med	Surface	?Contiguous with 27. Below 28 and 30	8	?Continuation of surface 27 below/north of wall 28
30	Med	Surface	Above 29. ?Butted 28. ?Below 31. Below 9	8	Cobble surface to N of wall 28
31	Med	Surface	Above 33. ?Above 30. Sealed by 9	8	Extensive surface in N half of trench. Different materials to 30
32	PM	Wall	Above 8. Sealed by 6	8	PM/mod. Mortared stone footing
33	Med	Layer	Below 31		Only seen at N end of trench. Poss. same deposit as 40 in Tr 12B
34	Mod	Tarmac surface	Sealed 35	11	
35	Mod	Layer	Sealed 36 and 38. Sealed by 34	11	Crushed limestone base for tarmac
36	Mod	Demolition	Above 39.	11	

			Sealed by 38		
37	PM	Wall	Above 15, 39. Below 38	11	Mortared wall overlying large stone wall 15
38	Mod	Demolition	Above 37. Sealed by 35	11	
39	PM	Dark soil layer	Above 17. ?Butted 15. Cut by 46.	11	Garden soil' analogous to 8 in Tr 8
40	?Med	Layer	Below 41	12B	?Part of same deposit as 33 in Tr 8?
41	Med/PM	Mid-brown layer	Above 40. Below 42	12B	Analogous to layer 9 in Tr 8
42	PM	Dark soil	Above 41. Below 43	12B	Garden soil'
43	Mod	Topsoil	Above 42	12B	
44	?Med	Wall footing	Within 17	11	Sondage in centre of trench
45	PM	Wall	Above 47. Sealed by demolition	11	Mortared wall above ditch 46
46	PM	Ditch	?Cut 39. Filled by 47	11	Near W end of trench
47	PM	Ditch fill	Fill of 46. Below 45	11	
48	Mod	Topsoil	Above 49	12A	
49	PM	Dark soil	Above 51. Below 48	12A	Garden soil'
50	Nat	Natural	?Below 52	12A	Probable natural at E end of trench
51	PM	Layer	Above 52. Below 49	12A	
52	?Med/PM	Surface	Above 53 and ?50. Below 51	7A and 12A	
53	?Med/PM	Layer	Above 55. Below 52	12A	Sondage at W edge of 52
54	Med	Surface	Below 55	12A	Sondage at W edge of 52
55	Med	Layer	Above 54. Below 53	12A	Sondage at W edge of 52



0 5km
scale 1:250,000 @ A4



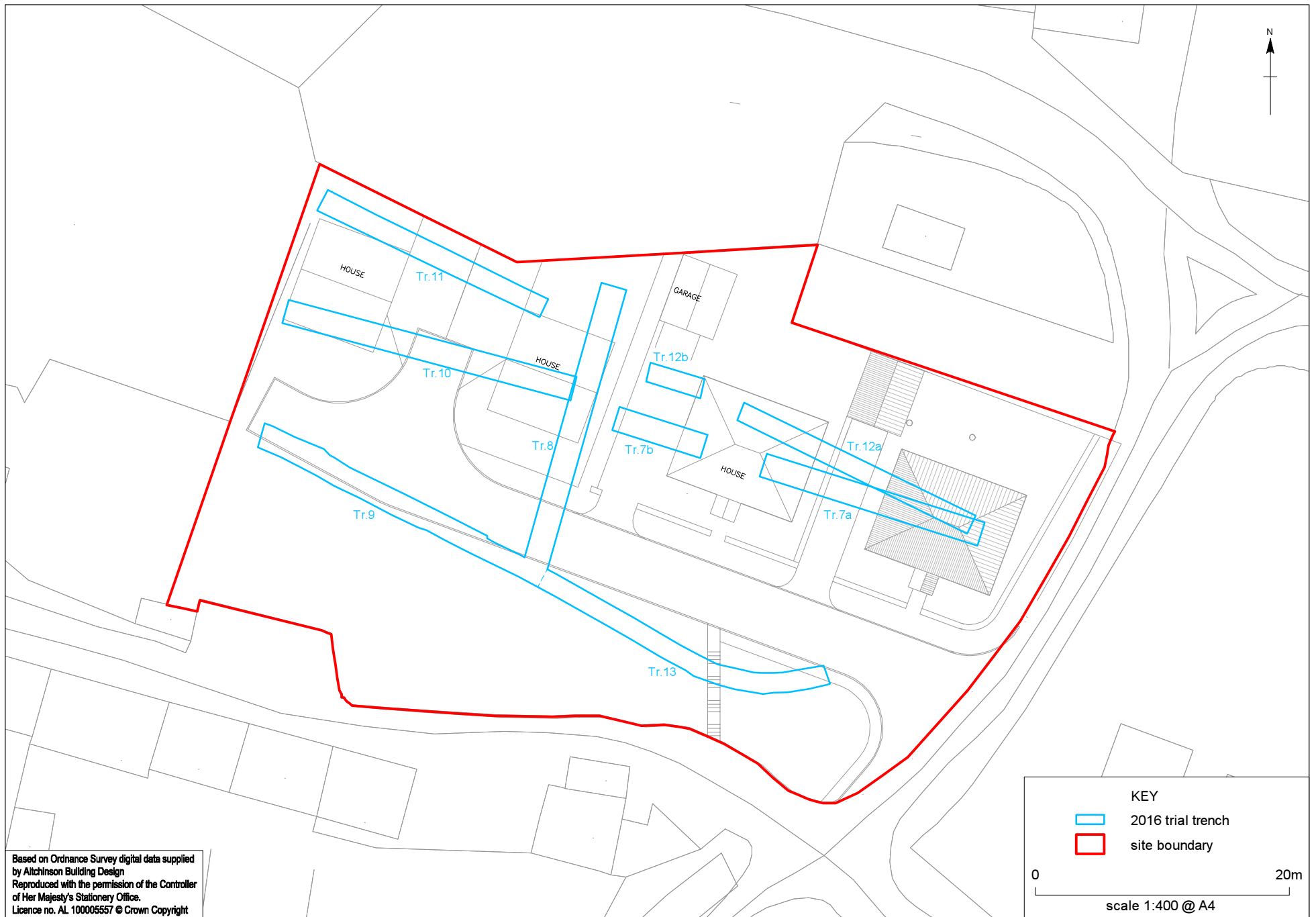
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Wark-on-Tweed: site location

Figure 1

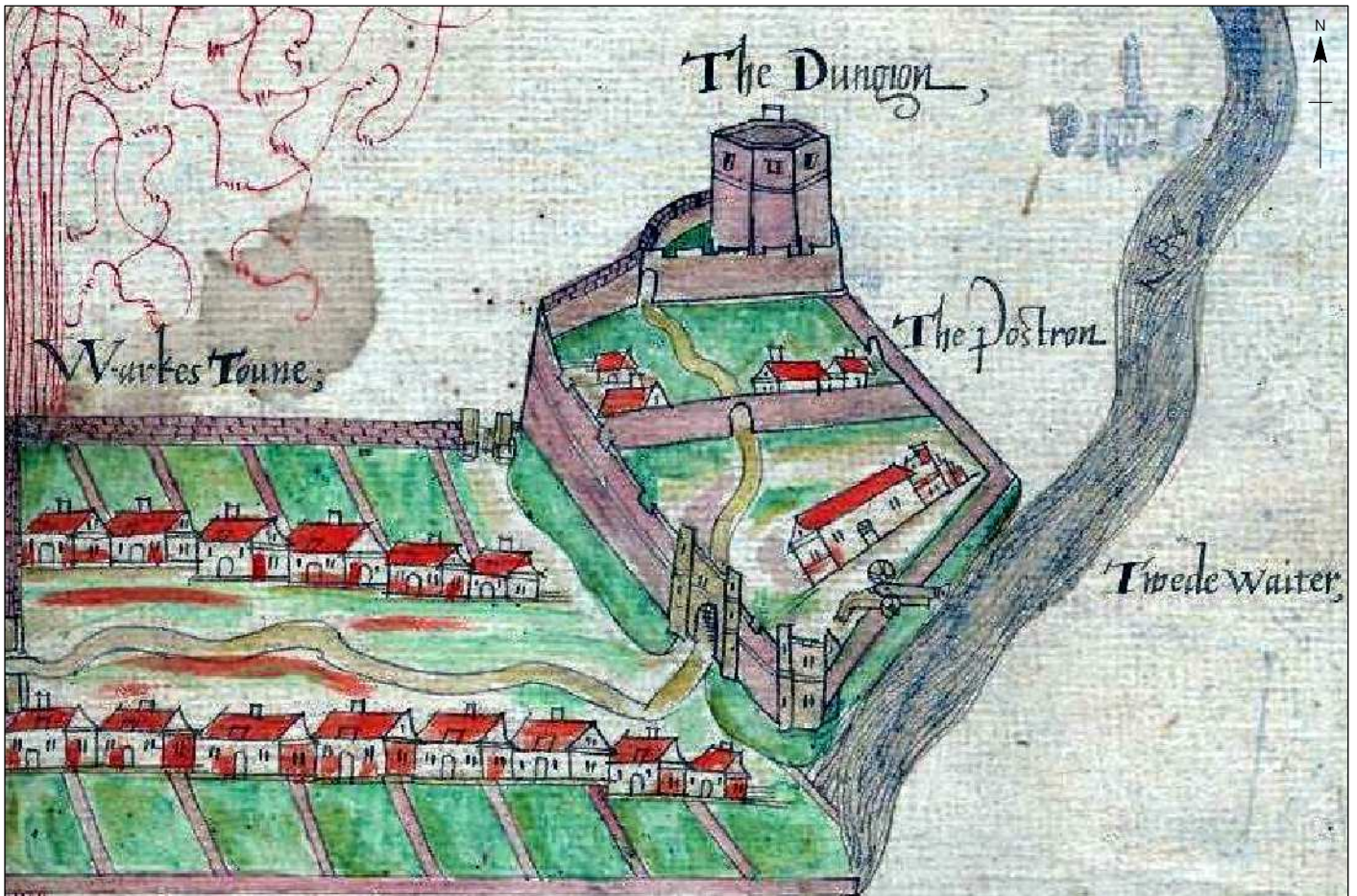


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Wark-on-Tweed: location of 2016 trial trenches over proposed development layout

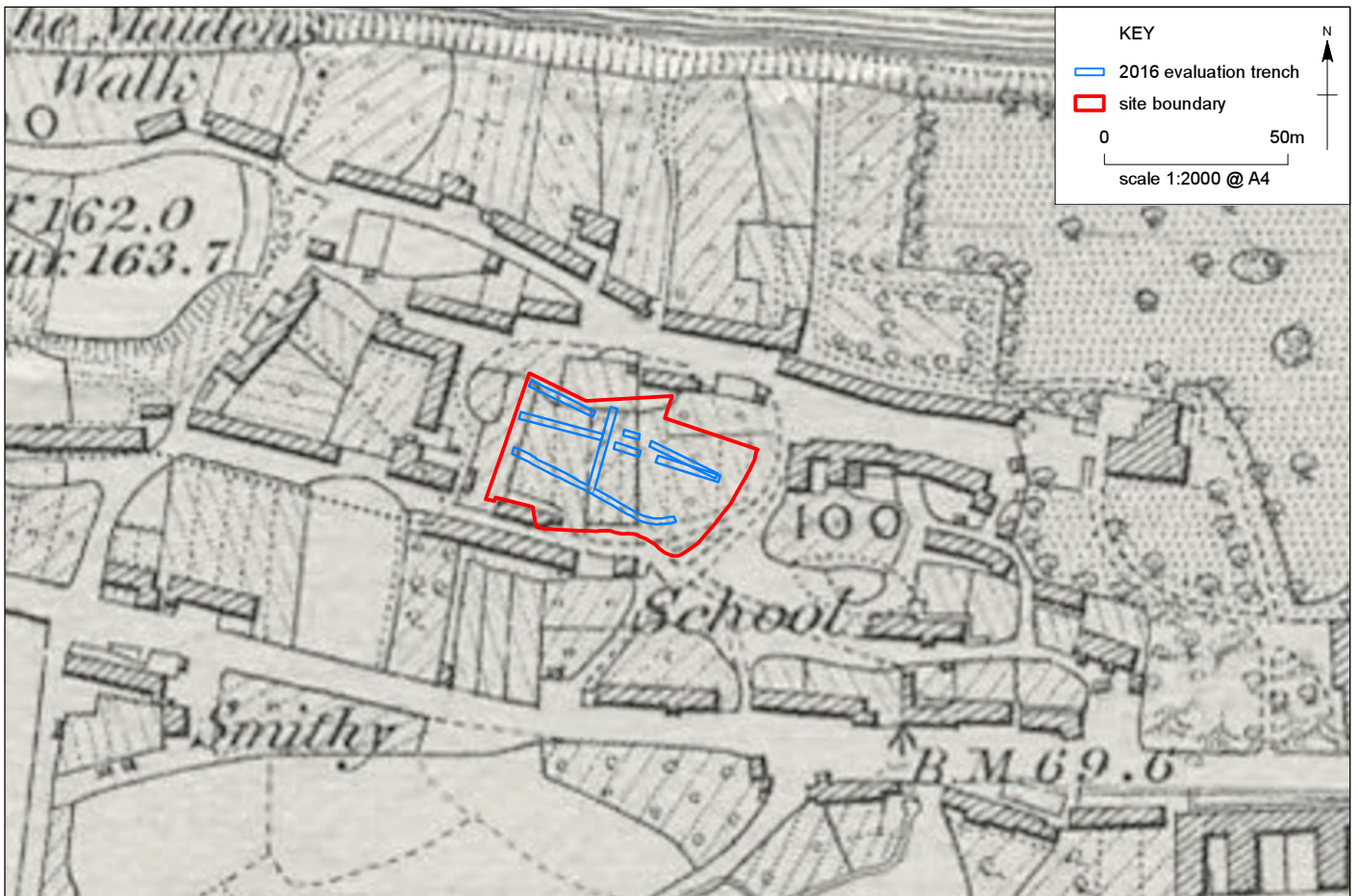
Figure 2



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Wark-on-Tweed: 16th century plan of Wark Castle for Sir Thomas Grey

Figure 3



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Wark-on-Tweed: Ordnance Survey map of 1860

Figure 4



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Wark-on-Tweed: overall plan of excavated trenches

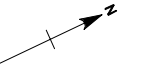
Figure 5

Trench 8



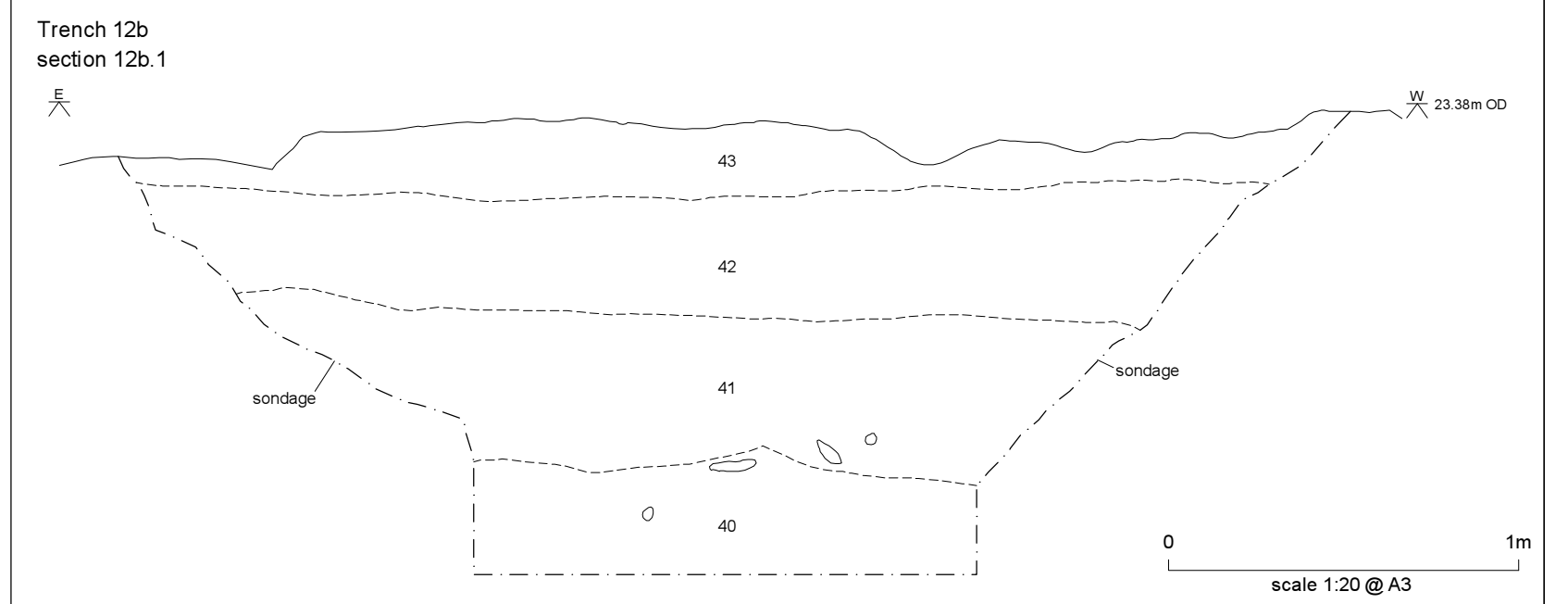
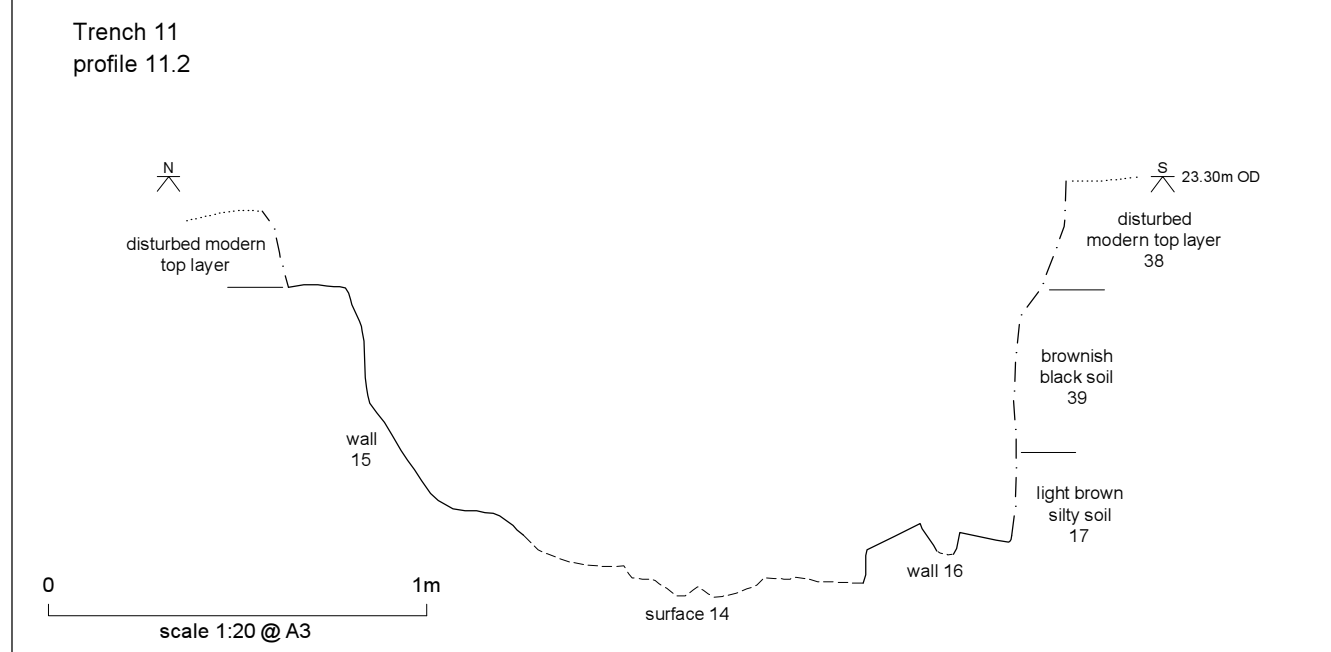
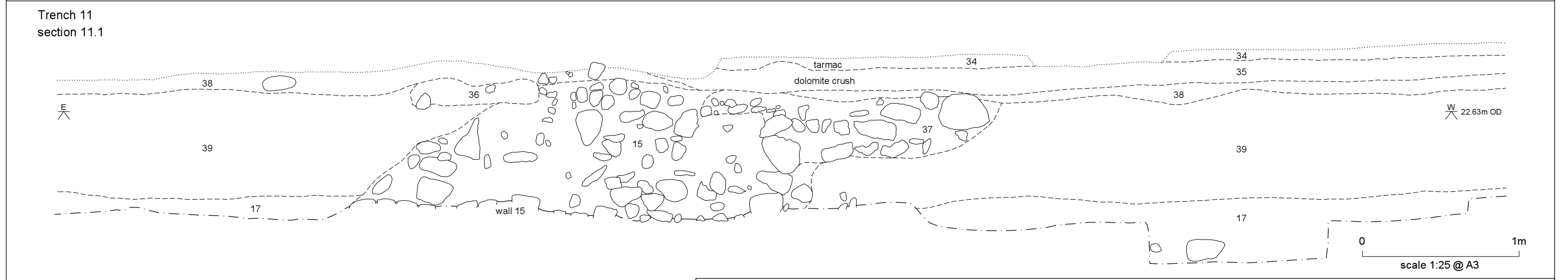
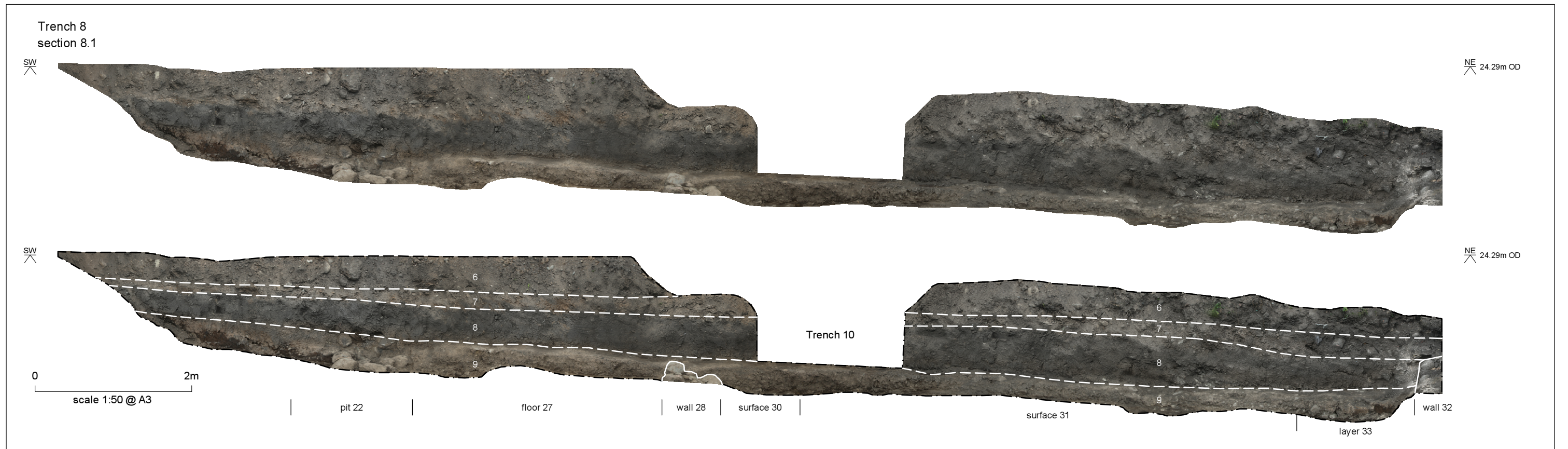
s.8.1

Trench 11



s.11.1

s.11.2



©NAA 2016 Wark-on-Tweed: Trench 8 section, Trench 11 section and profile and Trench 12B section

Figure 7



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Wark-on-Tweed: Trench 7A facing east,
scale 1m

Plate 1



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Wark-on-Tweed: Trench 7B facing west,
scale 1m

Plate 2



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Wark-on-Tweed: Trench 8 facing south, wall 28 with surface 30 in front and surface 27 behind, scales 1m and 0.5m Plate 3



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Wark-on-Tweed: Trench 10 facing west, scale 1m Plate 4



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Wark-on-Tweed: Trench 11 facing west, wall 15 (scaled) with wall 16 and surface 14 in foreground, scale 1m Plate 5



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Wark-on-Tweed: Trench 11 facing east, wall 44 with wall 15 behind, scale 1m Plate 6



©NAA 2016 *Wark-on-Tweed: Trench 12 facing north, Plate 7 surface 52, showing location of trial hole (see plate 8 below), scale 1m*



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Wark-on-Tweed: Trench 12a north facing section, scales 1m and 0.5m

Plate 8



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*Wark-on-Tweed: Trench 13 with Trench 9 Plate 9
beyond, facing west, scales 1m and 0.5m*