

LAND BETWEEN FERN BANK AND EAST VIEW, REAGILL, PENRITH, CUMBRIA

Archaeological Evaluation



Client: Keith Hall

Planning Application Ref.:
18/0238

NGR: NY 6033 1760 (centre)

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Non-Technical Summary

Following the submission of a planning application for the construction of a residential development on land between Fern Bank and East View, Reagill, Penrith, Cumbria, Greenlane Archaeology was commissioned to carry out an archaeological evaluation of the site, preceded by a rapid desk-based assessment.

The site occupies part of a field to the west side of the hamlet of Reagill; early maps of the area show that it has remained largely unchanged since the mid-19th century. However, Lidar imagery shows a several features of possible archaeological interest within the site boundary comprising possible platforms and boundaries. These and some boundaries and other features shown on the early maps were specifically targeted during the evaluation, which comprised excavation of seven linear trial trenches each 20m long. The fieldwork was undertaken by Greenlane Archaeology in January 2019.

Across the site a shallow layer of topsoil was revealed above the clay natural. Below the topsoil, on the south side of the site, redeposited material was revealed, some of which clearly formed the earthworks in this area. This was cut by stone field drains and there were also more modern drains in this area. Elsewhere deposits was found to be very shallow and a shallow ditch, clearly of post-medieval date and corresponding with a feature connecting to a trough against the eastern field boundary, was revealed in one trench and a possible track towards the north side. A trench crossing the bank along the west side of the site was revealed to form the edge of a finer and more improved soil.

Despite the lack of dating evidence for the remains that were discovered it is apparent that several phases of activity could be identified, some of which are of local significance. The first related to the field system of which the bank along the west side forms part, which, although difficult to date, is similar to other field systems in the area thought to date from the late prehistoric period onwards. The redeposited material on the southern side of the site is thought likely to have derived from the coal mines to the west and was probably placed in this field in order to improve access from the mines to the road. Later features, including the drains and a track, relate to subsequent attempts to improve the land from the 19th century onwards.

Acknowledgements

Greenlane Archaeology would like to thank Keith Hall for commissioning the project, Jack Hall for providing the excavator and driver (Neil), and Stuart Roberts for co-ordinating the fieldwork and providing information about the site. Further thanks are due to Jeremy Parsons, Historic Environment Officer (Development Control), at Cumbria Country Council (CCC), for his comments on the project.

The project was carried out by Dan Elsworth and Tom Mace. The illustrations were produced by Tom Mace and the finds were processed by Dan Elsworth and assessed by Jo Dawson (post-medieval finds), and Dan Elsworth (stone) at Greenlane Archaeology. The project was managed by Dan Elsworth, and the report was edited by Jo Dawson.

1. Introduction

1.1 Circumstances of the Project

1.1.1 Following the submission of a planning application (ref. 18/0238) for a residential development on land between Fern Bank and East View, Reagill, Penrith, Cumbria (centred on NGR NY 6033 1760) a condition (No. 7) was placed on the decision notice by Eden District Council, following advice from the Historic Environment Officer at Cumbria County Council, requiring that the site be subject to an archaeological evaluation. This was to comprise a rapid desk-based assessment, a visual inspection of the site, and the excavation of a series of linear trial trenches totalling at least 230m² prior to the construction of the proposed new buildings on the site to assess whether any below-ground remains of archaeological interest are present. Greenlane Archaeology was subsequently appointed by Keith Hall (hereafter 'the client'), to carry out the archaeological evaluation. In response to this Greenlane Archaeology produced a project design (*Appendix 1*) and following the acceptance of this by the Historic Environment Officer (HEO) at Cumbria County Council (CCC) the onsite work was undertaken between 22nd and 24th January 2019.

1.2 Location, Geology, and Topography

1.2.1 The site is located to the west side of the main road through the hamlet of Reagill in Crosby Ravensworth parish. It is approximately 4.5km north-east of Shap and 14.5km south-east of the Orton Fells, at approximately 260m above sea level (Ordnance Survey 2005; Figure 1).

1.2.2 The solid geology of the area comprises carboniferous limestone (Moseley 1978, plate 1), which is exposed as limestone pavement or else overlain by glacially-derived boulder clay (Countryside Commission 1998, 57). The landscape is characterised by large expanses of moorland and upland farmland divided by high limestone walls (Countryside Commission 1998, 56).

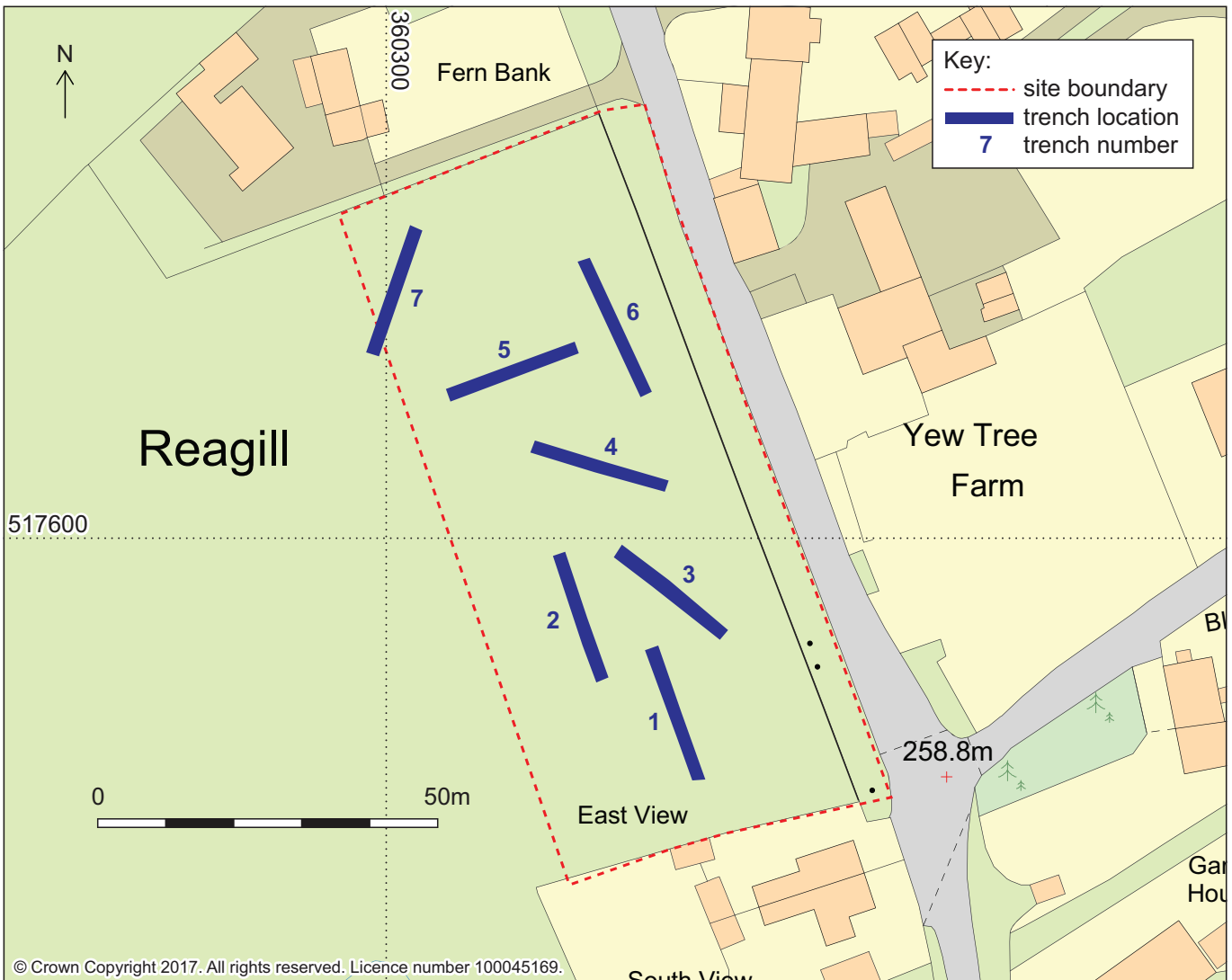
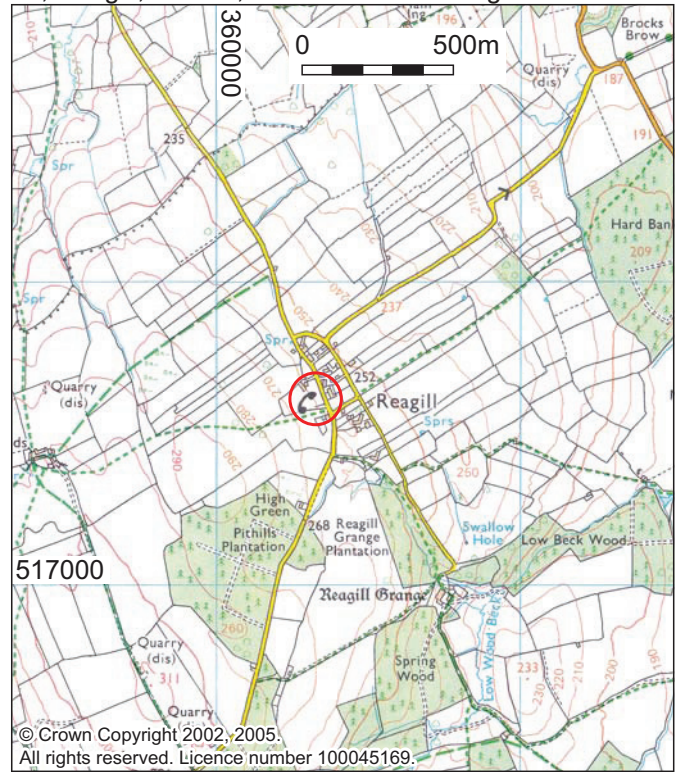
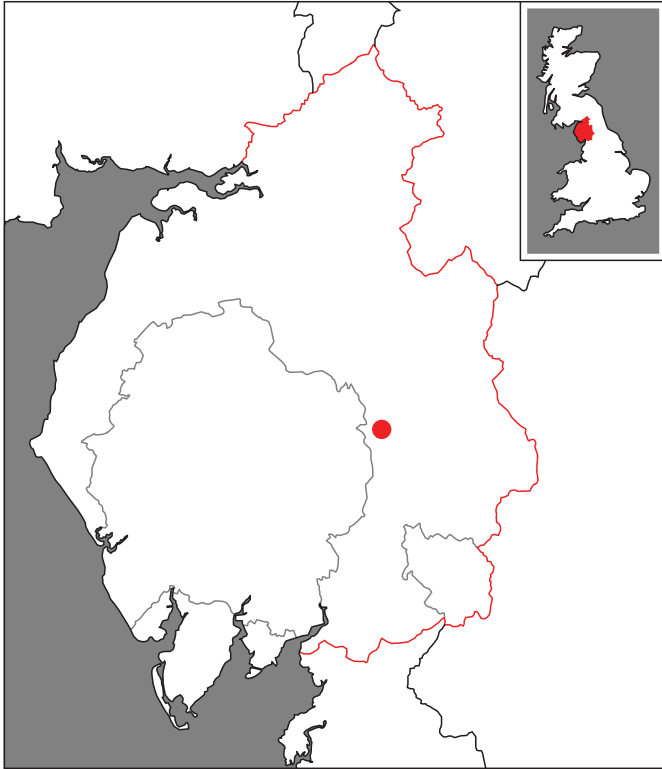


Figure 1: Site location

Client: Keith Hall

2. Methodology

2.1 Desk-Based Assessment

2.2.1 A desk-based assessment was carried out in accordance with the guidelines of the Chartered Institute for Archaeologists (CIfA 2014a). This principally comprised an examination of early maps of the site and published secondary sources. A number of sources of information were used during the compilation of the desk-based assessment:

- **Cumbria Archive Kendal (CAC(K))**: since this is currently closed relevant primary sources, principally early maps of the area, were examined online;
- **Greenlane Archaeology**: additional primary and secondary sources held in Greenlane Archaeology's library and online resources were also examined to provide information for the site background and map regression.

2.2 Archaeological Evaluation

2.2.1 The evaluation was carried out according to the standards and guidance of the Chartered Institute for Archaeologists (CIfA 2014b) and comprised the excavation of seven evaluation trenches, numbered from 1 to 7 from south to north. Each trench was 1.8m to 2.0m wide and approximately 20m long apart from Trench 6, which was 22m long. The south-west end of Trench 7 fell slightly outside the site boundary, however, the area of trenching within the site boundary still totalled almost 270m², which exceeds the minimum area requested by the brief. Excavation was discontinued once the natural geology was reached, which was typically around 0.2m to 0.4m below the ground surface at a height of between 256m and 259m above sea level.

2.2.2 The topsoil was removed using a mechanical excavator with a toothless bucket and underlying deposits were cleaned and further investigated by hand. All finds were collected from all deposits, as far as was practical. The following recording techniques were used during the evaluation:

- **Written record**: descriptive records of all deposits and features (see *Appendix 2*) were made using Greenlane Archaeology *pro forma* record sheets, specifically trench record sheets;
- **Photographs**: photographs in both 35mm colour print and colour digital format (jpeg and RAW) were taken of all archaeological features uncovered during the evaluation, as well as general views of the site, the surrounding landscape, and working shots. A selection of the colour digital photographs is included in this report and the remainder are included in the archive. A written record of all of the photographs was also made using Greenlane Archaeology *pro forma* record sheets (Greenlane Archaeology 2007);
- **Instrument survey**: the trenches and topographic features were surveyed using a Leica reflectorless total station which captures the survey data in as a digital .DXF file that can then be processed in AutoCAD. This enabled the location of each trench to be positioned and allowed levels above Ordnance Datum to be provided through reference to a nearby spot height;
- **Drawings**: no features of archaeological interest suitable for producing more detailed drawings were encountered so all of the drawings were produced using the total station, although sketches were made on the trench record sheets.

2.3 Finds and Samples

2.3.1 **Collection**: all of the finds were recovered by hand and stored in self-seal bags with white write-on panels on site before being removed for processing and assessment.

2.3.2 **Processing**: artefacts were washed, dried in a drying oven, and packaged appropriately in self-seal bags with white write-on panels.

2.3.3 **Assessment and recording:** the finds were assessed through visual examination, identified where possible by comparison with published examples, and a list of them was compiled (see *Appendix 3*).

2.3.4 **Environmental Samples:** no samples were collected as no suitable deposits were encountered.

2.4 Archive

2.4.1 A comprehensive archive of the project has been produced in accordance with the project design, and current ClfA standards and guidance (ClfA 2014c). The paper and digital archive and a copy of this report will be deposited in the Cumbria Archive Centre in Kendal (CAC(K)) after the completion of the project. On completion of the project a copy of this report will be provided for the client and a copy will be retained by Greenlane Archaeology. In addition a digital copy will be provided to the Historic Environment Record at Cumbria County Council, and a record of the project will be made on the OASIS scheme.

3. Desk-Based Assessment

3.1 Introduction

3.1.1 The desk-based assessment is intended to place the results of the evaluation in their local historical and archaeological context and primarily involved the examination of early maps and consultation of published histories of the area.

3.2 Map Regression

3.2.1 **Early maps:** although there are early, typically county-wide, maps that include the area, they are generally very small scale and are not included in this section as they are not detailed enough to be useful in understanding the development of the proposed development site. The most useful maps for understanding the development of the site date from the mid-19th century onwards.

3.2.2 **Tithe map, 1845:** the area is not shown on the tithe map for the township of Reagill, which was in Crosby Ravensworth parish, so it was presumably not subject to tithes (NA IR 29/27/3 1845).

3.2.3 **Ordnance Survey, 1863:** this is the first edition Ordnance Survey map at a scale of 1:10,560 (Plate 1). The site is spread across three fields to the west of the main north/south thoroughfare through Reagill. There is a track from the north-west corner of the area to what appears to be a small building to the north-east of the centre of the site.

3.2.4 **Ordnance Survey, 1898:** this is the first edition of the Ordnance Survey map at a scale of 1:2,500 (Plate 2). The north boundary of the field at the south end of the area has changed since the earlier edition, it is now slightly more east/west, and there is an east/west track marked across the field south of that (Plate 2; cf. Plate 1). The possible structure marked to the north-west of the centre of the area on the earlier map has also been removed and a trough is now shown to the east.

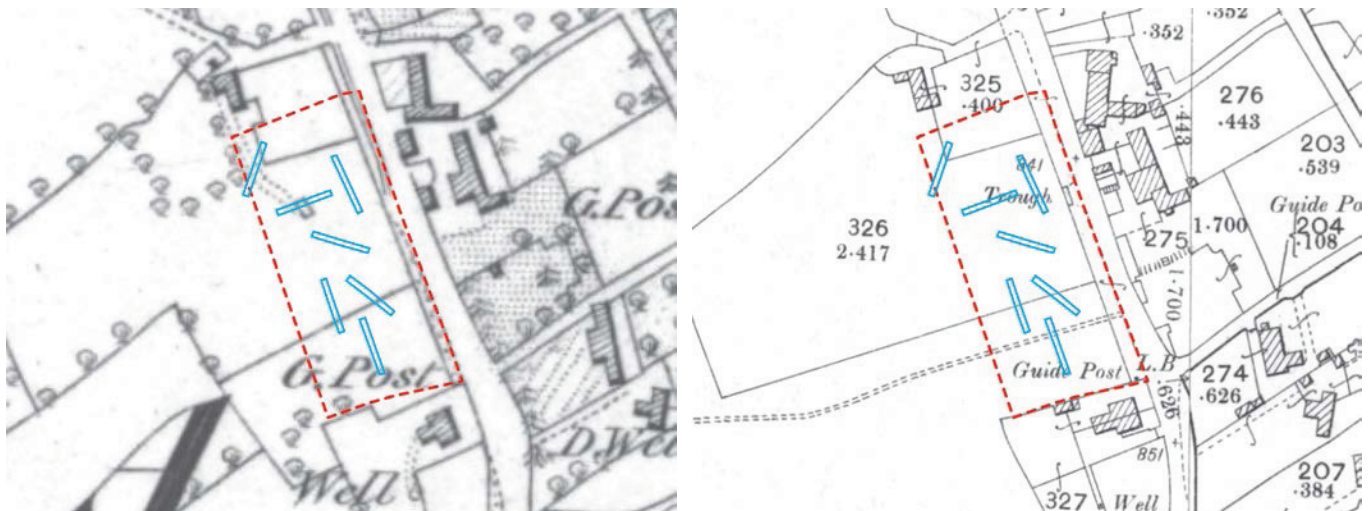


Plate 1 (left): Extract from the 1:10,560 Ordnance Survey map of 1863, showing the site boundary and evaluation trench locations

Plate 2 (right): Extract from the 1:2,500 Ordnance Survey map of 1898, showing the site boundary and evaluation trench locations

3.2.5 **Ordnance Survey, 1915:** the field boundary at the north end of the area has been removed while the south end of the area remains unchanged (Plate 3; cf. Plate 2).

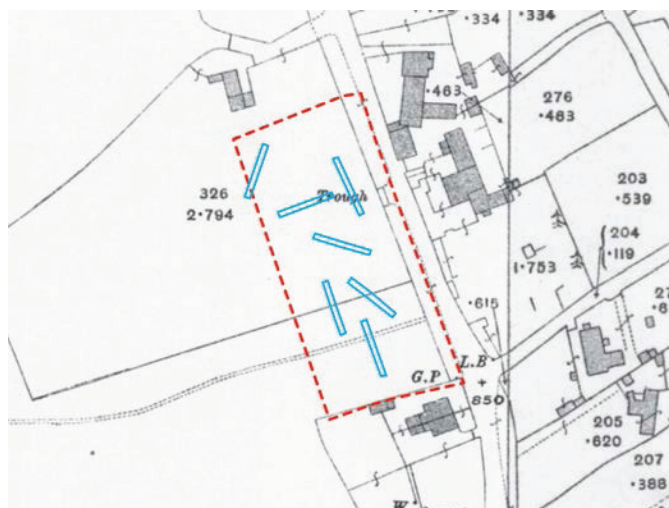


Plate 3: Extract from the 1:2,500 Ordnance Survey map of 1915, showing the site boundary and evaluation trench locations

3.3 Site History

3.3.1 **Prehistoric Period (c11,000 BC – 1st century AD):** there is limited evidence for activity in the county in the period immediately following the last Ice Age, though this is typically found in the southernmost part on the north side of Morecambe Bay. Excavations of a small number of cave sites have found artefacts of Late Upper Palaeolithic type and the remains of animal species common at the time but now extinct in this country (Young 2002), with human remains found in one of these caves also dated to the end of this period (Smith *et al* 2013). A small group of bone harpoon points found near Crosby-on-Eden perhaps belongs to this period, in which case they would be the closest examples to the site (Hodgson 1895). The county was also clearly inhabited during the following period, the Mesolithic (c8,000 – 4,000 BC), as large numbers of artefacts of this date have been discovered during field walking and eroding from sand dunes along the coast, but these are typically concentrated in the west coast area and on the uplands around the Eden Valley (Cherry and Cherry 2002). More recent work has identified an extensive area of Mesolithic activity on the River Eden near Carlisle (Clark 2010) and field walking elsewhere on the same river has provided further evidence (Clarke *et al* 2008), perhaps demonstrating the importance of the Eden and its tributaries. These discoveries demonstrate that river valleys, lakesides, and coastal areas are a common place for such remains to be discovered (Middleton *et al* 1995, 202; Hodgkinson *et al* 2000, 151-152) and further remains of similar date are likely to exist in the local area.

3.3.2 In the following period, the Neolithic (c4,000 – 2,500 BC), large scale monuments such as burial mounds and stone circles begin to appear in the region and one of the most recognisable tool types of this period, the polished stone axe, is found in large numbers across the county, having been manufactured at Langdale (Hodgson and Brennand 2006, 45). Probable Neolithic remains closer to the site include the large stone circle at Gamelands near Orton, and the Shap Avenue (Clare 1978; 2007, 80-83; Barrowclough 2010, 109-110), and a timber circle that continued in use into the Bronze Age (Turnbull and Walsh 1997), and the wider area is prolific in the number of stone circles it contains (Turner 1986). During the Bronze Age (c2,500 – 600 BC) monuments, particularly those thought to be ceremonial in nature, become more common still, and it is likely that settlement sites thought to belong to the Iron Age (c600 BC – 1st century AD) have their origins in this period. These have been identified across the upland parts of Cumbria, and are defined by clearance cairns and associated boundaries present across the county (Quartermaine and Leech 2012). The majority of these sites have not seen modern excavation so their exact dating is uncertain. Sites that can be specifically dated to the Iron Age are very rare and there is likely to have been a considerable overlap between the end of the Iron Age and the beginning of the Romano-British period; it is evident that in this part of the country, initially at least, the Roman invasion had a minimal impact on the native population in rural areas (Philpott 2006, 73-74).

3.3.3 Romano-British to Early Medieval Period: (1st century AD – 11th century AD): the Roman military presence in the North West is apparent from the existence of forts, which in many cases led to the formation of associated civilian settlements (*vici*), and the supply network of roads and coastal trade, as well as the incidence of Roman artefacts such as coins (Philpott 2006, 71). The Lune and Eden valleys provided a route of access to Carlisle for the Roman advance (*ibid.*, 63) and the route northwards is still apparent along the modern A6 between Carlisle and Penrith (Shotter 2004, 31), although the main routes north/south in this area are thought to have passed to the east of the site via Brougham and Old Penrith (Shotter 2004, 53). A large proportion of the identified Romano-British settlement sites in Cumbria are located to the south and east of Penrith (Philpott 2006, 75) and there are extensive field systems around the wider Eden Valley area that are likely to have been in use in this period and beyond, although they may have earlier origins (Higham and Jones 1975; 1991). The status and manner of use of the settlement sites is debatable, although the discovery of a Roman parade helmet on a supposedly 'native' site at Crosby Garrett suggests potentially close contacts with quite high status members of the Roman military (Breeze and Bishop 2013; Breeze 2018).

3.3.4 Following the cessation of Roman administration in the early fifth century the region fragmented into smaller kingdoms. Much of what is now Cumbria probably came under the control of Rheged, a kingdom that seems likely to have extended across the border between what became England and Scotland and whose central territory may have been focussed on the nearby Lynvenet valley (Clarkson 2010, 68-78; Breeze 2012) yet by the mid-seventh century the area seems to have been securely under Northumbrian rule (Kirkby 1962, 80-81). Firmly dated archaeological evidence for the immediate post-Roman period in the county is sparse due in part to poor site visibility, which often consists of traces of rural settlements which have been heavily truncated (see discussion in Philpott 2006, 59). Furthermore, there is inevitably a great deal of uncertainty with dating settlement sites on stylistic grounds alone given the persistence of traditional styles from the Roman to the early medieval period, however, a rectangular building with earth-fast timber posts excavated at Shap has tentatively been attributed to the seventh to eighth century on the basis of loom weight fragments (Heawood and Howard-Davis 2002, 157-8). In the wider context of possible Anglian settlement at Fremington and Brougham (although again the evidence for this classification is slight), a settled rural hinterland around the foci at Dacre and Penrith is suggested for the early medieval period (*ibid.*, 168).

3.3.5 The arrival of Norse settlers between perhaps the late ninth and early 10th century had a considerable effect on the area, in particular on place-names (Edwards 1998, 7-8). Physical evidence for settlement is rare, although an increasing number of burials of Norse type from both rural and urban contexts are known (see Paterson *et al* 2014; McCarthy and Paterson 2015; McCarthy *et al* 2015) with a furnished Viking burial known at Hesketh-in-the-Forest, north of Penrith perhaps the closest to the site (Edwards 1998, 10-12). Several complete and fragmentary 'Viking Age' (late ninth and early 10th century) silver brooches have also been found in the Penrith area, most notably on Flusco Pike, three miles to the west of Penrith (Edwards 1998, 33-36; Richardson 1996). Place-name evidence indicates that there was a complicated mixture of people settled in the area that is now Cumbria, with the local area containing examples primarily of Old English and Norse origin (Smith 1967, 154-157). Politically the area remained very mixed during the ninth and 10th century (see Elsworth 2018).

3.3.6 Medieval Period (11th century AD – 16th century AD): the medieval period in general in Cumbria was one of considerable initial growth, followed by serious decline in the 14th century as a result of the combined effects of Scottish raids and disease in both people and animals (Winchester 1987, 46-47). Reagill is first recorded in 1176, the name referring to a 'ravine haunted by foxes' (Smith 1967, 157), and was granted to Shap Abbey in c1200, after which it passed to the Wharton family on the Dissolution (Winchester 2016, 107).

3.3.7 Post-medieval Period (16th century AD – present): by the end of the medieval period there was a gradual economic improvement across the region (Winchester 1987, 48). In general it was not until the beginning of the post-medieval period and the Industrial Revolution that rural areas such as this began to see any substantial new development as the population began to rise and demand for land and new housing led to a considerable amount of building (Pearsall and Pennington 1989, 256). As with many other settlements in the local area Reagill was less noticeably affected by this, had a relatively

static population throughout the 19th and early 20th centuries, and continues to be economically dominated by agriculture (Winchester 2016, 107). However, it was not untouched by industrialisation as a short lived coal mining operation existed less than 500m to the west of the site, which began in the late 17th century and ended in the early 19th century (Tyson 2004). Reagill is also unique in this period as the home to an 'Image Garden' of sculptures largely based on classical themes constructed by local resident and amateur artist Thomas Bland (Longville 2004).

3.4 Lidar

3.4.1 Lidar data is freely available for the area (Plate 4) and this revealed several features of possible archaeological interest within the site boundary. These primarily comprise a range of irregular earthwork platforms towards the centre and south and more linear ditches, orientated approximately east/west to the north. These earthworks are apparently bounded by a large bank orientated approximately north/south to the west, beyond which are further linear earthworks outside of the site boundary. All of these earthworks were evident on site to some degree and those within the site boundary were surveyed during the evaluation (see Figure 2).

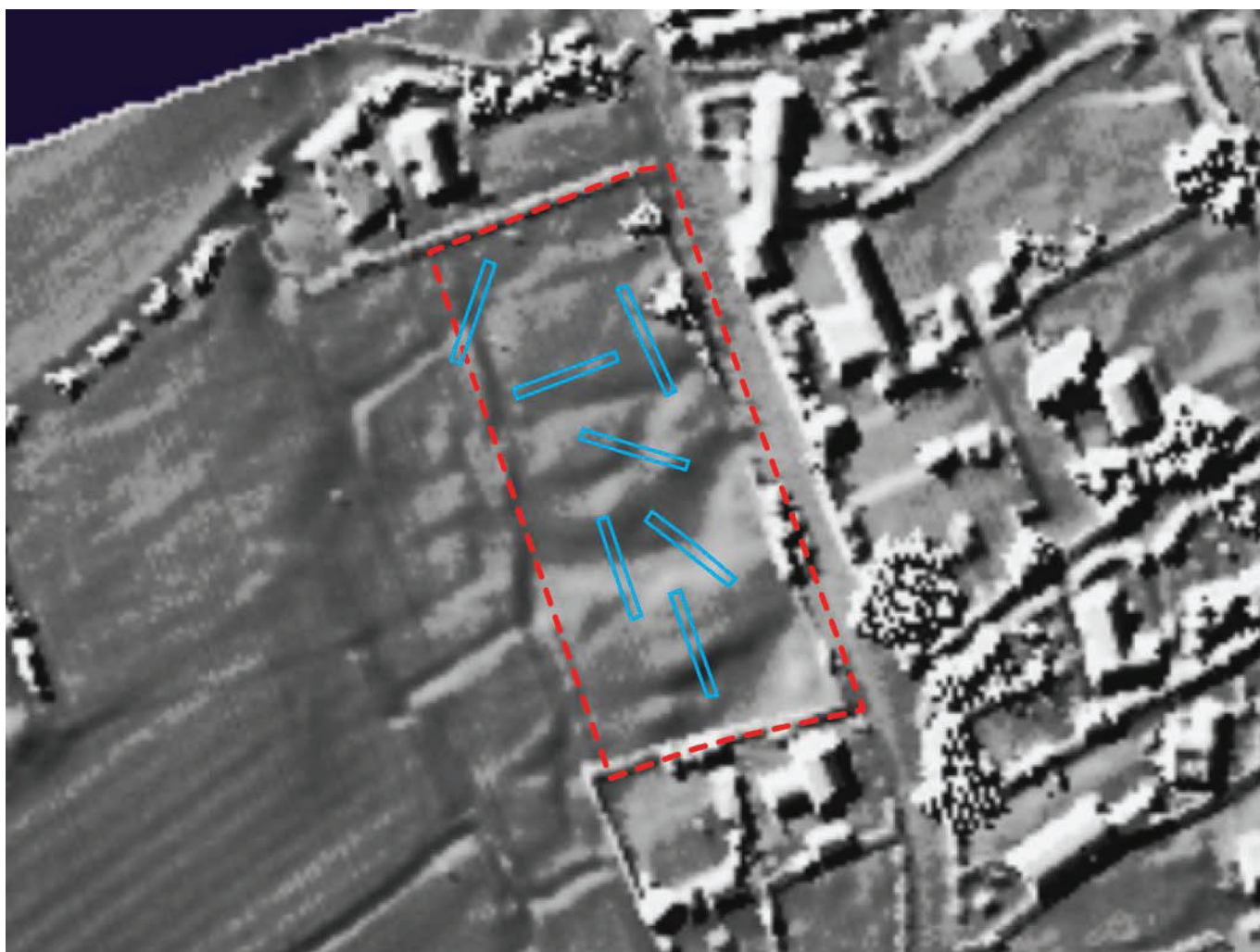


Plate 4: Lidar image of the site (houseprices.io 2019), showing the site boundary and evaluation trench locations

3.5 Conclusion

3.5.1 The available maps show that the site has remained largely undeveloped since at least the mid-19th century. The only substantive changes to the site have been alterations to the field boundaries, although trackways and a small structure are also shown. The lidar imagery shows a number of

earthworks of potential archaeological interest within the proposed development site, all of which do not obviously correspond to any features in the early mapping.

3.5.2 The history of the local landscape demonstrates that there is evidence for occupation in the wider region dating back to the end of the last Ice Age, but more locally it is perhaps likely to be dominated by evidence relating to the medieval settlement and industrial activity associated with the post-medieval iron mines.

4. Fieldwork Results

4.1 Trench 1

4.1.1 Trench 1 was 20m long and orientated north/south (Plate 5 and Plate 6; Figure 2). The topsoil (**100**) was a soft, mid brownish-grey silty clay, up to 0.3m thick. Below that was a dumped deposit of a firm pale orange clay (**101**), probably redeposited natural, which was between 0.3m and 0.4m thick (Figure 3). This dumped material was mottled with coal flecks and abundant angular gravel and some larger pebbles, and was cut into by a stone drain at the north end of the trench (Plate 7). The underlying firm clay natural (**102**) varied from dark grey to mid-orange. A twisted copper cable cut into the natural at the south end of the trench.



Plate 5 (left): Trench 1 viewed from the north

Plate 6 (right): Trench 1 viewed from the south-west



Plate 7: Stone drain in Trench 1

4.2 Trench 2

4.2.1 Trench 2 was 20m long and orientated north/south (Figure 2). The soft, mid greyish-orange silty clay topsoil (**200**) was up to 0.3m thick. Below that was a dumped deposit of firm, mid greyish-orange clay (**201**), up to 0.5m thick, with angular gravel (30%), rounded gravel (10%), and boulder-sized inclusions (Plate 8 and Plate 9). This dumped material was cut into by a 0.2m wide gravel-filled drain towards the north end of the trench (Figure 3). The underlying natural (**202**) was a mixed mid-orange and grey clay, with 10% rounded gravel. A stone drain was cut into the natural across the trench.



Plate 8 (left): Trench 2 viewed from the south, after removal of the topsoil (200)



Plate 9 (right): Trench 2 viewed from the north, after removal of the topsoil (200)



Plate 10 (left): Gravel-filled drain in Trench 2



Plate 11 (right): Natural exposed in Trench 2, viewed from the south



Plate 12: Stone drain in Trench 2

4.3 Trench 3

4.3.1 Trench 3 was 20m long and orientated north-west/south-east (Plate 13 and Plate 14; Figure 2). The topsoil (**300**) was a soft, mid brown, silty clay, up to 0.2m thick. Below that was a dumped deposit (**301**) of firm, mottled pale orangey grey clay, with 30% angular gravel (Figure 3). This deposit was left high at the south-east end of the trench where it was cut across by a stone drain (Plate 15; Plate 15). The same deposit formed a noticeable linear feature across the trench at the north-west end, presumably the result of infilling a slight depression in this area. The natural was a firm, mid brownish orange clay (**302**), which was cut by a modern drain filled with pale grey gravel and grey clay at the north-west end of the trench (Plate 16).



Plate 13 (left): Trench 3 viewed from the south-east

Plate 14 (right): Trench 3 viewed from the north-west



Plate 15 (left): Stone drain at the south-east end of Trench 3

Plate 16 (right): Gravel-filled drain at the north-west end of Trench 3

4.4 Trench 4

4.4.1 Trench 4 was 20m long and orientated north-west/south-east (Figure 2). There was a 0.15m thick layer of dark pink loose gravel (**400**) at the south-east end of the trench which formed a modern track. This was overlain in parts by a soft, mid orangey-brown silty clay topsoil (**401**). The topsoil overlay a dumped deposit of firm, mottled pale greyish orange clay (**402**), with 30% angular gravel inclusions (Plate 17 and Plate 18; Figure 3). This deposit became darker and stonier towards a noticeably wetter patch near the centre of the trench where there was clearly a depression running across this part of the field (Plate 19). The natural comprised firm, mid-orangey brown clay (**403**), with 20% angular gravel.



Plate 17 (left): Trench 4 viewed from the north-west

Plate 18 (right): Trench 4 viewed from the south-east



Plate 19: Natural (403) and darker patch of 402 in the centre of Trench 4

4.5 Trench 5

4.5.1 Trench 5 was 20m long, orientated east/west, and devoid of features (Plate 20 and Plate 21; Figure 2 and Figure 4). The topsoil layer (**500**), a mid-orangey-brown silty clay, was up to 0.25m to 0.3m thick above the firm, mid greyish orangey clay natural (**501**).



Plate 20 (left): Trench 5 viewed from the east

Plate 21 (right): Trench 5 viewed from the west

4.6 Trench 6

4.6.1 Trench 6 was extended to 22m to determine the extent of a linear feature at the south-east end of the trench (Figure 2 and Figure 4). The 0.25m thick topsoil (**600**) was a soft mid greyish brown sandy-silt with some small angular stone inclusions. Below that, cut into the natural (**605**) at the south-east end, was a small linear feature (**604**), possibly a narrow ditch or gully, 0.8m wide and 0.15m deep, extending along the limits of excavation of the trench, with three fills, each around 50mm thick. The uppermost fill was a mottled, mid brown sandy-silt (**601**), the central fill was a firm, mid yellowish brown clay with 20% angular cobbles (**602**), and the basal fill was soft, mid grey silt (**603**). This feature was continued by a shallow ditch aligned north-east/south-west evident on the surface, which continued to a trough adjacent to the eastern boundary. The natural was fairly firm, orange-brown sandy-clay to clay with frequent sub-angular stone inclusions.



Plate 22 (left): Trench 6 viewed from the north-west

Plate 23 (right): Trench 6 viewed from the south-east



Plate 24: Stony feature 604 at the south-east end of Trench 6

4.7 Trench 7

4.7.1 Trench 7 was 20m long, north-east/south-west, and cut across a bank at the south-west end (Figure 2). The soft, dark greyish orange, sandy silt topsoil (**700**) was between 0.2m and 0.3m thick. The bank at the south-west end comprised boulders along the north-east edge of a deposit of soft, mid orange silty clay (**702**) at the top end of the trench (Figure 4). Lower down, to the north-east, was a patch, up to 1.5m wide, of dark grey silty clay with 50% angular gravel (**701**). This was up to 0.15m thick on top of the natural (**703**), which comprised firm, pale yellowish orange clay.



Plate 25 (left): Trench 7 viewed from the north-east

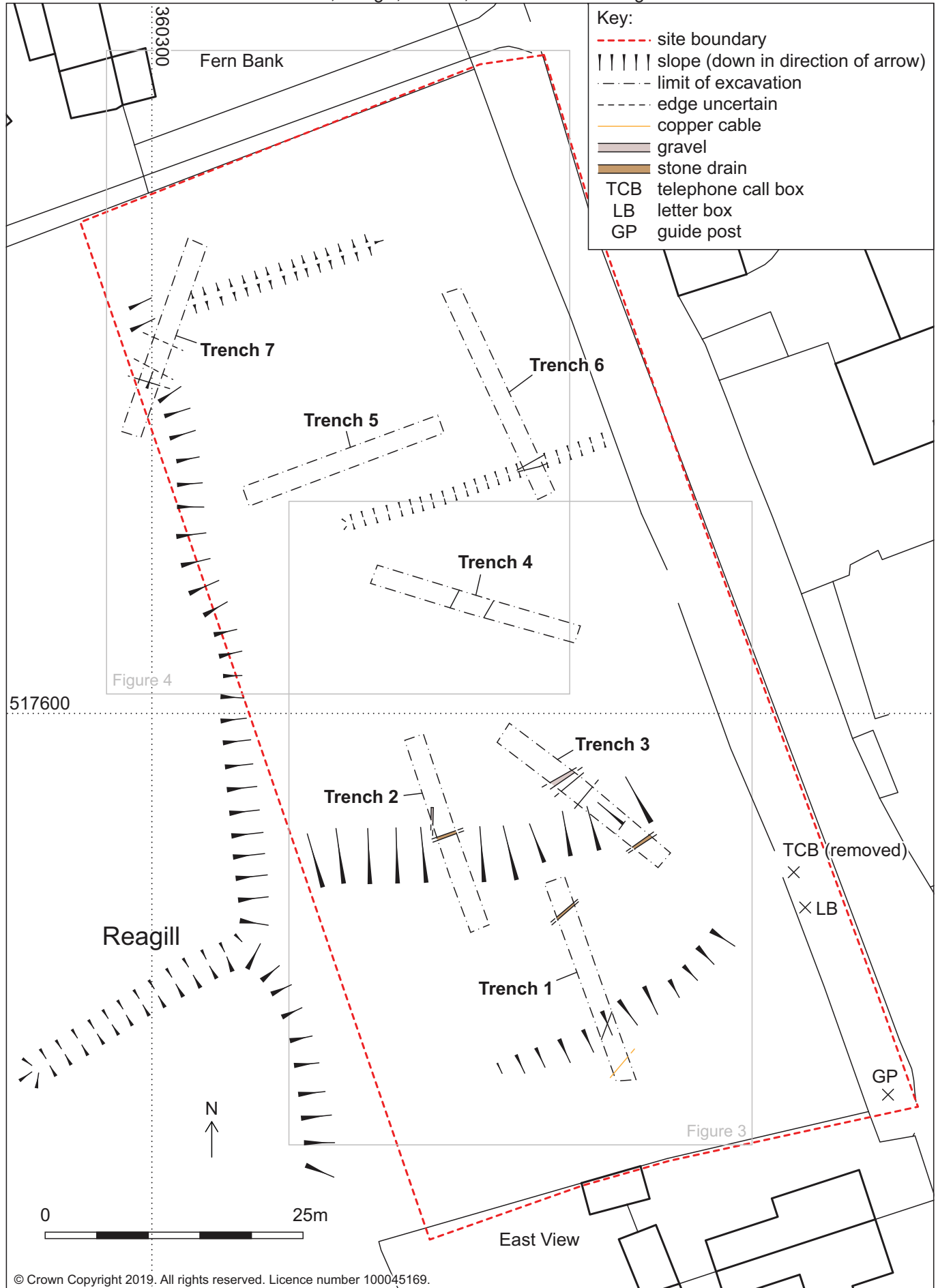
Plate 26 (right): Trench 7 viewed from the south-west



Plate 27: Bank at the south-west end of Trench 7



Plate 28: Gravel patch (701) in Trench 7



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Figure 2: Topographic survey plan, showing trench locations

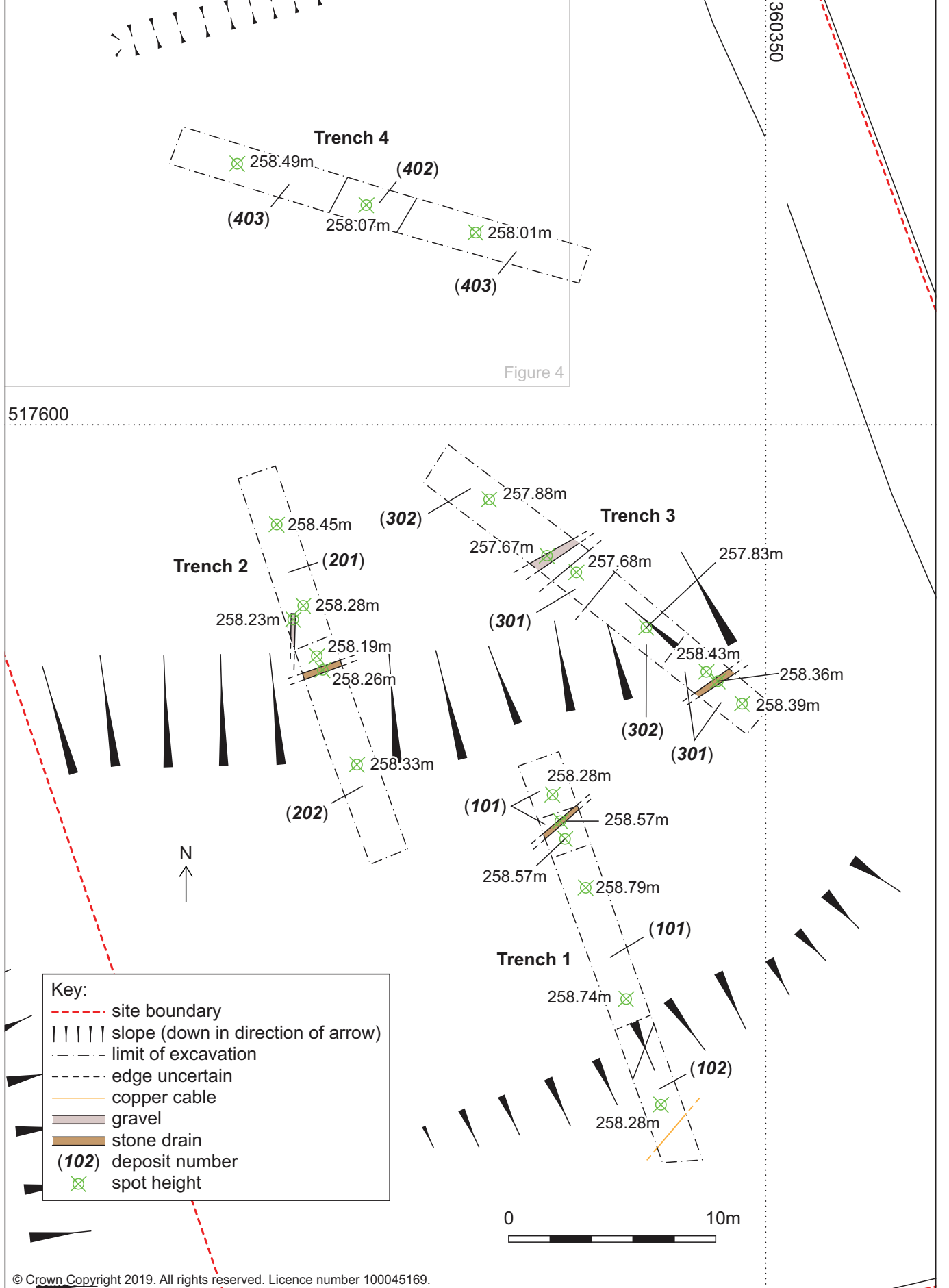
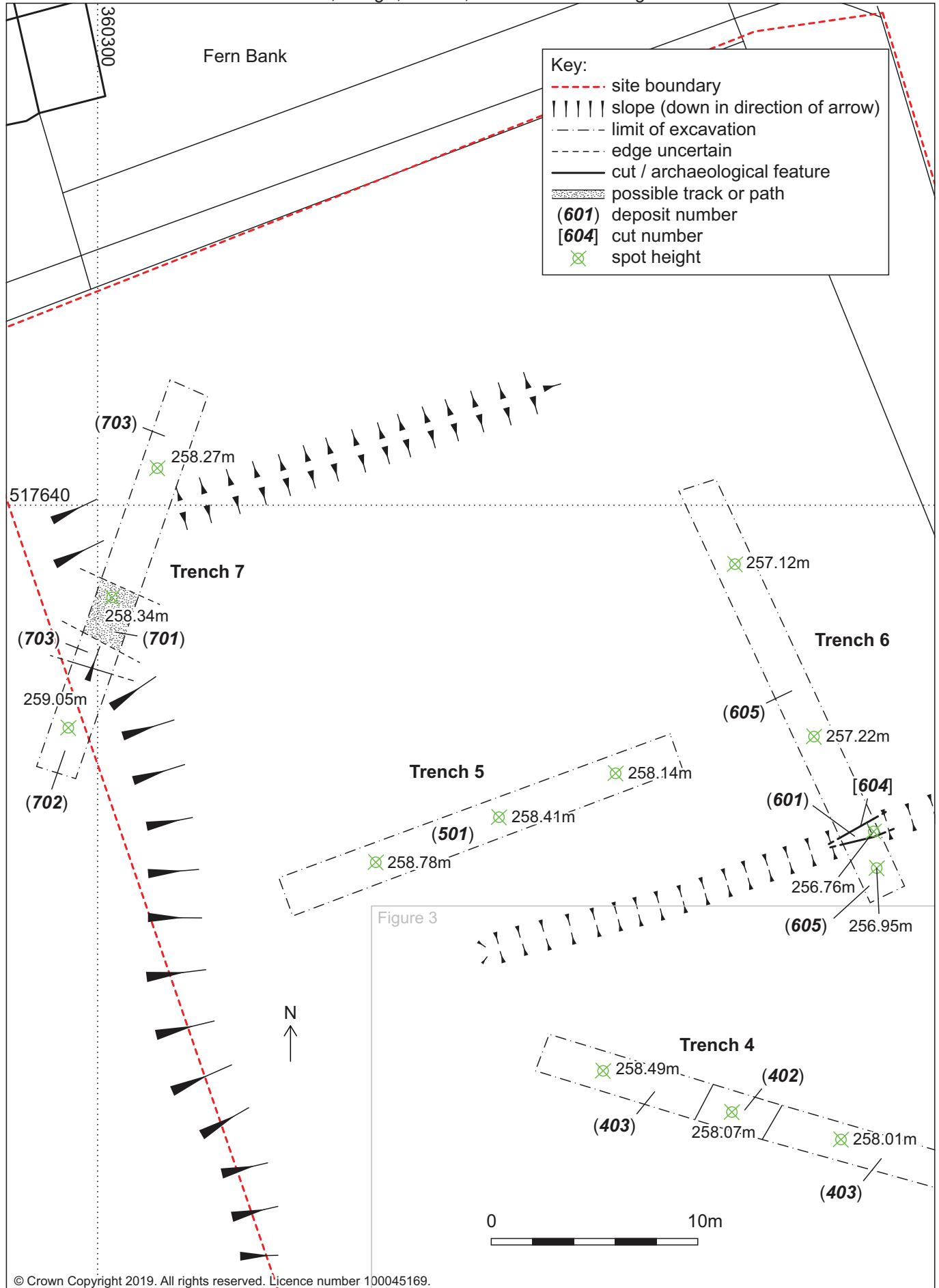


Figure 4

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Figure 3: Plan of Trenches 1 to 4

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Figure 4: Plan of Trenches 5 to 7

4.8 Finds

4.8.1 **Introduction:** in total, 12 finds were recovered by hand during the evaluation, the majority of probable or definite post-medieval date and recovered from topsoil deposits. A full list of the finds is presented in *Appendix 3* with a discussion below.

4.8.2 **Pottery:** a total of six fragments of post-medieval pottery were recovered during the evaluation. They are all fairly typical domestic forms of largely 18th to 19th century date and primarily comprise tablewares, although coarser kitchenwares are also represented.

4.8.3 **Glass:** a single fragment of glass was recovered during the evaluation comprising an opaque type of undiagnostic form. Such glass was in use from at least the Roman period onwards.

4.8.4 **Iron:** four fragments of iron were recovered from a single context (**301**), comprising two broken pieces of a horse shoe or clog iron and two pieces of wire or short nails. While not readily dateable the round section of the wire/nails suggests a post-medieval date while the horse shoe/clog iron is most likely 18th or 19th century.

4.8.5 **Stone:** the fragment of dressed stone would, in this location, be very difficult to explain, if it were not for the proximity of the group of sculptures on the opposite side of the road from the site in the 'Image Garden' created by Thomas Bland (Longville 2004). This piece undoubtedly represents a part broken from one of the existing statues, which seems likely given the evidence for a fixing or repair, or waste from a failed or unfinished work, which was presumably thrown over the wall into the field.

5. Discussion

5.1 Results

5.1.1 The topsoil (**100**, **200**, **300**, **401**, **500**, **600**, and **700**) in each trench was generally quite shallow, usually between 0.2m and 0.3m thick, with no discernible subsoil layer, and the underlying natural (**102**, **202**, **302**, **403**, **501**, **605**, and **703**) varied across the area from an orange-brown to grey clay.

5.1.2 There was a layer of dumped material below the topsoil in Trenches 1 (**101**), 2 (**201**), 3 (**301**), and 4 (**402**). All of these trenches are located towards the south-east end of the area and in each case this material was a pale orange/grey clay, with 30% angular gravel. This deposit broadly corresponded with the raised area/possible earthwork in Trenches 1 and 3 and it was also seemingly used to infill lower-lying areas of Trenches 3 and 4. It is conceivable that this material was derived from the mining activities to the west of the site, perhaps redeposited here to build up the roadside for easier access and/or improve the condition of the ground. Indeed, a narrow track is shown to cut across Trench 1 on the Ordnance Survey maps of 1898 and 1915 (Plate 2 and Plate 3 respectively), which connected to the gate to the south-east end of the site.

5.1.3 Stone drains were cut into this dumped deposit in Trench 1 and 3. Drains of this type were largely superseded by ceramic tiles in the mid-to-late 19th century (Davis and Davis 2013), which suggests this deposit dates from before then. Later gravel-filled cuts were also noted in Trenches 1 and 2, though these were clearly modern.

5.1.4 There was no evidence of the field boundary, the location of which has shifted slightly, which is shown to cut across Trenches 2 and 3 on the historic Ordnance Survey maps (see Plate 1 to Plate 3). This was apparently 'dug out' in recent memory (Keith Hall pers comm).

5.1.5 Trench 5 targeted the location of a possible small structure or enclosure marked on the 1863 edition of the Ordnance Survey map (Plate 1), but no remains associated with this were found.

5.1.6 A narrow ditch or gully (**604**) cut across the south-east end of Trench 6, the route of which could be traced on the surface as a slight depression and culminated at the trough midway along the north-east side of the area.

5.1.7 Midway along Trench 7 a patch of dark grey silty clay with 50% angular gravel was noted, which correlates with the position of a track marked at this end of the site in 1863 (the track was not shown on later editions; Plate 1, cf. Plate 2). A slightly embanked feature to the east side of Trench 7 probably relates to a field boundary marked hereabouts on the earliest editions of the Ordnance Survey maps (Plate 1 and Plate 2); however, this boundary had been removed by 1913 (Plate 3) and there was no trace of the return passing through the north-east end of the trench.

5.1.8 The south-west end of Trench 7 cut across an embankment along the south-west side of the site. This was marked by some larger stones set within a soft mid orange silty clay below the topsoil, which continued beyond the south-west of the trench. There is no boundary marked here on any of the Ordnance Survey maps, so this earthwork presumably pre-dates the post-medieval period.

5.2 Phasing

5.2.1 Phasing the deposits at features encountered during the evaluation is difficult given the lack of dating evidence recovered. However, it is possible to postulate the way in which the site developed from the available information.

5.2.2 **Phase 1:** the long bank along the west edge of the site (crossed by Trench 7) presumably pre-dates the early 19th century because it does not correspond to any of the boundary features shown in the early mapping and possibly forms part of a wider complex of earthworks extending outside of the site boundary. Dating these features is difficult due to the lack of diagnostic finds but on typological such earthworks have been extensively recorded in the wider area dating from the late prehistoric period onwards (see Higham and Jones 1975 for example). The evaluation did demonstrate that the soil bounded to the west of this earthwork had been improved and presumably therefore subject to

cultivation, unlike the rest of the site, further suggesting that it represents part of a larger field system used over a considerable period of time.

5.2.3 **Phase 2:** the redeposited material, which seems to have resulted in the earthworks on the south side of the site, in particular the large ramped area running to the southern gate, seems likely to have derived from mining activities far to the west. This material was presumably placed here to provide better access to the main road through Reagill. Elsewhere this material appears to have been used to infill low-lying areas, presumably also to improve the ground. Unfortunately, there was very little to help date this redeposited material, although the pieces of iron recovered from it in Trench 3 would seem to confirm a post-medieval date. In addition, the stone drains cut into these deposits are unlikely to post-date the early to mid-19th century after which time ceramic drains were widely adopted (Davis and Davis 2013).

5.2.4 **Phase 3:** later activity, comprising the creation of the stone drains (and more modern gravel-filled ones), the construction of the track in Trench 7, and the ditch in Trench 5, which seems to have been to allow water to drain across the field to the trough on the east side, is clearly post-medieval in date. This is likely to have occurred in the 19th century and later and relates to attempts to improve the ground in various ways.

5.3 Significance

5.3.1 While relatively few finds and features of archaeological interest revealed the redeposited material thought to relate to the mining to the east and the carved piece of stone likely to have derived from the 'Image Garden' to the east, are of some local interest. Perhaps more significant are the earthworks along the west side of the site, although these are largely outside of the proposed development area, and also the fact that the evaluation has provided an opportunity for some of the features observed in the lidar imagery to be recorded in more detail for future reference.

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Appendix 1: Project Design

Archaeological Evaluation Cover Sheet and Project Design

The Site	
Site Name	Land between Fern Bank and East View, Reagill, Penrith
County	Cumbria
NGR	NY 6033 1760

Client	
Client Name	Keith Hall

Planning	
Pre-planning?	No
Planning Application No.	3/18/0238
Condition number	7
Local Planning Authority	Eden District Council
Planning Archaeologist	Jeremy Parsons, Cumbria County Council Historic Environment Service

Archaeological work	
Desk-based assessment done as previous phase of work?	No
Trenching area required	230 square metres
Approximate number and dimensions of trenches proposed	7 trenches 20m long by 1.7m wide

1. Introduction

1.1 Project Cover Sheet

1.1.1 All the details specific to this project are set out on the cover sheet of this project design. The project design itself covers all elements that are involved in archaeological evaluation.

1.2 Greenlane Archaeology

1.2.1 Greenlane Archaeology is a private limited company based in Ulverston, Cumbria, and was established in 2005 (Company No. 05580819). Its directors, Jo Dawson and Daniel Elsworth, have worked continuously in commercial archaeology since 2000 and 1999 respectively, principally in the north of England and Scotland. Greenlane Archaeology is committed to a high standard of work, and abides by the Chartered Institute for Archaeologists' (CIfA) Code of Conduct. The various elements of the project will be carried out according to the Standards and Guidance of the Chartered Institute for Archaeologists (CIfA 2014a-c).

1.3 Staff

1.3.1 **Dan Elsworth (MA (Hons), ACIfA)** graduated from the University of Edinburgh in 1998 with an honours degree in Archaeology, and began working for the Lancaster University Archaeological Unit, which became Oxford Archaeology North (OA North) in 2001. Daniel ultimately became a project officer, and for over six and a half years worked on excavations and surveys, building investigations, desk-based assessments, and conservation and management plans. These have principally taken place in the North West, and Daniel has a particular interest in the archaeology of the area. He has managed many recent projects in Cumbria and Lancashire including several archaeological evaluations.

1.3.2 **Tom Mace (BA (Hons), MA, MIFA)** has extensive experience of working on a variety of archaeological projects, especially watching briefs, but also excavations, evaluations, and building recordings, as well as report writing and illustration production. He joined Greenlane Archaeology in 2008 having worked for several previous companies including Archaeological Solutions and Oxford Archaeology North. He currently works on a broad range of projects and is also responsible for the production of all illustrations for reports and publications as well as some post-excavation assessments. He is a Member of the Chartered Institute for Archaeologists.

1.3.3 **Jo Dawson (MA (Hons), ACIfA)** graduated from University of Glasgow in 2000 with a joint honours degree in Archaeology and Mathematics, and since then has worked continuously in commercial archaeology. Her professional career started at Glasgow University Archaeological Research Division (GUARD), following which she worked for Headland Archaeology, in Edinburgh, and then Oxford Archaeology North, in Lancaster. During this time she has been involved in a range of different archaeological projects. She has extensive experience of both planning and pre-planning projects, and has undertaken assessments of all sizes. Since establishing Greenlane Archaeology in 2005 she has managed numerous projects in south Cumbria, including desk-based assessments and evaluations. She currently mainly carries out quality control of reports and post-excavation assessments. She is an Associate member of the Chartered Institute for Archaeologists.

1.3.4 **Specialists:** Greenlane Archaeology have a range of outside specialists who are regularly engaged for finds and environmental work. Engagement is dependent upon availability, but specialists typically engaged are as follows:

Specialism	Specialist
Animal bone	Naomi Sewpaul
Ceramic building material, medieval and Roman	Phil Mills
Conservation	York Archaeological Trust
Clay tobacco pipe	Peter Davey (or Tom Mace in house for smaller assemblages)
Flots	Headland Archaeology, Edinburgh
Human bone	Malin Holst
Industrial residue	Gerry McDonnell
Medieval pottery	Chris Cumberpatch for assemblages from the North East of England
Miscellaneous find types, for example Roman glass and medieval and earlier metalwork	Chris Howard-Davis
Prehistoric pottery	Blaise Vyner
Radiocarbon dates	Scottish Universities Environmental Research Centre
Roman pottery	Ruth Leary
Samian	Gwladys Monteil
X-ray of metal finds	York Archaeological Trust

Client: Keith Hall

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2. Objectives

2.1 Rapid Desk-Based Assessment

2.1.1 To examine early maps of the site and any other relevant primary and secondary sources in order to better understand the site, and set it in its historic context.

2.2 Archaeological Evaluation

2.2.1 To excavate evaluation trenches as specified in the project design cover sheet, in order to identify the presence of any archaeological deposits, features, and structures on the site and establish their form, function, and date where possible.

2.3 Report

2.3.1 To produce a report detailing the results of the evaluation, which will outline the form and date of any archaeological features encountered.

2.4 Archive

2.4.1 Produce a full archive of the results of the project.

3. Methodology

3.1 Rapid Desk-Based Assessment

3.1.1 Where an archaeological desk-based assessment has not already been carried out in a previous phase of work, a rapid examination of easily available sources, particularly maps, relating to the site will be carried out. The sources that will be used as part of the desk-based assessment will include:

- **Record Office/Archive Centre:** the majority of original and secondary sources relating to the site are deposited in the relevant Record Office(s) or Archive Centre(s), as specified in the cover sheet of this project design. Of principal importance are early maps of the site, particularly Ordnance Survey maps but also the Tithe Map, but other relevant primary sources such as the census, taxation records, parish registers, wills, deeds and other documents will also be consulted. In addition relevant secondary sources will also be consulted and all of this information will be utilised to better understand the historical and archaeological development of the site and set it in context;
- **Historic Environment Record:** this is a list of all of the recorded sites of archaeological interest recorded in the county, and is the primary source of information for a study of this kind. Each site is recorded with any relevant references, a brief description and location related to the National Grid. The HER will be consulted and relevant information relating to any sites in close proximity to or within the proposed development area. In addition, relevant secondary sources, particularly previous archaeological investigations in the immediate area and aerial photographs, will also be examined;
- **Online Resources:** where available, mapping such as Ordnance Survey maps and tithe maps will be consulted online;
- **Greenlane Archaeology:** a number of copies of maps and local histories are held by Greenlane Archaeology. These will be consulted in order to provide information about the site.

3.2 Archaeological Evaluation

3.2.1 The anticipated number and dimensions of evaluation trenches are set out on the cover sheet of this project design. The evaluation methodology, which is based on Greenlane Archaeology's excavation manual (Greenlane Archaeology 2007), will be as follows:

- The trenches will be excavated with regard to the position of any known constraints, focussing on the areas of high archaeological interest or potential, and avoiding areas which are likely to have been severely damaged or truncated by later activity, unless they are considered to have a high potential;
- The overburden, which is unlikely to be of any archaeological significance, will be removed by machine under the supervision of an archaeologist until the first deposit beneath it is reached;
- All deposits below the overburden will be examined by hand in a stratigraphic manner, using shovels, mattocks, or trowels as appropriate for the scale. Deposits will only be sampled, rather than completely

removed, below the first identified level of archaeological interest, unless specified by the Planning Archaeologist (see cover sheet), with the intension of preserving as much *in situ* as possible;

- The position of any features, such as ditches, pits, or walls, will be recorded and where necessary these will be investigated in order to establish their full extent, date, and relationship to any other features. Negative features such as ditches or pits will be examined by sample excavation, typically half of a pit or similar feature and approximately 10% of a linear feature;
- All recording of features will include hand-drawn plans and sections, typically at a scale of 1:20 and 1:10, respectively, and photographs in colour digital format (both RAW files and JPEG format at at least 12meg resolution) will be taken;
- All deposits, trenches, drawings and photographs will be recorded on Greenlane Archaeology *pro forma* record sheets;
- All finds will be recovered during the evaluation for further assessment as far as is practically and safely possible. Should significant quantities of finds be encountered an appropriate sampling strategy will be devised;
- All faunal remains will also be recovered by hand during the evaluation, but where it is considered likely that there is potential for the bones of fish or small mammals to be present appropriate volumes of samples will be taken for sieving;
- Deposits that are considered likely to have, for example, preserved environmental remains, industrial residues, and/or material suitable for scientific dating will be sampled. Bulk samples of between 20 and 60 litres in volume (or 100% of smaller features), depending on the size and potential of the deposit, will be collected from stratified undisturbed deposits and will particularly target negative features (e.g. gullies, pits and ditches) and occupation deposits such as hearths and floors. An assessment of the environmental potential of the site will be undertaken through the examination of samples of suitable deposits by specialist sub-contractors (see *Section 1.3.4* above), who will examine the potential for further analysis. All samples will be processed using methods appropriate to the preservation conditions and the remains present;
- Any human remains discovered during the evaluation will be left *in situ*, and, if possible, covered. The Planning Archaeologist will be immediately informed as will the local coroner. Should it be considered necessary to remove the remains this will be carried out under the guidance of the local coroner, and a licence obtained from the Ministry of Justice, under Section 25 of the Burial Act of 1857;
- Any objects defined as 'treasure' by the Treasure Act of 1996 (HMSO 1996) will be immediately reported to the local coroner and securely stored off-site, or covered and protected on site if immediate removal is not possible;
- The evaluation trenches will be backfilled following excavation although it is not envisaged that any further reinstatement to its original condition will be carried out.

3.2.2 Should any significant archaeological deposits be encountered during the evaluation these will immediately be brought to the attention of the Planning Archaeologist so that the need for further work can be confirmed. Any additional work will be carried out following discussion with the Planning Archaeologist and subject to a new project design, and the ensuing costs will be agreed with the client.

3.3 Report

3.3.2 The results of the evaluation will be compiled into a report, which will provide a summary and details of any sources consulted. It will include the following sections:

- A front cover including the appropriate national grid reference (NGR);
- A concise non-technical summary of results, including the date the project was undertaken and by whom;
- Acknowledgements;
- Project Background;
- Methodology, including a description of the work undertaken;
- Results of the rapid desk-based assessment;
- Results of the evaluation, including finds and samples;

- Discussion of the results including phasing information;
- Bibliography;
- Illustrations at appropriate scales including:
 - a site location plan related to the national grid;
 - a plan showing the location of the evaluation trenches in relation to nearby structures and the local landscape,;
 - plans and sections of any features discovered during the evaluation;
 - photographs of any features encountered during the evaluation and general shots of the evaluation trenches;
 - extracts from historic mapping.

3.4 Archive

3.4.1 The archive, comprising the drawn, written, and photographic record of the evaluation trenches, formed during the project, will be stored by Greenlane Archaeology until it is completed. Upon completion it will be deposited with the relevant Record Office or Archive Centre, as detailed on the cover sheet of this project design, together with a copy of the report. The archive will be compiled according to the standards and guidelines of the ClfA (ClfA 2014c). In addition details will be submitted to the Online AccesS to the Index of archaeological investigationS (OASIS) scheme. This is an internet-based project intended to improve the flow of information between contractors, local authority heritage managers and the general public.

3.4.2 A paper and digital copy of the report will be provided to the client and a digital copy of the report will be provided to the relevant Historic Environment Record, as detailed on the cover sheet of this project design.

3.4.3 The client will be encouraged to transfer ownership of the finds to a suitable museum. Any finds recovered during the evaluation will be offered to an appropriate museum (see cover sheet). If no suitable repository can be found the finds may have to be discarded, and in this case as full a record as possible would be made of them beforehand.

4. Work timetable

4.1 Greenlane Archaeology will be available to commence the project on the date specified on the Order Form, or at another date convenient to the client. It is envisaged that the elements of the project will be carried out in the following order:

- **Task 1:** rapid desk-based assessment (where this has not already been carried out as a previous phase of archaeological work);
- **Task 2:** archaeological evaluation;
- **Task 3:** processing and assessment of finds and samples;
- **Task 4:** production of draft report including illustrations;
- **Task 5:** feedback on draft report, editing and production of final report;
- **Task 6:** finalisation and deposition of archive.

5. Other matters

5.1 Access and clearance

5.1.1 Access to the site will be organised through co-ordination with the client and/or their agent(s).

5.2 Health and Safety

5.2.1 Greenlane Archaeology carries out risk assessments for all of its projects and abides by its internal health and safety policy and relevant legislation. Health and safety is always the foremost consideration in any decision-making process.

5.3 Insurance

5.3.1 Greenlane Archaeology has professional indemnity insurance to the value of **£1,000,000**. Details of this can be supplied if requested.

5.4 Environmental and Ethical Policy

5.4.1 Greenlane Archaeology has a strong commitment to environmentally and ethically sound working practices. Its office is supplied with 100% renewable energy by Good Energy, uses ethical telephone and internet services supplied by the Phone Co-op. In addition, the company uses the services of The Co-operative Bank for ethical banking, Naturesave for environmentally-conscious insurance, and utilises public transport wherever possible. Greenlane Archaeology is also committed to using local businesses for services and materials, thus benefiting the local economy, reducing unnecessary transportation, and improving the sustainability of small and rural businesses.

6. Bibliography

Chartered Institute for Archaeologists (CIfA), 2014a *Standard and guidance for historic environment desk-based assessment*, revised edn, Reading

CIfA, 2014b *Standards and Guidance for Archaeological Field Evaluation*, revised edn, Reading

CIfA, 2014c *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives*, revised edn, Reading

HMSO, 1996 *Treasure Act*, <http://www.opsi.gov.uk/acts/acts1996/1996024.htm>

Appendix 2: Summary Context List

Context	Type	Description	Interpretation
100	Deposit	Soft, mid brownish-grey silty clay, up to 0.3m thick	Topsoil
101	Deposit	Firm, pale orange clay, very mottled with coal flecks and 30% angular gravel and some larger pebbles; 0.3m to 0.4m thick; there was a stone drain cutting through this deposit at the north end of Trench 1	Dumped deposit
102	Deposit	Varies from dark grey firm clay to mid-orange clay; 1% angular cobble inclusions; there was a twisted copper wire cutting through 102 at the south end of Trench 1	Natural
200	Deposit	Soft, mid greyish-orange silty clay, up to 0.3m thick, with very little stone inclusions	Topsoil
201	Deposit	Firm, mid greyish-orange clay, up to 0.5m thick, with angular gravel (30%), rounded gravel (10%), and boulder-sized inclusions; cut by a gravel-filled drain, 0.2m wide, towards the north end	Dumped deposit
202	Deposit	Mixed mid-orange and grey, firm clay, with 10% rounded gravel; cut by drain made from rounded cobbles and boulders	Natural
300	Deposit	Soft, mid brown, silty clay, 0.2m thick	Topsoil
301	Deposit	Firm, mottled pale orangey grey clay, with 30% angular gravel, cut by a stone drain; only 0.1m thick but left in at the south-east end	Dumped deposit
302	Deposit	Firm, mid brownish orange clay cut by a modern drain filled with pale grey gravel and grey clay	Natural
400	Deposit	Dark pink loose gravel at the south-east end of Trench 4, up to 0.15m thick	Modern gravel
401	Deposit	Soft, mid orangey-brown silty clay, 0.2m to 0.3m	Topsoil
402	Deposit	Firm, mottled pale greyish orange clay, 30% angular gravel, becoming darker and more stony at a wet patch near the centre	Dumped deposit
403	Deposit	Firm mid-orangey brown clay, with 20% angular gravel	Natural
500	Deposit	0.25m – 0.3m thick, soft, mid orangey-brown silty clay	Topsoil
501	Deposit	Firm, mid greyish orangey clay, 20-30% mostly, rounded gravel but with larger stones at the west end	Natural
600	Deposit	Soft mid greyish brown sandy-silt with some small angular stone inclusions, 0.25m thick	Topsoil
601	Deposit	Mottled, mid brown sandy-silt, 0.05m thick	Uppermost fill of 604
602	Deposit	Firm, mid yellowish brown clay, with 20% angular cobbles, 0.05m thick	Central fill of 604
603	Deposit	Soft, mid grey silt, 0.05m thick	Lowest fill within 604
604	Cut	Possible ditch cut or gully, aligned north-east/south-west, forming a slight dip on the surface perpendicular to the trench, possibly aligned/draining to a trough to the north-east; filled by: 601 to 603 , with a concave base and sides; the cut is 0.8m wide by 0.15m deep	Gully or possible ditch
605	Deposit	Fairly firm, orange-brown sandy clay to clay with frequent sub-angular cobble-sized stones and small angular pebble inclusions	Natural
700	Deposit	Soft, dark greyish orange, sandy silt, 0.2m to 0.3m thick	Topsoil
701	Deposit	Patch up to 1.5m wide of dark grey silty clay with 50% angular gravel up to 0.15m thick	Possible path
702	Deposit	Soft, mid orange silty clay, with 20% rounded gravel and boulders at the edge of a bank	Improved ground
703	Deposit	Firm, pale yellowish orange clay, with 30% rounded gravel	Natural

Appendix 3: Summary Finds List

Context	Type	Qty	Description	Date range
100	Pottery	1	Blue sponge-printed pearlware saucer rim	Late 18 th – early 19 th century
301	Fe	4	Two broken fragments of a horse shoe or clog iron, and two short sections of wire or nails, round section	Post-medieval
500	Stone	1	Broadly cylindrical piece of dressed buff coloured fine-grained stone with carved recess along one side forming moulded edge decorated with chiselled cross-hatching and small dots in relief, reverse face roughly finished and so presumably not meant to be seen or broken from a larger object. One end has iron staining around two areas of breakage suggesting it was perhaps at one time had iron fittings or repairs	Post-medieval?
601	Pottery	4	Pearlware: two refitting bowl rim fragments with relief-moulded beading, and fragment and base fragment probably from same vessel	Late 18 th – mid 19 th century
701	Pottery	1	Brown-glazed red earthenware with white slip-coated interior, from pancheon or similar	19 th – early 20 th century
702	Glass	1	White opaque body fragment with white enamel/paint on exterior, possibly heat-affected after breakage	Not closely dateable