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Ray Wind Farm Grid Connection, Northumberland


Archaeological Mitigation Works

Report No. 3479

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**Ray Wind Farm Grid Connection,
Northumberland**

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1. INTRODUCTION

1.1 General

This report presents the results of a programme of archaeological mitigation works carried out by CFA Archaeology Ltd (CFA) for the Ray Wind Farm Grid Connection works between Ray Wind Farm substation (at approx. NY 9506 8568) and Fourstones substation (at approx. NY 8966 6846) (Fig. 1). The work was carried out between August 2015 and April 2016 and was commissioned by Vattenfall Wind Power Ltd.

1.2 Background

The grid connection route comprises some 24km of cable. The northernmost part of the cable route lies within the development boundary of the wind farm and followed the wind farm infrastructure to the southern edge of the forestry to the west of Ray Fell.

The majority (approximately 10km) of the grid connection route follows the route of the Green Rigg Wind Farm to Fourstones Substation grid connection (Archaeological Services Durham University 2012), or was placed within, or in the verge of, public roads. There are only four short sections totalling about 5.7km where the cable route deviates from the Green Rigg route and traverses open ground:

- From the southern edge of the forestry to the west of Ray Fell to the public road at Sweethope Loughs (approximately 1.3km).
- Parallel to the A68 in the fields to the west of the road, from the crossroads with the minor road near Green Rigg to High Pithouse (approximately 1.5km). This part of the A68 follows the route of Dere Street Roman, although the northern part of this road section has been previously widened.
- From the A68 at High Pithouse (north of Low Farm) to the public road at Middle Cowden (approximately 1.8km, excluding a short section of public road at Low Farm).
- From the public road near Combyheugh to the north bank of the River North Tyne at Chipchase Strothers (approximately 1.1km).

One part of the route, from the south bank of the River North Tyne to the public road north of Fairshaw Farm, lies partly within Nunwick Park, an 18th century landscaped park on the bank of the River North Tyne (Registered Park and Garden List No. 1001051), an area which is considered to be archaeologically sensitive. This part of the route is immediately adjacent to the route of the existing Green Rigg grid connection for a length of about 800m.

A further area of archaeological sensitivity is adjacent to the Scheduled Monument of Hadrian's Wall (No 1010960), near Tower Tye / Milecastle 29, where directional drilling from outside of the scheduled area will allow the cable to pass beneath the monument with no impact within the scheduled area. Scheduled Monument Consent, dated 27 April 2015, has been received for these works from Historic England (reference S00107315).

A Written Scheme of Investigation (WSI) was prepared for Vattenfall Wind Power Ltd by CFA Archaeology Ltd, dated 27th August 2015, and was agreed by Northumberland Conservation, archaeological advisors to Northumberland Council, and the Northumberland National Park Authority.

1.3 Objectives

The archaeological mitigation works were:

- **Preservation in situ.** The Scheduled Monument List Entry Nos. 1011111 and 1008665 will be fenced off, with a 20m buffer zone included, for the duration of works in their vicinity. Other sites to be demarcated include NHER 19025, and sites A, B, C, E and G .
- **Earthwork survey.** The mine workings around Camp Hill will be surveyed prior to construction.
- **Archaeological Watching Brief.** A targeted watching brief is required where the cable route passes across open fields and within areas of archaeological sensitivity.
- **Tool box talk.** A tool box talk prepared by a senior archaeologist will be issued to all site personnel.

2. WORKING METHODS

CFA follows the Chartered Institute for Archaeologists' Code of Conduct, Standards and Guidance for archaeological watching briefs. Recording of all elements followed established CFA methods. All work complied with the requirements of Northumberland Conservation.

2.1 Preservation In Situ

Scheduled Monument List Entry No. 1008665 was protected through fencing off, with a buffer of 20m added to the defined scheduled area. Non-scheduled sites, to include milestone NHER 19025, and sites A, B, C, E and G, were protected through fencing off or avoidance, including a buffer of 15m for Site E. Sites were fenced off with a visible barrier as appropriate, which remained in place for the duration of all construction works.

Scheduled Monument List Entry No. 1011111 did not require fencing off due to an alteration in the cable route taking it further away from the site.

A 10m buffer was maintained to the west of the field boundary along the edge of the A68, to provide a buffer between the likely location of the former Roman road and associated archaeology and the ground works.

The sites were located by GPS and a photographic record was made of the surviving remains.

2.2 Earthwork Survey

The mine workings around Camp Hill were surveyed prior to construction.

The survey area covered an area of 50m to either side of the cable route and identified and recorded any surviving remains of upstanding features that might be affected by the proposed cable route within or adjacent to the stripped corridor.

The topographic survey used DGPS (with an accuracy of $\pm 10\text{mm}$), supplemented by a digital photographic record and written descriptions of all of the surviving features.

2.3 Watching Brief

A targeted watching brief was undertaken where the cable route passed across open fields and within areas of archaeological sensitivity. These areas are listed in items 1-6 below.

1. From the southern edge of the forestry to the west of Ray Fell to the public road at Sweethope Loughs (approximately 1.3km).
2. West of and parallel to the A68 adjacent to Dere Street Roman Road (approximately 1.5km).
3. From the A68 at High Pithouse (north of Low Farm) to the public road at Middle Cowden (approximately 1.8km, excluding a short section of public

road at Low Farm). This will include recording site H where it is crossed by the stripped corridor.

4. From the public road near Combyheugh to the north bank of the River North Tyne at Chipchase Strothers (approximately 1.1km).
5. From the south bank of the River North Tyne to the public road north of Fairshaw Farm (Nunwick Park) (approximately 800m).
6. During ground breaking works adjacent to the Hadrian's Wall scheduled area for the directional drilling. Launch and reception pits will be located outside of the scheduled area to the north and south. The launch pit on the north side will be in the same location as for the Green Rigg cable connection and therefore has been previously subject to archaeological work; the reception pit on the south side of the river will involve new ground breaking and will therefore be subject to a watching brief.

All groundbreaking works were carried out under archaeological supervision and mechanical excavators were fitted with smooth bladed ditching buckets.

2.4 Excavation

Several newly discovered sites were encountered during monitoring of ground breaking works for the cable route. Where possible the sites were preserved in situ, however when the cable route could not be relocated several sites required further archaeological mitigation. The sites excavated are as follows:

- Two cairns were encountered and subsequently excavated at the southern section of Ray Wind Farm, within the corridor of the cable route: Cairn L (109) and Cairn M (112).
- A potential bell pit 003 (Site A) south of Green-Rigg Wind Farm was excavated during onsite monitoring.
- Seventy-three sites, the vast majority relating to mining works, were surveyed between Tone Lane and Middle Cowden within the corridor of the cable route. Twenty-three sites were affected by the cable route excavation.
- A later prehistoric roundhouse was uncovered and excavated at Chipchase.
- Three pits were and five ditches were investigated at Chipchase.

2.5 Toolbox Talks

Appendix 2 of the WSI includes the document 'Guidance in Relation to Archaeology'. Construction staff were appraised of its contents.

3. ARCHAEOLOGICAL RESULTS

3.1 General

The cable route, being approx. 24km in length, passed through a varied landscape. The work took place between 50m AOD at Fourstones Substation and 296m AOD at Ray Wind Farm (see Fig. 1a-e).

The route passed from upland rough grazing to improved agricultural land as it travelled southwards past Green Riggs Wind Farm. The land south of Green Riggs was formerly or currently arable/pastoral land with enclosed (fenced or walled) field systems.

The topsoil (**001, 301 and 401**) varied between upland peaty turf at 150mm in depth to a ploughed topsoil of up to 400mm in depth overlying natural subsoil (**002, 111, 302, 303 and 400**) which was light brown silty sand and mixed light greyish-brown sandy clays.

3.2 Preservation In Situ

The working corridor (wayleave) for the grid connection was fenced off along its route, and therefore any sites which lay outside of the fenced corridor were not affected by construction activities.

Scheduled Monument List Entry No. 1008665 (Fig. 1c) was protected through fencing off, with a buffer of 20m added to the defined scheduled area. The contractors were made aware of its importance and legal protection.

Site A (Fig. 1b), a quarry, could not be avoided by the cable route wayleave and so was recorded as part of the watching brief (see Section 3.4.2 for description).

Site B (Fig.1b) was a field boundary visible as a rubble bank parallel to the west side of the A68; the fenced wayleave excluded this feature and it was not impacted upon.

Site C (Fig. 1b) was a former trackway located to the west of the A68 opposite High Pithouse, extending up to 25m from the field boundary; the fenced wayleave excluded this feature and it was not impacted upon.

Site E (Fig. 1b) was a rectangular earthwork some 40m by 35m defined by a bank with external ditch up to 4m wide and 1m high which equates with description of HER entry 9495. This earthwork contained a stand of trees and was therefore excluded from the fenced grid route wayleave and was not impacted upon.

Site G (Fig. 1e) equates to the area of former mine workings, which were subject to a pre-construction earthwork survey (Section 3.3 for descriptions) and a watching brief, and therefore elements of Site G which lay outside of the fenced wayleave were not affected, and elements which lay within the working corridor and which were exposed during topsoil stripping were excavated as appropriate and recorded (Section 3.4.3).

Milestone NHER 19025 (Fig. 1e) lies in the west verge of the unclassified public road between the B6318 and the B6320 to the east of Black Carts. The milestone was demarcated (Fig. 33).

3.3 Earthwork Survey between Tone Lane and Cowden Burn

3.3.1 Introduction

The survey area was a 100m wide corridor (50m to either side of the cable route) between Tone Lane to the north and the crossing of the (dry) Cowden Burn to the south, with local extensions where needed, for example where linear ditches merged just outside the corridor (Fig. 1c, Fig. 2a-c). It was within undulating improved pasture fields, none of which have been ploughed in living memory. The level of survival seen in the archaeological features suggests it has not been ploughed since at least the 19th century.

The survey area includes Site G (Fig. 1c), identified by Peter Cardwell during a field survey on 29th July 2015 and described as an area of former coal workings visible as earthwork remains of shafts (bell pits) and associated features (trackway, former field boundaries and quarry pit), which was presumed to pre-date Cowden Colliery to the south which was extant in the mid 19th century. Some of the shafts noted on the historic mapping were not readily visible during the initial field survey so were presumed to have been at least partially infilled, with additional shafts and earthworks visible which were not depicted on the historic mapping.

The Ordnance Survey (OS) 1:2500 map of the area (1863-1895, Fig. 2d) shows ‘Old Workings (coal)’ to the west of Camp Hill camp and a large number of ‘Old Shafts’ in a generally NE-SW alignment, following the coal strata in the underlying geology. The majority of the depicted features lie to the north-west of the survey corridor but two apparent shafts are shown on either side of the track which forms the centre of the survey corridor.

The survey area also contained part of the Scheduled Monument of Camp Hill (List Entry No. 1008665) (Fig. 1c).

3.3.2 Survey Results

A total of 63 features were recorded during the survey and these are described in detail in Appendix 7 and summarised in Table 1. Each feature was provided with a site number. The survey results are shown on Figs. 2a-c.

Table 1. Summary of Field Survey Sites

Site Numbers (Total)	Field Classification
2-4, 6, 8-10, 12, 15-16, 18, 21-22, 25, 28, 30-31, 34, 36-59, 63 (42)	Mining features including possible shafts, bell pits and test-pits
5, 7, 11, 17, 19-20, 27, 29, 32, 35 (10)	Drainage ditches
1, 60 (2)	Tracks
48 (1)	Linear indentations (bays)
13 (1)	Strip cultivation
14, 62 (2)	Mounds
24 (1)	Drystone wall

26 (1)	Building (possible)
33 (1)	Platform
23 (1)	Quarry
61 (1)	Camp Hill enclosure

The vast majority of the survey sites were interpreted as industrial mining test-pits, shafts or bell-pits, largely depending on their size. Characteristically, the smaller of these consisted of a penannular or horseshoe shaped upcast bank partially surrounding a circular depression or pit. In many cases, a linear drainage ditch ran obliquely downhill through the opening in the bank, often intersecting other similar ditches on the way to the natural watercourses. Many of these mining sites measured around 4-10m in overall diameter.

There were also a number of less regular features, with a larger central pit and extensive spoil heaps. These were often much larger overall, with diameters up to 24m being recorded. It was noted that the larger features tended to be those with Coal Authority Reference Numbers and tended to be the ones shown on the OS maps. Examples of these industrial features are shown in Fig. 3-8.

A network of drainage ditches was recorded. All of these are probably contemporary with the mining features as they often emanated from these features and/or diverted surface water away from them. Examples are shown in Fig. 9-10. These features were typically around 1.5m wide and 0.4m deep. Upcast banks were recorded on many downslope sides. Only rarely were they excavated at 90° to the contours, and only then when the slope was gentle. Most ran obliquely across the slopes, linking with other ditches. At one intersection, a large flat stone may have served to divert the flow when required. Ditch Site 19 almost encircled mining Site 18 and both were overlain by the trackway (Site 1). Site 20 was overlain by the drystone wall (Site 24) in two places. A deep pit within ditch Site 35 may have acted as a sediment trap.

Within the Cowden Estate, a grass track ran within the survey corridor (Site 1) (Fig. 3-5). A branch at the SW end led towards a group of coal workings outside the survey area. To the NE, the track was blocked by the drystone wall Site 24. Beyond, in the Tone Hall Estate, it is an actively used farm track. The tracks are both around 3m wide.

Traces of strip cultivation (Site 13, Fig. 3) were recorded within the Cowden Estate, in the grass field to the SW of the drystone wall (Site 24). These features were aligned NW-SE and survived as raised grassy strips with very narrow drainage channels between them. Each grassy strip was 3.5m-4m (12ft) in width and the channels between them were no more than 0.5m in width. Mining Sites 8 and 12 clearly pre-dated these features as did ditches Sites 17, 20. Other sites, especially the larger mining features noted above, probably post-dated the strip cultivation.

Two mounds were recorded. One (Site 14, Fig. 11) was adjacent to the track and may have been to assist in loading carts. This measures 13m by 4m and was 0.5m high. The other (Site 62) had no obvious function.

A drystone wall running NE-SW (Site 24, Fig. 7) divides the Cowden and Tone Hall Estates and blocks the track (Site 1). There is no evidence from the wall structure that there was ever a gate at the point where the wall meets the track.

A possible building (Site 26) was recorded. This consisted of a 'U'-shaped stony bank with a gap in one side, perhaps an entrance. Further stony banks were recorded outside the possible entrance. Overall, the site measured 9m by 9m.

A rectangular turf platform (Site 33) measuring 14m by 4m and 0.4m high was located just SE of Site 31.

A possible quarry or pit (Site 21) was located just to the SE of the drystone wall (Site 24). Gorse partially obscures this site.

Relationships with other features were recorded. For example, Sites 8 and 12 were cut by parallel drainage ditches (Site 13) which formed agricultural features akin to Ridge and Furrow cultivation. Sites 18 and 21 were overlain by the track (Site 1, Fig. 4). Site 25 was cut by the drystone wall (Site 24, Fig. 7) that marked the land boundary between the Cowden and Tone Hall Estates.

Elements of the Camp Hill enclosure were recorded where they lay within the survey corridor.

3.4 Watching Brief/Excavations

A targeted watching brief was undertaken during ground breaking works associated with the cable trench, temporary compounds, launch pads and access tracks where the cable route passed across open fields and within areas of archaeological sensitivity.

The site was regularly inspected prior to ground reduction works and several new sites and features were identified within 100m of the cable route (see below).

3.4.1 Ray Fell to the public road at Sweethope Loughs

Within the cable wayleave, Cairns L (**009**) and M (**012**) (see Fig 1b and Fig. 12-13) were discovered prior to construction works and were removed in agreement with Northumberland Conservation. Cairns L and M are consistent in form to cairns investigated within Ray Wind Farm and both appear to be field clearance cairns.

Cairn L comprised a single course of weathered yellow sandstones extending 4m by 3m and roughly oval in plan with each stone on average 500mm by 300mm by 250mm (Fig. 12). The stones were surrounded by colluvial brown sand (**010**) and once the stones (**009**) were removed sterile natural subsoil (**011**) was exposed. No finds were recovered from this feature.

Cairn M comprised two courses of mixed medium weathered irregular sandstones, measuring 4m in diameter by up to 500mm deep (see Fig. 13). The stones were surrounded by colluvial brown sand (**010**) and once the stones (**012**) were removed sterile natural subsoil (**011**) was exposed. The upper part of the cairn had sustained damage from farm machinery running over its western edge. The cairn also contained a possible cup-marked stone found face down and broken on its north-west side.

A potential burnt mound deposit was discovered in the section of the cutting for the existing forestry track north-east of Summit Cottages (see Fig. 1b). It measured about 4m in diameter and contained blackened peaty topsoil with possible heat affected / fire-cracked stone. This feature was discovered exposed in section adjacent to the track on its north side and remains in situ as it lies outside of any construction works for the wind farm and grid route access.

3.4.2 West of the A68 to Tone Lane

Site A (**003**) was located within a field along the western edge of the A68 Road just south of Green Rigg Wind Farm (see Fig. 1b, Fig. 30). It was identified prior to onsite works and was excavated as part of the watching brief element along the cable route.

Site A comprised a large grassed crater measuring 19.90m long by up to 17.50m wide, clearly visible on the surface, with a grassed central hollow up to 1m in depth. The cable trench exposed 200mm of topsoil over a central hollow measuring 2.50m in diameter by a depth of 0.40m (Fig. 14). Once the topsoil was removed a slightly dark loose brown organic deposit **004** was encountered within the hollow, possibly a water borne deposit run-off from topsoil **001**. The feature appears to relate to some kind of mineral extraction pit or quarry of unknown date. No finds were recovered from this feature.

3.4.3 Tone Lane to the public road at Middle Cowden

A watching brief was undertaken during topsoil stripping between Tone Lane and the unclassified road between Middle Cowden and Rushey Law (Fig. 1c, Fig. 14). It therefore included all of the survey area described above (Section 3.3) as well as a length of cable route to the south-west. The cabling and associated works affected Sites 1, 2, 7, 8, 15, 18, 21, 24, 25, 27, 30, 32, 35, 59. In addition, ten new features (Sites 64-73) were recorded during the work as sub-surface features.

Topsoil was stripped from an area around 15m wide using a tracked excavator. The topsoil within the watching brief area was 0.2m-0.5m deep and it overlay fairly soft sandy clay with frequent chunks of shale and sandstone. Considerable amounts of coal were present within the topsoil in the vicinity of the mining remains. None of the exposed pit features were cut through by the cable trench and overall the watching brief added little to the survey information. The ditches associated with the mining remains were seen to hardly penetrate the natural subsoil and the recorded sections were often no more than 0.1m deep.

Features identified as mine shafts were recorded in plan only, where it was safe to do so; excavation of such features is unacceptably dangerous given the potential for collapse of mineworkings. The features are described below from NE to SW.

Site 59 was stripped of its upstanding bank (Fig. 16). The exposed circular pit or shaft (**107**) was around 4m in width. It remained unexcavated but was filled (**108**) with a dark brown clay-silt with frequent stones and coal chunks. A drain (joining Sites 32/35) ran NE, then SE, under the wooden sleepers of Site 64 (Fig. 17, top right). It merged with other drains and eventually entered the Cowden Burn. This ditch feature

(100) was 0.2m wide and 0.2m deep. The ditch fill (101) contained quantities of modern pottery, glass and an iron hammer.

Site 64 consisted of a number of substantial wooden planks (170) which may have been tramway sleepers. Yellow clay had been laid or packed around these planks. The feature overlay the fill (101) of ditch 100, and just to the SE a second ditch merged from the west.

Just to the south-east of Site 59, a small rectangular pit (104, Fig. 18) was recorded (Site 65). This measured 0.45m by 0.2m and was >0.1m deep. Fragments of a metal container and numerous broken glass and ceramic vessels (105) were found in the feature.

Just north of Site 30, a previously unseen ditch leading out of Site 34 merged with ditch Sites 32/35 (Fig. 19) and it may be that the flow ran into a third ditch which had been cut by deposits associated with Site 30, one of several with a Coal Authority Reference Number which appear to be relatively recent. Only partially exposed, this feature was also overlain by the modern track and a recent ditch. The shaft (166) measured 5m in width and was filled (167) with black soil and coal fragments. Around this was a band of stones and shale (168) representing the bank, with coal-rich soil (169) beyond. A row of stones (170) which may be the remains of a culvert on the north side of the site coincided with the alignment of ditch Site 32.

Between Site 30 and the drystone wall (Site 24), three further ditches were exposed. A previously unrecorded ditch (113, Site 66) crossed the cable route and, to the south-east, was cut by mining Site 28, another with a Coal Authority Reference Number. Two branches of ditch Site 27 (115) were also recorded. These ditches were between 0.3m and 0.6m wide and were, at the most, 0.1m deep. No finds were recovered.

The drystone wall field boundary (Site 24) and the bisected mining feature (Site 25) are shown in Fig. 7. The cable route cut across both at this point and a partial section through Site 25 was recorded. The pit was obscured by vehicle tracks but the surrounding bank (121) was formed from sandstone cobbles and loose shale. Outside this was a possible concentric ditch (163) which was filled with grey soil and coal shale (120). A section was also obtained through ditch Site 20. This feature (117) was 2.8m wide and 0.7m deep. It was filled with compact grey-brown clay-silt (118). No finds were recovered.

To the SW of the wall, the track Site 1 had a grass surface and was stripped. This process revealed that a primary surface of sandstone cobbles, chips and coal fragments (159) was overlain by a less substantial surface of small rounded cobbles (165). In most places these surfaces overlay one another but around Site 21 the later surface lay slightly to the SE, showing the track moved away from the mining feature.

Over half of Site 18 was exposed within the wayleave but conditions made it impossible to add much useful information to that recorded during the survey. The spoil heap to the NW of the track (Site 1) consisted of sandstone, shale and poor quality coal (164). Two ditches were exposed on the NE side of the spoil heap (164). One was clearly an element of Site 19; the cut (124) had a width of 0.4m and a depth of 0.05m with a flat base. The fill (125) was a peaty silt. The second ditch (122, Site

67) had a width of 0.4m, a depth of 0.15m and a 'V' profile. The fill (123) was similar to 125.

The SE half of Site 15 was exposed within the wayleave but little useful information in addition to that recorded during the survey was gleaned. An edge of what may be the central pit (127) was exposed. The fill (128) was of coal shale and peaty soil. The surrounding bank (126) consisted of coal shale and grey clay. An area of flat stones (129) outside the bank was noted.

A 150m length of ditch Site 7 was exposed and three sections recorded. This feature (134) was around 0.5m wide and had a depth of 0.1m. The fill (135) consisted of brown clay-silt with occasional stones. One sherd of modern ceramic was recovered.

At Site 2, topsoil stripping revealed two sub-circular pits (152, 154) with an irregular platform (151) of shale on the east side. A stone culvert drain (156, Fig. 20) with a substantial flow northwards appeared to cut through the edge of the site. The culvert trench was 0.6m wide and contained a sandstone drain structure (158) 0.3m high and 0.2m wide. Laminated sediments (157, 161-2) were recorded within the drain. No finds were recovered.

The course of the Cowden Burn is dry where the cable route crosses as the flow disappears into old mine workings c.100m to the north. Beyond, an overgrown mining level or adit (shown on Fig. 1c) lies to the north of the wayleave. Within the wayleave, a drain and possible trackway surface were recorded (Site 68). The drain (136) was shallow and did not cut the natural subsoil. The fill (137) was a coal-rich clay-silt. The track surface (138) was 3m wide and consisted of sandstone cobbles and chunks of coal. No finds were recovered.

Midway up the slope to the SW of Site 68, two ditches with N-S alignments crossed the wayleave (Sites 69-70). Both emanated from mining features to the south of the cable route and could be traced for some distance to the north, linking with other mining features. The ditches (139, 141) were around 0.8m wide and 0.2m deep. Their fills (140, 142) were of a brownish-grey silt. No finds were recovered.

At the top of the slope, a drystone wall (Site 71) marked the boundary between the uncultivated ground to the NE and pastoral fields to the SW. This wall had been demolished to foundation level and the stones scattered on either side. It was 0.8m wide at the base, with a clear batter visible on the foundation stones.

Site 72 consisted of a NW-SE aligned low linear bank with a clear ditch on the NE side and traces of a second ditch on the SW side. The whole feature had a width of 5.1m. Within the wayleave, only the ditch on the NE side (145) was present as a negative feature. This had a width of around 1m and a depth of <0.05m. The fill (146) was a brownish-grey silt. No finds were recovered.

Site 73 (Fig. 21) was similar to, and parallel with, Site 72. A NW-SE aligned bank with a width of 2m had a clear ditch with a width of 0.8m on the NE side. Within the wayleave, the ditch (147) was 0.6m wide and 0.15m deep. The fill (148) was a grey-brown silty clay containing numerous stones and broken pieces of clay-pipe field drain. No finds were recovered.

3.4.4 *Combyheugh to the River North Tyne at Chipchase Strothers*

Roundhouse

The remains of a roundhouse, identified during topsoil-stripping activities, were located approximately 1.2km south-east of Chipchase Castle and 0.65km north of the River North Tyne (Fig. 1d, Fig. 22-23). The site (NY 89133 74827, centred) occupied a slight east-west running ridge within a gently undulating arable agricultural landscape. After consultation with Northumberland Conservation, a strategy of 100% excavation of all features exposed within the confines of the wayleave was adopted. Bulk samples were taken from deposits likely to provide palaeoenvironmental evidence; the two ring-grooves were bulk sampled from each of the excavated slots (1-11).

The suite of features consisted of two non-concentric ring-grooves (**304/342** and **305**), two linear gullies (**330** and **332**) and small pits, postholes or stakeholes (**307**, **309**, **312**, **314**, **316**, **318**, **320**, **322**, **324**, **326**, **328**, **334**, **336**, **338**, **340**, **344** and **346**). The topsoil (**301**) consisted of 0.2m-0.3m of reddish brown sandy silt. Underlying this was a thin layer of greyish brown sandy clay (**302**) and brown-yellow sandy clay natural (**300**).

A detailed summary of the excavated features is contained within Appendix 8.

The outer (**305**) of the two curvilinear ring-grooves was approximately 14.5m long, varying in width from 0.25m-0.5m, and ranged in depth from 0.06m-0.2m (Fig. 24). The profile along the ditch was generally V-shaped with a thin notch in the base identified in some slots. Assuming the ring-groove had originally been a complete circle, only the south-west quadrant survived.

The inner ring-groove consisted of two discontinuous lengths (**304** and **342**) which measured 11.5m and 1.9m respectively. The width of the larger length ranged between 0.06m-0.15m in width and 0.06m-0.15m in depth (Fig. 25). The smaller length was 0.3m wide and survived to a depth 0.11m. It continued under the eastern boundary of the wayleave. Both the inner and outer groove-rings contained similar fills (**306** and **310**, respectively) which consisted of mid-brown grey sandy clay.

Six of the pits (**309**, **312**, **322**, **326**, **328** and **334**) contained packing stones consistent with being postholes and may constitute the remains of a post-ring. Pit **324** contained large amounts of angular and sub-angular stones and may represent a central load-bearing post (Fig. 27). Two other pits (**338** and **346**) did not contain packing stones but if included form a fairly coherent ring of posts with the others mentioned above (Fig. 26). However, it must be stressed that this is merely conjecture. The remainder of the pits did not contain significant amounts of stones or any evidence of post-pipes and did not form a coherent pattern.

The other notable features were two north-south orientated gullies (**330** and **332**). Gully **330** terminated just south of the inner ring-groove **304**. It measured 7.3m in length, 0.5m in width (max) and survived to a depth of 0.06m. The second one (**332**) terminated just to the north of the outer ditch (**305**). It measured 5.2m in length, 0.35m in width (max) and survived to a depth of 0.05m. The fills consisted of very similar

brownish grey sandy fills (**331** and **333**) and probably represent the same truncated feature. The intersections with the ring-grooves were investigated but it was not possible to discern the phasing given the similarity of the fills within the gullies and ring-grooves and the shallow nature of these cuts. However, it should be noted that the two gullies did not terminate at the edge of the ring-grooves and projected a little into the interior. Therefore, it is possible these represent an earlier linear feature which was subsequently truncated by the digging of the ring-grooves and traces within the interior of the roundhouse were subsequently erased.

Because of the incomplete nature of the ring-grooves and the lack of intercutting features any phasing of the site was problematic. As noted above, the two gullies (**330** and **332**) intersected the inner and outer ring-grooves respectively. However, the remains were so denuded and the fills were so similar that it was not possible to identify the phasing. The only other intercutting feature was posthole **334** and ring-groove **304** where, similarly, the fills were practically indistinguishable. However, the stone on the western side of the posthole may be indicative of an in situ packing stone which suggests that the posthole cut the ring-groove.

The two ring-grooves are not quite concentric and this would suggest that there were at least two phases of construction. In addition, one would expect that a ring of load bearing posts would be separate from the ring-groove in a structure which combined the post-ring and ring-groove construction method. However, this is not the case for (**304**) and the postholes are not equidistant from the outer ring-groove.

The lack of postholes or stakeholes in the base of the ring-grooves, as well as the thin notch in the outer groove, would suggest contiguous split timbers formed the outside wall. Pope (2014) proposes that ring-groove houses have their origins in the Early Bronze Age, and are also found in the Iron Age.

Other features

Three isolated pits (**404**, **407** and **410**) and five ditches (**412**, **414**, **416**, **418** and **421**) were encountered to the south of the roundhouse at Chipchase (Fig. 1d).

The pits were very shallow, likely plough-truncated, measuring from 0.86m-3m long by 0.79m- 1.62m wide by up to 0.13m in depth (Fig. 28). Pit **407** had evidence of in situ burning with an underlying burnt sandy natural **405**. No finds were recovered from these pits.

Ditches **412**, **414**, **416**, **418** and **421** ran across the cable route measuring up to 10m in exposed length by 0.70m-1.40m wide by up to 0.30m in depth (Fig. 29). No finds were recovered from these ditches. These ditches likely represent agricultural drainage of unknown date.

3.4.5 River North Tyne to Fairshaw Farm (Nunwick Park)

No archaeological features or deposits were exposed during the topsoil stripping of this section.

3.4.6 *Adjacent to Hadrian's Wall*

Directional drilling beneath Hadrian's Wall, a Scheduled Monument (List Entry No. 1010960) and World Heritage Site (UNESCO Frontiers of the Roman Empire Ref. 430ter) was required.

Ground breaking works adjacent to Hadrian's Wall included an area to accommodate a launch pad for the directional drilling on the north side of the Wall and an access track and reception pit on the south side of the Wall (see Fig. 1e and Figs. 31-32).

The monitoring did not reveal any archaeological features, deposits or artefacts.

4. FINDS ASSESSMENT

4.1 Summary

Christina Hills

The majority of the finds were modern and came from the Tone Lane to Cowden Burn section. The modern finds included clear and brown bottle glass, ceramic pottery, an iron hammer and two copper alloy discs. A quantification is provided in Appendix 5.

The rest of the finds are prehistoric and all come from the Chipchase section. These include lithics, stone and pottery and are discussed below.

Table 2. Finds summary

Find type	Number	Weight (g)
Copper Alloy	2	4
Glass	27	1471
Iron	5	778
Lithic	1	8
Pottery	91	1453
Stone	1	127

4.2 Lithics and Stone

Ann Clarke

A catalogue is provided in Appendix 8.

4.2.1 *Chipchase*

The few prehistoric stone finds all came from the Chipchase section. The most interesting context is pit fill **347** which contained a stone tool; a flint chunk; and five small flint flakes (<10mm in maximum dimension).

The stone tool was made from a flat, elongated triangular cobble of metamorphosed sandstone with smooth, water-rolled surface. The broad end was flaked from either face to make a coarse, chopper-like edge with a curved outline. Some rounding and light flaking took place on this edge after the shaping but it was not heavily used. The narrow end bears single pecked facets on either face right at the tip of the cobble which have altered this end an acute angle. Linear grooves on the facets have been left

by a fine, hard, edge. These facets were likely to be part of an intention to shape the stone as they are closely worked and balanced on both sides in terms of extent of spread and angle of shaping; this pattern of traces would have been difficult to achieve by using this part of the flat cobble simply as a hammerstone and it is more likely that the tool was shaped by pecking, perhaps to enable some method of hafting.

This is an unusual form of stone tool and therefore difficult to date. In plan it resembles an unground stone axehead, the broad end having been flaked to shape an angled blade end prior to grinding it smooth. However, axes made from cobbles are usually completely shaped by pecking and grinding a suitably-shaped cobble rather than by flaking the edge to shape first. Moreover, the angle of the pecked facets on the narrow end would not indicate shaping of the butt end. It is probable that the end of this tool was flaked to shape a chopper-like edge whilst the narrow end was shaped to place in a haft.

Recent excavation at Stainton, Cumbria has recovered over 20 flaked cobbles from Neolithic contexts which were called core tools and had rough chopper-like edges formed by simple flaking (Clarke 2015). The cobbles selected for this working tended to be larger and rounder than the small, flat cobble from Chipchase. These core tools may have been made to be used as wedges, perhaps for splitting wood or in construction work. There is also a possibility that these core tools were made to produce a chopper-like edge and were involved perhaps in butchery practices. Flaked cobbles are known from Early Bronze Age assemblages in the Northern Isles and at Tofts Ness, Orkney it was suggested that they were used to split long bones for bone marrow (Clarke 2006); a practice that was also identified during the Early Bronze Age occupation at Tofts Ness (Dockrill 2007, 22).

For the moment a date in the Early Bronze Age is a likely assessment for the production and use of this tool. The worked flint from the same pit (Table 3) is not diagnostic of any period, comprising just small flakes and a chunk.

A few worked flints were recovered from other contexts (Table 3) and none of these can be assigned a specific prehistoric period of use. These comprised single small flint flakes (<10mm in maximum dimension) from ditch fill **343** and pit fill **308**. The bipolar core has three platforms, one on either end with a chisel-type profile and the other a flatter platform located down the side. It appears to be bipolar re-working of a platform core. It is unstratified from near ditch **421**.

Table 3. Stone and flaked lithics from Chipchase section

Context	Type
308	Small flint flake
343	Small flint flake
347	Stone tool; flint chunk; five small flint flakes
Unstratified (near ditch 421)	Bipolar core, flint

4.2.2 Cairn M

A cup-marked stone was found face down within the stones of Cairn M (**012**). It is a large block of medium-grained sandstone with a natural flat base and weathering has formed cracks along the bedding planes and the surface layers are peeling. The

remains of four, or possibly six pecked cup marks survive on the upper face; the deepest one is c.70mm in diameter and 27mm deep whilst the rest of the remaining cup marks are smaller and may have been reduced in size by the weathering.

Cup-marked stones are a feature of the prehistory of the Northumberland Moors where they occur as panels of rock art on exposed bedrock or as individual ‘portable’ stones with cup marks (ERA 2016). Single cup-marked stones are often found at Early Bronze Age cairns e.g. at Huntshough, Northumberland five were found within the cairn built on top of a rock art panel (Waddington et al 2005) and cup marked stones were incorporated into the kerbs or mounds of cairns such as Fowberry and Weetwood in Northumberland (Beckensall 1999, 142). There are examples of cup-marked stones associated with other funerary rites e.g. at Balblair, cup marks were made on the slabs of the Food Vessel cist (Beckensall 2006, 124). Whether the single cup marked stone in Cairn M is a stray incorporated into a later clearance cairn, or whether it is in its original setting within a Bronze Age cairn is not clear. However, if it was not within its original setting then, given its weight, it is unlikely to have travelled far and most likely derived from nearby Early Bronze Age activity.

4.3 Pottery

Melanie Johnson

Sherds of prehistoric pottery were hand collected during the roundhouse excavations at Chipchase and recovered during sample processing. A summary quantification is presented in Table 4 below. Thirty-six sherds and fragments, weighing 169g, were recovered in total. Most of the pottery by weight came from contexts **345** and **347**; these are the fills of post-holes **344** and **346** associated with the roundhouse.

Table 4. Prehistoric pottery summary

Context	No. of sherds	Weight (g)
308	2	1
313	2	3
317	2	2
319	1	2
329	2	5
343	1	4
345	4	83
347	22	69

The majority of the sherds were undiagnostic body sherds, but 4 sherds from context **345** appear to be from the same vessel and include a rim sherd; this is a simple rounded rim on a straight-sided vessel. One body sherd from context **347** has decoration in the form of a thick cord impression.

The fabrics are coarse and the sherds are often abraded. The sherds from context **347** had a distinctive fabric with burnt-out inclusions creating voids within the fabric.

The roundhouse is likely to date to the Bronze Age or Iron Age and the pottery would fit within this broad later prehistoric period.

5. ENVIRONMENTAL SAMPLING

Mhairi Hastie

A total of forty-two soil samples were retained for palaeoenvironmental analysis during the archaeological investigations.

Twenty-three of these samples, taken from the remains of a roundhouse and other features uncovered at Chipcase, were processed through a system of flotation. The floating debris (flot) was collected in a 250 μ m sieve and the remaining material (retent) in the tank was washed through a 1mm mesh. Both the flots and the retents were then air-dried under controlled conditions.

The retents were sorted by eye for small finds and non-buoyant archaeobotanical remains, and scanned with a magnet to pick up ferrous debris. Any significant material was removed and bagged. The flots were scanned using a binocular microscope (x10-x200 magnifications) and the presence of any charred plant remains recorded.

Identification of archaeobotanical material was carried out with reference to seed atlases and in-house reference collection.

5.1 Results

The results are summarised in Table 6. The results are organised by feature type and the findings are expressed quantitatively using the following criteria: + = rare, ++ = occasional, +++ = common and ++++ = abundant.

Small finds/Artefacts

No small finds or artefacts were recovered from the samples.

Palaeoenvironmental Remains

Nutshell: Fragments of hazelnut shell (*Corylus avellana*) were recovered from seven samples, principally from the fills of pits associated with the roundhouse. In most cases only one or two fragments of nutshell were present in each sample, although the fill of pit (404) did contain over 30 large fragments.

Rhizomes: Fragments of charred rhizomes (underground stem/roots) were noted in the fill of pit 307. The rhizome remains were poorly preserved and fragmentary and could not be identified to species level.

Wood charcoal: All, bar one sample from the fill of ditch (412), contained some wood charcoal. The largest concentrations of wood charcoal being recovered from five pit fills and a possible plough scar. Initial identification of the charcoal indicates the presence of small diameter round wood from scrubby species, such as hazel, birch,

etc. Fourteen of the samples contained sufficiently large enough fragments of wood charcoal for AMS dating (Table 5).

The quantity and quality of the carbonised plant remains recovered from the samples does not allow for detailed discussion. Given the presence of small round wood fragments of charcoal present throughout the deposits, recovered from the site, it is likely that this material is remnants of fuel waste. The small amounts of nutshell recovered may have been brought to the site along with the collected wood; although, the amount of nutshell present in the fill of pit (403), would suggest that the nuts were being potentially collected as a source of food and the shells discarded onto a hearth/fire.

5.2 Recommendations

Carbonised Plant Remains

No further work is recommended for the nutshell and rhizomes.

AMS Dating

Sufficiently large enough fragments of wood charcoal and nutshell were recovered from fifteen samples for AMS dating (Table 5), should it be required. Identification of the wood species present would require to be carried out prior to dating.

Table 5. Summary of samples suitable for AMS dating

Sample type	Location	Context	Sample No.
Wood charcoal	Chipchase - Roundhouse	Context 307 (Pit)	Sample 20
Wood charcoal	Chipchase - Roundhouse	Context 312 (Pit)	Sample 17
Wood charcoal	Chipchase - Roundhouse	Context 316 (Pit)	Sample 15
Wood charcoal	Chipchase - Roundhouse	Context 320 (Pit)	Sample 14
Wood charcoal	Chipchase - Roundhouse	Context 322 (Pit)	Sample 12
Wood charcoal	Chipchase - Roundhouse	Context 324 (Pit)	Sample 18
Wood charcoal	Chipchase - Roundhouse	Context 328 (Pit)	Sample 27
Wood charcoal	Chipchase - Roundhouse	Context 338 (Pit)	Sample 21
Wood charcoal	Chipchase - Roundhouse	Context 346 (Pit)	Sample 40
Wood charcoal	Chipchase - Roundhouse	Context 318 (Pit/posthole)	Sample 13
Wood charcoal	Chipchase - Roundhouse	Context 309 (Posthole)	Sample 23
Wood charcoal	Chipchase - Roundhouse	Context 314 (Posthole)	Sample 16
Wood charcoal	Chipchase – Other Features	Context 404 (Pit)	Sample 37
Wood charcoal	Chipchase – Other Features	Context 410 (Plough scar)	Sample 34
Hazelnut Shell	Chipchase – Other Features	Context 404 (Pit)	Sample 37

Table 6. Composition of Samples

Fill of	Feature type	Context Number	Sample Number	FLOT					RETENT			
				Approx. Flot Vol (ml)	Nutshell	Rhizomes	Wood charcoal		Nutshell	Wood charcoal		
							Qty	AMS		Qty	AMS	
<i>CHIPCHASE - ROUNDHOUSE</i>												
342	Outer Ditch	343	39	<10			+ (VSF)			+ (VSF)		
304	Inner Groove-ring	306	10	10			+ (VSF)			+ (SF)		
307	Pit	308	20	10		+ (SF)	+ (VSF)		+	++++	*	
312		313	17	10			+	*		+ (SF)		
316		317	15	<10						+	*	
320		321	14	20			+++	*		+		
322		323	12	10			+	*	+			
324		325	18	20			+	*		++	*	
326		327	11	<10						+		
328		329	27	10				+ (VSF)		++	+++	*
334		335	19	<10				+ (VSF)			+	
336		337	22	<10				+ (VSF)		+	+ (SF)	
338		339	21	10				+	*		+	
344		345	38	<10				+ (VSF)				
346		347	40	20				+	*	++	++++	*
318		Pit/Posthole	319	13	10			+ (VSF)			+	*
309	Posthole	311	23	10			++	*		+	*	
314		315	16	10			+ (VSF)		+	+	*	
315		310	1	<10						+		
<i>CHIPCHASE - OTHER FEATURES</i>												
412	Ditch	411	41			Archaeologically sterile			Archaeologically sterile			
404	Pit	403	37	50	++		++++	*	+	+		
410	Plough-scar (poss.)	409	34	50			++++	*		++	*	
-	In-situ burnt deposit	405	35	20			++ (VSF)					

KEY: + = rare (1-10 items), ++ = occasional (11-50 items), +++ = common (51-100 items) and ++++ = abundant (>101 items)

SF = small fragments (<5mm in dia.), VSF = very small fragments (<2mm in dia.)

* = sufficiently large enough fragments for AMS dating

6. CONCLUSION

A programme of archaeological mitigation works was carried out during installation of a grid connection cable between Ray Substation and Fourstones Substation, Northumberland.

The landscape from Ray Substation to Fourstones Substation contains a number of sites of archaeological interest dating from the later prehistoric period to more recent industrial quarrying and agricultural practices.

A later prehistoric ring-groove roundhouse was excavated in the Chipchase section. The two ring-grooves were not concentric which would tend to suggest there were at least two phases of construction. There were a number of small pits which contained packing stones and probably represent the vestigial remains of postholes for load-bearing uprights forming a post-ring. The remainder of the pits are likely representative of other structural or domestic elements within the roundhouse. A fragment of a stone tool and fragments of pottery were recovered.

The survey and watching brief between Tone Lane and Middle Cowden revealed substantial numbers of industrial mining remains within a well preserved industrial landscape, where the emphasis was on the exploration for coal. The majority of the mining remains appeared to be test pits, searching for useable coal. These were associated with ditches and other more vestigial feature relating to mining. Dating of these remains relies on cartographic sources and observed relationships, and the Ordnance Survey map shows these sites were already marked as 'old' by 1863; the mining activity is post-medieval in date. It may be that the mining features coincide with the prospecting for, and use of, Cowden Colliery, just to the south of the study area. The colliery was open in 1863 and was abandoned by 1895. Alternatively, the mining features may have aimed to supply fuel resources to either the Hareshaw Ironworks at Bellingham, or Redesdale Ironworks at Ridsdale. Hareshaw operated 1839-48 (The Archaeological Practice Ltd 2007) and Redesdale from 1836 to the 1870s (Linsley 1992).

Other features encountered during these mitigation works likely date to the post-medieval period or later and relate to quarrying and agriculture. These include three pits and five ditches of unknown provenance at Chipchase, a quarry pit beside the A68, and two cairns at Ray Fell.

In line with the WSI, the project archive, comprising all CFA record sheets, digital photographs, maps and reports, will be deposited with an appropriate repository and copies of reports will be lodged with Northumberland Council and the Northumberland National Park Authority Sites and Monuments Records (SMR).

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APPENDIX 1: Digital Photograph Register

Image No.	Summary description of subject	Taken from
Initial Route Inspection		
1	Walkover - Sandstone railway bridge at south Ray.	NW
2	Walkover - looking south from sandstone railway bridge	N
3	Walkover - chimney, remains of railway structure	NE
4	Walkover - looking southwest from Romano-British homestead	NE
5	Walkover - toward Romano-British homestead	SW
6	Walkover - Old wall founds near Sonsy Nook	W
7	Walkover - Old wall founds near Sonsy Nook	E
8	Walkover - Old wall founds near Sonsy Nook	E
9	Walkover – Hadrian’s Wall section (Hadrian’s Wall)	W
10	Walkover – Hadrian’s Wall section (Hadrian’s Wall)	SW
11	Walkover – Hadrian’s Wall section (Hadrian’s Wall)	W
12	Walkover – Hadrian’s Wall section S side of road	W
13	Walkover - Roman road section General view from crossroads	N
Lowe Farm Survey		
14	Camp Hill earthwork, general views	SW
15	Camp Hill earthwork, general views	SW
16	Camp Hill earthwork, general views	SW
17	General views of the survey area from SW of Cowden Burn	SW
18	General views of the survey area from SW of Cowden Burn	SW
19	View SW from field wall to Camp Hill	NE
20	View NE to the field wall and Low Farm	SW
21	Bricks and furnace/kiln bricks built into field wall at the anticipated cable route	SW
22	Bricks and furnace/kiln bricks built into field wall at the anticipated cable route	NW
23	Site 1 track	S
24	Site 1 track	N
25	Sites 1-3, general views	NW
26	Sites 1-3, general views	NW
27	Sites 1-3, general views	NW
28	Site 2 quarry pit	W
29	Site 2 quarry pit	S
30	Site 3 quarry pit	E
31	Site 3 quarry pit	N
32	Site 4 quarry pit, close up and general	N
33	Site 4 quarry pit, close up and general	N
34	Site 2, turf platform on right (E) side	S
35	Site 4, possible rectangular turf structure to S of pit	NE
36	Site 4, possible rectangular turf structure to S of pit	N
37	Site 5 ditch, SE-NW part including possible gap next to site 6 including bank on SW side	NW
38	Site 5 ditch, SE-NW part including possible gap next to site 6 including bank on SW side	NW
39	Site 5 ditch, SE-NW part including possible gap next to site 6 including bank on SW side	NW
40	Site 5 ditch, NE-SW part next to track	NE
41	Site 6 quarry pit general view	NE
42	Site 6 quarry pit general view	SE
43	Site 6 quarry pit general view	SE
44	Site 7 ditch general view	SW
45	Site 7 ditch general view	NE
46	Site 11 ditch general view	NW
47	Site 9 quarry pit and ditch site 11	NE

Image No.	Summary description of subject	Taken from
48	Site 9 quarry pit and ditch site 11	ENE
49	Site 10 quarry pit spoil within area	NNW
50	Site 10 big quarry pit outside area	NNW
51	Site 11 ditch passing site 10	SE
52	Sites 12 and 13 general view	SE
53	Sites 12 and 13 general view	E
54	Sites 12 and 13 general view	SE
55	Site 8 quarry/bell pit general view	SSE
56	Site 8 quarry/bell pit general view	E
57	Site 14 'L' shaped bank by track	NE
58	Site 14 'L' shaped bank by track	NNE
59	As above - note possible bedrock on track scars	W
60	Site 15 Quarry pit and track	NE
61	Site 15 with Site 16 beyond	SE
62	General View of Site 16	E
63	General View of Site 16	E
64	Site 16 with circular pit in corner	SE
65	Site 16 sheep erosion showing coal shank	NW
66	Quarry/ bell pit with linear drain just outside area	SSE
67	Site 17 general view of ditch	NE
68	Site 18 trackway	SSW
69	Site 18 spoil heap on either NW side	E
70	Site 18 pit and bank on SE side	W
71	Site 19 ditch just upslope of site 18	SW
72	Site 19 ditch just upslope of site 18	NNE
73	General View of Site	N
74	Site 19 'Y' ditch running NNW	SSE
75	Site 19 'Y' ditch running NNW of site 18	SSW
76	Site 19 'Y' ditch running NNW	ESE
77	Site 20 ditch terminal near scheduled area	SW
78	Site 20 running towards track	SE
79	Site 20 running towards track, end	NE
80	Site 20 running into ditch alongside track Site 1	NE
81	Site 21, quarry/ bell pit general views	NE
82	Site 21, quarry/ bell pit general views	WSW
83	Site 21, quarry/ bell pit general views	S
84	Site 22, track-way leading to it from site 1	N
85	Site 22, track-way leading to it from site 1	W
86	Site 22 quarry pit	W
87	Site 22 quarry pit, slabs in bank/ spoil	NW
88	Site 22 quarry pit General view	W
89	Wall site 24, rebuilt join	SE
90	Wall site 24, bricks included	SSE
91	Wall site 24, bricks included, second section	SSE
92	Possible quarry or level, Site 23 general view	WSW
93	Possible quarry or level, Site 23 general view	SW
94	Site 25 quarry / bell pit overlain by wall site 24	ENE
95	As 87	WSW
96	Ditch site 20 continuation to N of wall 24	E
97	Building site 26 view of entrance	SW
98	Building site 26 view of entrance	SSW
99	Ditch site 27 running NW towards two pit features outside area	SE
100	Ditch site 27 passing quarry/ bell pit site 28	W
101	Site 28 mine general view	W
102	Site 28 probable shaft	W
103	Site 30 probable shaft/ pit	NNE

Image No.	Summary description of subject	Taken from
104	Site A pre-topsoil removal	SSE
105	Site A pre-topsoil removal	NW
106	Topsoil strip start at Green Rigg	N
107	Topsoil strip start at Green Rigg	NW
108	Site 29 Ditch leading SE from Site 30	NW
109	Site 30 quarry/ bell pit	SW
110	Site 32 ditch network	Various
111	Site 32 ditch network	Various
112	Site 32 ditch network	Various
113	Site 32 ditch network	Various
114	Site 31 bell pit/ mine	SW
115	Site 31 bell pit/ mine	WNW
116	Site 31 bell pit/ mine	SSE
117	Site 33 rectangular platform general view	SSW
118	Site 33 rectangular platform, site 31 top left	SE
119	Site 34 bell pit/ shaft general view	SSE
120	Site 34 bell pit/ shaft low bank across bank terminals	W
121	Site 34 bell pit/ shaft general view	NNE
122	Site 35 ditch up to site 31ditch	Various
123	Site 35 ditch up to site 31ditch	Various
124	Site 35 ditch up to site 31ditch	Various
125	Site 35 ditch up to site 31ditch	Various
126	Site 35 ditch up to site 31ditch	Various
127	Site 35 ditch up to site 31ditch	Various
128	Site 35 settling pit/ tank	E
129	Site 36 bell-pit	NW
130	Site 37 pit/test hole	SSW
131	Site 38 pit, general view	NW
132	Site 39 pit, general view	NW
133	Site 40 pit, general view	SW
134	Site 41 pit, general view	W
135	Site 42 pit, upcast bank top right	E
136	Site 42 pit ,showing ditch site 35 running SE	NW
137	Site 43 bell pit	NE
138	Site 44 'L' shaped pit(s)	NW
139	Site 44? with overlying site 45 beyond	SW
140	Site 45 bell pit, general view	SSW
141	Site 46 test pits, general view with a channel and site 47 top right	SSW
142	Site 47, general view	W
143	Site 48 three terraced bays, general view	SSW
144	Site 49 bell pit, general view	SE
145	Site 50 bell pit, general view	SSE
146	Site 51 and site 52, general view	SE
147	Site 54 bell pit	SE
148	Clay pipe culvert carrying burn under Tone Lane	S
149	Clay pipe culvert carrying burn under Tone Lane	S
150	Site 55 bell pit, general view	E
151	Site 56 bell pit, general view	SE
152	Site 57 bell pit, general view	WNW
153	Site 58 bell pit, general view	SE
154	Site 59 bell pit, general view	NE
155	Site 60 track up to Lowe Farm Gate	W
156	Site 62 bank	NE
157	Site 62 bank	N
158	General shot of Site 61 Camp	S
159	Site 63 mound, test-pit?	SW

Image No.	Summary description of subject	Taken from
160	Site 63 mound, test-pit?	SE
Grid Route Works at Site A southwards to Lowe Farm		
161	Pre-excavation shot of possible bell pit	S
162	Working shot of compound	S
163	Linear trench	S
164	Linear trench	N
165	Section of linear trench	E
166	Linear ditch (from middle)	N
167	Linear ditch (from middle)	S
168	Possible bell pit	S
169	Linear trench	N
170	Linear trench	S
171	Full stripped area of bell pit	S
172	Full stripped area of bell pit	N
173	Working shot	S
174	Area to be stripped from compound edge	S
175	Working shot	S
176	Shot showing area stripped	N
177	Shot of stripped area	N
178	Working shot	S
179	Area stripped	N
180	Pre-shot of possible pit.	W
181	Pre-shot	S
182	Area stripped	N
183	Area stripped	N
184	Area stripped	N
185	Area stripped	N
186	Area stripped	N
187	Pre-ex shot of route	S
188	Pre-ex shot of route	SW
189	Pre-ex shot of route	NE
190	Pre-ex shot of route	SW
191	Pre-ex shot of route	NE
192	Pre-ex shot of route	SW
193	Pre-ex shot of route	NE
194	Pre-ex shot of route	SW
195	Roman road section - Working shots Lowe Farm	Various
196	Roman road section - Working shots Lowe Farm	Various
197	Roman road section - Working shots Lowe Farm	Various
198	Roman road section - Working shots Lowe Farm	Various
199	Roman road section - Working shots Lowe Farm	Various
200	Roman road section - Working shots Lowe Farm	Various
201	Roman road section - Working shots Lowe Farm	Various
202	Roman road section - Working shots Lowe Farm	Various
203	Roman road section - Working shots Lowe Farm	Various
204	Roman road section - Working shots Lowe Farm	Various
205	Roman road section - Working shots Lowe Farm	Various
161	Pre-excavation shot of possible bell pit	S
162	Working shot of compound	S
163	Linear trench	S
164	Linear trench	N
165	Section of linear trench	E
166	Linear ditch (from middle)	N
167	Linear ditch (from middle)	S
168	Possible bell pit	S
169	Linear trench	N

Image No.	Summary description of subject	Taken from
170	Linear trench	S
171	Full stripped area of bell pit	S
172	Full stripped area of bell pit	N
173	Working shot	S
174	Area to be stripped from compound edge	S
175	Working shot	S
176	Shot showing area stripped	N
177	Shot of stripped area	N
178	Working shot	S
179	Area stripped	N
180	Pre-shot of possible pit.	W
181	Pre-shot	S
182	Area stripped	N
183	Area stripped	N
184	Area stripped	N
185	Area stripped	N
186	Area stripped	N
187	Pre-ex shot of route	S
188	Pre-ex shot of route	SW
189	Pre-ex shot of route	NE
190	Pre-ex shot of route	SW
191	Pre-ex shot of route	NE
192	Pre-ex shot of route	SW
193	Pre-ex shot of route	NE
194	Pre-ex shot of route	SW
195	Roman road section - Working shots Lowe Farm	Various
196	Roman road section - Working shots Lowe Farm	Various
197	Roman road section - Working shots Lowe Farm	Various
198	Roman road section - Working shots Lowe Farm	Various
199	Roman road section - Working shots Lowe Farm	Various
200	Roman road section - Working shots Lowe Farm	Various
201	Roman road section - Working shots Lowe Farm	Various
202	Roman road section - Working shots Lowe Farm	Various
203	Roman road section - Working shots Lowe Farm	Various
204	Roman road section - Working shots Lowe Farm	Various
205	Roman road section - Working shots Lowe Farm	Various
Grid Route from Lowe Farm southwards		
206	Shot at shaft [102]	W
207	Shot at bell pit [107]	W
208	Shot at pit [104] containing box (105)	W
209	Linear ditch and wooden sockets? For machinery	W
210	Linear ditch running N-S	SW
211	Linear ditch running N-S	NW
212	Linear ditch running N-S	N
213	Half sectioned [104]	W
214	Post-ex of [104]	W
215	General view of northern end of WB area, Lowe farm	N
216	Ditch leading from shaft site	
217	Ditch site 32/35 section	
218	As previous SE facing section	SE
219	Stone slabs pre-ex	NE
220	Stone slabs pre-ex general view	NE
221	Stone slabs post-ex natural below	NE
222	General and close-up views of natural stone	S
223	General and close-up views of natural stone	SW
224	General views of cable route SSW of Site 63	NNE

Image No.	Summary description of subject	Taken from
225	General views of cable route SSW of Site 63	
226	Drain part of site 32 running SSE from site 34	SSE
227	General View of slot through ditch site 35, intersection with possible props or sleepers (site 64)	SE
228	Site 30 general view	SE
229	Site 30 general view	
230	Site 30 capstones for ditch Site 32	ESE
231	Site 30 capstones for ditch Site 32	
232	Site 30 general view	SW
233	Site 30 general view	SW
234	Site 30 general view	Various
235	Views of sections at drain intersection	Various
236	Views of sections at drain intersection	Various
237	Views of sections at drain intersection	Various
238	Ditch site 66 (new site) pre-ex	SE
239	Ditch site 27 N branch, pre-ex	SSE
240	Ditch site 27 S branch, pre-ex	W
241	Ditch site 27 S branch, pre-ex	
242	Ditch site 27 S branch, excavated 1.5m section	Various
243	Ditch site 27 S branch, excavated 1.5m section	Various
244	Ditch site 27 N branch, post-ex 1m section	Various
245	Ditch site 66 excavated 1.5m section	Various
246	Ditch site 66 excavated 1.5m section	Various
247	General view NE from the wall	SW
248	Site just below SW of the wall	SE
249	Site just SW of the wall	SE
250	Pre-ex views	SE
251	Site just SW of the wall	SW
252	Site just SW of the wall	SW
253	Site just SW of the wall	SW
254	Ditch site 20 section	E
255	Ditch site 20 section	ESE
256	Culvert 156	NW
257	Culvert 156 interior	W
258	Culvert 156 interior	W
259	Sample section	W
260	Site 68	SW
261	Site 68, trackway surface	SW
262	Site 68, trackway surface	SW
263	Site 69/70	Various
264	Site 69/70, ditch	Various
265	Site 69/70, ditch pre-ex	Various
266	Site 69/70, ditch section	E
267	Site 69/70, ditch pre-ex	Various
268	Site 69/70, ditch section	Various
269	Site 71/ Site H	E
270	Site 71/ Site H, stripped	N
271	Site 71/ Site H, section close up	Various
272	Site 72, slot	Various
273	Site 72, section	N
274	Site 73	Various
275	Site 73, pre-ex slot	Various
276	Site 73, post-ex slot	Various
277	Site 73, section	Various
278	General view toward Camp Hill	S
279	Camp Hill earthworks	S
280	General view over mining sites	N

Image No.	Summary description of subject	Taken from
281	Cable trench through mining deposits, section	S
282	Cable trench through mining deposits, section	S
283	Site 1 track-way	NW
284	Site 1 general view	NW
285	Site 1 general view	SSE
286	Cairn M pre-ex	N
287	Cairn M pre-ex	N
288	Cairn L pre-ex	W
289	Cairn L pre-ex	N
290	General shot pre-ex of grid route at Ray from Cairn L	N
291	Site 1, section through track-way	SSE
292	Site 2, culvert in section	NW
293	Site 2, culvert in section	W
294	Site 2, culvert in section close up	W
295	Site 2, culvert in section close up	W
296	Site 2 general shot, cable trench	NW
297	General shot of cable trench	SW
298	General pre-ex shot at Summit cottages with revised route	S
299	Homestead at revised route, summit cottages	Various
300	Homestead at revised route, summit cottages	Various
301	Homestead at revised route, summit cottages	Various
302	Homestead at revised route, summit cottages	Various
303	Homestead at revised route, summit cottages	Various
304	General pre-ex shot at Summit cottages with revised route	S
305	Pre-ex Cairn L	S
306	Possible burnt mound located along existing forestry track NW of Summit Cottages	S
307	Possible burnt mound located along existing forestry track NW of Summit Cottages	ESE
308	Site 68 from spoil heap showing trackway	E
309	General post-ex view of Grid route toward Camp Hill	N
Grid Route Connection within Ray Wind Farm Section		
310	Wind farm connect section -E facing section Cairn L / [109]	E
311	Wind farm connect section -E facing section Cairn L / [109]	E
312	Wind farm connect section -E facing section Cairn L / [109]	E
313	Wind farm connect section -E facing section Cairn L / [109]	NE
314	Wind farm connect section -E facing section Cairn L / [109]	SSE
315	Wind farm connect section -turf removed Cairn L / [109]	S
316	Wind farm connect section -turf removed Cairn L / [109]	E
317	Wind farm connect section -turf removed Cairn L / [109]	SSW
318	Wind farm connect section -turf removed Cairn L / [109]	SE
319	Wind farm connect section - PX Cairn L / [109]	NW
320	Wind farm connect section -as found Cairn M / [112]	W
321	Wind farm connect section -W facing section Cairn M / [112]	W
322	Wind farm connect section -Mid ex Cairn M / [112]	N
323	Wind farm connect section -Mid ex Cairn M / [112] stones removed	W
324	Wind farm connect section -W facing section Cairn M / [112]	W
325	Wind farm connect section -W facing section Cairn M / [112]	W
326	Wind farm connect section -Mid ex Cairn M / [112]	S
327	Wind farm connect section -Mid ex Cairn M / [112]	S
328	Wind farm connect section -Mid ex Cairn M / [112] stones removed	S
329	Wind farm connect section -Mid ex Cairn M / [112] stones removed	S
330	Wind farm connect section -Mid ex Cairn M / [112] turf removed	N
331	Wind farm connect section -Mid ex Cairn M / [112] turf removed	S

Image No.	Summary description of subject	Taken from
332	Wind farm connect section -Mid ex Cairn M / [112] turf removed	E
333	Wind farm connect section -Post ex Cairn M / [112]	W
Grid Route at Chipchase		
334	Pre-work site shot, Chipchase by riverside	S
335	Working shot compound	E
336	Working shot compound	S
337	Working shot compound stoned up	E
338	Entrance to compound, top field road to Barrasford	W
339	Natural + depth of cable cut compound	E
340	Site conditions, cable cut compound	NE
341	Entrance to field while compound being made	N
342	Working shot typical natural	E
343	Sample tub, location of pit with white flint	S
344	Roman pottery - as found	-
345	Roundhouse - initial strip	S
346	Roundhouse - initial strip	S
347	Roundhouse - initial strip	SW
348	Pit (upslope- flint white, mottled fill)	SW
349	Roundhouse	NW
350	Roundhouse	NW
351	Roundhouse	W
352	Roundhouse	W
353	Roundhouse	W
354	Roundhouse	SW
355	Working shot of area S of roundhouse	N
356	Working shot of area S of roundhouse	N
357	2m wide trench S of roundhouse	S
358	2m wide trench S of roundhouse	S
359	Area strip S of roundhouse	
360	Field boundary ditch - lower field	W
361	Field boundary ditch - lower field	W
362	Field boundary ditch - lower field	W
363	Area - lower field	N
364	Area - lower field	S
365	Area - lower field	S
366	Hazard tape around burnt areas	SW
367	Hazard tape around burnt areas	SW
368	Stripped area towards compound	W
369	Roundhouse fill excavated	NW
370	Roundhouse fill excavated	W
371	Roundhouse fill excavated	W
372	Working shot [420] area	-
373	Working shot [420] scale on ditch	E
374	Working shot [420] to [414]	SW
375	Working shot linear [414]	W
376	Working shot of area. Typical conditions, ditch	E
377	Lower field, area shot only	N
378	Lower field, area shot top soil depth	S
379	Lower field linears (modern)	S
380	Lower field linears, running from left to right of photo	SE
381	Linears lower field - modern	SW
382	Linear No. 1 with scale [420]	E
383	Linear No. 1 with scale	E
384	Linear No. 1 E facing section	E
385	Linear No. 1 W facing section	W
386	Linear No. 1 E facing section	E

Image No.	Summary description of subject	Taken from
387	Field below, Fairshaw farm - working shot	S
388	Field below, Fairshaw farm - note topsoil depth	N
389	Stone (not milestone) on opposite side of road to milestone	-
390	Location of stone from previous photo	S
391	Milestone no. 19025, Roman	N
392	Milestone no. 19025, Roman location	E
393	Milestone no. 19025, is to the N of this farm	S
394	Linear ditch No. 3 - pre-ex (415) [416]	W
395	Linear ditch No. 3 - plan and section	W
396	Linear ditch No. 3 - section	
397	Linear ditch No. 2 - plan (413) [414]	W
398	Linear ditch No. 2 - section (413) [414]	W
399	Linear No. 4 plan post-ex [418]	W
400	Linear No. 4 close up of section	W
401	Linear No. 4 note uneven surface	N
402	Pre-ex shot of pit [404]	E
403	Pre-ex shot of pit [404] and sand (405)	E
404	Pre-ex shot of pit [404] and sand (405)	E
405	Pre-ex shot of pit [410]	SW
406	SE-facing section of [404]	NW
407	Post-ex shot of [404]	NE
408	W facing section of [407]	E
409	Post-ex shot of [407]	E
410	NW facing section of [410]	SE
411	Post-ex shot of [404, 407, 410]	NE
412	Post-ex shot of [404, 407, 410]	SW
413	W facing section of [412]	E
414	W facing section of [412]	E
415	Location shot of section [412]	NW
416	Location shot of section [412]	W
417	E facing section of [412]	W
418	Pre-ex shot of area to be stripped	NW
419	Post-ex shot of area to be stripped	NW
420	Post-ex of working area stripped	SE
421	Post-ex of working area stripped	SE
Roundhouse Excavation at Chipchase		
422	Pre-ex shots of frozen ground on arrival	N/NE
423	Pre-ex shots of frozen ground on arrival	N/NE
424	Pre-ex shots of frozen ground on arrival	N/NE
425	Site partially cleaned	E
426	Site partially cleaned	NE
427	Proof of conditions, working shots cleaning slop	NE
428	Proof of conditions, working shots cleaning slop	SE
429	Cleaning towards end of the first day	NW
430	Site cleaned again ready for excavation of features	NW
431	Site cleaned again ready for excavation of features	NW
432	Site cleaned again ready for excavation of features	SW
433	Ditch [305]/(310), Slot 1, NNE-facing section	NNE
434	Ditch [305]/(310), Slot 2, SSW-facing section	SSW
435	Ditch [305]/(310), Slot 2,NW-facing section	NW
436	Ditch [305]/(310), Slot 3, SE-facing section	SE
437	Ditch [305]/(310), Slot 3, WNW-facing section	WNW
438	Ditch [305]/(310), Slot 4. ESE-facing section	ESE
439	Ditch [305]/(310), Slot 4, WNW-facing section	WNW
440	Ditch [305]/(310), Slot 5, ESE-facing section	ESE
441	Ditch [305]/(3100, Slot 5, N-facing section	N

Image No.	Summary description of subject	Taken from
442	Ditch [305]/(310), Slot 6, E-facing section	E
443	Slot 1, general shot	W
444	Slot 2, general shot	W
445	Slot 3, general shot	SW
446	Slot 4, general shot	SSW
447	Slot 5, general shot	S
448	Slot 6, general shot	S
449	Shot of site, end of day 2	SW
450	Ditch [304], Slot 7, ENE-facing section	ENE
451	Ditch [304], Slot 8, WSW-facing section	WSW
452	Ditch [304], Slot 8, NE-facing section	NE
453	Ditch [304], Slot 9, SW-facing section	SW
454	Ditch [304], Slot 9, NNE-facing section	NNE
455	Ditch [304], Slot 10, S-facing section	S
456	Ditch [304], Slot 10, NNW-facing section	NNW
457	Ditch [304], Slot 11, SE-facing section	SE
458	Posthole [309], SE-facing section	SE
459	Posthole [309], half sectioned, plan view	SE/above
460	Shallow, sub-rectangular pit [307], ESE-facing section	ESE
461	Pit [316], S-facing section	S
462	Posthole [314], E-facing section	E
463	Posthole [312], N-facing section	N
464	Posthole [312], plan view	N/above
465	Posthole [318], N-facing section	N
466	Posthole [318], general shot of half section	N
467	Posthole [322], E-facing section	E
468	Posthole [322], plan view	E/above
469	Posthole [320], plan view	E
470	Stone setting/large posthole [324], E-facing section	E
471	Stone setting/large posthole [324], E-facing section	E
472	Small posthole [338], E-facing section	E
473	V small posthole/stake-hole [336], half sectioned	W
474	Posthole [326], E-facing section	E
475	Posthole [326], plan view with packing stones removed	E/above
476	Posthole [328], S-facing section	S
477	Posthole [328], plan view	S/above
478	Posthole [309], with packing stones in situ, plan view	E/above
479	Posthole [328], post-ex, prior to removal of stones, plan view	SW/above
480	Posthole [326], post-ex, plan view	W
481	Posthole [328], post-ex, plan	SW/above
482	Large pit [307], post-ex, plan view	E/above
483	General working shot of site, end of day 3	W
484	NNE-facing section, terminus of ditch [342]	NNE
485	NW-facing section of Slot 12, general view	NW
486	NW-facing section of Slot 12, detail view	NW
487	W-facing section of Posthole [345]	W
488	Plan view of Posthole [345]	W
489	Post-ex of Posthole [345]	W
490	Post-ex of Posthole [345]	W
491	Posthole [346], E-facing section	E
492	Posthole [346], E-facing section	E
493	Posthole [346], plan view	E/above
494	General shot of site with tags	NW
495	General shot of site with tags	NW
496	General shot of site with tags	W
497	General shot of site with tags	W

Image No.	Summary description of subject	Taken from
498	General shot of site with tags	SW
499	General shot of site without tags	SW
500	General shot of site without tags	W
501	General shot of site without tags	NW
502	Posthole [346], post-ex, plan view	E/above
503	Posthole [346], post-ex, plan view	W/above
504	Posthole [346], post-ex, general view	S
Hadrian's Wall Southern Section		
505	General working shots of trench excavated at BH4	Various
506	General working shots of trench excavated at BH4	Various
507	General working shots of trench excavated at BH4	Various
508	General working shots of trench excavated at BH4	Various
509	General working shots of trench excavated at BH4	Various
510	BH3 working shot	NW
511	BH3 excavated to natural	E
512	BH3 excavated to natural	W
513	BH3 excavated to natural	W
514	Access track to BH4	N
515	Access track to BH4	S
505	General working shots of trench excavated at BH4	Various
506	General working shots of trench excavated at BH4	Various
507	General working shots of trench excavated at BH4	Various
508	General working shots of trench excavated at BH4	Various
509	General working shots of trench excavated at BH4	Various
510	BH3 working shot	NW
511	BH3 excavated to natural	E
512	BH3 excavated to natural	W
513	BH3 excavated to natural	W
514	Access track to BH4	N
515	Access track to BH4	S
Hadrian's Wall Northern Section		
516	General view of drilling platform pre-ex next to Hadrian's wall	Various
517	General view of drilling platform pre-ex next to Hadrian's wall	Various
518	General view of drilling platform pre-ex next to Hadrian's wall	Various
519	General view of drilling platform pre-ex next to Hadrian's wall	Various
520	Drilling platform partially stripped.	SE
521	Reception pit for drillers to S of Hadrian's wall	Various
522	Reception pit for drillers to S of Hadrian's wall	Various
523	Post-ex drilling platform fully stripped.	Various
524	Post-ex drilling platform fully stripped.	Various
525	Post-ex drilling platform fully stripped.	Various
516	General view of drilling platform pre-ex next to Hadrian's wall	Various
517	General view of drilling platform pre-ex next to Hadrian's wall	Various
518	General view of drilling platform pre-ex next to Hadrian's wall	Various
519	General view of drilling platform pre-ex next to Hadrian's wall	Various
520	Drilling platform partially stripped.	SE
521	Reception pit for drillers to S of Hadrian's wall	Various
522	Reception pit for drillers to S of Hadrian's wall	Various
523	Post-ex drilling platform fully stripped.	Various
524	Post-ex drilling platform fully stripped.	Various
525	Post-ex drilling platform fully stripped.	Various

APPENDIX 2: Context Register

Context no.	Fill of	Area	Description	Interpretation
001		West of A68	Dark brown moderately compact organic silt. 150mm up to 400mm in depth.	Topsoil
002		West of A68	Light brown soft silty sand with no inclusions.	Natural subsoil
003		West of A68	Site A. Potentially a large bell-pit, measuring 19.90m long by up to 17.50m wide. Clearly visible on the surface, with a grassed central hollow (forming a crater in the slope) up to 1m in depth before excavation. Initial trench was 2.50m wide exposing 200mm of topsoil over the central hollow measuring 2.50m in diameter by a depth of 0.40m from present ground surface. Within this hollow was a slightly dark loose brown organic deposit 004, possibly a water bourn run off from topsoil 001.	Cut of large pit / quarry
004	003	West of A68	Site A. Dark loose organic silt measuring up to 100mm in thickness and 2.50 m in diameter located in the central hollow of 003.	Waterborne deposit, natural in-fill of 003.
009		Ray Fell to Sweethope Loughs	Cairn L. A single course of weathered yellow sandstones extending 4m by 3m and roughly oval in plan. Each stone was on average 500mm by 300mm by 250mm. Large stones could not be removed by hand. Stones were surrounded by a colluvial brown sand (110) and once stones were removed a sterile natural subsoil (111) was exposed. GPS reference: 394946 584640	Clearance cairn.
010		Ray Fell to Sweethope Loughs	Moderately compact mid-brown sand. Sterile colluvial deposit. Average 220mm thickness. Heavily rooted, with some bioturbation from burrowing.	Colluvial deposit
011		Ray Fell to Sweethope Loughs	A mixed compact light yellow clay with yellow sandstone inclusions. Found at a depth of 200mm-250mm.	Natural subsoil
012		Ray Fell to Sweethope Loughs	Cairn M. Mixed medium weathered irregular sandstones, two courses deep, measuring 4m in diameter by up to 500mm deep. Lower larger stones removed by machine. Sustained damage from machines running over its west side (farming). Contained a possible cup-marked stone found face down and broken on its NW side. GPS reference: 394901 584440	Clearance cairn.
100		Tone Lane to Cowden Burn	Cut for a ditch dug to remove water from mining features, forming part of a network of ditches. 4 sections were excavated and recorded to show variations along its length but displays a regular depth of 200mm and width of 200mm.	Drainage ditch

Context no.	Fill of	Area	Description	Interpretation
101	100	Tone Lane to Cowden Burn	Dark brownish moderately compact grey sandy silt	Fill of [100] - waterborne deposit
102		Tone Lane to Cowden Burn	A roughly circular cut measuring 4m by 2.3m in plan. Unexcavated due to hazard of fall-in.	Cut of shaft
103	102	Tone Lane to Cowden Burn	Dark brownish grey firm clayey silt with tumbled stone inclusions measuring 2m by 2.9m. Redeposited material backfilling shaft. Material made of tumbled stones, different types of soil, clay and sand.	Fill of [102] - backfill
104		Tone Lane to Cowden Burn	A rectangular cut with vertical sides to a flat base measuring 450mm by 200mm by up to 6cm in depth.	Cut for a metal container.
105	104	Tone Lane to Cowden Burn	A rusted metal container surviving only as a stain in the natural subsoil containing bottles, ceramic bowl and bottle lids.	Fill of [104] - container
106	104	Tone Lane to Cowden Burn	Orangey brown firm clayey silt measuring 450mm by 200mm by 60mm. Backfill of [104]	Fill of [104] - backfill
107		Tone Lane to Cowden Burn	A circular cut measuring 6m by 6m adjoining ditch (drainage). Unexcavated due to hazard of fall-in.	Cut for possible bell pit.
108	107	Tone Lane to Cowden Burn	Dark brownish friable clayey silt with coal and stone inclusions measuring 6m in diameter.	Fill of [107] - back fill
109		Tone Lane to Cowden Burn	Cut for linear ditch. Same as 100	Drainage ditch
110	109	Tone Lane to Cowden Burn	Grey-brown clay-silt	Ditch fill
111		Tone Lane to Cowden Burn	Cut for linear ditch	Drainage ditch
112	111	Tone Lane to Cowden Burn	Grey-brown clay-silt	Ditch fill
113		Tone Lane to Cowden Burn	Cut for linear ditch, Site 66	Drainage ditch
114	113	Tone Lane to Cowden Burn	Dark brownish-grey clay-silt	Ditch fill
115		Tone Lane to Cowden Burn	Cut for linear ditch, Site 27	Drainage ditch
116	115	Tone Lane to Cowden Burn	Dark brownish-grey clay-silt	Ditch fill
117		Tone Lane to Cowden Burn	Cut for linear ditch, Site 20	Drainage ditch
118	117	Tone Lane to Cowden Burn	Light brown clay-silt	Ditch fill
119		Tone Lane to Cowden Burn	Light brown clay-silt	
120	163	Tone Lane to Cowden Burn	Dark brown clay-silt	Natural silting?
121		Tone Lane to Cowden Burn	Light brown clay, shale and sandstone	Mining spoil
122		Tone Lane to Cowden Burn	Cut for drainage ditch, Site 67	Drainage ditch
123	122	Tone Lane to Cowden Burn	Dark brown clay-silt	Ditch fill

Context no.	Fill of	Area	Description	Interpretation
124		Tone Lane to Cowden Burn	Cut for drainage ditch, Site 19	Drainage ditch
125	124	Tone Lane to Cowden Burn	Dark brown clay-silt	Ditch fill
126		Tone Lane to Cowden Burn	Clay, shale and sandstone, Site 15	Spoil from mining feature
127		Tone Lane to Cowden Burn	Cut for mining feature, Site 15	Mining feature
128	127	Tone Lane to Cowden Burn	Shale and poor quality coal	Spoil from mining feature
129		Tone Lane to Cowden Burn	Stone slabs, Site 15	Uncertain
130		Tone Lane to Cowden Burn	Cut for ditch, Site 7	Drainage ditch
131	130	Tone Lane to Cowden Burn	Dark grey-brown clay-silt with coal flecks	Ditch fill
132		Tone Lane to Cowden Burn	Cut for ditch, Site 7	Drainage ditch
133	132	Tone Lane to Cowden Burn	Dark grey-brown clay-silt with coal flecks	Ditch fill
134		Tone Lane to Cowden Burn	Cut for ditch, Site 7	Drainage ditch
135	134	Tone Lane to Cowden Burn	Dark grey-brown clay-silt with coal flecks	Ditch fill
136		Tone Lane to Cowden Burn	Linear ditch, Site 68	Drainage ditch
137	136	Tone Lane to Cowden Burn	Brownish-grey clay-silt with coal dross	Ditch fill
138		Tone Lane to Cowden Burn	Sandstone chunks and coal chips/lumps, Site 68	Track surface
139		Tone Lane to Cowden Burn	Linear ditch, Site 69	Drainage ditch
140	139	Tone Lane to Cowden Burn	Brownish-grey clay-silt	Ditch fill
141		Tone Lane to Cowden Burn	Linear ditch, Site 70	Drainage ditch
142	141	Tone Lane to Cowden Burn	Brownish-grey clay-silt	Ditch fill
143		Tone Lane to Cowden Burn	In-site wall structure, Site 71. Sandstone slabs and cobbles	Wall
144		Tone Lane to Cowden Burn	Demolished and scattered stones	Wall demolition
145		Tone Lane to Cowden Burn	Linear ditch, Site 72	Land boundary ditch
146	145	Tone Lane to Cowden Burn	Brownish-grey clay-silt with flecks of clean yellow clay	Ditch fill
147		Tone Lane to Cowden Burn	Linear ditch, Site 73	Land boundary ditch
148	147	Tone Lane to Cowden Burn	Brownish-grey clay-silt with flecks of clean yellow clay	Ditch fill
149	147	Tone Lane to Cowden Burn	Pieces of broken clay-pipe drain	Dumped deposit?
150		Tone Lane to Cowden Burn	Brownish silty shale	Bank deposit
151		Tone Lane to Cowden Burn	Shale deposit, Site 2	Platform or surface
152		Tone Lane to	Cut for feature	

Context no.	Fill of	Area	Description	Interpretation
		Cowden Burn		
153	152	Tone Lane to Cowden Burn	Brownish silty clay	
154		Tone Lane to Cowden Burn	Cut for mining feature, Site 2	Mining test-pit
155	154	Tone Lane to Cowden Burn	Brownish grey silty clay and stones	Backfill
156		Tone Lane to Cowden Burn	Cut for culvert drain, Site 2	Mining drainage?
157	156	Tone Lane to Cowden Burn	Light grey-brown fine sandy silt	Ditch fill
158	156	Tone Lane to Cowden Burn	Sandstone slabs and blocks	Culvert structure
159		Tone Lane to Cowden Burn	Sandstone chunks, soil, yellow clay and coal chips, Site 1	Track surface
160	156	Tone Lane to Cowden Burn	Grey-brown clay-silt and stones	Backfill of culvert trench
161	156	Tone Lane to Cowden Burn	Mustard-yellow fine sand, silt and clay	Secondary erosion
162	156	Tone Lane to Cowden Burn	Grey-orange clay-silt with orange-brown flecks	Primary erosion
163		Tone Lane to Cowden Burn	Possible cut for encircling ditch or stripping the site of topsoil, Site 25	Mining site preparation?
164		Tone Lane to Cowden Burn	Sandstone, shale and poor quality coal, Site 18	Mining spoil
165		Tone Lane to Cowden Burn	Small cobbles and brown silty soil, Site 1	Track surface
166		Tone Lane to Cowden Burn	Cut for probable shaft or bell-pit, Site 30	Mining site preparation?
167	166	Tone Lane to Cowden Burn	Mixture of coal fragments, soil and small stones	Backfill of mining feature
168		Tone Lane to Cowden Burn	Yellow-brown mixture of stones and shale.	Bank material
169		Tone Lane to Cowden Burn	Deposit of coal, shale and soil outside 168	Probable soil
170		Tone Lane to Cowden Burn	Rectangular sandstone blocks in a line. Continues the alignment of ditch Site 32	Probable culvert structure
300		Chipchase	Natural - light brown/orange clayey sand with bands of pure sand and sand and degraded stones.	Natural subsoil
301		Chipchase	Topsoil - Reddish brown sandy silt	Topsoil
302		Chipchase	Subsoil - thin lens of light brown sandy clay	Natural subsoil
304		Chipchase	Cut of inner circular groove-ring, sub circular in plan, c. 10m in diameter. Heavily truncated, 0.28m to 0.06m in width, 0.15m to 0.06m in depth. It had both a v-shaped and u-shaped profile in places	Cut for inner structural elements of the roundhouse
305		Chipchase	Cut of outer ditch, sub-circular in plan c. 12-13m in diameter. Heavily truncated. It varied from between 0.5-0.25m in width and survived to a depth of between 0.2-0.06m. The u-shaped profile of the ditch was fairly uniform along its length	Cut for outer structural elements of the roundhouse
306	304	Chipchase	Fill of inner ditch - mid-brown/grey sandy clay	Fill of 304 - likely filled in post-

Context no.	Fill of	Area	Description	Interpretation
				removal.
307		Chipchase	Cut of sub-rectangular pit - 1.27m x 0.95m in plan, up to 0.1m deep.	Possibly a natural hollow or later agricultural feature
308	307	Chipchase	Fill of sub-rectangular pit - dark greyish brown clayey sand	Fill of 308, backfill
309		Chipchase	Cut of possible post-hole - 0.35m wide by 0.12m deep	Possible post-hole related to roundhouse structure
310	305	Chipchase	Fill of outer ditch - mid brownish grey sandy clay	Fill of 305 - likely filled in post-removal.
311	309	Chipchase	Fill of posthole - mottled, mid greyish sandy clay, with several stones up to 0.1m diameter - possible packing stones.	Fill of 309 - stones may represent post-packing stones
312		Chipchase	Cut of sub-circular pit or posthole - 0.3m wide by 0.22m deep	Possible post-hole related to roundhouse structure
313	312	Chipchase	Fill of 312 – mottled greyish brown sandy clay with occasional stones up to 0.1m in diameter.	Fill if 313 - stones may represent post-packing stones
314		Chipchase	Cut of sub-circular pit or posthole – 0.48m by 0.4m; 0.23m deep	Possible post-hole related to roundhouse structure
315	314	Chipchase	Fill of posthole - mid greyish brown clayey sand, with several stones up to 0.1m diameter - possible packing stones.	Possible posthole related to roundhouse structure
316		Chipchase	Cut of irregular shaped pit, 0.32m wide by 0.13m deep	Likely a burrow or natural feature due to its irregular shape
317	316	Chipchase	Fill of 316 - brownish grey clayey sand	Fill of 316, backfill
318		Chipchase	Cut of circular pit/posthole, 0.46m diameter by 0.27m deep.	Possibly a post-hole relating to the roundhouse structure but no packing stones evident - usage unknown
319	318	Chipchase	Fill of 318 - mottled orangey brown clayey sand	Fill of 318, backfill
320		Chipchase	Cut of sub-circular pit - 0.47m x 0.4m; 0.13m depth	Shallow pit - no indication of usage - likely related to roundhouse structure
321	320	Chipchase	Fill of 320 - mid greyish brown clayey sand	Fill of 320, backfill
322		Chipchase	Cut of sub-circular pit - 0.3m diameter by 0.2m deep	Possible post-hole related to roundhouse structure
323	322	Chipchase	Fill of 323 - mid reddish brown sandy clay with occasional stones up to 0.1m diameter.	Fill of 322 - stones may represent post-packing stones
324		Chipchase	Cut of ovoid pit - 1.8m x 0.8m; 0.25m deep	Possibly the truncated remains of a heavily packed post-hole for a large post relating to the roundhouse structure

Context no.	Fill of	Area	Description	Interpretation
325	324	Chipchase	Fill of 324 - mid greyish brown sandy clay containing numerous quarried stone blocks up to 0.2m in length	Fill of 324 - stones possibly represent packing stones at the base of a large post-hole
326		Chipchase	Cut of sub-circular pit - 0.35m x 0.36m; 0.42m deep	Likely the truncated remains of a post-hole relating to the roundhouse structure
327	326	Chipchase	Fill of 326 - mid grey clayey sand containing stones up to 0.15m diameter.	Fill of 326 - the stones likely represent post-packing stones
328		Chipchase	Cut of circular pit - 0.4m diameter by 0.29m deep	Possibly a post-hole relating to the roundhouse structure but no packing stones evident
329	328	Chipchase	Fill of 328 – mottled light brown and grey sandy clay	Fill of 328, backfill
330		Chipchase	Cut of linear feature, poss. Field system	
331	330	Chipchase	Fill of linear – mid-brown grey sandy clay	
332		Chipchase	Cut of linear, prob. Continuation of (330)	
333	332	Chipchase	Fill of linear – mid-brown sandy clay	
334		Chipchase	Cut of ovoid shaped pit - 0.32m x 0.38m; 0.16m deep	Possibly a post-hole related to the roundhouse structure which has been heavily truncated
335	334	Chipchase	Fill of 334 - brownish grey clayey sand	Fill of 334 - backfill
336		Chipchase	Cut of ovoid pit - 0.15m x 0.13m; 0.05m deep	Small pit - usage unknown, likely heavily truncated
337	336	Chipchase	Fill of 336 – dark grey clayey sand	Fill of 336, backfill
338		Chipchase	Cut of ovoid-shaped pit, 0.4m x 0.34m; 0.2m deep	Possible post-hole related to roundhouse structure
339	338	Chipchase	Fill of 338 – mid-dark grey clayey sand containing rounded stones up to 0.1m diameter	Fill of 338 - stones may represent packing for a post or stake
340		Chipchase	Cut of sub-circular pit - 0.2m x 0.19m by 0.06m deep	Cut of small pit - unknown usage
341	340	Chipchase	Fill of 340 - mid greyish brown sandy clay with pockets of gravel	Fill of 340 - backfill
342		Chipchase	General cut of return of outer ditch after possible northern entrance	Most likely the continuation of 305 - ditch cut for outer structural elements of the roundhouse
343	342	Chipchase	Fill of 342 - mid brownish clayey sand	Fill of 342, as 310
344		Chipchase	Cut of ovoid pit - 0.3m x 0.17m; 0.05m deep (heavily burrowed)	Cut of small pit, usage unknown
345	344	Chipchase	Fill of 344 - mid orangey grey sandy clay	Fill of 344 - backfill
346		Chipchase	Cut of ovoid pit – 0.5m x 0.44m; 0.21m deep	Possibly a truncated post-hole related to

Context no.	Fill of	Area	Description	Interpretation
				the structure of the roundhouse
347	346	Chipchase	Fill of 346 - mid greyish brown clayey sand with occasional stones	Fill of 347 - stones may represent post-packing stones
348	328	Chipchase	Secondary fill of probable posthole - mid to dark grey sandy clay	Probable post-abandonment infilling
400		Chipchase	Mixed orange-yellow mottled sand.	Natural subsoil
401		Chipchase	Mid-yellow-brown loose organic sand.	Topsoil
402		Chipchase	Mid-yellow-brown moderately compact silty sand	Subsoil
403	404	Chipchase	Mid-brown to black friable silty sand with occ. Sub angular heat affected stone	Fill of small discrete pit
404		Chipchase	0.86m by 0.79m by 0.13m. Sub-circular. Truncated by plough scar.	Cut of small discrete pit
405		Chipchase	In situ burning. Mid-orange-red soft burnt sand. 30mm thick.	Burnt sand deposit- in situ burning of natural subsoil base under 407.
406	407	Chipchase	Heterogenous mix of moderately compact mid-brown to black silty sand. 80mm thick.	Fill of pit
407		Chipchase	Sub-oval, 1.62m by over 0.66m by 80mm in depth.	Cut of pit in section
408		Chipchase	Overlies 410. 4m by 2m by 10mm (trace). Fibrous quality mid brown silty sand with occ. Small stones. May form part of plough-scar fill.	Sand deposit sealing 410
409	410	Chipchase	Dark greyish black silty sand with frequent sub-angular stones at 70mm in depth.	Fill of large pit
410		Chipchase	Sub-oval, 3m by 1.36m by 70mm in depth. Truncated by plough scarring.	Cut of large pit
411	412	Chipchase	Mid-brown firm silty clay, 0.25m in depth.	Fill of ditch
412		Chipchase	1m slot, 0.80m wide by 0.25m in depth. Truncated by plough scar.	Cut of ditch
413	414	Chipchase	Mid-brown firm silty clay, 0.20m in depth.	Fill of ditch
414		Chipchase	1m slot by 0.8m wide by 0.20m in depth. Concave sides.	Cut of ditch
415	416	Chipchase	Mid-brown firm silty clay, 0.22m in depth.	Fill of ditch
416		Chipchase	1m slot by 0.7m wide by 0.22m in depth. Truncated by clay pipe field drain. Concave sides.	Cut of ditch
417	418	Chipchase	Dark greyish brown firm silty clay up to 0.30m in depth.	Fill of ditch
418		Chipchase	Linear with shallow uneven sides. 1m slot by 1.40m by 0.30m in depth	Cut of ditch
419	418	Chipchase	Black/grey firm ashen deposit. Lower fill. Possible industrial/ burning deposit.	Fill of ditch
420		Chipchase	Linear with concave sides. 1m slot by 0.70m by 0.25m in depth	Fill of ditch
421	420	Chipchase	Mid brown firm silty clay, 0.25m in depth.	Cut of ditch

APPENDIX 3: Drawing Register

Dwg No	Sheet No.	Scale	Plan / Section	Description/contexts
1	1	1:20	P	Site 65, plan of cut [104] for metal box
2	1	1:20	P	Site 32, plan of ditch [100] having 3 sections
3	1	1:10	S	E facing section of ditch [100], site 32
4	1	1:10	S	SE facing section of ditch [100], site 32
5	1	1:10	S	N facing section of ditch [100], site 32
6	1	1:10	S	W facing section of ditch [111], site 32
7	1	1:20	P	Plan of linear ditch [111], site 32
8	1	1:20	P	Plan of continuation of ditch [109], with 3 sections
9	1	1:10	S	SW facing section of ditch [109], site 32
10	1	1:10	S	NE facing section of ditch [109], site 32
11	1	1:10	S	S facing section of ditch [109], site 32
12	2	1:20	P	Plan of site 30
13	3	1:20	P	Plan of linear ditch 32
14	3	1:10	S	Section of ditch 32 [113]
15	3	1:10	S	Section of ditch 32 [113]
16	3	1:20	P	Plan of site 27 [115] ditch
17	3	1:10	S	Section of ditch [115], site 27
18	3	1:10	S	Section of ditch [115], site 27
19	3	1:10	S	SW facing section of ditch [139], site 69
20	3	1:10	S	Section of ditch [143], site 71
21	3	1:10	S	Section of ditch [147], site 73
22	3	1:10	S	Section of ditch [147], site 73
23	3	1:10	S	Section of ditch [145], site 72
24	11	1:100	Plan	Drawing of possible bell with trench in
25	3	1:20	Plan	Site 69, Plan of ditch [139]
26	3	1:20	Plan	Site 71, Plan of ditch [143]
27	4	1:10	Section	Section of ditch [117]
28	5	1:100	Plan	Plan of sites 18, 19, unknown ditch [122] + [124]
29	5	1:100	Plan	Plan of site 15
30	5	1:10	Section	Site 7, section of ditch [130]
31	5	1:10	Section	Site 7, section of ditch [132]
32	5	1:10	Section	Site 7, section of ditch [134]
33	5	1:10	Section	Site 19, section of ditch [124]
34	5	1:10	Section	Site ? 67, Section of ditch [122]
35	6	1:100	Plan	Plan of site 2 (including [156], [154], [152])
36	6	1:50	Plan	Plan of site 2 (including [156], [154], [152])
37	7	1:10	Section	Culvert [156] cutting site 2 section
38	8	1:10	Section	Cairn [109] E facing section
39	8	1:20	Plan	Cairn [109] stones in plan (mid-ex)
40	9	1:10	Section	Cairn [112] SW facing section
41	9	1:20	Plan	Cairn [112] stone (mid-ex)
42	10	1:10	Section	SE facing section of [404]
43	10	1:10	Section	W facing section of [407]
44	10	1:10	Section	NW facing section of [410]
45	10	1:20	Plan	Plan of [404]
46	10	1:20	Plan	Plan of [407]
47	10	1:20	Plan	Plan of [410]
48	10	1:10	Section	E facing section of [412]
49	10	1:20	Plan	Plan of ditch [412]
50	12	1:20	Plan	Plan of Linear No. 2 [414]
51	12	1:10	Section	Section of Linear No. 2
52	12	1:10	Section	Section of Linear No. 3 [416]
53	12	1:20	Plan	Plan of Linear No. 3 [416]

Dwg No	Sheet No.	Scale	Plan / Section	Description/contexts
54	12	1:10	Section	Section of Linear No. 4 [418]
55	12	1:20	Plan	Plan of Linear No. 4 [418]
56	12	1:10	Section	Section of Linear No.1 [420]
57	12	1:10	Section	Section of Linear No.1 [420]
58	12	1:20	Plan	Plan of Linear No. 1 [420]
59	13	1:10	Section	ENE-facing section of inner ring-groove [304], Slot 7
60	13	1:10	Section	ENE-facing section of inner ring-groove [304], Slot 8
61	13	1:10	Section	N-facing section of the inner ring-groove [304], Slot 9
62	13	1:10	Section	S-facing section of inner ring-groove [304], Slot 10
63	13	1:10	Plan	Plan of Slot 10, inner ditch [304] with posthole [334]
64	13	1:10	Section	SSE-facing section of Slot 11, inner ring-groove [304] with posthole [309]
65	13	1:10	Plan	Plan of Slot 11, inner ring-groove [304] with posthole [309]
66	13	1:10	Section	S-facing section of pit/posthole [328]
67	13	1:10	Section	Plan of pit/posthole [328]
68	13	1:10	Section	E-facing section of posthole [326]
69	13	1:10	Plan	Plan of half-sectioned posthole [326]
70	13	1:10	Plan	Plan of posthole [309] with packing stones in situ
71	13	1:10	Section	Profile of posthole [326] after packing stones removed
72	14	1:10	Section	NNE-facing section of Slot 1, outer ring-groove [305]
73	14	1:10	Section	S-facing section of Slot 2, [305]
74	14	1:10	Section	NNW-facing section of Slot 2, [305]
75	14	1:10	Section	SSE-facing section of Slot 3, [305]
76	14	1:10	Section	NW-facing section of Slot 3, [305]
77	14	1:10	Section	SE-facing section of Slot 4, [305]
78	14	1:10	Section	NW-facing section of Slot 4, [305]
79	14	1:10	Section	ESE-facing section of Slot 5, [305]
80	14	1:10	Section	W-facing section of Slot 5, [305]
81	14	1:10	Section	E-facing section of Slot 6, [305]
82	14	1:10	Section	E-facing section of Pit [307]
83	14	1:10	Section	NNE-facing section of terminus of [342], Slot 12
84	14	1:10	Section	NW-facing section of Slot 12
85	14	1:20	Plan	Plan of half-sectioned Pit [307]
86	14	1:20	Section	N-facing section of linear [330]
87	14	1:10	Plan	Plan of half-sectioned Pit [344]
88	14	1:10	Section	E-facing section of poss. Posthole [346]
89	14	1:10	Plan	Post-ex plan of [346]
90	15	1:10	Section	E-facing section of Pit [324]
91	15	1:10	Section	E-facing section of [320]
92	15	1:10	Section	S-facing section of [318]
93	15	1:10	Section	E-facing section of [322]
94	15	1:10	Section	S-facing section of [316]
95	15	1:20	Plan	Plan of half-sectioned [320]
96	15	1:20	Plan	plan of half-sectioned [318]
97	15	1:20	Plan	Plan of half-sectioned [322]
98	15	1:20	Plan	Plan of half-sectioned [316]
99	15	1:20	Plan	Plan of half-sectioned [324]
100	15	1:20	Plan	Plan of half-sectioned [312]
101	15	1:10	Section	N-facing section of [312]
102	15	1:20	Plan	Plan of half-sectioned [314]
103	15	1:10	Section	E-facing section of [314]
104	15	1:10	Section	E-facing section [338]
105	15	1:20	Plan	Plan of half-sectioned [338]
106	15	1:20	Plan	Plan of fully excavated [338]

Dwg No	Sheet No.	Scale	Plan / Section	Description/contexts
107	15	1:10	Plan	Plan of half-sectioned [336]
108	15	1:10	Section	E-facing section of [336]
109	15	1:10	Section	E-facing section of [340]
110	15	1:10	Plan	Plan of half-sectioned [340]
111	15	1:10	Section	S-facing section of [332]

APPENDIX 4: Sample Register

Sample No.	Area	Context	Feature	Sample Type	Volume
1		310	305	Bulk	10
2		310	305	Bulk	10
3		310	305	Bulk	10
4		310	305	Bulk	10
5		310	305	Bulk	10
6		310	305	Bulk	10
7		306	304	Bulk	10
8		306	304	Bulk	10
9	VOID				
10		306	304	Bulk	10
11		327	326	Bulk	10
12		323	322	Bulk	10
13		319	318	Bulk	10
14		321	320	Bulk	2
15		317	316	Bulk	2
16		315	314	Bulk	10
17		313	312	Bulk	2
18		325	324	Bulk	10
19		335	334	Bulk	2
20		308	307	Bulk	40
21		339	338	Bulk	5
22		337	336	Bulk	1
23		311	309	Bulk	2
24		313	312	Bulk	2
25		315	314	Bulk	10
26		317	316	Bulk	2
27		329	328	Bulk	30
28		319	318	Bulk	2
30		327	326	Bulk	4
31		321	320	Bulk	2
32		325	324	Bulk	2
34		409	410	Bulk	40
35		405	407	Bulk	3
36		406	407	Bulk	5
37		403	404	Bulk	20
38		345	344	Bulk	5
39	VOID				
40		347	346	Bulk	20
41		411	412	Bulk	30
101		411	412	Bulk	25
102		413	414	Bulk	25
103		415	416	Bulk	
104		417	418	Bulk	10
105		419	418	Bulk	5

APPENDIX 5: Finds Quantification

Context	Other context info	Find type	No.	Wt (g)	Notes	Spotdate
U/S		Copper Alloy	2	4	discs	Modern
U/S		Lithic	1	8	Flint	Prehistoric
101	site 32	Iron	1	500	Hammer	Modern
101	site 32	Glass	1	20	Clear bottle base	Modern
101	site 32	Pottery	9	110	ceramic	Modern
104		Pottery	32	942	ceramic	Modern
104		Glass	16	619	Brown bottle. One marked 'virol'	Modern
104		Glass	5	747	Clear bottle. Complete bottles	Modern
104		Glass	4	83	Clear patterned	Modern
104		Iron	3	8	Bottle seals	Modern
104	site 65	Pottery	9	257	ceramic	Modern
104	site 65	Glass	1	2	Clear	Modern
104	site 65	Iron	1	270	Handle	Modern
134	site 7	Pottery	1	9		Modern
347		Stone	1	127	tool?	Prehistoric
343		Pottery	1	4		Prehistoric
345		Pottery	4	82		Prehistoric
347		Pottery	36	63		Prehistoric

APPENDIX 6: Lithics and Stone Catalogue

Context	Sample No.	Catalogue No.	Material	Type	Sub-type	No.	Description	ML	MW	MTh
310	1	1	Quartz	Small flake	Inner	1	Probably natural spall.			
308	20	2	Grey flint	Small flake	Inner	1				
343	39	3	Grey flint	Small flake	Inner	1				
347	40	4	Grey flint	Small flake	Inner	5				
347	40	5	Grey flint	Chunk	Inner	1		12	11	7
U/S		6	Grey flint	Bipolar core	Without cortex	1	Bipolar core with three platforms - one on either end with scalar-type edge and one from flatter platform on one side. Flake and blade removals.	27	20	11
347		7	Quartzitic metamorphosed sandstone?	Stone tool		1	Waterworn flat, elongated triangular cobble. The broad end has been flaked bifacially to make a curved, angled edge. The narrow end has been shaped by pecking a facet on either face which makes an angled end. A chopper-edge tool with shaping on the butt end most likely to enable hafting.	96	49	21
112	Cairn M			Sandstone	Cup-marked stone		Large block of medium-grained sandstone. Natural flat base. Appears weathered and bedding planes are visible and peeling. Remains of four, possibly six cup marks pecked onto upper surface. Deepest one is c.70mm in diameter and 27mm deep. The rest are smaller and may not be complete.	500	300	115

APPENDIX 7: Gazetteer of Survey Sites, Tone Lane-Cowden Burn

Site No.	Description
1	Trackway from Tone Lane to Middle Cowden via Cowden Colliery. Includes a branch to 'Old Coal Workings,' shown on OS mapping. Around 3m wide. Used by farm vehicles around Low Farm. Disused to the north of Middle Cowden and blocked by field wall (Site 24). During the WB the track was seen to have 2 phases of surface. A primary phase consisted of quarried sandstone chunks and coal chips. This was overlain by a Phase 2 layer of small rounded stones that could stem from field clearance. The 2 phases mostly follow the same route but around Site 21 the earlier phase runs slightly to the NW. About 3.5m diameter for Phase 1, 3m for Phase 2.
2	Cone shaped depression with a possible turfy platform on the E side of the pit. Overall 6m x 5m. The WB showed the pit was around 1.5m deep and a culvert had been cut through the area between the pit and the platform.
3	Cone-shaped depression with a slight upcast bank on the SW/W sides. Overall 7m x 5.5m
4	Cone shaped depression. Possible turf structure on the SE side 3.5m x 3m externally and 1.5m x 1.5m internally. Possible entrance in NW corner. Overall 7m x 7m
5	Linear ditch with upcast bank on down slope side. Ditch 1.4m wide and 0.5m deep. Bank 1m wide and 0.2m high. Leads from a mining feature outside study area towards track Site 1 then bends 90° to follow track SW downhill
6	A reed-filled depression with a penannular bank around it. Gap on N side which corresponds with a gap in the Site 5 bank. Overall 13m x 14m.
7	Linear ditch parallel to Track Site 1. 1.5m wide and 0.4m deep. Begins near Site 8 and ends in a dog-leg avoiding Site 2.
8	Cone shaped depression with surrounding bank. Overall 16m x 13m. Whole site is cut by drainage channels (Site 13) from strip cultivation.
9	A slight bank surrounds a flat area 4m x 4m. Bank is 0.2m high. Ditch Site 11 passes to the N in a manner similar to Sites 5 and 6.
10	Very substantial mine or bell pit and associated spoil heap mostly outside the survey area.
11	Linear ditch passing Sites 9 & 10 on the upslope side. 1.5m wide and 0.3m deep. No visible bank.
12	Cone shaped depression with surrounding bank. Overall 14m x 13m. Whole site is cut by drainage channels (Site 13) from strip cultivation.
13	Strip cultivation, not strictly Rig & Furrow. Linear strips 12 feet (3.5m-4m) wide with narrow (0.3m wide) steep-sided drainage channels between them. These features are clearest to the NW of Track Site 1 but can also be traced around Site 20 where they cut the edges of the ditch and bank. None of these remains were recorded on the Tone Estate to the NW of wall Site 24.
14	L-shaped or foot-shaped bank on the upslope (SE) side of Track Site 1. 13m x 4m at SW end. 2m wide at NE end. 0.5m high
15	Cardwell Site G4. Depression 6m dia with possible drain exiting on NE side. Traces of a platform (as Site 2) on SW side. Bank is 2-3m wide. Overall 14m x 10m. The WB added no useful information about this site.
16	Cardwell Site G5. Depression 5m dia. Extensive spoil heap on SW and SE upslope sides. Unusual mound on the N side of the pit. Overall 20m x 20m. This feature is not cut by the strip cultivation. Possible bell pit.
17	Linear ditch probably intended to divert water from a mining site to the N outside the study area. Ditch is 1.2m wide and 0.3m deep. Appears to stop short of Site 16 rather than being overlain by it. This site is clearly cut by the strip cultivation (Site 13).
18	Cardwell Site G3. Large mining site on both sides of Track Site 1. It looks like the track was reinstated after the mine was abandoned. Ditch alongside track clearly cuts the edge of the pit and the associated bank. Pit is 6m wide and 2m deep. Overall 24m x 21m. Ditch Site 19 diverts water away from this site. The cable trench cut through the spoil heap. This was 0.5m deep with dark coal and shale at the base, overlain by more grey coal-shale.
19	Ditch system. Almost encircles Site 18. 1.2m wide and 0.3m deep ditch. Bank is around 1m wide and 0.2m high. This feature is clearer than the strip cultivation and the relationship is unclear.
20	Extensive ditch system. All run into the ditch that runs alongside Track Site 1. 1.5m wide ditch, 0.4m deep. Bank is 1.5m wide and 0.3m high. The bank is clearly cut by the strip

Site No.	Description
	cultivation although the ditch isn't filled in. Continuation of the ditch runs under wall Site 24.
21	Cardwell Site G2. Poorly preserved pit 6m x 4m. Possible outflow through the surrounding bank on the NW side. Extensive spoil heap. Overall 18m x 10m. As with Site 18, it looks like the Track Site 1 has been reinstated through the feature after abandonment. Also seems to overlie the strip cultivation.
22	Cardwell Site G1. Very substantial site with a grassy track 5m wide linking it to the Track Site 1. Pit is 6m wide and 2m deep. Large stone slabs in the bank material, the only site to have these. No bank on N side adjacent to track.
23	Uncertain what this site is, partly due to overgrown vegetation. Possible level or adit. Overall 20m x 10m. Wall Site 24 has been rebuilt where it passes this site.
24	Drystone wall constructed from angular quarried sandstone. This is the only wall in the vicinity. Part of the feature is very well built and part is less well built. The wall is 1.5m high and tapers from 0.8m at the base to 0.4m at the top. Clearly blocks the alignment of Track Site 1, cuts mining Site 25 and overlies ditch Site 20.
25	Half of a bank. Remainder of this site is cut by wall Site 24 and by an active farm track on the NW side of the wall. The remaining site measures 12m x 5m.
26	Possible structure. A 'U'-shaped bank has a gap in the middle of one side which might be an entrance. Stones protrude through the turf. Outside the possible entrance are further stony turf bank. 3 mining pits lie nearby, all outside the study area.
27	Drainage ditches leading from mining features outside the study area E and past Site 28. 1.2m wide and 0.3m deep. Denuded bank on S side.
28	Coal Authority Ref. No. 391579-03P? Poorly preserved site, spoil heaps and banks are partly levelled. Uncertain shaft location. Mining site of some sort.
29	Linear ditch draining mining Site 30.
30	Coal Authority Ref. No. 391579-032. Poorly preserved site as an actively used farm track runs through the middle of it. Traces of a circular shaft 5m dia can be seen and there is a slight gap in the bank on the E side for drain Site 29. Overall 16m x 16m.
31	Well preserved site. Central depression 5m dia and 1m deep with a penannular bank around it. Gap in the bank on NW side 2m dia through which drain Site 32 runs. Overall 14m x 12m.
32	Network of shallow ditches draining several mining features including Site 31. Others are outside the study area. 1m-1.5m wide and 0.3m deep.
33	Rectangular platform a few metres SE of Site 31. Possible stance for a machine. Overall 14m x 4m and 0.4m high.
34	Coal Authority Ref. No. 391579-033. Well preserved site. Central depression 3.5m x 4.5m dia and 1m deep with a large boulder in the centre. A penannular bank lies around it. Disturbance from animal feeding on S and N sides. Overall 14m x 11m. Although no trace of a ditch was seen, a ditch was revealed leading SE from this site during the WB.
35	Network of ditches linking the mining features with the wider drainage network. Variable preservation. 1m-1.5m wide. A large flat stone at one of the junctions may have been used to divert the flow. A pit midway along a stretch of ditch may have been a settling tank.
36	Pit without a visible surrounding bank. Ditch Site 35 runs S from this feature. Overall 3.2m x 2.5m and 0.7m deep.
37	Pit without a visible surrounding bank. Overall 1.8m dia and 0.3m deep.
38	Pit without a visible surrounding bank. Overall 3m x 2m and 0.8m deep. A short stretch of ditch links this site to the adjacent Site 39.
39	Pit without a visible surrounding bank. Overall 1.2m dia and 0.2m deep. A short stretch of ditch links this site to the adjacent Site 38.
40	Pit without a visible surrounding bank. Overall 3m x 2m and 0.3m deep.
41	Depression 0.5m deep with a bank or platform on the SW side. Overall 6m x 5m.
42	Mining or quarry feature into sloping ground. Upcast bank or platform on NW side. Overall 4.5m x 3.8m and 0.9m deep.
43	Pit without a visible surrounding bank. Overall 2.2m dia and 0.3m deep.
44	Possibly two conjoined pits, one of which is overlain by an 'L'-shaped bank. Overall 6m x 3m and 0.7m deep.
45	Pit with a width of 2.5m surrounded by a penannular upcast bank with a gap in the N, upslope side. This is unusual as it would not allow a drain to be located there. Overall 7m

Site No.	Description
	diameter.
46	Dumbbell shaped feature consisting of two pits connected by a channel or ditch. Overall 10m x 3.5m and 0.4m deep at the ends.
47	Pit 2m dia with a denuded bank on the SW side. Bank 1.5m dia and 0.3m high. Overall 5m dia.
48	This site appears to be three conjoined bays in a slight slope. These may in fact be quarries but could be some sort of a platform or stance. Overall 16m x 6m and up to 1m deep.
49	Pit with what may be a penannular upcast bank, clearest on the NW side. Possible drain exit on SE side. Overall 5m dia and 0.5m from bank top to pit base.
50	Pit without a visible surrounding bank but with shallow channel running SE. This can be traced for several metres. Overall 7m x 3m.
51	Pit without a visible surrounding bank but with a few stones in the base. Overall 1.5m dia and 0.3m deep.
52	Pit without a visible surrounding bank. Overall 3m x 2.75m and 0.4m deep.
53	Pit without a visible surrounding bank. Overall 2m x 2.2m and 0.2m deep
54	Pit 1m deep with a penannular upcast bank 0.4m high with a gap on the S side which dips into a slight gully. Overall 5.5m x 3.5m.
55	Pit or quarry into slope alongside the Carry Burn. A bite has been taken out of the slope and an apron 2m dia of re-deposited spoil is visible outside it. Overall 5m x 4.5m.
56	Pit 1m deep with a penannular upcast bank 0.4m high with a wide gap on the SSE side which dips into a slight gully. Overall 9m dia and 1m deep.
57	Pit 1m deep with upcast banks 0.3m high on the N and SW sides. Overall 6m x 5m. A length of slight terracing just beyond the SW bank may be the remains of a track and may correspond to the location of a track shown on the 1866-1952 OS maps.
58	Half of a mining site overlain and truncated by the modern farm track which follows the course of the track on the OS 1866 map. A pit 0.2m deep is surrounded by a penannular bank containing a gap on the NE side. The surviving half measures 4m x 2m and the bank is 0.2m high
59	Large circular pit 5m dia and 0.3m deep with a penannular bank 1.5m wide and 0.2m high. A gap on the NE side was seen during the WB to contain a ditch linking with Site 35 ditches. Overall 9m x 8.75m.
60	Track, not clearly on historic maps. Runs from the existing farm track to the gate into Low Farm. Length 35m. Width 4m.
61	Camp Hill Scheduled Ancient Monument No. 1008665. This site was surveyed where it intersects the 100m study corridor. Most of the S half is tree covered. The N half contains a mining feature and an associated ditch (Site 20). The ditch is around 4.5m wide and 0.4m deep. The bank is 3.5m wide and 0.3m high.
62	Linear bank with no obvious purpose. 12m outside the outer bank of Camp Hill Settlement. Overall 17m x 4.2m and 0.3m high.
63	A grassy mound with a slight indentation on the SE side. Could be mining related but may be a more modern material dump. Overall 13m x 10m and 1.2m high.
64	An layer of wooden planks similar to railway sleepers which were associated with deposits of soft yellow clay and overlay a ditch (Site 35) leading away from mining Site 59.
65	Small pit into which had been put a metal container containing glass bottles and ceramic vessels.
66	Linear ditch associated with mining features. Probably cut by mining Site 28.
67	Linear ditch associated with mining features. May be the same as Site 19 but on a different alignment.
68	An 'Old Level' is shown on the OS County Series 1:2500 map (1863-95). This is currently a small hole in the ground into which flows a small stream. The cable route passed c.20m to the S of the level. A shallow ditch was recorded as was a spread of sandstone cobbles and coal chips/chunks. The ditch became indistinct away from the level and an outwash fan of silt and coal fragments was seen. The cobble spread had a width of 2.4m. This may have been a rough track or the foundations for a mineral railway track.
69	Linear ditch linking two possible mining test-pits to the S of the cable route to others to the N. All of the flow in these ditches currently runs into the level, Site 68.
70	Linear ditch linking at least one possible mining test-pit to the S of the cable route to others to the N. All of the flow in these ditches currently runs into the level, Site 68.

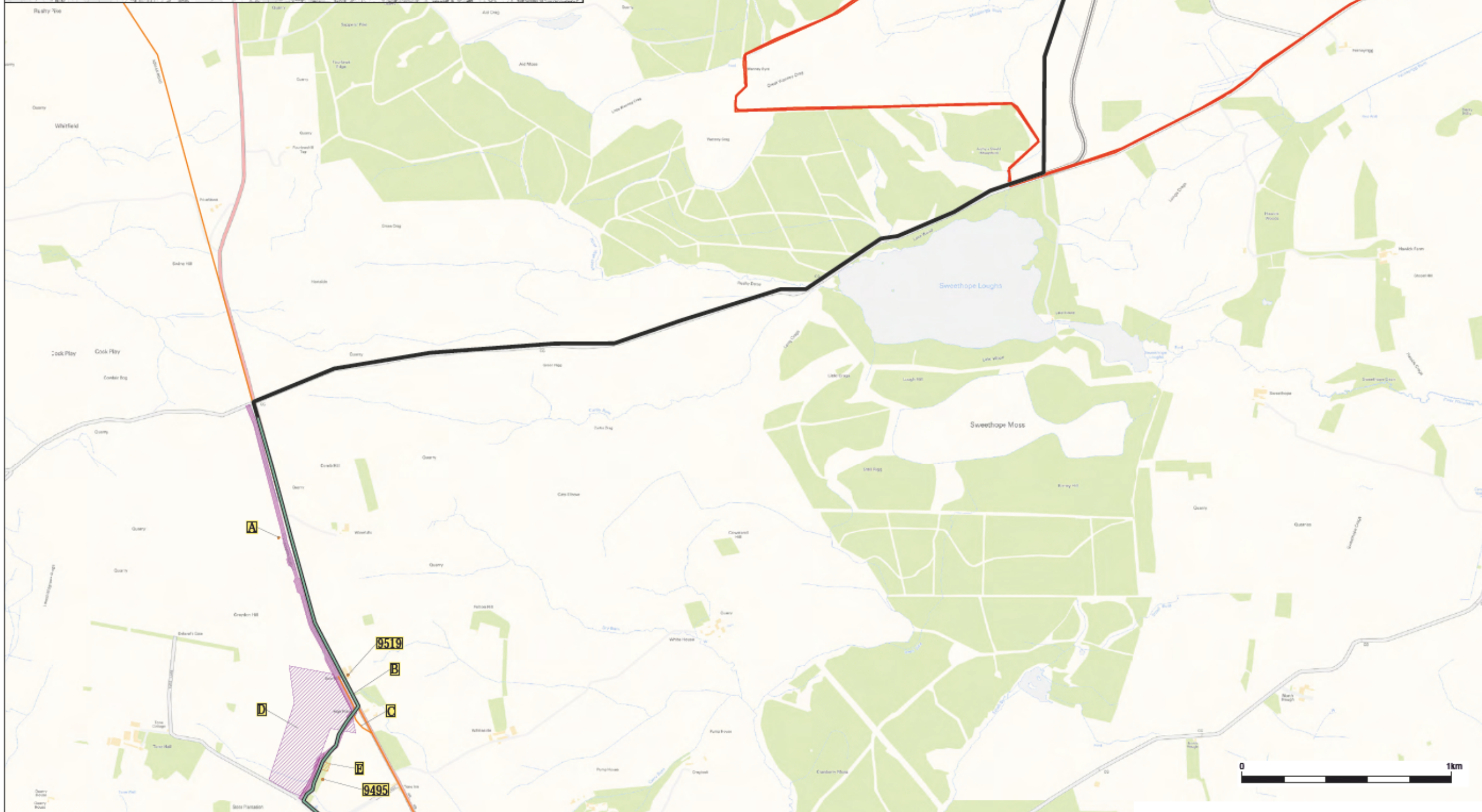
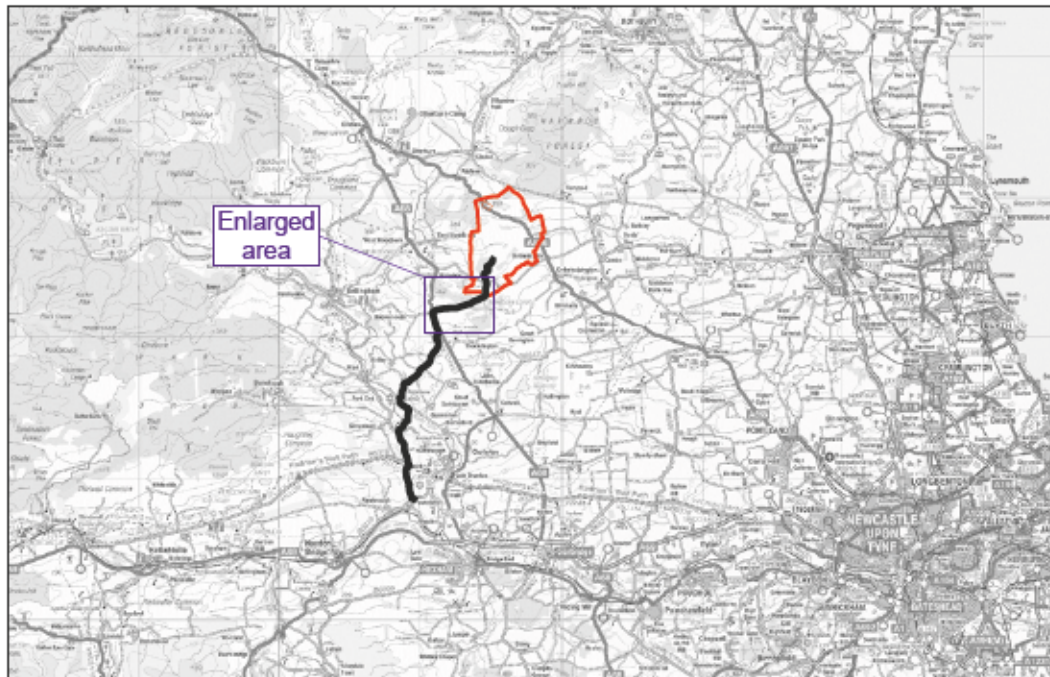
Site No.	Description
71	Cardwell Site H. A demolished drystone boundary wall and District Boundary. The structure has been spread on either side of the wall. Either the boundary was no longer needed or this was done to prevent livestock taking shelter and becoming buried. Width at base 0.8m (the same as wall Site 24). No spread to a width of 3-4m.
72	Linear bank with a ditch on the NE side running SE towards Middle Cowden. Width of bank, 2.7m. Width of ditch. 1.2m. Shown on 1866 OS map and discontinuous on later OS maps. The WB showed that the ditch hardly penetrated the natural subsoil.
73	Linear bank with a ditch on the NE side running SE towards Middle Cowden. Width of bank, 2m. Width of ditch. 0.8m. Not shown on 1866 OS map but it's parallel with Site 72 and must be of similar date. The WB showed that the ditch here was more substantial, with a width of 0.6m and a depth of 0.15m.

APPENDIX 8: Summary of Excavation Results of Roundhouse

Feature	Context No.	Dimensions	Description
Inner ditch, Slot 7	304	0.6m wide x 0.15m deep	Ditch segment with u-shaped profile with fill (306)
Inner ditch, Slot 8	304	0.28m wide x 0.11m deep	Ditch segment with u-shaped profile with fill (306)
Inner ditch, Slot 9	304	0.46m wide x 0.1m deep	Ditch segment with u-shaped profile with fill (306)
Inner ditch, Slot 10	304	0.2m wide x 0.06m deep	Ditch segment with u-shaped profile with fill (306). The ditch appears to have been cut by the adjacent posthole (335)
Inner ditch, Slot 11	304	0.33m wide x 0.06m deep	Ditch segment with u-shaped profile with fill (306)
Inner ditch, Slot 12	342	0.3m wide x 0.11m deep	Ditch segment with u-shaped profile with fill (343)
Outer ditch, Slot 1	305	0.25m wide x 0.08m deep	Ditch segment with u-shaped profile with fill (310)
Outer ditch, Slot 2	305	0.45m wide x 0.2m deep	Ditch segment with v-shaped profile with fill (310)
Outer ditch, Slot 3	305	0.5m wide x 0.15m deep	Ditch segment with v-shaped profile with fill (310)
Outer ditch, Slot 4	305	0.3m wide x 0.07m deep	Ditch segment with u-shaped profile with fill (310)
Outer ditch, Slot 5	305	0.26m wide x 0.06m deep	Ditch segment with u-shaped profile with fill (310)
Outer ditch, Slot 6	305	0.4m wide x 0.11m deep	Ditch segment with a slightly v-shaped profile with fill (310)
Sub-rectangular pit	307	1.27m long x 0.95m wide x 0.09m deep	Shallow, sub-rectangular pit with a single dark greyish brown (308)
Circular posthole	309	0.35m in diameter x 0.12m deep	A posthole containing packing stones. The sides were near vertical with a slightly concave base. With the packing stones included the diameter decreases to 0.25m. The posthole contained a single fill (311) consisting of mottled mid-greyish sandy clay
Sub-circular posthole or stake-hole	312	0.3m in diameter x 0.22m deep	The small posthole or stakehole contained packing stones which would have decreases the diameter to approximately 0.12m. The sides were vertical with a concave, u-shaped base. The feature contained single mottled greyish brown clayey sand (313).
Sub-circular	314	0.48m x 0.4m and	Very few packing stones were recovered from

Feature	Context No.	Dimensions	Description
posthole or stake-hole		0.23m deep.	the fill. The fill (315) consisted of mid greyish brown clayey sand
Irregular posthole/stake-hole	316	0.32m wide x 0.13m deep	There were practically no packing stones recovered from the feature. It contained a single brownish grey clayey sand fill (317). The western side was near vertical but the eastern side was more gently sloping. The base was slightly concave.
Circular posthole/stake-hole	318	0.46m diameter 0.27m deep.	V-shaped profile. It contained a single fill of mottled orangey brown clayey sand (319). There were no packing stones present. However, the feature was cone-shaped.
Sub-circular pit	320	0.47m wide and 0.4m transversely; 0.13m deep	Pit had sloping sides and a flat base. It contained a single fill (321) which consisted of mid-greyish brown clayey sand.
Sub-circular posthole	322	0.35m x 0.36m; 0.2m deep	Large concentration of packing stones in the upper part of the mid-reddish brown sandy clay fills (323). The stones were concentrated on the northern side of the posthole towards the bottom of the feature. It had near vertical sides and a flat base.
Ovoid pit	324	1.8m x 0.8m; 0.25m deep.	The pit had sloping sides and a rounded concave base. The mid-greyish brown sandy clay fill (325) contained a large percentage of medium sized quarried stones.
Sub-circular posthole	326	0.35m x 0.36m; 0.42m deep	The fill consisted of 60-70% rounded and sub-angular stones (small-medium sized) within a matrix of mid-grey clayey sand (327). The stones were tightly packed within the feature. When the stones were removed, in order to further excavate the feature, it revealed a probable posthole with vertical sides and slightly concave base.
Circular posthole	328	0.4m diameter and 0.29m deep	The basal fill consisted of small rounded and angular stones within a matrix of mottled light brown and grey sandy clay (329). The secondary fill consisted of mid to dark grey sandy clay (348). The posthole had near-vertical sides and a rounded concave base.
Linear gully	330	7.3m long x 0.5m wide (max); 0.06m deep	The shallow gully had gently sloping sides and a flat base. The fill consisted of mid-brown grey sandy clay (331). It was not possible to ascertain if the gully had cut the inner ditch, or vice versa, as the fills were too similar and the remains were too denuded. However, the gully does not continue through the structure. Another linear gully (332) is opposite to (330) and probably represents a continuation of the gully. This terminates just inside the outer ditch
Linear gully	332	5.2m long x 0.35m wide; 0.05m deep.	The fill consisted of mid-brown sandy clay (333). Similarly to (330), it was not possible to ascertain the phasing with regards to the outer ditch and the gully. The intersection was investigated but the fills were too similar to discern which cut which.
Ovoid posthole	334	0.32m x 0.38m;	Fill consisted of brownish grey clayey sand

Feature	Context No.	Dimensions	Description
		0.16m deep	(335). There was only one large, rounded stone (packing) within the fill but it took up over half the posthole. It appears that the posthole cut the ditch (304).
Ovoid stakehole	336	0.15m x 0.13m	Fill consisted of dark grey clayey sand (337). The feature had gently sloping sides v-shaped concave base.
Ovoid posthole	338	0.4m x 0.34m; 0.2m deep	The single fill (339) consisted of small, rounded stones within a matrix of mid-dark grey clayey sand.
Small, sub-circular pit	340	0.19m x 0.2m; 0.06m deep.	Contained a single fill (341) which consisted of mid-greyish brown sandy clay and gravel mix
Small oval pit	344	0.3m x 0.17m; 0.05 deep	Single fill (345) of mid-orangey grey sandy clay. It had been partially disturbed by burrowing. Pottery fragment found within the fill in the eastern half of the pit.
Ovoid pit posthole	346	0.5m x 0.44m; 0.21m deep	Partially cut by modern clay pipe field drain. The posthole contained two fragments of pottery and part of a stone tool.



- Key:**
- Windfarm Boundary
 - Ray Grid Route
 - Ray Grid Alternative Routes
 - Ray Grid Buffer
 - Watching Brief Areas
 - Proposed Infrastructure
 - Scheduled Monument Area
 - Cultural Heritage (point)
 - Cultural Heritage (linear)
 - Borrow Pit location
 - Ridge and Furrow

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Title:
 Location of Cairns L and M, and a Potential Burnt Mound deposit along the forestry track

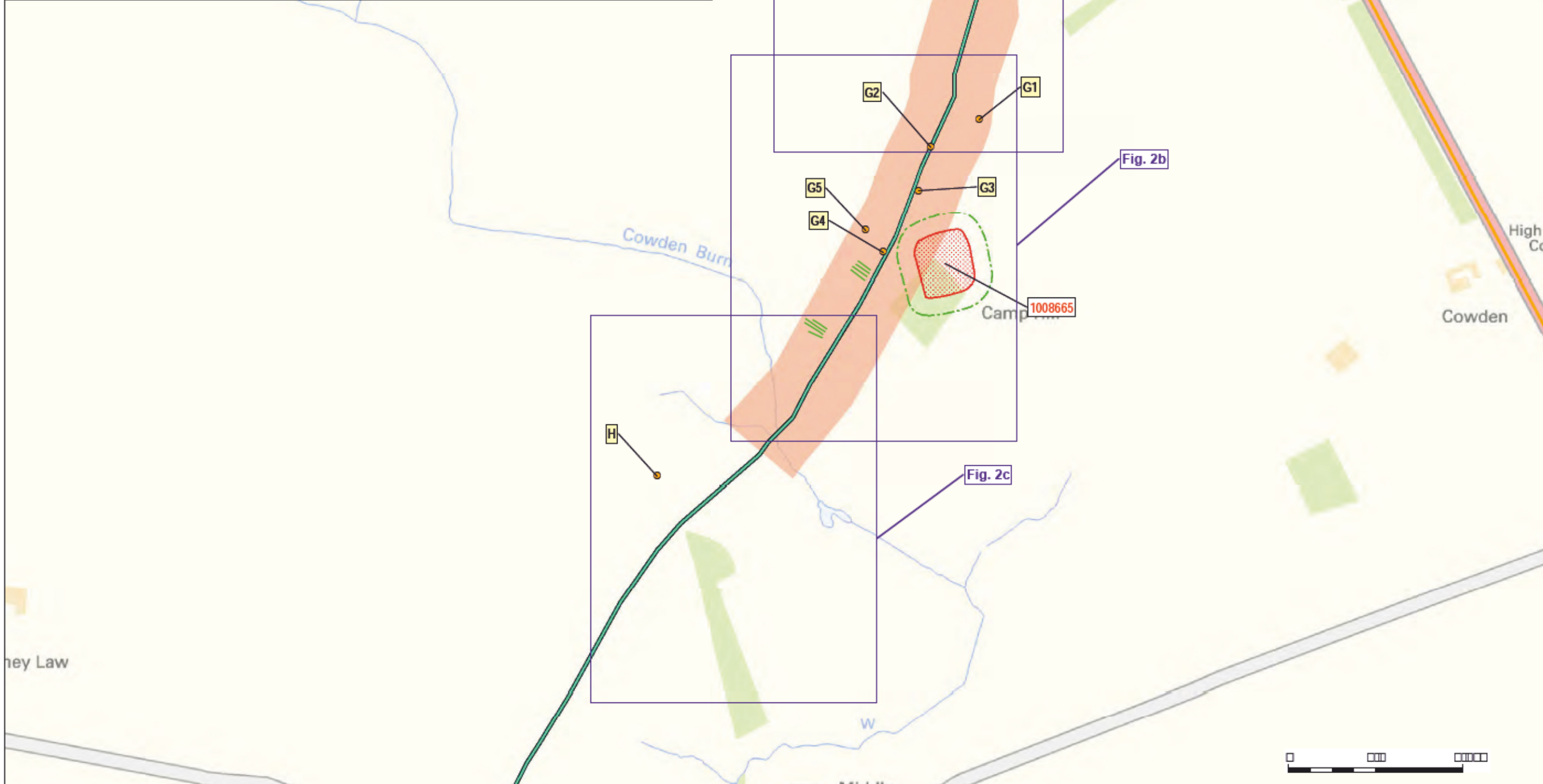
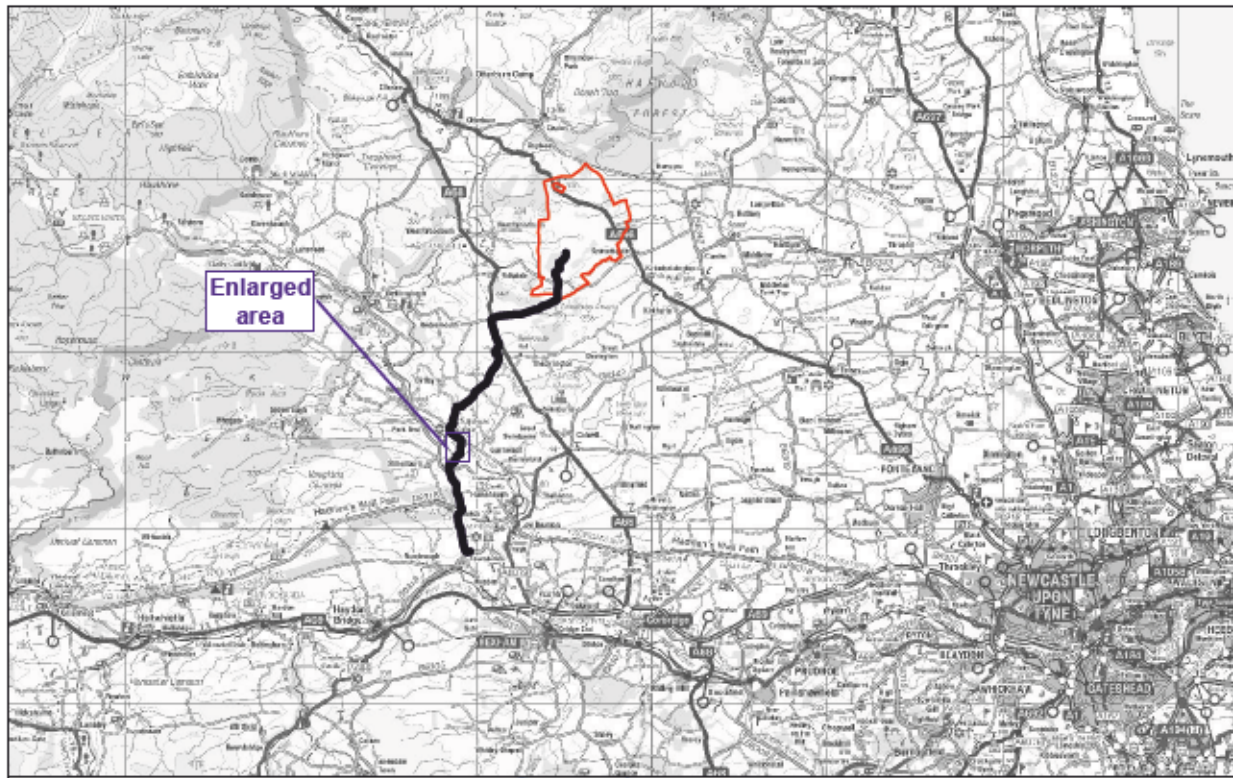
Project:
 Ray Wind Farm Grid Connection

Client:
 Vattenfall

Scale at A3:
 1:20000

Drawn by: MP	Checked: SW	Date: 21/11/2016
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Report No.: 3479	Fig. No.: 1b
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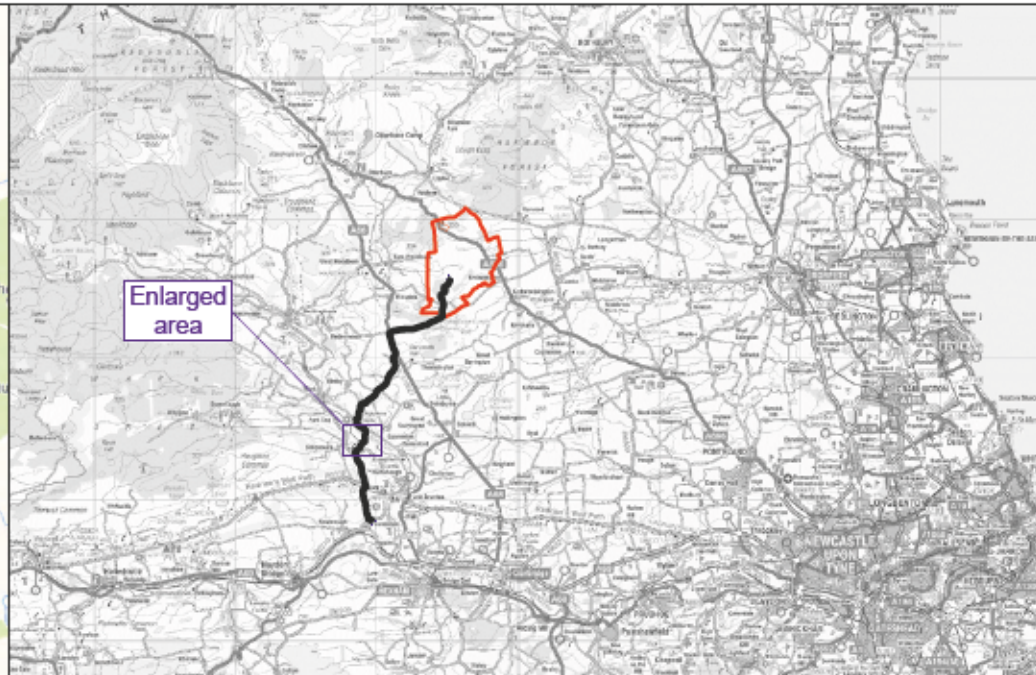
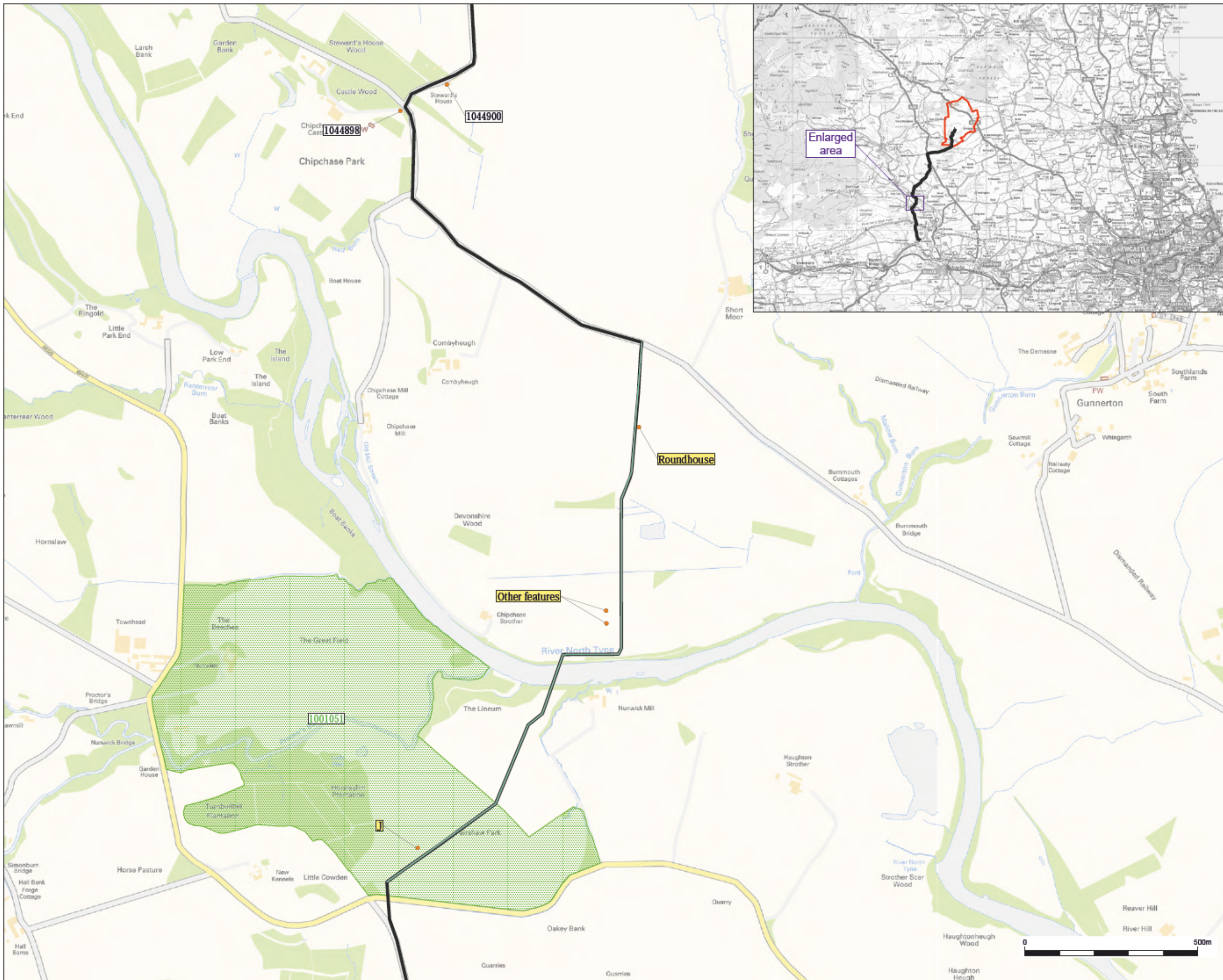
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- Key:**
- Windfarm Boundary
 - Ray Grid Route
 - Watching Brief Areas
 - Registered Park and Garden
 - Cultural Heritage (point)

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Title:
Location of Archaeological Sites at Chipchase

Project:
Ray Wind Farm Grid Connection

Client:
Vattenfall

Scale at A3:
1:10000

Drawn by: MP	Checked by: SW	Date: 21/11/2016
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Report No: 3479	Fig. No: 1d
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- Key:**
- Windfarm Boundary
 - Ray Grid Route
 - Watching Brief Areas
 - Scheduled Monument Area
 - Cultural Heritage (point)

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Title:
Location of Archaeological monitoring at Hadrian's Wall

Project:
Ray Wind Farm Grid Connection

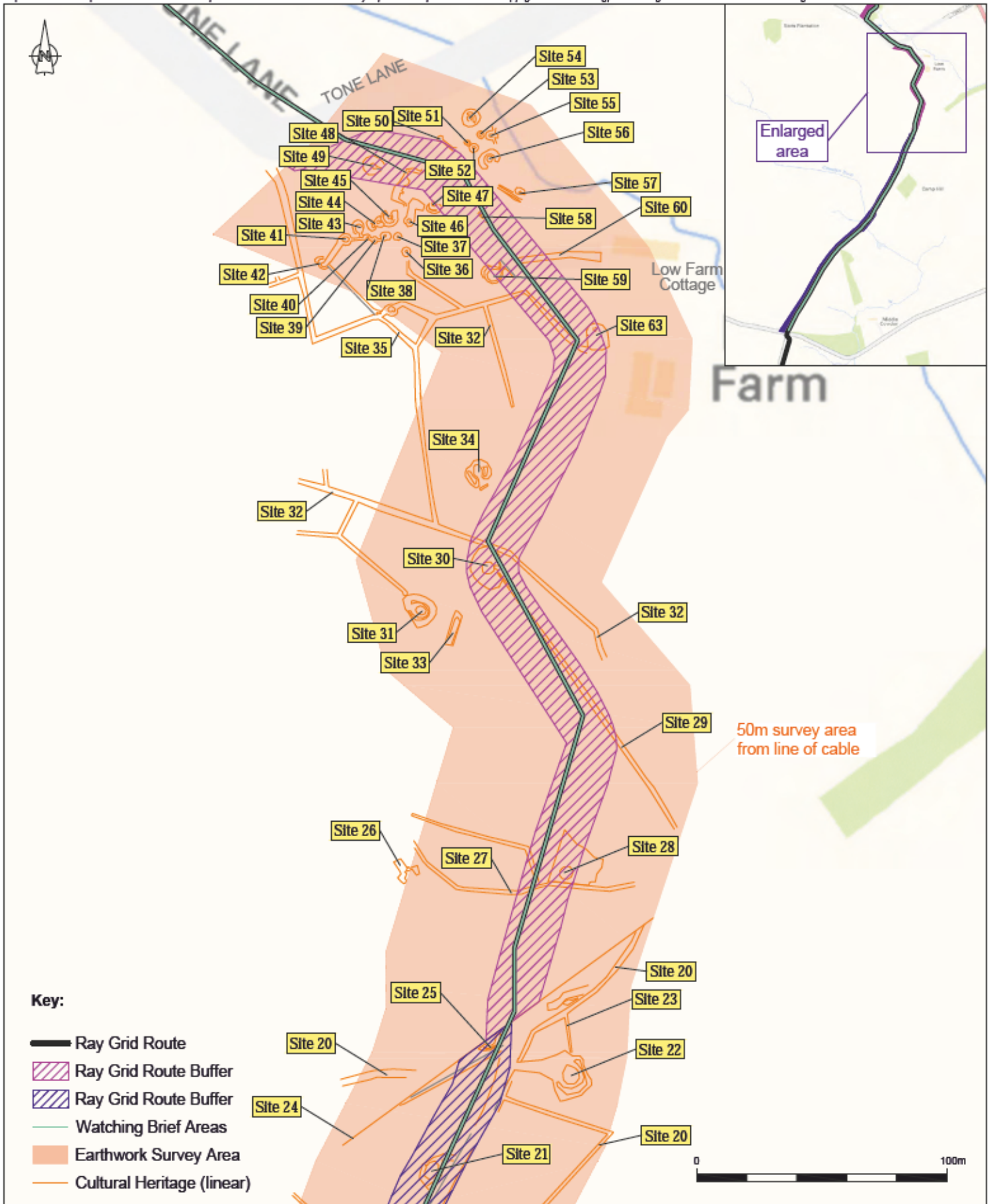
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Vattenfall

Scale at A3:
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Drawn by: MP	Checked: SW	Date: 21/11/2016
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Report No: 3479	Fig. No: 1e
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Title: Survey and Watching Brief Results, Tone Lane to Cowden Burn, Northern Area

Client: Vattenfall

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Project: Ray Wind Farm Grid Connection

Scale at A4: 1:2000

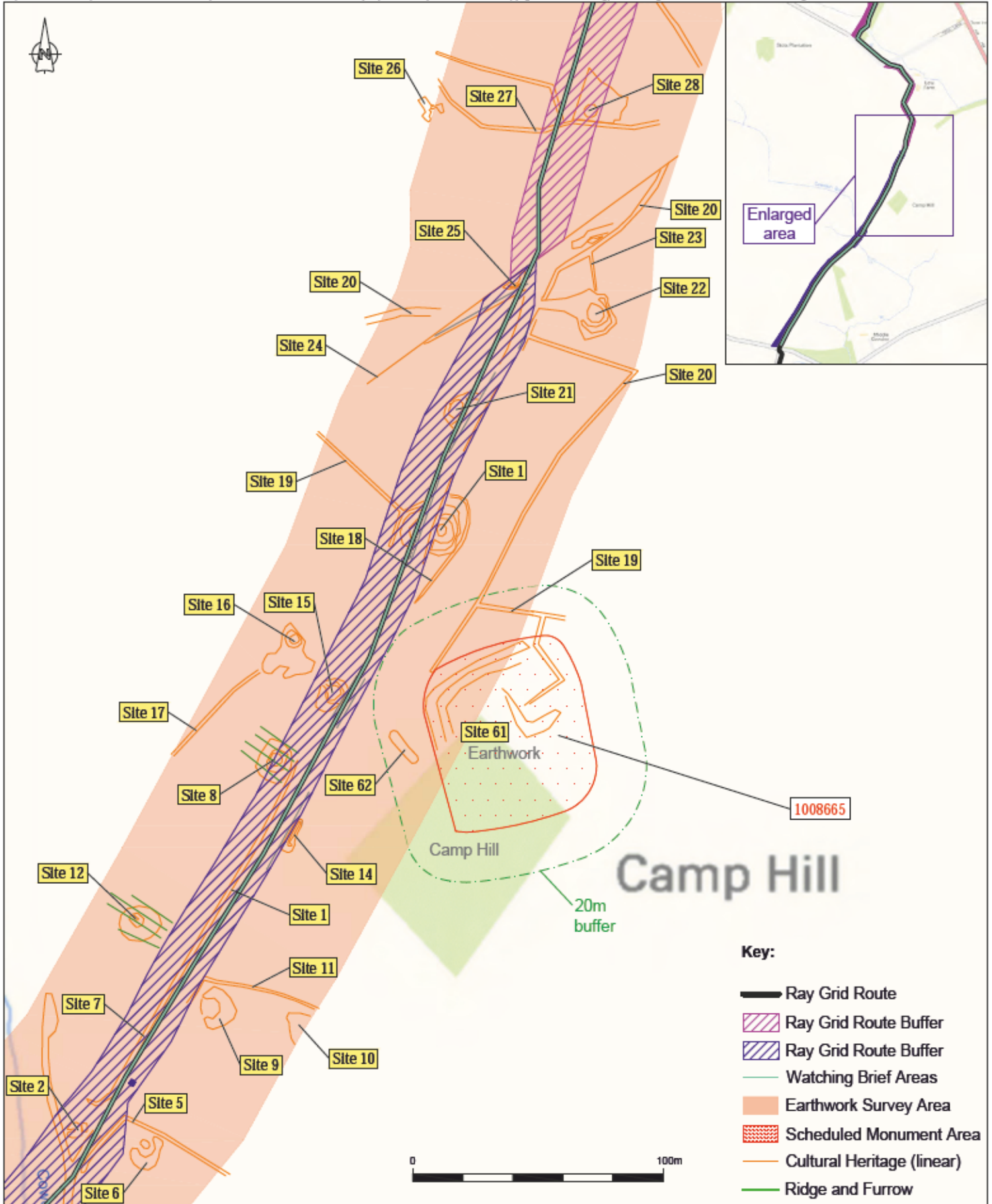
Drawn by: MP

Checked: SW

Date: 21/11/2016

Report No: 3479

Fig. No: 2a



Title: Survey and Watching Brief Results, Tone Lane to Cowden Burn, Central Area

Client: Vattenfall

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Project: Ray Wind Farm Grid Connection

Scale at A4:
1:2000

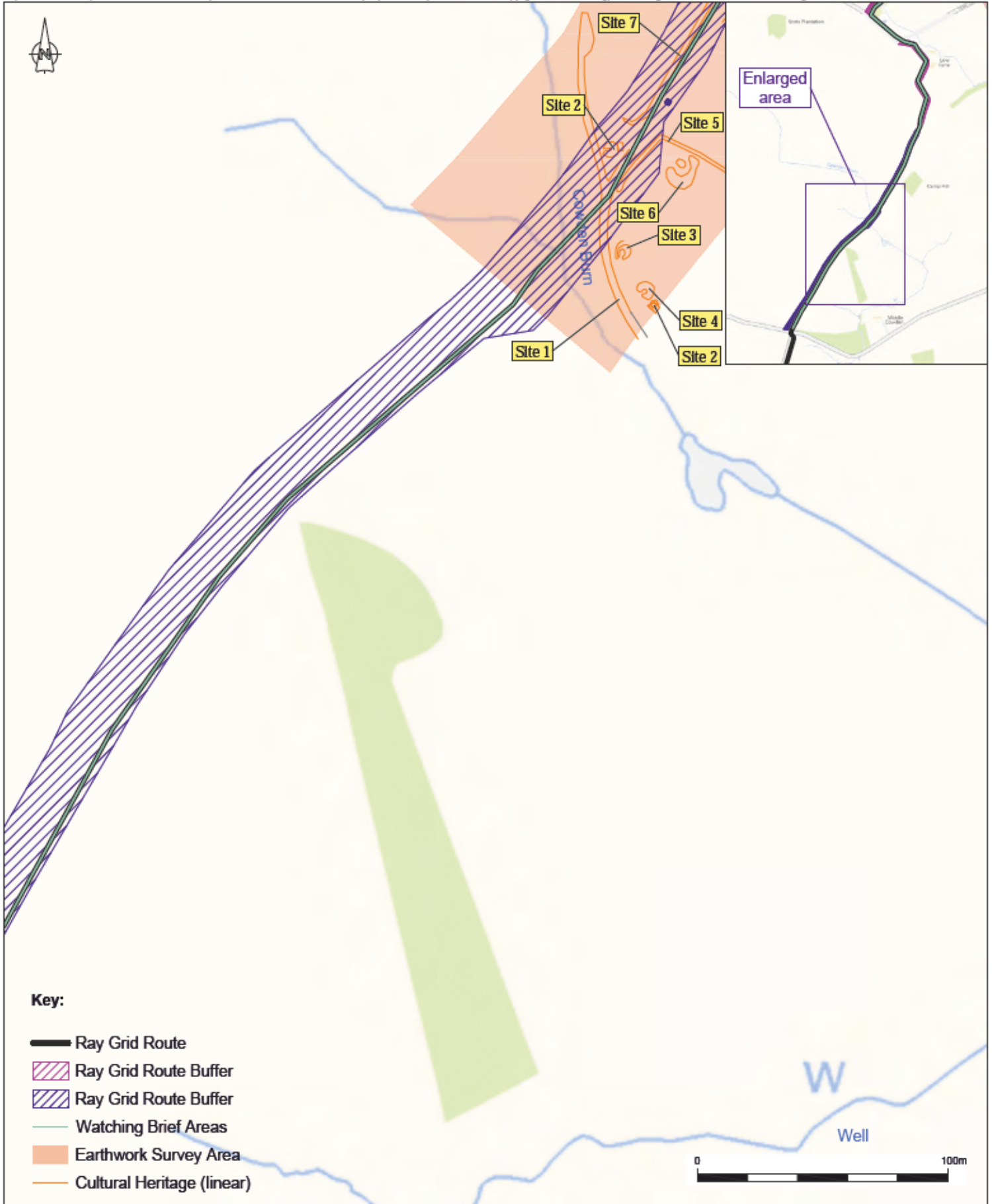
Drawn by:
MP

Checked:
SW

Date:
21/11/2016

Report No:
3479

Fig. No:
2b



Title: Survey and Watching Brief Results, Tone Lane to Cowden Burn, Southern Area

Client: Vattenfall

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Project: Ray Wind Farm Grid Connection

Scale at A4: 1:2000

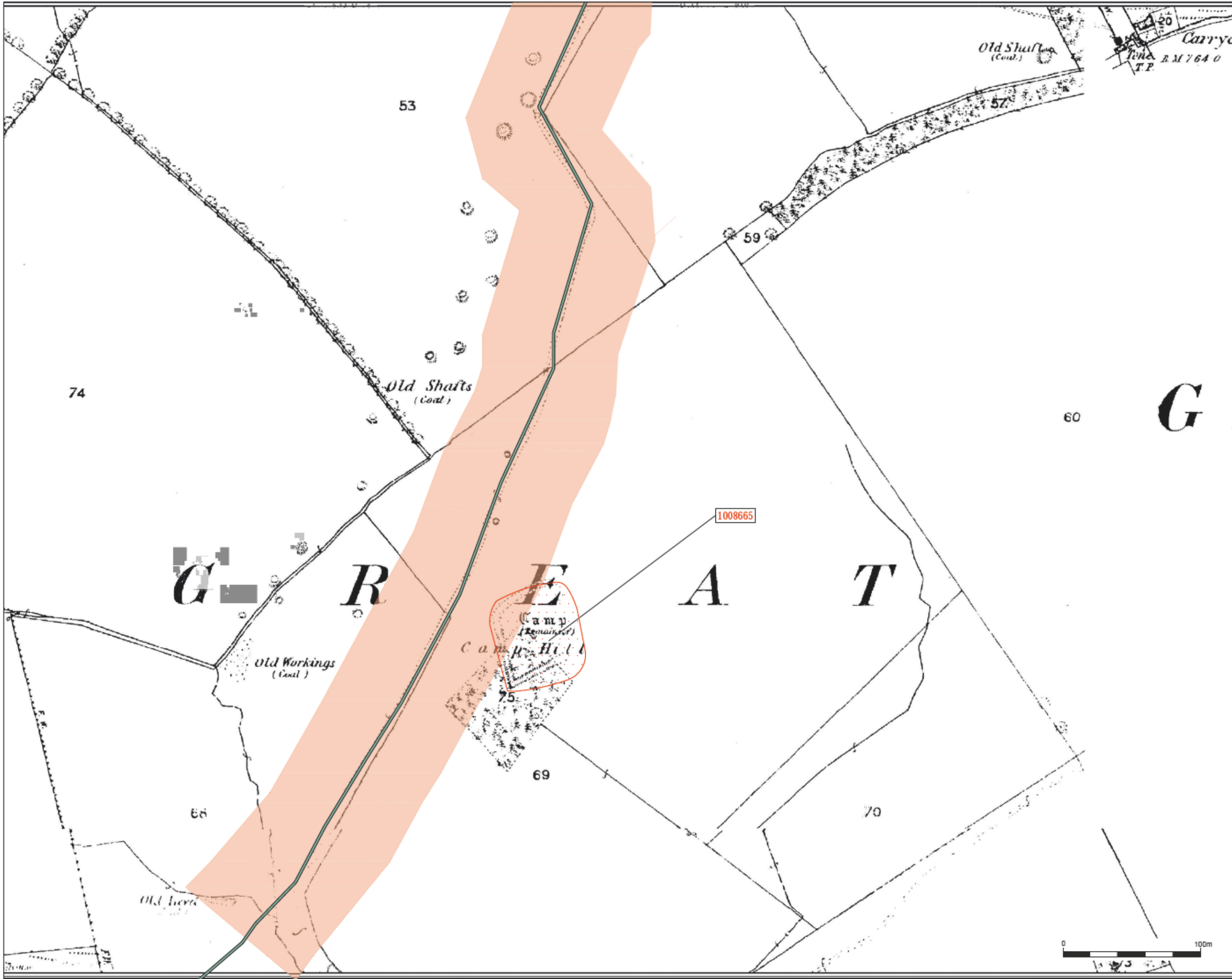
Drawn by: MP

Checked: SW

Date: 21/11/2016

Report No: 3479

Fig. No: 2c



Key:

- Ray Grid Route
- Watching Brief Areas
- Earthwork Survey Area
- Scheduled Monument Area

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Title:
 Reproduction of the OS County Series Northumberland 1:2500 1863-1895 map showing most of the survey area

Project:
 Ray Wind Farm Grid Connection

Client:
 Vattenfall

Scale at A3:
 1:2500

Drawn by: MP	Checked by: SW	Date: 21/11/2016
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Report No: 3479	Fig. No: 2d
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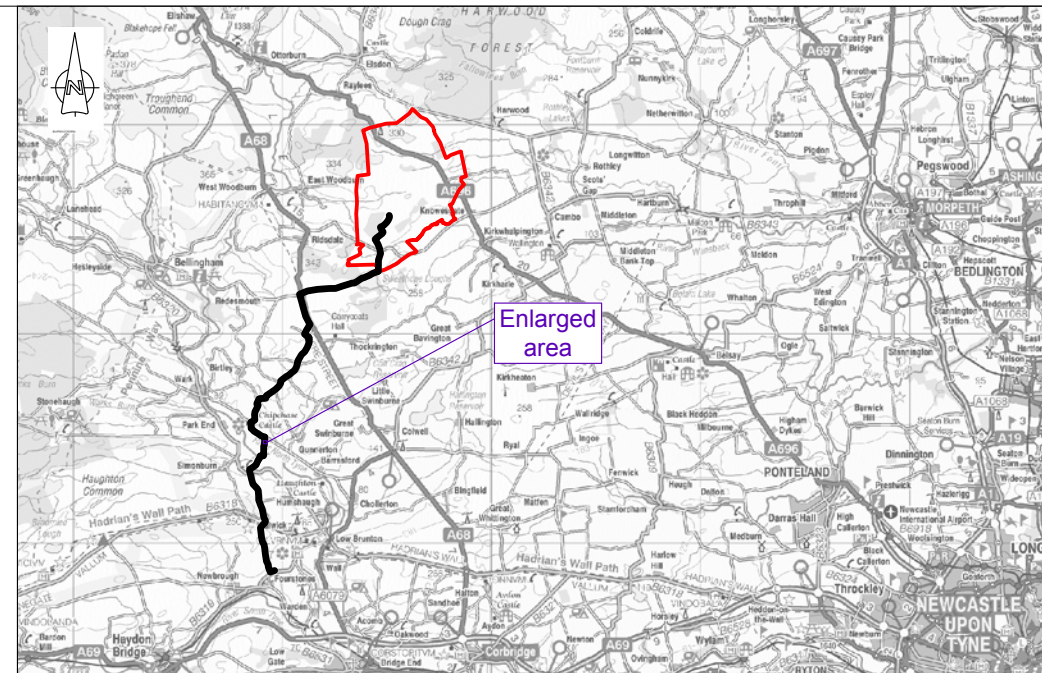
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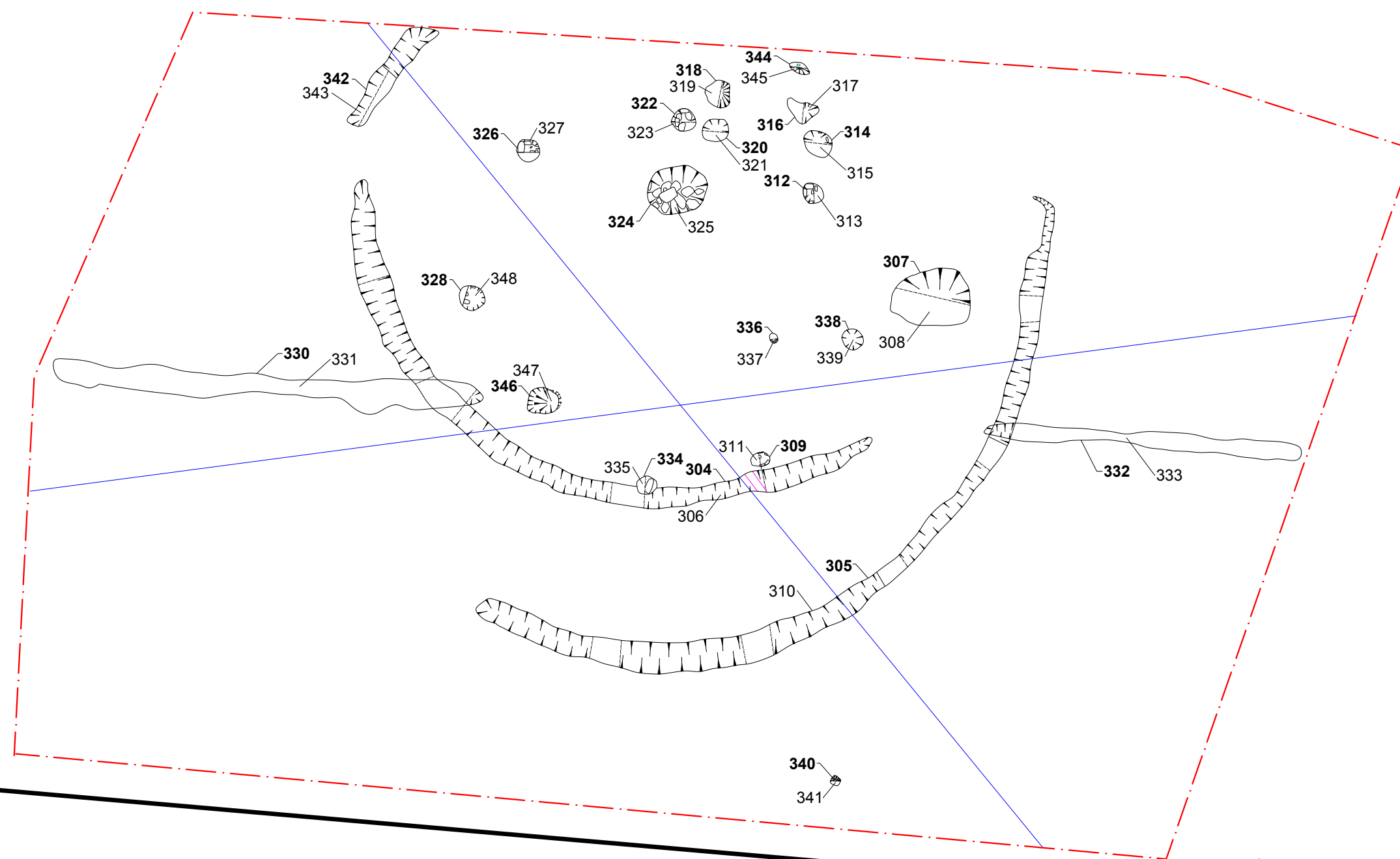
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Key:

- Windfarm Boundary
- Ray Grid Route
- Limits of Excavation
- Modern Feature
- Field Drain
- Pottery



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Title:
**Location map and site plan
 of Roundhouse**

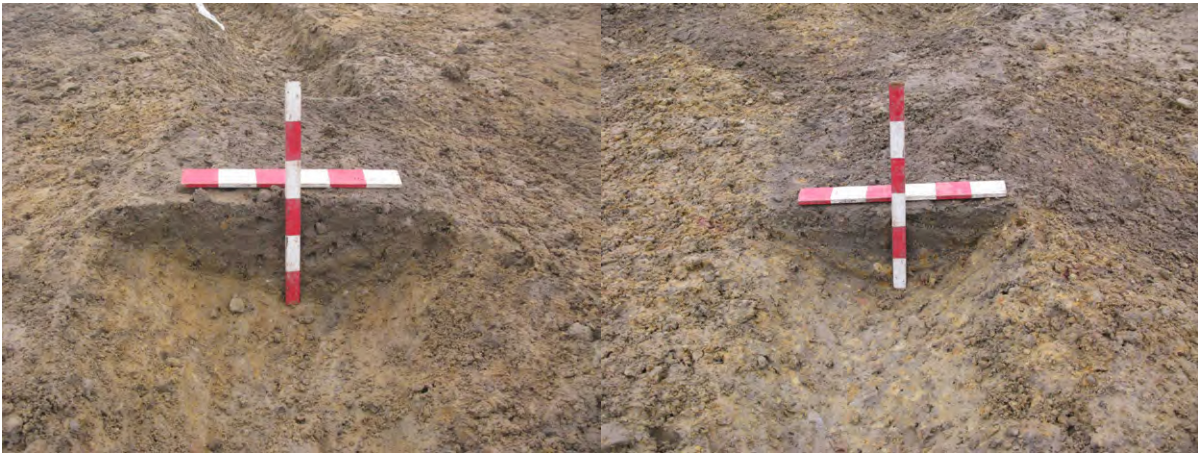
Project:
Ray Wind Farm Grid Connection

Client:
Vattenfall

Scale at A3:
1:80

Drawn by: MP	Checked by: SW	Date: 02/11/2016
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Report No: 3479	Fig. No: 22
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