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Celebrating Our Woodland Heritage:
Park Wood, Keighley
An Archaeological Woodland Survey

Pennine Prospects
Celebrating Our Woodland Heritage Project
Report No: PP42/191219

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Celebrating 50 years

Celebrating Our Woodland Heritage: Park Wood, Keighley An Archaeological Woodland Survey

Pennine Prospects

Report No: PP42/191219

December 2019

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Contents

Summary

This report discusses the results of an archaeological woodland survey undertaken at the City of Bradford Metropolitan District Council property of Park Wood, Keighley, West Yorkshire, as part of the National Lottery Heritage Fund, Newground Together, Yorkshire Water and Green Bank Trust funded Celebrating Our Woodland Heritage project managed by Pennine Prospects.

Over an area of 10.3 hectares (25.5 acres), volunteers led by Christopher Atkinson, Woodland Heritage Officer with Pennine Prospects recorded 55 previously unidentified archaeological features between the 22nd and 24th January 2017.

The results of this survey (described in this report) will be used to enhance the regional historic record as well as provide the landowner with recommendations concerning the management of the historic environment within the woodland.

The results of the survey highlighted the intensive use of this ancient woodland between the 19th and 20th centuries for the extraction of the underlying millstone grit bedrock. In addition the site of Park Wood Top, a post-medieval farmstead was found to include a high degree of preservation in relation to its associated garden/paddock enclosures.

All of the features recorded during the survey are of local significance relating to industry and field enclosure.

1.0 Introduction

This report was compiled as part of the Celebrating Our Woodland Heritage project. This three year project (2016-2019) is jointly funded by the National Lottery Heritage Fund, Yorkshire Water, Green Bank Trust and Newground Together, and aims to identify, record and interpret the historic environment of woodlands across the South Pennines (National Character Area 36 – Natural England, 2014).

Led by Pennine Prospects, the project recognises, as a result of a desk-based study, *'Hidden Heritage of the South Pennine Woodlands'* (Brown, 2013), that … "*number of sites recorded on the HER (Historic Environment Record) does not represent the true nature of the surviving archaeological resource*". The report highlights that this underrepresentation (and general lack of knowledge) was the primary threat to woodland archaeology.

The Celebrating Our Woodland Heritage project therefore seeks to enhance the historic record for woodland across the South Pennines by means of a structured programme of archaeological walkover surveys. Where appropriate these surveys will provide the opportunity for members of the public, heritage and youth groups to engage and contribute towards the investigations.

Archaeological features to be recorded within areas of woodland can represent the whole of human history and use of the landscape. Features relating to the woodland itself can include historic or veteran trees; woodland boundaries; charcoal burning platforms; storage platforms; cottage sites; trackways and mills. Features may also predate the current woodland and represent prehistoric-medieval field boundaries; settlement sites or stones such as Iron-Age cup and ring carvings.

The information collated during the field surveys will be deposited in the form of an archaeological report (*CIfA, 2014*) and digital record to the landowner and the regional Historic Environment Record. This data will not only guide future research into the region, but also support and promote the preservation of the historic environment as a part of any future management programmes within woodlands.

2.0 Location and Geology

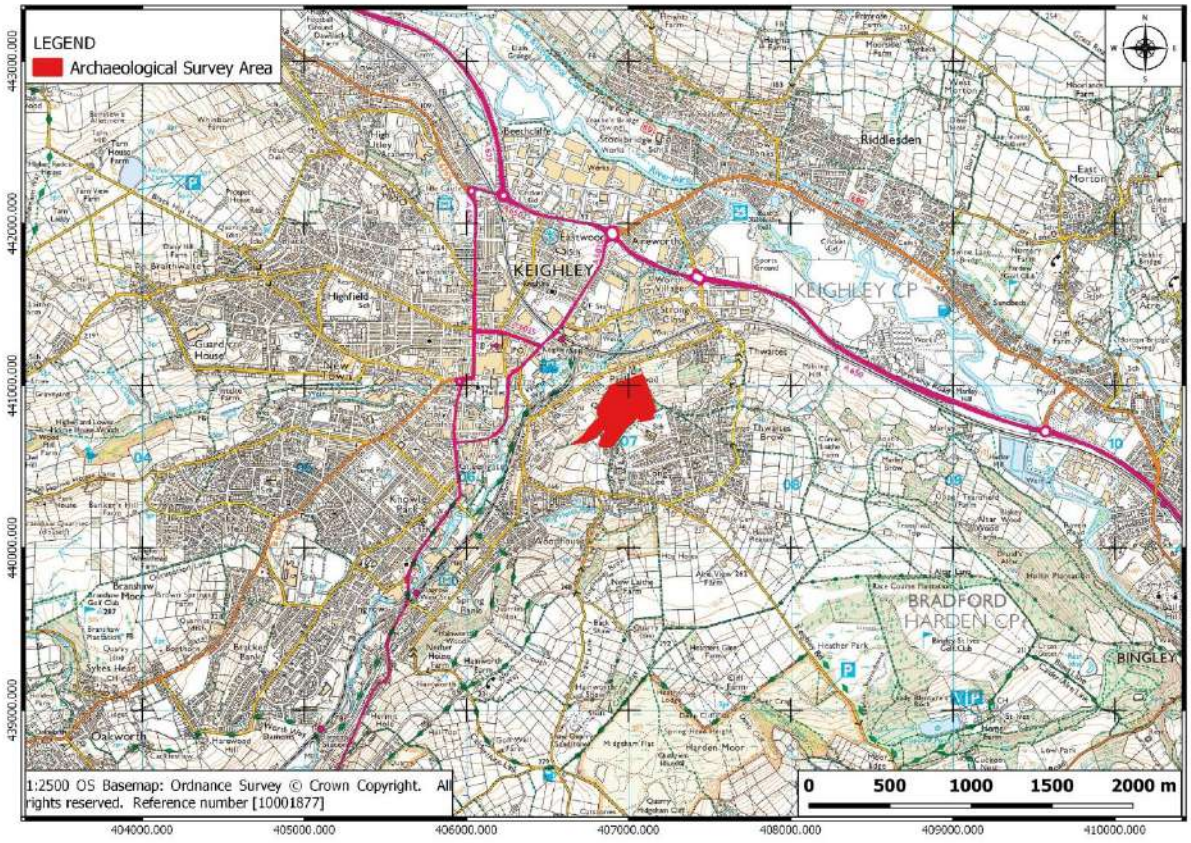

Figure 1: Location of Park Wood in relation to Keighley, West Yorkshire. Ordnance Survey © Crown Copyright. All rights reserved. Reference number [10001877]

The surveyed area of Park Wood (10.3 hectares / 25.5 acres) is located to the east of the centre of Keighley, West Yorkshire. The western half of the woodland (the focus of this report) is owned and managed by City of Bradford Metropolitan District Council. The woodland occupies a steep to moderate north-northwest-facing gradient into the Aire valley. Multiple springs arise within the woodland, some following abbreviated courses towards the River Worth, whereas others spread diffusely without forming channels. Rocky outcrops both within and within the immediate vicinity of the woodland are the result of historic mineral extraction at the site.

The woodland (NGR: 406960 440869) lies within the urban fringe of Keighley, bounded to the north and west by Parkwood Street at its associated terraced housing, beyond which is the River Worth. To the south and southeast, at a higher elevation, are the communities of Long Lee and Thwaites Brow. Adjacent to the site

are two primary schools (Parkwood Primary School and Long Lee Primary School), a rifle range, a farm, various industrial complexes and fields managed as pasture.

Parkwood is listed in the National Forest Inventory 2014 as deciduous broadleaved woodland (MAGIC, 2017). The eastern half of the woodland is recognised as Ancient & Semi-Natural Woodland whereas the western half is Ancient Replanted Woodland (MAGIC, 2017).

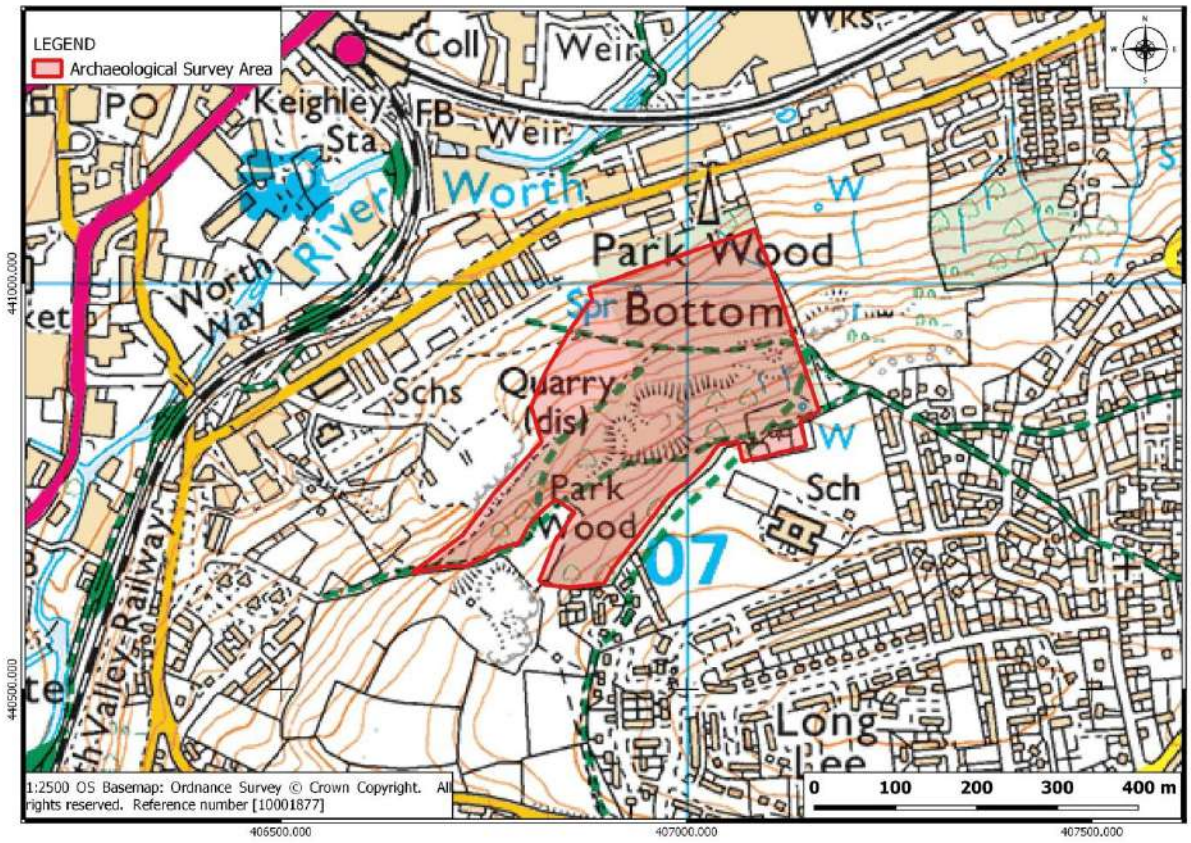

Figure 2: Location and extent of the of the Park Wood survey area, Keighley, West Yorkshire. Previously recorded features and monuments are also displayed. Ordnance Survey © Crown Copyright. All rights reserved. Reference number [10001877]

At its height the woodland sits at an elevation of around 220m above sea level to the south, falling to approximately 100m to the north. Access to the site was from the northwest via a public footpath that extends southeast through the woodland. The wood is open to public access and has an active Friends of Park Wood group that assist woodland maintenance, education and enjoyment of the woodland.

The bedrock geology is of Millstone Grit (Midgely Grit) sandstone with some faulting and folding in the area. This sedimentary bedrock was formed approximately 315

million years ago in the Carboniferous Period from rivers depositing mainly sand and gravel detrital material in channels to form river terrace deposits, with fine silt and clay from overbank floods forming floodplain alluvium, and some bogs depositing peat. There is also a Marsdenian coal seam in the District at Thwaites Brow, above Park Wood to the southeast. Till (boulder clay) is the main glacial deposit in the area, generally less than 5m thick (BGS, 2017).

The soil type is free-draining, slightly acid and loamy with low natural fertility. This supports neutral and acid pastures and deciduous woodland communities, including bracken and gorse in uplands.

3.0 Aims and Purpose of Assessment

This investigation forms a baseline record of the archaeological and historic features contained within the property of Park Wood, Keighley, West Yorkshire. The general aims of the archaeological woodland survey described in this report were to:

1. Develop a history of land use for the property from readily available historic and archaeological documentation.
2. Identify previously unrecorded archaeological features and sites across the property.
3. Revisit and assess the condition of previously recorded archaeological features and sites across the property.
4. Provide management recommendations concerning each of the historic assets identified and recorded. This information will support any future management works within the woodland.
5. Produce a database (Appendix 1) for use by the landowner and West Yorkshires Historic Environment Record.

4.0 Methodology

4.1 Location and Geology

Property information including any digital property mapping data was obtained from the landowner. Data concerning the statutory and non-statutory conditions of land and habitats both on and within the vicinity of the property was obtained from Natural England and made available for commercial use under the Open Government Licence. In addition the Natural England maintained MAGIC website was consulted. The webpage provides authoritative geographic information about the natural environment from across government. The information covers rural, urban, coastal and marine environments across Great Britain.

Site geological and soil data was obtained online from the British Geological Survey OpenGeoscience webpage. The data was downloaded and displayed using QGIS 3.2.2 Bonn, an Open Source Geographic Information System (GIS). Site maps were produced at a scale to best illustrate the full extent of the woodland under investigation.

4.2 Historical and Archaeological Background

Previously collated historical and archaeological data concerning the site under investigation (which includes a 200m buffer around the area) was obtained from West Yorkshire Archaeology Advisory Service (WYAAS) as well as a search of the Heritage Gateway. Listed building; parks and gardens and scheduled monument data was obtained from the National Heritage List for England and downloaded as shapefiles from Historic England.

4.3 Map Regression

Historic map regression of woodlands will be undertaken as a means of identifying a broad account of landscape change and use. Where possible the available map coverage (which included 1st – 3rd Edition County Series Survey, 1st – 4th Edition National Grid and land utilisation mapping) were georeferenced using QGIS 3.2.2 Bonn and shapefiles produced to provide site specific data to map the historic development of woodlands and the immediate surroundings. The Shapefiles are included within the digital appendix.

4.4 Light Detection and Ranging (LiDAR)

Light Detection and Ranging (LiDAR) data was consulted to support the historic map regression and walkover survey elements. Digital Surface Model (DSM) and Digital Terrain Model (DTM) tiles at a resolution of 50cm were downloaded from the DEFRA Survey Data Download webpage. The dataset *'Contains public sector information licensed under the Open Government Licence v3.0'*. The tiles were converted from an American Standard Code for Information Interchange (ASCII) format to a raster format using QGIS 3.2.2 Bonn. The tiles were merged to create a single raster layer; a slope algorithm was then applied to create a model suitable for the analysis of the survey area and its immediate surroundings.

Four DSM and DTM tiles were required for analysis as part of the assessment. The DSM ASCII tiles consulted were:

se0640_DSM_50cm, se0641_DSM_50cm, se0740_DSM_50cm, se0741_DSM_50cm

The DTM ASCII tiles consulted were:

se0640_DTM_50cm, se0641_DTM_50cm, se0740_DTM_50cm, se0741_DTM_50cm

4.5 Level 1 Reconnaissance Survey (Field Survey)

The field survey was undertaken in January 2017. The investigation was systematic (where possible), with each woodland parcel walked in transects. Linear features encountered whilst walking each transect (such as relict field boundaries and trackways) were recorded in their entirety, before continuing along the transect.

Each archaeological feature encountered (such as quarries, platforms and relict boundaries), was recorded in a field notebook and transcribed into an EXCEL spreadsheet (see Appendix 1). The information recorded included:

- **Grid Reference** *(using a handheld Garmin GPSmap 64s)*
- **Site Name**
- **Site Type** *(i.e. cottage site; quarry; charcoal burning platform; trackway)*

- **Description** *(i.e. dimensions; interpretation)*
- **Period** *(i.e. prehistoric; roman; medieval; post-medieval; modern; unknown)*
- **Condition/Threat** *(i.e. erosion caused by livestock)*
- **Recommendations** *(management suggestions)*
- **Reference** *(i.e. photographic reference; historic map reference)*
- **Importance** *(i.e. Local – Regional – National)*

4.6 Field Conditions

The survey area covered 10.3 hectares (25.5 acres) and was undertaken during cool, clear conditions. The survey was prohibited in certain areas due to wet ground conditions, steep terrain and dense ground flora.

5.0 Historical and Archaeological Background

5.1 Historical Background

The Aire Valley is rich with sites relating to Mesolithic, Neolithic, Bronze Age, Iron Age activity, although no such sites have been identified within the vicinity of Park Wood itself. Romano-British activity within the area is recognised by two find spots consisting of a 2" bronze eagle uncovered in 1917 within a ploughed field to the west of Park Wood (WYAAS HER PRN: 2153), and a now lost cache of coins thought to come from within Parkwood itself (WYAAS HER PRN: 48127). In addition the course of a Roman Road (WYAAS HER PRN: 537) which connected Ilkley with Manchester is understood to run somewhere to the southeast of the woodland and north of Harden Moor (where it is thought to run parallel to the western edge of the moor).

The earliest detailed reference to the area in which Park Wood is located comes from the Domesday Book or 'Great Survey' of England and Wales commissioned by King William I in 1086CE. Although the nearest settlement is *Chichelai* (Keighley) (which is recorded as 'Waste', land which was either unusable or uncultivated, and not taxed), Keighley lay within Staincliffe Wapentake rather than Skyrack Wapentake, in which Park Wood is located. As such the land is likely to have been associated with settlements of either Hainworth or Marley, both held as waste by the Tennant-in-chief Erneis of Buron (ed. Morris, 1986). In the instance of Marley, along with its neighbouring settlements (Baildon, Bingley, Cottingley, Eldwick, Halton and Micklethwaite); the value of the land was £4. The manor included an area measuring 1 league (2.4 km / 1.5 miles) long by 2 leagues (4.8 km / 1.50 miles) of *Silva pastilis* (wood pasture), as well as up to 6 carucates (291.2 hectares / 720 acres) of land suitable for arable (ed. Morris, 1986).

Names including variations on 'ley' generally refer to areas of pasture or grazing, as such, Keighley is understood to originate from the Old English 'a woodland clearing of a man called Cyhha' (A. D. Mills, 2011). 'Thwaite' as in Thwaites Brow located to the east of Park Wood derives from the Old Scandinavian for 'the clearing, meadow, or paddock' (A. D. Mills, 2011). Both names suggest a degree of woodland clearing around what is now Park Wood prior to the Norman Conquest.

The County of York Survey by Thomas Jefferys (figure 3), published in 1772 is one of the first detailed surveys depicting the landscape and pattern of settlement (minus the pattern of field enclosure) around the study area. Although the woodland itself is not depicted, both the nucleated settlements of Keighley located to the west and Thwaits to the east of Park Wood are identifiable along with the River Worth; which marked the border between Skyrack Wapentake (to the east) and Staincliffe Wapentake (to the west).

Figure 3: Excerpt of the County of York Surveyed in (1772) MDCCLXVII, VIII, IX, and MDCCLXX Engraved by Thomas Jefferys (Sheet V). Park Wood would be found to the east of the settlement of Keighley and southwest of Thwaits. Copyright © The British Library Board, Source: http://www.bl.uk/onlinegallery/onlineex/maps/uk/004966547uvu1771.html

It is with the publication of the 1852 Ordnance Survey Six-Inch Survey (figure 4), that detail concerning the plan of Park Wood itself along with the pattern of landscape enclosure can be observed. The map shows the network of trackways that run through the wood as well as the site of two farmsteads, Park Wood Top along the southern edge of the woodland and Wood Lathe along its western edge.

The Historic Landscape Characterisation undertaken by West Yorkshire Archaeology Advisory Service indicates the pattern of enclosure extending away from the woodland to the west and southwest represents a pattern of piecemeal enclosure dating between 800BCE and 1066CE, whereas to the south the more regular pattern

of square or rectangular fields relates to surveyed Parliamentary or private enclosure dating from 1782.

Figure 4: Excerpt of the Yorkshire 200 (includes: Keighley.) OS Six-inch England and Wales surveyed between 1847 and 1848 and published in 1852. Copyright © National Library of Scotland, Source: https://maps.nls.uk/view/102344905

It is interesting to note on the 1852 publication (figure 4) the depiction a southwest to northeast orientated ridge or scarp within the woodland, a feature that was exploited after the production of this map for the extraction of millstone grit. By the time of the 1894 1:2500 First County Series Survey (figure 5) publication, the level of mineral extraction within the woodland is clear, with three large quarries (the western most labelled as 'Old Quarry') represented as cutting into the scarp mentioned above. In addition extraction had begun within the vicinity of Wood Lathe (now labelled as Park Wood Top). The network of tracks within the woodland at this date would suggest the material extracted from the quarries was being transported towards Keighley rather than Thwaites Brow.

By this date the development and encroachment of Keighley towards to woodland is well underway with the establishment terrace housing along Park Wood Street and Quarry Street, a School, allotments and industrial works.

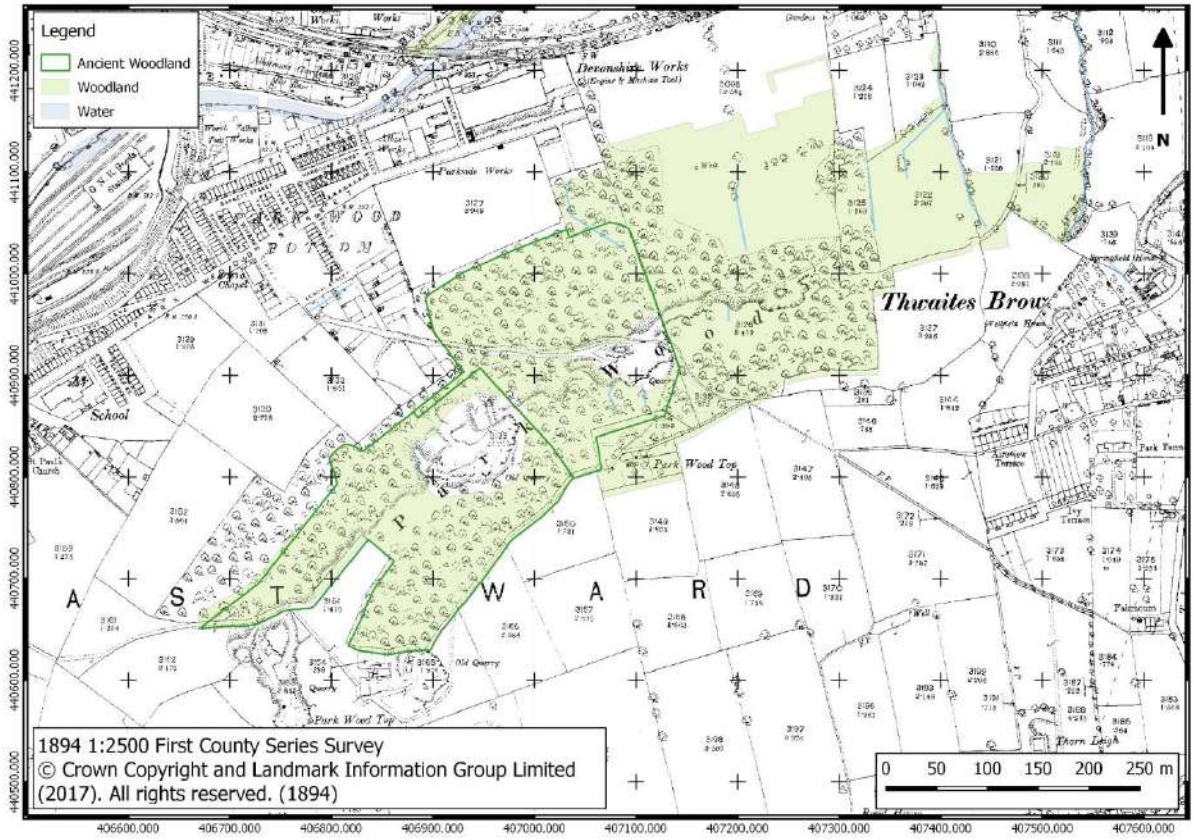

Figure 5: Excerpt of the 1894 1:2500 First County Series Survey. EDINA Historic Digimap Service, https://digimap.edina.ac.uk © Crown Copyright and Landmark Information Group Limited (2019). All rights reserved. (1894) FOR EDUCATIONAL USE ONLY

By the publication of the 1908 1:2500 First Revision First County Series Survey (figure 6) only the middle of the three quarries remained operational. In association with the quarry site the survey depicts the location of two cranes and a structure (which lay outside of the survey area). Further development of housing had occurred by this date to the north of the woodland, as well as the opening of a clay pit to the west, which appears to have included a tramway for the transporting of material.

The 1934 1:2500 Third Revision First County Series Survey (figure 7) indicates all mineral extraction within the woodland had ceased by this date. Although to the west of the woodland the quarry activity around the farmstead of Park Wood Top

continued in operation and the clay works had expanded further. The remaining fields between Park Wood Street and Park Wood itself had also been largely amalgamated by this date.

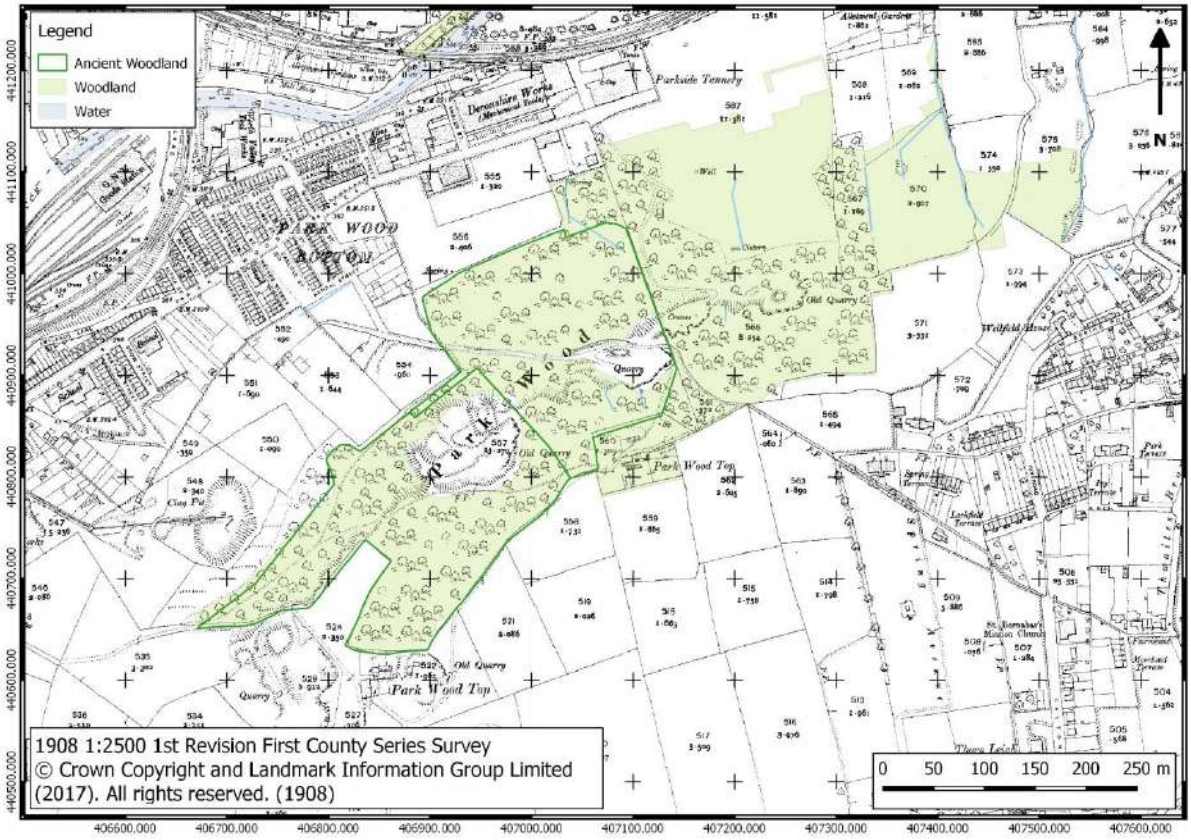

Figure 6: Excerpt of the 1908 1:2500 First Revision First County Series Survey. EDINA Historic Digimap Service, https://digimap.edina.ac.uk © Crown Copyright and Landmark Information Group Limited (2019). All rights reserved. (1908) FOR EDUCATIONAL USE ONLY

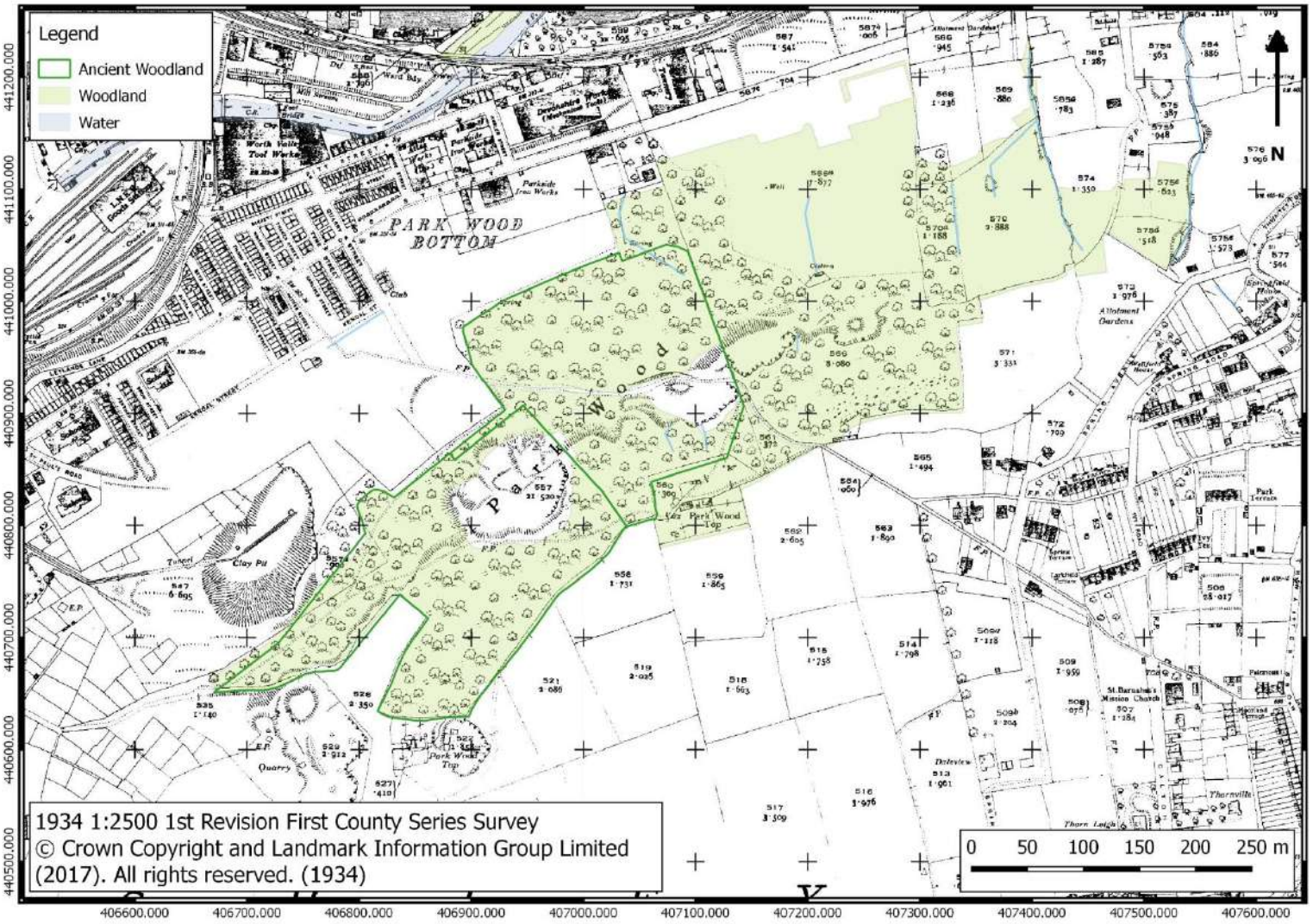

Figure 7: Excerpt of the 1934 1:2500 Third Revision First County Series Survey. EDINA Historic Digimap Service, https://digimap.edina.ac.uk © Crown Copyright and Landmark Information Group Limited (2019). All rights reserved. (1934) FOR EDUCATIONAL USE ONLY

5.2 Light Detection and Ranging (LiDAR)

Open Data LiDAR Digital Surface Model (DSM; figure 8) and Digital Terrain Model (DTM; figure 9) data was obtained from the DEFRA Survey Data Download website. The dataset provide complete coverage of the Park Wood survey area and wider environment at a resolution of 50cm.

The DSM represents a depiction of the landscape as it appeared at the time of the survey. As such the dataset includes structures, vehicles and in this case the tree canopy. Due to the thin nature of the tree canopy, and the likelihood that the survey was flown during late autumn/winter, the woodland canopy does not prohibit the identification of archaeological features on the ground. In contrast the DTM is a bare-earth representation of the landscape. After the application of an algorithm, above ground features such as structures and vegetation have been removed to give a model of the bare topography. Although this is useful for the identification of platforms, tracks and areas of mineral extraction within woodland environments, it is less suited at recording upstanding remains such as ruin structures and drystone boundaries.

The LiDAR dataset served to complement both the historic map regression and field survey phases of the investigation, aiding in the identification of sites, as well as serving to test the accuracy of field records (particularly useful in areas of dense ground vegetation where field survey was restricted). The dataset is visualised in this report as Slope Models.

Due to the resolution quality, relatively subtle features on the ground (such as narrow footpaths and shallow pits) are visible alongside more distinct features within the woodland (such as the extensive quarries, relict boundaries and settlement remains).

The following three images depict the DSM (figure 8) and DTM (figure 9) and the DSM overlain with the distribution of archaeological sites recorded as a result of this investigation (figure 10).

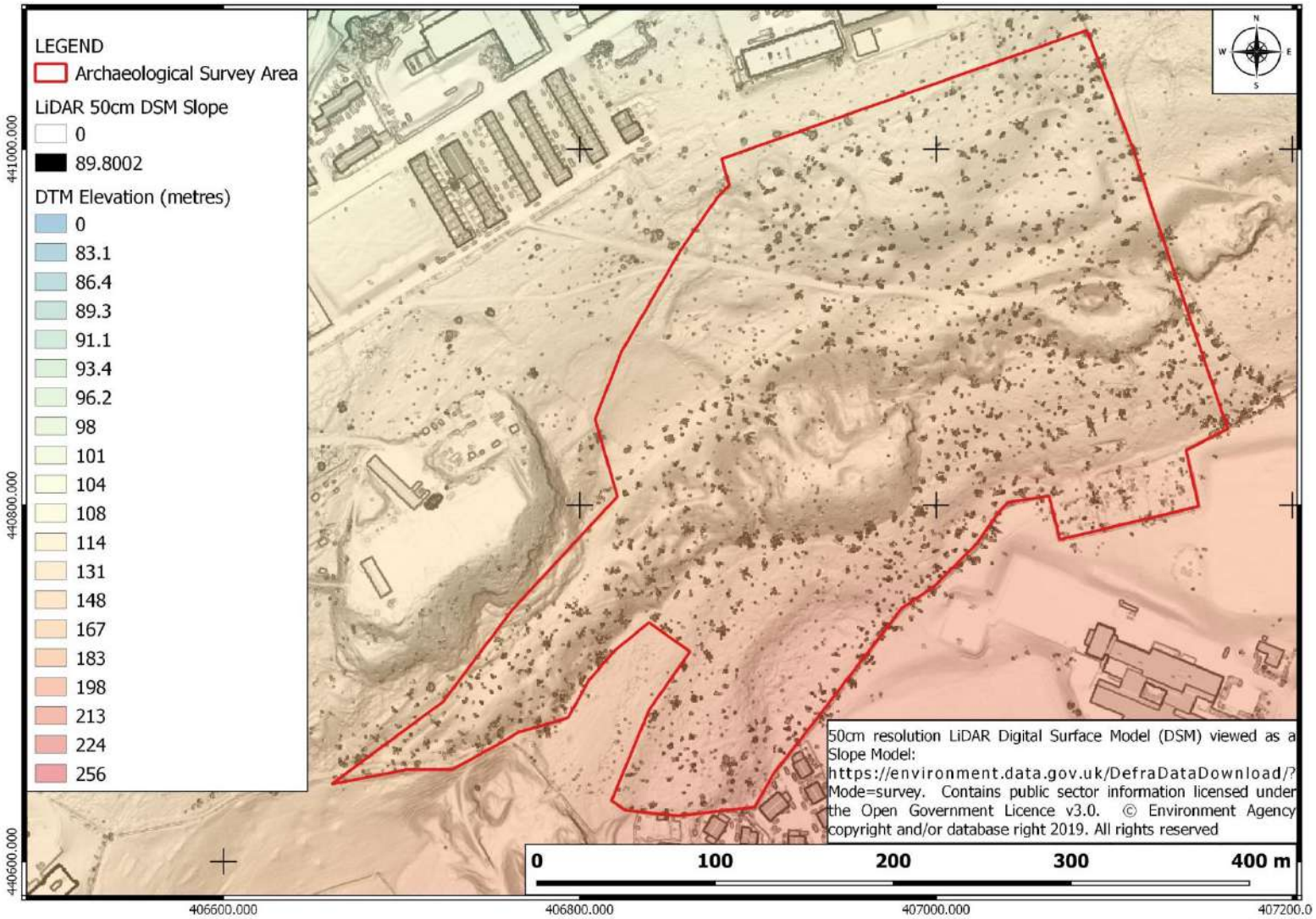

Figure 8: 50cm Resolution LiDAR DSM of Park Wood visualised as a Slope Model. Contains public sector information licensed under the Open Government Licence v3.0. © Environment Agency copyright and/or database right 2019. All rights reserved

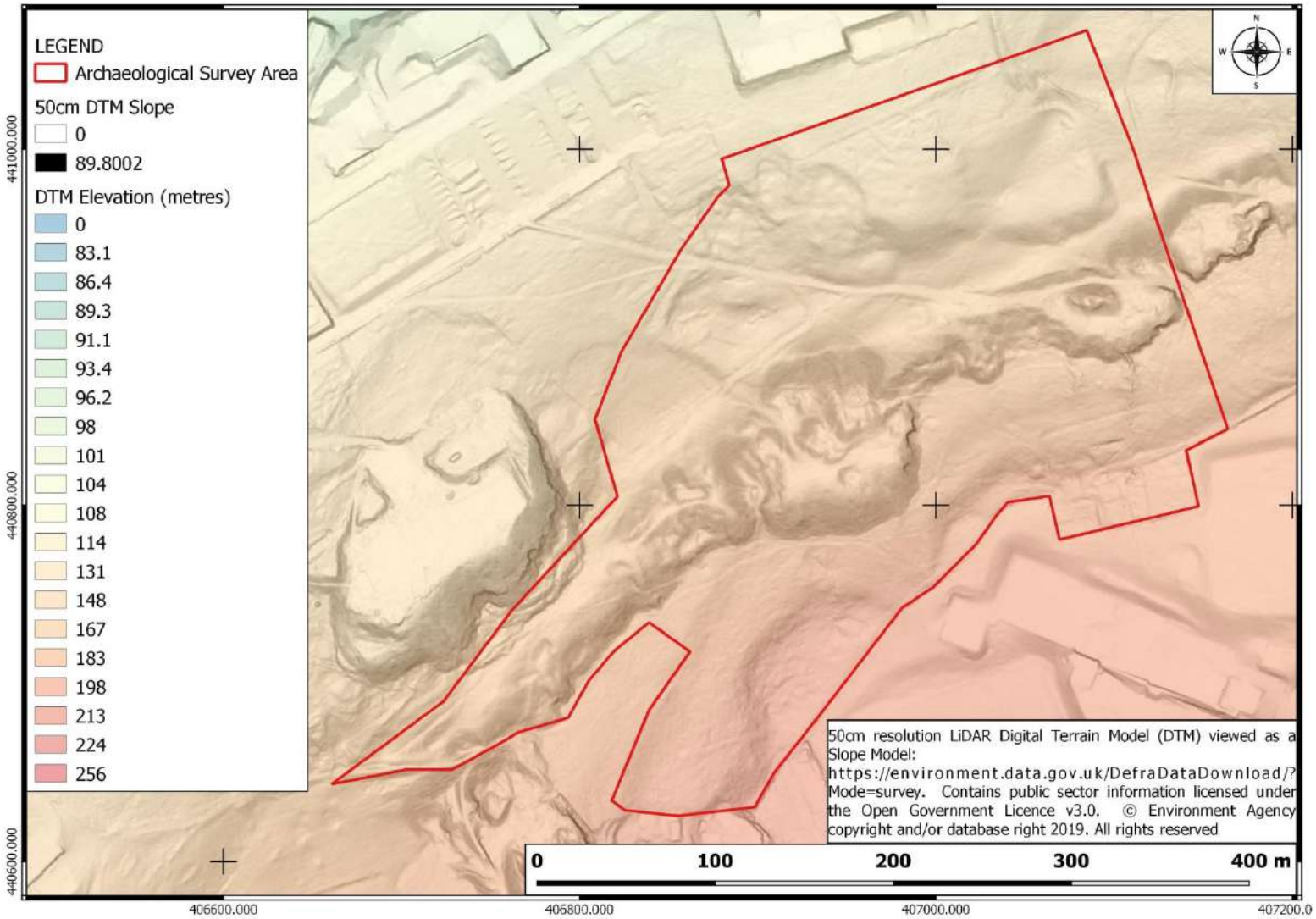

Figure 9: 50cm Resolution LiDAR DTM of Park Wood visualised as a Slope Model. Contains public sector information licensed under the Open Government Licence v3.0. © Environment Agency copyright and/or database right 2019. All rights reserved

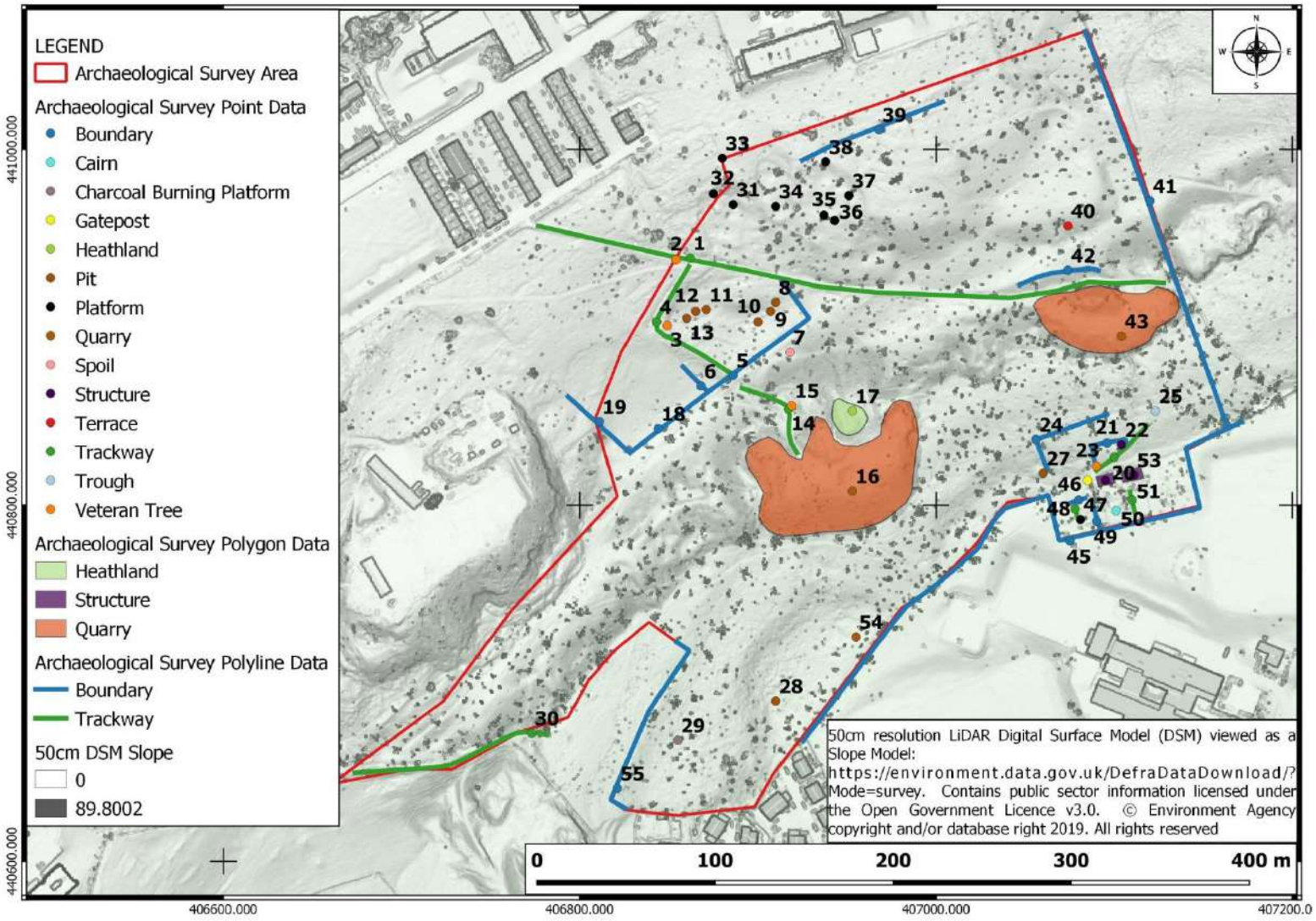

Figure 10: 50cm Resolution LiDAR DSM of Park Wood depicting the distribution of features recorded as a result of the archaeological survey. Contains public sector information licensed under the Open Government Licence v3.0. © Environment Agency copyright and/or database right 2019. All rights reserved

5.3 Archaeological Background

Prior to this investigation, ten locally listed monuments had been recorded within and/or immediately outside of the property of Park Wood, Keighley. Sites of historic/archaeological interest recorded within the property prior to the survey include findspots.

Table 1: List detailing the known archaeological records on and immediately around Park Wood.

SAM:	LB No:	NT HBSMR:	HER:	Name:	Type:
			48131	3 Bronze Age cinerary urns containing cremations and part of quern.	Cinerary Urn, Cremation
			2153	A 2" bronze eagle thought to be Roman, found in 1917 in a recently ploughed field. The figurine is in Keighley museum.	Findspot
			48127	Roman coins found in Parkwood some years before 1920. The present location of the coins is not known.	Findspot
			1368041	A number of Medieval trackways which are visible as earthworks on air photographs.	Trackway
			1361112	A complex of post Medieval extractive pits and associated spoil heaps, trackways and rectangular enclosures are visible as earthworks on air photographs. The purpose of this complex is uncertain.	Extractive Pit, Rectangular Enclosure, Trackway
			1361121	A post Medieval field boundary is visible as an earthwork on air photographs. This feature is a little under 3m wide.	Field Boundary
			1361140	A post Medieval trackway is visible as an earthwork on air photographs. This feature is associated with a post	Trackway

				Medieval quarry. Its ovoid shape is a result of it being used for entry and exit from the quarry.	
			1361146	A Medieval trackway is visible as an earthwork on air photographs. This trackway is banked on its north-western side. The ditch section is 5.8m wide and the bank is 2.2m wide. This trackway is cut by later Medieval/Post Medieval small scale extraction.	Trackway, Quarry
			1361158	A Medieval/post Medieval enclosure is visible as an earthwork on air photographs. This rectilinear enclosure comprises a ditch (4.7m wide) which is only apparent on three sides, the fourth side utilises a drainage ditch.	Enclosure
			1361225	Two coal workings and three spoil heaps are visible as earthworks on air photographs.	Coal Workings, Spoil Heap

6.0 Results

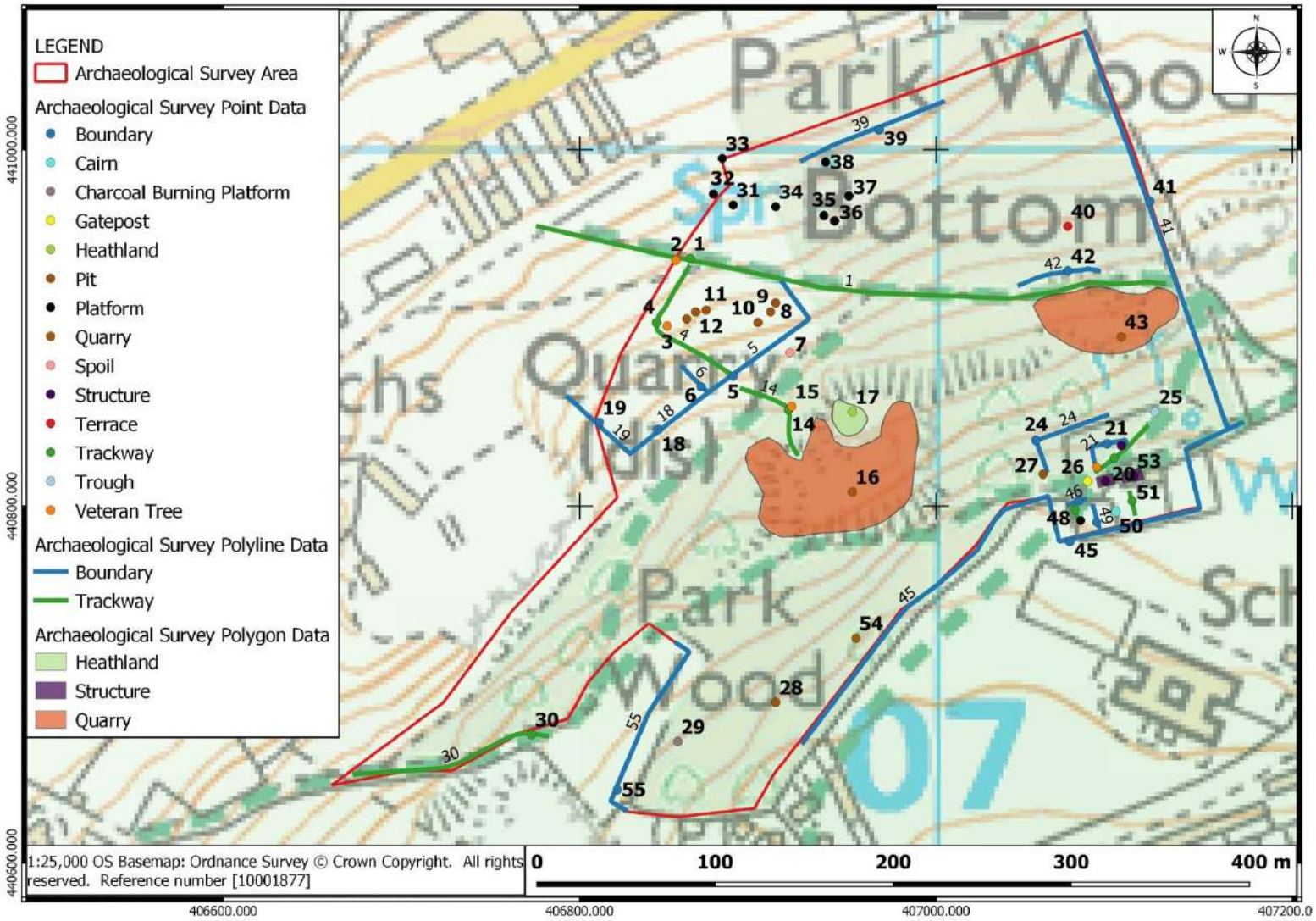

Figure 11: Distribution of features of archaeological interest recorded during the Level 1 (Reconnaissance) Woodland Survey

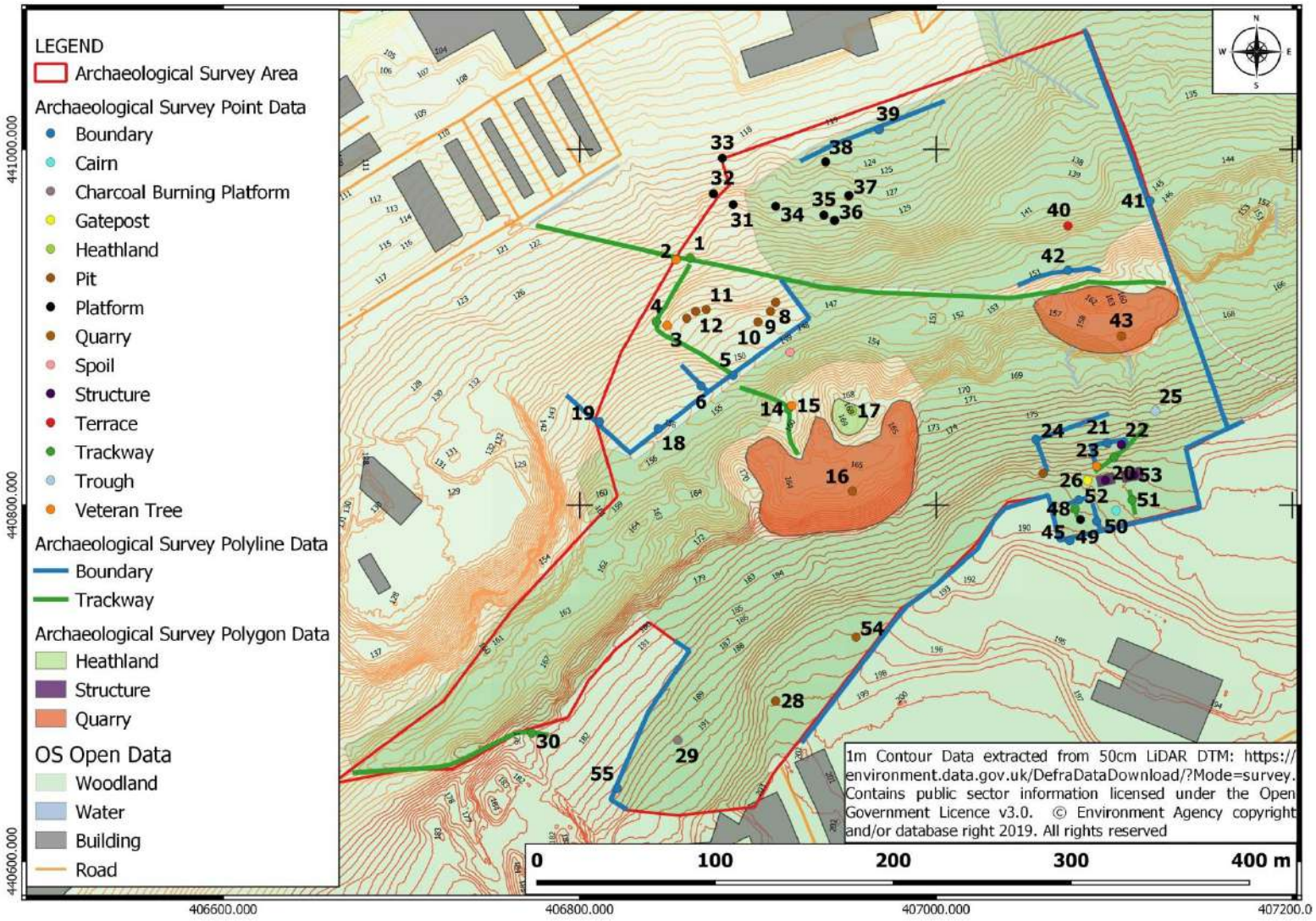

Figure 12: Distribution of features of archaeological interest recorded during the Level 1 (Reconnaissance) Woodland Survey

During the course of the survey 55 features of archaeological and historical significance were recorded within Park Wood. The following serves to summarise the findings by period. A detailed dataset for each of the recorded features can be found in Appendix 1; enlarged copies of the distribution maps are within Appendix 2.

6.1 Prehistoric

No evidence for Prehistoric activity was identified during this investigation.

6.2 Romano-British

No evidence for Romano-British activity was identified during this investigation.

6.3 Medieval

No direct evidence for Medieval activity was identified, although a number of the more established trackways, along with the site of Park Wood Top may have a medieval origins.

6.4 Post-medieval

The majority of features identified during the survey appear to relate to the post-medieval period, in particular the structural remains of Park Wood Top, the allotment garden features, wood/field boundaries and quarries.

6.4.1 Structures

Site No. 22, 52 and 53 – Park Wood Top

The remains of three structures (Site No. 22, 52, 53) were identified during the survey, all of which relate to the historic farmstead site of Park Wood Top located on the southern edge of the woodland. Sites 52 and 53 represent the foundation remains of two distinct two-storey structures located next to each other and accessed via a lane orientated northeast-southwest to the north. The eastern most structure (Site No. 53) is sunken at its centre, suggesting it once supported a cellar. The foundation remains at both sites stand no more than 1.50m tall. In addition individual thresholds which serve to mark divisions within each of the structures, as well as window ledges survive in places.

Plate 1: Evidence of a cellar within the eastern most structure (Site No. 53) of Park Wood Top (Photograph: IMG_7239; Scales are 1.0m). Copyright Pennine Prospects

Each of the structures were constructed of dressed local millstone grit (plate 2) and brick. Evidence for the use of mortar and plaster can be found across the site.

Plate 2: Surviving foundations of the eastern most structure (Site No. 53) of Park Wood Top (Photograph: IMG_7241; Scales are 1.0m). Copyright Pennine Prospects

In association with the structures, individual boundaries demarcating gardens or paddocks associated with the site survive, as well as a possible outhouse or shed (Site No. 23) and network of tracks (figure 13).

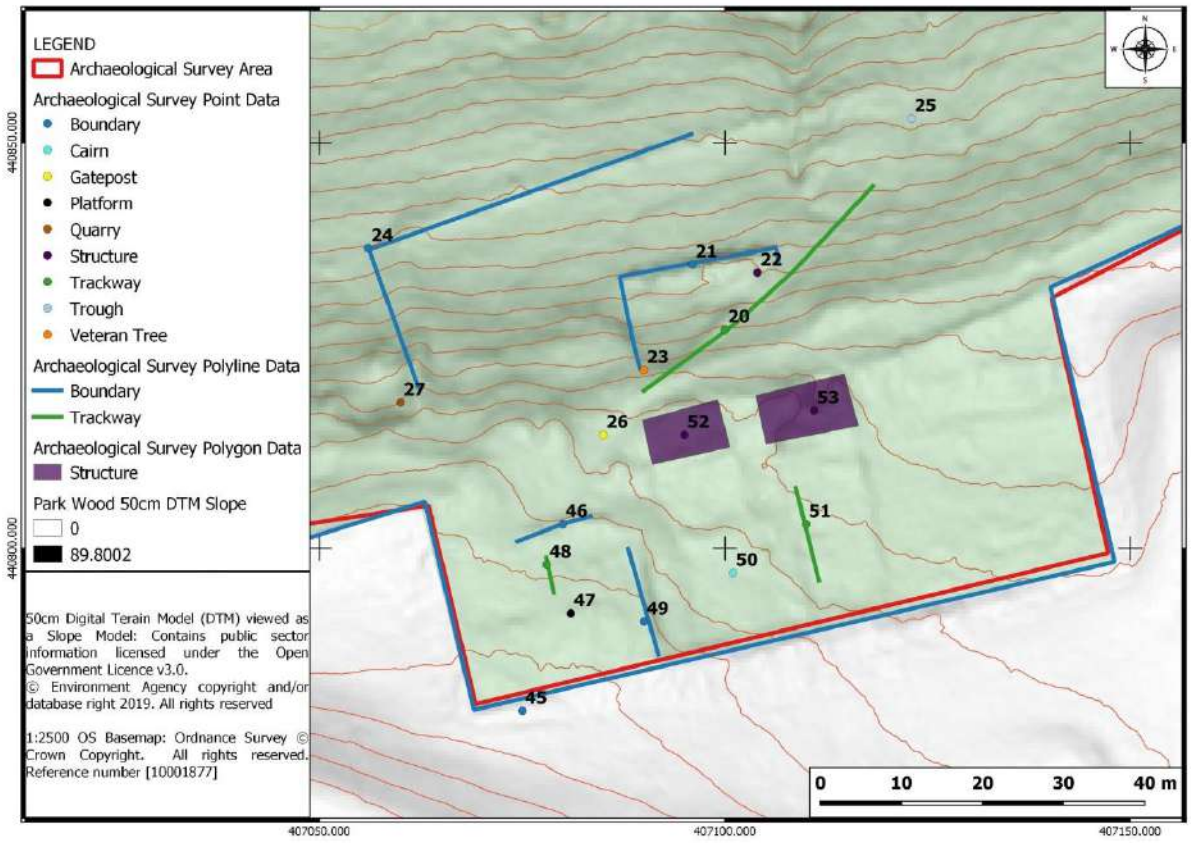

Figure 13: Plan of recorded features relating to the site of Park Wood Top. When overlain onto the 50cm LiDAR Digital Terrain Model it is possible to identify additional divisions relating to gardens/paddocks associated with Park Wood Top. Contains public sector information licensed under the Open Government Licence v3.0. © Environment Agency copyright and/or database right 2019. All rights reserved

6.4.2 Industrial Activity

Evidence for industrial activity on the site is illustrated by two large millstone grit quarries (Site No. 16 & 43), highlighted both by the historic mapping and available LiDAR coverage. Both sites include exposed bedrock faces upon their southern edge as well as evidence for access routes into the sites from the north. The larger of the two is Site No. 16 (plate 3) which measures up to 72.0m long (northeast-southwest) by 20.0m wide, the exposed millstone grit face stands at least 6.0m tall. Spoil from both sites is piled up along the northern edge of the quarried area.

In addition to the large quarries, nine smaller quarries or pits were identified (Site No. 8, 9, 10, 11, 12, 13, 27, 28 & 54) presumed to be associated with either prospecting or for the extraction of opportune surface stone.

Plate 3: Exposed millstone grit face within the western most quarry (Site No. 16) within Park Wood (Photograph: P1040217; Scale is 2.0m). Copyright Pennine Prospects

Located within the grounds of Park Wood Top, to the south of the site of the two buildings, is the site of a possible cairn or quarry stone processing area (Site No. 50; plate 4). The site covers an area of 12.50m diameter, and consists of a large pile of cut millstone grit angular blocks. One of the larger stone blocks measures up to 1.40m by 0.60m by 0.40m.

Evidence for charcoal production within the woodland was identified in the form of a possible charcoal burning platform (Site No. 29) located within the west of the woodland. The roughly oval platform set into the northwest-facing slope is truncated

by a modern footpath with timber supported steps. If it is a charcoal production site (surface charcoal was observed at the site) then the platform 7.20m diameter.

Plate 4: Large cairn (Site No. 50) or site of a quarry processing area located to the south of Park Wood Top (Photograph: IMG_7230; Scales are 2.0m). Copyright Pennine Prospects

6.4.3 Land Divisions

Thirteen boundaries (Site No. 5, 6, 18, 19, 21, 24, 39, 41, 42, 45, 46, 49 & 55) were identified and recorded during the course of the field survey. A particularly interesting network of boundaries are located on the northern edge of the woodland (Site No. 5, 6, 18 & 19), which represent the original division between the woodland and neighbouring fields as depicted on the 1894 1:2500 First County Series Survey (figure 5).

The boundaries here stand no more than 0.30m above the ground surface and on the whole survive as a line of partially exposed foundation stones. The site of two gated access ways is marked by gritstone posts along the relict boundary Site No. 5. One controlled access along the cobbled track (Site No. 1) and the other controlled

access to the site of a large gritstone quarry (Site No. 16) located to the south, via a terraced track (Site No. 4 & 14).

Plate 5: Location of a gated access route (Site No. 5) through the site of a relict woodland boundary (Photograph: P1040192; Scale is 1.0m). Copyright Pennine Prospects

Where boundaries stand to their full height (Site No. 41 & 45; plate 6), they continue to serve as the woodland boundaries, separating park wood from Thwaites Brow to the south, or serving as a woodland compartment boundary. The irregular drystone walls stand to a height of 1.50m and up to 0.50m wide, supporting rounded coping stones.

Plate 6: Woodland compartment boundary (Site No. 41) which separates the surveyed area of (Photograph: IMG_7214; Scale is 2.0m). Copyright Pennine Prospects

6.4.4 Routes of Communication

The majority of footpaths through Park Wood follow well established historic tracks. The most prominent is the cobbled track (Site No. 1; plate 7) which ascends the hillside connecting Kendal Street with the large area of quarrying (Site No. 43) and Thwaites Brow beyond. The cobbled surface is constructed of dressed rectangular gritstone blocks measuring *c.*0.20m x 0.10m. The track measures up to 2.0m wide and supports a shallow stone-lined drain on either side. It is understood the track once supported gas and then electric lights, although the precise dates for this is unknown (Friends of Park Wood, 2019).

Elsewhere trackways consist predominantly of worn dirt terraced tracks. Where the trackways connect with areas of settlement (such as the site of Park Wood Top), trackways have been enhanced in order to establish a form a metalled surface. All of the trackways recorded during the survey provide access to sites of mineral

extraction within the woodland. Within the vicinity of the large quarry Site No. 43, the remains of an irregular drystone retaining wall (Site No. 42), downslope of the main cobbled track (Site No. 1) marks the location of a now lost track. In association with the cobbled track, the two routes provided the option for two-way traffic within the vicinity of the area of mineral extraction.

Plate 7: Cobbled trackway (Site No. 1) which connects Kendal Street with Thwaites Brow via the mineral extraction area in Park Wood (Photograph: P1040187; Scale is 2.0m). Copyright Pennine Prospects

6.4.5 Veteran Trees

Four veteran trees (Site No. 2, 3, 15 & 23) were identified within the property, all of which are at least 140 years old. The species represent three sycamores once managed as coppice and an ash, once managed as a pollard. The ash (Site No. 23) is situated within the grounds of Park Wood Top

7.0 Discussion

Park Wood, Keighley, West Yorkshire is recognised as an ancient woodland. Until this community-based archaeological investigation of the site, no previous ground-based archaeological survey had been undertaken at the site.

The Level 1 reconnaissance survey, undertaken in January 2017 led to the identification and recording of 55 monuments of archaeological significance. All of the features recorded can be regarded as post-medieval in origins, although the site of Park Wood Top a historic farmstead site located at the summit of the hill within the south of the woodland has the potential to predate this period.

By far the largest concentration of sites relate to the historic extraction of the underlying millstone grit bedrock. Not only is this evidenced by the quarries themselves, but also the network of tracks within the woodland which serve to connect the extraction sites in Park Wood with Keighley to the west.

Despite being recognised as ancient woodland, the character of Park Wood is greatly influenced by the 19th and 20th century. Evidence relating to its earlier use or its relation to neighbouring fields (particularly to the north and west) is difficult to ascertain. In the case of its association with neighbouring fields, the now relict boundaries are diminished to a degree that they are barely visible. The woodland too, is encroaching into what were previously fields which lay between the wood and Kendal Street.

8.0 Management Recommendations

As a part of this survey, identified features were assessed in regards to condition; this information has been used to formulate management recommendations. The recommendations cover only those features identified within woodland areas. The operational management of the reservoir and its subsidiary features such as access routes were beyond the scope of this investigation.

8.1 General Guidelines

Forestry operations can be detrimental to both upstanding archaeological remains and below-ground archaeological deposits. Guidelines which meet the requirements of the United Kingdom Forestry Standard (UKFS) have been published by the Forestry Commission (Forestry Commission; 2011). The reader is advised to refer to this document for further information.

The guidelines recognise:

1. Forests should be designed and managed to take account of the historical character and cultural values of the landscape.
2. Windblown trees located upon features of archaeological interest can cause considerable damage due to the uplift of root plates. Any upstanding walls or structures may also be crushed as a result of windblown trees. General root action can also be disruptive to both below and above ground archaeological features.
3. Although low-level woodland browsing can control woody vegetation within woodland pastures and clearings; overgrazing by introduced livestock can cause significant erosion to upstanding earthworks and structures. Additional measures such as fencing may be required to protect the ground around individual sites of historic importance/interest.
4. Forest operations and civil engineering activities involve heavy machinery and earth-moving equipment. These can unintentionally destroy or damage archaeological remains and veteran trees directly, or in-directly due to soil vibration, compaction and erosion.
5. Ground disturbance and with that potential damage or destruction to archaeological features and below ground deposits can also be caused as a

result of habitat restoration projects. This can involve the pulling out of tree stumps and the inverting of soil layers to reduce surface nutrient content. Alternatively restocking can lead to new or additional damage to archaeological features and below-ground deposits.

6. There is considerable public interest in cultural heritage and the historic environment and interpretation of theses aspects of woodlands can provide a focus for visitors (using the public rights of way through the woodland). This could be achieved as part of a wider access or recreation strategy. Historic environment features can be linked by heritage trails and explained through the use of interpretative panels, leaflets or maps. However these would need to be managed to avoid negative impacts on the historic environment, such as increased erosion.

In 2018 ancient woodland, including ancient semi-natural woodland and plantations on ancient woodland received specific legislation as part of the National Planning Policy Framework (Chapter 15. Conserving and enhancing the natural environment) concerning their protection. The reader is advised to refer to this document prior to any management or development activities.

The guidance states:

1. Direct impacts of development on ancient woodland or veteran trees include:
    - damaging or destroying all or part of them (including their soils, ground flora, or fungi)
    - damaging roots and understorey (all the vegetation under the taller trees)
    - damaging or compacting soil around the tree roots
    - polluting the ground around them
    - changing the water table or drainage of woodland or individual trees
    - damaging archaeological features or heritage assets

2. Nearby development can also have an indirect impact on ancient woodland or veteran trees and the species they support. These can include:
    - breaking up or destroying connection between woodlands and veteran trees

- reducing the amount of semi-natural habitats next to ancient woodland
- increasing the amount of pollution, including dust
- increasing disturbance to wildlife from additional traffic and visitors
- increasing light pollution
- increasing damaging activities like fly-tipping and the impact of domestic pets
- changing the landscape character of the area

Legislation states: '… *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists …*' (Chapter 15, Paragraph 175, NPPF, 2019).

8.2 Mitigation

1. At the earliest stage, in advance of any management operations within areas of woodland, the organisation commissioning the works should consult with the regional historic environment authority, in this instance City of Bradford Metropolitan District Council.
2. Where an operation next to a historical feature is unavoidable, clear routes and exclusion areas should be marked out to provide protection to the monuments. Contractors could be provided with a 'cab-card', detailing in bullet-point and map format information concerning the heritage, exclusion zones and routes to and from site.
3. Regular visits to heritage sites to monitor the condition will identify any new threats or damage to the feature.
4. Trees and shrubs either on or within the immediate vicinity of archaeological sites/features should be managed to limit the extent and establishment of woody vegetation. It should be considered that large trees vulnerable to windthrow be removed or crowned to reduce the weight of the tree canopy. However, veteran trees should be retained where possible.

8.3 Specific Guidelines

Specific management recommendations for each feature recorded as part of the survey can be found in Appendix 1.

All of the boundaries (with the exception of (Site No. 41 & 45) recorded during the survey are relict and in numerous states of decline. Each boundary should be monitored to ensure ground vegetation and tree saplings do not establish themselves on the stonework and cause damage/erosion. Mature trees within close proximity of all of the boundaries recorded during the survey should also be monitored and where appropriate, coppiced/pollarded, crowned, thinned or removed to prevent windthrow damage to the features. Although relict, the boundaries should be stabilised where necessary and maintained as relict features.

In the case of upstanding walls (Site No. 41 & 45) which serve to mark the southern edge of the woodland and the division between the privately owned woodland to the east; the boundary should be monitored to ensure ground vegetation and tree saplings do not establish themselves on the stonework and cause damage/erosion. Mature trees within close proximity of the boundaries should also be monitored and where appropriate, coppiced/pollarded, crowned, thinned or removed to prevent windthrow damage to the features. Any current damage along upstanding walls (such as the partial collapse of Site No. 41; plate 6) should be repaired.

The condition of Park Wood Top (Site No 52 & 53) and its associated grounds (Site No. 20, 21, 22, 23, 24, 25, 26, 46, 47, 48, 49, 50 & 51) suggest a moderate to high degree of preservation concerning below ground archaeological features and deposits at each location. This is particularly important as the post-medieval farmstead and enclosure may have been established/utilised medieval foundations. As such scrub and sapling tree vegetation should be monitored and where necessary reduced upon the feature to reduce the risk of disturbance to below ground archaeological features and deposits. Young and mature trees upon or within the immediate vicinity should be coppiced/pollarded or felled in order to prevent windthrow damage. Any works at the site will likely require archaeological intervention.

9.0 Acknowledgments

Pennine Prospects would like to thank Bob Thorp, Tree and Woodland Manager, City of Bradford Metropolitan District Council for his invitation, permission, and enthusiasm for the Celebrating Our Woodland Heritage Project.

We would also like to thank the staff of West Yorkshire Archaeological Advisory Service Historic Environment Record, in particular Ian Sanderson, Principal Archaeologist and Jason Dodds, HER Officer, for their support and provision of data relating to Park Wood.

I would like to give particular thanks to all of the volunteers who helped to undertake the archaeological survey on the 22nd and 24th January 2017. Thank you:

Jill Campbell, Pam Bellwood, Richard Bleathman, Eric Ashford, Phil Lowde, Maggie Flemming, Hollie Jackson, Rachael Gillespie, Rose Karpinski, Joe Dwyer-More, Bonnie Horton, Richard Goddard, Ben Jennings, Kayleigh Eldekvist, Sue Patchett, Julie Sullivan, Sue Skinner and Paul Skinner

This project would not have been possible without the support of the National Lottery Heritage Fund. Thank you to all of the National Lottery players, without whom, projects such as the Celebrating Our Woodland Heritage project would not be possible.

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11.0 List of illustrations

11.1 Tables

11.2 Figures

Figure 10: 50cm Resolution LiDAR DSM of Park Wood depicting the distribution of features recorded as a result of the archaeological survey. Contains public sector information licensed under the Open Government Licence v3.0. © Environment Agency copyright and/or database right 2019. All rights reserved

Figure 11: Distribution of features of archaeological interest recorded during the Level 1 (Reconnaissance) Woodland Survey

Figure 12: Distribution of features of archaeological interest recorded during the Level 1 (Reconnaissance) Woodland Survey

Figure 13: Plan of recorded features relating to the site of Park Wood Top. When overlain onto the 50cm LiDAR Digital Terrain Model it is possible to identify additional divisions relating to gardens/paddocks associated with Park Wood Top. Contains public sector information licensed under the Open Government Licence v3.0. © Environment Agency copyright and/or database right 2019. All rights reserved

11.3 Plates

Plate 1: Evidence of a cellar within the eastern most structure (Site No. 53) of Park Wood Top (Photograph: IMG_7239; Scales are 1.0m). Copyright Pennine Prospects

Plate 2: Surviving foundations of the eastern most structure (Site No. 53) of Park Wood Top (Photograph: IMG_7241; Scales are 1.0m). Copyright Pennine Prospects

Plate 3: Exposed millstone grit face within the western most quarry (Site No. 16) within Park Wood (Photograph: P1040217; Scale is 2.0m). Copyright Pennine Prospects

Plate 4: Large cairn (Site No. 50) or site of a quarry processing area located to the south of Park Wood Top (Photograph: IMG_7230; Scales are 2.0m). Copyright Pennine Prospects

Plate 5: Location of a gated access route (Site No. 5) through the site of a relict woodland boundary (Photograph: P1040192; Scale is 1.0m). Copyright Pennine Prospects

Plate 6: Woodland compartment boundary (Site No. 41) which separates the surveyed area of (Photograph: IMG_7214; Scale is 2.0m). Copyright Pennine Prospects

Plate 7: Cobbled trackway (Site No. 1) which connects Kendal Street with Thwaites Brow via the mineral extraction area in Park Wood (Photograph: P1040187; Scale is 2.0m). Copyright Pennine Prospects

Appendix 1: Survey Database

Site No.	Easting	Northing	Site Name	Site Type	Sub-category	Description	Period	Condition/Threat	Recommendation	Reference	Significance
1	406862	440939		Trackway	Terraced Track	Regular lain cut stone track extending upslope from Kendal Street towards Thwaites Brow to the southeast. The track also served to provide access to an extensive area of quarrying. The track measures 2.05m wide.	Post-medieval	The feature is in a good condition. Vegetation consists of mature and sapling beech and oak.	The feature should continue to be monitored.	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: P1040187	Local
2	406854	440938		Veteran Tree	Sycamore	Multi-stemmed Sycamore located on the southern edge of main route way throw the wood. The tree measures 2.90m wide.	Post-medieval	The feature is in a good condition.	The feature should continue to be monitored.	Photograph Ref: P1040188	Local
3	406849	440901		Veteran Tree	Sycamore	Multi-stemmed Sycamore located at the foot of a sunken track. The tree measures 4.10m wide.	Post-medieval	The feature is in a good condition. Vegetation includes a dense blanket of brambles.	The feature should continue to be monitored.	Photograph Ref: P1040189, P1040190	Local

4	406843	440903		Trackway	Terraced Track	Terraced track extending southwest for a distance of c.30m before redirecting to run up slope for c.50m. The track peters-out short of a relict boundary and gateway at its southern end. The track measures up to 3m wide and is cut into the slope by c.1.80m. The 1894 1:2500 First County Series Survey indicates the feature to have supported a boundary relating to an area of allotment gardens.	Post-medieval	The feature is in a fair condition. Vegetation includes dense brambles, nettles and beech and sycamore.	The feature should continue to be monitored. Reduce and manage existing scrub and sapling tree growth upon the feature. Protect the monument from the damaging effects of windthrow by selective felling and removal of over-mature trees in danger of collapse.	Photograph Ref: P1040191	Local
5	406886	440873		Boundary	Irregular Drystone Wall	Boundary marking the northern limit of Park Wood as depicted on the 1894 1:2500 First County Series Survey. The boundary is of irregular construction and stands no more than 0.40m high, 0.50m wide. The feature supports a pair of gateposts at this location set 2.75m apart. The stone posts are of local sandstone and stand up to 0.90m tall.	Post-medieval	The feature is in a poor condition. Vegetation includes brambles and mature oak and sycamore.	The feature should continue to be monitored. Scrub vegetation should be managed and where necessary reduced to prevent erosion. Trees should be monitored and where necessary coppiced/pollarded or felled to prevent windthrow damage.	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: P1040192, P1040193, P1040194, P1040196, P1040197, P1040203	Local

										, P1040204 , P1040205	
6	406868	440867		Boundary	Irregular Drystone Wall	Relict irregular drystone wall extending north from woodland boundary wall. The feature stands no more than 0.10m tall, 0.50m wide. The feature can be traced for a distance of c.9m before it becomes overgrown.	Post-medieval	The feature is in a poor condition. Vegetation includes beech saplings and mature beech and sycamore.	The feature should continue to be monitored. Scrub vegetation should be managed and where necessary reduced to prevent erosion. Trees should be monitored and where necessary coppiced/pollarded or felled to prevent windthrow damage.	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: P1040200	Local
7	406918	440886		Spoil		Northeast-facing spoil mound associated with quarry to the south. A narrow track, terraced into the slope extends eastwards to its summit.	Post-medieval	The feature is in a good condition. Vegetation includes beech saplings and mature beech and sycamore.	The feature should continue to be monitored	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: P1040201 , P1040202	Local

8	406910	440914		Pit		Quarry measuring 0.5 m deep, 2m long, 2m wide, oriented east-west.	Post-medieval	The feature is in a good condition. Vegetation includes brambles and birch.	The feature should continue to be monitored	Photograph Ref: P1040206	Local
9	406907	440909		Pit		Oval quarry measuring 0.5m deep, 2.50m in diameter, oriented east-west.	Post-medieval	The feature is in a good condition. Vegetation includes brambles and beech saplings.	The feature should continue to be monitored	Photograph Ref: P1040207	Local
10	406900	440903		Pit		Quarry 4.90m long, 2.20m wide with excessive bramble cover.	Post-medieval	The feature is in a fair condition. Vegetation includes brambles.	The feature should continue to be monitored	Photograph Ref: P1040208	Local
11	406871	440910		Pit		Quarry, 2.80m long, 1.70m wide and 0.50m deep.	Post-medieval	The feature is in a fair condition. Vegetation includes brambles and beech saplings.	The feature should continue to be monitored	Photograph Ref: P1040210	Local
12	406865	440909		Pit		Quarry 2.60m long and 2.20m wide.	Post-medieval	The feature is in a fair condition. Vegetation includes birch and beech.	The feature should continue to be monitored	Photograph Ref: P1040211	Local
13	406860	440905		Pit		curvi-linear quarry oriented east-west. Feature is 3.50m long, 1m wide, and 0.5m deep.	Post-medieval	The feature is in a fair condition. Vegetation includes beech and brambles.	The feature should continue to be monitored	Photograph Ref: P1040212	Local

14	406917	440854		Trackway	Terraced Track	Terraced track oriented northwest-southwest providing access to an area of mineral extraction. The track measures up to 3m wide. on its approach to the quarry the track is strewn with large angular blocks of sandstone. blocks.	Post-medieval	The feature is in a good condition. Vegetation includes beech saplings and birch.	The feature should continue to be monitored. Scrub vegetation should be managed and where necessary reduced to prevent erosion. Trees should be monitored and where necessary coppiced/pollarded or felled to prevent windthrow damage.	Photograph Ref: P1040213, P1040214	Local
15	406919	440856		Veteran Tree	Sycamore	Multi-stemmed Sycamore measuring 3.60m diameter.	Post-medieval	The feature is in a good condition. Vegetation includes beech saplings.	The feature should continue to be monitored	Photograph Ref: P1040215	Local
16	406953	440808		Quarry		Large quarry cut into the northwest-facing slope. The feature measures c.72m long northeast-southwest by 20m wide. The exposed sandstone bedrock face along its south-eastern edge stands c.6m high. The quarry was accessed via a track to the west.	Post-medieval	The feature is in a good condition. Vegetation includes birch, beech, sycamore, oak, fern, bracken, and brambles.	The feature should continue to be monitored	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: P1040216, P1040217	Local

17	406953	440853	Heather Hill	Heathland		Heather Hill' a raised located on the northern edge of a quarry. The summit is rich in moorland heather, bilberry and grass vegetation suggesting it may represent the remains of a heathland which predates the industry and a period when the wood was more open.	Post-medieval	The feature is in a good condition. Vegetation includes heather, bilberry some bramble, and birch saplings.	The feature should continue to be monitored. Reduce and manage existing scrub and sapling tree growth upon the feature to enhance the moorland species.	Photograph Ref: P1040218	Local
18	406844	440843		Boundary	Irregular Drystone Wall	Foundations of an irregular drystone wall visible in the surface of a footpath. The boundary originally marked the northern edge of the woodland. The foundations measure c.0.50m wide.	Post-medieval	The feature is in a poor condition. Vegetation includes sycamore, birch, and beech.	The feature should continue to be monitored. Scrub vegetation should be managed and where necessary reduced to prevent erosion. Trees should be monitored and where necessary coppiced/pollarded or felled to prevent windthrow damage.	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: P1040219	Local

19	406811	440847		Boundary	Irregular Drystone Wall	Wall oriented South to South-West, 27 m long and 1 m 20 cm wide. Photos taken facing East/South-East. Last photo is of coppiced tree near the wall.	Post-medieval	The feature is in a poor condition. Vegetation includes sapling and mature beech and birch.	The feature should continue to be monitored. Scrub vegetation should be managed and where necessary reduced to prevent erosion. Trees should be monitored and where necessary coppiced/pollarded or felled to prevent windthrow damage.	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: P1040220, P1040221	Local
20	407100	440827		Trackway	Terraced Track	Trackway orientated northeast-southwest and recorded on the 1894 First County Series Survey. The track measures up to 2m wide and is clearest at the summit of the ridge where it links with the site and enclosures of Park Wood Top. A single upright gate post (1.15 m high and 0.22m wide) stands along its northern edge where evidence of a now collapsed irregular drystone revetment wall also exists.	Post-medieval	The feature is in a fair condition. Vegetation includes birch, sycamore and ash tree with elder.	The feature should continue to be monitored. Reduce and manage existing scrub and sapling tree growth upon the feature. Protect the monument from the damaging effects of windthrow by selective felling and removal of over-mature trees in danger of collapse.	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: P1040224, P1040226, P1040227, P1040228	Local

21	407096	440835		Boundary	Terrace	Irregular drystone wall terraced boundary enclosing a small field/paddock located to downslope to the north of the site of Park Wood Top. The boundary stands up to 1.50m tall. At the top of the boundary a number of cut stone slabs are evident, indicating the site of a paved surface.	Post-medieval	The feature is in a poor condition. Vegetation includes mature ash, oak, elder and sapling trees.	The feature should continue to be monitored. Scrub vegetation should be managed and where necessary reduced to prevent erosion. Trees should be monitored and where necessary coppiced/pollarded or felled to prevent windthrow damage.	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: P1040232, P1040235, P1040243, P1040244, P1040246	Local
22	407104	440834		Structure		Foundation remains of a small rectangular structure located downslope of Park Wood Top and located within the northeast corner of a small drystone wall enclosure. The structure measures 3.30m by 4.80m and stands no more than 0.50m high. Upon its western edge is a construction break 1m wide supporting two upright stone posts, the remains of an entrance.	Post-medieval	The feature is in a poor condition. Vegetation includes ash and oak.	The site should continue to be monitored. Vegetation upon the feature should be managed to reduce scrub and tree development upon upstanding structural remains in order to reduce further erosion. Any operations at the site will likely require archaeological	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: P1040232, P1040235, P1040237	Local

									intervention.		
23	407090	440822		Veteran Tree	Ash Tree	Veteran Ash tree 9m tall and 3m wide, growing on the northern edge of a track adjacent to Park Wood Top site. The tree shows signs of having been managed as a pollard.	Post-medieval	The tree is in a good condition. Vegetation includes ash.	The feature should continue to be monitored.	Photograph Ref: P1040247, P1040248, P1040249	Local
24	407056	440837		Boundary	Irregular Drystone Wall	Relict irregular drystone wall boundary enclosing a rectilinear area on the summit of the ridge, to the north of the site of Park Wood Top. The boundary survives up to 1.40m high and 0.50m wide.	Post-medieval	The feature is in a fair to poor condition. Vegetation includes mature beech and sycamore with beech saplings.	The feature should continue to be monitored. Scrub vegetation should be managed and where necessary reduced to prevent erosion. Trees should be monitored and where necessary coppiced/pollarded or felled to prevent windthrow damage.	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: P1040251, P1040252, P1040254, P1040260, P1040263, P1040264	Local
25	407123	440853		Trough		Stone trough made up of 4 slabs, 1.70m long, 0.70m wide and 0.45m deep. The feature was fed by spring upslope to the south.	Post-medieval	The feature is in a good condition, some erosion caused by water flow from spring. Vegetation includes beech saplings.	The feature should continue to be monitored. Reduce and manage existing scrub and sapling tree growth upon the feature. Protect	Map Ref: 1908 1:2500 First Revision First County Series Survey;	Local

									the monument from the damaging effects of windthrow by selective felling and removal of over-mature trees in danger of collapse. Any operations at the site will likely require archaeological intervention.	Photograph Ref: P1040256, P1040259	
26	407085	440814		Gatepost		Worked stone with circular grooves, 0.70m long and 0.25m wide with 0.10cm cup in the stone. Possible collapsed sandstone gatepost.	Post-medieval	The feature is in a good condition.	The feature should continue to be monitored.	Photograph Ref: P1040267	Local
27	407060	440818		Pit		Small quarry cut into northwest-facing slope. The feature measures 8.10m in length, 10.70m wide and up to 1.60m deep.	Post-medieval	The site is in a good condition. Vegetation includes some saplings on the Western edge and mature sycamore.	The feature should continue to be monitored.	Photograph Ref: P1040269, P1040272, P1040274	Local
28	406910	440690		Pit		Possible quarry located at the summit of the ridge and orientated north-south. It measures 12.50m long by 3m wide and 0.30m deep.	Post-medieval	Vegetation includes birch.	The feature should continue to be monitored.	Photograph Ref: P1040278	Local

29	406855	440668		Charcoal Burning Platform		Possible charcoal platform, 7.20m in diameter. The feature is intersected by a public footpath along its northern edge.	Post-medieval	The feature is in a fair condition. Vegetation includes beech, sapling, and sycamore.	The feature should continue to be monitored.	Photograph Ref: P1040279, P1040280	Local
30	406773	440672		Trackway	Holloway	Holloway oriented east-west and located on the western edge of the woodland adjacent to an area of quarrying to the south. It measures up to 2m wide and 0.50m deep. The track undoubtedly served to provide access to the wood and the extraction activity within Park Wood. The track supports two gateposts, beyond which is a small quarry 8.20m long, 7.80m wide and 2.2 m deep. Along the northern edge of the holloway are the foundations of an irregular drystone wall 0.50m wide and up to 0.10m high.	Post-medieval	The feature is in a fair condition. Vegetation includes mature elder, ash and hawthorn as well as sapling beech.	The feature should continue to be monitored. Reduce and manage existing scrub and sapling tree growth upon the feature. Protect the monument from the damaging effects of windthrow by selective felling and removal of over-mature trees in danger of collapse.	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: P1040282, P1040284, P1040286, P1040289, P1040290, P1040291	Local

31	406886	440969		Platform		Platform with rock fireplace in the centre, oriented East to West facing North-West. Feature is 12.60 m long and 11 m wide. The fireplace is likely very recent, its construction taking place within the last 2 years. This area is covered in soil and contains a coppiced sycamore at the West of the platform. This area is surrounded by a ring of young trees. There is a hollow to the West side of the platform. Photos show the coppiced sycamore and the platform facing South, respectively. The feature is likely to relate to a period when the area was utilised as allotment gardens.	Post-medieval	Poor condition. Vegetation includes coppiced sycamore and young trees.	The feature should continue to be monitored.	Photograph Ref: IMG_7198, IMG_7199	Local
32	406875	440975		Platform		Circular-shaped hollow facing North. Hollow is 6.4 m in diameter. Stream erodes the hollow at the West side. There is a sycamore at the North side of the hollow and an ash at the South side. The feature is likely to relate to a period when the area was utilised as allotment gardens.	Post-medieval	Fair condition. Some erosion from a stream along the edge. Vegetation includes bracken, ash, and sycamore.	The feature should continue to be monitored.	Photograph Ref: IMG_7200	Local

33	406880	440995		Platform		Low walls in 'W' shape outside of the wood boundary. The walls are two stones tall. Two medium-sized coppiced trees are near the walls. This feature can be seen in the allotment area on the map.	Post-medieval	Vegetation includes coppiced trees.	The feature should continue to be monitored.		Local
34	406910	440968		Platform		Platform with small square-shaped hole in it oriented North-South. The feature is 9.70 m long and 7.80 m wide. The feature is likely to relate to a period when the area was utilised as allotment gardens.	Post-medieval	Vegetation includes beech saplings.	The feature should continue to be monitored.	Photograph Ref: IMG_7203	Local
35	406937	440963		Platform		Possible charcoal platform, facing North. The feature is 5.2 m in diameter. Photos taken facing South. The feature is likely to relate to a period when the area was utilised as allotment gardens.	Post-medieval	Fair condition. Vegetation includes many beech saplings.	The feature should continue to be monitored.	Photograph Ref: IMG_7204, IMG_7205	Local
36	406943	440960		Platform		Circular platform 5.1 m in diameter. Photo taken facing South. The feature is likely to relate to a period when the area was utilised as allotment gardens.	Post-medieval	Good condition. Vegetation includes holly, sycamore, and beech.	The feature should continue to be monitored.	Photograph Ref: IMG_7206	Local

37	406951	440974		Platform		Platform with a fallen oak lying across it. The feature is 8.2 m long. Photo taken facing South-West. The feature is likely to relate to a period when the area was utilised as allotment gardens.	Post-medieval	Good condition. Vegetation includes some beech saplings.	The feature should continue to be monitored.	Photograph Ref: IMG_7207	Local
38	406938	440993		Platform		Platform 8.9 m long. Photos taken facing South. The feature is likely to relate to a period when the area was utilised as allotment gardens.	Post-medieval	Good condition. Vegetation includes beech saplings.	The feature should continue to be monitored.	Photograph Ref: IMG_7208, IMG_7209	Local
39	406968	441011		Boundary	Terrace	Terrace woodland boundary marking the northern edge of the woodland. The terrace includes a number of drainage ditches which drain from the south onto its summit. The terrace is oriented East to West and stands up to 1.30m tall. Drainage ditches run North to South to join the terrace. Coordinates taken at the South end of the trackway where it is about 1.3 m wide. Photo 7210 is taken facing North, 7211 is taken facing East, 7212 is taken facing West, and 7213 is taken facing the South-East ditch.	Post-medieval	The feature is in a fair condition. The terrace is boggy. Vegetation includes several large coppiced sycamore.	The feature should continue to be monitored. Scrub vegetation should be managed and where necessary reduced to prevent erosion. Trees should be monitored and where necessary coppiced/pollarded or felled to prevent windthrow damage.	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: IMG_7210, IMG_7211, IMG_7212, IMG_7213	Local

40	407074	440957		Terrace		Semi-circular north-facing terrace. The slope of the terrace is steep and up to 10.0m tall. Although the feature is like likely natural, it could equally represent an extraction site, perhaps for clay. The terrace encloses an area c.60.0m (east-west) by 20.0m (north-south).-East.	Post-medieval		The feature should continue to be monitored.		Local
41	407120	440971		Boundary	Irregular Drystone Wall	Irregular drystone wall serving to mark the division between the landowners of Park Wood. The boundary appears on the 1852 OS Six-Inch Yorkshire 200 survey. The boundary is orientated northwest to southeast and stands up to 1.50m tall, supporting angular copping stones set on edge.	Post-medieval	Fair condition. Vegetation includes moss, encroaching beech, and sycamore saplings.	The feature should continue to be monitored. Scrub vegetation should be managed and where necessary reduced to prevent erosion. Trees should be monitored and where necessary coppiced/pollarded or felled to prevent windthrow damage.	Map Ref: 1852 OS Six-Inch Yorkshire 200; Photograph Ref: IMG_7214	Local

42	407074	440932		Boundary	Irregular Drystone Wall	North-facing irregular drystone wall serving as a retaining wall. The feature can be traced for a distance of 50.0m and stands up to 1.80m tall. The 1894 1:2500 First County Series Survey and later publications indicates it marked the southern edge of a track which diverted away from the main cobbled carriageway.	Post-medieval	The feature is in a poor condition. Vegetation includes beech, sycamore and sapling trees.	The feature should continue to be monitored. Scrub vegetation should be managed and where necessary reduced to prevent erosion. Trees should be monitored and where necessary coppiced/pollarded or felled to prevent windthrow damage.	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: IMG_7215	Local
43	407104	440895		Quarry		Long narrow north-facing quarry with spoil heaps along its northern edge. The site is recorded on the 1894 1:2500 First County Series; by the time of the 1908 publication, works associated with the quarry had extended further east. The site is accessible from the north via the stone cobbled carriageway.	Post-medieval	Fair condition. Vegetation includes many saplings, ash, sycamore, beech, and ferns.	The feature should continue to be monitored.	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: IMG_7216	Local

45	407075	440780		Boundary	Irregular Drystone Wall	The southern edge of Park Wood is marked by an irregular drystone wall with angular coping stones set on edge. The boundary stands up to 1.20m tall forming the southern edge of Park Wood. The boundary incorporates two sandstone gateposts within the vicinity of the Park Wood Top site. The posts stand between 1.10m and 1.30m tall.	Post-medieval	Fair condition, with occasional collapsed sections. Vegetation includes moss.	The feature should continue to be monitored. Scrub vegetation should be managed and where necessary reduced to prevent erosion. Trees should be monitored and where necessary coppiced/pollarded or felled to prevent windthrow damage.	Map Ref: 1893 1:2500 First County Series Survey; Photograph Ref: IMG_7217	Local
46	407080	440803		Boundary	Irregular Drystone Wall	Foundations for an irregular drystone wall orientated east-west. The boundary can be traced for a distance of 25.0m to the east of the west of the site of Park Wood Top. It stands up to 0.40m tall and 1.70m wide. It is recorded on the 1893 1:2500 First County Series Survey.	Post-medieval	The feature is in a poor condition. Vegetation includes ash , beech, and beech saplings.	The feature should continue to be monitored. Scrub vegetation should be managed and where necessary reduced to prevent erosion. Trees should be monitored and where necessary coppiced/pollarded or felled to prevent windthrow	Map Ref: 1893 1:2500 First County Series Survey; Photograph Ref: IMG_7218	Local

									damage.		
47	407081	440792		Platform		Roughly square raised platform identifiable by irregular drystone foundations standing up to 0.20m tall. The feature covers an area 6.10m long by 3.80m wide. Keighley Park bricks were found as part of the structure. Photo IMG_7221 shows the feature facing North with the Keighley Park brick, Photo IMG_7222 shows the roughly hewn wall facing West.	Post-medieval	Poor condition. Vegetation includes ash, sycamores, trees, and saplings.	The feature should continue to be monitored. Reduce and manage existing scrub and sapling tree growth upon the feature. Protect the monument from the damaging effects of windthrow by selective felling and removal of over-mature trees in danger of collapse. Any operations at the site will likely require archaeological intervention.	Photograph Ref: IMG_7221 IMG_7222, IMG_7224	Local
48	407078	440798		Trackway	Terraced Track	Possible track with rough stone kerbing orientated north-south and located to the southwest of the site of Park Wood Top. The feature measures 9.20m long, 0.50m wide, 0.10m high at maximum. This may connect with the smaller nearby parallel orthostats. The feature gains width as it heads	Post-medieval	The feature is in a poor condition. Vegetation includes ash, and brambles.	The feature should continue to be monitored.	Photograph Ref: IMG_7226	Local

						Northwards. A tree on the Northern edge may be growing in the gateway.					
49	407090	440791		Boundary	Irregular Drystone Wall	Relict irregular drystone wall orientated north-south. The feature is visible for a distance of 9.0m before becoming inaccessible. It measures up to 1.30m wide and 0.95m tall at its highest point. The 1894 1:2500 First County Series Survey depicts the boundary a demarcating a small field or garden located immediately to the south of Park Wood Top.	Post-medieval	The feature is in a poor condition. Vegetation includes a mature sycamore tree.	The feature should continue to be monitored. Scrub vegetation should be managed and where necessary reduced to prevent erosion. Trees should be monitored and where necessary coppiced/pollarded or felled to prevent windthrow damage.	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: IMG_7227	Local
50	407101	440797		Cairn	Clearance Cain	Cairn measuring up to 12.50m in diameter. The feature consists of a large pile of cut sandstone. One of the larges stone blocks measures 1.40m by 0.60m by 0.40m in dimensions. At the highest point, the feature is about 1.0m tall.	Post-medieval	Feature is in a good condition. Vegetation includes moss and brambles.	The feature should continue to be monitored.	Photograph Ref: IMG_7230	Local

51	407110	440803		Trackway	Path	Brick kerbed track and foundations of a parallel wall oriented north-south. The feature is up to 1.90m wide and 18.90m long. The feature is lost in thick scrub to the north. To the south the feature terminates at the woodland boundary. The feature is likely to represent a garden path or access way into the field/garden to the south of the site of Park Wood Top.	Post-medieval	Poor condition. Vegetation includes scrub.	The feature should continue to be monitored.	Photograph Ref: IMG_7231	Local
52	407095	440814	Park Wood Top	Structure	Farmstead	The remains of a building with evidence for at least two rooms and a window. The feature is 12.7 m long and 4.0m to 7.70m wide. The site is part of the complex of Park Wood Top. Photo IMG_7232 shows feature facing East at the internal doorway between rooms. Photo IMG_7233 shows feature facing south at the window lintel and stone frame. Photo IMG_7234 shows feature facing South-East at the projection of the wall at the possible external entrance.	Post-medieval	The feature is in a poor condition. Vegetation includes sapling beech and elder, brambles and mature ash.	The site should continue to be monitored. Vegetation upon the feature should be managed to reduce scrub and tree development upon upstanding structural remains in order to reduce further erosion. Any operations at the site will likely require archaeological intervention.	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: IMG_7232, IMG_7233, IMG_7234	Local

53	407111	440817	Park Wood Top	Structure	Farmstead	The remains of a house with evidence for a possible cellar. Structure measures 9.0m (north-south) by 10.50m (east-west) in dimensions. The site represents part of the complex known as Park Wood Top. The structure had two storeys, and was demolished in the mid 20th century. There are no distinguishable internal doorways. A large sunken central pit may mark the location of a cellar. Photo IMG_7238 shows the feature facing West at the doorway leading to the external cellar. Photo IMG_7239 shows the feature facing South and the internal cellar. Photo IMG_7241 shows the feature facing South including the external coursing on the wall.	Post-medieval	The feature is in a poor condition. Vegetation includes sapling beech and elder, brambles and mature ash.	The site should continue to be monitored. Vegetation upon the feature should be managed to reduce scrub and tree development upon upstanding structural remains in order to reduce further erosion. Any operations at the site will likely require archaeological intervention.	Map Ref: 1894 1:2500 First County Series Survey; Photograph Ref: IMG_7238, IMG_7239, IMG_7241	Local

54	406955	440726		Quarry	Pit	Delve/slightly sunken area measuring 18.0m (east-west) by 11.0m (north-south). The feature is no more the 0.40m deep and supports a level base. There is a raised bank on its southeast and northeast sides which represents spoil. The bank dimensions are 2.30m in width and 0.40m high. Access to the extraction site was from the southwest.	Post-medieval	The feature is in a good condition. Vegetation includes mature silver birch, beech, and saplings.	The feature should continue to be monitored.	Photograph Ref: IMG_7243	Local
55	406821	440641		Boundary	Irregular Drystone Wall	Irregular drystone wall with occasional orthostat inclusion serving to enclose the eastern edge of a clearing at the western end of Park Wood. The boundary is first recorded on the 1852 Yorkshire 200 Six-inch Ordnance Survey publication. The wall stands up to 0.50m wide and 1.30m tall. The north-east to south-west orientated boundary is truncated at its southern end to provide access.	Post-medieval	The feature is in a fair condition. Vegetation includes saplings beech and ash, mature oak and ash and brambles.	The feature should continue to be monitored. Scrub vegetation should be managed and where necessary reduced to prevent erosion. Trees should be monitored and where necessary coppiced/pollarded or felled to prevent windthrow damage.	Map Ref: 1852 Ordnance Survey Yorkshire 200 Six-Inch Survey; Photograph Ref: IMG_7245, IMG_7247	Local

Appendix 2: Distribution Map

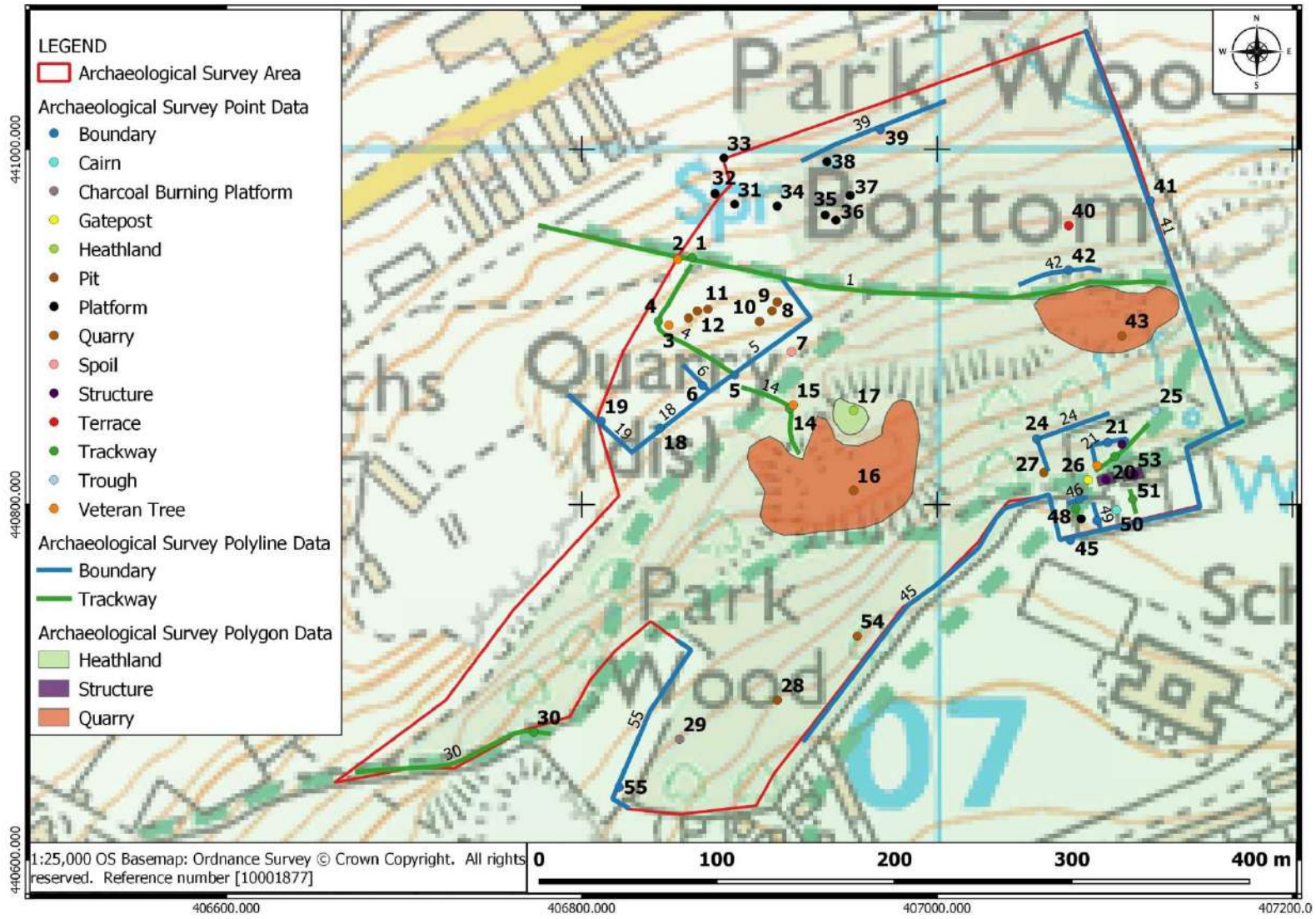

Figure 11: Distribution of features of archaeological interest recorded during the Level 1 (Reconnaissance) Woodland Survey

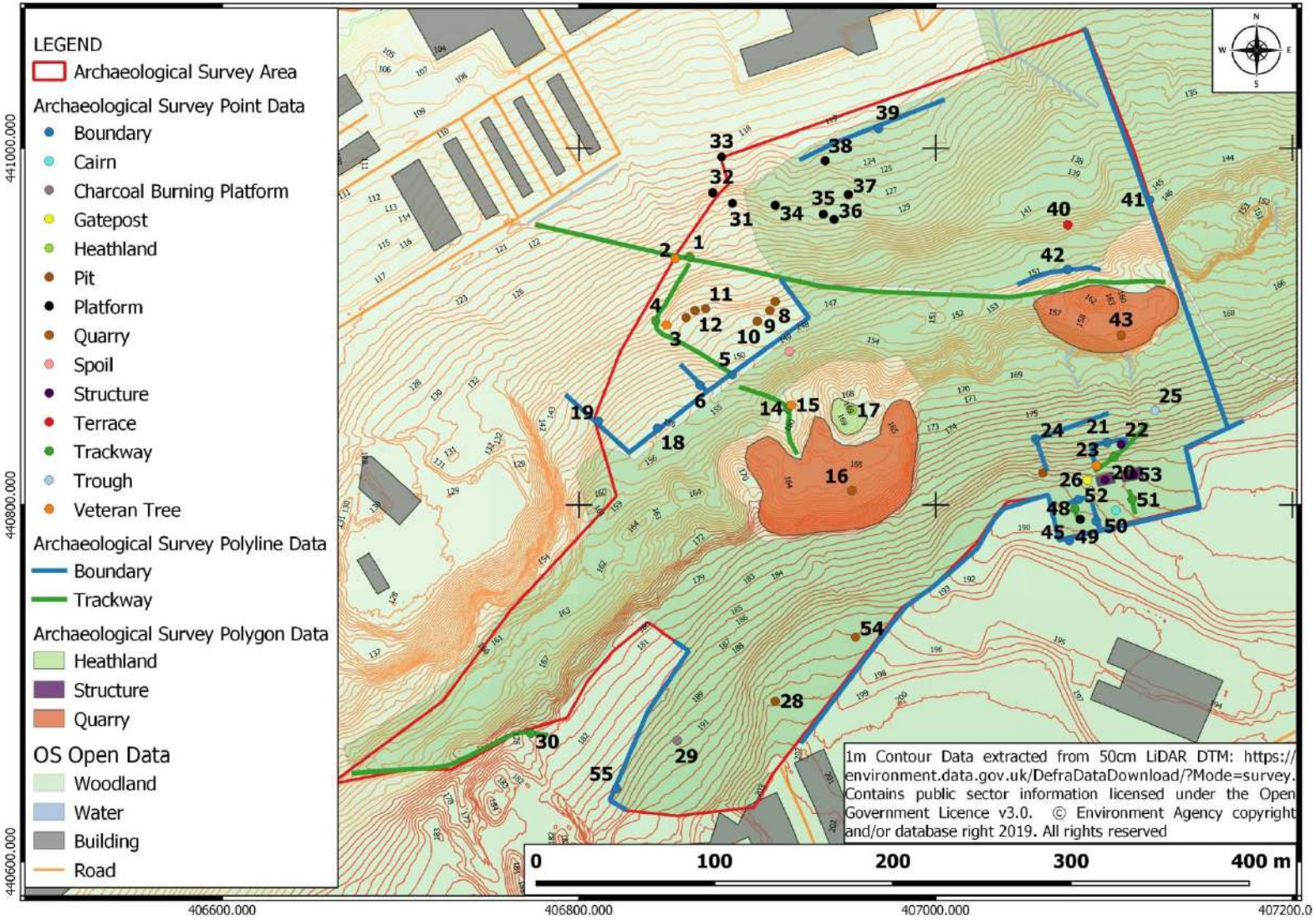

Figure 12: Distribution of features of archaeological interest recorded during the Level 1 (Reconnaissance) Woodland Survey

Appendix 3: Historic Mapping

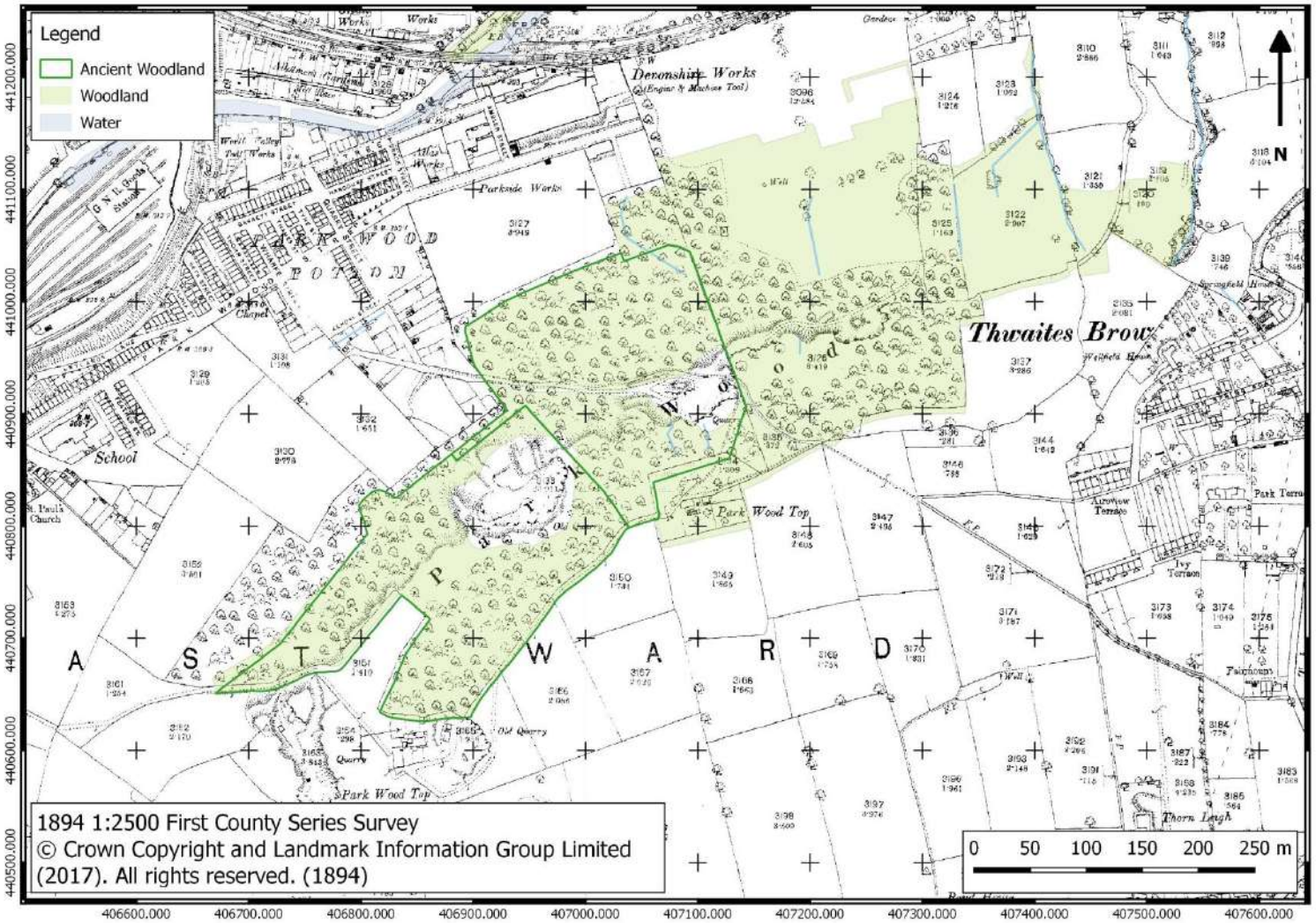

Figure 5: Excerpt of the 1894 1:2500 First County Series Survey. EDINA Historic Digimap Service, https://digimap.edina.ac.uk © Crown Copyright and Landmark Information Group Limited (2019). All rights reserved. (1894) FOR EDUCATIONAL USE ONLY

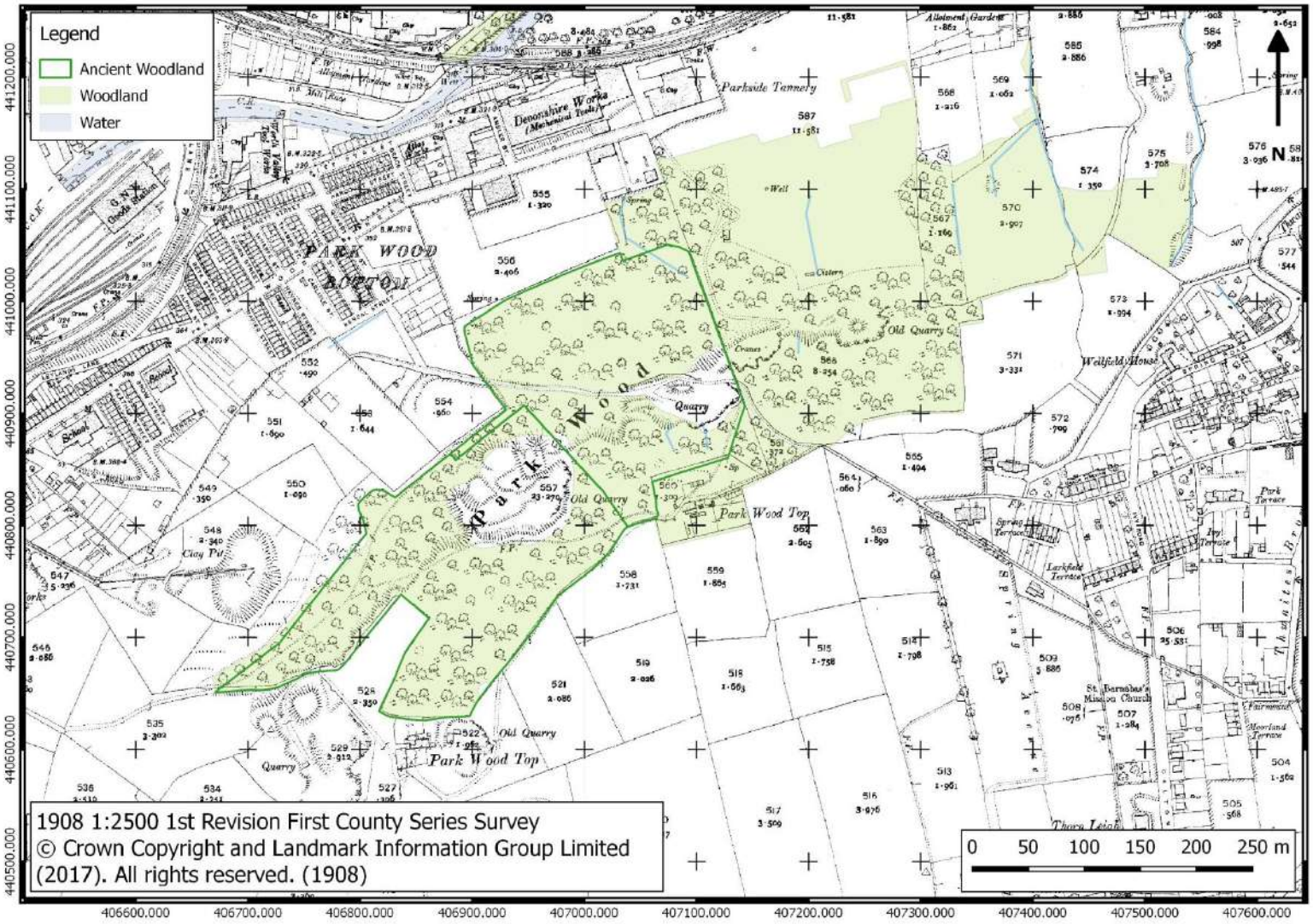

Figure 6: Excerpt of the 1908 1:2500 First Revision First County Series Survey. EDINA Historic Digimap Service, https://digimap.edina.ac.uk © Crown Copyright and Landmark Information Group Limited (2019). All rights reserved. (1908) FOR EDUCATIONAL USE ONLY

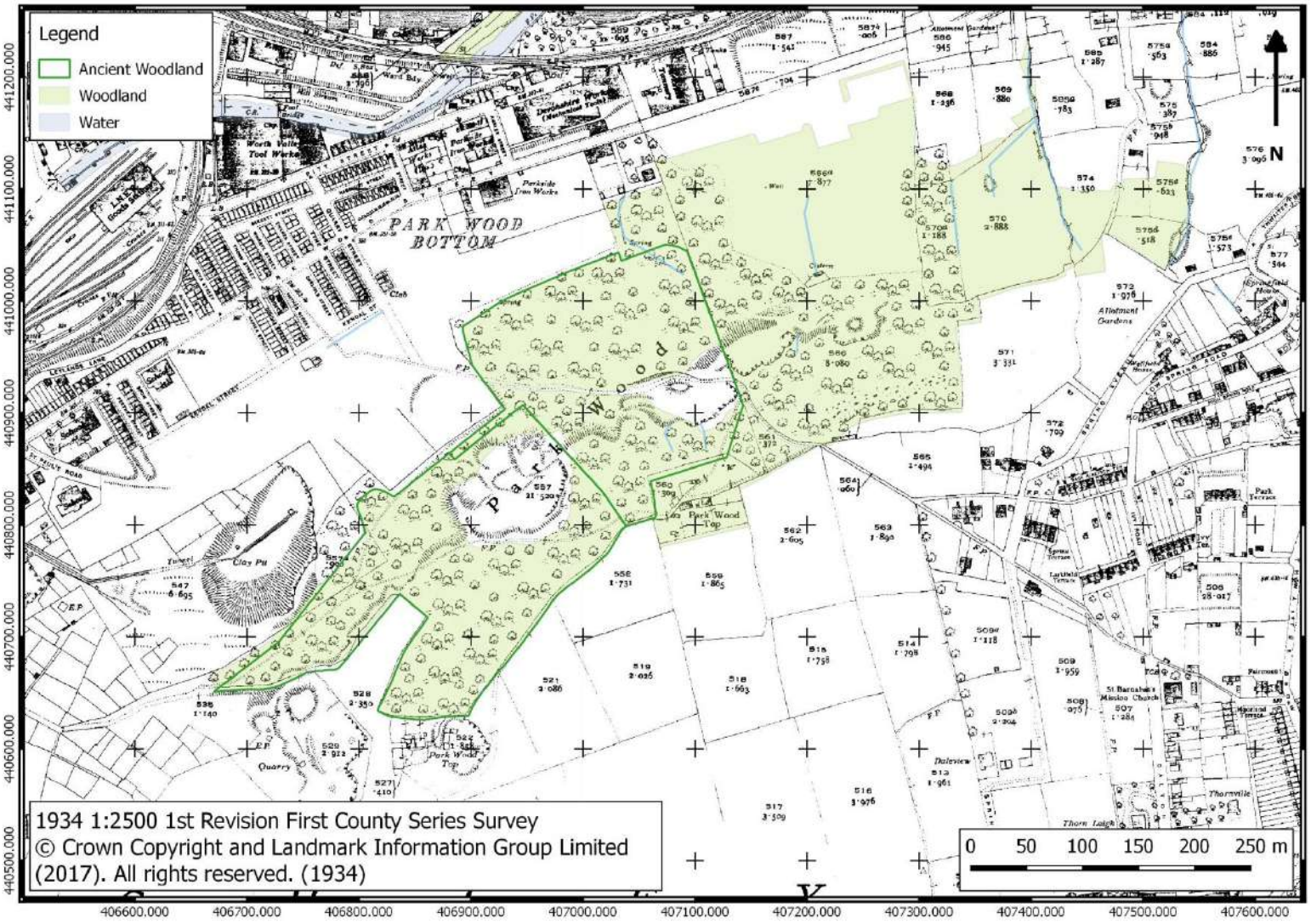

Figure 7: Excerpt of the 1934 1:2500 Third Revision First County Series Survey. EDINA Historic Digimap Service, https://digimap.edina.ac.uk © Crown Copyright and Landmark Information Group Limited (2019). All rights reserved. (1934) FOR EDUCATIONAL USE ONLY

Appendix 4: Light Detection and Ranging (LiDAR)

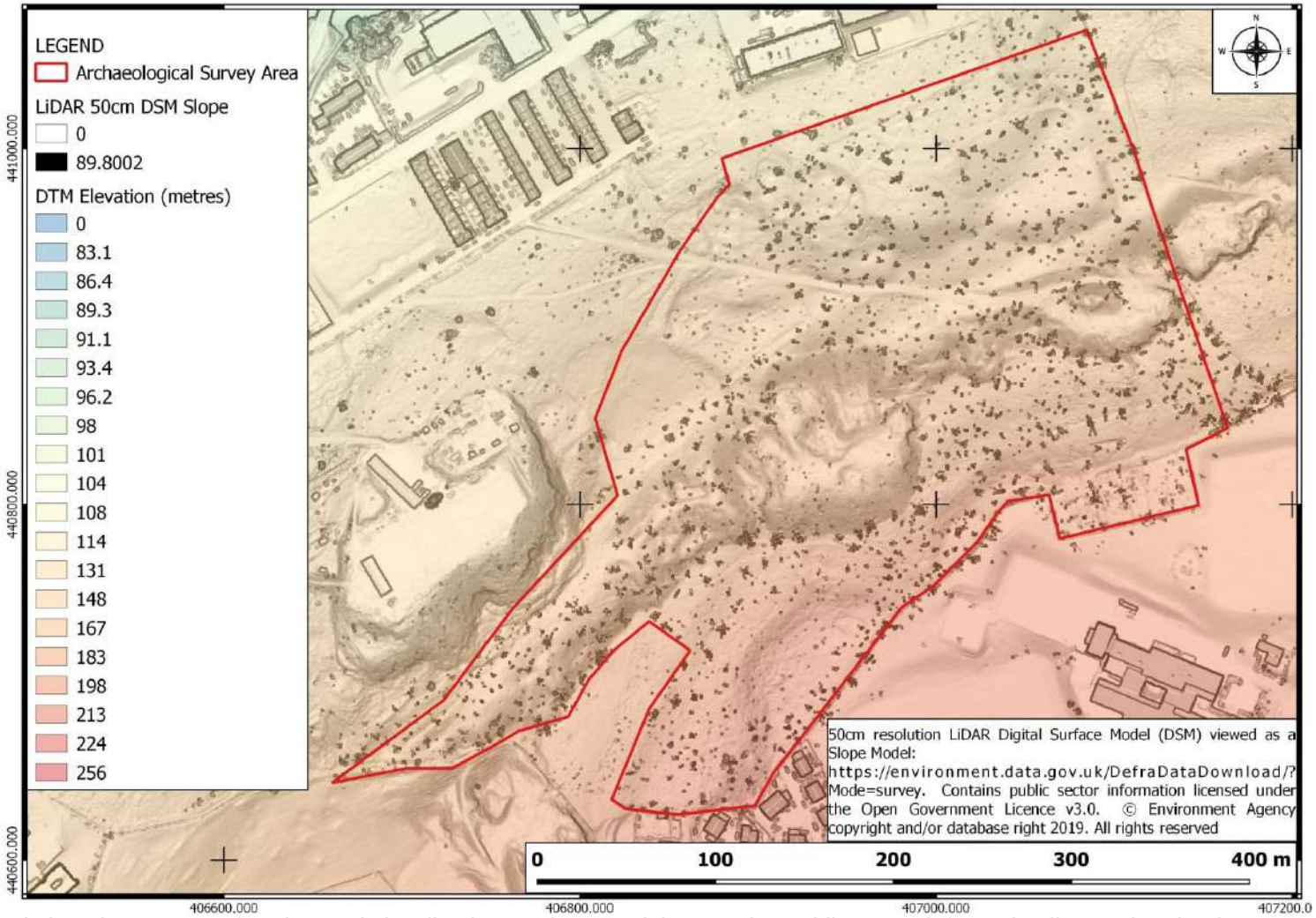

Figure 8: 50cm Resolution LiDAR DSM of Park Wood visualised as a Slope Model. Contains public sector information licensed under the Open Government Licence v3.0. © Environment Agency copyright and/or database right 2019. All rights reserved

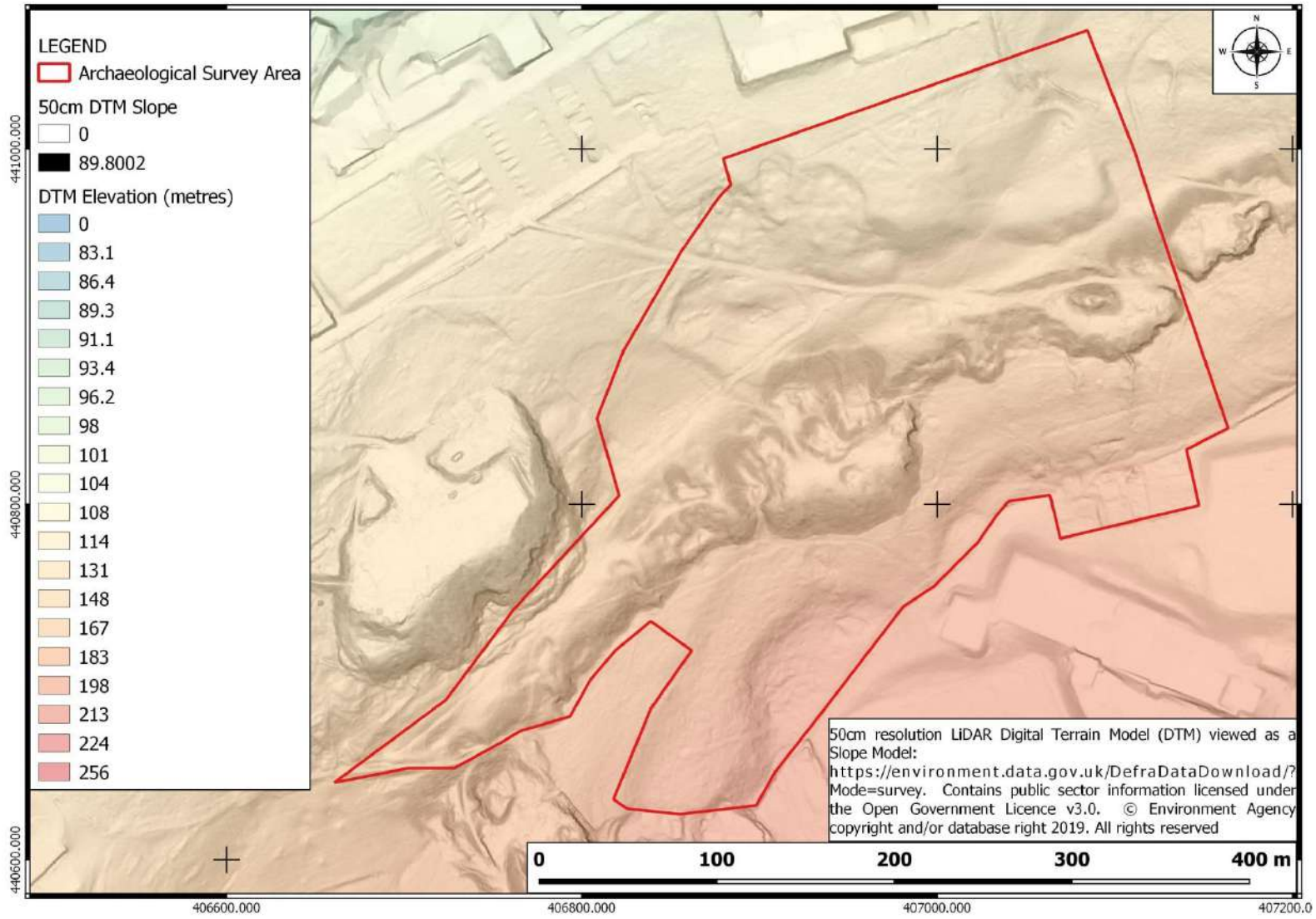

Figure 9: 50cm Resolution LiDAR DTM of Park Wood visualised as a Slope Model. Contains public sector information licensed under the Open Government Licence v3.0. © Environment Agency copyright and/or database right 2019. All rights reserved

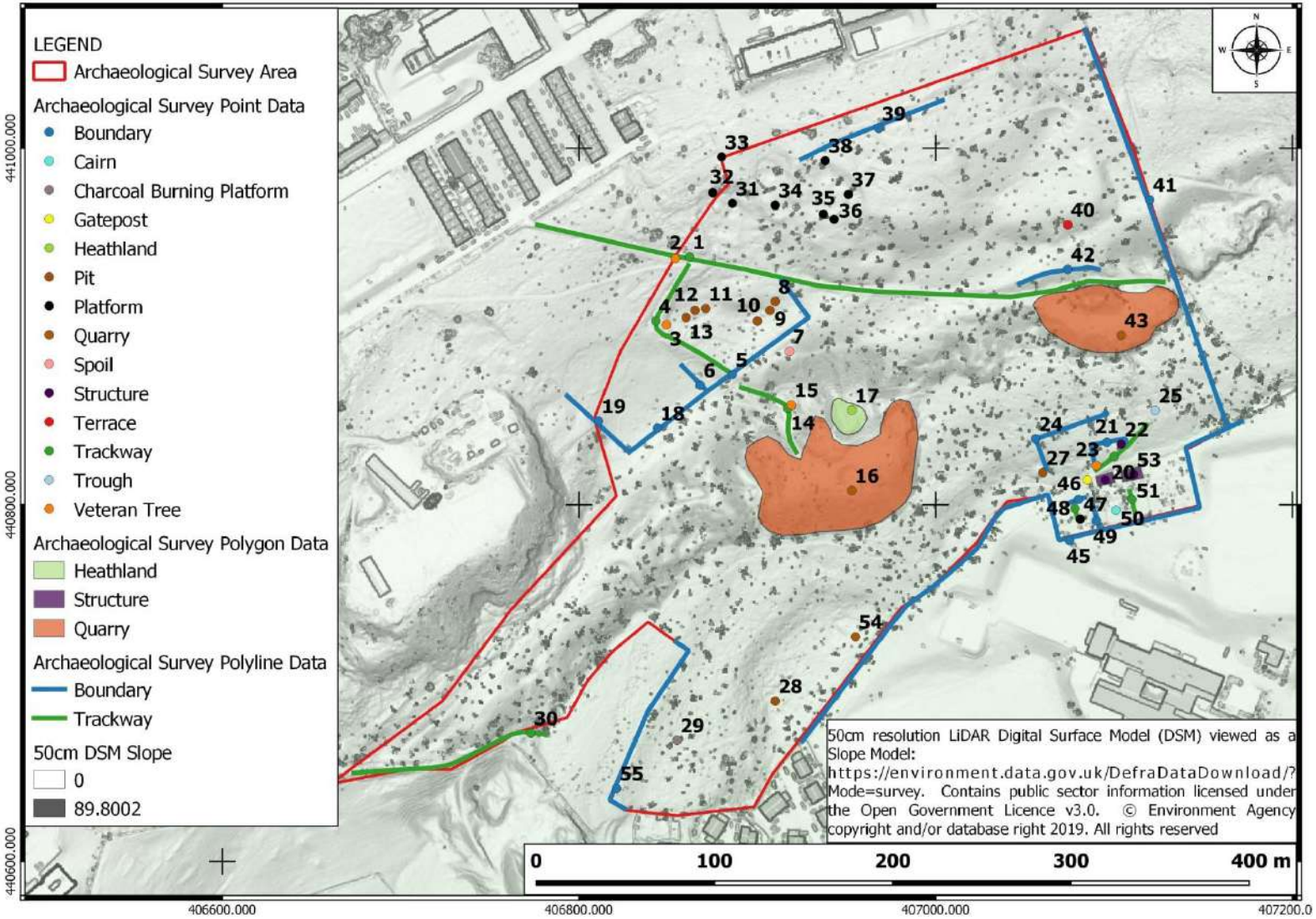

Figure 10: 50cm Resolution LiDAR DSM of Park Wood depicting the distribution of features recorded as a result of the archaeological survey. Contains public sector information licensed under the Open Government Licence v3.0. © Environment Agency copyright and/or database right 2019. All rights reserved

Appendix 5: Digital Archive

Included with this report is a CD-Rom which contains a digital archive for use by the landowner and regional Historic Environment Record.

The digital archive includes:

- PDF digital copy of this report – PP42-191219 BMDC Park Wood Report
- Excel survey database – PP42-191219 Archaeological Survey Database
- Digital photographic archive – PP42-191219 Archaeological Survey Photographs
- GIS Shapefiles of historic mapping data – PP42-191219 Archaeological Survey Shapefiles

Appendix 6: About the Author and Pennine Prospects

At the time of this reports production, the author Christopher Atkinson was in employment with Pennine Prospects as part of the Celebrating Our Woodland Heritage Project. As Heritage and Landscape Development Manager, Chris manages a programme of archaeological woodland surveys across the South Pennines, as well as the wider project. He has been in full time employment as an archaeologist since 2006, in which time he has worked for Herefordshire Council's archaeology service as Community Archaeologist (2006-2013); Project Officer for the National Trust (2015) and self-employed (2013-2016). He is experienced in landscape survey, site excavation, geophysical survey, desk-based assessment, use of GIS (including MapInfo Professional; ArcGIS and QGIS) and the production of management plans for clients such as Natural England and Historic England.

He holds an undergraduate degree in Archaeology from the University of Wales Lampeter (2004) and a Masters with distinction in Landscape Archaeology from the University of Sheffield (2015).

Pennine Prospects is a unique rural regeneration company created in 2005 as a champion for the South Pennines, the dramatic upland landscape that stands prominently above the urban centres of Greater Manchester, the Lancashire valleys and West Yorkshire. It is an award-winning partnership organisation that has attracted over £5 million of national and European funding to deliver a wide range of projects aimed at promoting, protecting and enhancing the built, natural and cultural heritage of the South Pennines.

Pennine Prospects lies at the heart of a well-established partnership bringing together six local authorities, two water companies, government agencies and the voluntary sector. The company is strongly committed to sustainable development and enables partner organisations, local residents and businesses to maximise the benefit of the area's rich natural, cultural and heritage assets.

Through its activities, Pennine Prospects supports the economy of the South Pennines by uncovering, highlighting and promoting all that is special about the area. In addition, the company develops community projects, promotes access to the uplands and waterways and connects people with their landscape.