

# Land at Eden Golf Course Crosby-on-Eden Cumbria

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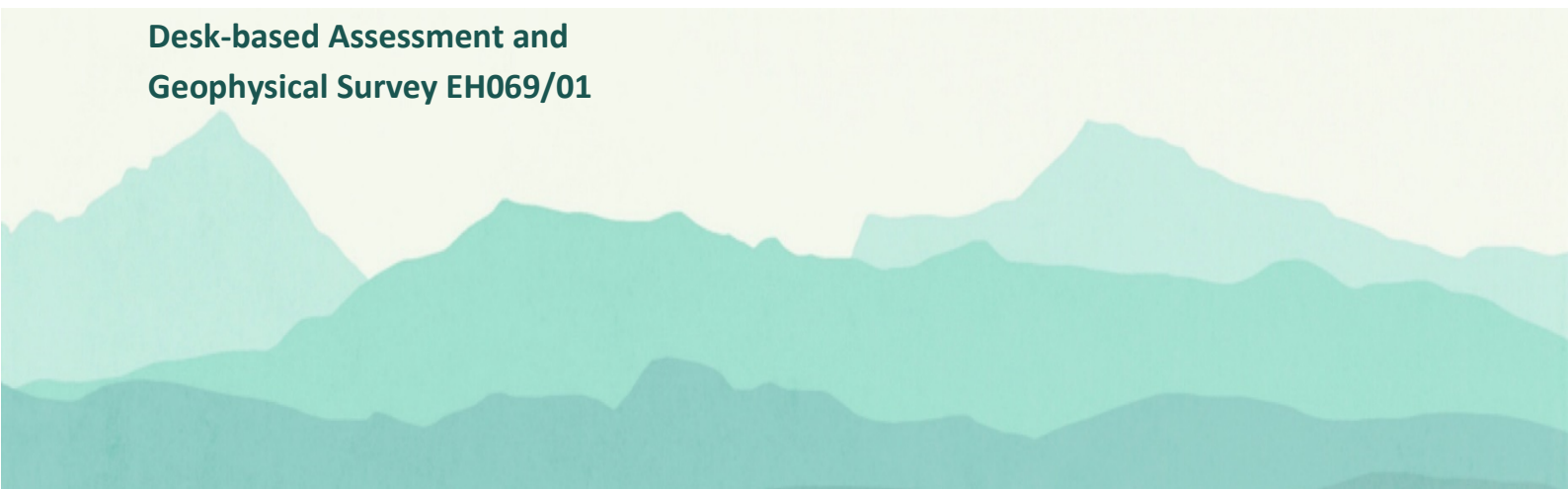
Mr Alistair Wannop



**NOVEMBER 2020**

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**Desk-based Assessment and  
Geophysical Survey EH069/01**



# Land at Eden Golf Course

## Crosby-on-Eden

## Cumbria

### Desk-based Assessment and Geophysical Survey for Mr Alistair Wannop

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## CONTENTS

Summary.....	3
1 Introduction.....	4
1.1 Project Circumstances.....	4
2 Methodology.....	5
2.1 Introduction.....	5
2.2 Documentary Research.....	5
2.3 Site Visit.....	5
2.4 Geophysical Survey.....	5
2.5 Project Archive.....	7
3 Desk-based Assessment.....	8
3.1 Location, Topography and Geological Context.....	8
3.2 Locations of Designated and Non-Designated Heritage Assets.....	8
3.3 Archaeological and Historical Background.....	9
3.4 Previous Archaeological Works.....	14
4 Site Visit.....	15
4.1 Introduction.....	15
4.2 Site Conditions.....	15
5 Geophysical Survey.....	20
5.1 Introduction.....	20
5.2 Area 1.....	20
5.3 Area 2.....	21
5.4 Area 3.....	22
5.5 Discussion.....	22
6 Conclusions.....	23
6.1 Proposed Development Area.....	23
6.2 Archaeological potential.....	23
7 Bibliography.....	25
APPENDIX 1: Heritage Asset Gazetteer.....	27
APPENDIX 2: Figures.....	32

## FIGURES

Figure 1: Site location

Figure 2: Detailed site location

Figure 3: Locations of heritage assets

Figure 4: Extracts from historic county maps of Cumberland

Figure 5: Extracts from historic Ordnance Survey maps (1868-1957)

Figure 6: Modern aerial imagery (LiDAR) showing ridge and furrow earthworks overlain by the golf course

Figure 7: Location of the geophysical survey areas (Areas 1-3)

Figure 8: Geophysical survey of the north side of Area 1 (minimally processed data) showing survey grid

Figure 9: Geophysical survey of the north side of Area 1 (processed data)

Figure 10: Geophysical interpretation of the north side of Area 1

Figure 11: Archaeological interpretation of the north side of Area 1

Figure 12: Geophysical survey of the south side of Area 1, Area 2 and Area 3 (minimally processed data) showing survey grid

Figure 13: Geophysical survey of the south side of Area 1, Area 2 and Area 3 (processed data) showing

Figure 14: Geophysical interpretation of the south side of Area 1, Area 2 and Area 3

Figure 15: Archaeological interpretation of the south side of Area 1, Area 2 and Area 3

## PLATES

Plate 1: Map of the Parish of Crosby upon Eden in the County of Cumberland, Surveyed 1857

Plate 2: The north side of the proposed development area showing raised green, looking west

Plate 3: The central fairway in Area A showing possible ridge and furrow earthworks, looking southwest

Plate 4: Pond on the south side of the proposed development area in Area A, looking south

Plate 5: Overgrown and waterlogged area on the west side of Area A, looking south

Plate 6: Concrete slab on the north side of the site, looking northeast

Plate 7: The southwest side of the proposed development area (Area B), looking northeast

Plate 8: Spur of land (Area C) on the west side of the site, looking south

Plate 9: Part of the golf course in Area C, looking northeast

## Summary

In November 2020 Eden Heritage Ltd was commissioned by Mr Alistair Wannop to undertake an archaeological desk-based assessment and geophysical survey focusing on land at Eden Golf Course, Crosby-on-Eden, Cumbria (Ordnance Survey grid reference: NY 4660 5928). The assessment was undertaken to help inform a future planning application for a proposed holiday lodge development at the site.

The assessment revealed that there are no recorded designated heritage assets within the proposed development area, but that an undated cropmark site known as Crosby Enclosure and Field System is recorded as being within the site boundary. Finds of possible Roman and medieval date have previously been recovered from the site during a field-walking associated with the development of the golf course in 2005. The site is also located within the Frontiers of the Roman Empire (Hadrian's Wall) World Heritage Site.

Ridge and furrow of possible medieval date was identified within the site boundary during the site visit and was confirmed by the geophysical survey. The proposed development area has apparently remained undeveloped agricultural land throughout the post-medieval and modern periods. The 1857 tithe map of the Parish of Crosby-on-Eden shows the proposed development subdivided by the current track, with a cottage and garden depicted adjacent to the track outside of the proposed development area. The two fields on the southwest side of the proposed development area were arable fields at that time known as Bank.

The most significant activity to take place near the site in the 20th century was the creation of a military airfield known as Crosby-on-Eden in 1941 to the northeast of the proposed development area. In total 207 hectares of land was taken by the RAF for the airfield. A very substantial drainage system was identified crossing the north side of the proposed development area during the current project, which carries water across the golf course from fields to the east. Given the substantial nature of the drain it is feasible that this system is associated with 20th century activity at the military airfield.

The geophysical survey confirmed the presence of archaeological features associated with Crosby Enclosure and Field System on the southwest side of the proposed development area. An almost square enclosure divided into four quadrants, was identified by the survey, which is overlain by ridge and furrow of possible medieval date and truncated by the field boundary to the southeast. The geophysical survey also indicated that features continued into the field to the south, where they may be less well-preserved due to damage through modern ploughing. Although this site is undated, the morphology of the features identified suggests the presence of an enclosure and/or field system of possible Iron Age or Romano-British date.

# 1 Introduction

## 1.1 Project Circumstances

- 1.1.1 Eden Heritage Ltd was commissioned by Mr Alistair Wannop, to undertake an archaeological desk-based assessment and geophysical survey of land at Eden Golf Course, Crosby-on-Eden, Cumbria (centred at National Grid Reference NY 4460 5928; Figure 1). The assessment was undertaken in order to provide information to support a future planning application for a proposed holiday lodge development at the site.
- 1.1.2 The area is a focus for Roman military activity. Hadrian's Wall and vallum and the Stanegate Roman Road pass to the north of the proposed development area. The site is also located within the designated area of the Frontiers of the Roman Empire (Hadrian's Wall) World Heritage Site. A cropmark site known as Crosby Enclosure and Field System is also recorded as being within the site boundary. Finds of possible Roman and medieval date have also previously been recovered from the site during a field-walking associated with the development of the golf course (Martin 2005).
- 1.1.3 As a result, Jeremy Parsons, Historic Environment Officer at Cumbria County Council, advised that an archaeological desk-based assessment and geophysical survey of the site was required, in order to help establish the heritage significance of the proposed development area and to help determine the potential for archaeological remains. This information was to be used to help determine the need for, and scope of, any further archaeological work and/or mitigation at the site. This was in line with government advice as set out the National Planning Policy Framework (MHCLG 2019).

## 2 Methodology

### 2.1 Introduction

2.1.1 All work undertaken was consistent with the relevant standards and procedures of the Chartered Institute for Archaeologists, as set out in *Standard and Guidance for Historic Environment Desk-Based Assessment* (CIfA 2020a). The geophysical survey fieldwork and reporting was undertaken following Historic England guidelines (English Heritage 2008) and in accordance with the standard and guidance of the Chartered Institute for Archaeologists (CIfA 2020b).

### 2.2 Documentary Research

2.2.1 The primary and secondary sources used within this report were derived mainly from the Cumbria Historic Environment Record (HER) and the online sources which were also consulted, including the Archaeology Data Service (ADS) and the National Heritage List (NHL) maintained by Historic England.

2.2.2 Several published and unpublished sources were consulted for information of the proposed development area including the Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society, as well as various resources held by Eden heritage Ltd. The Cumbria Record Office could not be visited due to ongoing Coronavirus restrictions.

2.2.3 A search radius of 1km from the site boundary was used, which was considered appropriate given the topographic context of the site. The 1km boundary is depicted on Figure 3.

### 2.3 Site Visit

2.3.1 The site and its environs were visited on the 5th November 2020.

2.3.2 The site was inspected to assess if there was any evidence for features of archaeological/historic interest within the proposed development area, and to assess the character of the landscape of the site, including any evidence for previous landscaping and levelling activities which may have had an impact on any potential buried archaeological remains.

### 2.4 Geophysical Survey

2.4.1 **Technique Selection:** geomagnetic survey was selected as the most appropriate technique, given the non-igneous geology (sandstone), and the expected presence of archaeological features at depths of no more than 1.5m. Magnetic survey over Helsby Sandstone Formation can produce variable results, but previous surveys have shown magnetic susceptibility exists, which can produce moderate anomaly strengths. This response will also depend on local variations in drainage and overlying soils.

2.4.2 **Field Methods:** the geophysical survey area measured c.12ha in total, comprising two areas occupied

by the existing golf course and a field of pasture (Figure 2). A 30m grid was established across each area and tied-in to known Ordnance Survey points using a Trimble M3 Total Station (Areas 1-3).

2.4.3 Geomagnetic measurements were determined using a Bartington Grad601-2 dual gradiometer system, with twin sensors set 1m apart. It was expected that significant archaeological features at a depth of up to 1.5m would be detected using this arrangement. The survey was undertaken using a zig-zag traverse scheme, with data being logged in 30m grid units. A sample interval of 0.25m was used, with a traverse interval of 1m, providing 3600 sample measurements per grid unit, with measurements being recorded at the centre of each grid cell. The data were downloaded on site into a laptop computer for processing and storage.

2.4.4 **Data Processing:** geophysical survey data were processed using Terra Surveyor software, which was used to produce 'grey-scale' images of the raw data. Positive magnetic anomalies are displayed as dark grey, and negative magnetic anomalies are displayed as light grey. A palette bar shows the relationship between the grey shades and geomagnetic values in nT.

2.4.5 Raw data were processed in order to attempt to further define and highlight the archaeological features detected. The following basic data processing functions were used:

- *Destagger:* to compensate for data collection errors due to sloping ground or difficult terrain (destagger was performed on selected survey grids using an offset of 100cm);
- *Destripe:* to reduce the effect of striping in the gradiometer data, sometimes caused by misalignment of the twin sensors (zero mean traverse was performed on all survey grids using a threshold of 1 standard deviation);
- *Clip:* to clip data to specified maximum and minimum values, in order to limit large noise spikes in the geophysical data (data were clipped from -3nT to 3nT);
- *Interpolate:* to match the resolution of the sample intervals in the x and y directions (doubled in the y direction).

2.4.6 **Interpretation:** four types of geophysical anomaly were detected in the gradiometer data:

- *positive magnetic:* regions of anomalously high or positive magnetic data, which may be associated with the presence of high magnetic susceptibility soil-filled features, such as pits or ditches;
- *negative magnetic:* regions of anomalously low or negative magnetic data, which may be associated with features of low magnetic susceptibility, such as stone-built features, geological features, land-drains or sub-surface voids;
- *dipolar magnetic:* regions of paired positive and negative magnetic anomalies, which typically reflect ferrous or fired materials, including fired/ferrous debris in the topsoil, or fired structures, such as kilns or hearths;



- *bipolar magnetic*: regions of alternating positive and negative magnetic anomalies, which frequently reflect the presence of modern service pipes, drains, or electric cables;
- *magnetic disturbance*: areas of high amplitude magnetic disturbance or interference, which may be associated with the presence of modern structures, such as services, fences or buildings.

2.4.7 **Presentation**: the grey-scale images were combined with site survey data and Ordnance Survey data to produce the geophysical survey figures.

2.4.8 Geophysical survey interpretation diagrams show the location and extent of dipolar, bipolar, positive and negative geophysical anomalies, and areas of magnetic disturbance. Archaeological interpretation diagrams Are also provided, which are based on the interpretation of the geophysical survey results in light of the archaeological and historical context of the site.

## 2.5 Project Archive

2.5.1 The data archive for the geophysical survey has been created in accordance with the recommendations of the Archaeology Data Service (ADS 2013) and is held at the company offices. A PDF version of the final report will be deposited with the Cumbria Historic Environment Record in Kendal within 3 months of completion of the project, once approved by the client.

2.5.2 The project is also registered with the **Online Access to the Index of archaeological investigations** (OASIS Project). The OASIS reference for this project is: edenheri1- 409260.

## 3 Desk-based Assessment

### 3.1 Location, Topography and Geological Context

- 3.1.1 Crosby-on-Eden is situated approximately 6.5km to the northeast of Carlisle in the Solway Plain, in part of Cumbria that was formerly known as Cumberland (Figure 1). Crosby-on-Eden is the combined name given to two small villages, High Crosby and Low Crosby, which are located north of the River Eden within the civil parish of Stanwix Rural. The proposed development area is located c.1.25km to the southeast of Crosby-on-Eden, centred on Ordnance Survey grid reference NY 4660 5928.
- 3.1.2 The proposed development encompasses just under 12ha of land to the south of the A689 on the northeast side of Eden Golf Course (Figure 2). The topography of the land is varied occupying a ridge overlooking the River Eden. The northeast side of the site has an average elevation of c.33m aOD (above Ordnance Datum) with a slight fall in elevation down to c.32m aOD to the south in an area of pastureland. To the west elevations fall sharply to c.25m aOD along the western site boundary.
- 3.1.3 There is a lack of substantial tree cover, but mature trees and shrubs are present along the site boundaries and there are some mature trees and shrubs within the area occupied by the golf course. Parts of the course are uncultivated rough ground. The golf course extends outside of the site boundary to the southwest. To the north and east of the site the land is agricultural. Black Wood bounds the south side of the proposed development area, beyond which is further agricultural land.
- 3.1.4 The solid geology of the site comprises sandstone known as Helsby Sandstone Formation. This sedimentary bedrock formed approximately 242 to 247 million years ago in the Triassic Period. This is overlain by glaciofluvial deposits of sand and gravel formed up to 2 million years ago in the Quaternary Period (BGS 2020).

### 3.2 Locations of Designated and Non-Designated Heritage Assets

- 3.2.1 There are no designated heritage assets recorded within the site boundary. However, the site is within the Frontiers of the Roman Empire (Hadrian's Wall) World Heritage Site.
- 3.2.2 There is one listed building located within the 1km search area; a Grade II listed milestone to the north east of Crosby House (Asset 1). There is no visibility between the milestone and the site.
- 3.2.3 There are three non-designated heritage assets recorded within the site boundary. These are Crosby Enclosure and Field System (Asset 6) and finds recovered during fieldwalking, comprising a pewter find (Asset 18) of possible medieval date, and a silver coin find (Asset 19) of probable Roman date.
- 3.2.4 There are 17 other non-designated heritage assets recorded in the Historic Environment Record within the 1km search area (Appendix 1, Figure 3). The site is not located within a Conservation Area.
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### 3.3 Archaeological and Historical Background

- 3.3.1 This historical and archaeological background is compiled from sources consulted during the desk-based research. It is intended only as a summary of historical developments within and around the proposed development site. The locations of known heritage assets as identified from the Cumbria Historic Environment Record (HER) database, within the approximate 1km study area are illustrated in Figure 3 and summarised in Appendix 1. Only the heritage assets that are regarded as being of particular relevance to the current proposed development area are discussed in detail below.
- 3.3.2 The following chronological dates are based on Historic England's Period List. The date ranges have been provided to assist with the identification of archaeological and cultural periods, however these dates should not be taken as definitive or absolute, as time periods vary depending on geographical focus and archaeological science disciplines (FISH 2017).
- 3.3.3 **Prehistoric (up to c. AD43):** the earliest evidence for human hunter-gatherer activity in Cumbria dates to the Late Upper Palaeolithic c.16,000-8,000BC, although evidence for occupation in this period is rare. The evidence for the first post-glacial activity in Cumbria comes from sites around Morcambe Bay, indicating hunting was taking place in the area. Two bone harpoon heads were recovered from Crosby-on-Eden which has been used as evidence that similar activity was taking place in the Solway Plain area (Barrowclough 2010, 61). The two harpoon heads (Asset 3) were recovered from peat in a boggy field near Newby Grange in 1875. However, The British Museum has stated they were similar to ones used in Terra Del Fuego and likely to be recent (Hodgson 1895).
- 3.3.4 Evidence for Mesolithic activity is more frequent, scatters of lithic material providing the main evidence for occupation in this period, with few organic or structural remains having been identified in Cumbria (Brennand 2006, 25). Palaeoenvironmental evidence suggests that this activity was widespread in the county. However, there are no Mesolithic sites recorded within the search area.
- 3.3.5 The transition from the Mesolithic to Neolithic was a gradual process in Cumbria and characterized by new lithic tool types and the introduction of pottery. Neolithic and Bronze Age activity was revealed during excavations by Carlisle Archaeology Unity at High Crosby in 1993. An area of pits was identified containing Neolithic pottery (Grimston Ware) and many fire-cracked stones. The suggestion was that the material may have represented seasonal activity rather than permanently occupied settlement (McCarthy 2002, 37).
- 3.3.6 Neolithic settlement sites remain elusive in Cumbria, in contrast to the presence of important Neolithic monuments, which make up the majority of the archaeological record for this period. The domination of the landscape by monuments in the Neolithic and Early Bronze Age seems to have been succeeded by a pattern of field systems and permanent settlements (Thomas, J 1991, 34). Little is known about Early Bronze Age settlement but there is an abundance of evidence in Cumbria for

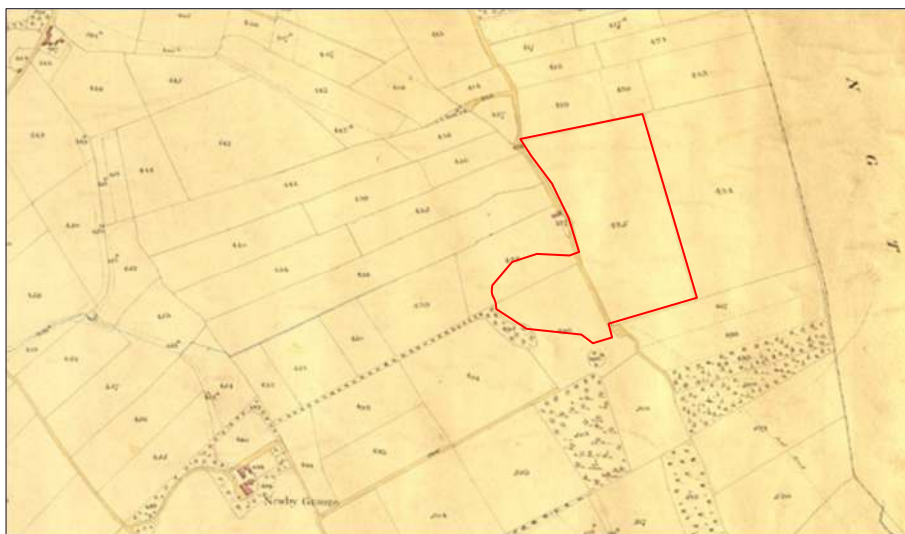
land use during this period in the form of cairn fields, which are associated with field clearance and the improvement of land for grazing or cultivation (Brennand 2006, 34).

- 3.3.7 Rural settlement during the Iron Age is represented in Cumbria by numerous cropmarks seen on air photographs in lowland areas and by earthwork enclosures in the uplands. The presence of prehistoric and Romano-British settlements in the Solway Plain was demonstrated by Bewley who recorded numerous cropmark sites, which appeared to be located to take advantage of the fertile soils (Bewley 1994). The dating of settlements based on morphology alone has proven problematic, however, and there is a lack of datable Iron Age material culture in Cumbria. Several cropmark sites of possible prehistoric date have been recorded within the 1km search area. An incomplete cropmark of a possible Iron Age or Roman rectangular enclosure, has been recorded on aerial photographs at Crosbymoore (Asset 20), located 250m to the north of the proposed development area. Another cropmark known as Holme Ends Linear Cropmarks (Asset 21) is recorded c.700m to the south and may potentially be part of a field system of prehistoric or Romano-British date.
- 3.3.8 Based on the available evidence, the potential for archaeological remains relating to the prehistoric period being present sub-surface within the site boundary is therefore considered to be moderate.
- 3.3.9 **Romano-British Period (c.AD 43 to c. 410):** Much has been written about Hadrian's Wall, which marks one of the frontiers of the Roman Empire, and the international importance of the surviving remains has been recognised through its designation as a World Heritage Site. Hadrian's Wall, built under the orders of the Emperor Hadrian in the early 2nd century, was a physical barrier running for over 70 miles from coast to coast, built of stone in the east and, initially, built of turf in the west. For most of its length the wall had a substantial ditch on the north side to provide additional defence, and to the south was another barrier known as the vallum. This was a broad flat-bottomed ditch flanked by a pair of linear banks, which shadowed the course of the Wall for almost all its length. The vallum's main function was to act as a barrier to restrict access to the Wall from the south. Hadrian's Wall was the frontier of the Roman Empire in Britain until c.AD 400 when the armies withdrew from Britain (Historic England 2020). The stretch of Hadrian's Wall and vallum between Baron's Dyke and Birky Lane at Walby is located approximately 1.7km to the northwest of the site boundary.
- 3.3.10 The Roman road which runs from Corbridge to Carvoran Roman Fort is located 650m to the north of the proposed development area and was an Agricolan military road pre-dating Hadrian's Wall (Asset 4). This road was transformed into a frontier road or 'frontier system' with additional forts by Trajan in the early years of the 2nd century AD (McCarthy 202, 53). It has been located approximately on the route of the road between High Crosby and Low Crosby. Parts of the road are scheduled. Two Roman coins have recently been recovered from land to the south of the road (Assets 12 and 13).
- 3.3.11 A well-defined sub-rectangular enclosure is located c.780m to the southeast of the proposed development area at Newby Grange (Asset 8). According to McCarthy it represents a Roman fort.

- 3.3.12 More is known about the military activity in this period than about any other aspect of Roman activity in the North West. The impact that the Roman frontier had on native society has been the subject of much archaeological research. The cropmark sites discussed above (Assets 20 and 21) may relate to Romano-British activity in this period, but the dating is currently uncertain.
- 3.3.13 The only confirmed evidence for activity in this period from within the proposed development area is a Roman coin (Asset 19). A copper alloy coin, measuring 18mm in diameter, was found during a field-walking survey on the east side of the site undertaken in advance of the development of the golf course. The coin is a probable minima of late Roman date, but all relief detail had been lost.
- 3.3.14 Based on the available evidence, the potential for archaeological remains dating to the Romano-British period within the site boundary is also considered to be moderate.
- 3.3.15 **Early Medieval (AD c. 410-1066):** throughout Cumbria evidence for early medieval activity is very limited. The place name Crosby is believed to derive from Old Norse 'kross' and 'byr' meaning hamlet by the cross (i.e. guidepost). This language was spoken by Norwegians who colonized North West England from the 9th century onwards (Lee 1998, 34).
- 3.3.16 There are no known post-Roman or early medieval sites recorded in the vicinity of the proposed development area. The potential for archaeological remains dating to the early medieval period within the site boundary is therefore assessed as being low.
- 3.3.17 **Medieval (AD 1066-1485):** from the 11th century Carlisle and the surrounding areas were disputed lands between the expanding kingdoms of England and Scotland. King William Rufus took Carlisle in 1092 and the Crosby-on-Eden area may have been very much a 'frontier land'. In 1135 King David of Scotland took control of Carlisle and Scotland became the dominant authority in the county until 1157 when Henry II re-established English control over Cumberland and Westmorland and Carlisle was granted its first charter as an English city (Rollinson 1996, 44).
- 3.3.18 Crosby-on-Eden comprises the townships of Brunstock, High Crosby, Low Crosby and Walby and was part of the barony of Linstock, which was granted to the second bishop of Carlisle (Bernard, died c.1186) by Waldeof son of Gospatric, lord of Allerdale (Winchester 2017, 106). Bishops Dyke or Barras Dyke (Asset 2) is the boundary between the Barony of Gilsland and Bishop of Carlisle's Manor (or barony) of Linstock (Hodgson 1897, 144). The Bishop of Carlisle had permission to impark (Bishop's Dyke) from 1295 onwards. The boundary consisted of double rampart with intervening space of c.10 ft (3m) and ran from Hadrian's Wall in the north to the River Irthing in the south, and was located approximately 250m to the east of the proposed development area (Figure 3). Part of the dyke to the south of Stanegate was destroyed by ploughing in 1883 (Ferguson 1884, 278).
- 3.3.19 Another cause of social and economic disruption in the 14<sup>th</sup> century was the plague. Its effects can be seen in the Bishop's manor of High Crosby where income from leased demense (or domain) land was low because 'it could not be demised better after the pestilence' (Winchester 1987, 45).
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- 3.3.20 An enclosure, field system, and ridge and furrow of possible medieval date are recorded on air photographs within the western part of the proposed development area (Asset 6). The aerial photograph shows an almost square enclosure divided into four quadrants but truncated by a field boundary to the east. However, the origins and date of the enclosure are uncertain.
- 3.3.21 Based on this evidence the potential for archaeological remains dating to the medieval period within the site boundary is therefore considered to be high.
- 3.3.22 **Post Medieval (AD 1485-1901):** in 1603 the Union of the Crowns brought a lasting peace and stability to the border region, and an end to the Scottish raids which threatened the economy and well-being of the border region (Rollinson 1996, 65). The second half of the 16th century and the first half of the 17th century also saw the emergence of a powerful rural middle class of yeomen farmers, which brought some profound and lasting changes to the landscape (ibid., 66).
- 3.3.23 County maps of Cumberland are the earliest readily available maps to show the proposed development area in this period (Figure 4). Although at a small scale the 1774 Map of the County of Cumberland (surveyed 1770 by Thomas Donald and engraved by J Hodgkinson) shows the proposed development area as being rural and undeveloped to the southeast of High Crosby and the Carlisle to Newcastle Road (Figure 4a). Uncultivated land is depicted to the north of the site, which may be associated with White Moss, an area of common associated with the townships of Crosby-on-Eden.
- 3.3.24 Between 1751 and 1759 the Carlisle to Newcastle Military Road was constructed to the north of the proposed development area, using Hadrian's Wall as a source of building stone. A sandstone milestone with cast iron plates associated with this road is located c.600m to the northwest of the proposed development area (Asset 1) and is designated a Grade II listed building. It is a chamfered stone with two faces in the direction of traffic, one face with cast iron plate 'TO CARLISLE 5 MILES', other face 'TO NEWCASTLE 51 MILES'. In 1811 this road became the Carlisle to Temon Turnpike. Each milestone is shown on Hodgkinson and Donald's map (Figure 4a).
- 3.3.25 Greenwood's 1824 Map of the County of Cumberland also shows the site as undeveloped, on the south side of a wooded area, which is bisected by a road or track (Figure 4b). This is probably the same track that currently runs from Crosby Moor to the proposed development area (see Figure 3).
- 3.3.26 The tithe map of the Parish of Crosby-on-Eden is the earliest map consulted to show the site in detail (Plate 1). This shows the proposed development subdivided by a track with a rectangular field to the east (numbered 425) with two fields to the west (numbered 428 and 296) and a field boundary bisecting the western portion of the site. A cottage and garden are depicted adjacent to the track outside of the proposed development area (numbered 427). The notes accompanying the tithe map state the occupier of the cottage as Henry Braithwaite, it being part of Crosby Glebe (land used to support a parish priest). Plot 425 was owned by Thomas Little (Watch Cross) and was a field of pasture known as Far Common. Plot 496 was owned by William Nicolson Hodgson and was an arable

field known as Bank. Plot 428 to the north was also part of Crosby Glebe, occupied by John Armstrong. This was also an arable field with the same name of Bank (reflecting the site topography).



**Plate 1:** Map of the Parish of Crosby upon Eden in the County of Cumberland, Surveyed 1857

- 3.3.27 The First Edition 6" to one-mile Ordnance Survey map of 1862 shows the area subdivided into a regular pattern of rectangular fields, with series of long narrow strip fields to the north and west (Figure 5a). The regular field pattern is indicative of a period of post-medieval enclosure. Barras Dyke (Asset 2) is depicted running along the field boundary to the east. A track is shown providing access from the northwest to the cottage (named Bankhead), located just outside of the site boundary.
- 3.3.28 Newby Grange (Asset 10) is depicted on the First Edition Ordnance Survey map of 1862 located 625m to the southwest of the site. The house was built in 1853 in the Elizabethan style surrounded by gardens and parkland. It has recently been used as a restaurant and hotel.
- 3.3.29 No known post-medieval activity is recorded within the proposed development area, apart from the access track and field boundary to the west. The potential for significant archaeological remains dating to the post-medieval period within the site is therefore assessed as being low.
- 3.3.30 **Modern (AD 1901-Present):** Crosby-on-Eden Parish was abolished in 1934 and partly subsumed into Stanwix Parish and Wetheral Parish. The area remained primarily agricultural in the early modern period with a population of 238 recorded in 1931 (Winchester 2017, 106).
- 3.3.31 In 1941 a military airfield known as Crosby-on-Eden (Asset 11), was opened to the northeast of the proposed development area as the base for the Elementary Flying Training School used by Operational Training Units (OTU). In total 512 acres (207 hectares) of land was taken by the RAF to become Crosby-on-Eden airfield (Capita Symonds 2006). In 1960 the airfield was bought by Carlisle Council and reopened as Carlisle Airport. It is currently operating as the Carlisle Lake District Airport.
- 3.3.32 The Revised Edition 25" to one-mile Ordnance Survey map of 1901 (Figure 5b) shows the same layout

within the site boundary as the First Edition Ordnance Survey map of 1862. By the time of the 1925 Ordnance Survey map the east side of the proposed development area had been subdivided into two (Figure 5c). The proposed development area apparently remained unchanged up to the mid-20<sup>th</sup> century (Figure 5d). Several springs were noted to be present to the west of the site on these maps as several ditches are shown running along the field boundaries, aligned northeast to southwest.

- 3.3.33 The site remained agricultural up to the end of the 20th century. Based on this evidence the potential for the presence of remains relating to the modern period within the site boundary is low.
- 3.3.34 **Undated Archaeological Remains:** The Historic Environment Record has three entries within the search area for undated or unclassified cropmarks. Unclassified cropmarks are recorded at Newby (Assets 5 and 7) located c.600m to the southeast of the proposed development area. Further unclassified cropmarks have been recorded on air photographs at White Moss (Asset 9), including possible rectangular enclosure located c.720m to the north of the site.
- 3.3.35 As noted above, an undated enclosure, field system, and ridge and furrow of probable medieval date are also recorded on air photographs within the western part of the proposed development area (Asset 6). The aerial photograph shows an almost square enclosure divided into four quadrants but truncated by a field boundary to the east. The nature and date of the enclosure is currently uncertain.
- 3.3.36 An inspection of modern aerial imagery has confirmed the presence of ridge and furrow cultivation on the north and west sides of the proposed development area, and a former field boundary ditch which is visible crossing the northside of the site, but not the recorded enclosure (Figure 6). Two curvilinear features are visible on the north side of the proposed development area. The potential for undated archaeological remains within the site boundary is therefore considered to be high.

## 3.4 Previous Archaeological Works

- 3.4.1 In 2005 a fieldwalking and metal-detector survey was undertaken in advance of the development of the golf course. The survey was undertaken within three areas defined (Areas 1-3). Area 1 was located 850m to the west of the site boundary, but Area 2 and Area 3 were within the current site.
- 3.4.2 The survey recovered 36 artefacts which were mostly from the medieval and later periods, the majority being recovered from Area 1. These included sherds of medieval pottery and a lead loom weight (Asset 15), A silver coin belonging to the reign of Elizabeth I (Asset 16), and a copper alloy find (possibly a candelabra remnant) of post-medieval or later date (Asset 17).
- 3.4.3 In total, 13 artefacts were recovered from Area 2 in the northeast corner of the current site boundary, comprising two sherds of medieval pottery, post-medieval building material, and post-medieval/modern metal objects. Area 3 on the southeast side of the site produced five finds: a Later Roman copper alloy coin (Asset 19), a possible medieval pewter spoon end (Asset 18), medieval and post-medieval pottery and a modern button (Martin 2005).



## 4 Site Visit

### 4.1 Introduction

- 4.1.1 The site was visited on the 19th August 2020. The site was inspected for any evidence for features of archaeological/historic interest within the proposed development area and the evidence for previous landscaping and levelling activities was assessed, to determine if they may have had an impact on any potential buried archaeological remains (Figure 2).
- 4.1.2 An assessment was also made of any potential impacts the proposed development may have on the setting and significance of recorded designated and non-designated heritage assets in the vicinity, including any non-designated heritage assets identified during the course of the research.

### 4.2 Site Conditions

- 4.2.1 The proposed development area occupied an elevated position on the eastern edge of a steep bank; the land to the west forming a wide valley through which flowed the River Eden. The topography within the site was varied and contained two channels on the northwest side of the site (Figure 2). The land was bounded by hedges with post and wire fences. Several mature oak were present along the southern boundary adjacent to Black Wood, beyond which was a water-filled holloway or ditch.
- 4.2.2 The proposed development area was located either side of a track (Plate 1) which was aligned northwest to southeast joining the A689 to the northwest of the site (see Figure 3). The site was divided by the track and fences into three areas, comprising a large rectangular area to the east occupied by the golf course (Area A), a triangular field of pasture to the southwest (Area B), and a small spur of land to the north occupied by Hole No 8 of the course (Area C), separated by a fence.
- 4.2.3 Area A contained two fairways aligned northeast to southwest which comprised mown grass with associated greens, bunkers and mounds (Plates 2 and 3). It was noted that the greens were artificially raised to create a level playing area, whilst the bunkers had been excavated into the ground, the material being used to create the greens and mounds. Two ponds were to the south (Plate 4).
- 4.2.4 Slight earthworks were identified in the northern part of the main fairway in Area A, aligned approximately northeast to southwest, which were indicative of ridge and furrow cultivation (Plate 3). This evidence corresponded to earthworks visible on modern aerial imagery (see Figure 6).
- 4.2.5 Either side of the fairway the ground was uncultivated and overgrown with some scrub and trees present to the southeast and west (Plate 5). The land was waterlogged during the visit and evidently poorly drained. No earthworks or other features of historic interest were identified in these areas.



**Plate 2:** The north side of the proposed development area showing raised green, looking west



**Plate 3:** The central fairway in Area A showing possible ridge and furrow earthworks, looking southwest



**Plate 4:** Pond on the south side of the proposed development area in Area A, looking south



**Plate 5:** Overgrown and waterlogged area on the west side of Area A, looking south

- 4.2.6 A concrete slab was identified on the north side of the proposed development area (Plate 7). This covered a chamber and drain which was running with water during the site visit. This is believed to be connected to a brick chamber on the western boundary, which drains from the fields to the east. Another brick chamber was present in a valley on the west side of the proposed development area.



**Plate 6:** Concrete slab on the north side of the site, looking northeast

- 4.2.7 Area B on the southwest side of the site comprised a relatively level field of pasture (Plate 7). No archaeological features were identified in this area, which appeared to have been ploughed previously.



**Plate 7:** The southwest side of the proposed development area (Area B), looking northeast

- 4.2.8 Area C was located immediately to the north of this field and comprised a spur of land at the top of a natural bank, the ground falling away steeply to the north and west (Plate 8). This land was part of the golf course, comprising mown grass, a gravel tee area and the green for Hole No. 8 (Plate 9).



**Plate 8:** Spur of land (Area C) on the west side of the site, looking south



**Plate 9:** Part of the golf course in Area C, looking northeast

4.2.9 The site visit confirmed that the majority of the proposed development area was suitable for geophysical survey. However, the margins of the golf course, which were overgrown and waterlogged, were deemed unsuitable for geophysical survey and would need to be excluded.

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## 5 Geophysical Survey

### 5.1 Introduction

- 5.1.1 The geophysical survey was undertaken between the 24th and 26th November 2020. The survey was undertaken over three areas (Areas 1-3) covering the majority of the proposed development area. However, the overgrown and waterlogged ground on the margins of the golf course were unsuitable for geophysical survey and were excluded. In addition, some of the golf course features (ponds, bunkers and trees) were excluded from the survey, as were some ongoing drainage works (Figure 7).
- 5.1.2 The survey area was bounded by field boundaries consisting of hedges and post and wire fences. These fences produced strong magnetic disturbance around the periphery of the survey areas.
- 5.1.3 Small discrete dipolar magnetic anomalies and occasional strong dipolar magnetic anomalies were detected across the whole of the study area. These are almost certainly caused by fired/ferrous litter in the topsoil, which is typical for modern agricultural land. These anomalies are indicated on the geophysical interpretation drawings, but not referred to again in the subsequent interpretations.

### 5.2 Area 1

- 5.2.1 Area 1 was located in the rectangular field on the east side of the proposed development area occupied by the golf course (Area A). Two wide fairways were located in this area with some overgrown and waterlogged ground on the margins, which were excluded from the survey (Figure 7). A number of golf course greens, bunkers, mounds and ponds were present in Area 1, concentrated in the northeast and southwest corners of the field. Some of these features produced diffuse positive, negative or dipolar magnetic anomalies in the gradiometer data.
- 5.2.2 Two brick inspection chambers with concrete covers were located on the north side of Area 1, which produced strong dipolar magnetic anomalies in the gradiometer data (Figures 8-10). These were believed to be part of a substantial drainage system carrying water from the fields to the east. A linear bipolar magnetic anomaly was detected crossing the north side of Area 1, aligned northeast to southwest, which is believed to be associated with the drain. A linear negative magnetic anomaly was also detected following the bottom of a steep valley, which is also probably associated with the drainage system (Figure 11). During the geophysical survey this system was being investigated by a drainage contractor and found to be up to 12 feet (3.6m) deep in places (M Oliphant 2020, pers. comm., 26 November). The excavated portions of this system were excluded from the survey.
- 5.2.3 A series of weak linear positive magnetic anomalies was detected crossing the north side of Area 1 area, with a northeast to southwest alignment, which are believed to represent ridge and furrow cultivation, as identified from aerial imagery (see Figure 6). Similar features were also detected on

the higher ground on the west side of Area 1, with a northwest to southeast alignment.

- 5.2.4 A negative linear magnetic anomaly was detected on the northeast side of Area 1, aligned northeast to southwest, flanked by two positive linear magnetic anomalies, which may be a drain or service pipe associated with features on the golf course. Another linear magnetic anomaly was detected crossing the northwest side of Area 1, which may also be a drain or service, but this was uncertain.
- 5.2.5 A curvilinear positive magnetic anomaly was detected on the northwest side of Area 1, which may represent a soil-filled feature. However, the close proximity of this feature to a large tree may indicate that it is associated with the root system. A number of small discrete positive magnetic anomalies were detected nearby which may also be soil-filled features, but this was uncertain.
- 5.2.6 Several broad and curvilinear positive magnetic anomalies were detected on the south side of Area 1, which were either associated with golf course features (bunkers and mounds) or possibly associated with levelling activities associated with the creation of the fairway (Figures 12-15).
- 5.2.7 A linear bipolar magnetic anomaly was detected at the south end of the fairway, aligned east to west, which is believed to be a water pipe or drain associated with the adjacent golf course pond.

### 5.3 Area 2

- 5.3.1 Area 2 was located a triangular field of pasture on the southwest side of the proposed development area (Area B). Strong magnetic disturbance was detected along the margins of Area 2 due to the presence of post and wire fences and two substantial concrete gate posts at the entrance on the north side of the field (Figures 12-15).
  - 5.3.2 A concentration of small discrete dipolar magnetic anomalies, and several linear positive magnetic anomalies, was detected on the southeast side of Area 2, which may be due to a concentration of fired/ferrous materials. The anomalies covered a roughly rectangular area measuring approximately 17m by 15m and could potentially represent the foundations of a buried structure or building.
  - 5.3.3 This feature appeared to be disturbed by ploughing. A series of weak linear positive magnetic anomalies was detected crossing the east side of Area 2, aligned northwest to southeast, which were indicative of plough furrows. A similar series of weak linear positive magnetic anomalies was also detected crossing the west side of Area 2, with a northeast to southwest alignment.
  - 5.3.4 Several weak linear positive magnetic anomalies were detected crossing the west side of Area 2, aligned approximately northeast to southwest, which are interpreted as soil-filled features. Although these features were indistinct, their association with features identified in Area 3 to the north may indicate the presence of soil-filled ditches continuing in this area, which have been disturbed/truncated by ploughing. A number of small discrete positive magnetic anomalies were also detected in Area 2 which may also be soil-filled features, but this was uncertain.
-

## 5.4 Area 3

- 5.4.1 Area 3 was located on a small spur of land to the north of Area 2 occupied by Hole No 8 of the golf course (Area C), separated from Area 2 by a post and wire fence. This fence produced strong magnetic disturbance along the southern edge of the geophysical survey area (Figures 12-15).
- 5.4.2 A concentration of strong discrete dipolar magnetic anomalies was detected on the northwest side of Area 3, which are indicative of ferrous magnetic material, the nature of which is uncertain.
- 5.4.3 A pattern of linear positive magnetic anomalies was detected crossing Area 3, which appears to represent a series of soil-filled ditches enclosing a roughly square area measuring 56m east to west and 46m north to south. These features defined a roughly square enclosure with rounded corners, subdivided into four quadrants by crossing ditches. Several weak linear positive magnetic anomalies were also detected in this area, aligned east to west, which may be associated.
- 5.4.4 A series of parallel linear positive and negative magnetic anomalies, aligned northeast to southwest, was detected crossing the majority of Area 3, which are indicative of ridge and furrow cultivation. These features appear to overly the soil-filled ditches described above.

## 5.5 Discussion

- 5.5.1 The geophysical survey has detected evidence for relatively recent activity associated both with the golf course and agricultural activity, comprising probable plough furrows and land drains.
- 5.5.2 Modern structures have also been detected comprising a very substantial drainage system crossing the north side of the proposed development area, which carries water across the golf course from fields to the east. A drain has been constructed at a depth of 12 feet (3.6m) in places, with brick inspection chambers capped with concrete at regular intervals along its length. Two possible routes across the site have been identified, one following a natural valley through the site (see Figure 11). Given the substantial nature of the drain it is feasible that the system is associated with 20th century activity at the military airfield known as Crosby-on-Eden (Asset 11), which was located to the northeast of the proposed development area. Geophysical surveys at the airfield undertaken by the author have revealed a very substantial system of drainage for the airfield runways. It is possible that the airfield drains were linked to the River Eden, thereby crossing the proposed development area.
- 5.5.3 Archaeological features have been detected on the southeast side of the proposed development area in the vicinity of the recorded cropmark, Crosby Enclosure and Field System (Asset 6). The geophysical survey has confirmed the presence of an almost square enclosure divided into four quadrants, overlain by ridge and furrow of possible medieval date, and truncated by the field boundary to the southeast. Features appear to continue in the field to the south, indicating the field system may be more extensive, although features here appear to have been disturbed by ploughing.



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## 6 Conclusions

### 6.1 Proposed Development Area

- 6.1.1 The proposed development area encompasses 12ha of land to the south of the A689 on the northeast side of Eden Golf Course at Crosby-on-Eden. The site occupies an elevated position, occupying a ridge of land overlooking the River Eden, which flows through a valley to the southwest.
- 6.1.2 The assessment has revealed that there is a moderate potential for archaeological remains dating to the prehistoric and Romano-British periods within the site boundary. The site is located within the designated area of the Frontiers of the Roman Empire (Hadrian's Wall) World Heritage Site. A cropmark site known as Crosby Enclosure and Field System (Asset 6) is also recorded as being within the site boundary. Although this site is currently undated, ridge and furrow of possible medieval date is also recorded on air photographs within the southwestern part of the proposed development area.
- 6.1.3 The proposed development area has apparently remained undeveloped agricultural land throughout the post-medieval and modern periods. The 1857 tithe map of the Parish of Crosby-on-Eden shows the proposed development subdivided by a track with a cottage and garden depicted adjacent to the track outside of the proposed development area. The two fields on the west side of the proposed development area were arable fields at that time known as Bank.
- 6.1.4 The most significant activity to take place near the site in the 20th century was the creation of a military airfield known as Crosby-on-Eden (Asset 11) in 1941 to the northeast of the proposed development area. In total 207 hectares of land was taken by the RAF for the airfield.
- 6.1.5 In 2006 the golf course was laid out including over a large portion of the proposed development area. A fieldwalking and metal-detector survey was undertaken in advance of the development of the golf course. A Later Roman copper alloy coin (Asset 19), a possible medieval pewter spoon end (Asset 18), medieval and post-medieval pottery, and post-medieval/modern metal objects were recovered from within the proposed development area during the survey.

### 6.2 Archaeological potential

- 6.2.1 The site visit has identified the presence of ridge and furrow earthworks of possible medieval date over the southwest and northwest portions of the proposed development area. Narrow ridge and furrow has also been noted on the fairway on the east side of the proposed development area, which may possibly be post-medieval. The site visit and geophysical survey have also revealed the presence of a substantial modern drainage system crossing the north side of the proposed development area, which could potentially be associated with military activity at Crosby-on-Eden Airfield. The system includes a number of brick-built inspection chambers which are not unlike the airfield structures.

6.2.2 The geophysical survey has confirmed the presence of archaeological features associated with Crosby Enclosure and Field System (Asset 6) on the west side of the proposed development area. An almost square enclosure divided into four quadrants, has been identified, which is overlain by ridge and furrow of possible medieval date, and truncated by the field boundary to the southeast. The survey has also indicated that features continue into the field to the south, where they may be less well-preserved due to damage through modern ploughing. Although the site is undated, the morphology of the features identified suggests the presence of an enclosure and/or field system of possible Iron Age or Romano-British date.

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## APPENDIX 1: Heritage Asset Gazetteer

Site No.	HER Ref.	Name	Summary	Designation	Period	Grid Coordinates
1	N/A	Milestone (North East of Crosby House)	A sandstone milestone with cast iron plates (probably 1758), for the Carlisle-Newcastle Military Road. Chamfered stone with two faces in direction of traffic, one face with cast plate TO CARLISLE 5 MILES, other face TO NEWCASTLE 51 MILES, both in four lines. Whitewashed over and lettering picked-out in black. In 1811 this became the Carlisle to Temon Turnpike. Each milestone is clearly drawn on Hodgkinson and Donald's map of Cumberland and Westmorland, surveyed in 1770.	Grade II Listed Building: List entry no 1107876	Post-medieval	346048,559873
2	210	Bishop's Dyke/Barras Dyke, White Moss	Bishops or Barras Dyke runs from Hadrian's Wall to the River Irthing and is the boundary between barony of Gilisland and Bishops manor of Crosby. The Bishop of Carlisle had permission to impark (Bishop's Dyke) from 1295 onwards. It consists of double rampart with intervening space of c.10 ft.	Non-designated	Medieval	346996,559474
3	4538	Bone Harpoon Find, Newby Grange, Stanwix Rural	Two bone harpoon heads, each c.11 inches long were found in peat in boggy field near Newby Grange. One has large barb on either side, the other has 8 or 9 serrations on one side. The British Museum says they are from Terra Del Fuego.	Non-designated	Prehistoric	346100,558600

Site No.	HER Ref.	Name	Summary	Designation	Period	Grid Coordinates
4	5781	The Stanegate Roman Road	The Roman road runs from Corbridge to Carvoran Roman Fort and was an Agricolan military road pre-dating Hadrian's Wall. It was possibly transformed into a frontier road or 'frontier system' with additional forts by Trajan. Parts are scheduled.	Non-designated	Roman	346299,560075
5	6021	Newby Unclassified Cropmarks, Irthington	Unclassified cropmarks seen on air photographs. There were no obvious archaeological features seen in January 2000.	Non-designated	Unknown	347400,558900
6	6022	Crosby Enclosure and Field System, Stanwix Rural	An enclosure, field system, and ridge and furrow are recorded on air photographs possibly of Celtic origin (?). The aerial photograph shows an almost square enclosure divided into four quadrants but truncated by a field boundary to the east.	Non-designated	Early Medieval/ Medieval	346500,559150
7	6023	Newby Unclassified Cropmarks, Irthington	Unclassified cropmarks seen on air photographs. There were no obvious archaeological features seen in January 2000.	Non-designated	Prehistoric: Bronze Age	347400,559200
8	6024	Newby Grange Enclosure Cropmark, Stanwix Rural	The aerial photographs show a well-defined sub-rectangular enclosure. There may be other enclosures or features to the south and east of this large enclosure, but these are partly obscured by geological features on the air photographs. According to Mike McCarthy, the cropmark represents a Roman fort. An enclosure has also been interpreted as possibly being connected with the medieval grange at Newby.	Non-designated	Roman/ Medieval	346000,558450

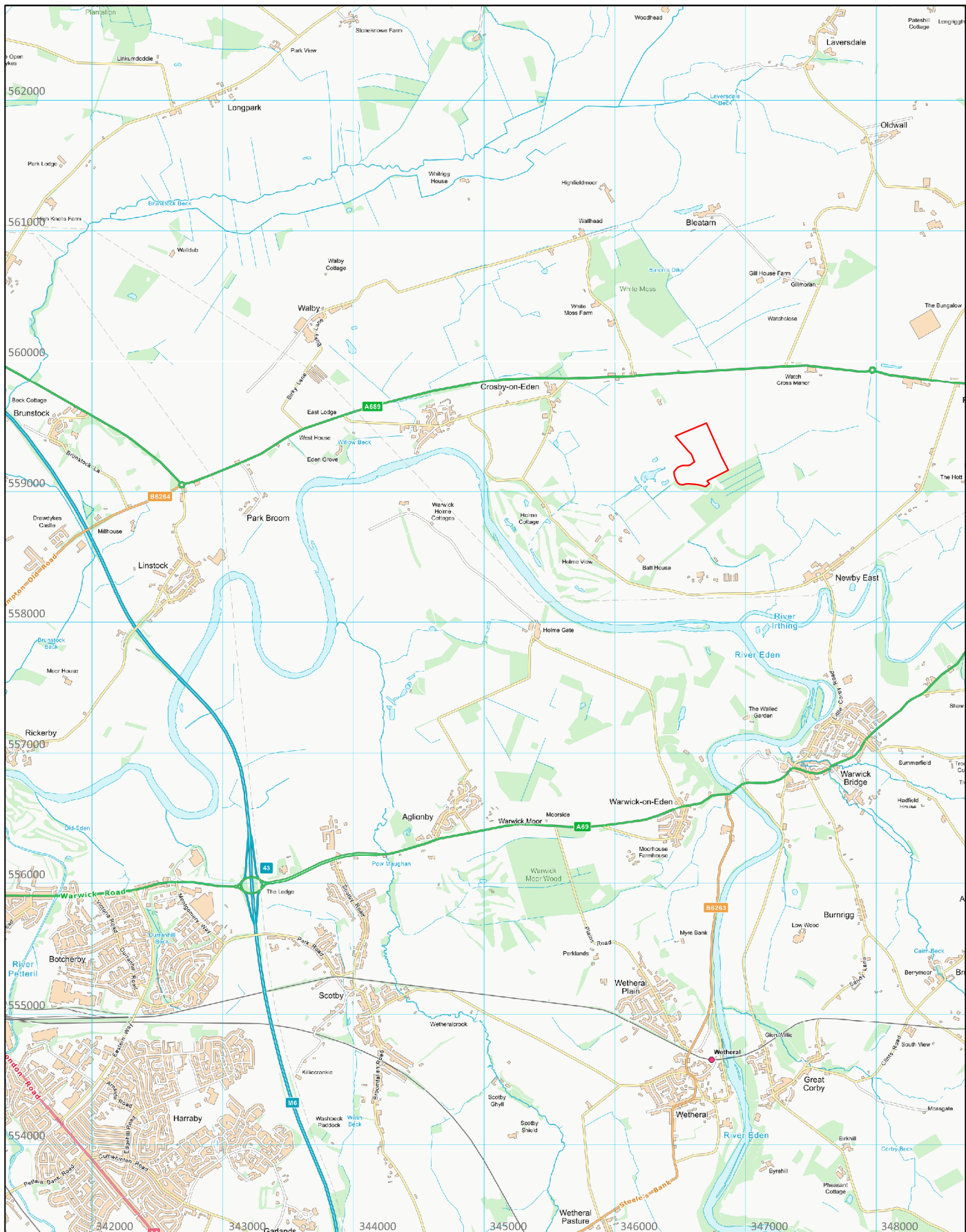
Site No.	HER Ref.	Name	Summary	Designation	Period	Grid Coordinates
9	6100	White Moss Unclassified Cropmark	Unclassified cropmarks seen on air photographs, including possible rectangular enclosure. There were no obvious archaeological features seen when visited in January 2000.	Non-designated	Unknown	346200,560100
10	41772	Newby Grange, Crosby-on-Eden	A house built in 1853 in the Elizabethan style and depicted on an 1857 tithe map. The house was the seat of William Nicholson Hodgson, MP. It has been used in recent times as a restaurant and hotel.	Non-designated	Post-medieval	346040,558630
11	41943	Crosby-on-Eden / Carlisle Airport, Irthington	A former military airfield known as Crosby-on-Eden, and now Carlisle Lake District Airport. It opened in 1941 as the base for the Elementary Flying Training School used by Operational Training Units (OTU). A 1944 survey of military airfields recorded 3 aircraft hangars - one of which survives, 3 Bellman hangars and 3 blister aircraft hangars. There were 3 tarmac landing strips and temporary accommodation for base personnel. The control tower survives, though with a later wooden control room. From 1946-7, the airfield was also used by British European Airways. In 1960 the airfield was bought by Carlisle Council and reopened as Carlisle Airport	Non-designated	Modern	348200,560700
12	42537	Coin Find, Irthington	Copper alloy coin found in 2005 near Stanegate. It is a Sestertius of Traian (AD 116/7). Minted in Rome (Italy).	Non-designated	Roman	347000,560000

Site No.	HER Ref.	Name	Summary	Designation	Period	Grid Coordinates
13	42544	Coin Find, Irthington	Silver denarius found at Lane End Farm in April 2007. It is an Early Roman denarius of Hadrian dating from c. AD125-128	Non-designated	Roman	347475,559568
14	42547	Coin Find, Irthington	Silver found in 2005 near Stanegate. It is an Elizabeth I sixpence, 1580-82 (probably second issue). Minted in London.	Non-designated	Post-medieval	347000,560000
15	43261	Loom Weight Find, Crosby-on-Eden, Stanwix Rural	A lead loomweight, measuring 20mm in diameter of which less than half survives, was found during a field-walking survey undertaken in advance of the development of the golf course. It is undecorated but possibly medieval in date.	Non-designated	Medieval	345605,559101
16	43262	Coin Find, Crosby-on-Eden, Stanwix Rural	A silver coin measuring 22mm in diameter, heavily worn and bent due to plough damage, was found during a field-walking survey undertaken in advance of the development of the golf course. Sufficient inscription remained to identify the coin as belonging to the reign of Elizabeth I and probably a groat (4d)	Non-designated	Post-medieval	345589,559072
17	43263	Copper Alloy Find, Crosby-on-Eden, Stanwix Rural	A copper alloy find, possibly a candelabra remnant, was found during a field-walking survey undertaken in advance of the development of the golf course. The artefact comprised of a round bowl 33mm in height with a decorated serrated lip, attached to two flanges that presumably were inserted into a larger piece. Possibly post-medieval or later in date.	Non-designated	Post-medieval?	345610,559041



Site No.	HER Ref.	Name	Summary	Designation	Period	Grid Coordinates
18	43264	Pewter Find, Crosby-on-Eden, Stanwix Rural	A possible pewter spoon-end, measuring 22mm x 18mm, was found during a field-walking survey undertaken in advance of the development of the golf course. Possibly medieval in date	Non-designated	Medieval	346749,559111
19	43265	Coin Find, Crosby-on-Eden, Stanwix Rural	A copper alloy coin, measuring 18mm in diameter, was found during a field-walking survey undertaken in advance of the development of the golf course. The coin is a probable minima of late Roman date but all relief detail has been lost.	Non-designated	Roman	346749,559111
20	43548	Crosbymoore Enclosure, Crosby-on-Eden, Stanwix Rural	An incomplete cropmark of a possible Iron Age or Roman rectangular enclosure, measuring 43m by 23m, visible on aerial photographs.	Non-designated	Prehistoric/ Roman	346835,559740
21	45091	Holme Ends Linear Cropmarks, Stanwix Rural	Three linear cropmarks visible on Google Earth imagery from 30 June 2018, which may form part of a field system. The features comprise a single approximately north-south aligned linear feature (ditch), with single east-west aligned ditches emanating from this to both the east and west. The features are not perfectly straight, and do not appear to be the result of modern drainage or field boundaries visible on the first edition Ordnance Survey. Potentially part of a field system of prehistoric or Romano-British date.	Non-designated	Prehistoric/ Roman	346440,558372

## APPENDIX 2: Figures



Eden Heritage Ltd 2020

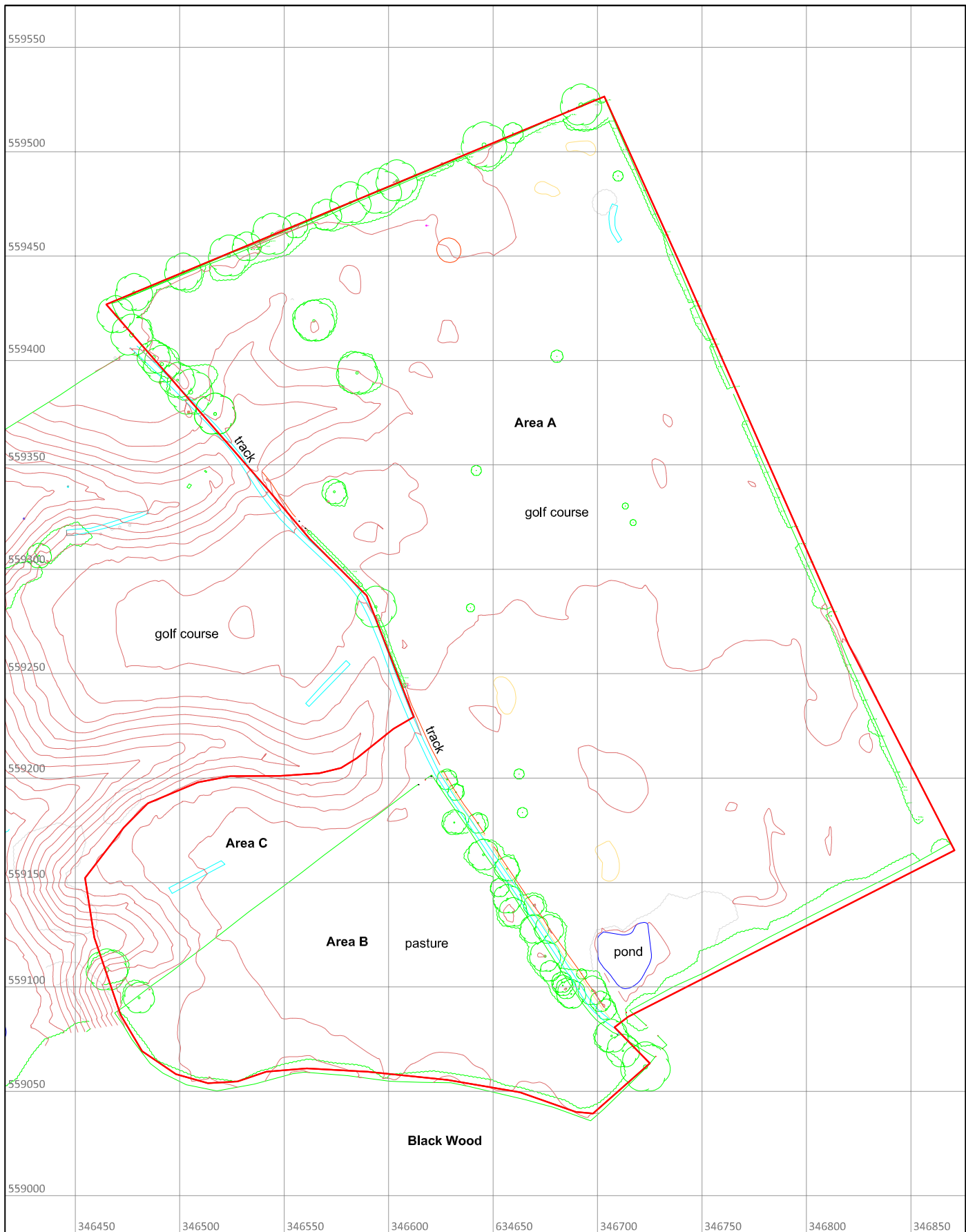
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 REPORT: EH079/01  
 SCALE: 1:40,000 at A4  
 DRAWN BY: MDR  
 DATE: November 2020

KEY:



Contains OS data © Crown copyright and database right (2018)

Figure 1: Site location.






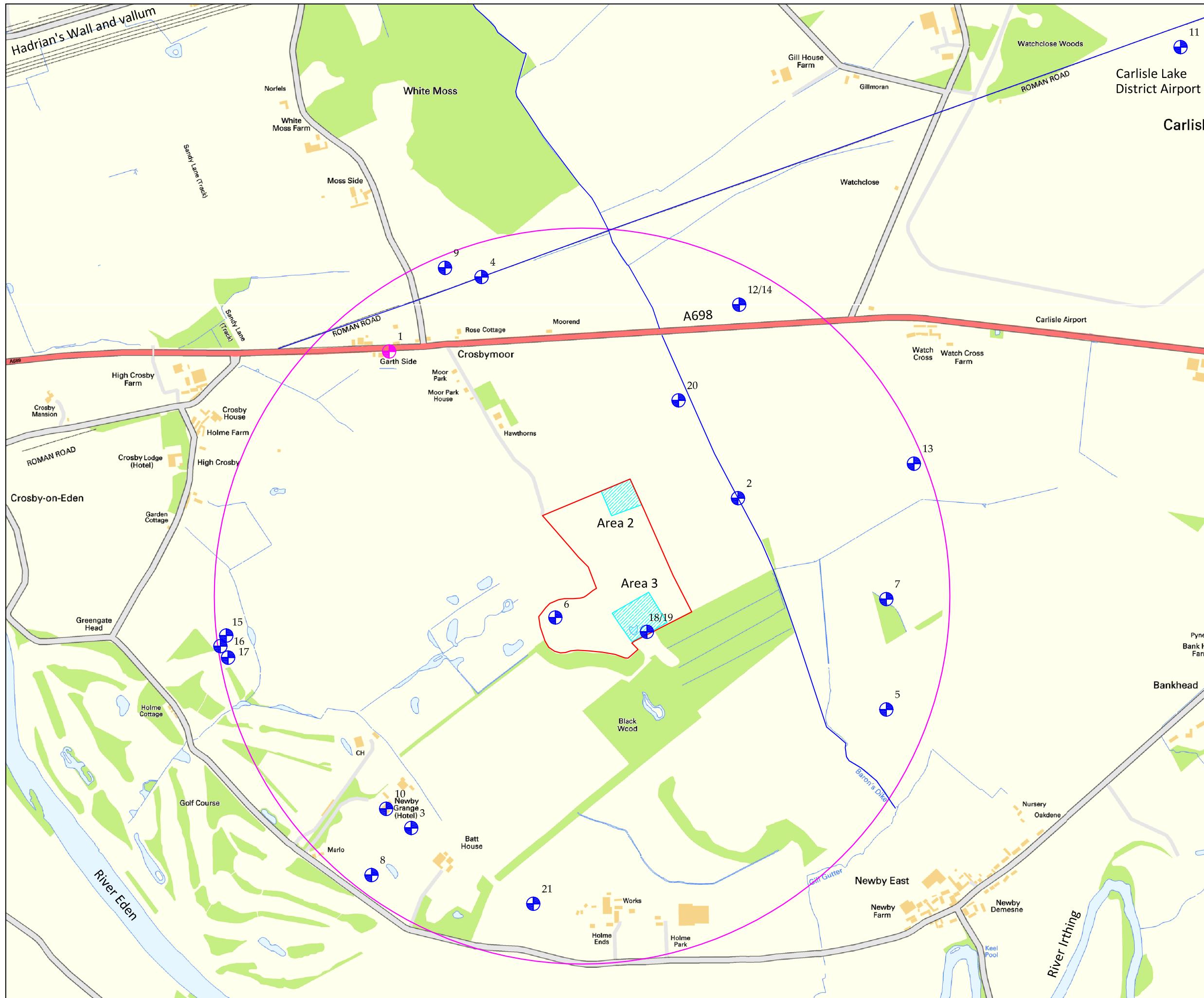
 <p>Eden Heritage Ltd 2020</p>	<p>PROJECT: Land at Eden Golf Course, Crosby-on-Eden, Cumbria</p> <p>CLIENT: Mr Alistair Wannop</p> <p>REPORT: EH079/01</p> <p>SCALE: 1:2,500 at A4</p> <p>DRAWN BY: MDR</p> <p>DATE: November 2020</p>	<p>KEY:</p>  <p>site boundary</p>	 <p>Contains survey data provided by JLP Surveying (2019)</p>
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Figure 2: Detailed site location



PROJECT:  
Eden Golf Course,  
Crosby-on-Eden, Cumbria

CLIENT:  
Mr Alistair Wannop

REPORT: EH079/01  
SCALE: 1:10,000 at A3  
DRAWN BY: MDR  
DATE: November 2020






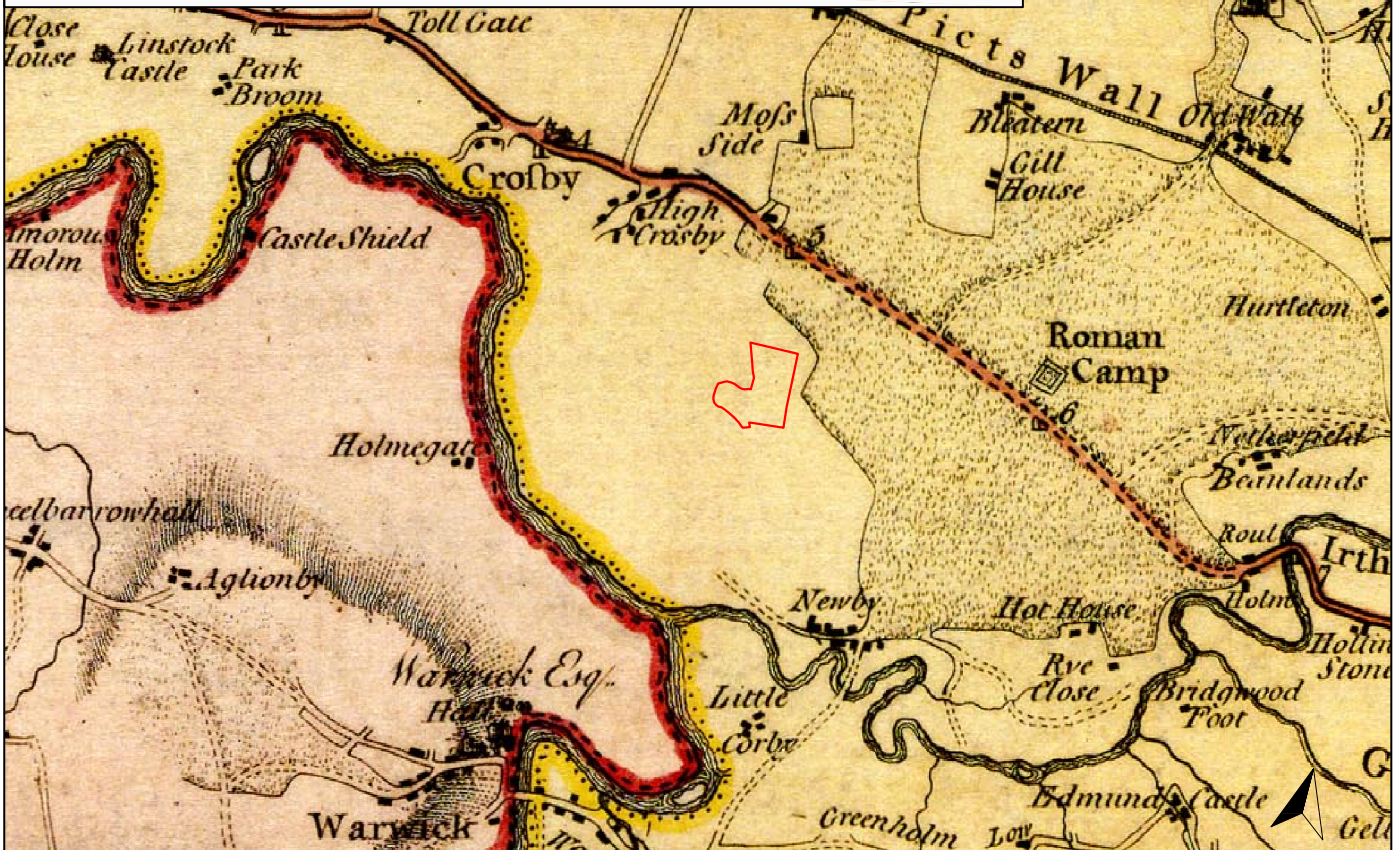
- KEY:
-  site boundary
  -  1km search area
  -  1 non-designated heritage assets
  -  1 designated heritage asset
  -  2005 survey area

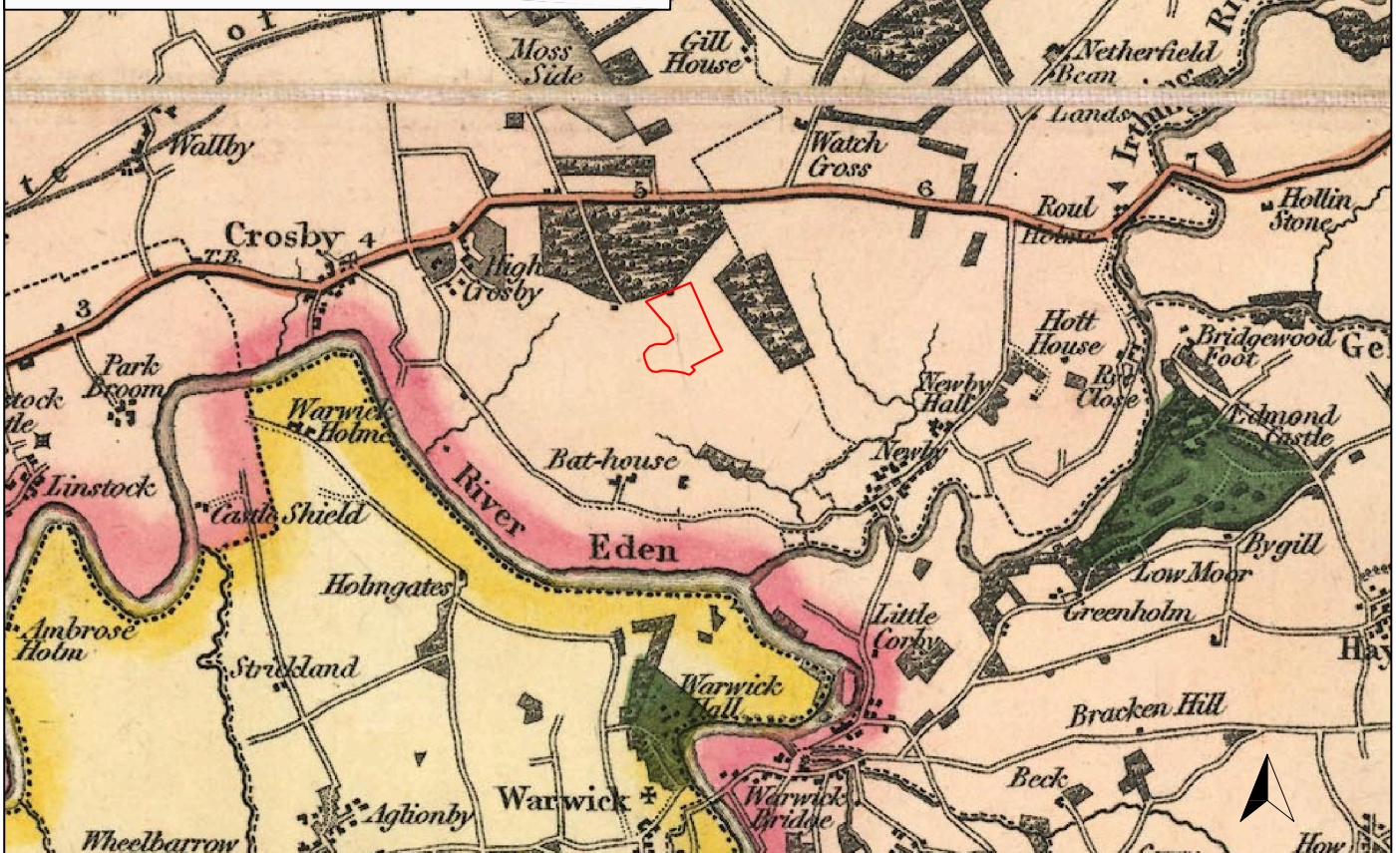


Figure 3: Locations of heritage assets.

a) Thomas Donald and J Hodgkinson 1774 Map of the County of Cumberland (surveyed 1770)



b) C & J Greenwood 1824 Map of the County of Cumberland





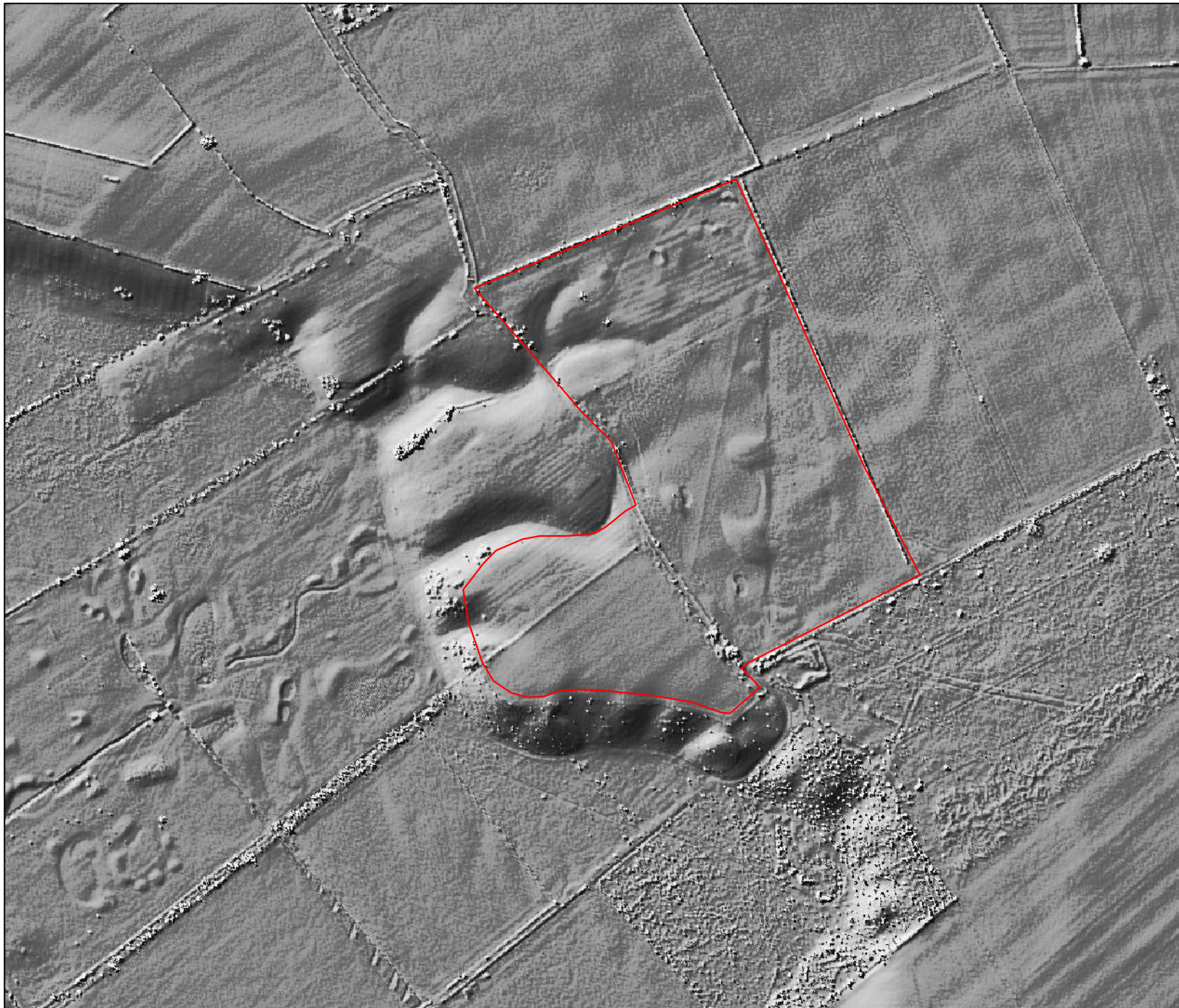
 <p>Eden Heritage Ltd 2020</p>	PROJECT:	Land at Eden Golf Course, Crosby-on-Eden, Cumbria	KEY:   site boundary (location approximate)
	CLIENT:	Mr Alistair Wannop	
	REPORT:	EH079/01	
	SCALE:	1:40,000 at A4	
	DRAWN BY:	MDR	
DATE:	November 2020		

Figure 4: Extracts from historic county maps of Cumberland.



Figure 5: Extracts from historic Ordnance Survey maps (1868-1957).



Eden Heritage Ltd 2020

**PROJECT:**

Land at Eden Golf Course,  
Crosby-on-Eden, Cumbria

**CLIENT:**

Mr Alistair Wannop

**REPORT:** EH079/01

**SCALE:** 1:5,000 at A4

**DRAWN BY:** MDR

**DATE:** October 2020

**KEY:**



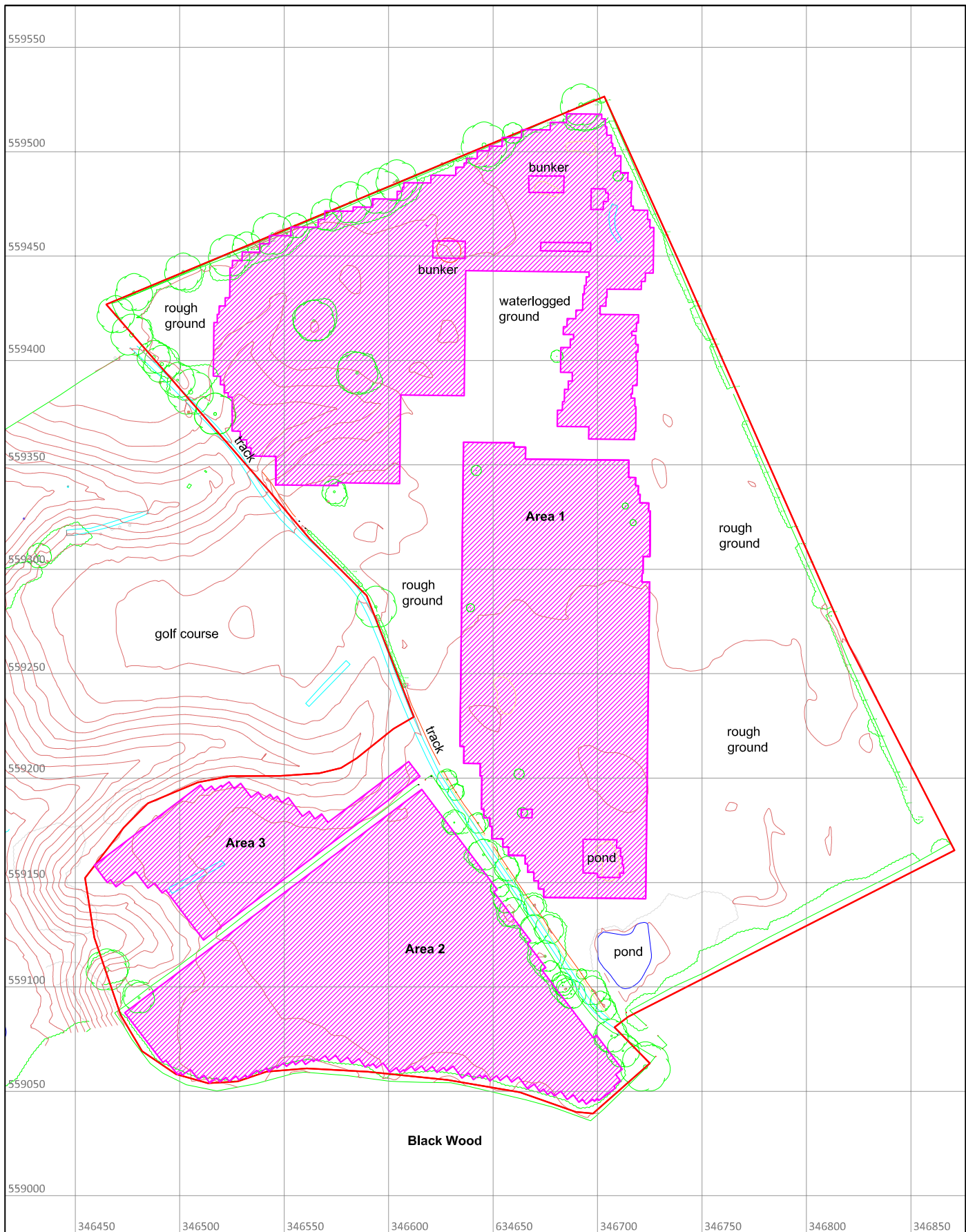
site boundary



Contains Environment Agency data  
published under the Open  
Government Licence (2018)

Figure 2: Modern aerial imagery (LiDAR) showing ridge and furrow earthworks overlain by the golf course .








**Eden Heritage**  
Archaeology & Heritage Services

Eden Heritage Ltd 2020

PROJECT: Land at Eden Golf Course, Crosby-on-Eden, Cumbria  
 CLIENT: Mr Alistair Wannop  
 REPORT: EH079/01  
 SCALE: 1:2,500 at A4  
 DRAWN BY: MDR  
 DATE: November 2020

KEY:

-  site boundary
-  geophysical survey area



Contains survey data provided by JLP Surveying (2019)

Figure 7: Location of the geophysical survey areas (Areas 1-3)

PROJECT:

Eden Golf Course,  
Crosby-on-Eden, Cumbria

CLIENT:

Mr Alistair Wannop

REPORT:

EH079/01

SCALE:

1:1,000 at A4

DRAWN BY:

MDR

DATE:

November 2020

KEY:



-  outline of proposed development area
-  outline of geophysical survey area



Figure 8: Geophysical survey of the north side of Area 1 (minimally processed data) showing survey grid.

PROJECT:

Eden Golf Course,  
Crosby-on-Eden, Cumbria

CLIENT:

Mr Alistair Wannop

REPORT:

EH079/01

SCALE:

1:1,000 at A4

DRAWN BY:

MDR

DATE:

November 2020

KEY:



-  outline of proposed development area
-  outline of geophysical survey area



Figure 9: Geophysical survey of the north side of Area 1 (processed data).

PROJECT:

Eden Golf Course,  
Crosby-on-Eden, Cumbria

CLIENT:

Mr Alistair Wannop

REPORT:

EH079/01

SCALE:

1:1,000 at A4








DRAWN BY:

MDR

DATE:

November 2020

KEY:

-  outline of proposed development area
-  outline of geophysical survey area
-  dipolar magnetic anomaly
-  positive magnetic anomaly
-  negative magnetic anomaly
-  bipolar magnetic anomaly
-  magnetic disturbance

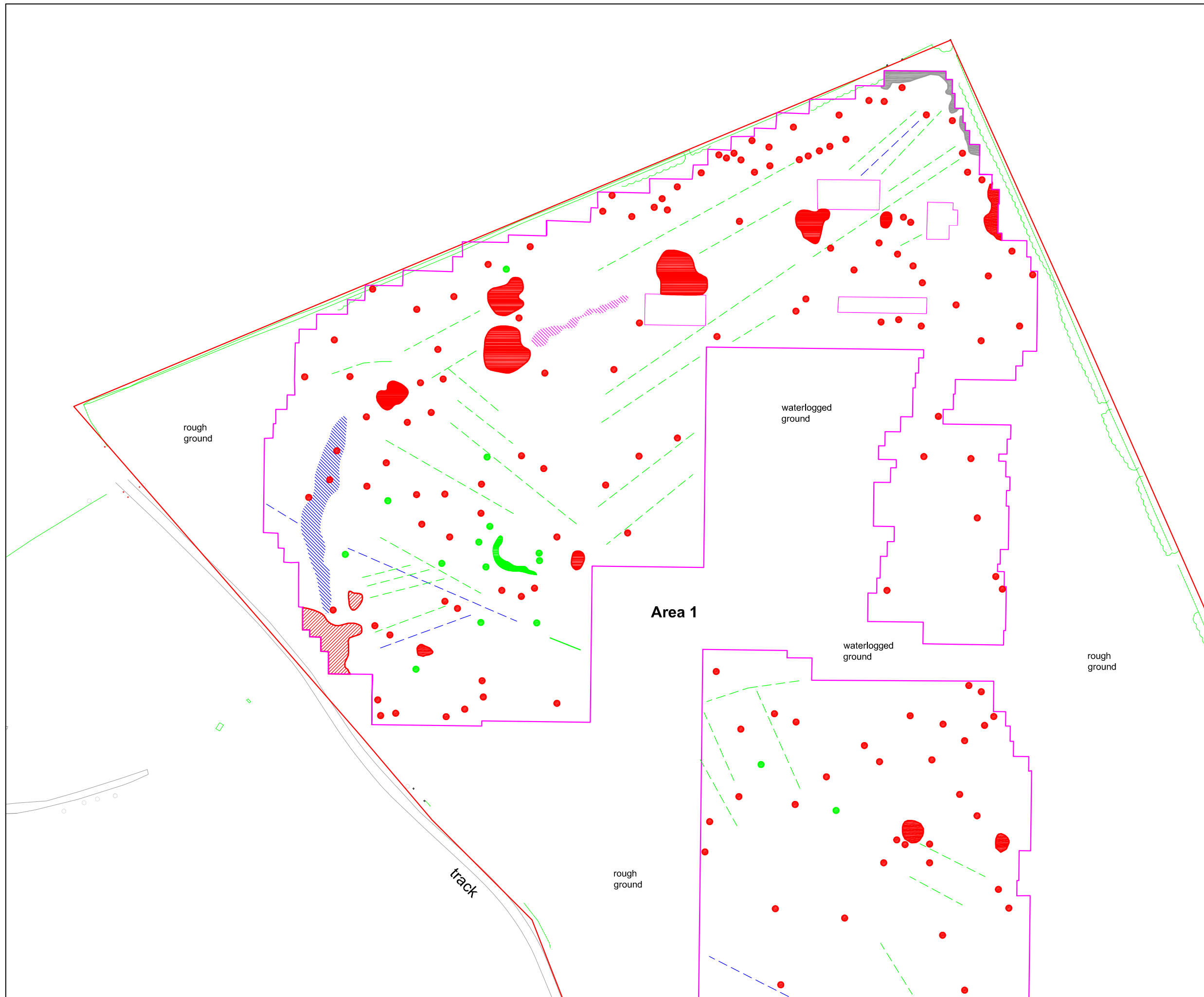


Figure 10: Geophysical interpretation of the north side of Area 1.

**PROJECT:**

Eden Golf Course,  
Crosby-on-Eden, Cumbria

**CLIENT:**

Mr Alistair Wannop

**REPORT:**

EH079/01

**SCALE:**

1:1,000 at A4








**DRAWN BY:**

MDR

**DATE:**

November 2020

**KEY:**

-  outline of proposed development area
-  outline of geophysical survey area
-  possible soil-filled feature
-  direction of ploughing
-  modern drains
-  possible modern service
-  golf course features

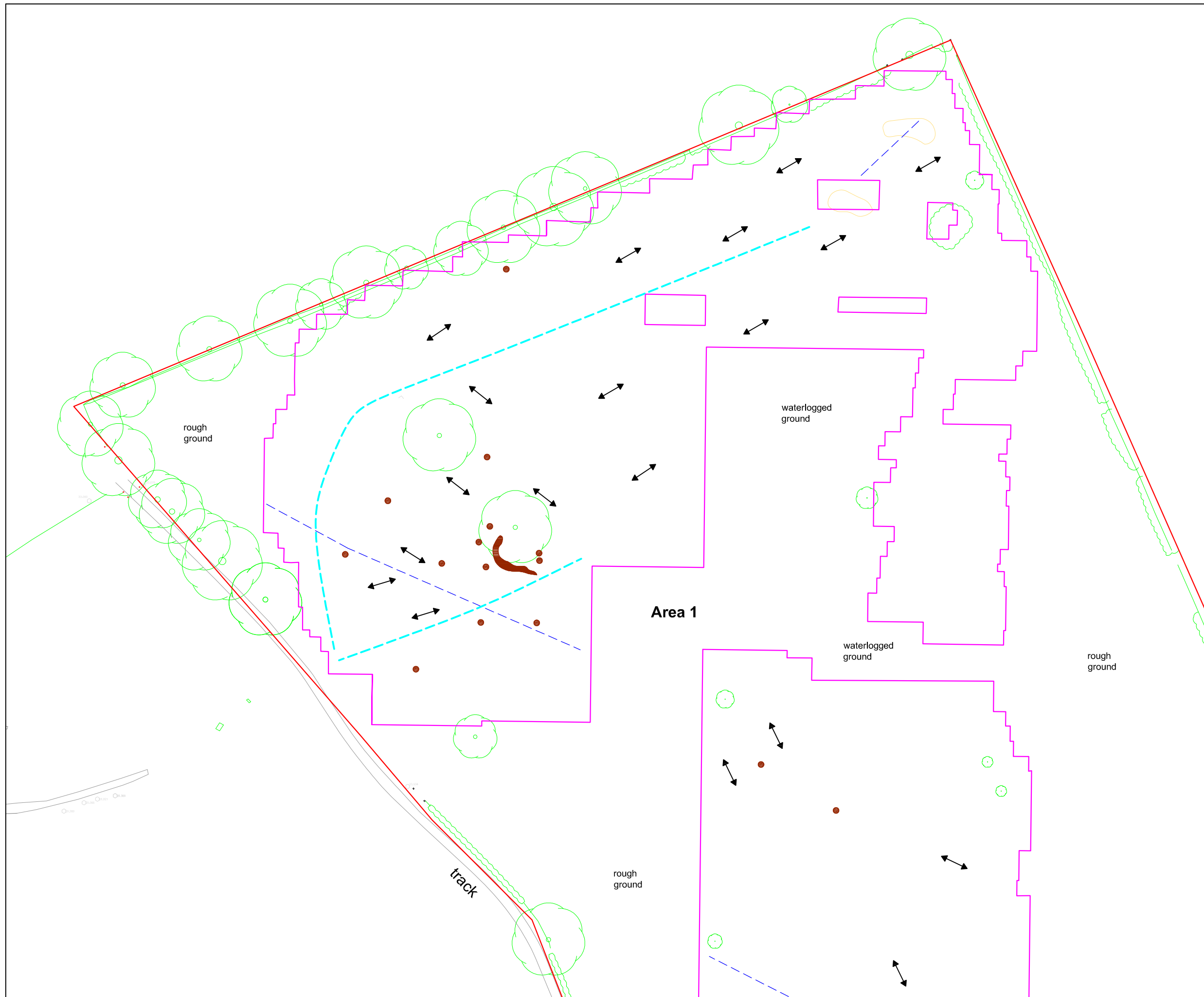


Figure 11: Archaeological interpretation of the north side of Area 1.



PROJECT:  
Eden Golf Course,  
Crosby-on-Eden, Cumbria

CLIENT:  
Mr Alistair Wannop

REPORT: EH079/01  
SCALE: 1:1,000 at A4  
DRAWN BY: MDR  
DATE: November 2020

KEY:

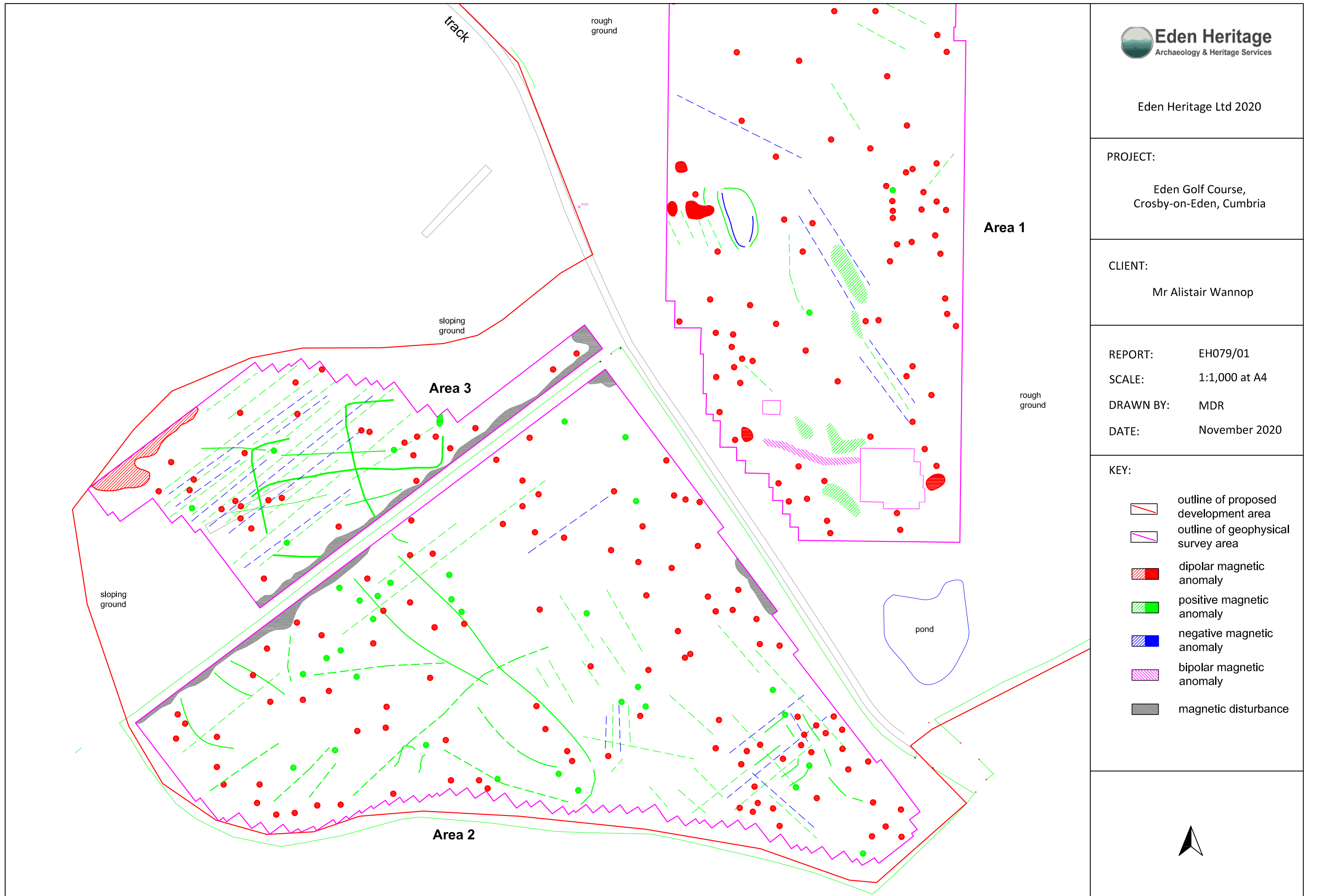
- outline of proposed development area
- outline of geophysical survey area



Figure 12: Geophysical survey of the south side of Area 1, Area 2 and Area 3 (minimally processed data) showing survey grid.



Figure 13: Geophysical survey of the south side of Area 1, Area 2 and Area 3 (processed data).



PROJECT:

Eden Golf Course,  
Crosby-on-Eden, Cumbria

CLIENT:

Mr Alistair Wannop

REPORT:

EH079/01

SCALE:

1:1,000 at A4

DRAWN BY:

MDR

DATE:

November 2020

KEY:








-  outline of proposed development area
-  outline of geophysical survey area
-  dipolar magnetic anomaly
-  positive magnetic anomaly
-  negative magnetic anomaly
-  bipolar magnetic anomaly
-  magnetic disturbance



Figure 14: Geophysical interpretation of the south side of Area 1, Area 2 and Area 3.



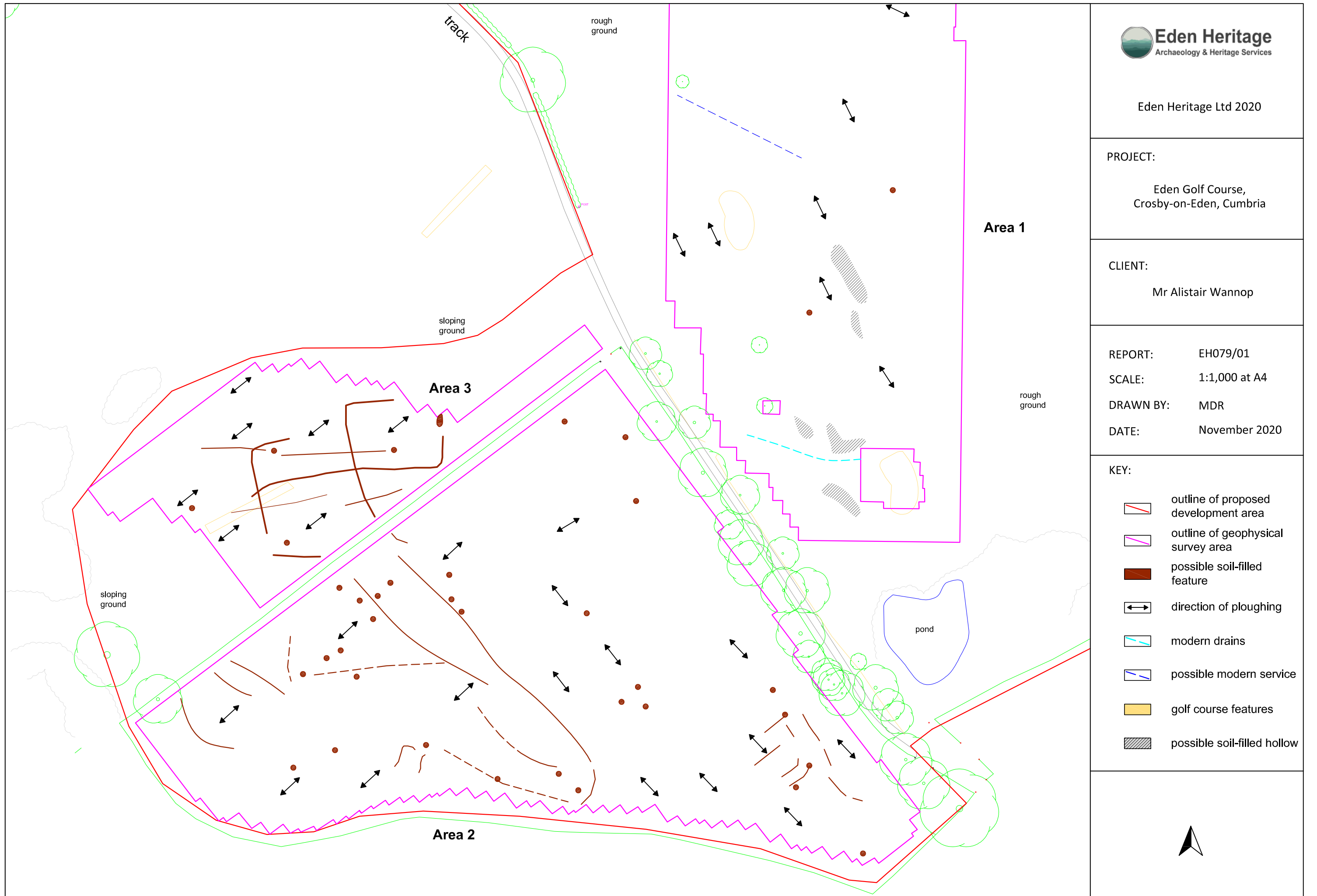


Figure 15: Archaeological interpretation of the south side of Area 1, Area 2 and Area 3.

**Heritage Impact Assessment  
Archaeological Desk-Based Assessment  
Historic Landscape Survey  
Written Scheme of Investigation**

**Geophysical Survey  
Trial Trench Evaluation  
Archaeological Excavation  
Archaeological Watching Briefs**

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