

# RWE Renewables UK Dogger Bank South (West) Limited RWE Renewables UK Dogger Bank South (East) Limited

# Dogger Bank South Offshore Wind Farms

**Environmental Statement** 

Volume 7

**Appendix 22-7 Geophysical Assessment Report** 

Part 1 of 9

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### Glossary

Term	Definition
Barrow	Artificial mound of earth, turf and/or stone, normally constructed to contain or conceal burials.
Bronze Age	This period follows on from the Neolithic and is characterised by the increasing use of Bronze work. It is subdivided in the Early, Middle and Late Bronze Age. Archaeological period lasting from 2,600-700 BC.
Cropmark	Patterns or variations in the colour or growth rates of crops which are usually caused by the differential effects on plant ecology of below-ground disturbances or soil enrichment, including the presence of archaeological features. These patterns can be observed from the air.
Early Medieval	This dates from the breakdown of Roman rule in Britain to the Norman invasion in 1066 and is to be used for monuments of post Roman, Saxon and Viking date. Archaeological period lasting from 1066 to 410.
Early Prehistoric	For monuments which are characteristic of the Palaeolithic to Mesolithic but cannot be specifically assigned. Archaeological period lasting from 50,000 to 4,000 BC.
EIA Regulations	Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.
Enclosure	An area of land enclosed by a boundary ditch, bank, wall, palisade or other similar barrier.
Iron Age	This period follows on from the Bronze Age and is characterised by the use of iron for making tools and monuments such as hillforts and oppida. The Iron Age is taken to end with the Roman invasion. Archaeological period lasting from 800 BC to 43 AD.
Landfall	The point on the coastline at which the Offshore Export Cables are brought onshore, connecting to the onshore cables at the Transition Joint Bay (TJB) above mean high water.

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Term	Definition	
Medieval	The Medieval period or Middle Ages begins with the Norman invasion and ends with the dissolution of the monasteries.  Archaeological period lasting from 1066-1540 AD.	
Mesolithic	The Middle Stone Age, falling between the Palaeolithic and the Neolithic; marks the beginning of a move from a hunter gatherer society towards food producing society. Archaeological period lasting from 10,000-4,000 BC.	
National Mapping Programme (NMP)	Historic England's National Mapping Programme - aerial imagery survey project mapping archaeology visible from aerial photography as cropmarks and soilmarks.	
Onshore Converter Stations	A compound containing electrical equipment required to transform HVDC and stabilise electricity generated by the Projects so that it can be connected to the electricity transmission network as HVAC. There will be one Onshore Converter Station for each Project.	
Onshore Development Area	The Onshore Development Area for ES is the boundary within which all onshore infrastructure required for the Projects would be located including Landfall Zone, Onshore Export Cable Corridor, accesses, Temporary Construction Compounds and Onshore Converter Stations.	
Onshore Export Cables	Onshore Export Cables take the electric from the Transition Joint Bay to the Onshore Converter Stations.	
Palaeochannel	The course or channel of a river or stream preserved as a geological feature.	
Palaeolithic	500000 to 10000 BC The Old Stone Age defined by the practice of hunting and gathering and the use of chipped flint tools. This period is usually divided into Lower, Middle and Upper Palaeolithic.	
Post-medieval	Begins with the dissolution of the monasteries and ends with the death of Queen Victoria. Use more specific period where known. Archaeological period lasting from 1540-1901 AD.	

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Term	Definition
Priority Areas	Areas within the Onshore Development Area defined as priority for Archaeological Geophysical Survey as agreed with the ETG in the Written Scheme of Investigation for Archaeological Geophysical Survey. The criteria for Priority Areas are set out in the Written Scheme of Investigation.
Roman	Traditionally begins with the Roman invasion in 43AD and ends with the emperor Honorius directing Britain to see to its own defence in 410AD. Archaeological period lasting from 43-410 AD.
The Applicants	The Applicants for the Projects are RWE Renewables UK Dogger Bank South (East) Limited and RWE Renewables UK Dogger Bank South (West) Limited. The Applicants are themselves jointly owned by the RWE Group of companies (51% stake) and Masdar (49% stake).
The Projects	DBS East and DBS West (collectively referred to as the Dogger Bank South Offshore Wind Farms).



### **Acronyms**

Term	Definition
αOD	above Ordnance Datum
DBS	Dogger Bank South
DCO	Development Consent Order
DMV	Deserted Medieval Village
EAC	European Archaeology Council
EIA	Environmental Impact Assessment
ES	Environmental Statement
GIS	Geographical Information Systems
HHER	Humber Historic Environment Record
LiDAR	Light Detection and Ranging
NHLE	National Heritage List of England
NLS	National Library of Scotland
NMP	National Mapping Programme
OASIS	Online Access to the Index of Archaeological Investigations
OS	Ordnance Survey
РА	Priority Area
PEIR	Preliminary Environmental Information Report
PPE	Personal Protective Equipment
RAMS	Risk Assessment Method Statement
RTK	Real Time Kinetic

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Term	Definition
WSI	Written Scheme of Investigation



#### 22.7 Archaeological Geophysical Survey

#### 22.7.1 Introduction

#### 22.7.1.1 Project Overview

- 1. AOC Archaeology have been commissioned by RWE Renewables (the Applicant) to carry of a geophysical survey for the Dogger Bank South (DBS) Offshore Wind Farms (the Projects). This document reports on the first five phases of Archaeological Geophysical Survey undertaken up to 16<sup>th</sup> January 2024 and has been used to inform Volume 7, Chapter 22 Onshore Archaeology and Cultural Heritage (application ref: 7.22) of the Environmental Statement (ES). This report summarises the results of all the surveys undertaken to date; and as such includes surveys undertaken for the PEIR boundary in addition to the final ES Onshore Development Area.
- 2. The first and second phases of the Archaeological Geophysical Survey focused on 25 Priority Areas selected on the basis of:
  - Key areas of project infrastructure; substation locations, landfall, engineering pinch points and selected areas within the Onshore Export Cable Corridor;
  - Areas of high or uncertain archaeological potential based on Humber Historic Environment Record (HHER) and National Mapping Programme (NMP) data;
  - Areas confirmed of high or uncertain archaeological potential based on ongoing assessment of aerial imagery and LiDAR by Air Photo Services (APS);
  - Areas within the vicinity of Scheduled Monuments or suspected nondesignated assets of schedulable quality/potential national significance; and
  - Several "Blank areas" where there may be limited or no HHER records and the NMP or APS's assessment to date have not confirmed the likely potential for the presence of buried assets.



#### 22.7.1.2 Survey Undertaken To Date

- 3. This document reports on the first five phases of Archaeological Geophysical Survey targeting Priority Areas undertaken up to 16<sup>th</sup> January 2024 to inform the assessment in **Volume 7, Chapter 22 Onshore Archaeology and Cultural Heritage (application ref: 7.22)** and identify the necessity of further stages of (non-intrusive and intrusive) archaeological evaluation, where necessary.
- 4. The initial original scope of the survey programme was to initially focus on the Priority Areas, with surveys of the remaining Onshore Development Area to follow on. However, access and ground conditions meant that it has not been possible to complete all the Priority Areas within the timeframe required to produce this document.
- 5. Furthermore, as a result of ongoing site selection and route refinement work the Onshore Development Area was refined and subsequently eleven of the Priority Areas (PA2, PA4, PA5, PA10, PA14, PA19-23 and PA25) were removed from the scope.
- 6. As the survey programme progressed during 2023 the focus of attention moved from surveying just the Priority Areas, to the remainder of the Onshore Development Area. The survey programme has worked flexibly around available land access, and suitability of ground conditions, in order to gain the maximum amount of survey coverage possible within the Onshore Development Area.
- 7. Initial survey was undertaken within the PEIR boundary which covered an area of 1200ha. A total of approximately 943ha across seventeen of the 25 Priority Areas, the PEIR Boundary and the updated Onshore Development Area has been investigated to date by magnetic gradiometry.
- 8. The final Onshore Development Boundary covers an area of 455ha of which approximately 434ha is suitable for geophysical survey out (excluding roads, woodland, hedges etc), 339ha of which has been surveyed to date. Approximately 95ha of geophysical survey is still ongoing beyond the 16<sup>th</sup> January 2024 cut-off date for this report.



#### 22.7.1.3 Report Structure

- 9. This report discusses the results of the onshore archaeological geophysical surveys undertaken up to 16<sup>th</sup> January 2024.
- 10. A detailed discussion of the survey results by survey area is provided in section 22.7.5. An overview of the results of the Archaeological Geophysical Survey is provided in section 22.7.6 where the results are discussed by anomaly type. The discussions are supported by the following figures:
  - Figure 22-7-1 Location of Development Area
  - **Figures 22-7-2** to **22-7-8** Location of Priority Areas and Surveyed Areas
  - **Figures 22-7-9** to **22-7-35** Summary greyscale images at 1:5,000;
  - **Figures 22-7-36** to **22-7-62** Summary interpretations at 1:5,000;
  - **Figures 22-7-63** to **22-7-264** Archive XY traces at 1:1,250;
  - Figures 22-7-265 to 22-7-466 Archive greyscale images at 1:1,250;
     and
  - **Figures 22-7-467** to **22-7-668** Archive interpretations at 1:1,250.
- 11. The interpretation figures include HHER data, and NMP and APS transcriptions to aid discussion. The archive interpretation figures display anomaly identification numbers which are included in the detailed discussion of the results in section 22.7.5.
- 12. This report has been prepared as detailed in the WSI (RWE, 2022) and in accordance with the Chartered Institute for Archaeologists' (CifA) Standard and guidance for Archaeological Geophysical Survey (CifA, 2014a), and Historic England's recommended guidance European Archaeological Council (EAC) Guidelines for the Use of Geophysics in Archaeology (Schmidt et al. 2016).

#### 22.7.2 Objectives

- 13. The key objectives for the Archaeological Geophysical Survey are to:
  - To undertake a programme of detailed geophysical survey across targeted sections along the Projects' onshore infrastructure (Phase 1), followed by full coverage (or as close to as possible) (Phases 2-5);
  - Identify and characterise sub-surface anomalies that may have an archaeological origin (including defining the spatial limits of already known or suspected heritage assets);
  - Discount areas within the survey area that are found to have been subject to previous 'modern' disturbance, for example where

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- geophysical survey data indicate the presence of 'made' or previously heavily disturbed ground (e.g., deep modern quarrying);
- Provide an interpretation (in written form with accompanying Geographical Information Systems (GIS) data) of all recorded geophysical anomalies to inform the assessment in Volume 7, Chapter 22 Onshore Archaeology and Cultural Heritage (application ref: 7.22)
- Prepare a fully illustrated report on the results of the Archaeological Geophysical Surveys that is compliant with all relevant standards, guidance and good practice; and
- Produce a site archive for deposition with the East Riding of Yorkshire and Hull and East Riding Museum Service and to provide information for accession to the HHER.

#### 22.7.3 Baseline Information

#### 22.7.3.1 Site Location and Description

- 14. The Onshore Development Area comprises a relatively rural area of field punctuated with smaller rural settlements, with the culmination of the larger settlement of Beverley towards the south-west of the Onshore Development Area. The extant modern field pattern is a patchwork of earlier relict boundaries where modern agricultural techniques have shaped the present landscape.
- 15. As a result, the Landfall Zone, Onshore Export Cable Corridor and Onshore Substation Zone are located in predominantly agricultural areas. There are a number of towns and villages in proximity to the proposed Onshore Development Area including Skipsea, Sigglesthorn, Tickton and Beverley. The Onshore Substation Zone is located in the area between Skidby and Beverley, to the south of Beverley (**Figure 22-7-1**).
- 16. This report presents the findings of all geophysical surveys undertaken to date. It includes areas within the PEIR Development Area which are no longer within the Onshore Development Area for ES. This includes an additional Landfall Zone, Onshore Substation Zone, and the 200m wide export cable corridor that was under consideration at PEIR stage.



### 22.7.3.2 Geology and Soils

- 17. The topography across the majority of the Onshore Development Area is relatively flat, situated at approximately 10m above Ordnance Datum (aOD) at the coast, and staying relatively level until reaching the hinterlands of the Wolds, where the land gently rises up to approximately 20m aOD near Cherry Burton, rising to approximately 55m aOD to the south-west of Beverley, before gently falling and levelling off to approximately 25m aOD south of Beverley at the Onshore Substation Zones.
- 18. The Onshore Development Area is underlain by solid geological deposits of chalk belonging to the White Chalk Subgroup. The BGS (2022) geology maps show the bedrock within the Onshore Development Area to comprise the following formations (from oldest to youngest bedrock age):
  - Burnham Chalk Formation:
  - Flamborough Chalk Formation; and
  - Rowe Chalk Formation.
- 19. The BGS (2022) geology maps show that various superficial deposits underlie the Onshore Development Area. These deposits include (from oldest to youngest deposit age):
  - Basement Till (diamicton);
  - Skipsea Till (diamicton);
  - Lacustrine Sand, Silt and Clay Deposits;
  - Glaciofluvial Sand and Gravel Deposits;
  - River Terrace Sand and Gravel Deposits; and
  - Alluvial Clay Silt and Sand Deposits.

### 22.7.3.3 Archaeological and Historical Background

20. Detailed Archaeological and Historical Background can be found in **Volume**7, Chapter 22 Onshore Archaeology and Cultural Heritage (application ref: 7.22) which is informed by the baseline data and information gathering exercise and assessment undertaken as part of the Archaeological Desk-Based Assessment (ADBA) (**Volume 7, Appendix 22.2 (application ref:** 7.22.22.2)) the Aerial Photographic, LiDAR and Map Regression Analysis undertaken by Air Photo Services Ltd (**Volume 7, Appendix 22.3** (application ref: 7.22.22.3)).

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- 21. The area of East Riding has a rich historical and archaeological heritage, with nationally significant archaeological sites and monuments located across the landscape. An overview of the landscape's history is detailed in The Yorkshire Countryside: A Landscape History (Muir, 1997), which is summarised below, as well as a summary of the findings from the East Riding of Yorkshire, Chalk Lowland, and the Hull Valley National Mapping Programme (NMP) (Historic England, 2012) and the Yorkshire and Lincolnshire Rapid Coastal Zone Assessment Surveys (Historic England and Humber Field Archaeology, 2009 & 2015c).
- 22. Early prehistoric activity is known within the region through pollen analysis, which indicates that forests were beginning to be cleared during the Mesolithic period. Following this, the Yorkshire Wolds and wider area became well settled during the Neolithic period, due to the wide range of natural resources. Evidence for this habitation is seen in the surviving Neolithic ceremonial/funerary monuments in the Wolds landscape, such as long barrows and henges. Evidence for seasonal occupation during the Mesolithic and Neolithic period within the wetlands of Holderness is also evident in environmental remains and flint scatters.
- 23. Settlement of the Wolds continued during the Bronze Age period. This is evidenced by over 140 Early Bronze Age round barrows known across the region, particularly on the higher ground overlooking river valleys. Groupings of barrows are notable within the valley of the River Hull and its tributaries. These funerary monuments indicate the landscape was well settled, although direct evidence for these settlements in the archaeological record is limited.
- 24. A distinctive material culture called the 'Arras Culture' prevailed throughout East Yorkshire during the Iron Age. A well-known element of this culture is burial within a square barrow, a subset of which contain high-status chariot burials. Square barrows survive as cropmarks on aerial photographs, usually in small groups, and as low earthworks, such as those at a cemetery containing about 120 square barrows just south of Scarborough, and the grouping of earthworks at Westwood Pasture, south-west of Beverley. Significant examples of square barrows, one including a chariot burial, were excavated in recent years prior to housing development in the Yorkshire Wolds, near Pocklington (Caffell & Holst, 2017).

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- 25. Activity during the Romano-British period often relates to periods of enclosure and land division, seen in the form of cropmarks. Large numbers of enclosure were identified during the NMP, often rectilinear in plan and isolated, although occasionally they were found in groups, aligned with trackways. Trackways have been identified in archaeological excavations or from cropmarks which are thought to be Iron Age to Romano-British in origin (although could be earlier) and are often aligned to define access down into the Hull Valley. A single possible Roman villa has been identified in the cropmark records at Skidby (MHU 6598).
- 26. There is little evidence for Anglo-Saxon archaeological remains within the region, although the earliest phases of Beverley Minster, then known as Inderauda, were constructed during the period. It was founded at the turn of the 8th century and re-founded after the reconquest from the Danes by King Athelstan in the 10th century. It is during the later centuries of the Anglo-Saxon period that many of East Yorkshire's settlements and associated open-field systems were established.
- 27. Medieval activity is better attested to within the region. A total of 29 moated or defended sites were recorded during the NMP, with six sites potentially indicative of monastic granges. Sites of potential deer parks are located at Leconfield, Bentley, Skidby, Cottingham, Risby, Beverley and Woodmansey. Deer parks were ostentatious signals of power and wealth to the wider landscape and population, setting aside areas of managed woodland under seigniorial ownership for personal hunting use and coppicing of the woodland. They were identifiers of wealth and often developed nearby moated manor sites.
- 28. During the late medieval period, a worsening climate (the 'Little Ice Age') and poor rural economic stability, along with outbreaks of the Bubonic Plague reduced the quantity and quality of grain production. This led to land being lain to pasture and created opportunity to encourage peasant migration to urban centres. Deserted settlements are relatively common within the region, found at Wilsthorpe, Auburn, Eske in the National Heritage List of England (NHLE List Entry 1005216), Hartburn (Fraisthorpe), Winkton (Barmston), Gembling, Raventhorpe (Cherry Burton), Risby (NHLE List Entry 1018600), Rotsea, Winthorpe (Etton) and Bentley. The scheduled remains at Rotsea (NHLE List Entry 1005212), located over 5km west of the Onshore Development Area, are worthy of distinction, consisting of 15 ha of preserved earthworks, with an associated nearby moated site. Beverley Minster and most parish churches within the region were built in the medieval period and retain most or much of their late medieval fabric.

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- 29. Except for some ecclesiastical buildings, most built-heritage assets within the region, including most of the built-heritage assets at Beverley, were constructed during the post-medieval and early modern periods. Formal gardens were laid out at Risby Hall during the late 17th century and were extended with pleasure grounds and ornamental lakes a century later (NHLE List Entry 1001419).
- 30. A large number of World War II pillboxes, anti-tank defences, searchlight batteries, observation posts and other military installations and structures are common along the Holderness coast. This includes the Royal Observer Corps underground monitoring post at Skipsea (NHLE List Entry 1021192) and the anti-aircraft gunsite at Butt Farm (NHLE List Entry 1019186), near Beverley, both of which are Scheduled Monuments.
- 31. Within the Study Area there are 602 designated heritage assets. These comprise:
  - 32 Scheduled Monuments;
  - 557 Listed Buildings;
  - Two registered Parks and Gardens; and
  - 11 Conservation Areas.
- 32. All designated heritage assets have been compiled into a gazetteer (Volume 7, Appendix 22-2, Annex 1 (application ref: 7.22.22.2)).
- 33. Within the study area there are 316 HER records describing buildings (25), findspots (45), monuments (248) and non-assigned records (26). All HER data has been compiled into a gazetteer (Volume 7, Appendix 22-2, Annex 1 (application ref: 7.22.22.2)). HER records within the Study Area are summarised as:
  - 12 Prehistoric (undefined);
  - Two Palaeolithic:
  - Two Mesolithic;
  - Seven Neolithic;
  - Nine Bronze Age;
  - 14 Iron Age;
  - 12 Roman:
  - 45 Medieval:
  - 97 Post-medieval;
  - 65 Modern: and
  - 51 Undated.

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The potential heritage assets of archaeological interest and the rationale for selection of each Priority Area are presented in **Table 22-7-1**. The locations of the Priority Areas are presented on **Figures 22-7-2** to **22-7-8**, while the potential heritage assets are displayed on the summary and archive interpretation **Figures 22-7-27** to **22-7-44** and **22-7-259** to **22-7-365**.



Table 22-7-1 Priority Archaeological Geophysical Survey Potential Heritage Assets

Priority Area	HHER ID	NLHE Name and Type	NHLE ID	Description	Hectares (Ha)	Notes
PA1	20667, 16379, 21207, 9991, 9992, 9990, 21208, 18429	N/A	N/A	Landfall. Prehistoric axe. Bronze Age auroch horn. Medieval to post-medieval ridge and furrow. WWII Pillboxes, possible weapon pits and bomb craters.	32.68	
PA2	3862, 9001, 21212-7, 8834, 8838, 21236	N/A	N/A	Landfall. Withow Mere prehistoric lake. Mesolithic elk antlers. Neolithic dwelling. Flint tools, prehistoric pottery, medieval pottery finds. Medieval settlement of Withow. WWII defences including minefield and weapon pits. Undated double ditch.	26.81	Priority Area now outside the Onshore Development Area.
PA3	N/A	Hall garth Hall and WWII Post (Scheduled Monument)	1013705, 1021192	Cable corridor option between two Scheduled Monuments of Hallgarth Hall and WWII site	25.54	



Priority Area	HHER ID	NLHE Name and Type	NHLE ID	Description	Hectares (Ha)	Notes
PA4	3862, 3407, 3409, 3413, 8849, 8977, 17599	N/A	N/A	Withow Mere prehistoric lake. Bronze Age beaker, amber and bone spear finds. Possible Bronze Age ring ditch nearby. Possible crannog. Bank and ditches.	16.12	Priority Area now outside the Onshore Development Area.
PA5	N/A	N/A	N/A	Blank area near landfall, included to support site selection.	14.22	Priority Area now outside the Onshore Development Area.
PA6	19339, 17601, MHU19340	N/A	N/A	Rectangular enclosure in Ladies Field. Findspots of prehistoric flint and medieval pot. Nearby undated linear cropmarks.	31.29	
PA7	22163, 18424, 19377, 18520	N/A	N/A	Near an Iron Age/Romano-British square enclosure. Other undated enclosures nearby. Near the medieval Dunnington Grange. WWII decoy.	20.82	



Priority Area	HHER ID	NLHE Name and Type	NHLE ID	Description	Hectares (Ha)	Notes
PA8	19371, MHU16531, 19372	Moated grange at Moor Grange (Scheduled Monument)	1007971	Blank area of unknown potential. Nearby undated enclosure and other undated cropmarks in the wider area. Near Scheduled medieval grange.	19.55	
PA9	MHU982, MHU987, 989	N/A	N/A	Nunkeeling Deserted Medieval Village (DMV) evident as cropmarks. Near a possible medieval moated site and Nunkeeling Priory.	17.57	Priority Area now outside the Onshore Development Area.
PA10	3617, 19468	N/A	N/A	Catfoss deserted medieval settlement. Undated linear cropmark.	25.80	
PA11	3623, 2574	N/A	N/A	Medieval kiln and Romano-British pottery and possible enclosures to west. Catfoss deserted medieval settlement to north- west. Possible medieval moated site to south.	6.75	
PA12	2574, 3621	N/A	N/A	Possible medieval moated site and trackway. Near the site of Catfoss Hall.	1.86	



Priority Area	HHER ID	NLHE Name and Type	NHLE ID	Description	Hectares (Ha)	Notes
PA13	8840, 3591, 3628, 3597, 19093, 10203, 3590, 17944, 7169	N/A	N/A	Series of cropmarks indicating field systems and ditch systems. Possible mound and ditch. Various possible enclosures. Possibly of Iron Age or Romano-British date.	113.66	
PA14	6579	Site of Meaux Cistercian Abbey (Scheduled Monument)	1007843	Near the Scheduled Site of Meaux Abbey. Otherwise, a blank area with some undated enclosures recorded at the north of the area.	58.16	Priority Area now outside the Onshore Development Area.
PA15	22251, 13271, 18425, 19044	N/A	N/A	Iron Age and or Romano-British enclosures and field boundaries. Former course of Holderness Drain. WWII decoy.	37.11	



Priority Area	HHER ID	NLHE Name and Type	NHLE ID	Description	Hectares (Ha)	Notes
PA16	9005, 9004, 13104	Eske medieval settlement and field system, west and south of Eske Manor (Scheduled Monument)	1005216	Near Scheduled Eske medieval settlement. Two prehistoric axes, one dated to Bronze Age. Post- medieval saltings.	20.28	
PA17	8376	Moated site and two fishponds 80m south-west of Parkhouse Farm (Scheduled Monument)	1007842, 1008292	Possible triple dyke feature. Within proximity of two Scheduled medieval features.	43.07	



Priority Area	HHER ID	NLHE Name and Type	NHLE ID	Description	Hectares (Ha)	Notes
PA18	13179, 12175, MHU596, 8683	Romano-British Enclosures (Scheduled Monument)	1013999, 1013995, 1013996, 1013992, 1013991, 1013997, 1013994, 1013999, 1014001	Near Scheduled Bronze Age cemetery and settlement sites. Enclosure bank. Possible medieval holloway. Deer leap. Other banks and ditch recorded in this area.	40.57	
PA19	21853	N/A	N/A	Bronze Age metal working site	21.91	Priority Area now outside the Onshore Development Area.



Priority Area	HHER ID	NLHE Name and Type	NHLE ID	Description	Hectares (Ha)	Notes
PA20	6605, 3632, 3643, 20855, 19622, 3647, 3663, 3648	N/A	N/A	In an area of extremely high archaeological potential for assets of high importance. Various double-ditched trackways, possible Bronze Age ring ditches. Various Iron Age coin findspots. Likely settlement site.	87.82	Priority Area now outside the Onshore Development Area.
PA21	21700, MHU13308, 8940, 12378	Risby medieval hall, settlement and gardens; and Cellar Heads moated site and ridge and furrow earthworks (Scheduled Monument)	1015312, 1018600, 1015312	Iron Age/Romano-British enclosures and possible Roman Road located directly between two medieval Scheduled Monuments, Substation. Near Cellar Head medieval Scheduled Monument. Possible former barn at north-east.	39.07	Priority Area now outside the Onshore Development Area.
PA22	19512, 7518, 2545, 14716, 3532	Risby medieval hall, settlement and gardens; and Cellar Heads moated site (Scheduled Monument)	1018600 1015312	Mortuary enclosure, various ring ditches (hut circles) inside an oviod enclosure, with associated trackway and field ditches. Romano-British pottery found nearby. Vague uncertain reference to a ruin in the HHER.	39.44	Priority Area now outside the Onshore Development Area.



Priority Area	HHER ID	NLHE Name and Type	NHLE ID	Description	Hectares (Ha)	Notes
PA23	3532, 12530, 12805, 9237	Risby Jacobean gardens, hall and medieval settlement remains (Scheduled Monument, Registered Park and Garden)	1018600 1001419	Substation. Possible Bronze Age ring ditch to west. Post-medieval turnpike road and Dunflat toll gate.	61.57	Priority Area now outside the Onshore Development Area.
PA24	15124, EHU1975	Heavy Anti-aircraft gunsite, 350m west of Butt Farm (Scheduled Monument)	1019186	Substation. Undated moated site. Watching brief in the area suggests moderate to high archaeological potential.	48.10	
PA25	6625, 1509	N/A	N/A	Substation. Possible henge, not visible on any aerial photographs. Ring ditch. Iron Age, Romano-British and medieval enclosures.	90.05	Priority Area now outside the Onshore Development Area.



## 22.7.4 Methodology

### 22.7.4.1 Method Selection and Justification

- 35. Gradiometer surveys measure small changes in the earth's magnetic field. Archaeological materials and activity can be detected by identifying changes to the magnetic values caused by the presence of weakly magnetised iron oxides in the soil (Aspinall et al., 2008; Sharma, 1997). Human inhabitation often causes alterations to the magnetic properties of the ground (Aspinall et al., 2008). There are two physical transformations that produce a significant contrast between the magnetic properties of archaeological features and the surrounding soil: the enhancement of magnetic susceptibility and thermoremanent magnetization (Aspinall et al., 2008; Heron and Gaffney 1987).
- 36. Ditches and pits can be easily detected through gradiometer survey as the topsoil is generally suggested to have a greater magnetisation than the subsoil caused by human habitation. Areas of burning or materials which have been subjected to heat commonly also have high magnetic signatures, such as hearths, kilns, fired clay and mudbricks (Clark 1996; Lowe and Fogel 2010).
- 37. It should be noted that negative anomalies can also be useful for characterising archaeological features. If the buried remains are composed of a material with a lower magnetisation compared to the surrounding soil, the surrounding soil will consequently have a greater magnetization, resulting in the feature in question displaying a negative signature. For example, stone materials of a structural nature that are composed of sedimentary rocks are considered non-magnetic and so will appear as negative features within the dataset.
- 38. Ferrous objects (i.e., iron and its alloys) are strongly magnetic and are typically detected as high-value peaks in gradiometer survey data, though it is not usually possible to determine whether these relate to archaeological or modern objects.
- 39. Although gradiometer surveys have been successfully carried out in all areas of the United Kingdom, the effectiveness of the technique is lessened in areas with complex geology, particularly where igneous and metamorphic bedrock is present or thick layers of alluvium or till. All magnetic geophysical surveys must therefore take the effects of background geological and geomorphological conditions into account.

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### 22.7.4.2 Survey and Data Processing

- 40. Parameters and survey methods were selected that were suitable for the prospective aims of the survey and in accordance with recommended professional good practice (Schmidt et al., 2016).
- 41. Digital photographs of every survey area were taken before, during and after geophysical survey to show any changes to field conditions following the programme of works. The photos were downloaded and stored off site.
- 42. The majority of the survey was undertaken using pushcart-based gradiometer systems. The cart system utilises six Grad-O1 fluxgate gradiometer sensors mounted upon a carbon fibre frame 1m apart, along with data logging equipment and batteries. Before each session of use, the cart system was balanced around a single set up point within the local survey area specifically chosen for being magnetically quiet. Balancing the machine around this point produces a more uniform dataset throughout and allows all data to be plotted with ease.
- 43. A total of 810ha were surveyed using the Bartington cart.
- 44. Suitable areas have been surveyed with a Sensys MAGNETO® MXPDA quad towed magnetometer system. The cart utilises sixteen FGM650/3 fluxgate gradiometer sensors mounted upon a frame at 0.25m or 0.5m separation, along with data logging equipment and batteries.
- 45. A total of 102ha were surveyed using the Sensys towed array.
- 46. Data was collected using zig-zag traverses alongside a constant stream of GPS data collected through a Trimble R10 GPS, enabling the collected data to be spatially georeferenced without the need for a pre-determined grid system. The data was collected through a laptop mounted to the cart using Geomar MLGrad601 software. Additional Details area provided in **Annex 1**.
- 47. Care was taken to attempt to avoid metal obstacles present within the survey area, such as metal fencing around hedge boundaries as gradiometer survey is affected by 'above-ground noise' and avoiding these improves the overall data quality and results obtained.
- 48. The data was downloaded from MLGrad601 and converted into a .xyz file in Geomar MultiGrad601 before being processed along with the GPS data in TerraSurveyor v3.0.34.10. The details of these processes can be found in **Annex 2**.



- 49. Due to ground conditions some areas were surveyed using a Bartington Grad 601-2 handheld system. The survey was conducted within a grid system, across grids measuring 30m by 30m which were marked out using temporary markers at each grid node. Data was collected using zig-zag traverses, with a sample interval of 0.25m and a traverse interval of 1m. Additional Details area provided in **Annex 1**.
- 50. A total of 31ha were surveyed using the handheld Bartington Grad 601-2 system.
- 51. The gradiometer data were downloaded using Bartington Grad601 PC Software v313 and processed using Geoscan Geoplot v4.0. The details of these processes can be found in **Annex 2**.

### 22.7.4.3 Results and Interpretation of Gradiometer Data

- 52. The results of the Archaeological Geophysical Survey have been assessed and interpreted to gain a clear understanding of potential buried below ground remains within the survey extent in advance of development works.
- 53. The survey results are plotted at a variety of ranges and assembled in a layered GIS environment for interpretation alongside aerial images, current and historic maps and layers detailing the geology and soils present within the survey area. XY trace plots were also available for the characterisation of magnetic signals.
- 54. By necessity, only the most effective plotting ranges have been produced as figures within the report:
  - **Figures 22-7-9** to **22-7-35**: Processed Summary Greyscale Images plotted at -1nT to 2nT (1:5,000);
  - **Figures 22-7-36** to **22-7-62**: Summary Interpretations (1:5,000);
  - **Figures 22-7-63** to **22-7-264**: Minimally Processed Archive XY Traces plotted at 50nT per cm (1:1,250);
  - **Figures 22-7-265** to **22-7-466**: Processed Archive Greyscale Images plotted at -1nT to 2nT (1:1,250); and
  - **Figures 22-7-467** to **22-7-668**: Archive Interpretations (1:1,250).
- 55. Interpretations of the data were created as layers in ArcGIS Pro and the technical terminology used to describe the identified anomalies can be found in **Annex 3**. Anomalies have been divided into the following overarching categories:
  - **Definite/Probable Archaeology:** Interpretation is supported by the presence of known archaeological remains or by other forms of evidence such as HHER records, LiDAR data or cropmarks identified

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through aerial photography, or anomalies with no other possible explanation due to their diagnostic;

- Possible Archaeology: Anomalies are likely to have an archaeological origin, however without supporting evidence from known archaeological remains, HHER records, LiDAR or aerial photography, they can only be classed as having a possible archaeological origin;
- **Unclear Origin:** Responses are magnetically weak, fractured, or isolated and their context is difficult to ascertain. Whilst an archaeological origin is possible, an agricultural, geological, or modern origin is also likely;
- Agricultural: Trends associated with agricultural activity, either historical or modern; and
- **Non Archaeology:** Responses which are likely to have derived from non-archaeological processes or activities, or natural variations.
- 56. The classes have three sub-types (generally); anomalies (typically indicated by a solid colour polygon), spreads (a stippled polygon) and trends (a line with a colour matching the polygon colour). Anomalies refer to distinct changes in the survey data which suggest an abrupt boundary between materials below ground, such as a cut feature with a magnetically contrasting fill. Spreads of enhanced material refer to diffuse areas of altered magnetic contrast which suggest a localised spread of material with a magnetic contrast within the topsoil or ploughzone. Linear trends are less distinct and are typically visible as linear patterning in the overall texture of the data. A common example of these is the striping effect caused by recent ploughing.
- 57. For the most part, only anomalies of a definite, probable, or possible archaeological origin and historical responses have been assigned an anomaly number on the interpretation figures. Anomalies and trends of an uncertain origin that are integral to the discussion have also been assigned anomaly numbers. The anomaly ID is prefixed by the field number. These are only provided on the archive interpretations.



- 58. The following sources of information were consulted to aid interpretation of the Archaeological Geophysical Survey results:
  - HHER:
  - NLHE:
  - NMP;
  - LiDAR and map regression prepared by APS;
  - British Geological Survey, Geology of Britain Viewer; and
  - National Library of Scotland (NLS).

### 22.7.5 Detailed Results of Gradiometer Survey

- 59. The detailed results are discussed by field from Landfall in the northeast to the substation in the southwest. For ease of discussion and data display the results have been divided into parts:
  - Fields that lie within, extend beyond, or immediately adjacent to the Onshore Development Boundary; and
  - Fields that lie beyond the Onshore Development Boundary.



Table 22-7-2 Detailed Results of Gradiometer Survey Areas that lie within, extend beyond, or immediately adjacent to the Onshore Development Boundary

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
1141 (Figures 22-7-63, 22-7-265, 22-7-467)	Survey area lies within updated Onshore Development Boundary.	Very strong dipolar magnetic responses [1141A] have been recorded at the location of a known bomb crater (MHU21208).	A short linear anomaly [1141B] has been detected in the south-east of the survey area. The response extends for approximately 50m and is aligned NW-SE. This could be related to the rectilinear complex in Field 1145 to the south. However, the weak and truncated nature of the feature makes a more definitive interpretation difficult.  A short curving positively enhanced anomaly [1141C] has been detected in the south of the area to the west of [1141B]. This could potentially indicate a ditch type feature. However, the response is poorly defined and fragmentary, partly due to past ridge and furrow cultivation.	A few short linear trends are present across the south of the survey area [1141D]. While the possibility of these being associated with the postulated ditch [1141B], they could be due to natural variations or agricultural activity.  Discrete areas of enhanced magnetism [1141E] have been noted in the south of the survey area. While an archaeological origin for these cannot be excluded, a natural origin is most likely.	A linear trend indicative of a field drain has been detected in the north of the survey area.  Parallel trends have been noted throughout the survey area and are due to past ridge and furrow cultivation. These are aligned approximately north-south.	Amorphous zones of strongly enhanced magnetism have been detected throughout the survey area. These are typical of natural subsurface variations.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
1140 (Figures 22-7-64, 22-7- 266, 22-7-468)	Survey area lies within updated Onshore Development Boundary. Survey area is within PA1.	A WW2 pillbox and associated foundations/infilled ditches [1140A] have been detected in the centre of the survey area (MHU 9990).	None detected.	Several weakly magnetised trends are present throughout the survey area [1140B]. These might correlate with WW2 trenches, but they do not correlate with known HER data. However, some may be due to agricultural activity including drainage, and natural variations.	A strong linear trend indicative of a field drain has been detected in the north of the survey area.  Parallel trends have been noted throughout the survey area and are due to past ridge and furrow cultivation. These are aligned approximately north-south. Weaker parallel trends on a similar	Amorphous zones of strongly enhanced magnetism have been detected throughout the survey area. These are typical of natural subsurface variations.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
					alignment are due to modern ploughing	
(Figures 22-7-65, 22-7-267, 22-7-469)	Survey area lies within updated Onshore Development Boundary.	A probable rectilinear enclosure [1145A] has been detected in the north of the survey area. The rectilinear enclosure measures 100m wide from east to west, however the northern extent may have been removed by either the modern field boundary or ploughing in Field 1141 to the north.  Additional anomalies [1145B] have been detected within the postulated enclosure suggest internal divisions. It is possible that the linear response [1145C] is part of a trackway.	Within the postulated enclosure [1145A] a subcircular anomaly [1145D] has been detected. This could indicate a potential roundhouse with a west facing opening. However, the form is not very well-defined, and the response may be part of a slightly broader rectilinear enclosure within [1145B]. The fragmentary linear trends [1145E] may be associated with anomaly [1145C] and could indicate a possible trackway.  Two positively enhanced linear trends [1145F] extend from the southwest corner of the field to the eastern boundary. This is consistent with a ditch type feature. The ditch appears to terminate at the field boundaries but may extend into the fields to the south and east but if so, the responses are very ephemeral.	Short linear spreads of enhanced disturbance [1145G] has been detected to the west of 1145C. This may be an extension [1145E] but it is categorised as having an unclear origin due to its short length and fragmentary nature.  In the south of the survey area weak linear and curvilinear trends [1145H] have been noted. An archaeological origin for these cannot be dismissed, but a natural or agricultural origin seems more likely.  A few spreads of enhanced response [1145I]. have been detected to the north and south of [1145F]. It is unclear if these are responses to buried features or geological responses.  Fragmentary trends [1145J] have been detected along the eastern limits of the survey area. These are aligned north-south and appear to be associated with the east-west aligned linear trend [1144D] detected immediately to the east in Field 1144.	Part of an historic field boundary has been detected in the west of the survey area.  Parallel trends have been noted throughout the survey area on a NNW-SSE alignment and are due to past ridge and furrow cultivation.	The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				Small linear trends have been located in the north of the survey area [1145K]. It is unclear if these are ploughing trends or geological responses.		
1144 (Figures 22-7-65 to 22-7-66, 22-7-267 to 22-7-268, 22-7-469 to 22-7-470)	Survey area lies within updated Onshore Development Boundary. Survey area lies partially within PA1.	Very strong dipolar magnetic responses [1144A] have been recorded at two locations corresponding to known bomb craters in this field (MHU21208).	A pair of positively enhanced linear trends [1144B] have been detected in the north of the survey area on an east-west orientation, possibly an extension of the rectilinear enclosure or trackway detected in Field 1145 to the west. However, while the response is consistent with a ditch feature, it is not clearly associated with any other responses and could indicate a former field boundary.	A weakly enhanced linear trend [1144C] has been detected to the north of [1144B], aligned in a similar east-west direction, It is unclear if this associated with [1144A] or a drain.  A weakly enhanced linear trend [1144D] has been detected bisecting the centre of the survey in an east-west direction. It is unclear if this is an unrecorded field boundary or a drain.  A few weakly enhanced trends [1144E] and spreads of enhanced response [1144F] have been detected across the survey area. It is unclear if these are associated with geological features or agricultural activity.	Parallel trends have been noted throughout the survey area and are due to past ridge and furrow cultivation and modern ploughing. These are aligned approximately north-south.	Amorphous zones of weakly enhanced magnetism have been detected in the south of the survey area. These are typical of natural subsurface variations.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
1312 (Figures 22-7-65 to 22-7-67, 22-7-267 to 22-7-269, 22-7-469 to 22-7-471)	Survey area lies within updated Onshore Development Boundary. Survey area is within PA1.	A series of strongly enhanced positive curvilinear trends are observable in the south of the survey area which have the appearance of a trackway [1312A]. These fade away to the west, but other similarly magnetised	Weaker linear trends [1312E] are visible around the periphery of [1312A] and [1312B]. These are not as well defined but may form similar, associated ditches. A small concentration of positively enhanced anomalies	Positively enhanced linear trends [1312H] have been detected extending from [1312A]. As they have a much weaker response it is unclear how much of the response is from an extension of the postulated ditch features	A former historic field boundary has been detected in the centre of the survey area. The response terminates at a WW2 pillbox.  Parallel trends have been noted throughout the	Amorphous zones of strongly enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations such as palaeochannels.

Field No	Notes	Definite/Probable	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
		Archaeology	i cooline / ii chideology	Onoice.	7.g. rounding.	Tron 7 ii chacologicai
		anomalies have been detected immediately to the south of 1312A [1312B, 1312C, 1312D]. Anomaly [1312B] suggests a rectilinear enclosure, with ditches [1312C] and [1312D] extending from the northwest and southwest corners of the postulated enclosure. These responses could be related to other positively enhanced anomalies in Fields 1141 and 1145 due to their similar magnetic response and size, although there is no direct relationship to these features.  Very strong dipolar magnetic responses have been recorded at the location of a known bomb crater (MHU21208).	[1312F] has been detected to the west of [1312B]. These could indicate a small circular ditch, but an archaeological origin is possible.  A smaller and weaker spread of positively enhanced magnetism [1312G] has been detected to the southeast of [1312A]. This may be due to modern disturbance, but it has been categorised as possibly archaeological in origin due to the wider context.	or due to modern agricultural practices.  A linear spread of positively enhanced disturbance has been detected in the southwest of the survey area [1312]. The alignment corresponds with the presumed ditch type features. However, as it is such a short feature, and it is so weakly magnetised it could also be a geological response or have an agricultural origin.  Small discrete areas of enhanced magnetism have been detected throughout the survey area [1312J]. While an archaeological origin for these anomalies cannot be excluded, a natural origin is equally plausible.	survey area and are due to past ridge and furrow cultivation. These are aligned approximately north-south.	The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
11 (Figures 22-7-68 to 22-7-69, 22-7-270 to 22-7-271, 22-7-472 to 22-7-473)	Survey area lies within updated Onshore Development Boundary. Survey area lies partially within PA3.	None Detected.	Several positively enhanced responses in the south of the survey area create a disrupted pattern that suggest a series of abutting enclosures [11A] and [11B]. These are disturbed by later ridge and furrow cultivation. Within postulated enclosure [11A] several strongly enhanced anomalies [11C] have been detected which may suggest features	A weakly positively enhanced linear trend is present within the centre of the survey area, which forks northwards for about 15m [11F]. A separate weakly negatively enhanced linear trend is also visible to the west of the dataset [11G]. The origin of these is unclear, and a natural or agricultural origin is plausible.	Clearly defined parallel linear trends indicative of ridge and furrow cultivation have been detected on a north-south alignment throughout the survey area.  Linear and curvilinear trends suggestive of drainage have been detected southeast of the survey area and coincide with an overgrown and more boggy area.	Large spreads of amorphous responses have been detected within the survey area and are consistent with natural variations.  The enhanced magnetism to the east of the survey area is due to the proximity of a camping and caravan park, with associated infrastructure located on the boundary of the survey area. The enhanced magnetism on the



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			associated with the postulated enclosure. A small spread of positively enhanced linear trends [11E] have been detected within [11A]. These have been noted as having a possible archaeological origin, but they could be due to natural variations or agricultural activity.			northern and western boundaries is attributable to road infrastructure and a possible buried service pipe adjacent to the boundary of the survey area.
16 (Figures 22-7-69, 22-7- 271, 22-7-473)	Survey area lies within updated Onshore Development Boundary.	None Detected.	None Detected.	None Detected.	Drainage has been detected in the north and west of the dataset, corresponding with an overgrown and more boggy area of survey, which extends from Field 11.	A small continuation of a band of a geological feature in the south of Field 11 continues into the survey area.
10 (Figures 22-7-70, 22-7-272, 22-7-474)	Survey area lies within updated Onshore Development Boundary. Survey area lies partially within PA3.	None Detected.	None Detected.	None Detected.	Parallel linear trends have been detected in the south of the survey area. These are aligned approximately north-south and are indicative of past ridge and furrow cultivation.	The large spread of dipolar responses in the south of the survey area, running west-east, is consistent with geological responses.  A service pipe is present in the north of the survey area aligned east-west. A telegraph pole also lies adjacent to the pipe and has generated an area of magnetic disturbance.  The boundary fence associated with the school property is also creating a strong magnetic response on the western limits of the survey area.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
(Figures 22-7-70 to 22-7-73, 22-7-275 to 22-7-477)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA3.	A concentration of positively enhanced anomalies has been detected in the southwest of the survey area. Linear responses [35A] suggest an enclosure that measures at least 30m by 90m and appears to extend to the south of the survey area. Several additional anomalies [35B] suggest possible interval divisions and features.  Further linear trends [35C] extends to the northeast of [35A] and suggest a further enclosure. This is likely to be related to [35A]. There also appears to be a slight semicircular feature within [35C].	A much less well defined rectilinear anomaly [35D] northwest of [35A]. It is only complete on three sides, although this may be the genuine shape of the feature. However, it is also obscured to some extent strong responses generated by natural variations.  In the northeast of the survey area, a further series of rectilinear trends [35E] have been detected. These are on a comparable alignment to the trends detected in the south of Field 11, 150m to the northeast.  A negatively enhanced linear trend [35F] can be observed in the southwest of the survey area. This lies within an area of strong natural magnetic enhancement. It appears likely to be an archaeological feature, however a more definitive interpretation cannot be given due to the underlying geological spread potentially obscuring the extent of the feature.	A pair of very short enhanced linear features [35G] have been detected to the south of [35E]. It is unclear if these are a continuation of [35E] or a result of the ridge and furrow ploughing.  A very faint linear zone of negatively enhanced response [35H] is apparent over the north of [35E] and almost bisects the field. It is unclear whether this is an unrecorded former field division, or due to modern agricultural practices.  A strongly enhanced linear feature [35I] has been detected in the northwest of the survey area. It is unclear whether this is an unrecorded field boundary or a drain.  A largely continuous strongly enhanced positive trend [35J] has been detected in the centre of the field, bisecting the survey area northwest to southeast. It is unclear if this is an unrecorded historic field boundary or potentially further undated enclosures. A few comparable trends [35K] have also been detected between [35J] and the historic field boundary to the west. The anomalies	Former field boundaries have been detected in the south and east of the survey area.  Two groups of parallel trends indicative of past ridge and furrow cultivation have been mapped across this survey area. These are all aligned approximately northsouth and respect the former field divisions.	Amorphous zones of strongly enhanced magnetism have been detected towards the centre of the survey area These are typical of natural subsurface variations such as palaeochannels.  Small zones magnetic disturbance along the edges of the survey area due to adjacent metal fences and the road infrastructure to the east of the survey area.  A medium level of isolate ferrous/fired responses have been noted.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				are shorter and less likely to represent former field boundaries.  A positively enhanced linear trend [35L] has been located extending from [35F]. It is unclear whether this is related to [35F], or if it has a more recent agricultural origin.  A few short and weakly enhanced linear trends [35M] have been detected to the northwest of [35D]. While these may have an archaeological origin, an agricultural origin is more plausible.		
(Figures 22-7-73 to 22-7-76, 22-7-275 to 22-7-278, 22-7-477 to 22-7-480)	Survey area lies within updated Onshore Development Boundary.	A series of linear trends [54A] has been detected in the southwest of the survey area. The responses suggest two, potentially overlapping, enclosures with possible internal features. These responses extend westwards into Field 63 suggesting a complex of enclosures and potential settlement features.	A series of weaker, more fragmentary, anomalies [54B] are present in the vicinity of [54A]. These have a less definitive shape but may indicate a continuation of the postulated enclosure system [54A].  In the northwest of the survey area a second concentration of linear anomalies [54C] has been detected. Although weaker and more fragmentary, the form of these responses is comparable to [54A]. These may form another enclosed settlement. It is not clear if there is a clear spatial relationship	Some ephemeral trends and discrete responses [54F] are present in the east of the survey area. These may relate to a very truncated enclosure. However, a geological origin is equally likely.	Several former field boundaries are noted on historic mapping. These are not clearly defined in the data due to the elevated level of background response. However, some areas of enhanced magnetism have been noted which correspond with features on the 1st Ed OS map of 1888.  Parallel trends on an eastwest alignment are typical of past ridge and furrow cultivation.	Well defined areas of enhanced magnetism have been detected across the field. These are typical of natural geological variations.  Small zones of magnetic disturbance along the eastern and western edges of the survey area are due to adjacent metal fences and infrastructure.  A moderate level of isolated ferrous/fired responses have been noted throughout the survey area.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			between [54A] and [54C] due to the elevated level of background response in this area.			
			Three circular anomalies have been detected to the south of the survey area [54D]. The largest of these is approximately 15m in diameter and could be representative of unenclosed structures. However, the high level of background magnetism prevents a more definitive interpretation.			
			Positively enhanced linear anomalies [54E] have been detected in the northeast of the survey area. These may indicate the truncated remains of ditch type feature, but such an interpretation is cautious given the elevated level of background response.			
63 (Figures 22-7-75 to 22-7-7-76, 22-7-277 to 22-7-479 to 22-7-480)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA6.	Linear and curving trends [63A] have been detected in the southeast of the survey area. These are likely a continuation of the postulated enclosure system detected in Field 54 to the east. It seems likely to be an enclosed settlement, as this feature also contains what appears to be smaller enclosures truncated by	A series of weaker or less well defined anomalies [63B] have been noted in the vicinity of [63A]. These have a less definitive shape or bear a less obvious relationship to [63A]. Nonetheless, many of these anomalies bear similar magnetic signatures to [63A].	A series of positively enhanced anomalies [63C] have been detected to the north of [63A] These form a series of features that are either more ephemeral in nature or relate to natural variations.	Large bands of positively and negatively enhanced trends suggest an historic ridge and furrow ploughing regime.	There are strong responses throughout the survey area which are due to natural subsurface variations resulting in a high level of background response.  Zones of magnetic disturbance along the eastern limits of the survey area are due to adjacent metal fences and infrastructure.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
		later ridge and furrow cultivation.				A high level of isolated ferrous/fired responses have been noted.
72 (Figures 22-7-78 to 22-7-79, 22-7-280 to 22-7-281, 22-7-482 to 22-7-483)	Survey area lies within the updated Onshore Development Boundary. Survey area is within PA6.	None detected.	None detected.	A strong linear trend [72A] has been detected in the eastern half of the survey area. The origin of this is unclear. It is on the same alignment as past ridge and furrow cultivation and could simply be a slightly more enhanced cultivation response. However, it may be due to a former field boundary, although historic mapping suggests this lies slightly further to the north.  Trend [72A] terminates at a diffuse area of increased response [72B]. This may suggest that the responses are associated with a former field boundary.  A few discrete areas of enhanced response and weak linear trends have been noted. The origin of these is unclear. While an archaeological origin cannot be excluded, a natural or modern agricultural origin is more likely.	a north-south alignment are due to modern ploughing.	The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
79 (Figures 22-7-81 to 22- 7-85, 22-7-283 to 22-7- 287, 22-7-485 to 22-7- 489)	Survey area extends beyond the updated Onshore Development Boundary. Survey area is within PA7.	None detected.	None detected.	In the centre of the survey area a group of strong responses [ <b>79A</b> ] has been detected. The origin of these is unclear. They could be associated with	The fragmentary linear trends [79B] running north-south and east-west in the centre of the survey area corresponds with a former field boundary	Amorphous zones of strongly enhanced magnetism have been detected throughout the survey area. These are

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				the modern utility which passes immediately to the west, or they could have a natural origin. However, an archaeological origin cannot be wholly excluded.  Several discrete areas of enhanced magnetism have been noted within the survey area. The origin of these is unclear. While an archaeological origin cannot be excluded, a natural or modern origin is most likely.  A few weak linear trends have also been noted which are likely to have an agricultural origin.	shown on the 1st Ed OS map of 1888 (NLS, 2023).  Parallel trends have been noted running east-west throughout the survey area and are due to past ridge and furrow cultivation. Weaker parallel trends on a comparable alignment are due to modern ploughing.  Parallel linear trends indicative of field drains have also been detected within the survey area with most aligned north-south.	typical of natural subsurface variations.  A modern utility runs north-south through the centre of the survey area.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
81 (Figures 22-7-83 to 22-7-86, 22-7-285 to 22-7-288, 22-7-487 to 22-7-490)	Survey area extends beyond the updated Onshore Development Boundary.	A cluster of strong responses [81A] has been detected in the southeast of the survey area. It is assumed that this is associated with the known WW2 decoy (MHU18424) whose location is recorded 75m to the east.	In the southeast of the survey area linear trends forming a rectilinear enclosure [81B] measuring approximately 35m by 35m has been detected. This has been noted has having a possible archaeological origin due to its form which is suggest of a prehistoric enclosure, although none is recorded. It could be associated with the WW2 decoy (MHU18424).	In the northeast of the survey area fragmentary trends [81C] have been noted. The origin of these is unclear. They may have agricultural origins. However, the possibility of them being associated with the postulated enclosure [81B] cannot be dismissed.  Additional weak linear trends of an unclear origin have been noted. These are most likely to be due to agricultural activity, but they are not very well-defined.	Parallel trends have been noted running east-west throughout the survey area and are due to past ridge and furrow cultivation. Weaker parallel trends on a comparable alignment are due to modern ploughing.  Parallel linear trends indicative of field drains have also been detected within the survey area.  Most of these are aligned north-south.	Amorphous zones of strongly enhanced magnetism have been detected throughout the survey area. These are typical of natural subsurface variations.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
119 (Figures 22-7-92, 22-7-294, 22-7-496)	Survey area lies within updated Onshore Development Boundary	None detected.	None detected.	A small cluster of discrete responses covering an area of approximately 50m by 25m has been detected on a small plateau in the southwest of the field [119A]. This might be a curved ditch anomaly; however, the signal is very weak and interrupted.  A weakly enhanced curved linear trend is situated near the southern boundary of the survey area [119B]. The shape and size suggest a small enclosure; however, the magnetic signature is very weak, and it may have a natural origin.  A few weakly enhanced trends are visible in the west of the survey are aligned roughly north south [119C]. These are in the vicinity of nearby drainage, and have a similar signature, but they are not laid out in a plan that would obviously demonstrate a drainage pattern, so their provenance is undetermined without further investigation.  A series of small weakly magnetised anomalies and trends [119D] are distinguishable between two larger areas of modern disturbance. Their	I arge dipolar spikes in the	Large spreads of strongly magnetised disturbance are present across the centre of the site. These are broadly consistent with areas of lower elevation and may relate to the more waterlogged areas.  Modern drainage works were occurring on site during survey resulting in small areas being unavailable for survey.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				proximity to the former field boundary suggests a relationship, but it is not definitive and could also relate to geological activity.		
130 (Figures 22-7-96 to 22-7-97, 22-7-298 to 22-7-299, 22-7-500 to 22-7-501)	Survey area lies within the updated Onshore Development Boundary.	None detected.	None detected.	Linear trends [130A] aligned approximately north-south have been detected. These do not correspond with historic field boundaries but are likely to indicate undocumented boundaries.  More ephemeral trends [130B], generally aligned east-west, have also been detected. These are poorly defined and do not form a coherent pattern but are likely to be associated with recent agricultural activity.  Isolated discrete areas of enhanced response [130C] have been detected. There is no context for these responses and natural or modern origins are most likely.	Weak, fragmentary, parallel trends on a north-south alignment have been noted in the south of the survey area and are believed to be due to past ridge and furrow cultivation which extends into Field 1343 directly to the south.	Amorphous areas of slightly enhanced magnetism have been detected throughout the survey area. These are typical of natural subsurface variations.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
1343 (Figures 22-7-97 to 22.98, 22-7-299 to 22- 7-300, 22-7-501 to 22- 7-502)	Survey area extends beyond the updated Onshore Development Boundary.	None detected.	None detected.	A few discrete areas of enhanced response and weak linear trends have been noted. The origin of these is unclear. While an archaeological origin cannot be excluded, a natural or modern	The sinuous zones of enhanced response [1343A] running NW-SE in the south of the survey area corresponds with a former field boundary shown on the 1st Ed OS map of 1888 (NLS, 2023).	Amorphous areas of slightly enhanced magnetism have been detected throughout the survey area. These are typical of natural subsurface variations.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				agricultural origin is more likely.	Weak, fragmentary, parallel trends on a north-south alignment have been noted in the north of the survey area and believed to be due to past ridge and furrow cultivation. Weaker parallel trends on an eastwest alignment are due to modern ploughing.  Short linear trends in the west of the survey area are likely to indicate field drains.	The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
140c (Figures 22-7-98, 22-7-300, 22-7-502)	Survey area lies within the updated Onshore Development Boundary.	None detected.	Two parallel ditch type anomalies [140cA] have been detected. These extend for some 50m and are approximately 18m apart. These have been noted as having a possible archaeological origin as they may be associated with a possible Roman road running between Bridlington and Hull which is visible as a soil-mark (MHU1007) recorded 200m to the southwest. The anomalies coincide with soil marks visible on the Google Earth satellite image from 2005, but it is not clear if this is the same soil mark as the postulated Roman road. However, they could have an agricultural origin such as tracks or drains, hence them not being categorised as probable	A few ephemeral trends of an unclear origin have been noted. These are very weak against an elevated level of background response and are likely to be associated with natural variations or modern agricultural activity.	Weak, fragmentary, parallel trends on a NW-SE alignment have been noted within the survey area and reflect past ridge and furrow cultivation.	A high level of dipolar anomalies and an elevated level of background response has been noted, potentially due to the application of green waste.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			archaeology. It is also possible they are associated with the former airfield.			
140b (Figures 22-7-98 to 22-7-99, 22-7-300 to 22-7-502)	Survey area extends beyond the updated Onshore Development Boundary.	None detected.	None detected.	A negative linear trend [140bA] crosses the northern half of the survey area. This is parallel to an historic field boundary and may be associated with it.  In the south of the survey area an amorphous curving positive magnetic trend [140bB] has been detected. This has been noted as having an unclear origin, although a natural cause is likely given responses in the data from Field 140 to the east.	Two weak linear trends [140bC] coincide with former field boundaries indicated on historic mapping.  Parallel trends, aligned approximately east-west, have been noted in the south of the survey area and are believed to be due to past ridge and furrow cultivation. However, they could potentially be due to field drains.  Weaker parallel trends aligned north-south are due to modern ploughing.	Amorphous zones of slightly enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations.  The high levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
140 (Figures 22-7-99 to 22.101, 22-7-301 to 22-7-303, 22-7-503 to 22-7-505)	Survey area extends beyond the updated Onshore Development Boundary.	None detected.	None detected.	Numerous trends of an unclear origin have been detected with this survey area. In the west of the area a series of approximately parallel negative liners trends [140A] have been noted. It is most likely that these are associated with past ridge and furrow cultivation. However, a more recent agricultural origin, natural variations, or archaeological origins cannot be excluded. They extend northward into Field 130 to the north.	Several sets of parallel linear trends have been noted. Those aligned north-south and parallel to the extant field boundaries are due to modern ploughing. Trends aligned east-west in the south of the survey area are suggestive of past ridge and furrow cultivation which respect an historic field boundary.	Amorphous areas of slightly enhanced magnetism have been detected throughout the survey area. These are typical of natural subsurface variations.  The moderate to high levels of isolated ferrous/fired responses are due to modern debris in the topsoil.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				Several positive linear trends [140B] have been detected. These most likely relate to agricultural activity including ploughing and drainage features.		
138 (Figures 22-7-100 to 22.102, 22-7-302 to 22-7-304, 22-7-504 to 22-7-506)	Survey area extends beyond the updated Onshore Development Boundary.	None detected.	None detected.	Several weak linear trends of an unclear origin have been noted within the survey area. The negative parallel trends [138A] in the northwest of the survey area are likely to have an agricultural origin given they respect a former field boundary but could be due to natural variations.	Linear trends running east-west through the survey area [138B] coincide with former field boundaries shown on the 1st Ed OS map of 1888 (NLS, 2023). Additional former field boundaries [138C] have been detected in the north of the survey area on an NE-SW alignment and also correspond with historic field boundaries.  Parallel trends have been noted running approximately east-west throughout the southern half of the survey area and are due to past ridge and furrow cultivation. Weaker parallel trends on a north-south alignment are due to modern ploughing.	Several zones of strong magnetic response have been detected and are thought to be associated with modern land use.  The moderate to high levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
142 (Figures 22-7-102, 22-7-304, 22-7-506)	Survey area extends beyond the updated Onshore Development Boundary.	None detected.	None detected.	A cluster of strong discrete responses [142A] have been detected in the west of the survey area. The origin of the these is unclear. An archaeological origin cannot be excluded, but they may be due to natural variations or modern debris / activity.	Parallel trends have been noted running approximately east-west throughout the survey area and are due to past ridge and furrow cultivation. Weaker parallel trends on a comparable alignment are due to modern ploughing.	An amorphous zone of slightly enhanced magnetism has been detected in the centre of the survey area. This is typical of natural subsurface variations.  The moderate levels of isolated ferrous/fired responses are due to



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				A few week trends have also been noted which are most likely associated with agricultural activity.		modern debris in the topsoil.
1240 (Figures 22-7-103, 22-7- 305, 22-7-507)	Survey area extends beyond the updated Onshore Development Boundary.	None detected.	None detected.	None detected.	Weak parallel trends on a SW-NE alignment are due to modern ploughing.	The data from this survey area is dominated by magnetic disturbance due to a modern utility running through the centre of the survey area on a north-south alignment.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
1241 (Figures 22-7-103 to 22-7-104, 22-7-305 to 22-7-306, 22-7-507 to 22-7-508)	Survey area extends beyond the updated Onshore Development Boundary.	None detected.	In the southern half of the survey area a linear trend and associated curving response [1241A] has been detected. The nature and form of the response suggests a possible archaeological origin.  A weaker circular trend [1241B] has been detected 20m to the east of [1241A] and suggests a possible ring ditch some 8m in diameter.  Along the northwestern edge of the survey area linear trends [1241C] suggest part of a possible enclosure.  The above responses do not form a coherent pattern, but they do suggest possible	Weak rectilinear trends and amorphous areas of enhanced magnetism [1241D] have been detected in the vicinity of [1241A] and [1241B]. Although an archaeological origin cannot be excluded, they could be due to agricultural activity and natural variations  In the south of the survey area fragmentary linear trends [1241E] have been noted. These may be associated with agricultural activity. However, a linear cropmark has been recorded 120m to the south (MHU19463) meaning an	The fragmentary linear trends have been noted which correspond with former field boundaries depicted on the 1st Ed OS map of 1888 (NLS, 2023).  Parallel linear trends indicative of field drains have been detected in the north of the survey area aligned east-west.  Weak parallel trends on an NNW-SSE alignment are due to modern ploughing.	Amorphous zones of enhanced magnetism have been detected throughout the survey area. These are typical of natural subsurface variations.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			settlement and may be associated with responses from a previous geophysical survey (EHU2664). All these responses lie just to the west of the Onshore Development Boundary.	archaeological origin cannot be excluded.		
168 (Figures 22-7-109, 22-7-311, 22-7-513)	Survey area extends beyond the updated Onshore Development Boundary. Survey area is within P10.	None detected.	None detected.	Discrete areas of enhanced magnetism [168A] have been detected in the northern half of the survey area. The origin of these is unclear. Although an archaeological origin cannot be excluded, they do not form a coherent pattern. They are more likely to be due to natural variations or more deeply buried modern ferrous or fire material.  Two strong curving linear trends [168B] have been detected in the east of the survey area. Given these follow the topography of the area, a natural origin is most plausible.	The sinuous zone of magnetic disturbance [168C] running through the eastern half of the survey area coincides with a former field boundary indicated on the 1st Ed OS map of 1888 (NLS, 2023). Weak parallel trends have been noted running approximately east-west throughout the survey area and are due to modern ploughing.	A zone of strongly enhanced magnetism has been detected within the survey area. These are typical of natural subsurface variations such as palaeochannels.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
176 (Figures 22-7-109 to 22-7-111, 22-7-311 to 22-7-313, 22-7-513 to 22-7-515)	Survey area extends beyond the updated Onshore Development Boundary. Survey area is within P10.	None detected.	A relatively well-defined, but fragmentary, linear trend [176A] has been noted crossing the survey area. The response is aligned SW to NE and appears to turn in the north of the survey area. Nothing is indicated on the HER at this location.	Discrete areas of enhanced magnetism [176B] have been detected in the northern half of the survey area. The origin of these is unclear. Although an archaeological origin cannot be excluded, they do not form a coherent	The weak curving trend [176C] in the east of the survey area corresponds with a former field boundary shown on the 1st Ed OS map of 1888 (NLS, 2023).  Ephemeral parallel trends have been noted running approximately east-west	Ephemeral areas of enhanced magnetism have been detected across the survey area. These are typical of natural geological variations.  Small zones magnetic disturbance along the eastern and western edges

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			However, the anomaly has been categorised as having a possible archaeological origin based on its form and because it does not respect any of the extant or former boundaries or known ridge and furrow suggesting it could predate them. However, A modern agricultural or natural origin cannot be excluded.	pattern. They are more likely to be due to natural variations or more deeply buried modern ferrous or fire material.  Several additional weak trends have been noted within the survey area. These most likely have a natural or agricultural origin.	throughout the survey area and are due to past ridge and furrow cultivation. Weaker parallel trends on a comparable alignment are due to modern ploughing.	of the survey area are due to adjacent metal fences.  A high level of isolated ferrous/fired responses have been noted throughout the survey area.
178 (Figures 22-7-110 to 22-7-112, 22-7-312 to 22-7-314, 22-7-514 to 22-7-516)	Survey area lies within updated Onshore Development Boundary. Survey area lies partially within PA10.	None detected.	None detected.	A weak L-shaped trend [178A] has been detected in the east of the survey area. The origin of this is unclear and while an archaeological origin cannot be dismissed, an agricultural origin is equally plausible. A cluster of strong, discrete, responses [178B] has been noted in the east of the survey area. The origin is unclear, but a natural or modern origin is likely.	Linear trends indicate the location of former field divisions indicated on the 1st Edition OS map of 1888.  Parallel trends aligned north-south are suggestive of ridge and furrow cultivation.	An amorphous band of increased response in the west of the survey area is due to natural subsurface variations.
185 (Figures 22-7-112, 22-7-314, 22-7-516)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA11.	In the southwest of the survey area a series of linear trends [185A] have been detected. Although these are situated on the relatively slope of the hill the central linear trends form a trackway that are situated on the plateau, with the result suggesting	Possible rectilinear and circular anomalies [185B] are discernible within the spread of enhanced magnetic responses within the postulate enclosures [185A]. These have been truncated to some extent by the ridge and furrow ploughing.	A spread of positively enhanced response [185E] to the north of [185A] could be associated. However, the magnetic disturbance to the north obscures the shape of the response making it difficult to provide a more precise interpretation.	Parallel linear trends on an east-west orientation in the north of the survey area, and a north-south orientation in the south of the survey area are typical of past ridge and furrow cultivation.  Short linear trends have been noted which	Responses due to natural geological variations are apparent in the north of the survey area.  Magnetic disturbance on the eastern, northern and western limits of the survey area is associated with



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
		enclosures abutting the trackway.	A series of positively enhanced linear trends are visible in the east of the survey area which resemble a rectangular structure and correlate well with the known location of a windmill structure [185C]. The termination of two utility pipes at the edge of the anomalies suggest the active use of this structure from a relatively recent historical period. It is also located on the plateau, suggesting a use that may require exposure to wind.  A series of linear trends [185D] have been mapped near the southern limits of the survey area. These have been categorised as having a possible archaeological origin due to their possible spatial association with [185A]	A further spread of magnetic enhancement [185F] has been detected to the north of [185C]. It is unclear whether this is related to [185C] or to the geological variations seen directly to the north.	correspond with historic field boundaries.	metal wiring and a metal gate.
			and [185B]. However, given they follow the natural contours of the area, they could have a natural origin.			
184 (Figures 22-7-112, 22-7- 314, 22-7-516)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	None detected.	None detected.	A Utility have been detected traversing the centre of the survey area, which may relate to the former windmill structure in Field 185 to the west.
						Magnetic disturbance around the perimeter of the survey area is likely to



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
						be related to former quarry activity to the south of the survey area.  Horses were in the field prior to the survey, and some anomalies in the survey area relate to modern horse husbandry.  Magnetic disturbance on the limits of the survey area is associated with metal wiring.
189 (Figures 22-7-113, 22-7-315, 22-7-517)	Survey area lies within updated Onshore Development Boundary.	None detected.	Two small negatively enhanced anomalies [189A] have been detected within the survey area that align with the post-medieval ditch. However, the feature is not continuous.	A short negatively enhanced trend [189B] has been detected immediately south, and parallel to 189A [189B]. It does not fully follow the alignment of the ditch feature recorded in the HER, so it is uncertain how this relates to the historic feature.  A series of linear trends [189C] are present in the south of field. These are all within an area of enhanced magnetism, which could be a geological variation or an anthropological feature.	None detected.	Magnetic disturbance on the northern and western limits of the survey area is associated with the modern raised trackway.
191 (Figures 22-7-113, 22-7-315, 22-7-517)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA12.	Part of a moated site [191A] has been detected in the southwest of the survey area (MHU2574).	None detected.	Two weak positively enhanced trends are visible in the south of the survey area [191B]. These are in the vicinity of a moated site and trackway; however, they do not align with the known position. It	Parallel linear trends on an east-west orientation have been detected within the survey area and are typical of past ridge and furrow cultivation.	This area has a high level of background response.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				may be an unrecorded part of this complex, or they could have unrelated natural or modern origins.		
192 (Figures 22-7-113, 22-7-315, 22-7-517)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA12.	Part of a moated site [192A] has been detected in the southeast of the survey area (MHU2574).	None detected.	A group of enhanced linear trends are present to the west of the moated site [192B]. These might be related to the ditch feature that is also mentioned to be in the vicinity of the moated site, however some of the trends might also be ridge and furrow, or a coincidence of the very noisy background levels.	Parallel linear trends on an east-west orientation have been detected in the survey area and are typical of past ridge and furrow cultivation.	This area has a high level of background noise. This could be related to anthropogenic activity from the known archaeology on site.  The ferrous boundary fencing has resulted in zones of magnetic disturbance along the limits of the survey area.
193 (Figures 22-7-113, 22-7-315, 22-7-517)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA12.	None detected.	None detected.	A single large spread of enhanced dipolar disturbance has been recorded to the west of the survey [193A]. This has no historical associations, although it could be a continuation of the high levels of disturbance from Field 192 to the east.  A single slightly enhanced circular trend[193B] is noted just to the north of [193A]. It has the shape of a circular ditch type feature; however, it is very weak in response and could have a natural or modern origin.	None detected.	This area has a high level of background response. The ferrous boundary fencing has resulted in zones of magnetic disturbance along the limits of the survey area.
200	Survey area extends beyond the updated	None detected.	None detected.	A very strong anomaly [200A] has been detected in the north of the survey	Weak parallel trends on an east-west alignment are	Discrete zones of strongly enhanced magnetism have been detected within



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
(Figures 22-7-114, 22-7-316, 22-7-518)	Onshore Development Boundary.			area. The nature of the response suggests an area of burning, although it is not possible to say whether this is archaeological in origin or due to modern activity or debris.	due to modern agricultural activity.	the survey area and are suggestive of lightning strikes.  The magnetic disturbance along the western limits of the survey area is due to the adjacent track and fencing.  A high level of isolated ferrous/fired responses have been noted throughout the survey area.
200s (Figures 22-7-114, 22-7-316, 22-7-518)	Survey area lies within the updated Onshore Development Boundary.	None detected.	None detected.	None detected.	Weaker parallel trends are due to modern ploughing.	Amorphous zones of strongly enhanced magnetism have been detected throughout the survey area. These are typical of natural subsurface variations.  Zones of magnetic disturbance along the limits of the survey area are due to adjacent fencing.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
202 (Figures 22-7-114 to 22-7-115, 22-7-316 to 22-7-518 to 22-7-519)	Survey area extends beyond the updated Onshore Development Boundary.	None detected.	None detected.	A very strong anomaly [202A] has been detected in the west of the survey area. The nature of the response might suggest an area of burning, although it is not as well-defined as	Weak parallel trends on an east-west alignment are due to modern agricultural activity.	Discrete zones of strongly enhanced magnetism have been detected within the survey area and are suggestive of lightning strikes.  A moderate level of isolated ferrous/fired

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				[200A] to the northeast. It may have a natural origin.		responses have been noted throughout the
				Several discrete areas of enhanced magnetism have been noted within the survey area. The origin of these is unclear. While an archaeological origin cannot be excluded, a natural or modern origin is most likely.  A few weak linear trends have also been noted which are likely to have an		survey area.
1075	Cum lay area aytanda	A strang well defined set	Lincortrondo [1375D]	agricultural origin.	The fragmentary linear	The band of enhanced
1235 (Figures 22-7-116 to 22-7-117, 22-7-318 to 22-7-319, 22-7-520 to 22-7-521)	Survey area extends beyond the updated Onshore Development Boundary.	A strong, well-defined, set of linear trends [1235A] have been detected in the centre of the survey area, within the updated Onshore Development Boundary. These form a square enclosure measuring 35m by 35m, with the suggestion of a southern extension. The form and nature of the response suggests a probable archaeological origin. It is not possible to determine a date for the postulated enclosure. However, strong ridge and furrow responses in the area suggest it predates this medieval cultivation. Linear cropmarks shave been recorded 330m to the west (MHU19462).	Linear trends [1235B] have been noted which suggest an extension of the northern side of the postulated enclosure [1234A]. These have been categorised as possible archaeology due to their weak nature.	Three strong parallel linear trends [1235C] have been detected in the north of the survey area. The alignment of these suggest they are associated with known past ridge and furrow cultivation. However, given their noticeably stronger response they have been noted as unclear in origin; they could indicate an undocumented former field division.  A broad zone of slightly elevated response [1235D] has been noted in the south of the survey area. These probably have a natural origin, but an agricultural origin cannot be excluded.	The fragmentary linear trends [1235E] running north-south and east-west in the centre of the survey area corresponds with a former field boundary shown on the 1st Ed OS map of 1888 (NLS, 2023). Associated spreads of magnetic disturbance are likely to be associated with the removal of these former field boundaries.  Parallel linear trends indicative of field drains have been detected within the survey area with most aligned north-south.  Parallel trends have been noted running east-west throughout the survey area and are due to past ridge and furrow cultivation. Weaker parallel trends on a comparable	The band of enhanced disturbance in the south of the survey area, which extends into Field 1234 to the south appears nature in origin; however, a more anthropogenic interpretation should not be entirely ruled out.  A moderate level of isolated ferrous/fired responses have been noted throughout the survey area.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
					alignment are due to modern ploughing.	
(Figures 22-7-117 to 22-7-118, 22-7-319 to 22-7-320, 22-7-521 to 22-7-522)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA13.	None detected.	None detected.	A few small anomalies are present in the southeast corner of the survey area [1234A]. Their relative proximity to the historic field boundary means that they could be related, however their dispersed nature also means they could have other provenances.  Some curving positively enhanced anomalies are also present in the south of the survey area [1234B]. These don't respect any other features in the survey area and are relatively weak responses. Although these could be enclosures it could equally be related to geological responses.  Some additional positively enhanced linear trends are also present in the centre of the survey area [1234C]. These lie in the vicinity of another historic field boundary that bisects the survey area from west to east. Their character is similar to anomalies [1234B] and have a similar unclear interpretation.	Linear trends and zones of increased response are associated with three historic field boundaries that are indicated on the 1st Ed OS map of 1888.  Ploughing trends have been detected running north-south across the dataset.	A large curving spread of enhanced disturbance appears natural in original however, a more anthropogenic interpretation should not be entirely ruled out.  Additional morphous zones of enhanced magnetism have been detected throughout the survey area. These are typical of natural subsurface variations.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
1233 (Figures 22-7-118, 22-7-320, 22-7-522)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA13.	None detected.	None detected.	None detected.	None detected.	A large curving spread of enhanced disturbance appears natural in origin; however, a more anthropogenic interpretation should not be entirely ruled out.
215 (Figures 22-7-118 to 22-7-119, 22-7-320 to 22-7-321, 22-7-522 to 22-7-523)	Survey area lies within the updated Onshore Development Boundary.  Survey area is within PA13.	None detected.	None detected.	None detected.	Fragmentary parallel trends aligned approximately northsouth, have been noted within the survey area and are believed to be due to past ridge and furrow cultivation.  Weaker trends parallel to the extant boundaries are due to modern ploughing.	Amorphous zones of strongly enhanced magnetism have been detected throughout the survey area. These are typical of natural subsurface variations.  Zones of magnetic disturbance along the limits of the survey area are due to adjacent fencing.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
216 (Figures 22-7-119, 22-7-321, 22-7-523)	Survey area lies within the updated Onshore Development Boundary. Survey area is within PA13.	None detected.	None detected.	In the north of the area three discrete areas of strong response [216A] have been detected. These have been noted as having an unclear origin although they are likely to be due to naturally occurring magnetic material. However, an archaeological origin cannot be excluded.  The origin of the parallel trends [216B] in the east of the area is unclear; they	Linear trends and linear zones of magnetic enhancement [216C] coincide with historic field boundaries.  Weak trends aligned SW-NE are believed to be associated with field drains.  Weak parallel trends aligned NNW-SSE are due to modern ploughing.	A concentration of amorphous responses in the centre of the survey area are likely to reflect natural variations.  Zones of magnetic disturbance along the limits of the survey area are due to adjacent fencing.  The moderate levels of isolated ferrous/fired responses are due to



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				could be due to ridge and furrow cultivation or field drains. The fact that they respect historic field boundaries suggests they may be due to past cultivation.		modern debris in the topsoil.
221 (includes 218)	Survey area lies within the	In the centre of the survey	The weak trends and	Discrete anomalies and	Linear trends [221H] in the	A band of amorphous
(Figures 22-7-119 to 22-7-124, 22-7-321 to 22-7-326, 22-7-523 to 22-7-528)	updated Onshore Development Boundary.  Survey area is within PA13.	area well-defined linear trends [221A] suggests a rectangular enclosure. This corresponds with an Iron Age/Roman ditch visible as a cropmark (1460420). However, the magnetic anomaly is not as extensive as the recorded cropmark.  A curving linear trend [221B] has been detected immediately to the west of the [221A]. The nature and form of this response suggest a probable archaeological origin. However, it is not clear if this is an annex to the aforementioned enclosure, or a separate enclosure of a different date. It could potentially be part of the recorded Iron Age/Roman trackways (MHU7169) but its location is not consistent with the cropmark evidence.	discrete areas of enhanced response [221C] may indicate a continuation of the known enclosure [221A] but they are not as well-defined.  The weak linear trends [221D] appear to indicate a continuation of the possible additional enclosure [221B]. If these responses are associated with [221B] the data suggests two overlying enclosures of different dates.  Two short parallel zones of enhanced response [221E] appear to correspond with the trackway visible as cropmarks, but they are poorly defined.  The nature of the linear zone of enhanced response [221F] suggests an archaeological origin and it may be part of the known trackways although it has no corresponding cropmark.  The fragmentary linear trends [221G] in the	weak linear trends have been noted throughout the survey area. These have been categorised as unclear as it is difficult to determine if they have an archaeological origin, are due to agricultural activity or indicate natural variations.	east of the area correspond with former field boundaries indicated on historic mapping.  Parallel trends aligned approximately north south in the east of the area are indicative of past ridge and furrow cultivation.  The slightly stronger parallel trends aligned SW-NE are thought to indicate field drains.	responses in the south of the survey area reflect natural variations.  A modern service runs along the eastern limits of the survey area. A second service has been detected aligned east-west which terminates at historic field boundaries.  Zones of magnetic disturbance along the western and eastern limits of the survey area are due to adjacent fencing.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			southwest of the survey area have been noted as having a possible archaeological origin as there is some correlation with cropmarks interpreted as Iron Age/Roman field systems (1460420) but they are not very coherent or extensive.			
238 (Figures 22-7-122 to 22-7-127, 22-7-324 to 22-7-329, 22-7-526 to 22-7-531)	Northern survey area lies within the updated Onshore Development Boundary.  Survey area is within the Long Riston route Diversion.  Southern survey area lies beyond the updated Onshore Development Boundary.	None detected.	Linear zones of enhanced response have been detected in the southern survey area [238A], which lies beyond the updated Onshore Development Boundary. These may have a natural or agricultural origin. However, they could be associated with cropmarks recorded AP's that are noted as being Iron Age / Roman ditches (HE_UID 1460420), hence their classification as possible archaeology.	Numerous strong, very well-defined, responses [238B] have been noted as having an unclear origin. These predominately lie in the northern survey area, which lies within the updated Onshore Development Boundary. Given the wider context, it is likely that these have natural origin. However, the geometry of the responses suggests some may have anthropogenic origins of unknown date.  Several weak trends [238C] have been noted within the survey area. These most likely have a natural or agricultural origin, although an archaeological one cannot be excluded.  A few discrete areas of enhanced response and weak linear trends have been noted. The origin of these is unclear. While an	Strong parallel trends on an approximately northsouth orientation in the southern survey area are indicative of field drains.  Weak parallel trends on a comparable alignment have been noted as ploughing trends.  However, they could indicate field drains of a different material (e.g. plastic), or past ridge and furrow cultivation.  The weak trends aligned SW-NE are due to modern ploughing.	Amorphous zones of strongly enhanced magnetism have been detected throughout the survey area and are typica of natural subsurface variations.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				cannot be excluded, a natural or modern agricultural origin is more likely.		
(Figures 22-7-127 to 22-7-128, 22-7-329 to 22-7-531 to 22-7-532)	Northern survey area lies within the updated Onshore Development Boundary.  Survey area is within the Long Riston route Diversion.  Southern survey area lies beyond the updated Onshore Development Boundary.	None detected.	None detected.	Several discrete areas of enhanced response and linear trends have been noted. These are almost certainly natural in origin, but have been noted as having an unclear origin, as an archaeological origin cannot be entirely dismissed.	The weak trends aligned NW-SE are due to modern ploughing.	Strong sinuous zones of strong response have been detected in the north ern area and indicate natural variations.  The amorphous zone of weakly enhanced response detected in the southern survey area are also typical of natural subsurface variations.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
1323 (Figures 22-7-128, 22-7-330, 22-7-532)	Survey area extends beyond the updated Onshore Development Boundary.  Survey area is within the Long Riston route Diversion.	None detected.	None detected.	Several discrete areas of enhanced response and linear trends have been noted. These are almost certainly natural in origin, but have been noted as having an unclear origin, as an archaeological origin cannot be entirely dismissed.	None detected.	The amorphous zone of weakly enhanced response detected in the east of the survey area typical of natural subsurface variations.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
1293 (Figures 22-7-129 to 22-7-131, 22-7-331 to 22-7-535)	Survey area extends beyond updated Onshore Development Boundary.	None detected.	None detected.	There is a suggestion of rectilinear response [1293A] in the eastern half of the survey area. While an archaeological origin for this cannot be	The weak linear trend [1293B] in the east of the area corresponds with former field division depicted on the 1st Ed OS map of 1888 (NLS, 2023).	The amorphous zones of weakly enhanced response detected within the survey area are typical of natural subsurface variations.  The high levels of isolated ferrous/fired responses

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
	Survey area is within the Long Riston route Diversion.			excluded, it is most likely to have a natural origin.		are due to modern debris in the topsoil. The elevated level of background response might indicate green waste.
1292 (Figures 22-7-131 to 22-7-132, 22-7-333 to 22-7-334, 22-7-535 to 22-7-536)	Survey area lies within the updated Onshore Development Boundary. Survey area is within the Long Riston route Diversion.	None detected.	None detected.	Several discrete areas of enhanced response and linear trends have been noted. These are almost certainly natural in origin, but have been noted as having an unclear origin, as an archaeological origin cannot be entirely dismissed.	Parallel trends on an east- west alignment have been noted within the survey area and reflect past ridge and furrow cultivation.	Ephemeral sinuous zones of strong response have been detected in the northern area and indicate natural variations.  The high levels of isolated ferrous/fired responses are due to modern debris in the topsoil. The elevated level of background response might indicate green waste.
1201 - incomplete (Figures 22-7-132 to 22-7-134, 22-7-336 to 22-7-536 to 22-7-538)	Survey area extends beyond the updated Onshore Development Boundary.  Survey area is within P13.	None detected.	Three clusters of fragmentary responses have been noted within this survey area. These have been noted has having a possible archaeological origin due to their nature and form. However, interpretation is tentative. The most convincing is the southern group [1201A] as these have a more rectilinear form and could potentially indicate plough damaged prehistoric enclosures. No known features are recorded at this location. However, probable archaeology had been detected in Field 1192 to the west.	A weak linear trend [1201D] has been noted in the south of the survey area. The origin of this is unclear but an agricultural one is most likely.	The fragmentary linear trends have been noted which correspond with former field boundaries depicted on the 1st Ed OS map of 1888 (NLS, 2023).  Weak parallel trends on an east-west alignment in the south of the area are thought to indicate past ridge and furrow cultivation.	Amorphous zones of enhanced magnetism have been detected throughout the survey area. These are typical of natural subsurface variations.  The high levels of isolated ferrous/fired responses are due to modern debris in the topsoil. The elevated level of background response might indicate green waste.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			There is a lower level of confidence in the northern responses [1201B] and [1201C]. They may be natural; however, they have been classified as possible archaeology due to the wider archaeological landscape and the ambiguity in their origin. Most of these responses lie beyond the updated Onshore Development Boundary.			
1196 (Figures 22-7-134, 22-7-336, 22-7-538)	Survey area lies beyond the updated Onshore Development Boundary. Survey area is within P13.	None detected.	None detected.	A linear trend [1196A] has been noted. The origin of this is unclear and the small survey area limits interpretation; an agricultural origin is most likely.	Agricultural trends on an NNW-SSE alignment have been noted. It is not clear if these are due to modern ploughing or past ridge and furrow cultivation.	Small zones magnetic disturbance along the eastern and western edges of the survey area are due to adjacent metal fences.  A moderate level of isolated ferrous/fired responses have been noted throughout the survey area.
1192 (Figures 22-7-135 to 22-7-137, 22-7-337 to 22-7-339, 22-7-539 to 22-7-541)	Survey area extends beyond the updated Onshore Development Boundary. Survey area is within P13.	In the west of the survey area a concentration of linear and curvilinear trends have been detected [1192A]. The nature and form of the responses suggest a possible Iron Age settlement with associated enclosures and possible trackways. The HER record lists a possible enclosure at this location recorded as a poorly defined cropmark (MHU10203). The complex of responses	Weak linear trends [1192B] have been noted and are likely to be part of the [1192A] complex of responses. However, they have been noted as only having a possible archaeological origin due to their more ephemeral, fragmentary nature.	Positively enhanced linear trends [1192C] have been noted throughout the survey area. These are likely to have natural or agricultural origins, but have been noted as having an unclear origin, as an archaeological origin cannot be entirely dismissed.  Small discrete areas of enhanced magnetism have been detected throughout the survey area [1192D]. While an	Fragmentary linear trends [1192E] and spreads of enhanced response [1192F] correspond with former field boundaries and features shown on the 1st Ed OS map of 1888 (NLS, 2023). Associated spreads of magnetic disturbance are likely to be associated with the removal of these former field boundaries.  Parallel trends have been noted running SW-NE throughout the survey	Amorphous zones of strongly enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations such as palaeochannels.  Zones magnetic disturbance along the edges of the survey area are due to adjacent metal fences.  A moderate level of isolated ferrous/fired

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
		covers an area of 150m by 150m and lies within the updated Onshore Development Boundary.		archaeological origin for these anomalies cannot be excluded, a natural origin is equally plausible.	area and are due to past ridge and furrow cultivation. Weaker parallel trends on a comparable alignment are due to modern ploughing.	responses have been noted throughout the survey area.
1319 (Figures 22-7-138 to 22-7-141, 22-7-340 to 22-7-343, 22-7-542 to 22-7-545)	Survey area extends beyond the updated Onshore Development Boundary. Survey area is within P13.	None detected.	None detected.	The linear trend [1319A] in the east of the survey area is likely to be an undocumented former field boundary.	The weak linear trends [1319B] coincide with former field division depicted on the 1st Ed OS map of 1888 (NLS, 2023). Strong parallel trends on different alignments are indicative of field drains. The parallel weak trends aligned north-south are due to modern ploughing.	Amorphous zones of strongly enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations such as palaeochannels.  Zones of magnetic disturbance along the edges of the survey area are due to adjacent metal fences.  A moderate level of isolated ferrous/fired responses have been noted throughout the survey area.
1266 (Figures 22-7-140 to 22-7-141, 22-7-342 to 22-7-343, 22-7-544 to 22-7-545)	Survey area extends beyond the updated Onshore Development Boundary. Survey area is within P13.	None detected.	None detected.	The origin of the strong response [1266A] is unclear. However, it is likely to have modern origin.  The linear trend [1266B] is likely to have an agricultural origin but due to its slightly different orientation and slightly stronger response it has been categorised as having an unclear origin.	The weak parallel trends aligned NNW-SSE are due to modern ploughing.	Amorphous zones of enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations.  A modern utility runs along the eastern limits of the survey area.  A moderate level of isolated ferrous/fired responses have been noted throughout the survey area.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
1255 (Figures 22-7-142 to 22-7-143, 22-7-344 to 22-7-345, 22-7-546 to 22-7-547)	Survey area lies within the updated Onshore Development Boundary. Survey area is within P13.	A strong, well-defined, linear trend [1255A] has been detected in the northwest of the survey area. This appears to be a continuation of an Iron Age / Roman ditch visible as a cropmark (HE_UID 1334599).	A short linear trend [1255B] has been detected at the northwestern limits of the survey area, just beyond the Onshore Development Boundary. Its strength and nature are comparable to [1255A] but it has been noted as possible archaeology due to its limited extent.	None detected.	The linear trends [1255C] coincides with a former field division depicted on the 1st Ed OS map of 1888 (NLS, 2023).  Strong parallel trends on different alignments are indicative of field drains.  The parallel trends aligned north-south are due to modern ploughing.	Amorphous zones of enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations such as palaeochannels.  Zones of magnetic disturbance along the edges of the survey area are due to adjacent metal fences.  A low level of isolated ferrous/fired responses have been noted throughout the survey area.
1252 (Figures 22-7-142 to 22-7-143, 22-7-344 to 22-7-345, 22-7-546 to 22-7-547)	Survey area lies within the updated Onshore Development Boundary.	None detected.	A short, but well-defined, ditch type response [1252A] has been detected in the east of the survey area. This may be associated with the presumed ditches, [1255B] and [1257A], detected to the northwest, but interpretation is less confident due to strong natural and modern responses in the immediate vicinity.  Two parallel negative trends [1252B] have also been detected in the northeast of the survey area. These appear to be a continuation of trends [1257B] detected in Field 1257 immediately to the northeast. However, the	Some additional linear trends [1252D] have been detected within the survey area. The origin for these is unclear. While an archaeological origin cannot be excluded, a natural or agricultural origin is equally plausible.	The weak linear trend [1252D] coincides with a former field division depicted on the 1st Ed OS map of 1888 (NLS, 2023). Strong parallel trends on different alignments are indicative of field drains. The parallel trends aligned NW-SE are due to modern ploughing.	Amorphous zones of enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations such as palaeochannels.  Discrete parallel zones of strong response have been detected in the centre of the survey area. These are likely to indicate field drain with a high ferrous or fired component, potentially Victorian in date.  Zones of magnetic disturbance along the northern and eastern limits of the survey area are due to adjacent metal fences.  A low level of isolated ferrous/fired responses

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			form of the response differs, changing from positive to negative, although this may be associated with the elevated background response caused by natural variations. However, the general alignment and spatial relationship is comparable to the Prehistoric / Roman Trackway (HE_UID 1463587) recorded as a cropmark 280m to the southwest.			have been noted throughout the survey area.
			Further ditch type responses [1252C] has been detected in the south of the survey area. Although this does not correspond with any recorded cropmark features it lies only 50m to the east of a Later Prehistoric / Roman Trackway albeit on a different alignment.			
1257 (Figures 22-7-142 to 22-7-143, 22-7-344 to 22-7-345, 22-7-546 to 22-7-547)	Survey area extends beyond the updated Onshore Development Boundary.	The short trend [1257A] in the southeast of the survey areas appear to be a south-westward continuation of an Iron Age / Roman ditch visible as a cropmark (HE_UID 1334599).	Weak parallel trends [1257B] in the southeast of the survey area appear to be a continuation of [1257A] and [1255B]. These responses may indicate a southwestern extension of the known Iron Age /Romain ditch, but their weak nature precludes a more definite interpretation.	None detected.	Parallel trends have been noted running east-west throughout the survey area and are suggestive of past ridge and furrow cultivation. Weaker parallel trends on a comparable alignment are due to modern ploughing.	Amorphous zones of enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations such as palaeochannels.  Zones of magnetic disturbance along the eastern and southern limits of the survey area



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
						are due to adjacent metal fences.
						A low level of isolated ferrous/fired responses have been noted throughout the survey area.
1216 (Figures 22-7-144, 22-7- 346, 22-7-548)	Survey area extends beyond the updated Onshore Development Boundary.	None detected.	None detected.	None detected.	Parallel linear trends suggestive of ridge and furrow cultivation have been detected in the north of the survey area aligned approximately east-west. Weaker parallel trends aligned east-west and parallel to the extant boundaries are due to modern ploughing.	Zones of magnetic disturbance along the eastern limits of the survey area are due to adjacent metal fences.  A low level of isolated ferrous/fired responses have been noted throughout the survey area.
1253 (Figures 22-7-147, 22-7-349, 22-7-551)	Survey area lies within the updated Onshore Development Boundary.	None detected.	None detected.	None detected.	Strong parallel trends on different alignments are indicative of field drains.	Amorphous zones of enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations.
1244 (Figures 22-7-147 to 22-7-148, 22-7-349 to 22-7-350, 22-7-551 to 22-7-552)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A single positively enhanced curved linear trend is present in the centre of the survey area, [1244A]. The small size of the feature means it is difficult to assess its origin, but an archaeological one cannot be excluded.  A linear trend [1244B] is present to the southeast of [1244A]. It is roughly parallel with some of the drainage features	An historic field boundary has been detected in the south of the survey area, as a combination of trends and spreads of enhanced response, which continue in Field 1246 in the west.  Ploughing trends are visible running north to south across the survey, up to the former field boundary, suggesting some antiquity to the ploughing trends, potential	The north of the survey area has a more enhanced magnetic background owing to the presence of natural features in this portion of the survey area.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				detected in the survey area, however the short length of this anomaly makes such an interpretation more cautious.  A few linear trends [1244C] aligned west to east have been noted. These may be field drains but have a different signature to those categorised as drainage features.  A more strongly magnetised linear trend is visible on the southern edge of the survey area [1244D]. This is likely to indicate a field drain, but it has been noted as having an unclear origin as it may indicate a former filed division.	indicating ridge and furrow cultivation.  Several linear trends characteristic of field drains overlie the ploughing trends.	
1246 (Figures 22-7-147 to 22-7-150, 22-7-349 to 22-7-352, 22-7-551 to 22-7-554)	Survey area lies within updated Onshore Development Boundary.	None detected.	A well-defined spread of enhanced magnetic response has been detected in the northwest of the survey area, and forms blocks of rectilinear shapes [1246A]. Although the historic mapping does not suggest any former buildings in the area, the magnetic response is suggestive of a large anthropogenic structure, or series of structures. Just to the south and east of the main block of disturbance are small	A magnetically enhanced linear anomaly [1246D] appears to be associated with [1246A] and runs southward, forking into two trends at the southern terminus It is possibly related to 1246A as some kind of boundary, however it is not clear exactly how or even if it is contemporary.  A similar interpretation can be given for a small positively enhanced linear trend [1246E] just to the	Broad ridge and furrow trends have been detected within the data set.  Spreads of enhanced response correspond to historic former field boundaries.	A series of highly magnetic anomalies are present along the line of telegraph poles in the which run through the survey area on a NW-SE alignment.  Magnetic disturbance along the western limits of the survey area can be attributed to the road and the fencing on the western side of the survey area.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			spread of similarly enhanced response, which could be related to the main structure [1246B, 1246C].	east of [1246A], which extends up to just beyond a modern telegraph pole. This trend is more ephemeral than [1246D].		
				A longer linear trend [1246F]. has been detected, starting about 30m to the east of [1246A] and terminating near the westernmost position of a former field boundary. The response is fragmentary, but the nature of the response suggests a possible trackway, or at least some remnant of a double ditch feature.		
				Strong parallel linear trends [1246G] have been detected in the west of the survey area. These appear to terminate at [1246F]. They are likely to be due to past ridge and furrow cultivation but have been noted as unclear due to their potential association with [1246F] and [1246A].		
				Another interrupted weakly enhanced linear trend [1246H] runs roughly parallel to [1246F]. However, this trend terminates in the centre of the survey area and bears no obvious correlation to any other feature except for a former field boundary	,	

Field No	Notes	Definite/Probable	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
		Archaeology				
				to the north of the survey area.		
				In the centre of the survey area is a discrete but interrupted linear trend [12461]. As it is not parallel to the previous unclear trends discussed it is likely to have served a different function, however the weak character makes interpretation difficult.		
				Additional trend and areas of increased response have been noted in the south and west of the survey area. While an archaeological origin for these cannot be excluded a natural or agricultural origin seems more likely.		
(Figures 22-7-151 to 22-7-153, 22-7-355 to 22-7-355, 22-7-555 to 22-7-557)	Survey area lies within updated Onshore Development Boundary.	None detected.	A series of positively enhanced broad trends are visible over the eastern portion of the survey area. Although largely unconnected in form, they do form a loose pattern that could potentially suggests an unenclosed settlement, interspersed among the more natural trends in the vicinity [334A]. It is possible that these strong anomalies also have a natural origin.	A very weakly enhanced positive series of linear trends from a roughly rectilinear enclosure in the north of the survey area [334B]. The weakness of the magnetic response makes it unclear if this is a natural or anthropogenic response.  Additional weak negatively and positively enhanced trends have been detected to the southwest of the survey area, which do not match the more obvious natural trends in the survey area [334C]. However, their provenance is difficult	An historic field boundary is noted in the centre of the dataset, running parallel to the modern plough lines.	Overhead powerlines run the survey area on a SW-NE alignment. This has resulted in strong responses at the location of the telegraph poles and a diffuse band of elevated response due to the powerlines themselves.  Strongly magnetised disturbance on the edges and centre of the dataset can be attributed to the roads either side of the survey are or the telegraph poles that bisect the survey. However, a small series of spreads in the east of the dataset cannot



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				to ascertain without other methods of prospection.		be so easily explained and may be the remnants of a former drain.
						The background noise in the survey area is largely due to geological responses.
330 (Figures 22-7-13, 22-7- 355, 22-7-557)	Survey area lies within updated Onshore Development Boundary.Survey area lies	None detected.	None detected.	None detected.	None detected.	The modern utility detected in Field 315 continues into this area.
	within PA15.					Zones of elevated response are due to natural variations.
						Magnetic disturbance along the edges of the survey area is due to adjacent metal fences.
315 (Figures 22-7-153 to 22-7-155, 22-7-355 to 22-	Survey area lies within updated Onshore Development Boundary.	None detected.	A linear trend [ <b>315A</b> ] runs through the centre of the survey area. This has been	Additional trends have been noted within this survey area. It is likely that	Weak trends on NW-SE alignment reflect modern ploughing.	Curving linear trends of a natural origin are present throughout the dataset.
7-357, 22-7-557 to 22- 7-559)	Survey area lies within PA15.		noted as having a possible archaeological origin due to its nature and form, but	these have natural or agricultural origins. However, given that linear		Two modern utilities cross the survey area.
		it may have an agricultural origin.	trend [ <b>315A</b> ] has been noted as having a possible archaeological origin, it is possible that trend [ <b>315B</b> ] may be associated with		Small zones magnetic disturbance along the eastern and western edges of the survey area are due to adjacent metal fences.	
				[315A] given their spatial relationship. However, a natural or agricultural origin is more likely.		A high level of isolated ferrous/fired responses have been noted throughout the survey area.
						A n area of magnetic disturbance in the northeast of the survey area is suggestive of a small modern building,



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
						however there is no evidence on historic mapping to demonstrate a building in the survey area.
307 (Figures 22-7-154 to 22-7-155, 22-7-356 to 22-7-357, 22-7-558 to 22-7-559)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A single square shaped highly magnetic response has been detected in the northeast of the survey area [307A]. It has the response typically seen of modern infrastructure; however, there is no feature recorded on modern maps or aerial photography. It may be an anomalous response related to localised geological variations.	None detected.	Curving linear trends of a natural origin have been detected within the survey area.  A low level of isolated ferrous/fired responses have been noted in the west, with a medium level of ferrous/fired responses in the east of the survey area.
281 (Figures 22-7-155 22-7-357, 22-7-559)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA15.	None detected.	None detected.	None detected.	None detected.	Magnetic disturbance at the limits of the survey area is associated with metal fencing and the continuation of the modern utility detected in 296 and 315.  The isolated ferrous/fired
						responses are due to modern debris in the topsoil.
296 (Figures 22-7-156 to 22-7-158, 22-7-358 to 22-7-360, 22-7-560 to 22-7-562)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA15.	None detected.	A curving negative trend [296A] has been detected in the west of the survey area. This has been noted as possible archaeology due to its form, but it may have a natural origin.	Several weak linear trends and discrete areas of enhanced magnetism have been noted throughout this survey area. While an archaeological origin for these cannot be exclude, natural and agricultural origins are more likely.	None detected.	A subtle mottling is evident throughout the dataset which is due to natural variations.  A modern utility runs through the survey area on a NW-SE orientation.  Small zones magnetic disturbance along the

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
						edges of the survey area are due to adjacent metal fences.  A low level of isolated ferrous/fired responses have been noted.
291 (Figures 22-7-157 to 22-7-161, 22-7-359 to 22-7-363, 22-7-561 to 22-7-565)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA15.	None detected.	Short linear anomalies and discrete areas of enhanced magnetism [291A] have been noted along the northern limits of the survey area and have been categorised as having a possible archaeological origin. Interpretation is cautious due to the responses being on the limits of the survey area, but they have an archaeological form. However, an agricultural or natural origin cannot be excluded.	A subcircular zone of enhance magnetism [291B] has been detected in the south-east of the survey area. The origin of this is unclear. It may have an archaeological origin, but a natural origin is more likely.  Several weak linear trends and additional discrete areas of enhanced magnetism have been noted throughout this survey area. While an archaeological origin for these cannot be excluded, natural and agricultural origins are more likely.	Weak trends on NW-SE alignment reflect modern ploughing.	A modern utility runs along the western limit of the survey area.  Additional zones of magnetic disturbance are due to adjacent metal fencing.  The isolated ferrous/fired responses are due to modern debris in the topsoil.
299 (Figures 22-7-159 to 22-7-161, 22-7-361 to 22-7-363, 22-7-563 to 22-7-565)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA15.	None detected.	None detected.	Linear trends have been noted on a NE-SW alignment within this survey area. While noted as having an unclear origin, an agricultural origin is most likely	Linear trends on a north- south alignment are due to field drains.  Weak trends on NW-SE alignment reflect modern ploughing.	This area has a low level of background noise relative to Field 291 immediately to the north with only a small area of disturbance in centre of dataset.  The modern utility detected in Field 291 continues into this area
280 (Figures 22-7-160 to 22- 7-162, 22-7-362 to 22-	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A strong linear trend [280A] has been detected in the northeast of the survey area. It is parallel to	Parallel trends on east- west and WSW-ENE alignments are associated with modern ploughing.	Several broad linear trends in the east and north of the dataset are geological in origin, potentially



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
7-364, 22-7-564 to 22- 7-566)				the modern field boundary to the north and could be a headland. However, it could also have a natural origin.  Several linear trends and small discrete areas of enhanced disturbance are recorded in the east of the survey area, generally aligned north-south [280B]. These may be associated with the straightening of the river Hull; however natural or agricultural origins are also plausible.  A series of weakly enhanced trends have been detected aligned northwest to southeast [280C]. These may be related to previous agricultural regimes.  Several small discrete weakly enhanced trends are noted throughout the survey area [280D]. These may have geological origins or may be related to agricultural practices.		indicating former palaeochannels. Additionally, a series of discrete trends over the centre of the dataset are possible kettle holes, formed by glacial activity. A medium level of isolated ferrous/fired responses have been noted throughout the survey area.
303 (Figures 22-7-160 to 22- 7-162, 22-7-362 to 22- 7-364, 22-7-564 to 22- 7-566)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	Several weakly enhanced linear trends [303A] on a NE-SW alignment have been detected across the dataset. The origin of these is unclear. These could be the remnants of a former ploughing or drainage pattern.	A former field boundary has been detected in the centre of the survey area aligned north to south and corresponds with a former field boundary indicated on historic mapping.  Ploughing trends are visible on a north-south	A bridge in the northeast of the survey area has been generated an area of magnetic disturbance.  Broad discrete areas of enhanced response, especially in the west of the



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				Additional discrete areas of enhanced disturbance and some weakly enhanced trends are more randomly scattered throughout the survey area [303B]. These are more unclear and may be related to geological variations.	alignment over much of the survey area.	survey area, are geological in origin.  A medium level of isolated ferrous responses has been noted.
282 (Figures 22-7-162 to 22-7-163, 22-7-364 to 22-7-365, 22-7-566 to 22-7-567)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	Two linear zones of slightly negative enhancement have been detected in the southwest of the survey area [282A]. These may relate to former ditches or to geological variations.  A series of weakly enhanced trends have been detected in the north of the survey area [282B]. The origin of these is unclear. While they may relate to ditch like features, they could be due to natural variations or agricultural activity.  A pair of ephemeral negatively enhanced linear trends [282C] have been noted in the centre of the survey area. These could be a continuation of the drainage from the west of the survey area, or a relict fragment of ridge and furrow.  A single linear trend [282D], just to the south of	A former field boundary has been detected in the centre of the survey area, aligned north to south as a series of strongly enhanced discrete anomalies and ephemeral linear trends.  Positively enhanced parallel trends on a generally NW-SE alignment indicate drainage of a likely postmedieval date.	A moderate level of isolated ferrous/fired responses have been noted throughout the survey area.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				magnetic response. This could also be a continuation of the drainage from the west of the survey area or remnants of ridge and furrow cultivation.		
290 (Figures 22-7-163 to 22-7-164, 22-7-365 to 22-7-567 to 22-7-568)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A weakly enhanced semicircular trend [290A] has been detected in the centre of the survey area, measuring 20m in diameter. A discrete response has been detected within the circular response. The responses suggest a possible ring ditch with a central pit. However, such an interpretation is cautious as the shape is vague, and no other features relate to it.  A series of negatively enhanced linear trends [290B] are present to the southern half of the survey area. These form some rectilinear shapes with openings to the southwest, suggesting possible enclosures. However, the responses are weak and natural or agricultural origins are likely.  A discrete disjointed area of negatively enhanced disturbance is noted to the west of 290A [290C]. They are magnetically stronger than the geological	Weak parallel trends in the north of the survey area are on a generally north-south alignment and consistent with historical ridge and furrow patterns noted on aerial photography. A second set of stronger parallel trends are noted in the south of the survey area running NE-SW, suggesting a more modern agricultural pattern, which might be drainage.  Some drains are noted in the south of the survey area on a north-south alignment.	Well-defined areas of enhanced magnetism have been detected across the field. These are typical of natural geological variations.  Small zones of magnetic disturbance along the eastern and western edges of the survey area are due to adjacent metal fences.  A high level of dipolar anomalies has been noted possibly caused by green waste.

Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			anomalies nearby, however they do not form a coherent shape.		
			A weakly positively enhanced linear trend has been detected to the west of the survey area [290D]. It is possible that some of this may relate to modern headland, but much of the anomaly is not straight and may relate to geological processes instead.		
Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A very small area of positively enhanced disturbance has been detected in the northeast of the survey area, within the location of a recorded flint axe [302A]. If not for the location findspot, this would likely have been recorded as a natural anomaly.  Two positively enhanced trends [302B] running parallel to each other are noted to the south of [302A]. These are stronger than the probable modern ploughing trends detected elsewhere across the survey area. However, the features terminate abruptly in a similar pattern to the ploughing patterns.	Ploughing trends of a likely modern origin have been discerned across the whole survey area. These run in multiple directions and are evenly spaced. Some of these may also represent drains.	Ephemeral areas of enhanced magnetism have been detected across the field. These are typical of natural geological variations.  Small zones of magnetic disturbance along the eastern and western edges of the survey area are due to adjacent metal fences.  A high level of dipolar anomalies has been noted, possibly caused by green waste or the very bumpy nature of the field during survey.
	Survey area lies within updated Onshore	Survey area lies within updated Onshore  Archaeology  None detected.	Survey area lies within updated Onshore  Archaeology  None detected.  None detected.	Archaeology  anomalies nearby, however they do not form a coherent shape.  A weakly positively enhanced linear trend has been detected to the west of the survey area [290b]. It is possible that some of this may relate to modern headland, but much of the anomaly is not straight and may relate to geological processes instead.  Survey area lies within updated Onshore Development Boundary.  None detected.  None detected.  A very small area of positively enhanced disturbance has been detected in the northeast of the survey area, within the location of a recorded flint axe [302A]. If not for the location findspot, this would likely have been recorded as a natural anomaly.  Two positively enhanced trends [302B] running parallel to each other are noted to the south of [302A]. These are stronger than the probable modern ploughing trends detected elsewhere across the survey area. However, the features terminate abruptly in a similar pattern to the ploughing	Archaeology  anomalies nearby, however they do not form a coherent shape. A weakly positively enhanced linear trend has been detected to the west of the survey area (2900). It is possible that some of this may relate to modern headland, but much of the anomaly is not straight and may relate to geological processes instead.  Survey area lies within updated Onshore Development Boundary.  None detected.  None detected.  A very small area of positively enhanced disturbance has been detected in the northeast of the survey area, within the location of a recorded filint axe (302A). If not for the location findspot, this would likely have been recorded as a natural connady.  Two positively enhanced trends (302B) running parallel to each other are noted to the south of [302A]. Those of the survey area, these may also represent than the probable modern ploughing trends detected elsewhere across the whole survey area. These run in mittiple directions and are evenly spaced. Some of the location findspot, this would likely have been recorded as a natural connady.  Two positively enhanced trends (302B) running parallel to each other are noted to the south of [302A]. Those are stronger than the probable modern ploughing trends detected elsewhere across the survey area. These run in multiple directions and are evenly spaced. Some of 1302A]. Those been recorded as a natural connady.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				just to the south of [302B]. Although it is on a different alignment to [302B] it is possible that this also relates to modern agricultural practices. However, an archaeological origin cannot be wholly excluded.		
				A 126m long strongly enhanced positive linear anomaly [302D] is present in the west and centre of the survey area. It is possible that this is a drain, however it could be an undocumented field boundary.		
300 (Figures 22-7-165, 22-7-367, 22-7-569)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA16.	None detected.	Several linear trends [300A] have been detected and have been categorised as possible archaeology. However, they may simply indicate different phases of drainage, although their character and form differ from the drainage features detected elsewhere in this survey area.	A linear anomaly [300B] runs through the centre of the survey area on a north-south alignment. The origin of this is unclear. It may indicate a field drain but could potentially indicate an undocumented former field division.	Clearly defined linear trends indicative of field drains run east to west throughout the dataset.  Weak parallel trends on a generally north-south alignment are due to modern ploughing.	Ephemeral areas of enhanced magnetism have been detected across the survey area. These are typical of natural geological variations.  Small zones magnetic disturbance along the eastern and western edges of the survey area are due to adjacent met-al fences.  A high level of isolated ferrous/fired responses have been noted throughout the survey area.
297 (Figures 22-7-165 to 22- 7-166, 22-7-367 to 22-	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	An ephemeral linear anomaly [297A] crosses the northern half of the survey area. The origin of this is unclear. It may	Possible drains are visible running east to west throughout the dataset. Weak parallel trends on a generally north-south	Well-defined areas of enhanced magnetism have been detected across the field. These are typical



### **RWE**

Field No **Definite/Probable Possible Archaeology** Unclear **Agricultural** Non-Archaeological Notes **Archaeology** 7-368, 22-7-569 to 22-Survey area lies within indicate a field drain but alignment reflect modern of natural geological 7-570) PA16. could potentially indicate ploughing. variations. an undocumented former Small zones of magnetic field division. disturbance along the eastern and western edges of the survey area are due to adjacent metal fences. A high level of isolated ferrous/fired responses have been noted throughout the survey area. 298 Survey area lies within None detected. None detected. An ephemeral linear Short linear trends Areas of enhanced updated Onshore anomaly [298A] runs suggestive of field drains magnetism have been (Figures 22-7-166 to 22-Development Boundary. through the centre of the run east to west detected across the field. 7-167, 22-7-368 to 22survey area on a north throughout the dataset. These are typical of 7-369, 22-7-570 to 22-Survey area lies within south alignment. The origin natural geological 7-571) PA16. Weak parallel trends on a of this is unclear. It could variations. generally north-south potentially indicate an alignment indicate modern Discrete areas of magnetic undocumented former disturbance along the ploughing. field division, buts is more eastern and western edges likely to be a field drain. of the survey area are due Fragmentary linear trends to adjacent met-al fences. [298B] cross the north-A high level of isolated west of the survey area. ferrous/fired responses The origin of this is unclear. have been noted It may indicate a field drain throughout the survey but could potentially area. indicate an undocumented former field division and may be a continuation of [**297A**] to the east. 306 Survey area lies within None detected. An ephemeral linear Short linear trends The area is dominated by None detected. well-defined areas of updated Onshore anomaly [306A] runs suggestive of field drains (Figures 22-7-167, 22-7enhanced magnetism Development Boundary. through the centre of the run east to west 367, 22-7-571) survey area on a norththroughout the dataset. indicating natural Survey area lies within south alignment. The origin geological variations. PA16. Weak parallel trends on a of this is unclear. It may generally north-south Small zones magnetic indicate a field drain but disturbance along the



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				could potentially indicate an undocumented former field division.	alignment reflect modern ploughing.	eastern and western edges of the survey area are due to adjacent metal fences.
						A high level of isolated ferrous/fired responses have been noted throughout the survey area.
304 (Figures 22-7-167, 22-7-367, 22-7-571)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA16.	None detected.	None detected.	A small circular anomaly with a strong dipolar spike in the centre has been detected at the southern limits of the survey area, likely incomplete [304A]. It has the shape of a circular ditch feature with a central area of activity; however, it is not well defined, and the response is similar to the geological background in the vicinity.  A very small linear trend [304B] runs directly to the east of [304A]. This is potentially obscured by both the geological background and [304A]. It could be part of a former field system or a natural response.  In the centre of the survey area a larger discrete area of disturbance is present bisecting the survey area [304C]. This could be the remnants of an undocumented field boundary; however, it could also be a natural response.	An historic field boundary has been detected running northwest to southeast in the south of the survey area.  Ploughing trends are visible on a north-south alignment over most of the dataset.	Broad discrete areas of enhanced disturbance across the survey area are geological in origin.  Small zones of magnetic disturbance along the eastern and western edges of the survey area are due to adjacent metal fences.  A medium level of dipolar anomalies has been noted.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				Just to the south of [304C] a slightly curving weakly enhanced linear trend [304D] has been noted. It is unclear whether this relates to natural or anthropological processes.		
301e (Figures 22-7-168 to 22-7-169, 22-7-572 to 22-7-573)	Survey area extends beyond the updated Onshore Development Boundary.	None detected.	None detected.	Several linear trends aligned east-west have been detected [301eA]. The origin of these is unclear. They may indicate field drains, but their form differs slightly from those categorised as field drains. They could potentially indicate former field divisions.  A cluster of amorphous fragmentary trends and areas of enhancement [301eB] have been identified in the west of the area. These lack any coherent form and they are likely to have a natural or agricultural origin. However, the fact that the curving trends [301A] detected in Field 301 to the west do not continue into this area raise the possibility that differing agricultural practice may be truncating archaeological deposits within this survey area.	Strong parallel trends on different alignments are indicative of field drains.  Weak trends on an approximately north-south orientation are due to modern ploughing.	Amorphous zones of enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations.  A low level of isolated ferrous/fired responses have been noted throughout the survey area.
301 (partial)	Survey area lies within updated Onshore Development Boundary.	None detected.	Two strongly enhanced positive curving linear anomalies [ <b>301A</b> ] have	A small series of positively enhanced anomalies forming a rough semicircle	A linear trend in the east of the survey area corresponds with a former	Strong amorphous responses have been noted throughout the

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Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
(Figures 22-7-170, 22-7-372, 22-7-574)			been detected near the eastern limits of the survey area and are likely to continue eastward.  Despite their discontinuous appearance it is likely that these form enclosures.	have been detected in the centre of the survey area [301B]. The origin of these is unclear. However, it is probable that they are natural in origin.  A pair of parallel anomalies [301C] have been detected to the south of [301B]. These could relate to a former trackway; however, given its position within the geological responses it is difficult to give a more confident interpretation without further investigation.  A single positively enhanced linear trend [301D] is present to the north of 301A. This may indicate a field drain but could potentially reflect a former ploughing regime.	field boundary indicated on historic mapping.  Field drains are visible running roughly northsouth and SW-NE across the survey area.  Weaker parallel trends on an approximately northsouth alignment reflect modern ploughing.	survey area and reflect natural variations in the subsurface.  Discrete areas of magnetic disturbance run north south through the eastern half of the survey area and are due to telegraph poles.
347 (Figures 22-7-172 to 22-7-173, 22-7-374 to 22-7-375, 22-7-576 to 22-7-577)	Survey area extends beyond updated Onshore Development Boundary.	None detected.	None detected.	A discrete area of positively enhanced response is present in the northeast of the survey area [347A]. It has the appearance of a rectilinear structure of an unknown date. However, it could also have a geological origin due to the lack of clarity on the overall shape of the structure.  A series of linear anomalies [347B] are	Numerous linear tends aligned SW-NE and NE-SW are evident across the survey area and are suggestive of drainage features.  Weaker trends on comparable alignments are likely to be associated with modern ploughing.	Geological responses are visible in the centre of the survey area.  Discrete parallel zones of strong response have been detected in the south of the survey area. These are likely to indicate field drain with a high ferrous or fired component, potentially Victorian in date.  Modern disturbance to the southwest of the survey area is likely to relate to



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				present to the northeast and southwest of [347A]. These are not on the same alignment as the drainage in the field but have a similar response. These could reflect geological variations.  A small discrete area of positively enhanced magnetic disturbance has been detected in the centre of the survey area [347C]. It has an incoherent shape but could still be related to prior anthropogenic activity. However, it could equally be a geological response.		modern anthropological activity.  Large dipolar anomalies in the centre of the survey area relate to modern telegraph poles.
				A small disrupted positively enhanced pair of anomalies form a rough circular shape to the east of the survey area [347D]. It is not consistent enough in its shape to suggest a possible archaeological feature, but it is not clear enough to be classified as having a natural origin.  A small pair of linear anomalies are present in the centre of the survey area [347E]. These are unclear as they continue beyond the survey area and are likely to continue into the southern portion of the survey area.		



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				A multitude of additional linear trends have been recorded within the survey area. While an archaeological origin for these cannot be excluded, they are likely to be associated with field drains, although they are not as well-defined, or as consistent in alignment, as those categorised as drainage features.		
355 (Figures 22-7-172 to 22-7-174, 22-7-374 to 22-7-376, 22-7-576 to 22-7-578)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A curving positively enhanced linear trend has been detected in the centre of the survey area [355A], running SW-NE. It is unclear if it is a naturally occurring feature or a ditch type feature.  A weaker positively enhanced trend [355B] can be discerned to the east of [355A]. This is on a similar alignment. Again, it is unclear if it is a naturally occurring feature or a ditch feature.  A small curving linear trend [355C] is present just to the east of 355B. It is unclear as to whether this relates to [355B] or if it is a separate feature.  A weakly enhanced	Several drains traverse the survey area on NW-SE and NE-SW alignments.	Several areas of magnetic disturbance have been detected across the site in isolated patches; some of these relate to drainage.  A swathe of strong response has been detected in the centre and west of the survey area. This is likely to have a natural origin and coincides with topographic changes.  Small zones of magnetic disturbance along the eastern and western edges of the survey area are due to adjacent metal fences.  A moderate level of isolated ferrous/fired responses have been noted.
				curvilinear trend [355D] has been detected to the west of 355A. It is unclear if this is a naturally		

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Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				occurring feature or a ditch feature.		
				A spread of weakly enhanced magnetism [ <b>355E</b> ] is present at in the northwest of the survey area. While an archaeological origin for this cannot be excluded, it may have a natural origin.		
				A weakly dipolar linear trend is present to the northeast of the survey areas [355F]. It is unclear is this is a continuation of the drainage pattern in the field.		
				Two ephemeral positively enhanced trends [355G] are visible in the east of the survey area. It is unclear if they relate to [355B] or if they are naturally occurring features.		
382 (Figures 22-7-174 to 22-7-175, 22-7-376 to 22-7-377, 22-7-578 to 22-7-579)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A pair of positively enhanced linear trends [382A] extend southwards from the northeastern limits of the survey area. It is unclear whether these relate to field drains or geological features.	Several modern ploughing trends and drains have been detected across the whole survey area.	A modern utility runs along the southwestern limit of the survey area, parallel to the extant field boundary.  A moderate level of isolated ferrous/fired responses have been noted.
373 (Figures 22-7-176, 22-7-378, 22-7-580)	Survey area extends beyond updated Onshore Development Boundary.	None detected.	None detected.	A short linear trend [373A] has been noted in the north of the area. The origin of this is uncertain and interpretation is complicated by the limited survey area. A modern or	None detected.	The data set is dominated by magnetic disturbance due to adjacent fences and infrastructure.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				agricultural origin is likely, but an archaeological origin is also possible.		
400 (Figures 22-7-176, 22-7- 378, 22-7-580)	Survey area extends beyond updated Onshore Development Boundary.	None detected.	None detected.	None detected.	None detected.	The data set is dominated by magnetic disturbance due to adjacent fences and infrastructure.
432 (Figures 22-7-176 to 22-7-177, 22-7-378 to 22-7-379, 22-7-580 to 22-7-581)	Survey area extends beyond updated Onshore Development Boundary.	None detected.	In the north of the area a strong linear trend [432A] has been detected. The form and nature of the response suggest an archaeological origin. It could be a northerly extension of a medieval hollow way recorded by aerial photography (HE_UID 1551517) 140m to the south.	A discrete area of strong response [432B] has been detected in the centre of the survey aera. The origin is unclear, and it does not correspond with any known HER features, or former structures on historic mapping. It may have a modern origin, but an archaeological origin cannot be dismissed.  Additional linear trends [432C] have been detected which are likely to have an agricultural origin.	In the south of the survey area the linear trend and area of magnetic disturbance [432C] coincides with a former field boundary and associated small enclosure depicted on the 1st Ed OS map of 1888 (NLS, 2023).  Weaker trends on an NW-SE orientation are likely to be associated with modern ploughing.	There is a high level of magnetic noise across the site. Some of this is due to adjacent fencing and structures, but some of the elevated response may be associated with the application of green waste.
352 (Figures 22-7-178, 22-7-380, 22-7-582)	Survey area extends beyond updated Onshore Development Boundary.	None detected.	None detected.	None detected.	Weaker trends on an SW-NE orientation may be associated with past ridge and furrow cultivation.	Amorphous zones of enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations.  Zones of magnetic disturbance are due to adjacent fences and telegraph poles.
358 ( <b>Figures 22-7-178</b> to <b>22-7-180, 22-7-380</b> to <b>22-</b>	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A few linear trends run SW -NE, and some appear to continue into Field 378 to the southwest [358A]. It is unclear if these are drains	Weak parallel trends on an NNE-SSW alignment are associated with modern ploughing.	Zone of elevated response have been detected across the survey area and are



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
<b>7-382, 22-7-582</b> to <b>22-</b> <b>7-584</b> )				or related to other agricultural activity.		typical of natural variations.
				The origin of weak trends [358B] is unclear, but they are likely to indicate field drains.		Discrete areas of magnetic disturbance along limits of the survey area are due to adjacent metal fences and adjacent infrastructure.
						A moderate level of isolated ferrous/fired responses have been noted throughout the survey area.
378 (Figures 22-7-180 to 22-7-182, 22-7-382 to 22-7-384, 22-7-584 to 22-7-586)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	Several linear trends [378A] have been detected in the east of the survey area on a SW- NE orientation, with some appearing to continue into Field 358 to the northeast. It is unclear if these are drains or related to another form of agricultural activity. Additional linear trends [378B] aligned SE -NW have been noted in the southwest of the survey area. Again, it is unclear if these are drains or related to another form of agricultural activity of unknown date.	An area of magnetic disturbance in the centre of the survey area corresponds with a demolished structure related to Leconfield airfield.	Geological responses are visible throughout the survey area.  Discrete areas of magnetic disturbance along limits of the survey area are due to adjacent metal fences and adjacent infrastructure.  A moderate level of isolated ferrous/fired responses have been noted throughout the survey area.
				Some straight and curving linear trends are present throughout the survey area [378C]. These might be related to the geological variations but		

# **RWE**

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				could also have an agricultural origin.		
414 (Figures 22-7-181, 22-7-383, 22-7-585)	Survey area lies within updated Onshore Development Boundary.	None detected.	A positively enhanced linear trend [414A] that has the appearance of a former field boundary has been detected in the west of the survey area. It aligns with [407A] to the north and a modern field boundary to the south.	A small number of linear anomalies [414B] have been detected parallel to [414A]. It is unclear whether these are former plough marks on the same alignment as [414A] or associated with modern drainage.  Spread of enhanced response and weaker linear trends have been detected in the east of the survey area [414C]. The origin of these is unclear; they could be associated with agricultural activity or be due to natural variations.	Several linear trends have been noted across the survey area which are characteristic of field drains.	Zones of magnetic disturbance along the limits of the survey area is due to adjacent metal fences.  A moderate level of isolated ferrous/fired responses have been noted.
407 (Figures 22-7-183, 22-7-385, 22-7-587)	Survey area lies within updated Onshore Development Boundary.	None detected.	Two positively enhanced linear trends that have the appearance of former field boundaries have been detected bisecting the survey area in both northsouth and west-east directions [407A]. The north-south alignment aligns with a modern field boundary to the north and south; no corresponding field boundaries are recorded on historic mapping.	A small number of discrete areas of enhanced magnetism [407B] have been detected close to the intersection of the linear trends [407A]. It is unclear whether these are linked to the possible former field boundaries.  A cluster of discrete areas of enhanced response [407C]. has been detected to the west of the survey area, just to the north of [407A]. It is unclear if these are related to the possible	None detected.	A broad band of slightly elevated response runs through the centre of the survey area and is due to natural variations.  Zones of magnetic disturbance along the limits of the survey area is due to adjacent metal fences.  A moderate level of isolated ferrous/fired responses have been noted.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				former field boundaries or the former railway line.		
383 (Figures 22-7-182, 22-7- 384, 22-7-586)	Survey area extends beyond updated Onshore Development Boundary.	None detected.	None detected.	A weak linear trend [383A] has been detected in the centre of the area. The origin of this is unclear and while an archaeological origin cannot be excluded a natural or agricultural origin are more likely. It may be a continuation of the responses [389A] detected to the west.	Weak parallel trends are due to agricultural activity.	Amorphous zones of enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations.  Zones of magnetic disturbance are due to adjacent fences and modern debris.
389 (Figures 22-7-182, 22-7-384, 22-7-586)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A small number of discrete areas of enhanced response are located to the centre of the survey area, forming a roughly rectangular shape [389A]. These are possibly related to the geological variations in the field, alternatively they could also be the remnants of unrecorded structures. There is no clear relationship between these responses and the unclear trends detected in Field 414 to the south and Field 392 to the west.  Two further clusters of discrete areas of magnetic enhancement have been detected in the southern	Linear trends across the survey area are indicative of field drains.  Weak parallel trends aligned to the modern field boundaries are associated with agricultural activity.	A curving band of strong responses in the south of the survey area is characteristic of natural variations in the subsurface associated with a palaeochannel.  A moderate level of isolated ferrous/fired responses have been noted.
			half of the survey area [389B]. These could be related to the geological variations in the survey area; however, they deviate away from the			

# **RWE**

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				main body of geological responses.		
392 (Figures 22-7-183, 22-7-385, 22-7-587)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	Several positively enhanced short linear trends have been detected in the north of the survey area [392A]. These may be related to drainage patterns, but they are not as clear as the other drainage patterns in the survey area.	Linear trends across the survey area are indicative of field drains.  Weak parallel trends aligned to the modern field boundaries are associated with agricultural activity.	The magnetic disturbance along the southern limits of the survey area is related to the modern trackway.  A curving band of strong responses in the southeast corner of the survey area is characteristic of natural variations and continues into Field 389.
394 (Figures 22-7-183, 22-7-385, 22-7-587)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	Several positively enhanced short linear trends have been detected in the within the survey area [392A]. These may be related to drainage features, but they are not as clear as the other drainage patterns in the survey area.	Linear trends across the survey area are indicative of field drains and form patterns where the ground is likely to have been boggier.	Zones of magnetic disturbance along the limits of the survey area are due to adjacent metal fences.  The high levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
427 (Figures 22-7-183, 22-7-385, 22-7-587)	Survey area lies beyond updated Onshore Development Boundary.	None detected.	None detected.	A few weak linear trends [427A] have been detected within the survey area. The origin of these is unclear and while an archaeological origin cannot be excluded a natural or agricultural origin are more likely.	Ephemeral parallel trends running NNW-SSE throughout the survey area and are due to modern ploughing.	Amorphous zones of enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations.  Zones of magnetic disturbance along the northern limits of the survey area are due to adjacent metal fences and the railway line.  A high level of isolated ferrous/fired responses have been noted



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
						throughout the survey area.
393 (Figures 22-7-183 to 22- 7-184, 22-7-385 to 22- 7-386, 22-7-587 to 22- 7-588)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	None detected.	Strong, slightly curved, parallel trends on an NW-SE orientation are evident across the whole survey area. These are characteristic of past ridge and furrow cultivation, likely to be Medieval in date.  Weaker parallel trends	Magnetic disturbance has been recorded along the southwestern limits of the survey area, and is associated with the forme railway line on the boundary fence.
					aligned SW-NE are associated with modern agricultural activity.	
421 (Figures 22-7-183, 22-7-385, 22-7-587)	Survey area extends beyond updated Onshore Development Boundary.	None detected.	None detected.	A few weak linear trends [421A] have been detected within the survey area. The origin of these is unclear and while an archaeological origin cannot be excluded a natural or agricultural origin are more likely.	The fragmentary trend [421B] in the north of the survey area corresponds with a former field boundary shown on the 1st Ed OS map of 1888 (NLS, 2023).  Ephemeral parallel trends have been noted running NNW-SSE throughout the survey area and are due to past ridge and furrow cultivation. Weaker parallel trends on a comparable alignment are due to modern ploughing.	Zones of magnetic disturbance along the northern limits of the survey area are due to adjacent metal fences and the railway line.  A high level of isolated ferrous/fired responses have been noted throughout the survey area.
422 (Figures 22-7-184 to 22-7-185, 22-7-386 to 22-7-387, 22-7-588 to 22-7-589)	Survey area lies within updated Onshore Development Boundary.	None recorded.	None recorded.	Several positively enhanced trends are present in the east and northwest of the survey [422A]. These could be related to the geological variations or to other anthropological activity	A former field boundary has been detected running west-east across the centre of the survey area.  Strong, slightly curving, parallel trends on a generally north-south	An area of strongly enhanced disturbance [422B] has been detected in the north of the survey area, which could be related to the construction of the railway or a

Field No	Notes	Definite/Probable	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
		Archaeology				
				such as modern agricultural activity.	alignment indicating past ridge and furrow cultivation have been detected across the survey area.	separate unrecorded building.  Discrete areas of enhanced response have been noted in the centre of the survey area and likely relate to geological variations.
						Zones of magnetic disturbance along the northern and western limits of the survey area are due to the adjacent railway line and metal fences.  The moderate levels of
						isolated ferrous/fired responses are due to modern debris in the topsoil.
444 (Figures 22-7-186, 22-7-388, 22-7-590)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A single linear trend has been detected running NW to SE in the western half of the survey area [444A]. It is unclear as to whether it is related to agricultural practices or a natural feature.	North-south aligned parallel trends are a contention of the ridge and furrow cultivation detected in Field 417 to the north.	The magnetic disturbance along the northern limits of the survey area is due to adjacent metal fences
417 (Figures 22-7-184 to 22-7-188, 22-7-386 to 22-7-390, 22-7-588 to 22-7-592)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA17.	None detected.	A few weak trends of a possible archaeological origin have been noted within this survey area. However, interpretation is cautious given the elevated level of background enhancement and strong responses from	Several weak trends and discrete areas of magnetic enhancement of an unclear origin have been noted. The weak trends [417C] may be associated with possible archaeological features [417A], potentially indicting a relic field	The linear trend [417D] running through the centre of the survey area corresponds with a former field boundary record on the 1st Ed OS map of 1888 (NLS, 2023) Strong, slightly curving, parallel trends on a	Zones of magnetic disturbance along the limits of the survey area are due to adjacent metal fences.  The low levels of isolated ferrous/fired responses are due to modern debris in the topsoil.

# **RWE**

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			past ridge and furrow cultivation.  The fragmentary trend [417A] in the south-west of the survey area may indicate a former field boundary but could have a natural origin.  A suggestion of a rectilinear trend [417B] has been detected in the north-west of the area and lies within a general area of increased magnetic enhancement. This may indicate that earlier archaeological deposits are being disturbed by later ridge and furrow cultivation. However, no sites are known at this location and no cropmarks have been recorded.	system. However, they may have an agricultural origin.  While an archaeological origin for the discrete pit type responses can note be excluded, a natural origin is most likely.	generally north-south alignment dominate the data and are due to past ridge and furrow cultivation, likely to be Medieval in date.  Weaker parallel trends on a north-south alignment are due to modern ploughing.	
433 (Figures 22-7-188 to 22-7-189, 22-7-390 to 22-7-391, 22-7-592 to 22-7-593)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA17.	None detected.	Along the southern limits of the survey area a rectilinear trend [433A] has been detected. The nature and form of the anomaly suggests a possible archaeological origin. However, its location at the edge of the survey area complicates interpretation and it may have a natural origin.  A linear trend aligned eastwest [443B] has been detected in the west of the survey area. This appears to be a continuation of	Weak linear trends [433C] in the south of the area have been categorised as having an unclear origin. They may indicate remnants of a wider field system but could be due to more recent agricultural activity.  Several discrete zones of enhanced magnetism have been noted throughout the survey area. These have been noted as unclear in origin because while an archaeological origin	Strong, slightly curving, parallel trends on a generally north-south alignment indicating past ridge and furrow cultivation have been detected across the survey area.  Weaker parallel trends on a north-south alignment are due to modern ploughing.	A swathe of strong response has been detected in the western half of the survey area. This is likely to have a natural origin and coincides with topographic changes.  The low levels of isolated ferrous/fired responses are due to modern debris in the topsoil.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			anomalies detected in Field 443 immediately to the east.	cannot be excluded, a natural origin is more plausible.		
443 (Figures 22-7-189 to 22-7-191, 22-7-390 to 22-7-391, 22-7-593 to 22-7-595)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA17.	In the north-west of the survey area linear trends [443A] have been detected which appear to form part of a possible prehistoric field system. They are categorised as having a probable archaeological origin due to their character and form. However, no known sites or cropmarks have been recorded within this area.	In the western half of the area several weak linear trends [443B] have been detected. These appear to be a continuation of a possible series of enclosures or field systems detected in Field 446 to the west.  Two strong parallel trends [443C] have been mapped in the north-east of the survey area. The data suggests a possible trackway, but they may be ploughing headlands associated with the ridge and furrow cultivation.	Additional weak trends have been noted which have an unclear origin. It is possible that trends [443D] are associated with linear trends [443A] rather than the ridge and furrow cultivation, but such an interpretation is cautious.  Several discrete areas of enhanced magnetism have been noted throughout the survey area. These are most likely to be due to natural variations in the subsoil.	The strong, sinuous trend [443E] in the north of the survey area corresponds with a former field division indicted on historic mapping (NLS, 1888).  Parallel trends on a generally east-west alignment dominate the data and are due to past ridge and furrow cultivation.  Weaker parallel trends on a NE-SW orientation are due to modern ploughing. There is also a general NW-SE grain to the data which may reflect additional ploughing trends, or natural variations.	Zones magnetic disturbance along the eastern limits of the survey area are due to adjacent met-al fences and infrastructure.  A moderate level of isolated ferrous/fired responses have been noted throughout the survey area.
(Figures 22-7-190 to 22-7-191, 22-7-392 to 22-7-393, 22-7-594 to 22-7-595)	Survey area lies within updated Onshore Development Boundary. Survey area lies partially within PA17.	None detected.	Several weak linear trends [446A] have been detected. The data suggests a possible series of enclosures or field systems. They have been categorised as possible, rather than probable, archaeology due to their ephemeral nature and because an agricultural origin cannot be wholly excluded.	Several discrete areas of enhanced magnetism have been noted throughout the survey area. These are most likely to be due to natural variations in the sub-soil, although an archaeological origin cannot be wholly excluded.	The linear trend [446B] in the north of the survey area is a continuation of the former field boundary detected in Field 443 to the east.  Parallel trends on a generally east-west alignment dominate the data and are due to past ridge and furrow cultivation, likely to be Medieval in date.  Weaker parallel trends on a NE-SW orientation are	A low level of isolated ferrous/fired responses have been noted throughout the survey area.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
					due to modern ploughing. There is also a general NW-SE grain to the data which may reflect additional ploughing trends, or natural variations.	
474 (Figures 22-7-191 to 22-7-192, 22-7-393 to 22-7-394, 22-7-595 to 22-7-596)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA17.	A relatively well-defined linear trend [474A] has been detected in the north-west of the survey area and is probably archaeological in origin. Its form is slightly different to the possible archaeological trends detected in Field 466 to the north increasing confidence in interpretation. Roman / Iron Age cropmarks have been recorded 250m to the south-west.	More poorly defined trends have been detected in the north [474B] and south [474C] of the survey area. These have been noted as having a possible archaeological origin but could be due to natural variations.	Several discrete areas of enhanced magnetism have been noted throughout the survey area. These are most likely to be due to natural variations in the sub-soil, although an archaeological origin cannot be wholly excluded.	Strong, slightly curving, parallel trends on a generally north-south alignment dominate the data and are due to past ridge and furrow cultivation, likely to be Medieval in date.  The weak trend [474D] on the same alignment as the ridge and furrow cultivation trends coincides with a former field boundary indicated on the 1st Ed OS map of 1888.	Zone of elevated response have been detected in the north-west and south of the survey area and are typical of natural variations associated with palaeochannels.  Discrete areas of magnetic disturbance along northern limits of the survey area are due to adjacent metal fences and adjacent infrastructure.  A moderate level of isolated ferrous/fired responses have been noted throughout the survey area.
496 (Figures 22-7-193 to 22-7-194, 22-7-395 to 22-7-396, 22-7-597 to 22-7-598)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	An isolated discrete area of enhanced response [496A] has been detected. There is no context for this response and a natural origin is most likely.	The weak trend [496B] in the north of the survey area corresponds with a former field boundary shown on the 1st Ed OS map of 1888 (NLS, 2023).  Ephemeral trends parallel to the extant boundaries are due to modern ploughing.	Zones of magnetic disturbance along the western limits of the survey area are due to adjacent metal fences and the railway line.  A low level of isolated ferrous/fired responses have been noted throughout the survey area.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
517 (Figures 22-7-194, 22-7-396, 22-7-598)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	None detected.	Broad parallel trends on a NW-SE alignment have been detected in the southern half of the survey area and are consistent with past ridge and furrow cultivation.  Weaker trends aligned north south are thought to reflect more recent agricultural activity.	A modern utility runs through the northern half of the survey area on a NW-SE alignment. A low level of isolated ferrous/fired responses have been noted throughout the survey area.
520 (Figures 22-7-194 to 22-7-195, 22-7-396 to 22-7-397, 22-7-598 to 22-7-599)	Survey area extends beyond updated Onshore Development Boundary.	None detected.	None detected.	Discrete areas of strong response [520A] has been detected in the east of the survey aera. The origin is unclear, and it does not correspond with any known HER features, or former structures on historic mapping. It may have a modern origin as it appears to respect a former field boundary. However, an archaeological origin cannot be dismissed.  Additional linear trends have been detected which are likely to have an agricultural origin.	The weak trend [520B] in the north of the survey area corresponds with a former field boundary shown on the 1st Ed OS map of 1888 (NLS, 2023).  Ephemeral trends running NW-SE through the survey area are due to modern ploughing.	Amorphous zones of enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations.  Zones of magnetic disturbance along the northwestern limits of the survey area are due to adjacent fences and modern debris.
538 (Figures 22-7-195 to 22-7-196, 22-7-397 to 22-7-398, 22-7-599 to 22-7-600)	Survey area lies within updated Onshore Development Boundary. Survey area is within P18.	None detected.	None detected.	Two linear trends [538A] have been detected in the south of the survey area. The origin of these is unclear; they could indicate field drains. However, their rectilinear form could suggest a former field system.	Distinctive parallel trends cross the survey area on a NW-SE alignment. These are typical of past ridge and furrow cultivation.  Modern ploughing trends run NE-SW through the survey area.	Zones of magnetic disturbance along the northern and southern limits of the survey area are due to adjacent fences. A low level of isolated ferrous/fired responses have been noted throughout the survey



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				A broad curving zone of slightly elevated response [538B] has been detected in the southwest of the survey area. The limited survey extent in this area makes interpretation cautious, but a natural origin is plausible.		area.
560 (Figures 22-7-199, 22-7-401, 22-7-603)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA18.	A band of weakly enhanced response [560A] curving through the southern half of the survey area coincides with a bank recorded in AP's (1566264).	A series of disjointed positively enhanced anomalies have been detected along the line of the topography [560B]. These could be the remnants of opencast mining, or World War I practice trenches. A similar feature can be seen in Field 574 [574A].	A band of positively enhanced response [560C] is present to the south of the known bank feature It may be part of the bank, or an unrecorded bank or ditch feature.  Further spreads of enhanced magnetism [560D] has been detected to the west of the bank.  Although it has a different response to the main bank feature, it could be related to the bank feature.  A few weakly enhanced negative linear trends [560E] have been detected in the north of the survey area. These may be the result of unrecorded field boundaries; however, it could also be a result of modern farming practices.  A small discrete area of positively enhanced response [560F] has been detected to the south of [560B]. This could be a similar feature to [560B] or	Parallel trends running NW-SE through the survey area are suggestive of past ridge and furrow cultivation and align with aerial photography.	An area of natural disturbance is noted in the centre of the survey area, possibly a lightning strike.  Discrete areas of magnetic disturbance along northern limits of the survey area are due to adjacent metal fences and adjacent infrastructure.

# **RWE**

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				a naturally occurring feature.		
567 (Figures 22-7-200, 22-7-402, 22-7-604)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA18.	None detected.	None detected.	A single faint positively enhanced linear trend running SE-NW has been detected in the south of the survey area [567A]. It may be a response of the natural geology or a former ploughing regime.	A few weak modern ploughing trends have been detected in the centre of the survey area.	Broad bands of weak magnetic response have been attributed to geological responses along the northern and southern limits of the survey area.  A small area of enhanced disturbance is located in the south of the survey area and may be attributable to modern agricultural practices or geological processes.  Magnetic disturbance along the limits of the survey area are attributable to metal fencing in the hedges.
574 (Figures 22-7-201, 22-7-403, 22-7-605)	Survey area lies within updated Onshore Development Boundary. Survey area lies partially within PA18.	None detected.	A large number of linked positively enhanced anomalies have been detected in the north of the survey area, running roughly in the same position as the slight gulley in the survey area [574A]. This is comparable to responses [560B] and could be a result of the same processes described above, such as mining or practice trenches. However, a natural origin cannot be ruled out.	Several unclear responses [574B] have also been noted in the north of the survey area. These could be a continuation of feature [574A]. However, as they are not so clearly linked to [574A], they may be due to natural variations.  A positively enhanced circular anomaly [574C] is present in the south of the survey area. While this may have an archaeological origin, it is noted as in origin unclear due to it lying with an area of	Weak trends on NE-SE alignments are due to modern ploughing.	A large area of enhanced response in the southeast of the survey area is likely to be natural in origin. It might be linked to a modern mining operation to the southeast of the survey area.  Modern disturbance has been detected from metal fencing surrounding the survey area. Some disturbance in the centre of the survey area could be related to modern agricultural practices.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				elevated response caused by underlying natural variations.		
				A small circular anomaly [574D] has been noted in the northeast of the survey area. The response is very ephemeral. While an archaeological origin cannot be excluded, a natural origin is plausible.  Some weakly enhanced trends are present across the survey area. These might be related to modern agricultural trends or natural responses.		
578 (Figures 22-7-201, 22-7-403, 22-7-605)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A series of linear trends [578A] in the north of the survey area suggest part of a possible rectilinear enclosure. However, the responses are very week and could be due to former field divisions, agricultural activity, or natural variations.  A series of discrete anomalies are present over the survey area, mainly in an arc aligned NW-SE [578B]. It is unclear if these are a natural feature or possibly related to [574A] to the northeast.  A very faintly enhanced linear trend bisects the survey area from NW-SE	Weak trends on NE-SE alignments are due to modern ploughing.	An area of natural disturbance is noted in the centre of the survey area, possibly a lightning strike.  Modern disturbance has been detected from meta fencing surrounding the survey area. Some disturbance areas in the centre of the survey area could be related to moder agricultural practices.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				undocumented field boundary or a result of modern agricultural practices.		
(Figures 22-7-201 to 22-7-202, 22-7-403 to 22-7-404, 22-7-605 to 22-7-606)	Survey area extends beyond updated Onshore Development Boundary.	None detected.	Towards the centre of the survey area a well-defined circular anomaly [1251A] measuring 7m in diameter has been detected.  Nothing is recorded in the HER at this location and there is a very elevated level of background response within this field.  Although the shape of size of the anomaly is consistent with a ring ditch / barrow the strength of the response does not support such an interpretation. One possibility is it could indicate the base of a limekiln. Limekilns are noted in wider landscape on the 1 <sup>ST</sup> edition OS map and such activity would also explain the elevated level of background response.	A diffuse curving zone of elevated response and linear trends [1251B] have been noted in the centre of the survey area. The origin of this is unclear. It could have a modern or natural origin, but an archaeological origin cannot be excluded is it may indicate remnants of a possible trackway.  A broad negative linear trend [1251C] runs through the survey are on a NS-SE alignment. This is likely to indicate a former field division, but it does not correspond with any features on historic mapping.  A weak short linear trend [1251D] is just discernible in the south of the survey area. The response is ephemeral, and its orientation is consistent with known ridge and furrow noted in the area. It does show some correlation with a Prehistoric/Roman multiple ditch system earthwork (HE_UID 1087954).	Strong parallel linear trends on a NW-SE orientation are evident throughout the survey area. It is assumed that these are due to modern agricultural activity. There is no evidence in the data for the SW-NE aligned ridge and furrow recorded in aerial photographs.	Three modern services run through the south of the survey area on a SW-NE alignment, with a forth utility running along the eastern limits of the survey area. These, together with adjacent fencing and housing has resulted in broad swathes of magnetic disturbance at the limits of the survey aera.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
1320 (Figures 22-7-202, 22-7-406, 22-7-606)	Survey area extends beyond updated Onshore Development Boundary.	Along the western limits of the survey area, just beyond the Onshore Development Boundary, linear trends [1320A] have been detected. These have been noted as having a probable archaeological origin as they are suggestive of an enclosure and are likely to be associated with enclosures visible as cropmarks (MHU1507).	None detected.	Two linear trends [1320B] have been noted in the north of the survey area. While an archaeological origin for these cannot be excluded, a modern agricultural origin is more likely.	The fragmentary linear trend [1320C] corresponds with a former field division depicted on the 1st Ed OS map of 1888 (NLS, 2023).  Weak parallel trends on north-south and east-west alignments reflect agricultural activity.	Well-defined sinuous zones of strongly enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations such as palaeochannels.  Zones of magnetic disturbance at the limits of the survey area are due to adjacent fencing.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
634 (Figures 22-7-203 to 22-7-205, 22-7-405 to 22-7-407, 22-7-607 to 22-7-609)	Survey area extends beyond updated Onshore Development Boundary.	None detected.	None detected.	Several small discrete areas of enhanced response have been noted [634A]. The origin of these is unclear, and while an archaeological origin cannot be excluded, it is likely they are due to natural variations or modern activity.	The disturbance on the northern limits of the survey area [634B] corresponds with a former sewage works indicated on the 1st Ed OS map of 1888 (NLS, 2023).  Weak parallel trends on north- east-west alignments reflect agricultural activity.	Well-defined sinuous zones of strongly enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations such as palaeochannels.  Zones of magnetic disturbance at the limits of the survey area are due to adjacent fencing.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
648 (Figures 22-7-204 to 22-7-206, 22-7-407 to 22-	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A cluster of discrete areas of enhanced magnetism [648A] has been noted as having an unclear origin. It	The area of elevated response along the western limits of the survey area [648B] corresponds	Magnetic disturbance along the edges of the survey area is due to adjacent metal fences.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
<b>7-408, 22-7-608</b> to <b>22-7-610</b> )	Survey area lies within PA24.			is most likely that these responses have a natural origin.	with an infilled chalk pit (NLS, 2023). Weak trends on north- south and NE-SE alignments are due to modern ploughing.	A low level of isolated ferrous/fired responses have been noted.
704 (Figures 22-7-205 to 22-7-2067 22-7-407 to 22-7-409, 22-7-609 to 22-7-611)	Survey area lies within updated Onshore Development Boundary. Survey area lies within and beyond PA24.	None detected.	None detected.	A weak trend and linear zones of enhanced magnetism [704A] have been noted as having an unclear origin. It is most likely that these responses have agricultural or natural origins. However, an archaeological origin cannot be excluded as later prehistoric/Roman ditches and an enclosure are visible as cropmarks 150m to the north-west of this survey area.	The strong magnetic response in the northeast of the survey area lies on the line of a former field boundary indicated on the OS map of 1888 (NLS, 1888) and is likely to be associated with it.	A band of increased response along the southern limits of the survey area is believed to be due to natural variations and follows the topography of the area.  Disturbance and the gap in the data running through the centre of the survey area on a NW-SE orientation is due to overhead powerlines.  Magnetic disturbance along the edges of the survey area is due to adjacent metal fences.  A low level of isolated ferrous/fired responses have been noted.
701 (Figures 22-7-206 to 22-7-207, 22-7-408 to 22-7-409, 22-7-610 to 22-7-611)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A band of positively enhanced sinuous linear trends coincide with a small gulley in the east of the survey area [701A]. Although these responses share some similarities with [574A] and [560A], the responses are not as strong, and they could have a natural origin.	Weak trends on west-east and north-south alignments are due to modern ploughing.	A band of increased response along the southern limits of the survey area is believed to be due to natural variations.  Magnetic disturbance along the edges of the survey area is due to adjacent metal fences.  Disturbance and the gap in the data running through



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				Smaller discrete areas of enhanced response [701B] have also been noted. It is unclear if there is a relationship between [701A] and [701B]. These responses may be due to natural variations.		the centre of the survey area on a NW-SE orientation is due to overhead powerlines.
729 (Figures 22-7-207, 22-7-409, 22-7-611)	Survey area lies within updated Onshore Development Boundary. Survey area lies within and beyond PA24.	None detected.	None detected.	A weakly enhanced linear trend [729A] is visible running from SW-NE through the survey area. It follows a natural gulley and is similar to [701A] to the north. While an archaeological origin cannot be excluded, a natural origin is more likely.	Weak trends running through the data set on an east-west alignment are associated with modern agricultural activity.	The band of increased response along the northern limits of the survey area is believed to be due to natural variations and follows the topography of the area. The band of negative readings running NW to SE in the south of the survey area is due to interference caused by overhead low voltage power lines.  Magnetic disturbance along the edges of the survey area is due to metal fences and adjacent infrastructure.  A high level of isolated ferrous/fired responses have been noted.
762 (Figures 22-7-208 to 22-7-209, 22-7-410 to 22-7-411, 22-7-612 to 22-7-613)	Survey area lies within updated Onshore Development Boundary. Survey area lies within and beyond PA24.	None detected.	None detected.	A slight negatively enhanced linear trend [762A] runs from southwest to north-east through the survey area. The origin of this is unclear and it could have a natural or modern origin.  Two zones of enhanced response [762B] have	Weak trends running through the data set on an east-west alignment are associated with modern agricultural activity.	A large amount of magnetic disturbance is apparent on eastern and northern limits of the survey area and is due to adjacent fences and structures.  A moderate level of isolated ferrous/fired



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				been detected in the south of the survey area. The origin of these is unclear, although a modern origin is most plausible.  Ephemeral trends [762C] have been noted as having an unclear Origin but are likely to be due to agricultural activity.		responses have been noted.
764 (Figures 22-7-208 to 22-7-209, 22-7-410 to 22-7-411, 22-7-612 to 22-7-613)	Survey area lies within the updated Onshore Development Boundary. Survey area is within PA24	None detected.	None detected.	Some ephemeral linear trends [764A] have been noted. While these may be associated with the WWII heavy anti-aircraft gun site (MHU15288), they could equally be due to modern agricultural activity and / or natural variations.  A few discrete areas of enhanced response [764B] have been noted. These are almost certainly natural or agricultural in origin, but have been noted as having an unclear origin, as an archaeological origin cannot be entirely dismissed.	The data is dominated by parallel linear trends aligned approximately north-south which are characteristic of past ridge and furrow cultivation.  Weaker trends aligned east-west reflect modern agricultural activity.	Magnetic disturbance along the southern limits of the survey area and the elevated level of background response are likely to be associated with past use of the area during WWII.
832 (Figures 22-7-209 to 22-7-211, 22-7-411 to 22-7-413, 22-7-613 to 22-7-615)	Survey area lies within updated Onshore Development Boundary. Survey area lies within and beyond PA24.	None detected.	None detected.	There is a weak suggestion of a possible circular anomaly [832A] in the south of the survey area. This is noted as having an unclear origin due to the elevated level of background response.	Short linear trends visible in the data are believed to be associated with field drains.	Sinuous zones of enhanced magnetism are due to natural variations.  Magnetic disturbance along the edges of the survey area is due to adjacent metal fences.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				A negatively enhanced curving linear trend [832B] is present in the western half of the survey area. Additional trends have also been noted. These are noted as having an unclear origin as it is difficult to assess whether these are natural features or a remnant of a previously unknown archaeological feature.		Two utility pipes cross the south of the survey area in an east-west direction.  A high level of isolated ferrous/fired responses have been noted.
				A weakly enhanced circular trend [832C] has been detected in the south of the survey area, it could be a ditch feature, however it could also be related to the nearby natural features.		
				A large area of dipolar, highly magnetic response is recorded just to the north of the utility pipes in the south of the survey area [832D]. It has the response of a small building; however, no evidence exists on historic or modern mapping. It is also partially obscured by the utility pipe to the south. It could be associated with construction of the pipeline.		
858 (Figures 22-7-210 to 22-7-212, 22-7-412 to 22-	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.		Parallel trends running north-south across the survey area are suggestive of past ridge and furrow	Sinuous zones of enhanced magnetism are due to natural variations.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
<b>7-414, 22-7-614</b> to <b>22-7-616</b> )	Survey area lies within and beyond PA24.				cultivation, supported by the aerial photography.	Magnetic disturbance along the edges of the survey area is due to adjacent metal fences.
						Two utility pipes cross the south of the survey area ir an east-west direction.
						A high level of isolated ferrous/fired responses have been noted.
(Figures 22-7-212 to 22-7-215, 22-7-414 to 22-7-417, 22-7-616 to 22-7-619)	Survey area lies within updated Onshore Development Boundary. Survey area lies within and beyond PA24.	A series of positively enhanced linear trends forming rectangular enclosures and other delineations traverse the survey area in the south, on a predominantly eastwest alignment [865A]. On their own these form a small ladder settlement, albeit without a known historic road to follow. However, they may be a continuation of known cropmarks suggesting rectangular enclosures and settlement on a similar alignment 200m to the east (MHU3530), suggesting a potentially much larger settlement.	Several weaker trends [865B] have also been detected in the south of the survey area. Their form and relationship to the more definitive trends suggests that these are possibly archaeological features, although they are weaker and more fragmentary than [865A].	Additional ephemeral spreads and trends [865C] have been detected in the vicinity of [865A] and [865B]. These are more difficult to assign a clear interpretation to, owing to the enhanced background response in some parts and due to their overall weaker magnetic response.  A very magnetic dipolar spread of disturbance [865D] is present to the north of [865A]. This might be a natural feature, such as a lightning strike; however, its alignment with the known archaeology also means an archaeological interpretation cannot be ruled out.  A few ephemeral trends are scattered over the survey area [865E]. These could be the result of modern farming practices	Parallel trends running north-south across the survey area are suggestive of past ridge and furrow cultivation. These are strongest around the postulated settlement suggesting they are disturbing earlier, more enhanced deposits.	Sinuous zones of enhanced magnetism are due to natural variations, more noticeably in the north of the survey area.  Magnetic disturbance along the edges of the survey area is due to adjacent metal fences.  A linear band of magnetic disturbance from north to south overlies [865A] and is likely to be a result of modern agricultural practices, or a former trackway.  Two utility pipes cross the centre of the survey area is an east-west direction.  A high level of isolated ferrous/fired responses have been noted.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				or natural have natural origins.		
818 (Figures 22-7-212 to 22-7-215, 22-7-414 to 22-7-417, 22-7-616 to 22-7-619)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA24.	None detected.	A very well-defined circular anomaly [818A] has been detected in the north-west of this survey area, measuring approximately 30m in diameter. It is noted as possible, rather than probable, archaeology as the form of the responds is not entirely consistent with a ring ditch type feature. It appears to be associated with an extant feature and an area of likely modern distance which might suggest a more recent origin.	An area of strong enhancement [818B] has been detected immediately to the south of [818A]. While an archaeological origin for this cannot be excluded, the nature of the response suggests a modern origin.	The moderately high background disturbance, dense in places suggests possible modern agricultural practices.  The linear trend [818C] coincides with a former field boundary.  Parallel trends running NW-SE through the survey area are suggestive of past ridge and furrow cultivation.	Zones of magnetic disturbance along the limits of the survey area is due to adjacent metal fences.  A moderate level of isolated ferrous/fired responses have been noted.
841 (Figures 22-7-215, 22-7-417, 22-7-619)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	Two faint linear trends have been detected within an area of elevated background response [841A]. Due to the high levels of magnetic disturbance in the vicinity it is difficult to assign a clear interpretation to these anomalies, although they may be due to modern agricultural activities.	The linear trend running through the centre of the survey area corresponds with a former field boundary indicted on historic mapping. The strength of the response, and associated magnetic disturbance, suggests that a water pipe or similar feature may follow the line of the former boundary.  Parallel trends running NW-SE through the survey area are suggestive of past ridge and furrow cultivation, supported by aerial photography.	The survey area is dominated in the east and centre by magnetic disturbance from modern buildings and likely burial of materials used in horse husbandry.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
830 (Figures 22-7-215 to 22-7-217, 22-7-417 to 22-7-619 to 22-7-621)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	None detected.	None detected.	The survey area is dominated by magnetic disturbance from modern buildings and likely burial of materials used in horse husbandry.
814  (Figures 22-7-215 to 22-7-217, 22-7-417 to 22-7-417, 22-7-619 to 22-7-621)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A single weakly positively enhanced trend has been detected in the south of the survey area [814A]. It is unclear if this relates to an undocumented field boundary or has a natural origin. However, an archaeological origin cannot be excluded.	Parallel trends running NW-SE through the survey area are suggestive of past ridge and furrow cultivation, supported by aerial photography.	Zones of weakly enhanced response are likely to be geological in origin.  Zones of magnetic disturbance along the limits of the survey area is due to adjacent metal fences, farm buildings and telegraph poles.
799 (Figures 22-7-217, 22-7-419, 22-7-621)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	None detected.	Parallel trends running NW-SE through the survey area are suggestive of past ridge and furrow cultivation, supported by aerial photography.	Zones of magnetic disturbance along the limits of the survey area are due to adjacent metal fences and farm buildings.
789 ( <b>Figures 22-7-217, 22-7-419, 22-7-621</b> )	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA24.	None detected.	None detected.	A linear trend [789A] and a group of strong responses [789B] have been detected. These have unclear origins and may be associated with agricultural activity and modern debris, respectively.	Moderately high background disturbance, dense in places which suggests possible modern agricultural practices.  The zone of increased response [789C] coincides with a structure depicted on the 1st Ed OS map of 1888 (NLS, 2023).	Zones of magnetic disturbance along the limits of the survey area is due to adjacent metal fences.  A moderate level of isolated ferrous/fired responses have been noted.
773 (Figures 22-7-216 to 22-7-217, 22-7-418 to 22-7-4019 22-7-620 to 22-7-621)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA24.	None detected.	None detected.	Several weak trends have been noted. These are poorly defined against an elevated level of background response and	Moderately high background disturbance, dense in places which suggests possible modern agricultural practices.	Zones of magnetic disturbance along the limits of the survey area is due to adjacent metal fences.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				are noted as having an unclear origin.		A moderate level of isolated ferrous/fired responses have been noted.
791 (Figures 22-7-216 to 22-7-217, 22-7-418 to 22-7-4019 22-7-620 to 22-7-621)	Survey area lies within updated Onshore Development Boundary. Survey area lies within PA24.	None detected.	None detected.	Bands of increased response have been noted running east-west through the survey area. The origin of these is unclear. However, they are believed to be associated with modern disturbance from a combination of former tracks which existed in the area when it was wooded (NLS, 2023) and possible deposits of other modern material.  A weak curving trend [791A] has been detected in the south-west of the survey area. While an archaeological origin for this cannot be excluded a natural or modern origin is more likely.	Moderately high background disturbance, dense in places which suggests possible mod-ern agricultural practices.  Short trends aligned NW-SE are believed to be due to field drains.	Zones of magnetic disturbance along the limits of the survey area is due to adjacent metal fences.  A moderate level of isolated ferrous/fired responses have been noted.
747 (Figures 22-7-216, 22-7-418, 22-7-620)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A strongly enhanced positive curving anomaly [747A] runs through the southern half of the survey area. Although the strength and discrete nature of the anomaly suggests an anthropogenic origin, it has no other supporting evidence, and there are similarly shaped features in the vicinity which have a possible natural origin. It	None detected.	Two linear zones of magnetic disturbance run through the field on a north south orientation. It originates from the northern entrance and extend into filed 791 to the south, suggesting a former track.  Some of the isolated pockets of magnetic disturbance in the centre of the survey may be due

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Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				may be associated with the open drain which defines the southern limit of the survey area.  Two weakly positively enhanced linear trends are present in the west of the survey area [747B]. These are distinct from the magnetic responses nearby but could be associated with [747A]. The origin of these is unclear but a natural or agricultural origin is plausible.  Two weak negative trends [747C] have been noted in the centre of the survey area. The origin of these is unclear but a natural or agricultural origin is plausible.		to modern agricultural practices.  Zones of weakly enhanced response are likely to be geological in origin.  Some magnetic disturbance on the periphery of the survey area is attributable to the telegraph pole in the southwest and the modern farm infrastructure near the survey area.
900 (Figures 22-7-219, 22-7-421, 22-7-623)	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A short positively enhanced trend is present in the south of the survey area [900A]. It is unclear whether this relates to a ditch feature or a natural feature.	Parallel trends suggestive of modern agricultural cultivation have been recorded across the survey area.	Magnetic disturbance along the northern, western, and eastern edges of the survey area is due to adjacent metal fences.  Within the south of the survey area a zone of enhanced response has been noted which are generated by natural geological variations.
887 (Figures 22-7-220 to 22- 7-222, 22-7-422 to 22-	Survey area lies within updated Onshore Development Boundary.	None detected.	None detected.	A single short positively enhanced anomaly is present to the south of the survey area [887A]. It is	Historic field boundaries have been detected in the centre of the survey are on	Within the northeast of the survey area zones of enhanced response have been noted which are



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
7-424, 22-7-624 to 22- 7-626)				unclear whether this relates to a ditch feature or a natural feature.  A strongly enhanced discrete anomaly has been detected in the southeast of the survey area [887B]. It is unclear if this relates to an unrecorded modern structure or magnetic disturbance from the road.  A short positively enhanced anomaly has been detected in the southwest of the survey area [887C]. It is unclear if this feature extends further into the survey area, limiting interpretation.  A slightly enhanced curving anomaly has been detected in the north of the survey area [887D]. It is unclear if this is an archaeological or natural feature.	north-south and east-west alignments.  Modern ploughing trends have been detected in parts of the survey area.	generated by natural geological variations.  Overhead powerlines run across the survey area and no survey was possible beneath them.  A high level of isolated ferrous/fired responses have been noted, which may be due to green waste.  A utility pipe runs through the survey area, originating from a gas station to the northwest of the survey area.
896 (Figures 22-7-224 to 22-7-225, 22-7-426 to 22-7-427, 22-7-628 to 22-7-629)	Survey area lies within update Onshore Development Boundary.	None detected.	A single short negatively enhanced linear anomaly has been detected in the west of the survey are [896A]. It has no other features in the vicinity of a similar character; however, it could relate to an undocumented historical feature or a possible archaeological feature. Alternatively, it might also be a natural feature.	A few short linear anomalies [ <b>896B</b> ] have been detected in the vicinity of [896A]. It is unclear if these relate to agricultural trends or to [896A] itself.	Parallel trends suggestive of ridge and furrow cultivation have been recorded across the survey area.	A high level of isolated ferrous/fired responses have been noted.  Magnetic disturbance along the edges of the survey area is due to adjacent metal fences, adjacent road and ramp.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
977 (Figures 22-7-228, 22-7-430, 22-7-632)	Survey area lies within the updated Onshore Development Boundary.	None detected.	None detected.	A fragmentary linear trend [977A] has been noted in the south of the survey area. This is very weak against the elevated level of background response and is likely to have a natural or agricultural origin.	None detected.	Overhead powerlines cross the eastern portion of the survey area, and no survey was possible beneath them.  A high level of isolated ferrous/fired responses have been noted, which may be due to green waste.



Table 22-7-3 Detailed Results of Gradiometer Survey Areas that lie beyond the Onshore Development Boundary

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
24 (Figures 22-7-229, 22-7-431, 22-7-633)	Survey area lies outside updated Onshore Development Boundary.	A series of strongly enhanced linear trends were detected in the north of the survey area. The nature and form of these responses suggests a probable archaeological origin such as a trackway [24A] and associated enclosures [24B], potentially prehistoric in date. The anomalies do not correspond with any known archaeological features, although the site of WWII Diver AA Battery (MHU21210) overlies many of the responses. Only a limited area of enhanced magnetism [24C] corresponds with these former features.  Weaker rectilinear trends [24D] were recorded to the north of [24A] indicating an enclosure adjoining the postulated trackway.	Amorphous spreads [24E] of magnetically enhanced material have been recorded in the north of the area, immediate to the east of enclosure [24C]. This is noted as having a possible archaeological origin, although it is not possible to say if it is associated with the presumed prehistoric responses, or the later WWII Battery or its removal.  Along the southern limits of the survey area a rectilinear anomaly [24F] has been detected. The form and nature of the response suggests a small enclosure. However, there is no clear spatial relationship with trends [24B] and the anomaly may have a more recent origin, potentially associated with the WWII Battery.	A sinuous zone of negatively enhanced magnetism [24G] has been detected in the south of the survey area. The origin of this is unclear; it may have a natural origin or possibly be associated with the former battery.  Additional discrete zones of enhanced magnetism [24H] of an unclear origin have been noted in the south of the survey area. These may indicate archaeological deposits but could equally have a natural origin.	Parallel linear trends on a north-south alignment are indicative of past ridge and furrow cultivation.	Strong magnetic disturbance around the edges of the survey area is due to adjacent fences and infrastructure.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
28 (Figures 22-7-229, 22-7-431, 22-7- 633)	Survey area lies outside updated Onshore Development Boundary.	An extensive network of linear trends was detected in this survey area and are likely to be a continuation of those detected in Field 24 to the north-west. Linear and curvilinear trends [28A] in the north of the survey area suggest prehistoric field systems or enclosures.	A series of weaker linear and curvilinear trends [28D] have also been detected. These are most likely to indicate a continuation of the anomalies categorised as probable archaeology but are not as well defined.	Several discrete areas of enhanced magnetism [28E] and linear trends [28F] have been noted within this field which have an unclear origin. While some of these may indicate archaeological deposits and features, some may be due to natural variations or agricultural	The linear anomaly [286] crossing the south of the survey area corresponds with a former field boundary depicted on OS 1:25,000 map of 1937 - 61 (NLS, 2023).  Parallel trends have been noted throughout the survey area and are due	Amorphous areas of enhanced magnetism have been detected in the north of the survey area and are believed to be due to natural geological variations.  A modern service, on a NW-SE alignment, crosses the south-west of the field.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
		In the south of the field clearly defined rectilinear trends have been identified suggesting an inner enclosure [288], measuring approximately 30m by 35m, surrounded by associated linear trends [28C] forming a series of additional enclosures. The responses are consistent with Romano-British remains and may indicate a villa complex.		activity. Interpretation is confused by the elevated level of background response.	to past ridge and furrow cultivation. These are aligned approximately north-south in the north of the area, and east-west in the south of the area.	Strong magnetic disturbance along the edges, and running through the centre, of the survey area is due to adjacent metal fences.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
29 (Figures 22-7-230, 22-7-634)	Survey area lies outside updated Onshore Development Boundary. Survey area lies partially within PA2.	Three discrete areas of strongly enhanced magnetic response have been recorded in the centre of the survey area.  Response [29A] corresponds with an HHER entry recording a WW2 pillbox, trackway, and gun emplacement. (MHU9941) although nothing is present on the surface. Anomaly [29B] is associated with an extant pillbox while response [29C] coincides with a known gun emplacement.	Short linear trends [29D] were detected along the western limits of the survey area. These are likely to be a continuation of the series of enclosures detected in Field 28 immediately to the west.  In the south of the survey area a fragmentary circular response [29E] and apparently associated curvilinear trend [29F] has been detected. The form of the responses suggests a possible archaeological origin, but they could be due to natural variations, or be associated with WWII activity.	Several areas of enhanced magnetism have been detected which have unclear origins.  It is possible that the concentrations of discrete responses [29G] are associated with WWII activity, but a natural origin cannot be excluded.  The origin of the more amorphous area of enhanced magnetism [29H] along the western limits of the survey area is unclear. While its proximity to presumed archaeological features suggests a possible archaeological origin, its location along the modern field boundary may indicate a more recent origin.	The linear trends [291] aligned approximately north-south correspond with former field boundaries indicated on the OS map of 1888 (NLS, 2023).  Wide spaced parallel trends in the west of the survey area are due to ridge and furrow cultivation which extends into Field 28 to the west. In the eastern half of the survey area clear narrowly spaced parallel trends dominate the data. These respect the former field boundary and are believed to be associated with past ridge and furrow cultivation.  Ephemeral trends on a SW-NE orientation in the east of the area are due to field drains.	The coherent 'L'-shaped zone of enhanced magnetism [29J] mapped in the east of the survey area follows the base of large slope and is due to natural variations. Addition natural variations have been mapped along the northeastern limits of the survey area.  Magnetic disturbance around the edges of the survey area is due to adjacent fences.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
33 (Figures 22-7-231, 22-7-433, 22-7- 635)	Survey area lies outside updated Onshore Development Boundary.	None Detected.	None Detected.	The whole area is dominated by strong responses. This has been noted as having an unclear origin. While the landowner has discussed agricultural activity which would account for the elevated level of response, some of the disturbance may be due to the former Brickworks indicated on the 1st Ed OS map (NLS, 2023).	None Detected.	None Detected.
31 (Figures 22-7-231, 22-7-433, 22-7- 635)	Survey area lies outside updated Onshore Development Boundary.	None Detected.	None Detected.	Several poorly defined areas of enhanced magnetism and weak trends [31A] have been noted in the north-west of the survey area. While an archaeological origin for these anomalies cannot be excluded, they are likely to be due to natural variations and modern agricultural activity.	A group of parallel linear trends has been detected in the north-east of the survey area and are consistent with ridge and furrow cultivation.  Linear trends in the southeast of the survey area are typical of field drains and form a distinctive herringbone pattern.	Strong magnetic disturbance along the edges of the survey area are due to adjacent metal fences.  The high levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
39 (Figures 22-7-231, 22-7-433, 22-7- 635)	Survey area lies outside updated Onshore Development Boundary. Survey area lies partially within PA4.	In the south of the survey area a fragmentary circular anomaly [39A] have been detected which measures 14m in diameter.  This appears to be enclosed by a rectangular enclosure [39B] measuring approximately 35m by 45m. However, geophysical survey cannot date features and they may not be contemporary. While their form and nature suggest these features may be prehistoric in age, the possibility that they could be associated with WWII structures cannot be dismissed. No entries are	Several less well-defined linear trends [39C] have been detected. They are noted as possibly archaeological in origin as their form is less coherent, but they are associated with anomalies [39A] and [39B].	The origin of the linear trends [39D] is unclear. They may be associated with the spread of magnetically enhanced material [39E] which is likely to have a modern or agricultural origin.  A discrete pit type anomaly [39F] has been detected along the western limits of the survey area. While the response could be due to more deeply buried ferrous material, it may indicate an area of burning.	Weak parallel trends on a north-south alignment are typical of past ridge and furrow cultivation.  Weaker trends aligned east-west are due to modern ploughing.	Responses due to natural geological variations are apparent in the east of the survey area.  Zones magnetic disturbance along the edges of the survey area is due to adjacent metal fences.  A high level of isolated ferrous/fired responses have been noted.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
		recorded on the HHER in this area.		Linear trends [39G] on eastwest and north-south alignments are discernible in the north-east of the survey area. The origin of these is unclear with interpretation complicated by the elevated level of background response. They could have an archaeological origin indicating a continuation of the linear trends detected in Field 38. However, a more recent agricultural origin is possible.  Potentially associated with these trends are amorphous responses [39H]. While it is possible that these are plough damaged archaeological deposit, they could have a natural origin.		
38 (Figures 22-7-231 to 22-7-233, 22-7-433 to 22-7-435, 22-7-635 to 22-7-637)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA2 and PA4.	The area of strong magnetic response [38A] coincides with an extant WWII Pillbox (MHU18422).  The linear trend [38B] in the west of the area is believed to be a southward extension of the complex of enclosures detected in Field 28 to the north.	The more ephemeral linear trends [38C] in the west of the survey area are also believed to be part of the enclosure complex recorded in Field 28, but they are less well-defined hence their classification as possible archaeology.	The sinuous zones of elevated response [38D] may indicate further deposits associated with the enclosure complex to the north but interpretation is cautious; they could have a natural or agricultural origin.  Similarly, the discrete pit type anomalies [38E] have an unclear origin. While an archaeological origin cannot be excluded, a natural or modern origin is more plausible.  The linear trends [38F] in the south-west of the area are likely to have an agricultural cause such as ridge and	The clear linear trends [38H] correspond to former field boundaries depicted on the 1st Ed OS map of 1888 (NLS, 2023).  Two groups of parallel trends indicative of past ridge and furrow cultivation have been mapped across this survey area. These are all aligned approximately east- west and respect the former field divisions.  The more narrowly spaced parallel trends in the south-east of the area	Amorphous zones of strongly enhanced magnetism have been detected towards the centre of the survey area. These are typical of natural subsurface variations such as palaeochannels.  Small zones magnetic disturbance along the edges of the survey area is due to adjacent metal fences.  A low level of isolated ferrous/fired responses have been noted.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				furrow cultivation, but a natural origin cannot be excluded.	are believed to be associated with more recent agricultural	
				Several weak linear trends have been noted in the east of the survey area. It is likely that most of these are associated with drainage features or modern ploughing.	activity.	
				Trends [ <b>38G</b> ] in the southeast of the area may be associated with former field boundaries and tracks, although a more recent agricultural origin is also possible.		
37 (Figures 22-7-233, 22-7-435, 22-7-637)	Survey area lies outside updated Onshore Development Boundary. Survey area lies partially within PA2.	None detected.	None detected.	The origin of the linear trend [37A] and area of enhanced magnetism[37B] is unclear, but it is likely that they are associated with the former field boundaries.	The fragmentary trends [37C], which have ferrous elements in places, coincide with former filed divisions depicted on the 1st Ed OS map of 1888 (NLS, 2023).  Two sets of parallel trends have been noted within this small survey area. These are aligned eastwest in the north of the area, and north-south in the south of the area and are typical of past ridge and furrow cultivation with the change in orientation coinciding with the former field boundaries.	Small zones magnetic disturbance along the edges of the survey area is due to adjacent metal fences.  A low level of isolated ferrous/fired responses have been noted.
42 (Figures 22-7-232 to 22-7-234, 22- 7-434 to 22-7-	Survey area lies outside updated Onshore Development Boundary.	A series of linear trends forming two rectilinear enclosures [42A] and [42B] has been detected in the centre of this survey area.	Several less well-defined responses [42E] have been detected within the enclosures formed by	Several linear trends, zone of enhanced response and discrete areas of positive response [42J] are present	Strong parallel trends on a north-south and west- east alignment are consistent with aerial	A large band of geology covers the west and south of the survey area, bisecting the centre of the survey



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
436, 22-7-636 to 22-7-638)	Survey area lies within PA2 and PA4.	They also contain several probable features [42C] within them, forming a large complex of enclosed features and potential structures. These anomalies extend southwards into Field 50 forming a substantial complex of enclosures.  A more fragmented linear trend [42D] extends southwards from [42A] and [42B]. This is almost certainly part of the same enclosure complex.	[42A] and [42B]. These are not very well-defined but are likely to have an archaeological origin. However, whether they all relate to in situ features is unclear; some may indicate deposits disturbed by later ploughing.  A positively enhanced linear trend [42F] have been detected to the north of [42B]. Although discontinuous, it might be continuation of feature [38A] to the north, albeit likely truncated by modern ploughing activity. This is partially interrupted by a zone of negatively enhanced response [42G], that appears to overlie both [42F] and [42B]. This anomaly is on a comparable alignment to response [42H] which coincides with a former bank and possible ditches known from aerial photograph. Overall, the data suggest different phases of activity.  A weakly enhanced positive linear trend [42I] has been detected starting from the western corner of [42A] and continuing northwest. It appears to be related to anomaly [39B], again	across the survey area. The origin of these is unclear. While some may have an archaeological origin, others may be related to natural variations and agricultural activity.  Two large areas of increased response cover a large portion of the east of the survey area [42K]. These could be modern in origin or might have a geological origin.	photography of post-medieval ridge and furrow patterning.	area. A second band of geological disturbance is noted to the west of the survey area.  A high level of isolated ferrous/fired responses have been noted.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			suggesting an extensive network of related ditches and enclosures.			
(Figures 22-7-234 to 22-7-235, 22-7-436 to 22-7-638 to 22-7-639)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA2 and PA4.	A right-angled positively enhanced anomaly [50A] has been detected in the south of the survey area and continues into Field 53 to the south.  Together [50A] and [53A] suggest part of a large enclosure with internal divisions.  Two negative linear anomalies on a north-south alignment have been detected in the west of the survey area [50B]. These may continue northward into Field 42 to the north and connect to a series of enclosure features. They may form part of a trackway.  A fragmentary positively enhanced linear trend [50C] runs north-south though the centre of the survey are. It appears to be a continuation of similarly positively enhanced linear anomalies in Field 53 and 42 to the south and north respectively and suggests a continuous link between enclosed settlements.	A series of discrete positively enhanced responses [50D] are present in the vicinity of [50A] and [50B], which have a similar magnetic response. These are fragmentary but may be related to these features and may represent a less well defined ditch between these features.  To the west of [50C] is an area of enhanced disturbance [50E] which is highly likely to continue into Field 42 above [42E]. It has been disrupted by the ridge and furrow patterning, however the spread still retains some shapes that may be considered possibly archaeological in origin, such as ditches parallel to [50C].  To the south of 50E a group of negatively enhanced linear trends [50F], aligned east-west, has been detected. These appear to terminate at [50E]. It is similar in appearance to the negatively enhanced feature seen in Field 42 to the north.	A linear zone of weakly positively enhanced response [50G] runs parallel and to the south of [50F] This is potentially another ditch but could be a remnant of a geological or agricultural feature.  A cluster of discrete areas of enhanced response [50H] have been detected to the east of [50G]. It is unclear if this is part of a geological feature, modern disturbance, or a combination of natural variations and ridge and furrow cultivation. However, an archaeological origin cannot be wholly dismissed.  Some faint linear trends [50I] are also present in the west of the area. While an archaeological origin cannot be dismissed, an agricultural origin is more likely.  A linear zone of weakly enhanced negative response [50J] has been detected in the northwest of the survey area. This appears to be unrelated to any other feature directly, although it runs parallel to [50B], suggesting a possible relationship.  To the northwest of [50J] is a weakly enhanced positive linear trend [50K] that is		A well-defined band of positive response, typical of natural geological variations, runs through the centre of the survey area. Comparable responses are also present in the northeast of the survey area. Weaker sinuous bands of enhanced response are also present in the east of the survey area and reflect natural variations in the subsurface.  A high level of isolated ferrous/fired responses have been noted within the survey area.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				possibly linked to [420] to the northwest of the survey area. This could be a small ditch feature or a geological feature.		
48 (Figures 22-7-235 to 22-7-236, 22-7-437 to 22-7-438, 22-7-639 to 22-7-640)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA2.	None detected.	None detected.	A weakly enhanced positive anomaly [48A] is present in the northwest corner of the survey area. The shape of the feature doesn't conform to known archaeological features; however, it is not a clearly natural feature either, hence it being categorised as having an unclear origin.  Two small positively enhanced linear trends [48B] have been detected to the southeast of the survey area. One of these could be related to ploughing trends, and the other is at a different angle, suggesting a different provenance, but could be associated with drainage.  A large spread of weakly enhanced magnetism is present in the northeast of the survey area [48C]. It is unclear if this is part of a geological feature or modern disturbance, although an archaeological origin cannot be wholly dismissed.  A small negatively enhanced semicircular anomaly [48D] is	Historic field boundaries have been detected running through the centre of the survey area and along the southern limits and correspond with former field boundaries indicated on the 1st Ed OS map of 1888.  Parallel trends run in an east-west direction, although the age of the ploughing is difficult to estimate as the modern plough is in the same direction as the detected linear trends.	A large spread of disturbance is present on the western edge of the survey area, related to the modern field boundary.
				archaeological origin cannot be wholly dismissed.  A small negatively enhanced		

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				boundary or if it is a geological feature.  Some small discrete areas of enhanced magnetism [48E] have been detected to the south of [48D]. It is unclear if this is part of a geological feature, modern disturbance, or an archaeological origin.  A single weakly enhanced linear trend is present in the southwest of the survey area [48F]. It is unclear if this is part of the ridge and furrow ploughing or more recent agricultural activity.		
44 (Figures 22-7-236, 22-7-438, 22-7- 640)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA2.	None detected.	None detected.	The large spread from Field 48 overspills into this survey area from the northwest.	None detected.	None detected.
53 (Figures 22-7-235 to 22-7-236, 22-7-437 to 22-7-438, 22-7-639 to 22-7-640)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA2 and extends into PA4.	A series of strongly enhanced positive linear anomalies [53A], likely part of an enclosure, have been detected in the northwest corner of the survey area. These are an extension of the enclosure detected in Field 50 immediately to the north. Further linear trends [53B] extend eastwards from [53A]. This is a continuation of responses detected in Fields 50 and 42 to the north suggesting an enclosure complex over 300m in length.  A further linear trend [53C] extends southward from [53B] suggesting a continuation of the	A weaker positively enhanced linear trend [53D] has been detected continuing southwest from [53C]. It is likely to be a continuation of feature 53C, although this anomaly is much weaker.  A negatively enhanced trend [53E] has been detected to the south of [53A] and [53B] and appears to have a spatial relationship with [53C]. This could be related to the WW2 pillbox just to the west of the survey area. Alternatively, it could be	A spread of positively enhanced response [53G] has been detected between [53A] and [53B]. It is unclear if this relates to the modern field boundary or a geological feature. However, an archaeological origin cannot be dismissed given the wider context.  Some discrete dipolar anomalies [53H] have been detected in the centre of the survey area between a band of geological response and the westernmost historic field boundary. It is unclear if these relate to the historic field	Two former field boundaries have been detected running through the survey area on a north-south alignment. These correspond with field boundaries depicted on the 1st Ed OS map of 1888.  Weak parallel trends on a north-south alignment are indicate of past ridge and furrow cultivation and consistent with aerial photography showing post- medieval ridge and furrow.	The area is dominated by well-defined areas of enhanced magnetism indicating natural geological variations. These are typical of natural subsurface variations such as palaeochannels.  Small zones magnetic disturbance along the eastern and western edges of the survey area are due to adjacent metal fences.  A moderate level of isolated ferrous/fired responses have been noted throughout the survey area.

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
		complex. However, this only extends for approximately 47m.	another buried archaeological feature, but it is very ephemeral.  Within the enclosure formed by [53A] short linear trends [ <b>53F</b> ] have been detected. These are less well defined but suggest possible internal divisions. However, they could be associated with ridge and furrow cultivation, hence their categorisation as possible, rather than probable, archaeology.	boundary or to geological features. Similarly, a spread of very weakly enhanced disturbance [531] is present to the south of 53H.  Some weakly magnetised linear responses [53J] have been detected in the vicinity of 53I [53J]. It is unclear if these relate to agricultural practices or geological features.  Several linear trends [53K] and spreads of enhanced response [53L] have been detected in the east of the survey area. It is unclear if these are related to modern agricultural activity or geological features.		
51 (Figures 22-7-236, 22-7-438, 22-7- 640)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA2.	None detected.	None detected.	Two positive weakly enhanced linear trends running north to south have been detected in the survey area [51A]. As they are incomplete it is difficult to establish whether these have an agricultural or other anthropological use.	None detected.	Strongly enhanced spreads of dipolar magnetism occur through the centre and south of the site, likely related to modern agricultural practices.
121 (Figures 22-7-237 to 22-7-238, 22- 7-439 to 22-7- 440, 22-7-641 to 22-7-642)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA9.	None detected, although Nunkeeling DMV (MHU982) is situated within the vicinity of this field.	A negatively enhanced response [121A] has been detected in the south of the survey area. This may be a continuation of response [123B] to the west. However, it is poorly defined and could have a natural origin indicating	Several linear and circular tends have been noted throughout the survey area. While an archaeological origin for these cannot be excluded, a natural or agricultural origin is deemed more likely.	A former field boundary has been detected as a negative linear trend crossing the northern half of the field.  Parallel trends suggestive of past ridge and furrow cultivation have been noted in the centre of the survey area.	A broadly linear spread of positively and negatively enhanced magnetism is indicative of a naturally occurring feature, possibly the result of glacial processes and / or palaeochannels.  Magnetic disturbance along the northern, western and southern limits of the survey



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			an extension of the natural response [123E].			area is due to adjacent fences, and in the east due
			Poorly defined linear trends [1218] have been noted as having a possible archaeological origin. However, such an interpretation is cautious given the limited extent of the survey in this area.			to a high pressure gas pipe.
			A weak linear trend [121C] has been noted in the centre of the survey area. This may be a continuation of [123A], but it is poorly defined against an elevated level of background response.			
123 (Figures 22-7-237 to 22-7-238, 22- 7-439 to 22-7- 440, 22-7-641 to 22-7-642)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA9.	Nunkeeling DMV (MHU982) is recorded within this area as cropmarks. The linear trends [123A] correlate with extant earthworks associated with the DMV.	A linear zone of negative magnetic enhancement [123B] crosses the centre of the survey area. This may have an archaeological origin associated with the DMV. However, it may be due to an undocumented former field boundary.	Several linear zones of enhanced magnetism [123C] have been detected which have an unclear origin. They may be associated with the DMV but could equally be due to modern agricultural activity.	Parallel linear trends on an east-west orientation have been detected in the north of the survey area and are typical of past ridge and furrow cultivation.  The broad area of magnetic noise [123D] in the south of the survey area is believed to be due to modern activity such as	A curving band of fragmentary enhanced magnetism [123E] detected in the north-east of the survey area is thought to be associated with natural geological variations associated with topographic changes.  Magnetic disturbance along the northern and eastern limits of the survey area is
					the application of green waste and material to improve drainage.	due to adjacent fences.  The high levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
129 (Figures 22-7-238 to 22-7-239, 22-	Survey area lies outside updated Onshore Development Boundary.	None detected.	Several well-defined linear trends [129A] and more amorphous linear zones of increased magnetic	A linear trend [ <b>129D</b> ] has been detected in the southern half of the survey area. The origin of this is unclear. It may	Weak trends on a SSW- NNE orientation are due to agricultural activity. It is not clear if this is due to	Magnetic disturbance along the northern and eastern limits of the survey area is



Field No	Notes	Definite/Probable	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
		Archaeology				
7-440 to 22-7- 441, 22-7-642 to 22-7-643)	Survey area lies within PA9.		enhancement [129B] have been detected within this survey area. It is likely that these are associated with the DMV to the north and the site of Nunkeeling Priory (MHU989) to the west. However, the responses are poorly defined against an elevated level of background response.  Several broad areas of magnetic disturbance [129C] are evident in the west of the survey area. These are very well defined and have a general orientation consistent with [129A] and [129B]. They may indicate demolition spreads associated with former structures, or potentially infilled features such as fishponds. However, they may simply be due to spreads of modern material associated with agricultural activity.	be due to modern agricultural activity, but an archaeological origin cannot be excluded.	modern ploughing, as the field rotates between arable and pasture, or due to older ridge and furrow cultivation.	due to adjacent fences.  The high levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
134 (Figures 22-7-238 to 22-7-239, 22- 7-440 to 22-7- 441, 22-7-642 to 22-7-643)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA9.	None detected.	Three negative parallel linear trends [134A] run through the centre of the survey area on SW-NE alignment and continue into Field 135 to the south-west. These have been categorised as possible archaeology. The negative response would	Several additional weak linear trends [134B] on a generally east west alignment have been detected across the survey area. The origin of these is unclear. They may have an agricultural origin, but they could be due to natural variations.	The fragmentary linear trend [134D] running east west through the centre of the survey area corresponds with a former field boundary shown on the 1st Ed OS map of 1888 (NLS, 2023).  Narrowly spaced parallel trends have been	The magnetic disturbance along the eastern and northern limits of the survey area is due to a modern utility.  Magnetic disturbance on the western limits of the survey area is associated with a field entrance.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			normally suggest a bank type feature and they could potentially indicate a triple dyke feature. However, a more recent agricultural or natural origin cannot be excluded.	Several strong pit type anomalies [134C] have been detected. These may simply be due to more deeply buried ferrous material, but an archaeological origin cannot be excluded.	detected in the southern half of the survey area. These respect former field boundary and are likely to be associated with past ridge and furrow cultivation, although it is possible that they reflect more modern drainage features.	The isolated ferrous/fired responses are due to modern debris in the topsoil.
135 (Figures 22-7-239, 22-7-441, 22-7-643)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA9.	A short, strong, linear anomaly [135A] has been detected in the south of the survey, along the western limits of the area. Although the limited extent of the response makes interpretation cautious, it is likely to be associated with a possible moated site (MHU987) recorded at this location.	Some positively enhanced linear trends [135B] have been noted in the northwest of the survey area. The form of the responses suggests a possible archaeological origin, although there is no correlation with the undulations in the field.  Three ephemeral parallel trends [135C] have been noted in the north of the survey area. These appear to be a continuation of trends [134A] detected to the east.	Two discrete areas of enhanced magnetism [135D] have been recorded in the centre of the survey area. The origin of these is unclear, but they are most likely modern.	None detected.	Magnetic disturbance on the eastern limits of the survey area is associated with a field entrance.  The isolated ferrous/fired responses are due to modern debris in the topsoil.
139 (Figures 22-7-240 to 22-7-242, 22- 7-442 to 22-7- 444, 22-7-644 to 22-7-646)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	A very strong anomaly [139A] has been detected in the southwest of the survey area. The nature of the response suggest an area of burning, although it is not possible to say whether this is archaeological in origin or due to modern activity or debris.  Several discrete areas of enhanced magnetism have been noted within the survey	The fragmentary linear trends [139B] have been noted within the survey area with correspond with former field divisions shown on the 1st Ed OS map of 1888 (NLS, 2023).  Parallel trends have been noted on a north-south alignment which are thought to indicate	A modern utility runs north- south through the eastern half of the survey area. Discrete zones of strongly enhanced magnetism have been detected within the survey area and are suggestive of lightning strikes. The moderate to high levels of isolated ferrous/fired



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				area. The origin of these is unclear. While an archaeological origin cannot be excluded, a natural or modern origin is most likely.  A few weak linear trends have also been noted which are likely to have an agricultural origin.	modern field drains. However, the possibility that some of these may be associated with past ridge and furrow cultivation cannot be excluded. Weaker parallel trends on a comparable alignment are due to modern ploughing.	responses are due to modern debris in the topsoil.
1268 (Figures 22-7-242 to 22-7-243, 22-7-444 to 22-7-445, 22-7-646 to 22-7-647)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	A few weak trends have been noted which are most likely due to agricultural activity.	The weak linear trend [1268A] running SW-NE in the south of the survey area corresponds with a former field boundary shown on the 1st Ed OS map of 1888 (NLS, 2023).  Parallel trends have been noted running east-west throughout the survey area and are due to past ridge and furrow cultivation. Weaker parallel trends on a comparable alignment are due to modern ploughing.	The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
387 (Figures 22-7-244, 22-7-446, 22-7- 648)	Survey area lies outside updated Onshore Development Boundary.	The DMV of Storkhill (MHU6558) is located partially over the survey area in the west, and much of the magnetic disturbance and negatively enhanced anomalies [387A] in the west of the survey area correlate well with the known position of features relating to the DMV, such as the ditches.	None detected.	A series of weakly enhanced positive anomalies form a rough circular anomaly in the centre of the survey area [387B]. The dimensions of the anomalies are consistent with a structure such as a roundhouse, however the responses are fragmentary and not well defined.  A weakly enhanced linear trend [387C] can be	Ridge and furrow that is recorded in the HER has also been detected in the east of the survey area, traversing north to south.  A single drain is noted near the eastern boundary of the survey area.	Geological responses are visible in the east of the survey area.  Patches of magnetic disturbance are visible, either within the DMV or to the east of the DMV and are likely to represent infill or geological anomalies.  The southern boundary is dominated by magnetic



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				discerned to the southwest of [387A]. The origin of this response is unclear, but it appears to cut through the historical archaeology in the west of the survey area suggesting a more recent origin.  A single weakly enhanced linear trend has been detected in the east of the survey area, overlying a drain [387D]. It has no relationship to any of the other responses in the survey area. An agricultural origin is most plausible.		responses from the adjacent A1035.
379 (Figures 22-7-245, 22-7-447, 22-7- 649)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	A strong curving linear anomaly has been detected in the east of the survey area [379A]. The origin of this is unclear and while an archaeological origin cannot be dismissed an agricultural or natural origin is equally plausible.  A further positively enhanced anomaly [379B] has been detected in the centre of the survey area. It does not follow the alignment of the ridge and furrow patterning; however, it terminates at the same ridge as [379A], suggesting a possible relationship.  Two positively enhanced linear anomalies are present in the northwest of the survey are [379C]. These have the appearance of field drains,	Strong, straight, parallel trends on a generally SW-NE alignment dominate the data and are due to past ridge and furrow cultivation, likely to be Post-Medieval in date.	Weak amorphous zones of elevated response are noted throughout the survey area and likely relate to geological variations.  The magnetic disturbance along the western limits of the survey area due to the adjacent railway line.  A moderate level of isolated ferrous/fired responses have been noted.



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				however without any additional drains in this dataset it is impossible to prove this without further investigation.		
411 (Figures 22-7-245, 22-7-447, 22-7- 649)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	None detected.	None detected.	The survey area is largely dominated by magnetic disturbance from wire fencing and modern infrastructure.
401 (Figures 22-7-245, 22-7-447, 22-7- 649)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	A single weakly enhanced positive linear has been detected originating from the entrance of the field in the north running southwards [401A]. It is unclear if it relates to modern agricultural practices, former ridge and furrow or geological responses.	None detected.	The survey area is largely dominated by magnetic disturbance from wire fencing and modern infrastructure.
395 (Figures 22-7-245, 22-7-447, 22-7- 649)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	None detected.	None detected.	The survey area is largely dominated by magnetic disturbance from wire fencing and modern infrastructure.
406 (Figures 22-7-246, 22-7-448, 22-7- 650)	Survey area lies outside updated Onshore Development Boundary.	The strong linear trend [406A] in the east of the survey area coincides with a levelled earthwork recorded on aerial photography records [NMR RAF/106G/UK/723 4150 26-AUG-1945].	None detected.	A linear trend [406B], that is similar in magnetic response to the historic feature [406A], almost abuts the historic feature and continues into field 396 to the northwest. While the response is indicative of a ditch-like feature, it is not recorded in the HER. It is not possible to assign this a more definitive interpretation without further investigation; it could be a	Strong, straight, parallel trends with multiple alignments have been detected across the survey area. These are believed to be due to past ridge and furrow cultivation, likely to be Post-Medieval in date.  Weaker parallel trends aligned north-south in the east of the survey area	The magnetic disturbance in the east and northeast of the survey area is due to the adjacent railway line, as well as disturbance due to the creation of a track on the northeastern boundary of the survey area.  Weakly sinuous discrete anomalies are noted in the centre of the survey area and likely relate to

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Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				former field division or a field drain.  A second linear anomaly [406C] begins directly from the northernmost point of the historic feature [406A]. It is much weaker than [406A] and terminates in a patch of magnetic disturbance in the north of the survey area.  A weak curving trend [406D] has been noted situated between [406B] and [406C], crossing over the historic feature [406A]. This anomaly does not appear to respect any known archaeology. It may have a natural or agricultural origin.	are due to modern ploughing.	geological variations.  A moderate level of isolated ferrous/fired responses have been noted.
375 (Figures 22-7-246, 22-7-448, 22-7- 650)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	A weak linear trend [375A] and two discrete responses [375B] have been noted. The origin of these is unclear and while an archaeological origin cannot be excluded natural and agricultural origins are more likely.	In the southern half of the area several field drains have been detected.	Amorphous zones of enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations.  Zones of magnetic disturbance are due to adjacent fences and modern debris.
396 (Figures 22-7-246 to 22-7-248, 22- 7-448 to 22-7- 450, 22-7-650to 22-7-652)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	Several ephemeral linear [396A] trends have been noted throughout the survey area. The origin of these is unclear, but an agricultural origin is most likely.	Strong, slightly curved, parallel trends running across the survey area are due to past ridge and furrow cultivation, likely to be Medieval in date.  Some modern ploughing headland has been	A large area of highly magnetic disturbance has been detected in the south of the survey area, likely related to modern infrastructure.  The gate along the northern limits of the survey area has



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
					detected in the northeast corner of the survey area.	also generated an area of magnetic disturbance.
(Figures 22-7-246 to 22-7-248 to 22-7-448 to 22-7-450, 22-7-650 to 22-7-652)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	A relatively strong sinuous linear trends runs through the survey area on a SW-NE alignment. The origin of this is unclear. It may indicate a former field division as it shows some correlation with the ridge and furrow cultivation.  A linear trend [402B] has been detected in the east of the survey area and is a continuation of [406B] to the south. The origin of this is unclear. It could indicate an unmapped former field boundary, a ploughing headland, or a field drain.  Additional linear trends [402C] have been noted on a comparable alignment to [402B], some of which continue into field 396 to the north. Their origin is unclear, but they are likely to be associated with agricultural activity such as drainage.  A very small positively enhanced linear trend [402D] has been detected in the centre of the survey area. It is not clear if this is associated with ridge and furrow cultivation or as a different origin.	Strong, slightly curved, parallel trends running through the survey area are due to past ridge and furrow cultivation, likely to be Medieval in date.  Some modern ploughing headlands has been detected in the northeast corner of the survey area.	A geological variation has been detected in the centre of the survey area, possibly a lightning strike.  The southern and western boundaries are affected by magnetic disturbance due to the road and metal wiring in the hedge.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
1322 (Figures 22-7-249, 22-7-451, 22-7- 653)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	A few weak linear trends have been noted. While the origin of these is uncertain, they are likely to be associated with agricultural activity, or natural variations.	The fragmentary trend [1322A] in the north of the survey area corresponds with a former field boundary shown on the 1st Ed OS map of 1888 (NLS, 2023).  Weak parallel trends aligned north-south are due to modern ploughing.	Well-defined sinuous zones of strongly enhanced magnetism have been detected within the survey area. These are typical of natural subsurface variations such as palaeochannels.  Zones of magnetic disturbance at the limits of the survey area are due to adjacent fencing.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.
692 (Figures 22-7-249, 22-7-451, 22-7- 653)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	A small curving spread of very slightly enhanced response [692A] has been detected to the south of an historic field boundary and associated small enclosure. It is unclear if this is related to the historic feature or another provenance.  A similar curving band of response [692B] is noted to the south of [692A]. It is unclear if this is related to [692A]. Both could have natural origins.  Some weakly enhanced trends are present across the north of the survey area [692D]. It is unclear if these are from modern agricultural activities or other anthropological causes.	An historic field boundary has been detected in the north of the survey area, which correlates with historic mapping.  Weak trends on north-south alignments are due to modern ploughing.	Two dipolar linear trends cross a short distance over the SE of the survey area, from an area of high magnetism; these could be drains or utility pipes.  Magnetic disturbance along the edges of the survey area is due to adjacent metal fences, telegraph poles and modern infrastructure.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
717 (Figures 22-7-250, 22-7-452, 22-7- 654)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	None detected.	None detected.	Magnetic disturbance in the survey area is caused by the nearby roads and adjacent fencing.
726 (Figures 22-7-249 to 22-7-250, 22-7-451 to 22-7-452, 22-7-653 to 22-7-654)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	A single positively enhanced linear trend bisects the survey area [726A]. It is unclear if this is an undocumented trackway or a more modern feature.  A small spread of enhanced response has also been detected in the north of the survey area [726B]. It is unclear if this relates to the enhanced disturbance from modern sources or has a natural origin.	None detected.	Magnetic disturbance in the survey area is caused by the nearby roads and adjacent fencing.
724 (Figures 22-7-250, 22-7-452, 22-7- 654)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	None detected.	A fragmentary band of enhanced response runs through the northern half of the survey area, parallel to the utility. The response corresponds with a former field boundary and track indicted on historic mapping.	A modern utility through the northern portion of the survey area, continuing into Field 728.  Additional magnetic disturbance on the boundaries of the survey area is caused by a mix of agricultural debris and the nearby roads.  A moderate level of isolated ferrous/fired responses have been noted.
728 (Figures 22-7-250 to 22-7-251, 22- 7-452 to 22-7-	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	An area of positively enhanced disturbance curves through the centre of the survey area [728A]. It is	Parallel trends on an NNW-SSE alignment are thought to indicate past ridge and furrow cultivation, however, they	A modern utility runs along the northern limit of the survey area.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
<b>453, 22-7-654</b> to <b>22-7-655</b> )				unclear if this is a former trackway or a natural feature.	could indicate drainage features.  Weaker, more closely spaced, parallel trends on an SW-NE orientation reflect modern ploughing.	A high level of isolated ferrous/fired responses have been noted.
1232 (Figures 22-7-251, 22-7-453, 22-7- 655)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	A spread of strong magnetic response is recorded in the north of the survey area, [1232A]. It is unclear as to whether this has a natural or anthropological provenance, although it is situated in a natural gulley.	None detected.	The majority of the survey has an elevated level of background response, likely related to either green waste or the creation of the modern road infrastructure in the vicinity of the survey area.
742 (Figures 22-7-251 to 22-7-252, 22-7-453 to 22-7-454, 22-7-655 to 22-7-656)	Survey area lies outside updated Onshore Development Boundary.	None detected.	A negatively enhanced trend is present crossing from the north and extending beyond the west of the survey area [742A]. This could be an undocumented field boundary or trackway; however, given the weak response it may have a more natural origin.	A spread of strong magnetic enhancement [742B] has been detected in the north of the survey area and continues eastward as spread [736B]. As stated above, it is unclear as to whether this has a natural or anthropological provenance, although it is situated in a natural gulley.  A small series of weakly enhanced linear anomalies are recorded in the north of the survey area [742C]. It is likely these have natural or agricultural origins.	Weakly enhanced linear trends running north-south are present across the survey area and are likely to be remnants of Post-Medieval ridge and furrow or more modern ploughing regimes.	Magnetic disturbance along the western edge of the survey area is due to main road and trackway in the survey area.  The base of a former pylon has been detected in the north of the survey area.  A spread of disturbance is noted around the base of the telegraph pole in the centre of the survey area.
753 (Figures 22-7-251 to 22-7-252, 22-7-453 to 22-7-454, 22-7-655 to 22-7-656)	Survey area lies outside updated Onshore Development Boundary.	None detected.	None detected.	None detected.	The east-west aligned trend in the south of the area coincides with a former field boundary shown on the 1st Ed OS map of 1888 (NLS, 2023).	Zones of magnetic disturbance at the limits of the survey area are due to adjacent fencing.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.

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Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
					The NW-SE aligned parallel trends are indicative of field drains.	
					Weaker north-south aligned parallel trends reflect modern agricultural activity.	
776 (Figures 22-7-252, 22-7-454, 22-7-656)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA25.	None detected.	None detected.	None detected.	A weak trend running through the centre of the survey area on a north-south alignment corresponds with an historic field boundary.  Weakly enhanced linear trends running north-south are present across the survey area, which are likely to be remnants of Post-Medieval ridge and furrow or more modern ploughing regimes.	Magnetic disturbance along the southern edge of the survey area is due to adjacent metal fences.  A utility pipe is noted to the east of the survey area.  The base of a former pylon has been detected in the south of the survey area.
736 (Figures 22-7-252 to 22-7-253, 22-7-454 to 22-7-455, 22-7-656 to 22-7-657)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA25.	None detected.	A negatively enhanced trend is present crossing from the north and extending beyond the west of the survey area [736A]. This could be an undocumented field boundary or trackway; however, given the weak response it may have a more natural origin.	A spread of magnetic disturbance is recorded in the north of the survey area [736B]. It is unclear as to whether this has a natural or anthropological provenance, although it is situated in a natural gulley.	An historic field boundary has been detected north to south through the centre of the survey area.  Weakly enhanced linear trends running northsouth are present across the survey area, which are likely to be remnants of Post-Medieval ridge and furrow or more modern ploughing regimes.	Magnetic disturbance on the edges of the survey area is due to adjacent metal fences.  A utility pipe crosses the eastern half of the survey area.  Footings from telegraph poles have been detected in the south of the survey area.
710 (Figures 22-7-253 to 22-7-254, 22- 7-455 to 22-7-	Survey area lies outside updated Onshore Development Boundary.	None detected.	A negatively enhanced trend is present crossing from the north and extending beyond the west of the survey area	Some additional negative and positive linear trends [710B] have been detected within the survey area. The origin for these is unclear. While an	None detected.	Magnetic disturbance on the edges of the survey area is due to adjacent metal fences.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
<b>456, 22-7-657</b> to <b>22-7-658</b> )	Survey area lies within PA25.		[710A]. This could be an undocumented field boundary or trackway; however, given the weak response it may have a more natural origin.	archaeological origin cannot be excluded, a natural or agricultural origin is equally plausible.  A spread of magnetic disturbance is recorded in the south of the survey area, [710C]. It is unclear as to whether this has a natural or anthropological provenance, although it is situated in a natural gulley.		A utility pipe is noted in the east of the survey area.
(Figures 22-7-255 to 22-7-256, 22-7-457 to 22-7-458, 22-7-659 to 22-7-660)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA25.	None detected.	Two negative linear trends [687A] have been noted along the southern limits of the survey area. These have been noted as having a possible archaeological origin, although interpretation is cautious due to the elevated level of background response. They appear to extend into Field 714, to the south and may indicate former field divisions.	A spread of magnetic disturbance has been detected in the south of the survey area [687B]. It is unclear as to whether this has a natural or anthropological origin, although it is situated in a natural gulley. This elevated zone of response extends southwards into Field 714 and westwards into Field 710.	Weak parallel trends are due to modern ploughing.	A modern utility runs through the centre of the survey area and has generated a wide zone of magnetic disturbance.  Magnetic disturbance on the edges of the survey area is due to adjacent metal fences.  A moderate level of isolated ferrous/fired responses have been noted.
650 (Figures 22-7-255, 22-7-457, 22-7- 659)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA25.	None detected.	None detected.	None detected.	None detected.	The data is dominated by magnetic disturbance which is most likely associated with construction of the roundabout immediately to the north.  A band of magnetic disturbance runs along the southern limits of the field. This is either due to remnants of a fence line, or a small utility.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
						A high level of isolated ferrous/fired responses have been noted.
651 (Figures 22-7-255, 22-7-457, 22-7- 659)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA25.	None detected.	None detected.	Two amorphous areas of enhanced magnetism [651A] have been noted. The origin of these is unclear. While an archaeological origin cannot be excluded, a natural or modern origin is most likely.	A few weak trends associated with modern ploughing have been noted.	A utility pipe runs through the south of the survey area. A high level of isolated ferrous/fired responses have been noted.
741 (Figures 22-7-253, 22-7-455, 22-7-657)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA25.	None detected.	Weak negative linear trends have been detected running through the survey area on broadly north-south alignment. These have been noted as having a possible archaeological origin, although interpretation is cautious due to their ephemeral and fragmentary nature. Trend [741A] appears to extend into Field 782, to the south and may indicate former a formal field system. It coincides with a ditch noted on aerial photographs (1566060).  The more sinuous trend [741B] appears to correspond with a short length of ditch noted on aerial photographs and recorded as an Iron Age/Roman trackway (1566058).  A strong, well-defined	A spread of magnetic disturbance has been detected in the north of the survey area [741D]. It is unclear as to whether this has a natural or anthropological origin, although it is situated in a natural gulley. This elevated zone of response extends northwards into Fields 710 and 687 and eastwards into Field 714.  A weaker zone of elected response [741E] curves through the western half of the survey area. The origin of this is unclear, but a natural or agricultural origin is most likely.  A few weak trends have been noted, together with discrete pit type anomalies. The origin of these is unclear. While an archaeological cannot be excluded, agricultural and natural origins are most likely.	An historic field boundary has been detected in the east of the survey area.  Weakly enhanced parallel linear trends are present across the survey area and are associated with modern ploughing regimes.	Magnetic disturbance on the edges of the survey area is due to adjacent metal fences.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			been detected in the south of the survey area. It is difficult to formulate a precise interpretation for this response, but it has been categorised as having a possible archaeology origin given its possible spatial association with comparable responses in Field 782 to the south and the nature and form of the response.			
776 (Figures 22-7-260 to 22-7-261, 22-7-462 to 22-7-463, 22-7-664 to 22-7-665)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA25.	None detected.	None detected.	None detected.	A weak trend running through the centre of the survey area on a north-south alignment corresponds with an historic field boundary.  Weakly enhanced linear trends running north-south are present across the survey area, which are likely to be remnants of Post-Medieval ridge and furrow or more modern ploughing regimes.	Magnetic disturbance along the southern edge of the survey area is due to adjacent metal fences.  A utility pipe is noted to the east of the survey area.  The base of a former pylon has been detected in the south of the survey area.
714 (Figures 22-7-256, 22-7-458, 22-7- 660)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA25.	None detected.	None detected.	The strong linear anomalies [714A] along the north- western limits of the survey area appear natural in origin and lie at the bottom of a slope suggesting they are due to a paleochannel. However, they have been noted as having an unclear origin due to the limited survey extent. Two discrete anomalies [714B] have been detected	Overall, the dataset appears magnetically noisy, probably a result of modern agricultural practices such as the application of green waste.	The two discrete areas of magnetic disturbance in the centre and along the western limits of the survey area are due to telegraph poles.  Magnetic disturbance along the southern edge of the survey area is due to adjacent metal fences.



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				towards the centre of the survey area. The origin of these is unclear. They may be due to more deeply buried ferrous material or pockets of magnetic gravels. However, they may be infilled extraction pits, as comparable features are indicted on the 1888 OS map in the immediate area.		A high level of isolated ferrous/fired responses have been noted.
782 (Figures 22-7-258 to 22-7-260, 22-7-460 to 22-7-260 to 22-7-26	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA25.	A concentration of linear trends [782A] has been detected along the southern limits of this survey area. Although fragmentary, the responses form a clearly defined series of enclosures. These are not recorded in the HER or on AP transcriptions, but the size and form of the postulated enclosures are comparable to those recorded to the west (MHU3530) and east (1565989). In addition, the responses appear to respect the Iron Age/Roman track recorded in AP's (1087958).  In the northeast of the survey area a well-defined circular anomaly [782B] has been detected. This is approximately 18m in diameter and consistent with a ring ditch suggesting a possible barrow. Although no barrow is recorded in the HER at this location, barrows are noted within the wider area.	Less well-defined linear trends [782C] have been detected in the south of the area. These are almost certainly part of the enclosure complex [782A] and internal features but are noted as only having a possible archaeological origin due to their more ephemeral nature.  Several amorphous zones of enhanced magnetism [782D] have been noted within and around the enclosure system [782A]. These are noted has having possible archaeological origins. While some may indicate in-situ deposits some may be due to natural variations or agricultural activity.  Along the southern limits of the survey area some well-defined responses have been noted. These may be part enclosures lying to the south of	The origin of the sinuous zones of enhanced response [782F] in the southeast of the survey area is unclear. Given the wider context an archaeological origin cannot be dismissed; however, a natural origin is plausible.  Very weak parallel trends on NNW-SSE alignments have been noted throughout the survey area. These are noted as having an unclear origin as it is not clear if they are due to ridge and furrow cultivation or drainage features.  Throughout the survey area discrete pit type anomalies, have been noted. The origin of these is unclear. While an archaeological cannot be excluded, a natural origin is possible.	Ephemeral parallel trends aligned east-west and parallel to the extant boundaries are due to modern ploughing.	Magnetic disturbance around the edges of the survey area is due to adjacent fences.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.

# **RWE**

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
			recorded trackway. However, they do not clearly extend into Filed 825 to the south, making interpretation cautious.			
			The short linear trend [782E] is likely to be part of the Iron Age / Roman trackway recorded in AP's (1566058).			
766 (Figures 22-7-257 to 22-7-258, 22-7-459 to 22-7-460, 22-7-661 to 22-7-662)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA25.	A positively enhanced circular anomaly [766A] measuring approximately 17m in diameter, was detected in the south of the survey area. The response is not complete, but it is not clear if the breaks reflect the true geometry of the feature or are due to plough damage. The anomaly shows excellent correlation with an Iron Age / Roman round house recorded as a cropmark as part of the National Mapping Project (NMP).  Short linear trends [766B] have been detected which appear to be associated with the circular anomaly [766A] and are also visible as cropmarks. However, the features recorded as part of the NMP are far more extensive.  Linear and rectilinear trends [766C], suggesting enclosures, have been detected along the western limits of the survey area, 100m to the west of [766A]. These show excellent correction with an Iron Age / Roman rectilinear enclosure	Two poorly defined circular trends [766D] have been noted in the west of the survey area. These appear to lie within rectilinear enclosure [766C].  A weak, positive, rectilinear trend [766E] has been noted in the west of the survey area. Its location and orientation suggest it may be associated with [766B], but it is noted as having a possible archaeological origin as it does not correspond with the recorded cropmarks and may be due recent agricultural activity.  Weak trends [766F] show some correlation with AP transcriptions but they are very poorly defined against the elevated level of background response.	Ephemeral positive trends have been noted as having an unclear origin it. Trends [766G] may have an archaeological origin but such an interpretation is tentative give their ephemeral nature and the elevated level of background response, together with the lack of clear correlation with the recorded cropmarks.  Several negatively enhanced linear trends are visible in the south of the survey area. These are noted as having an unclear origin. While most are likely to have a natural origin, some may be due to agricultural activity or potentially former field divisions.	The line of strongly dipolar responses and associated linear trend [766H] which runs through northern half of the survey area corresponds with a former field boundary depicted on the 1st Ed OS map of 1888.  The discrete area of enhanced magnetism [766H] corresponds with a feature on the 1st Ed OS map which suggests an infilled extraction pit.  Ephemeral parallel trends running north-south through the survey are associated with modern ploughing.	The southern half of the survey area is dominated by a mottled appearance generated by natural geological variations.  Magnetic disturbance around the edges of the survey area is due to adjacent fences.  The moderate levels of isolated ferrous/fired responses are due to modern debris in the topsoil.



# **RWE**

Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
		with the responses, to the east, the gradiometer anomalies are not as extensive as the recorded cropmark features.				
825 (Figures 22-7-263, 22-7-667)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA25.	None detected.	Several positively enhanced linear trends [825A] have been detected in the west of the survey area. The form of the responses suggests a possible trackway and associated field divisions. These have been categorised as having a possible archaeological origin, but they could be more recent undocumented features.	Numerous linear trends of an unclear origin have been recorded throughout this survey area.  The positively enhanced linear trends [825B] along the northern limits of the survey area do not correlate with natural features and appear more likely archaeological to have an archaeological origin. However, their location on the edge of the survey area limits confidence in their interpretation hence them being classified as having an unclear origin. They may be due to agricultural activity.  Several diffuse linear zones of magnetic enhancement [825C] have been noted along the southern limits of the survey area. These may be due to former drainage ditches.  A strong discrete anomaly [825D] has been recorded in the north-west of the survey area. The origin of this is unclear. It may be due to modern ferrous material but could potentially indicate an area of burning or a capped bell pit.	The strong sinuous anomaly [825E] along the south-western limits of the survey area corresponds with an historic boundary which is no longer present. The boundary between Fields 825 and 861 is currently a slight ditch.  Parallel trends in the south of the survey area are indicative of past ridge and furrow cultivation.	Magnetic disturbance along the southern edge of the survey area is due to adjacent metal fences.  A high level of isolated ferrous/fired responses have been noted.
				Several negatively enhanced linear trends are visible within		



Field No	Notes	Definite/Probable Archaeology	Possible Archaeology	Unclear	Agricultural	Non-Archaeological
				the survey area. These are noted as having an unclear origin. While most are likely to have a natural origin, some may be due to agricultural activity or potentially former field divisions.		
861 (Figures 22-7-262, 22-7-464, 22-7- 666)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA25.	None detected.	None detected.	The large dipolar anomaly in centre of the survey area is likely to have a modern or natural origin.  A linear trend in the west of the area is noted as unclear in origin but is likely to have a modern or agricultural origin.	None detected.	Magnetic disturbance along the southern edge of the survey area is due to adjacent metal fences.  A high level of isolated ferrous/fired responses have been noted.
869 (Figures 22-7-263, 22-7-465, 22-7- 667)	Survey area lies outside updated Onshore Development Boundary. Survey area lies within PA25.	None detected. A possible henge (MHU6625) is recorded in the south of this survey area. The feature Is not visible in any aerial photograph and has not been detected by the gradiometer survey.	None detected.	The strong dipolar anomaly [869A] corresponds with a slight bowled depression in the field. Its origin is unclear, but it is most likely to have a more recent origin.  Weak linear trends have been noted throughout the survey area. While noted as having an unclear origin, they are most likely to be associated with agricultural activity.	Linear trend [869B] coincides with a former field division indicated on the OS map of 1888 (NLS, 2023).  Parallel trends suggestive of ridge and furrow cultivation have been recorded in the south of the survey area.	Magnetic disturbance along the southern edge of the survey area is due to adjacent metal fences and infrastructure.  A moderate level of isolated ferrous/fired responses have been noted.



## 22.7.6 Summary of Results

- 60. This section provides a summary of the results of the survey. This is an overview only and the detailed results of survey are provided in section 22.7.5.
- 61. The summary results are discussed by interpretation category from Landfall in the northeast to the substation in the southwest.

## 22.7.6.1 Definite/Probable Archaeology

- 22.7.6.1.1 Within, extending beyond, or immediately adjacent to the Onshore Development Boundary
- 62. **Field 1145 (Figures 22-7-9 and 22-7-36):** A probable rectilinear enclosure has been detected in the north of the survey area. Additional anomalies have been detected within the postulated enclosure suggesting internal divisions and a possible trackway.
- 63. **Field 35 (Figures 22-7-10** to **22-7-11 and 22-7-37** to **22-7-38):** A concentration of positively enhanced anomalies has been detected in the southwest of the survey area suggesting an enclosure that measures at least 30m by 90m and appears to extend to the south of the survey area. Additional anomalies suggest possible interval divisions and features.
- 64. **Field 54 (Figures 22-7-11 and 22-7-38):** A series of linear trends has been detected in the southwest of the survey area. The responses suggest two, potentially overlapping, enclosures with possible internal features. These responses extend westwards into Field 63 suggesting a complex of enclosures and potential settlement features.
- 65. **Field 63 (Figures 22-7-11 and 22-7-38):** A large number of positively enhanced linear trends in the south of the survey area form at least one enclosed ditch feature. The data suggests internal features and linear features that continue into Field 54 to the east.
- 66. **Field 81 (Figures 22-7-13 and 22-7-40):** A cluster of strong responses has been detected in the southeast of the survey area. It is assumed that this is associated with the known WW2 decoy (MHU18424) whose location is recorded 75m to the east. This lies beyond the updated Onshore Development Boundary.
- 67. **Field 185 (Figures 22-7-18 and 22-7-45):** In the southwest of the survey area a series of linear trends have been detected. Although these are situated on the slope of a hill, the central linear trends form a trackway that are situated on the plateau, with the result suggesting enclosures abutting the trackway.

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- 68. **Field 191 (Figures 22-7-18 and 22-7-45):** Part of a moated site (MHU2574) has been detected in the southwest of the survey area.
- 69. **Field 192 (Figures 22-7-18 and 22-7-45):** Part of a moated site (MHU2574) has been detected in the southeast of the survey area.
- 70. **Field 1235 (Figures 22-7-19 and 22-7-46):** A strong, well-defined, set of linear trends has been detected in the centre of the survey area. These form a square enclosure measuring 35m by 35m, with the suggestion of a southern extension. The form and nature of the response suggests a probable archaeological origin. It is not possible to determine a date for the postulated enclosure. However, strong ridge and furrow responses in the area suggest it predates this medieval cultivation. Linear cropmarks have been recorded 330m to the west (MHU19462).
- 71. **Field 221 & 218 (Figures 22-7-19** to **22-7-20 and 22-7-46** to **22-7-47):** In the middle of the survey area well-defined linear trends suggests a rectangular enclosure. This corresponds with an Iron Age/Roman ditch visible as a cropmark (1460420). However, the magnetic anomaly is not as extensive as the recorded cropmark. A second curving linear trend has been detected immediately to the west of the rectangular enclosure. The nature and form of this response suggest a probable archaeological origin. However, it is not clear if this is an annex to the enclosure, or a separate enclosure of a different date. It could potentially be part of the recorded Iron Age/Roman trackways (MHU7169), but its location is not consistent with the cropmark evidence.
- 72. **Field 1192 (Figures 22-7-21 and 22-7-48):** In the west of the survey area a concentration of linear and curvilinear trends has been detected. The nature and form of the responses suggest a possible Iron Age settlement with associated enclosures and possible trackways. The HER record lists a possible enclosure at this location recorded as a poorly defined cropmark (MHU10203). The complex of responses covers an area of 150m by 150m and lies within the updated Onshore Development Boundary.
- 73. **Field 1255 (Figures 22-7-22 and 22-7-49):** A strong, well-defined, linear trend has been detected in the northwest of the survey area. This appears to be a continuation of an Iron Age / Roman ditch visible as a cropmark (HE\_UID 1334599).
- 74. **Field 1257 (Figures 22-7-22 and 22-7-49):** The short trend in the southeast of the survey areas appear to be a south-westward continuation of an Iron Age / Roman ditch visible as a cropmark (HE\_UID 1334599).

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- 75. **Field 443 (Figures 22-7-29 and 22-7-56):** In the north-west of the survey area linear trends have been detected which appear to form part of a possible prehistoric field system. They are categorised as having a probable archaeological origin due to their character and form. However, no known sites or cropmarks have been recorded within this area.
- 76. **Field 474 (Figures 22-7-29 and 22-7-56):** A relatively well defined linear trend has been detected in the north-west of the survey area and is probably archaeological in origin. Its form is slightly different to the possible archaeological trends detected in Field 466 to the north increasing confidence in interpretation. Roman / Iron Age cropmarks have been recorded 250m to the south-west.
- 77. **Field 1320 (Figures 22-7-32 and 22-7-59):** 1320: Along the western limits of the survey area, just beyond the Onshore Development Boundary, linear trends have been detected. These have been noted as having a probable archaeological origin as they are suggestive of an enclosure and are likely to be associated with enclosures visible as cropmarks (MHU1507).
- 78. **Field 865 (Figures 22-7-33 and 22-7-60):** A series of positively enhanced linear trends forming rectangular enclosures and other delineations traverse the survey area in the south, on a predominantly east-west alignment. On their own these form a small ladder settlement. However, they may be a continuation of known cropmarks suggesting rectangular enclosures and settlement on a similar alignment 200m to the east (MHU3530), suggesting a potentially much larger settlement.

#### 22.7.6.1.2 Beyond Onshore Development Boundary

- 79. **Field 24 (Figures 22-7-10 and 22-7-37):** A series of strongly enhanced linear trends were detected in the north of the survey area. The nature and form of these responses suggests a probable archaeological origin such as a trackway and associated enclosures, potentially prehistoric in date.
- 80. **Field 28 (Figures 22-7-10 and 22-7-37):** An extensive network of linear trends was detected in this survey area and are likely to be a continuation of those detected in Field 24 to the north-west. Linear and curvilinear trends in the north of the survey area suggest prehistoric field systems or enclosures. In the south of the field clearly defined rectilinear trends have been identified suggesting an inner enclosure, measuring approximately 30m by 35m, surrounded by associated linear forming a series of additional enclosures. The responses are consistent with Romano-British remains and may indicate a villa complex.

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- 81. **Field 29 (Figures 22-7-10 and 22-7-37):** Three discrete areas of strongly enhanced magnetic response have been recorded in the centre of the survey area and corresponds with an HHER entry recording a WW2 pillbox, trackway, and gun emplacement (MHU9941).
- 82. **Field 38 (Figures 22-7-10 and 22-7-37):** The area of strong magnetic response coincides with an extant WWII Pillbox (MHU18422). Linear trends in the west of the area are believed to be a southward extension of the complex of enclosures detected in Field 28 to the north.
- 83. **Field 39 (Figures 22-7-10 and 22-7-37):** In the south of the survey area a fragmentary circular anomaly has been detected which measures 14m in diameter. This appears to be enclosed by a rectangular enclosure measuring approximately 35m by 45m. No entries are recorded on the HHER in this area.
- 84. **Field 42 (Figures 22-7-10 and 22-7-39):** A series of linear trends forming two rectilinear enclosures has been detected in the centre of this survey area. They also contain several probable features within them, forming a large complex of enclosed features and potential structures. These anomalies extend southwards into Field 50 forming a substantial complex of enclosures.
- 85. **Field 50 (Figures 22-7-10 and 22-7-39):** A right-angled positively enhanced anomaly has been detected in the south of the survey area and continues into field 53 to the south. A fragmentary positively enhanced linear trend runs north-south though the centre of the survey area. This appears to be a continuation of similarly positively enhanced linear anomalies in Fields 53 and 42 to the south and north respectively and suggests a continuous link between enclosed settlements.
- 86. **Field 123 (Figures 22-7-15 and 22-7-42):** Linear trends have been detected which correspond with extant earthworks associated with the Nunkeeling DMV (MHU982).
- 87. **Field 135 (Figures 22-7-15 and 22-7-42):** A short, strong, linear anomaly has been detected in the south of the survey, along the western limits of the area. Although the limited extent of the response makes interpretation cautious, it is likely to be associated with a possible moated site (MHU987) recorded at this location.



- 88. **Field 782 (Figures 22-7-34 and 22-7-61):** A concentration of linear trends has been detected along the southern limits of this survey area. Although fragmentary, the responses form a clearly defined series of enclosures. These are not recorded in the HER or on AP transcriptions, but the size and form of the postulated enclosures are comparable to those recorded to the west (MHU3530) and east (1565989). In addition, the responses appear to respect the Iron Age/Roman track recorded in AP's (1087958). In the northeast of the survey area a well-defined circular anomaly has been detected. This is approximately 18m in diameter and consistent with a ring ditch suggesting a possible barrow.
- 89. **Field 766 (Figures 22-7-34 and 22-7-61):** A positively enhanced circular anomaly measuring approximately 17m in diameter, was detected in the south of the survey area. The anomaly shows excellent correlation with an Iron Age / Roman round house recorded as a cropmark as part of the NMP. Short linear trends have been detected which appear to be associated with the circular anomaly and are also visible as cropmarks. Linear and rectilinear trends, suggesting enclosures, have been detected 100m to the west of. These also show excellent correction with an Iron Age / Roman rectilinear enclosure recorded by NMP. However, the gradiometer anomalies are not as extensive as the recorded cropmark features.

# 22.7.6.2 Possible Archaeology

- 22.7.6.2.1 Within, extending beyond, or immediately adjacent to the Onshore Development Boundary
- 90. **Field 1144 (Figures 22-7-9 and 22-7-27):** A pair of positively enhanced linear trends have been detected in the north of the survey on an east-west orientation, possibly an extension of the rectilinear enclosure or trackway detected in Field 1145 to the west.
- 91. **Field 35 (Figures 22-7-10 and 22-7-37):** In the northeast of the survey area, a series of rectilinear trends have been detected. These are on a comparable alignment to the trends detected in the south of Field 11, 150m to the northeast.



- 92. **Field 54 (Figures 22-7-11 and 22-7-38):** In the northwest of the survey area a second concentration of linear anomalies has been detected. Although weaker and more fragmentary, the form of these responses is comparable to the probable archaeology in the southwest of the survey area. Three circular anomalies have been detected to the south of the survey area. However, the high level of background magnetism prevents a more definitive interpretation. Positively enhanced linear anomalies have been detected in the northeast of the survey area. These may indicate the truncated remains of ditch type feature, but such an interpretation is cautious given the elevated level of background response.
- 93. **Field 81 (Figures 22-7-13 and 22-7-40):** In the southeast of the survey area linear trends forming a rectilinear enclosure measuring approximately 35m by 35m has been detected. This has been noted has having a possible archaeological origin due to its form which is suggest of a prehistoric enclosure, although none is recorded. This lies beyond the updated Onshore Development Boundary.
- 94. **Field 140c (Figures 22-7-15 and 22-7 -42):** Two parallel ditch type anomalies have been detected within this survey area. These extend for some 50m and are approximately 18m apart. These have been noted as having a possible archaeological origin as they may be associated with a possible Roman road running between Bridlington and Hull which is visible as a soil-mark (MHU1007) recorded 200m to the southwest. The anomalies coincide with soil marks visible on the Google Earth satellite image from 2005, but it is not clear if this is the same soil mark as the postulated Roman road. However, they could have an agricultural origin such as tracks or drains, hence them not being categorised as probable archaeology. It is also possible they are associated with the former airfield.
- 95. **Field 1241 (Figures 22-7-16 and 22-7-43):** In the southern half of the survey area a linear trend and associated curving response has been detected. The nature and form of the response suggests a possible archaeological origin. A weaker circular trend has been detected 20m to the east and suggests a possible ring ditch some 8m in diameter. Along the northwestern edge of the survey area linear trends suggest part of a possible enclosure. The above responses do not form a coherent pattern, but they do suggest possible settlement and may be associated with responses from a previous geophysical survey (EHU2664). All these responses lie just to the west of the Onshore Development Boundary.



- 96. **Field 176 (Figures 22-7-17 and 22-7-44):** A relatively well-defined, but fragmentary, linear trend has been noted crossing the survey area. The response is aligned SW to NE and appears to turn in the north of the survey area. Nothing is indicated on the HER at this location. However, the anomaly has been categorised as having a possible archaeological origin based on its form and because it does not respect any of the extant or former boundaries or known ridge and furrow suggesting it could predate them. However, A modern agricultural or natural origin cannot be excluded.
- 97. **Field 185 (Figures 22-7-18 and 22-7-45):** A series of linear trends have been mapped near the southern limits of the survey area. These have been categorised as having a possible archaeological origin due to their possible spatial association with the probable archaeology. However, given they follow the natural contours of the area, they could have a natural origin.
- 98. **Field 221 & 218 (Figures 22-7-19** to **22-7-20 and 22-7-46** to **22-7-47.** Two short parallel zones of enhanced response appear to correspond with the trackway visible as cropmarks (MHU7169), but they are poorly defined. An additional linear zone of enhanced response may be part of the known trackways although it has no corresponding cropmark. Fragmentary linear trends in the southwest of the survey area have been noted as having a possible archaeological origin as there is some correlation with cropmarks interpreted as Iron Age/ Roman field systems (1460420) but they are not very coherent or extensive.
- 99. **Field 238 (Figures 22-7-20 and 22-7-47):** Linear zones of enhanced response have been detected in the north of the survey area. These may have a natural or agricultural origin. However, they could be associated with cropmarks recorded AP's that are noted as being Iron Age / Roman ditches (HE\_UID 1460420), hence their classification as possible archaeology.
- 100. **Field 1201 (Figures 22-7-21 and 22-7-48):** Three clusters of fragmentary responses have been noted within this survey area. These have been noted has having a possible archaeological origin due to their nature and form. However, interpretation is tentative. The most convincing is the southern group as these have a more rectilinear form and could potentially indicate plough damaged prehistoric enclosures. No known features are recorded at this location. However, probable archaeology had been detected in Field 1192 to the west.



- 101. **Field 1252 (Figures 22-7-22 and 22-7-49):** A short, but well-defined, ditch type response has been detected in the east of the survey area. Together with two parallel negative trends also detected in the northeast of the survey area, these appear to be a continuation of trends detected in Field 1257 immediately to the northeast. The general alignment and spatial relationship are comparable to the Prehistoric / Roman Trackway (HE\_UID 1463587) recorded as a cropmark 280m to the southwest. A further ditch type responses has been detected in the south of the survey area. Although this does not correspond with any recorded cropmark features it lies only 50m to the east of the Later Prehistoric / Roman Trackway albeit on a different alignment.
- 102. **Field 1246 (Figures 22-7-23 and 22-7-50):** A well-defined spread of enhanced magnetic response has been detected in the northwest of the survey area, which form rectilinear blocks. Although the historic mapping does not suggest any former buildings in the area, the magnetic response is suggestive of a large anthropogenic structure, or series of structures.
- 103. **Field 334 (Figures 22-7-23 and 22-7-50):** A series of positively enhanced broad trends are visible over the eastern portion of the survey area. Although largely unconnected in form, they do form a loose pattern that could potentially suggests an unenclosed settlement, interspersed among the more natural trends in the vicinity. However, they may have a natural origin.
- 104. **Field 315 (Figures 22-7-23** to **22-7-24 and 22-7-50** to **22-7-51):** A positive linear trend runs through the centre of the survey area. This has been noted as having a possible archaeological origin due to its nature and form, but it may have an agricultural origin.
- 105. **Field 296 (Figures 22-7-24 and 22-7-51):** A curving negative trend has been detected in the west of the survey area. This has been noted as possible archaeology due to its form, but it may have a natural origin.
- 106. **Field 291 (Figures 22-7-24 and 22-7-51):** Short linear anomalies and discrete areas of enhanced magnetism have been noted along the northern limits of the survey area and have been categorised as having a possible archaeological origin. Interpretation is cautious due to the responses being on the limits of the survey area, but they have an archaeological form. However, an agricultural or natural origin cannot be excluded.



- 107. **Field 300 (Figures 22-7-25 and 22-7-52):** Several linear trends have been detected and have been categorised as possible archaeology. However, they may simply indicate different phases of drainage, although their character and form differ from the drainage features detected elsewhere in this survey area.
- 108. **Field 301 (Figures 22-7-26 and 22-7-53):** Two strongly enhanced positive curving linear anomalies have been detected near the eastern limits of the survey area and are likely to continue eastward. Despite their discontinuous appearance it is likely that these form enclosures.
- 109. **Field 432 (Figures 22-7-27 and 22-7-54):** In the north of the area a strong linear trend has been detected. The form and nature of the response suggest an archaeological origin. It could be a northerly extension of a medieval hollow way recorded by aerial photography (HE\_UID 1551517) 140m to the south.
- 110. **Field 417 (Figures 22-7-29 and 22-7-56):** A few weak trends of a possible archaeological origin have been noted within this survey area. However, interpretation is cautious given the elevated level of background enhancement and strong responses from past ridge and furrow cultivation. The fragmentary trend in the south-west of the survey area may indicate a former field boundary but could have a natural origin. A suggestion of a further rectilinear trend has been detected in the north-west of the area and lies within a general area of increased magnetic enhancement. This may indicate that earlier archaeological deposits are being disturbed by later ridge and furrow cultivation.
- 111. **Field 433 (Figures 22-7-29 and 22-7-56):** Along the southern limits of the survey area a rectilinear trend has been detected. The nature and form of the anomaly suggests a possible archaeological origin. However, its location at the edge of the survey area complicates interpretation and it may have a natural origin.
- 112. **Field 443 (Figures 22-7-29 and 22-7-56):** In the western half of the area several weak linear trends have been detected. These appear to be a continuation of a possible series of enclosures or field systems detected in Field 446 to the west. Two strong parallel trends have been mapped in the north-east of the survey area. The data suggests a possible trackway, but they may be ploughing headlands associated with the ridge and furrow cultivation.



- 113. **Field 446 (Figures 22-7-29 and 22-7-56):** Several weak linear trends have been detected. The data suggests a possible series of enclosures or field systems They have been categorised as possible, rather than probable, archaeology due to their ephemeral nature and because an agricultural origin cannot be wholly excluded.
- 114. **Field 474 (Figures 22-7-29 and 22-7-56):** Poorly defined trends have been detected in the north and south of the survey area. These have been noted as having a possible archaeological origin but could be due to natural variations.
- 115. **Field 560 (Figures 22-7-31 and 22-7-58):** A series of disjointed positively enhanced anomalies have been detected along the line of the topography. These could be the remnants of opencast mining, or World War I practice trenches.
- 116. **Field 574 (Figures 22-7-31 and 22-7-58):** A large number of linked positively enhanced anomalies have been detected in the north of the survey area, broadly coinciding with a slight gulley in the survey area. This is comparable to responses in Field 560 and could be a result of the same processes, such as mining or practice trenches. However, a natural origin cannot be ruled out.
- 117. **Field 1251 (Figures 22-7-32 and 22-7-59):** Towards the centre of the survey area a well-defined circular anomaly measuring 7m in diameter has been detected. Nothing is recorded in the HER at this location and there is a very elevated level of background response within this field. Although the shape of size of the anomaly is consistent with a ring ditch / barrow the strength of the response does not support such an interpretation. One possibility is it could indicate the base of a limekiln. Limekilns are noted in wider landscape on the 1st edition OS map and such activity would also explain the elevated level of background response.
- 118. **Field 818 (Figures 22-7-33 and 22-7-60):** A very well-defined circular anomaly has been detected in the north-west of this survey area, measuring approximately 30m in diameter. It is noted as possible, rather than probable, archaeology as the form of the responds is not entirely consistent with a ring ditch type feature. It appears to be associated with an extant feature and an area of likely modern disturbance which might suggest a more recent origin, potentially associated with WWII infrastructure.





#### 22.7.6.2.2 Beyond Onshore Development Boundary

- 119. **Field 11 (Figures 22-7-9 and 22-7-36):** Several positively enhanced responses in the south of the survey area create a disrupted pattern that suggest a series of adjoining enclosures. These are disturbed by later ridge and furrow cultivation.
- 120. **Field 24 (Figures 22-7-10 and 22-7-37):** Along the southern limits of the survey area a rectilinear anomaly has been detected. The form and nature of the response suggests a small enclosure. However, there is no clear spatial relationship with the probable archaeological trends detected and the anomaly may have a more recent origin, potentially associated with the WWII Battery.
- 121. **Field 29 (Figures 22-7-11 and 22-7-38):** In the south of the survey area a fragmentary circular response and possibly associated curvilinear trend has been detected. The form of the responses suggests a possible archaeological origin, but they could be due to natural variations, or be associated with WWII activity.
- 122. **Field 38 (Figures 22-7-11 and 22-7-38):** Ephemeral linear trends in the west of the survey area are believed to be part of the enclosure complex recorded in Field 28, but they are less well-defined hence their classification as possible archaeology.
- 123. **Field 121 (Figures 22-7-15 and 22-7-42):** Some negatively enhanced spreads continue from Field 123 eastward, suggesting a continuation of anthropogenic activity from the Nunkeeling DMV (MHU982). Curving trends to the east of the dataset form ditch like features which may indicate additional archaeological remains that may be related to the Nunkeeling DMV (MHU982). The stronger linear anomalies that extend from Field 123 are likely natural but form patterns that might be also considered anthropological in use.
- 124. **Field 129 (Figures 22-7-15 and 22-7-42):** Several linear trends and linear zones of increased magnetic enhancement have been detected within this survey area. It is likely that these are associated with the DMV to the north and the site of Nunkeeling Priory (MHU989) to the west. However, the responses are poorly defined against an elevated level of background response. Broad areas of magnetic disturbance are evident in the west of the survey area. These are very well defined and have a general orientation consistent with the known archaeology. They may indicate demolition spreads associated with former structures, or potentially infilled features such as fishponds. However, they may simply be due to spreads of modern material associated with agricultural activity.

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- 125. **Field 134 (Figures 22-7-15 and 22-7-42):** Three negative parallel linear trends run through the centre of the survey area on SW-NE alignment and continue into Field 135 to the south-west. These have been categorised as possible archaeology and they could potentially indicate a triple dyke feature. However, a more recent agricultural or natural origin cannot be excluded.
- 126. **Field 135 (Figures 22-7-15 and 22-7-42):** Some positively enhanced linear trends have been noted in the north-west of the survey area. The form of the responses suggests a possible archaeological origin, although there is no correlation with the undulations in the field.
- 127. **Field 742 (Figures 22-7-34 and 22-7-61):** A negatively enhanced trend is present in the north of the survey area. This could be an undocumented field boundary or trackway; however, given the weak response it may have a more natural origin.
- 128. **Field 736 (Figures 22-7-34 and 22-7-61):** A negatively enhanced trend continues from Field 742 to the west. This could be an undocumented field boundary or trackway; however, given the weak response it may have a more natural origin.
- 129. **Field 710 (Figures 22-7-34 and 22-7-61):** A negatively enhanced trend crosses the northern half of the survey area and is a continuation of the trend detected in Fields 736 and 742 to the west.
- 130. **Field 766 (Figures 22-7-34 and 22-7-61):** Two poorly defined circular trends have been noted in the west of the survey area. These appear to lie within the recorded rectilinear enclosure. A weak, positive, rectilinear trend has been noted in the west of the survey area. Its location and orientation suggest it may be archaeological in origin, but it is noted as having a possible archaeological origin as it does not correspond with the recorded cropmarks and may be due recent agricultural activity. Additional weak trends show some correlation with APS transcriptions, but they are very poorly defined against the elevated level of background response.
- 131. **Field 825 (Figures 22-7-34 and 22-7-61):** Several positively enhanced linear trends have been detected in the west of the survey area. The form of the responses suggests a possible trackway and associated field divisions. These have been categorised as having a possible archaeological origin, but they could be more recent undocumented features.



## 22.7.6.3 Unclear Origins

- 132. Within most of the survey areas ephemeral linear trends have been noted. While an archaeological origin cannot be excluded for all these responses, they are most likely to be associated with agricultural activity or natural variations.
- 133. Small, discrete areas of enhanced magnetism have been noted across most of the survey areas. While the possibility of these responses indicating archaeological deposits cannot be wholly dismissed, they are more likely to be due to natural variation in the subsoil or more deeply buried ferrous or fired material.
- 134. **Field 79 (Figures 22-7-13 and 22-7-40):** In the centre of the survey area a group of strong responses has been detected. The origin of these is unclear. They could be associated with the modern utility which passes immediately to the west, or they could have a natural origin. However, an archaeological origin cannot be wholly excluded.
- 135. **Field 142 (Figures 22-7-16 and 22-7-43):** A cluster of strong discrete responses have been detected in the west of the survey area. The origin of the these is unclear. An archaeological origin cannot be excluded, but they may be due to natural variations or modern debris / activity.
- 136. **Field 200 (Figures 22-7-18 and 22-7-45):** A very strong anomaly has been detected in the north of the survey area. The nature of the response suggests an area of burning, although it is not possible to say whether this is archaeological in origin or due to modern activity or debris.
- 137. **Field 238 (Figures 22-7-20 and 22-7-47):** Numerous strong, very well-defined, responses have been noted as having an unclear origin. These predominately lie in the northern survey area, which lies within the updated Onshore Development Boundary. Given the wider context, it is likely that these have natural origin. However, the geometry of responses suggests some may have anthropogenic origins of unknown date.
- 138. **Field 1293 (Figures 22-7-20 and 22-7-47):** There is a suggestion of rectilinear response in the eastern half of the survey area. While an archaeological origin for this cannot be excluded, it is most likely to have a natural origin.
- 139. **Field 432 (Figures 22-7-27 and 22-7-54):** A discrete area of strong response has been detected in the centre of the survey aera. The origin is unclear, and it does not correspond with any known HER features, or former structures on historic mapping. It may have a modern origin, but an archaeological origin cannot be dismissed.

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- 140. **Field 520 (Figures 22-7-30 and 22-7-57):** Discrete areas of strong response has been detected in the east of the survey aera. The origin is unclear, and it does not correspond with any known HER features, or former structures on historic mapping. It may have a modern origin as it appears to respect a former field boundary. However, an archaeological origin cannot be dismissed.
- 141. **Field 1251 (Figures 22-7-32 and 22-7-59):** A weak short linear trend is just discernible in the south of the survey area. The response is ephemeral, and its orientation is consistent with known ridge and furrow noted in the area. It does show some correlation with a Prehistoric/Roman multiple ditch system earthwork (HE\_UID 1087954).
- 142. **Field 764 (Figures 22-7-33 and 22-7-80):** Some ephemeral linear trends have been noted. While these may be associated with the WWII heavy anti-aircraft gun site (MHU15288), they could equally be due to modern agricultural activity and / or natural variations.

## 22.7.6.4 Agricultural

- 143. Within many of the fields, linear trends have been detected which correspond with former field boundaries depicted on historic mapping.
- 144. Weak linear trends suggestive of modern field drains have been detected within several of the survey areas.
- 145. Within several of the fields clearly defined parallel trends have been detected which are characteristic of past ridge and furrow cultivation. Weaker parallel trends reflect modern agricultural activity.

## 22.7.6.5 Non - Archaeology

- 146. Amorphous areas of enhanced magnetism caused by variations in the underlying soils and geology were recorded within many of the survey areas. These are strongest adjacent to streams were palaeochannels have been detected.
- 147. Modern utilities have recorded in some areas.
- 148. Magnetic disturbance around the edges of the survey areas is due to adjacent fences and infrastructure.
- 149. Isolated ferrous/fired responses due to modern debris in the topsoil have been recorded in all survey areas.

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# 22.7.7 Discussion and Conclusions of Survey to Date 22.7.7.1 Discussion

#### 22.7.7.1.1 Landfall, PA1, PA2 & PA4

- The gradiometer survey has recorded a complex range of anomalies across 150. the areas surveyed within these Priority Areas and adjacent fields. The results are dominated by an extensive network of linear and curvilinear anomalies of a probable archaeological origin. Linear and curvilinear responses in Fields 24 and 28 suggests a possible trackway and associated enclosures, potentially prehistoric in date. Immediately to the south, within Field 28, clearly defined rectilinear trends have been identified which are consistent with Romano-British remains and may indicate a villa complex. Within Field 39 to the south-west, a fragmentary circular anomaly enclosed by a rectangular enclosure has been detected. These anomalies do not correspond with any features recorded in the HHER or on NMP and APS transcriptions. The WWII battery that overlay the north-western of these responses have not been mapped, aside from limited areas of magnetic disturbance. This appears to be part of an extensive network of linear anomalies forming a series of interlinked enclosures detected across Fields 42. 50 and 53 to the south.
- 151. Several Discrete areas of strongly enhanced magnetic response have been recorded which corresponds with HHER entries for WW2 pillboxes, trackway, and gun emplacement.
- 152. Parallel trends indicative of extensive ridge and furrow cultivation have been detected across most of the survey areas.
- 153. Amorphous areas of enhanced magnetism have been recorded in many of the areas and reflect natural geological variations.
- 154. The results of the survey indicate that the technique is responding very well to the geological conditions and the expected archaeology.

## 22.7.7.1.2 Priority Area 3

155. A concentration of positively enhanced anomalies has been detected in the southwest of Field 35 suggesting an enclosure that measures at least 30m by 90m and appears to extend south beyond the survey area. Additional anomalies suggest possible interval divisions and features.



## 22.7.7.1.3 Priority Area 6

- 156. A large number of positively enhanced linear trends in the south of Field 63 form at least one enclosed ditch feature. The data suggests internal features and linear features that continue into Field 54 to the east.
- 157. Survey within the centre of this area has identified responses of an unclear origin, and agricultural trends.

#### 22.7.7.1.4 Priority Area 7

- 158. The limited survey in this Priority Area has detected a group of strong responses has been detected. The origin of these is unclear. They could be associated with the modern utility which passes immediately to the west, or they could have a natural origin. However, an archaeological origin cannot be wholly excluded.
- 159. Immediately beyond the western limits of this priority area, in Field 081, linear trends forming a rectilinear enclosure measuring approximately 35m by 35m has been detected.

### 22.7.7.1.5 Priority Area 8

160. Survey has yet to be undertaken within this Priority Area.

### 22.7.7.1.6 Priority Area 9

- 161. The gradiometer survey has recorded mixed results across the areas surveyed within this Priority Area.
- 162. Linear trends have been detected in Field 123 which correspond with extant earthworks associated with the Nunkeeling DMV (MHU982) in the north of the area. Several additional linear trends and areas of increased magnetic enhancement have been detected within Field 129 and 135. It is likely that these are associated with the DMV to the north and the site of Nunkeeling Priory (MHU989) to the west. However, the responses are poorly defined against an elevated level of background response.
- 163. Three negative parallel linear trends run through the centre of Field 134 on SW-NE alignment and continue into Field 135 to the south-west. These have been categorised as possible archaeology and could potentially indicate a triple dyke feature. However, a more recent agricultural or natural origin cannot be excluded.
- 164. A short, strong, linear anomaly was detected in the south of the Priority Area, Field 135, along the western limits of the area. Although the limited extent it is likely to be associated with a possible moated site (MHU987) recorded at this location.

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- 165. Within Field 140c, which lies in the rerouted Onshore Development Boundary to the west of Nunkeeling, two parallel ditch type anomalies have been detected. These extend for some 50m and are approximately 18m apart. These have been noted as having a possible archaeological origin as they may be associated with a possible Roman road running between Bridlington and Hull which is visible as a soil-mark (MHU1007) recorded 200m to the southwest.
- 166. Weak trends associated with ridge and furrow cultivation have been noted, together with natural variations.
- 167. The results of the survey indicate that the technique is responding well to the geological conditions and the expected archaeology. However, the slightly elevated levels of background response may be masking weaker responses from archaeological features if present.

### 22.7.7.1.7 Priority Area 10

168. Only a limited amount of survey has been undertaken to date within this Priority Area. Only natural variations have been detected.

### 22.7.7.1.8 Priority Area 11

169. In the southwest of Field 185 a series of linear trends have been detected. Although these are situated on the slope of a hill, the central linear trends form a trackway that are situated on the plateau, with the result suggesting enclosures abutting the trackway.

#### 22.7.7.1.9 Priority Area 12

170. The data from this small Priority Area shows an elevated level of background response due to natural geological and pedological variations which has reduced confidence in the interpretation of the results. Although part of a moated site (MHU2574) has been detected, the response is partly masked by the high level of background response.

#### 22.7.7.1.10 Priority Area 13

171. In the centre of this Priority Area 1192, Field 1192, a concentration of linear and curvilinear trends has been detected. The nature and form of the responses suggest a possible Iron Age settlement with associated enclosures and possible trackways. The HER record lists a possible enclosure at this location recorded as a poorly defined cropmark (MHU10203). The complex of responses covers an area of 150m by 150m and lies within the updated Onshore Development Boundary.

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- 172. With Fields 221 and 218 well-defined linear trends suggests a rectangular enclosure which corresponds with an Iron Age/Roman ditch visible as a cropmark (1460420), although the magnetic anomaly is not as extensive as the recorded cropmark. A second curving linear trend has been detected immediately to the west of the rectangular enclosure. The nature and form of this response suggest a probable archaeological origin. However, it is not clear if this is an annex to the enclosure, a separate enclosure of a different date, or part of the recorded Iron Age/Roman trackways (MHU7169). Two short parallel zones of enhanced response appear to correspond with the trackway visible as cropmarks. Fragmentary linear trends in the southwest of the survey area show some correlation with cropmarks interpreted as Iron Age/Roman field systems (1460420).
- 173. The remaining areas that have been surveyed are dominated by natural and agricultural responses.

## 22.7.7.1.11 Priority Area 15

- 174. The data from the areas surveyed within this Priority Area shows an elevated level of background response due to natural geological and pedological variations which has reduced confidence in the interpretation of the results.
- 175. Possible archaeology has been noted in the north-west of the Priority Area, Field 291. and is categorised as having a possible archaeological origin. Interpretation is cautious due to the responses being on the limits of the survey area, but they have an archaeological form. However, an agricultural or natural origin cannot be excluded, and they do not correspond with any known or recorded features.
- 176. A curving negative trend has been detected in the west of the survey area, Field 296. This has been noted as possible archaeology due to its form, but it may have a natural origin. A positive linear trend has been detected in the east of the Priority Area, Field 315. This has been noted as having a possible archaeological origin due to its nature and form, and the proximity of Iron Age or Romano-British enclosures and field boundaries recorded as cropmarks to the south-west.

## 22.7.7.1.12 Priority Area 16

177. The data collected within this Priority Areas has an elevated level of background response due to natural variations which results in a mottled affect across the data. This has reduced confidence in the interpretation of the results.

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178. Several linear trends have been detected that have been categorised as possible archaeology in Field 300. However, they may simply indicate different phases of drainage, although their character and form differ from the drainage features detected elsewhere in this Priority Area.

### 22.7.7.1.13 Priority Area 17

- 179. The data collected within this Priority Area is dominated by strong parallel trends indicating extensive past ridge and furrow cultivation. While the strength of the ridge and furrow responses suggest the technique is responding well, the variation in the strength of the anomalies from the ridge and furrow cultivation may indicate that it is disturbing underlying magnetically enhanced archaeology deposits. However, sinuous zones of elevated response have also been recorded which are due to natural variations and it could be these natural variations in the subsoil which are responsible for the variation in the response from the past cultivation.
- 180. In the north-west and south-west of the Priority Area, Field 443, and 474, linear trends have been detected which appear to form part of a possible prehistoric field system. They are categorised as having a probable archaeological origin due to their character and form. Although, no known sites or cropmarks have been recorded within this area, Roman / Iron Age cropmarks have been recorded 250m to the south-west.
- 181. In the west of the area weak linear trends have been detected in Field 446. The data suggests a possible series of enclosures or field systems They have been categorised as possible, rather than probable, archaeology due to their ephemeral nature and because an agricultural origin cannot be wholly excluded.
- 182. A few weak trends of a possible archaeological origin have been noted in the east of this Priority Area, Fields 417 and 422. However, interpretation is cautious given the elevated level of background enhancement and strong responses from past ridge and furrow cultivation.

# 22.7.7.1.14 Priority Area 24

183. The data from this Priority Area is relatively magnetically noisy due to natural variations, modern disturbance, and a former wooded area with associated tracks. This has reduced confidence in the interpretation of the results. The elevated levels of background response may be masking weaker responses from archaeological features if present.

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- 184. In the south-east of the Priority Area, Field 818, a very well-defined circular anomaly has been detected in the, measuring approximately 30m in diameter. It is noted as possible, rather than probable, archaeology as the form of the response is not entirely consistent with a ring ditch type feature. It appears to be associated with an extant feature and an area of likely modern distance which might suggest a more recent origin, potentially associated with WWII infrastructure.
- 185. In the south of Field 865, beyond the limits of the Priority Area, a series of positively enhanced linear trends forming rectangular enclosures and trackways have been detected on a predominantly east-west alignment. On their own these form a small ladder settlement. However, they may be a continuation of known cropmarks suggesting rectangular enclosures and settlement on a similar alignment 200m to the east (MHU3530), suggesting a potentially much larger settlement.
- 186. Parallel trends indicative of extensive ridge and furrow cultivation have been detected in some of the survey areas.
- 187. Amorphous areas of enhanced magnetism have been recorded in many of the areas and reflect natural geological variations.
- 188. Extensive areas of magnetic disturbance are evident due to metal fencing, overhead power lines and adjacent infrastructure.

### 22.7.7.1.15 Priority Area 25

- 189. The data from this Priority Area is dominated by negative linear and curvilinear trends and a generally elevated level of background response which is thought to reflect natural variations in the subsurface. The elevated levels of background response may be masking weaker responses from archaeological features if present.
- 190. A concentration of linear trends has been detected along the southern limits of this survey area. Although fragmentary, the responses form a clearly defined series of enclosures. These are not recorded in the HER or on AP transcriptions, but the size and form of the postulated enclosures are comparable to those recorded to the west (MHU3530) and east (1565989). In addition, the responses appear to respect the Iron Age/Roman track recorded in AP's (1087958). In the northeast of the survey area a well-defined circular anomaly has been detected. This is approximately 18m in diameter and consistent with a ring ditch suggesting a possible barrow. Although no barrow is recorded in the HER at this location, barrows are noted within the wider area.

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191. A positively enhanced circular anomaly was detected in the south of the Priority Area, Field 766. Short linear trends have been detected which appear to be associated with the circular anomaly. The anomalies show excellent correlation with an Iron Age / Roman round house recorded as a cropmark by NMP. Additional linear and rectilinear trends, suggesting enclosures, have been detected 100m to the west. These also show excellent correction with an Iron Age / Roman rectilinear enclosure recorded by NMP. However, the gradiometer anomalies are not as extensive as the recorded cropmark features. It is possible that the elevated level of background response may be masking weaker anomalies from archaeological deposits. However, given the interrupted nature of the response form the roundhouse it is possible that the archaeology in these areas has been truncated by ploughing.

### 22.7.7.2 Conclusion

- 192. The surveys to date have been successful in locating several areas of potential below ground archaeological remains. These contain both previously known and unknown deposits providing further information about potential archaeological remains in the wider Onshore Development Area.
- 193. Survey is currently ongoing to complete the remaining areas.
- 194. It must be caveated that these initial interpretation and results may in future have to be amended depending on future data outputs. This might be because future information gives more determinable data for that specific location.
- 195. The surveys to date have provided good correlation and congruence across the data sets collected and offers potential for intrusive works if required.





## 22.7.8 Statement of Indemnity

- 196. Although the results and interpretation detailed in this report have been produced as accurately as possible, it should be noted that the conclusions offered are a subjective assessment of collected data sets.
- 197. The success of a geophysical survey in identifying archaeological remains can be heavily influenced by several factors, including geology, seasonality, field conditions and the properties of the features being detected. Therefore, the geophysical interpretation may only reveal certain archaeological features and not produce a complete plan of all the archaeological remains within a survey area.





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# Annex 1: Archaeological Prospection Techniques, Instrumentation and Software Utilised

- 1. Gradiometer surveys measure small changes in the earth's magnetic field. Archaeological materials and activity can be detected by identifying changes to the magnetic values caused by the presence of weakly magnetised iron oxides in the soil (Aspinall et al., 2008, 23; Sharma, 1997, 105). Human habitation often causes alterations to the magnetic properties of the soils and sediments present in the area (Aspinall et al, 2008, 21). There are two physical transformations that produce a significant contrast between the magnetic properties of archaeological features and the surrounding soil: the enhancement of magnetic susceptibility and thermoremanent magnetization (Aspinall et al., 2008, 21; Heron and Gaffney 1987, 72).
- 2. Ditches and pits can be easily detected through gradiometer survey as the topsoil within and around settlements generally has a greater magnetisation than the subsoil; caused by human activity. This enhanced material accumulates in cut features such as ditches and pits. Areas of burning or materials which have been subjected to heat commonly also have high magnetic signatures, such as hearths, kilns, fired clay and mudbricks (Clark 1996, 65; Lowe and Fogel 2010, 24).
- 3. It should be noted that negative anomalies can also be useful for characterising archaeological features. If the buried remains are composed of a material with a lower magnetisation compared to the surrounding soil, the feature in question displaying a negative signature. For example, stone-built structures that are composed of sedimentary rocks are frequently non-magnetic and so will appear as negative features within the dataset if the local soils and sediments are at all magnetised.
- 4. Ferrous objects i.e. iron and its alloys are strongly magnetic and are typically detected as high-value peaks in gradiometer survey data; small (in spatial terms) spikes are generally assumed to derive from ferrous material of recent origin (e.g. stray bits of farm equipment) in the topsoil, though archaeological sources cannot be ruled out. Broader dipolar anomalies and those with diagnostic characteristics of form will be assigned to other classifications based on their character, which might include archaeology, burning, modern ferrous or uncertain.



- 5. Although gradiometer surveys have been successfully carried out in all areas of the United Kingdom, the effectiveness of the technique is lessened in areas with complex geology, particularly where igneous and metamorphic bedrock is present or there are layers of alluvium or till between the surface and the layers of interest. All magnetic geophysical surveys must therefore take the effects of background geological and geomorphological conditions into account.
- 6. AOC Archaeology's cart-based surveys are carried out using a Bartington Non-Magnetic Cart or a Sensys MAGNETO® MXPDA quad towed system. The cart systems enable multiple traverses of data to be collected at the same time, increasing the speed at which surveys may be carried out and offers the benefits of reduced random measurement noise and rapid area coverage (Schmidt et al 2015, 60-62, David et al. 2008, 21).
- 7. The Bartington pushcart system utilises six Grad-01-1000L sensors mounted upon a carbon fibre frame along with two DL601 dataloggers and one BC601 battery cassette. The sensors are normally positioned at 1m intervals on a horizontal bar, with the datalogger taking readings every 12.5cm along each traverse, though this can be altered to increase / reduce resolution if required. The data is georeferenced via a Trimble R10 Real Time Kinematic (RTK) VRS Now GNSS GPS which streams data throughout survey and allows the data to be recorded relative to a WGS1984 UTM coordinate system.
- 8. The Sensys MAGNETO® MXPDA quad towed magnetometer system utilises eight or sixteen FGM650/3 fluxgate gradiometer sensors mounted upon a frame at 0.25m or 0.5m meter separations, along with data logging equipment and batteries. The system takes readings every 12.5cm along each traverse, though this can be altered to increase / reduce resolution if required. The data is georeferenced via a Trimble R10 Real Time Kinematic (RTK) VRS Now GNSS GPS which streams data throughout survey and allows the data to be recorded relative to a WGS1984 UTM coordinate system.

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9. AOC Archaeology's handheld gradiometer surveys are carried out using Bartington Grad601-2 magnetic gradiometers. The Grad601-2 is a high-stability fluxgate magnetic gradient sensor, which uses a 1m sensor separation. The detection resolution is from 0.03 nT/m to 0.1nT/m, depending on the sensor parameters selected, making the Grad601-2 an ideal instrument for prospective survey of large areas as well as detailed surveys of known archaeology. The survey was conducted within a grid system, across grids measuring 30m by 30m which were marked out using temporary markers at each grid node. Grid nodes were set out and recorded using a Trimble R8/R10 dGPS with an error no greater than +/- 0.05m. Data was collected in the field on an using zig-zag traverses, with a sample interval of 0.25m and a traverse interval of 1m. The instrument stores the data collected on an on-board data-logger, which is then downloaded as a series of survey grids for processing.



# **Annex 2: Summary of Data Processing**

Process	Effect
Clip	Limits data values to within a specified range.
De-spike	Removes small spatial scale exceptionally high readings in the data. In resistivity survey, these can be caused by poor contact of the mobile probes with the ground. In gradiometer survey, these can be caused by highly magnetic items such as buried modern ferrous objects.
De-stagger	Corrects a misalignment of data when the survey is conducted in a zig-zag traverse pattern.
Discard Overlap (TerraSurveyor)	Removes datapoints which occur too closely together and can cause digital artefacts in the data which are caused by the overlapping of parallel traverses.
High pass filter	Removes low-frequency, large spatial scale variance in order to remove background trends in the data, such as variations in geology.
Interpolate	Increases the resolution of a survey by interpolating new values between surveyed data points, creating a smoother overall effect.
Low Pass filter	Uses a Gaussian filter to remove high-frequency, small spatial scale variance, typically for smoothing the data.
Remove Turns (TerraSurveyor)	Uses analysis of the direction of travel derived from the GNSS data to break continuous streams of data into individual traverses.
Zero Mean Traverse	Resets the mean value of each traverse to zero, in order to address the effect of striping in the data and counteract edge effects.



Bartington Cart & Sensys Cart survey	
Process	Extent
Base Settings	Interval 0.13m, Track Radius 1.06m
Remove Turns	Threshold Angle 90°, Cut Length 5m
Discard Overlap	Threshold Distance 0.4m, Minimum Track 5, Newest
Despike	Mean Diameter 3 Threshold 12
Destripe	Mean Traverse SD 1.5
High Pass Filter	Uniform (Median) 601
Clip	-30/30

Bartington Handheld Survey	
Process	Extent
Despike	Mean Diameter 3 Threshold 12
Destripe	Mean Traverse SD 1.5
Interpolate	Y, Expand - Expand -SinX/X x2
Clip	-30/30



# **Annex 3: Technical Terminology**

Type of Anomaly	Description of Type/Class and Rationale for Interpretation
Anomaly	Usually linear / curvilinear / rectilinear / discrete anomalies characterised by a sharp-edged increase or decrease in values compared to the magnetic background. Some interpretation classes may have more gradual transitions in magnetic character- this is used as part of the classification process.
Spread	Spreads of enhanced material refer to diffuse areas of altered magnetic character, which suggest a localised spread of material with a magnetic contrast within the topsoil or ploughzone or a generalised enhancement of the magnetic properties over a specific area. These anomalies do not have the high dipolar response characteristic of ferrous material anomaly unless specifically classified as a spread of ferrous debris.
Linear Trend	Linear trends are less distinct and are typically visible as linear patterning in the overall texture of the data. A common example of these is the striping effect caused by recent ploughing.
Class of Anomaly	Description
Probable Archaeology	Interpretation is supported by the presence of known archaeological remains or by other forms of evidence such as HER records, LiDAR data or cropmarks identified through aerial photography. OR the data contains diagnostic anomalies in terms of character or morphology which allow a secure interpretation. Anomalies typically have well defined edges with abrupt transitions indicative of cut features with magnetically enhanced fills, such as ditches. Discrete anomalies will be checked on XY traces for their magnetic character; discrete anomalies in this class likely to be cut features such as pits; anomalies indicating high temperature processes will alternatively classified as 'burned area' - see below. Ferrous material creates distinct 'spikes' and is classified as such.
Possible Archaeology	Anomalies are interpreted as likely to have an archaeological origin, though other explanations are also possible, but less likely. Anomalies typically have well defined edges with abrupt transitions indicative of cut features with magnetically enhanced fills, such as ditches. Discrete anomalies checked on XY traces; discrete anomalies in this class likely to be cut features such as pits; anomalies indicating high temperature processes classified as 'burned area' - see below.

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Type of Anomaly	Description of Type/Class and Rationale for Interpretation
Burned Area	An anomaly with a form on the XY trace plot that is characteristic of high temperature activity such as a kiln or hearth. Should be considered as possible archaeology and should be assigned an anomaly number if a more specific interpretation is possible based on the anomaly characteristics (for example, a clear kiln) so that this can be discussed in text.
Historical Features	Features observed on historical mapping that correspond with anomalies in the data. Linear anomalies caused by removed field boundaries often exhibit distinct characteristics related to the removal process. Areas of enhanced magnetism in this class could relate to former buildings, trackways, quarries or ponds and their nature should be clarified with the use of anomaly numbers and discussion in the results section.
Unclear Origin	These anomalies are (often) magnetically weak and discontinuous or isolated making their context difficult to ascertain. OR they are indistinct for other reasons such as magnetic disturbance in their vicinity. Anomalies in this category have no more likely explanation than another, so whilst an archaeological origin is possible, an agricultural, geological, or modern origin is also equally likely.
Agricultural	Anomalies associated with agricultural activity, either historical (unless shown on a map, then classed as a historical feature) or modern. Usually, this interpretation is arrived at due to on the ground observations of (for example) ploughing, access tracks and the like, or from observation of recent aerial images of the survey area. Recent ploughing is shown as a dashed line and Ridge and Furrow ploughing is shown as a solid line.
Ridge and Furrow / Rig and Furrow	A series of regular linear or slightly curvilinear anomalies which are broad and usually have diffuse edges, either composed of an increased or decreased magnetic response compared to background values. Wide regular spacing between the anomalies is consistent with that of a ridge and furrow / rig and furrow ploughing regime, and the regime may also have a degree of sinuosity characteristic of certain types of ridge and furrow cultivation. Often, multiple directions will be present, with distinct headlands in between. The pattern might follow the general landscape organisation, or it may radically differ from it, depending on the local sequence of inclosure. The anomalies often present as a positive 'ridge' anomaly adjacent to a negative 'furrow' anomaly.

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Type of Anomaly	Description of Type/Class and Rationale for Interpretation
Ploughing Trends	A series of regular linear anomalies or changes in the texture of the survey data, either composed of an increased or decreased magnetic response compared to background values. Anomalies seen parallel to field edges are representative of headlands caused by ploughing.
Drains	A series of magnetic linear anomalies (often with a characteristic alternating positive-negative pattern, which indicates a ceramic drain) of an indeterminate date, usually with a regular dendritic or herringbone patterning which reflects the topography of the survey area.
Geology / Natural	An area of enhanced magnetism that is composed of irregular (usually) weak increases or decreases in magnetic values, frequently with gradual transitions in character, compared with background readings. These are likely to indicate natural variations in soil composition or reflect variations in the bedrock or superficial geology. In areas where former water courses were present, paleochannels may present as distinct curving and banded or braided linear anomalies.
Service	Strong linear anomalies often composed of contrasting high positive and negative dipolar values, with a halo of magnetic disturbance extending from the causative body. Such anomalies are characteristic of below-ground services.
Magnetic Disturbance	A zone of strong magnetic response (usually alternating between positive and negative with abrupt transitions) that has been caused by modern infrastructure or ferrous material within or adjacent to the survey area, such as metallic boundary fencing, gateways. The magnetic haloes around services and changes in the background texture of the data resulting from overhead power lines also fall into this class. These haloes are strong enough to obscure other anomalies (including those of possible archaeological interest) in the area they affect.
Ferrous Anomalies / Ferrous (iron spikes) and ferrous or debris spreads	A response caused by ferrous materials on the ground surface or within the subsoil, which causes a strong but localised dipolar response in the data. These generally represent modern material often re-deposited during manuring, rubbish at field edges and spreads of debris or building material used to surface tracks or left behind following demolition. Distinct from magnetic disturbance, these anomalies relate to material at their spatial location, rather than an effect occurring at a distance from the material responsible.

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Type of Anomaly	Description of Type/Class and Rationale for Interpretation
Free Category for custom use	A category which may be employed to denote specifically identified anomalies related to known past activity within the area, for example those definitely associated with a former airfield, or mapped former mineral extraction.



Figures 22-7-1 to 22-7-688

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