

Heritage Assessment

Land South of London Road, Great Glen

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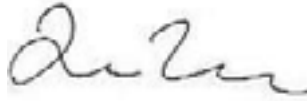
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Executive Summary

Ecus Ltd. were commissioned by Bovis Homes Limited in August 2015 to undertake a heritage assessment to support the preparation of a planning application for the development of a site southwest of Great Glen, Leicestershire (hereafter ‘the site’), located at NGR 464900 297855.

Whilst there is no known archaeology within the site boundary, an assessment of currently available evidence for the wider areas has indicated a potential for the survival of as yet unrecorded archaeological remains within the site, comprising a moderate potential for remains relating to prehistoric activity which is likely to have been impacted by medieval farming practices. Whilst the significance of any remains is unknown, truncated prehistoric remains could be of medium significance in enhancing knowledge of activity within the area, although this significance is likely to be lower due to the loss of integrity and poor survival from extensive historically ploughing. A programme of geophysical survey has been undertaken to remotely evaluate this potential which has highlighted the potential presence of a number of circular features of possible archaeological origin. Any surviving archaeological remains could be investigated and recorded as part of a programme of archaeological evaluation and mitigation as part of a planning condition.

There are well defined ridge and furrow earthworks across the site. Review of terrain models and historical and modern aerial imagery covering the historic parish of Glen Magna has indicated that the earthworks within the site form a well preserved part of a wider relict medieval open field system that covers the majority of the parish. The degree of loss of the fields north of the village due to urban expansion, and loss of ridge and furrow to the south and east from modern ploughing have affected the integrity of the landscape as a whole,, and it is considered for these reasons that Great Glen was not identified as a priority township for the management and preservation of ridge and furrow during Historic England’s “Turning the Plough” research programme in the 1990s and 2010s. Whilst not nationally important the ridge and furrow earthworks within the site do hold significance as a non-designated heritage asset. The scheme will result in the loss of areas of these earthworks, and an impact on the legibility of the historic landscape character surrounding the village.

There is considered to be the potential for effects upon the setting of three nationally designated heritage assets, comprising the Grade II Listed Church of St Cuthbert, the Grade II Listed The Sycamores and the Grade II Listed 39 London Road. In relation to these assets, the site represents part of the wider agricultural hinterland of Great Glen, with ridge and furrow earthworks providing evidence for the cultivation of the landscape that dates to at least the medieval period. As such the site may be considered to make a contribution to the historical interest of the listed buildings by reflecting the previous agrarian economy and livelihood of the village in an area which borders its historic core and is visible from highways and public rights of way. The site is considered to be within the setting of the Sycamores with the scheme considered to affect a limited change to its key positive attributes resulting in a slight but discernible reduction to its contribution to the heritage asset’s significance. The relative contribution of the site to the setting of the Church of St Cuthbert and 39 London Road is considered to be lower, and thus the scheme will only affect a very slight change to the key positive attributes of a heritage assets’ setting such that the change to the significance of the heritage assets is barely distinguishable.*

The design of the scheme has been derived to reduce or mitigate potential affects to the historic environment within and surrounding the site. A rural buffer is preserved around the edge of the village and the designated assets, which include areas of good quality ridge and furrow, such that the contribution the landscape makes to their historical interest as part of their setting will still be readily appreciable. Existing vegetation at the site boundary is to be strengthened, and the scale of development limited to mainly two storeys (with the potential for some 2 ½ storey in the centre of the site) in order to screen inter-visibility and thus reduce the effect of encroaching development on views from the designated heritage assets. Areas of ridge and furrow will be preserved within the scheme in public open spaces. It is therefore considered that the overall impact of the proposed scheme will amount to less-than-substantial harm to the historic environment.

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1. Introduction

1.1 Project Background

- 1.1.1 Ecus Ltd. were commissioned by Bovis Homes Limited in August 2015 to undertake a heritage assessment to support the preparation of an outline planning application for the development of a site southwest of Great Glen, Leicestershire (hereafter 'the site'), located at NGR 464773 298018 (**Figure 1**).
- 1.1.2 The proposed outline application is for a residential development, including road network, services, new tree planting, proposed equipped children's play spaces and amenity and meadow grassland.

1.2 The Site

- 1.2.1 The site is located on land south of London Road on the south-western outskirts of Great Glen, Leicestershire. The site is formed of pastoral farmland, comprising a single field, bounded by hedgerows. The site is crossed by earthworks associated with historic ridge and furrow cultivation.
- 1.2.2 The bedrock geology comprises mudstone of the Charmouth Mudstone Formation, overlain with Oadby Member Diamicton superficial deposits (BGS 2015). The topography of the site falls from approximately 126 m towards the northwest boundary to 98 m AOD to the southeast corner.

1.3 Consultation

- 1.3.1 Consultation was undertaken with Historic England and the Leicestershire County Council planning archaeologist in regards to technical advice in respect of geophysical survey, and the potential sensitivity to change within the site to designated heritage assets.
- 1.3.2 Historic England identified the following heritage assets as potentially sensitive to the development:
- The Grade II* Church of St Cuthbert
 - The non-designated ridge and furrow earthworks, as a key element in the kinetic experience of the above church and village of Great Glen.
- 1.3.3 These heritage assets have been discussed below.

1.4 Aims and Objectives

- 1.4.1 The purpose of this heritage assessment is to determine, as far as is reasonably possible from existing records, an understanding of the historic environment resource in order to formulate:
- An assessment of the potential for heritage assets to survive within the area of study;
 - An assessment of the significance of the known or predicted heritage assets considering their archaeological, historic, architectural and artistic interests;

- Strategies for further evaluation intrusive or non-intrusive, where the nature, extent or significance of the resource is not sufficiently well defined;
- An assessment of the impact of proposed development or other land use changes on the significance of the heritage assets and their settings; and
- Proposals for further archaeological investigation within a programme of research.

2. Regulatory and Policy Context

2.1 Introduction

2.1.1 There is national legislation and guidance relating to the protection of, and development on, or near, important archaeological sites or historical buildings within planning regulations as defined under the provisions of the Town and Country Planning Act 1990. In addition, local authorities are responsible for the protection of the historic environment within the planning system.

2.2 Historic Buildings and Ancient Monuments Act 1953

2.2.1 English Heritage is enabled by the Historic Buildings and Ancient Monuments Act 1953 (as amended by the National Heritage Act 1983) to maintain a register of parks, gardens and battlefield sites which appear to English Heritage to be of special historic interest. Registration in this way makes the effect of proposed development on the sites and their settings a material consideration. English Heritage are a statutory consultee in relation to works affecting Grade I/II* Registered Parks and Gardens.

2.3 Ancient Monuments and Archaeological Areas Act 1979

2.3.1 Scheduled Monuments and Areas of Archaeological Interest are afforded statutory protection under the Ancient Monuments and Archaeological Areas Act 1979 (as Amended) and the consent of the Secretary of State (Department of Culture, Media and Sport), as advised by English Heritage, is required for any works.

2.4 Planning (Listed Buildings and Conservation Areas) Act 1990

2.4.1 Works affecting Listed Buildings or structures and Conservation Areas are subject to additional planning controls administered by LPAs under the Planning (Listed Buildings and Conservation Areas) Act 1990. In considering development which affects a Listed Building or its setting, the LPA shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses (Section 66). In considering Conservation Areas the planning authority has a general duty to give special attention to the desirability of preserving or enhancing the character or appearance of that area (Section 72).

2.4.2 The statutory criteria for listing are the special architectural or historic interest of a building. Buildings on the list are graded to reflect their relative architectural and historic interest (DCMS, 2010a, para 7, page 4):

- Grade I: Buildings of exceptional interest;
- Grade II*: Particularly important buildings of more than special interest;
- Grade II: Buildings of special interest which warrant every effort being made to preserve them.

2.4.3 English Heritage is a statutory consultee in relation to works affecting Grade I/II* Listed Buildings.

2.5 Hedgerow Regulations 1997

- 2.5.1 Under the Hedgerow Regulations 1997, as amended by The Hedgerows (England) (Amendment) Regulations 2002, hedgerows are deemed to be historically important if they are over 30 years old and either: incorporate, or are associated with, a scheduled archaeological feature or site; marks the boundary of a pre-1600 estate or manor recorded at the relevant date in a Sites and Monuments Record; or form an integral part of a pre-1845 field system.
- 2.5.2 Para 5a may determine that a hedgerow is important regardless of the current completeness of the historic field system. A hedgerow so recorded would still be important if it is now the only remaining part of the pre-1845 field system.

2.6 Local Plan

- 2.6.1 The Harborough District Local Development Framework Core Strategy 2006-2028 sets out the District Councils current planning policy including management of the historic environment. Those policies relevant to the site are outlined below.

Policy CS11: Promoting Design and Built Heritage

In recognition of the importance of good design and the built heritage of the District, the highest standards of design in new development will be sought to create attractive places for people to live, work and visit. This will be achieved in the following way:

- a) *Development should be inspired by, respect and enhance local character, building materials and distinctiveness of the area in which it would be situated. Proposals which are rich in architectural detail, individual, yet sympathetic to the local vernacular will be particularly supported. In areas with particularly high heritage value (such as Conservation Areas), new development should be sympathetic to those characteristics that make these places special.*
- b) *All development should respect the context in which it is taking place and respond to the unique characteristics of the individual site and the wider local environment beyond the site's boundaries to ensure that it is integrated as far as possible into the existing built form of the undeveloped areas of land which are important to the form and character of a settlement or locality.*
- c) *Development should be well planned to:*
 - i. *Incorporate safe and inclusive design, suitable for all to access;*
 - ii. *Make the most of local built and natural assets;*
 - iii. *Be of a scale, density and design that would not cause damage to the qualities, character and amenity of the areas in which they are situated;*
 - iv. *Ensure that the amenities of existing and future neighbouring occupiers are safeguarded;*
 - v. *Reflect the landscape or streetscape in which it is situated and include an appropriate landscaping scheme where needed;*
 - vi. *Enable adaptation, allowing for mixed uses with the potential to change use where appropriate;*

- vii. *Enable adaptation, ensuring suitability for today's users and capability for alteration to suit users in a future changing climate;*
 - viii. *Where appropriate, encourage travel by a variety of modes of transport;*
 - ix. *Minimise waste and encourage re-use and recycling wherever possible.*
- d) *Heritage assets within the District, and their setting, will be protected conserved and enhanced, ensuring that residents and visitors can appreciate and enjoy them through:*
- i. *Supporting proposals for the statutory listing of buildings where it can be demonstrated that the buildings meet the criteria for designation;*
 - ii. *Realising and actively seeking opportunities within the planning process to secure the viable and sustainable future of heritage assets at risk of neglect or loss, especially where this supports tourism or business development, providing such development is consistent with the significance of the heritage asset;*
 - iii. *Ensuring development in existing Conservation Areas is consistent with the special character as described in the Statement of Appraisal for that Area, keep these Areas under review and work with local communities to appraise other areas of special architectural or historic interest in the towns, suburbs and villages of the District to inform potential designation of additional Conservation Areas;*
 - iv. *Safeguarding Scheduled Monuments and non-scheduled nationally important archaeological remains, and other areas of archaeological potential or importance and areas of historic landscape;*
 - v. *Encouraging improved access to building and places of heritage for local people and visitors;*
 - vi. *Identifying heritage assets of local importance;*
 - vii. *Promoting and managing Foxtan Locks and the Grand Union Canal as a tourism attraction and key strategic Green Infrastructure corridor in line with the Conservation Plan and Heritage Partnership Agreement.*

2.7 Neighbourhood Plan

- 2.7.1 The Great Glen neighbourhood plan was released as a draft in July 2016 for submission to Harborough District Council and other consultees. If adopted by the local authority it will become a material consideration in determining planning applications within the parish. Within the plan the application area is identified as a reserve housing site. Those policies relevant to the site are outlined below.

POLICY GG8: NON-NATIONALLY DESIGNATED HERITAGE ASSETS OF LOCAL HISTORICAL AND ARCHITECTURAL INTEREST

Development proposals that affect an identified non-designated buildings or structure of local historic or architectural interest, or its setting, will be required to conserve or enhance the character and setting of that building or structure.

POLICY GG15: RIDGE AND FURROW FIELDS

Development proposals that adversely affect or damage the identified areas of well

preserved ridge and furrow earthworks identified as surviving ridge and furrow will be resisted.

2.8 National Planning Policy Framework

- 2.8.1 Section 12 of the National Planning Policy Framework (NPPF) sets out the Government's current planning policy in relation to conserving and enhancing the historic environment. The key requirements are summarised below.
- 2.8.2 Applicants are required to provide proportionate information on the significance of designated and non-designated heritage assets affected by the proposals and an impact assessment of the proposed development on that significance. This should be in the form of a desk-based assessment and, where necessary, a field evaluation (NPPF, 128).
- 2.8.3 LPAs are required to take into account the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation; the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring; the desirability of new development making a positive contribution to local character and distinctiveness; and opportunities to draw on the contribution made by the historic environment to the character of a place (NPPF, 126/131).
- 2.8.4 In determining planning applications, great weight should be given to the conservation of designated heritage assets - World Heritage Sites, Scheduled Monuments, Listed Buildings, Protected Wreck Sites, Registered Parks and Gardens, Registered Battlefields or Conservation Areas designated under the relevant legislation (NPPF, 132).
- 2.8.5 In weighing applications that affect directly or indirectly the significance of a non-designated heritage asset, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset (NPPF, 135).
- 2.8.6 LPAs should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their significance and the impact, and to make this evidence publicly accessible and any archives deposited with a local museum or other public depository (NPPF, 141).

3. Methodology

3.1 Standards

3.1.1 This assessment is undertaken in accordance with:

- The Chartered Institute for Archaeologists' Standard and Guidance for historic environment desk based assessment (ClfA, December 2014).
- Planning Practice Guidance *Conserving and enhancing the historic environment* (6th March 2014), published by the Department for Communities and Local Government.
- Historic England's Historic Environment Good Practice Advice in Planning Notes (2015a-c).

3.2 Scope of Assessment

3.2.1 The initial step of the heritage assessment process is the identification of heritage assets likely to be affected by the proposal due to their presence within the scheme or due to the sensitivity of their setting. This is informed through a desk-based study and site visit. This step constitutes Step 1 of Historic England's *The Setting of Heritage Assets* (2015c).

3.2.2 The spatial scope of the assessment was defined by a 1 km study area around the land ownership boundary to inform the archaeological potential for the site.

3.2.3 The following sources were consulted to inform the presence of heritage assets within the study area, and to form a baseline for the assessment of their significance:

- The Leicestershire HER, comprising a database of all recorded archaeological sites, find-spots, and archaeological events within the county.
- National heritage datasets including The National Heritage List for England (NHLE), Images of England, PastScape, Viewfinder, NMR Excavation Index, and Parks and Gardens UK.
- Historic manuscripts and maps held at Leicestershire Records Office.
- Historic aerial photographs held at Historic England Archives.
- LiDAR digital terrain mapping available from the Environment Agency.
- Relevant primary and secondary sources including published and unpublished archaeological reports relating to excavations and observations in the area around the site were studied.

3.2.4 Site visits were undertaken in September 2015 and November 2016 in order to assess the general character of the site, identify visible historic features and assess possible factors which may affect the survival or condition of known or potential assets. Heritage assets identified as potential sensitive receptors to the proposed development were visited in order to assess the attributes of their setting that contribute to their significance and to establish whether intervisibility with the site could be established on the ground.

3.3 Assessment of Significance

- 3.3.1 The National Planning Policy Framework recommends that, in determining applications, local planning authorities should require applicants to describe the significance of any heritage assets affected, including any contribution made by their setting (NPPF 2012, 30).
- 3.3.2 The significance of heritage assets is defined in terms of their value to this and future generations because of their heritage interest, deriving not only from their physical presence, but also from their setting. This interest may be archaeological, architectural, artistic or historic (NPPF 2012, 56):
- Archaeological interest: derives from the presence or potential for evidence of past human activities worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.
 - Architectural interest: derives from the architectural design, decoration or craftsmanship of a heritage asset. Architectural interest may also apply to nationally important examples of particular building types and techniques and significant plan forms.
 - Artistic interest: derives from interest in the design and general aesthetics of a place. It can arise from conscious design or fortuitously from the way the place has evolved. More specifically, architectural interest is an interest in the art or science of the design, construction, craftsmanship and decoration of buildings and structures of all types. Artistic interest is an interest in other human creative skill, like sculpture.
 - Historic interest: derives from the ways in which past people, events and aspects of life can be connected through a place to the present. It tends to be illustrative or associative. Considers documentation, wider context, regional factors, and group value of the site.
- 3.3.3 The heritage interest of an asset's physical presence is assessed in terms of attributes identified in statutory criteria, general principles for selection (DCMS 2010a-b), selection guides published by Historic England, and regional research agendas.
- 3.3.4 The heritage interest of an asset's setting is assessed in accordance with Step 2 of Historic England's The Setting of Heritage Assets (2015c), which considers the physical surroundings of the asset (including its relationship with other heritage assets); the way in which the asset is appreciated, and the asset's associations and patterns of use. Attributes of setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral (NPPF 2012, 56).
- 3.3.5 The overall significance of a heritage asset is the sum value of its interest, expressed within this report on a 6-point scale of Very High, High, Medium, Low, Negligible and Unknown using the criteria presented in Table 1.
- 3.3.6 The contribution of a given site or application area to an asset's significance is assessed in order to provide a basis for assessing the sensitivity of the heritage asset to change within that specific area. The criteria for this assessment are presented in Table 2.

Table 1: Criteria for determining the significance of heritage assets

Heritage Significance	Criteria
Very High	World Heritage Sites and the individual attributes that convey their Outstanding Universal Value, or non-designated heritage assets of demonstrable international heritage interest.
High	Scheduled Monuments, Listed Buildings (Grade I, II*, II), Conservation Areas, Registered Historic Parks and Gardens (Grade I, II*, II), Registered Battlefields, Protect Wreck Site, or non-designated heritage assets of demonstrable national importance due to their heritage interest.
Medium	Locally Listed Buildings and Landscapes, or non-designated heritage assets of demonstrable regional importance due to their heritage interest.
Low	Non-designated heritage assets of demonstrably limited heritage interest.
Negligible	Non-designated heritage asset of very limited heritage interest, typically due to poor preservation, survival or restricted contextual associations.
Unknown	The significance of the heritage asset can not be ascertained from available evidence.

Table 2: Criteria for valuing the contribution of the application area to the significance of heritage assets

Contribution of Application Area	Criteria
High Contribution	The site possesses attributes that make a strong positive contribution to the understanding and/or appreciation of the interests that embodies its significance.
Medium Contribution	The site possesses attributes that make some positive contribution to the understanding and/or appreciation of the interests that embodies its significance.
Low Contribution	The site possesses attributes that make little positive contribution to the understanding and/or appreciation of the interests that embodies its significance.
Neutral Contribution	The site does not contribute to the understanding and/or appreciation of the interests that embodies its significance.
Negative Contribution	A site detracts from the understanding and/or appreciation of the interests that define the significance of a heritage asset.

4. Historic Environment Baseline

4.1 Introduction

- 4.1.1 The following section identifies the known and potential heritage assets that may have the potential to receive effects from the proposed development, compiled from sources listed in Section 3.
- 4.1.2 The HER assets are assigned a number with a HA (Heritage Asset) prefix within the text for ease of reference, are depicted on **Figure 2** and listed in Appendix 1. National Heritage List entries are referenced by their National Heritage List for England (NHLE) entry number and are depicted on **Figure 3**.

4.2 Historic and Archaeological Baseline

Previous Studies

- 4.2.1 There are 31 records of archaeological programmes of work having been focussed within the 1 km study area. These programmes of work include evaluations, building surveys, geophysics, archaeological observation, aerial photographic analysis and documentary evidence reviews. Of these investigations none are situated within the site but a total of 10 are located within a 100 m buffer of the site. These investigations are summarised below.
- **ELE 5025 – The A6 Great Glen Bypass, Leicestershire: An Archaeological Assessment – Birmingham Archaeology 2000.** A desk-based assessment and walkover survey was conducted in 2000 to identify and determine the survival, potential and significance of archaeological remains in order to allow the consideration and identification of any recommendations for further work ahead of the construction of the A6 bypass at Great Glen. The assessment identified an area of earthworks which required more detailed recording and concluded that further investigation would be required as the landuse history of the area suggested that there was potential for further archaeological evidence which may be invisible to non-intrusive methods of investigation.
 - **ELE 5658 – A photographic survey and archaeological watching brief at St Cuthbert’s Church, Great Glen – University of Leicester Archaeological Services 2008.** This work comprised three elements including a photographic record of the external wall of the church that would be affected by the addition of a new porch, a record of two grave slabs which would be covered by new flooring and a watching brief which was carried out on ground reduction works and service and foundation trenching for the porch. No archaeological features were recorded, some disarticulated human bone was discovered.
 - **ELE 5876 – A historic building photographic record of two ranges of outbuildings at The Sycamores, 26, London Road, Great Glen – TR Projects 2009.** A stable block and a further building range at The Sycamores, were surveyed prior to their conversion.
 - **ELE 6241 – 2007 Watching Brief on land at The New Leicester Grammar School, Mount Farm, Great Glen, Leicestershire – University of Leicester Archaeological Services 2007.** A watching brief was carried out on land for the new Leicester Grammar School at Mount Farm, Great Glen. No archaeological features were identified.

- **ELE 6242 - 2004 Desk-Based Assessment, Mount Farm, Great Glen – Scott Wilson 2004.** A desk-based assessment was completed at Mount Farm, Great Glen to inform the application for the New Leicester Grammar School. The desk-based assessment concluded that there was low archaeological potential and recommended a programme of building recording for a number of structures planned to be either altered or demolished.
- **ELE 6328 – A6 Great Glen Bypass, Leicestershire: Archaeological field Survey – Birmingham University Field Archaeology Unit 2000.** A survey which aimed to record the areas of relic landscape which would be destroyed by the construction of the A6 bypass at Great Glen was undertaken in 2000. The survey identified five fields requiring further investigation by trial excavation.
- **ELE 6329 – A6 Great Glen (Fields 9c, 16 and 20B), Leicestershire: An archaeological watching brief – Birmingham University Field Archaeology Unit 2002.** A watching brief was undertaken during the stripping of topsoil, for the construction of the A6 bypass at Great Glen. During the watching brief a previously unknown Romano-British settlement comprising enclosure ditches, cobbled surfaces, pits and burials was discovered. Field boundaries associated with the shrunken medieval village of Great Glen were also uncovered.
- **ELE 4864 – A6 Great Glen Bypass Leicestershire: Archaeological trial trenching, supervised topsoil stripping, salvage recording and excavation – Birmingham Archaeology 2001.** Eleven trenches were excavated following the fieldwalking, geophysics and earthwork surveys undertaken in advance of the construction of the A6 Bypass at Great Glen. Recorded features included medieval/post-medieval remains associated with the shrunken village of Great Glen, an Iron Age Hearth and a Roman settlement site.
- **ELE 9330 – 2014 Desk-Based Assessment, land off London road, Great Glen, Leicestershire – Pre-Construct Archaeology Ltd. 2014.** A desk-based assessment was undertaken to inform a planning application for a residential development of land adjacent to London Road, Great Glen. The desk-based assessment concluded that there is low to moderate potential for currently unknown archaeological remains or a prehistoric through to post-medieval date.
- **ELE 9357- 2015 Desk-Based Assessment, land east of Station Road, Great Glen. Phoenix Consulting Archaeology Ltd. 2015.** A desk-based appraisal undertaken to inform an application for proposals for residential development to the east of Station Road, Great Glen. The assessment concluded that the area has low potential for the recovery of significant archaeological remains.

Geophysical Survey

- 4.2.2 A magnetometer survey (**Appendix 4**) was commissioned to provide further evidence of the potential presence of archaeology within the site (ASWYAS 2016). Whilst the geology of the area (Diamicton) and presence of ridge and furrow have the potential to mask the presence of features, the strategy was considered of use as a non-invasive technique that could allow the identification of features or inform further stages of evaluation. The initial survey identified, in addition to the ridge and furrow, several potential circular features of c. 1m diameter across the area which could be archaeological in

origin.

Prehistoric (pre 43AD)

- 4.2.3 The Leicestershire HER returned a total of six records which have been attributed a prehistoric date. These include a worked flint found south/southeast of Great Glen (**HA1**), a late Neolithic/Early Bronze Age flint scatter to the south of Mount Farm (**HA3**), a prehistoric pit west of Stoneygate School (**HA2**), and a Bronze Age axe hammer found east of Gorse Spinney (**HA4**).
- 4.2.4 Iron Age sites include an Iron Age pit containing burnt stones and pottery (**HA5**) and a sherd of Iron Age pottery discovered alongside six sherds of Roman pottery south of Orchard Court (**HA6**). Recent excavations north of London Road have identified a ring ditch of Iron Age date.

Romano-British (43 AD – 410)

- 4.2.5 Further Romano-British remains have been found in Great Glen including the site of a possible villa where various finds were recovered, including pottery (Samian, grey, black burnished and colour coated ware) as well as tesserae, a third century Roman coin and a box-flue tile (**HA7**). Further pottery sherds and a 2nd century coin have also been recovered from land south of Church Road (**HA8**).
- 4.2.6 A total of 66 Roman Coins have been recorded by the Portable Antiquity Scheme (PAS) within the study area as well as one finger ring, one pendant and a figurine.

Anglo-Saxon/ Early-Medieval (411 – 1066)

- 4.2.7 It is thought that Great Glen formed the centre of an Anglo-Saxon royal estate, during the 9th century (**HA 21**) which stretched from the source of the river near Billesdon towards Newton Harcourt and Fleckney. However the HER notes that no archaeological evidence for the royal estate has been uncovered to support this theory.
- 4.2.8 None-the-less the village does retain some evidence of Anglo-Saxon occupation. Despite having been restored and largely rebuilt in 1876 the Church of St Cuthbert retains some Anglo-Saxon stonework and Norman elements (**HA11**). Saxon pottery has also been discovered south of Church Road (**HA9**) and a possible Anglo-Saxon/ medieval enclosed area has been identified in the northern part of Great Glen (**HA10**).
- 4.2.9 The PAS records a single Anglo-Saxon coin as having been found within the study area.

Medieval (1066-1540)

- 4.2.10 There are two entries for the town of Great Glen made within the Domesday Book. The first states that the lord in 1086 was William Lovet and the second refers to Alwin, lord in 1086. The tenant in chief for both areas was Hugh of Grandmesnil. The total taxable land at the time was 18.3 geld units and a total population of 45 households, and therefore Great Glen is considered a very large town for the time (Open Domesday 2015). The HER (**HA21**) records the historic settlement core as a heritage asset of medieval date. This location is also noted as the possible site of an Anglo-Saxon Palace. St

Cuthbert's Church burial ground is also recorded by the HER as a feature of medieval interest (**HA17**).

- 4.2.11 Remains of the medieval village have been surveyed east and south of Orchard Court (**HA12 & 22**) and south of Church Road (**HA13**), these remains comprised traces of building foundations and platforms, whilst excavations east of Orchard Court uncovered a 12th/13th century cobbled surface and walls and those south of Church Road uncovered sherds of medieval, Saxo-Norman and Saxon pottery. Further earthworks interpreted as possible house platforms were uncovered west of Lanchester House (**HA16**). Medieval plots have also been located south of Kingswood Lodge (**HA20**).



Plate 1: General view across site, note the pronounced ridge and furrow

- 4.2.12 Surrounding the settlement there is also evidence of medieval agricultural activity including the recorded site of windmills (**HA14 & 18**) and the potential site of a possible watermill (**HA15**) as well as a manuring scatter discovered west of Stoneygate School (**HA23**).

- 4.2.13 Ridge and furrow survives throughout the site (**Plate 1**), an assessment of which is provided below.

- 4.2.14 A number of finds have been recorded by the PAS within the study area including three medieval ampulla and one medieval coin.

Post-medieval (1540-1901)

- 4.2.15 Great Glen continued to grow throughout the post-medieval era only facing a decrease in population towards the end of the nineteenth century, when agricultural depression hit and many were attracted to the work provided by the industrialisation of Leicester (BHO, 2015).

- 4.2.16 No enclosure maps or tithe maps are present for the parish in the Leicestershire Record Office.
- 4.2.17 The town was served by good communication and transport routes including the road from Market Harborough to Leicester (**HA47**) which was turnpiked in 1726, the Grand Union Canal which runs just over 1 km south of the site, constructed between 1792 and 1797 and the Midland Railway's line from Leicester to Harborough which was constructed in 1857 (BHO, 2015).
- 4.2.18 Other features of a post-medieval date recorded by the Leicestershire HER include houses (**HA 25, 28, 29, 34-38, 41-43, 49, 50 & 52**), a farmhouse (**HA40**), outbuildings (**HA45**), The Great Glen Methodist Church and Sunday School (**HA39**) which opened in 1827 and 1879 respectively, public houses (**HA24 & 33**), a bridge over the River Sence (**HA32**), a windmill (**HA53**), a watermill (**HA44**) and a watermill leat (**HA48**).
- 4.2.19 The Vicarage (**HA27**) and alms houses (**HA26**) are also post-medieval in date. The alms houses were constructed in 1870 and funded by Thomas Crick, who had made his fortune in the shoe industry and resided at Rupert's Rest (**HA38**) (BHO).
- 4.2.20 There are a number of features associated with Great Glen Hall (**HA29**), including a cistern (**HA30**) an icehouse (**HA31**), the lodge house (**HA50**), and the surrounding garden (**HA51**).
- 4.2.21 The PAS records a single post-medieval coin, dating to Elizabeth I's reign within the study area.
- 4.2.22 The 1814 Ordnance Survey drawing of Burton Overy extends over the site and shows a field system which does not correlate with the current field boundaries or the earlier ridge and furrow (British Library 2016). This maybe the result of simplification or survey error.
- 4.2.23 Historic OS mapping shows the current field system had been established by the time of the publication of the 1886 6" OS map. With the exception of the truncation of the fields along the southern border of the site by the construction of the A6, the field system has remained largely unchanged (**Figure 4**).

Modern (1902- Present)

- 4.2.24 Leicestershire HER returned a total of two records of features of a modern date considered to have heritage value. These are the Grade II listed K6 Telephone Box (**HA54**) situated on the village green and the Grade II Listed war memorial (**HA55**) which dates to c.1920.

Unknown

- 4.2.25 The Leicestershire HER returned a single record to which no date has yet been attributed. This was a brickwork and masonry structure which became exposed in the river bank of the River Sence (**HA56**).
- 4.2.26 The small circular features identified within the geophysical survey are of unknown date and origin (see Appendix 4).

4.3 Historic Landscape

4.3.1 A programme of Historic Landscape Characterisation has been completed by Leicestershire County Council. The site has been identified as being situated within a landscape which is characterised by fields and enclosed land which are the result of re-organised piecemeal enclosure (HLE12765). 'Re-organised Piecemeal Enclosure' fields are the result of significant field boundary loss or straightening which has occurred since the publication of the 1st edition 6" OS map and are characterised by small irregular or rectilinear fields that have lost 10% or more of their field boundaries of areas of large irregular or rectilinear fields (LCC, 2010). Areas of re-organised piecemeal enclosure are considered to have medium archaeological potential, dependent upon previous land use and the agricultural regimes employed since enclosure. Any field or group of fields over 1 ha., where development is proposed, will be considered to have potential for below ground archaeology (LCC, 2010, 84).

Ridge and Furrow

4.3.2 The site is covered by well preserved ridge and furrow including both broad and narrow types with clear headlands and distinctive reverse 'S' form (**Figures 5-6**). There is some correlation between the sections of ridge and furrow and existing hedgerows, indicating that the existing field boundary pattern was based on some degree to the preceding division of open fields, although the unit of ownership was evidently of a much lower grain.

4.4 Summary of Potential Heritage Constraints

4.4.1 Whilst there are no designated heritage assets situated within the site, the site has been identified to potentially lie within the setting of five designated heritage assets within the 1 km study area (see outline assessment in Appendix 2), comprising:

- The Church of St Cuthbert (Grade II* Listed Building, NHLE: 1061596);
- The Vicarage (Grade II Listed Building, NHLE: 1180195);
- 26 London Road (Grade II Listed Building, NHLE: 1061600);
- 39 London Road (Grade II Listed Building, NHLE: 1180229); and
- Bridge over River Sence (Grade II Listed Building, NHLE: 1360683).

4.4.2 In addition to the above there is also considered to be potential for the development to effect non-designated heritage assets, including of as yet unknown non-designated archaeological remains, comprising:

- Moderate potential for archaeological remains comprising prehistoric to Romano-British features;
- Moderate potential for Anglo-Saxon remains;
- High potential for medieval remains relating to the agricultural hinterland of Great Glen; and
- Moderate potential for remains of a post-medieval date, likely to be agricultural in nature.

5. Statement of Significance

5.1 Introduction

- 5.1.1 In accordance with Steps 1 of Historic England's Historic Environment Good Practice Advice in Planning 3 (July 2015c) An assessment was undertaken to identify heritage assets within the 1 km study area which possessed settings that might be affected by the proposed scheme, and thereby scope out those assets which would not be affected. This assessment is included in **Appendix 2** of this report.
- 5.1.2 The following section assesses the heritage significance of heritage assets which have been identified as potentially sensitive towards change within the site in **Section 4** above and through the assessment presented in Appendix 2.
- 5.1.3 In accordance with Step 2 of Historic England's Good Practice Advice Note 3 (July 2015c) the following section assesses whether, how and to what degree the settings of the identified heritage assets contribute towards their significance. The assessment goes on to state the contribution of the site towards that setting.

5.2 The Church of St Cuthbert

- 5.2.1 The Church of St Cuthbert (Grade II* Listed Building, NHLE: 1061596) is situated approximately 500 m southeast of site centre and 68 m east of the closest point of the site boundary. The church retains a fourteenth century tower, whilst the remainder was restored and much rebuilt in 1876. The church is situated on the western outskirts of the village of Great Glen at the junction of London Road and Church Road. The church is surrounded by a churchyard which is enclosed by a low hedgerow and mature deciduous trees. There is also a number of tall yew trees planted throughout the churchyard. To the east of the churchyard is the associated listed vicarage.
- 5.2.2 The building is considered of national importance for its high architectural, aesthetic and historic value. The building draws its architectural and artistic value from the fabric of the church building and from the surrounding church grounds from which it is possible to appreciate its architectural and artistic qualities. The historic value of the building is derived from its long standing relationship to the village. The incorporation of Anglo-Saxon stone shows the longevity of the church, whilst the rebuilding and continual use of the church shows its continued importance to the village community.
- 5.2.3 The setting of the building is defined by the surrounding churchyard, from within which an appreciation of the architectural and artistic value of the church can be readily gained; the nearby vicarage to its east (with which the building shares a functional relationship); and the village of Great Glen from within which the building retains and contributes historic value. Movement between the historic cores of the village and the church are considered to offer a kinetic experience that forms a key element in the setting of the church. Further historical value is gained from the position of the church on the edge of the village which reflects its historic outlying relationship with the historic cores of Great Glen, and the fields beyond (with their surviving ridge and furrow earthworks) which reflect the wider rural economy of the parish within which the villagers worked.

- 5.2.4 There are a few views to and from the church which are considered to contribute towards its setting. The limited number of key views is due in part to the relatively short height of the western tower and the height of the surrounding mature trees which effectively screen views from a distance. The principal key views are from within the churchyard, and its immediate vicinity, looking past the church to the west and south, away from the site. These views are afforded from within the relatively enclosed confines of the churchyard, establishing a defined area in which the church is best experienced, but also permitting filtered views out, between the trees which line its boundary and the edge of London Road, into those nearby fields immediately bordering London Road to the west (**Plate 2**). These filtered views of fields are considered to contribute towards the setting of the church by enabling an understanding of its historic setting and rural context. The site lies beyond these immediate fields.
- 5.2.5 A further key view looking towards the site from the west has also been identified and is discussed below.
- 5.2.6 Directly to the west of the church on the opposite side of London Road is a public right of way (also depicted on the first edition OS Map) which would have linked Great Glen to various farms to the northwest, as well as Wigston. This footpath has been severed in recent times by the construction of the A6 and as such is in limited use. The footpath is aligned on the west tower of the church, which despite its relative low height is visible along the footpath and forms a focal point and landmark amongst and through the canopies of mature trees that border the churchyard and also line London Road. Whilst not in major use, movement along this footpath is considered to contribute towards the significance of the church as demonstrative of the church and the villages' historic rural surroundings. It is from within these views that the church is best experienced in relation to the surviving ridge and furrow that are clearly evident to the viewer in the fields south of the path and, to a much lesser extent due to the depth and height of intervening hedgerows, the fields within the site to the north.
- 5.2.7 There is also considered to be a wider contribution made by the enclosed fieldscape west of the village, and the surviving ridge and furrow, to the way in which the church is experienced. Travel from the northeast down London Road, which is a primary route into the village from the A6, offers glimpsed views of ridge and furrow in fields to the south of the road through the vegetation along the road edge. These views are increasingly restricted, and ultimately fully screened, on the approach to the village due to the channelling effect of dense roadside vegetation, and the tower of the church itself does not become visible until the junction with Church Road. Whilst the church is not directly experienced alongside the fieldscape in this way, the passage through the landscape before arriving at the church emphasises the sense of its rural surrounds.
- 5.2.8 The elements of the setting which contribute highly to the significance of the church are considered to comprise its relationship with its surrounding churchyard; its relationship with the vicarage; its relationship with the core of the village including the experience from moving between the two and the church's position on the village's rural edge; and the views experienced from the historic footpath west from the church through the fields. The wider historic landscape character, as experienced through moving through it, is considered to make a moderate contribution to the significance of the church.

5.2.9 The site comprises an area of pastoral land on the western outskirts of Great Glen, bounding the southern side of London Road. The enclosed fieldscape and the surviving remains of ridge and furrow, preserve a tangible link to a past medieval landscape of open fields and previous agrarian practices, and thus more widely an indicator of the social structure and economy of Great Glen. The northern area of the site is visible from London Road, albeit screened by vegetation along the field boundary, and is considered to contribute to a broader kinetic experience when approaching the church from the northwest. This experience does contribute positively to the setting of the church, but to a much lesser extent than the experience from along the public right of way to its west. This latter experience focuses on the church, thus demonstrating the significance of the church as a historic focal point for movement through the landscape, providing a direct visual connection between the fields and the church whilst the relationship is much less apparent from London Road where the ridge and furrow is partially screened and is not seen in conjunction with the church. The site is therefore considered to possess attributes that make some positive contribution to the understanding and appreciation of the interests that embodies its significance.



Plate 2: View looking southwest towards the site from the churchyard across to the fields on the opposite side of London Road

5.3 The Vicarage

5.3.1 The Vicarage (Grade II Listed Building, NHLE: 1180195) is located approximately 550 m southeast of site centre. The Vicarage was constructed in the 18th century in colour-washed brick and Swithland slate. It is situated in an enclosed garden which abuts the eastern border of the churchyard. The surrounding gardens are planted with dense mature garden planting and a number of mature trees. There are no views to or from the house and gardens within the surrounding area.

- 5.3.2 The building is considered of national importance for its high historic and architectural value. The building draws its architectural value from the quality of its fabric, whilst its historic value is contributed to by its relationship with the church and the village.
- 5.3.3 The setting of this building is defined by its surrounding gardens, its relationship to the Church of St Cuthbert and its relationship to the village. Although there is no visual connection between the building and the church the proximity of the two buildings is considered demonstrative of their close relationship.
- 5.3.4 Overall the setting of this building is considered to make a high contribution towards the significance of this heritage asset. This derives from the setting possessing key attributes that make a strong positive contribution to the understanding and/or appreciation of the values that embodies its significance.
- 5.3.5 The site is not considered to directly contribute to the setting of this asset and a consequence affects upon this heritage asset are not discussed further.

5.4 26 London Road

- 5.4.1 26 London Road (Grade II Listed Building, NHLE: 1061600) also known as The Sycamores is located approximately 290 m east of the site centre. The building is a late 18th century red brick construction comprising three-storeys. The principal elevation faces south over a formal garden towards agricultural fields beyond. The surrounding agricultural fields have retained well defined ridge and furrow earthworks. To the rear of the building are a series of contemporary outbuildings. The building is situated beyond the confines of the village on the western side of London Road.
- 5.4.2 The building is considered of national importance for its high architectural and historic value. Its architectural value is drawn from the quality of its design and materials and by its surrounding landscaping. Its historic value is connected to its position within a rural landscape and its associated outbuildings to the north which enable an understanding of purpose and historic context.
- 5.4.3 The setting of this building is defined by the private garden, on to which the principal elevation of the building faces, with the yard and outbuildings to the rear of the building and the surrounding farmland, all of which share a historic functional relationship to the building. The proximity of the building to the centre of Great Glen also plays a factor in the understanding of historic context.
- 5.4.4 Overall the setting of this building is considered to make a high contribution towards the significance of this heritage asset. This derives from the setting possessing key attributes that make a strong positive contribution to the understanding and/or appreciation of the values that embodies its significance.
- 5.4.5 Within this setting the site is considered to comprise part of the surrounding farmland which shares a historic and functional relationship to the building and as such makes a positive contribution.

5.5 39 London Road

- 5.5.1 39 London Road (Grade II Listed Building, NHLE: 1180229) is situated approximately 350 m north of the site centre. The building is a red brick, two-storey house located north of London Road. To the north of the building is an L-shaped range of farm-buildings immediately behind which is the modern building of Leicester Grammar School. The modern road which connects London Road to the Grammar School cuts diagonally in-between these two sets of buildings. To the south of 39 London Road is an open green lawn. The building sits to one side of a tree lined avenue, which formerly connected the building to London Road. This has now been partially bypassed towards its southern end and a modern semi-detached house has been constructed between the avenue and the lodge to Crick's Retreat.
- 5.5.2 The building is considered of national importance for its high architectural and historic values. The building draws its architectural value from the quality of its design and fabric and its historic value from its association with the outbuildings to the rear, the tree lined avenue and the surrounding farmland.
- 5.5.3 The setting of this building is defined by the historic relationship the building holds with the nearby outbuilding range, the tree-lined avenue and the surrounding farmland. This setting has been in part damaged by the addition of the school road, which intersects the historic farmyard and bypasses the tree lined avenue at its southern end and by a modern semi-detached house which has been positioned to one side of the southern end of the tree lined avenue
- 5.5.4 Overall the setting of this building is considered to make a high contribution towards the significance of this heritage asset. This derives from the setting possessing key attributes that make a strong positive contribution to the understanding and/or appreciation of the values that embodies its significance.
- 5.5.5 Within this setting the site is considered to make a low positive contribution as part of the wider agricultural landscape. Screening by the hedgerow which borders the site along London Road limits the ability to appreciate the sites contribution on the ground.

5.6 Ridge and Furrow and Historic Landscape Character

- 5.6.1 The site is situated within an area of land identified through the Leicestershire Historic Landscape Characterisation Project as '*re-organised Piecemeal Enclosure*' (HLC type 68). Across Leicestershire re-organised piecemeal enclosure accounts for 18.1% of historic landscape haracter covering an area of approximately 46100 ha and as such its occurrence is considered to be common.
- 5.6.2 This HLC type is characterised by small irregular or rectilinear fields that have lost 10% or more of their field boundaries since the 1st edition 6" OS map, or areas of large irregular or rectilinear fields. The enclosure pattern has developed through and amalgamation of fields created piecemeal enclosure, as a result of changes in agricultural practice which begin during the late nineteenth century which continued throughout much of the twentieth century. The HLC type does however contain within it elements, primarily fields with an 's-curve' or 'dog-leg' morphology which although fragmentary allude to

earlier medieval and post-medieval farming practices. In this case the fields covered by the application area retain well-preserved medieval ridge and furrow.

- 5.6.3 Within the site, the ridge and furrow comprises three similarly aligned blocks, or furlongs, within which there are areas of both narrow (<5 m width) and broad (>5 m width) ridge and furrow. The lands form a distinctive reverse 'S' shape, and headlands or heads, that preserve the motion of the plough.
- 5.6.4 A survey undertaken in the 1930s showed that almost all of the fields within the parish of Great Glen retained ridge and furrow earthworks indicating medieval open field farming (Great Glen Neighbourhood Plan 2011-2031) As part of this assessment a review of historical aerial photographs has identified survival in the 1940s was actually much larger than previously thought (**Figure 5**). It was also previously estimated that by 2003 60-70% of these remains had disappeared and now only sixteen surviving examples among approximately 140 fields survive (*ibid*). A review of available LiDAR data (Environment Agency, 2014, 1 m) suggests that the rate of survival is actually much higher.
- 5.6.5 To calculate the degree of development within the former open agricultural land of the parish, the area of present development calculated (14% of parish) and compared to the total area (2% of parish) for early development from the Leicestershire Historic Landscape Characterisation Project (types "Historic Settlement Core", "Country House", "Pre-1880s Settlement Detached" and "Pre-1880s Settlement Terraced"). The total area lost to development has therefore been calculated at 12% of the parish.
- 5.6.6 Of the remaining undeveloped land within the Parish of Great Glen (excluding the area of no data), 22% was found to retain good examples of ridge and furrow (prominent and distinct earthworks forming furlongs with characteristic features such as headlands and reverse 'S' profile) whilst approximately a further 30% were found to retain evidence of some ridge and furrow (indistinct earthworks indicating partially ploughed out ridge and furrow).
- 5.6.7 Limited evidence (uncertain earthworks, either relating to ploughed out ridge and furrow or modern cultivation) for ridge and furrow was identified in 24% of fields, whilst 12% contained no identifiable evidence of previous ridge and furrow (**Figure 6**).
- 5.6.8 The site lies in an area of good survival, and accounts for 6.5% of good ridge and furrow within the parish as a whole, although the actual development footprint is smaller.
- 5.6.9 Great Glen was not identified as a priority township by Historic England's 'Turning the Plough Project' (2001), as priority townships retaining between 70-100% (typically around 90%) of their ridge and furrow fields. Several examples of such priority townships are located within the local area, at Hungarton, Saddington and Mowsley. Whilst the assessment identified evidence of certain or potential ridge and furrow within 76% of the Parish, only 52% of the area had readily identifiable remains, and only 22% of the area were good quality. Consequently it is not considered that the township's surviving ridge and furrow is of national importance as a landscape but can be considered to contribute towards the historic significance of ridge and furrow across Leicestershire and the wider English Midlands.

5.6.10 The ridge and furrow earthworks are of historical value, contributing to the character of the landscape, to local identity and a sense of place.

5.7 Archaeological Potential

5.7.1 There is an uncertain potential for archaeological remains to survive within the site. Assessment of known archaeological sites in the area, and the results of a geophysical survey of the site, indicate there is a possible low-moderate potential for prehistoric settlement activity to underlie the medieval ridge and furrow earthworks.

5.7.2 The practice of ploughing the site that resulted in the creation of the ridge and furrow is anticipated to have caused an impact to archaeological evidence of preceding activity in the site.

5.7.3 Whilst the significance of any remains is unknown, prehistoric remains could be of medium significance in enhancing knowledge of activity within the area, although this significance is likely to be lower due to the loss of integrity and poor survival from extensive historical ploughing.

6. Statement of Effect

6.1 Introduction

6.1.1 This section analyses the range of effects the currently proposed scheme within the application area may have on heritage assets, and their setting. The setting assessment is in accordance with Step 3 of Historic England's Good Practice Advice Note 13 (2015c).

6.2 Scheme Proposal

6.2.1 The proposed scheme is for a residential development (the quantum of dwellings is approximately 100 units), associated road network, drainage, lighting and other provisions, green infrastructure comprising public open spaces and structural planting, a potential commercial development area for small start up businesses and flexible office space, and amenity and meadow grassland.

6.2.2 Potential changes which may arise from the scheme include;

- Direct physical effects upon any known or unknown surviving archaeological remains;
- Change to the historic landscape character;
- Affects upon setting, including loss of historic context, altered views and fragmentation of the historic landscape.

6.3 Assessment of Proposal

The Church of St Cuthbert

6.3.1 The site is situated immediately east of the Church of St Cuthbert and encompasses land considered to contribute towards the setting of the church as an area which enables an understanding of the surrounding historic rural context of both the church and the village.

6.3.2 The proposed development will result in the loss of an area of enclosed fieldscape and well preserved ridge and furrow, which will adversely effect the contribution this area currently makes to the kinetic experience of approaching the church from along London Road. This particular quality of the setting of the church is considered to make a slight contribution to its historic significance, which will be reduced as a result of the proposal.

6.3.3 The footpath which approaches the church will be maintained as such, linking into the proposed development and providing increased pedestrian access which will enhance appreciation, and therefore value, of views from this route. Fields to the south fall beyond the development area and as such will preserve their ridge and furrow and the positive contribution this area makes towards the setting of the church.

6.3.4 The preservation and enhancement of the views from the public right of way towards the church, the preservation of areas of ridge and furrow within the development, and the survival of other areas of good quality ridge and furrow within the wider landscape reduce the scale of impact from the proposed development on the contribution made by the appreciation of the historic landscape to the significance of the Church of St Cuthbert. Furthermore, the

development retains a rural buffer between it and the churchyard, preserving the rural edge adjacent to the church, and will not affect the contribution made by the wider setting from its relationship with the vicarage or the village which it serves to the east. The scheme will therefore affect a very slight change to the key positive attributes of the church's setting such that the change to its significance is barely distinguishable. The affect of the development is therefore considered to likely amount to the lower end of less than substantial harm.

26 London Road

- 6.3.5 The site is considered to contribute towards the setting of this building as part of the historic farmland with which this farmhouse is associated. It is therefore considered that the loss of this farmland will contribute towards a loss of historic landscape character. This is in part mitigated by the exclusion of fields adjacent to the house (the fields to the south and one to the west) from the site which preserves a sense of separation and a vestige of its agricultural context. It is noted that the mature hedgerows, trees and planting which provide a substantial screening belt between the house and the proposed development (**Plate 3**), should effectively screen views of the development from the ground floors of the principal elevation of the house.
- 6.3.6 There may be views of the development from the upper storey windows and as such the proposal will introduce modern buildings into a non-key view from the house.



Plate 3: View from principal elevation of 26 London Road, towards the proposed development site

- 6.3.7 The development will have no affect upon the relationship between the building and its associated outbuildings or yard. The development will also have no effect upon the enclosed garden or from the ground and first floor southern day rooms of the house and as such this element of the setting of

the building will be retained. The affect of the development is therefore considered to likely amount to the lower end of less than substantial harm at most.

39 London Road

6.3.8 Development within the site will have no affect upon the immediate setting of this farmhouse and will not affect the current relationship held between the building, its associated outbuildings and surrounding farmland. The development will potentially introduce new modern elements into views southwards along the tree lined avenue when leaving the property. Current hedgerow screening between the site and London Road is considered likely to partially mitigate this affect. As the building is situated to one side of the tree-lined avenue it is not considered that the development will affect a key view from the building itself but rather from its surrounding landscape. This view has already been altered and affected by modern development with the addition of the modern semi-detached housing at its southern end. The affect of the development is therefore considered to likely amount to the lower end of less than substantial harm at most.

Ridge and Furrow

6.3.9 There is clearly defined ridge and furrow across the site. Great Glen has not been identified as a priority township for the management and preservation of ridge and furrow. Development within the site would result in the damage and destruction of this ridge and furrow.

6.3.10 The degree of loss within the site is reduced through the planned retention of areas of ridge and furrow within the development, and the alignment of former furlongs is to be broadly reflected within the plan form and structure of the master plan.

6.3.11 A green corridor is to be established north-south through the centre of the site reflecting the former field boundary evident on historic Ordnance Survey maps, whilst the historic hedgerows around the site boundaries are to be retained.

Potential archaeology

6.3.12 Overall there is considered to be moderate potential for as yet unknown archaeological remains of prehistoric date within the site boundary. Any development within the site has the potential impact upon any such remains encountered.

6.3.13 The potential for impacts to the historic environment to arise during the construction phase relates primarily to the potential for excavations and groundworks to affect any below ground archaeological remains that may be present within the footprint of works. The proposed work within the site will comprise:

- The creation of roads and footpaths;
- The creation of new drainage and service connections;
- The removal and/or alteration of existing boundaries; and
- Groundworks associated with the phased construction of new residential units.

6.3.14 Impacts likely to occur would likely result in a direct physical effect resulting in damage to, or the destruction of any encountered remains.

7. Conclusions

7.1 The Setting of Designated Heritage Assets

- 7.1.1 There is considered to be the potential for development within the site to have effects upon the setting of three nationally designated heritage assets, comprising the Grade II* Listed Church of St Cuthbert, the Grade II Listed The Sycamores and the Grade II Listed 39 London Road.
- 7.1.2 In relation to these assets, the site represents part of the agricultural hinterland of Great Glen, with ridge and furrow earthworks providing evidence for the cultivation of the landscape that dates to at least the medieval period. As such the site is seen to make a contribution to their historical interest in reflecting the previous agrarian economy and livelihood of the village in an area which borders its historic core and is visible from highways and public rights of way.
- 7.1.3 The site is considered to be more important to the setting of The Sycamores with the scheme considered to affect a limited change to the key positive attributes of its setting resulting in a slight but discernible reduction to its contribution to the heritage asset's significance. The relative contribution of the site to the setting of the Church of St Cuthbert and 39 London Road is considered to be lower, and thus the scheme will only affect a very slight change to the key positive attributes of a heritage assets' setting such that the change to the significance of the designated heritage assets is barely distinguishable.
- 7.1.4 In accordance with NPPF para 126 and CS11 of the Local Plan the significance of heritage assets and their setting should be sustained and enhanced. The design of the scheme has been derived to reduce or mitigate potential affects to the historic environment. A rural buffer is preserved around the edge of the village and the designated assets, which include areas of good quality ridge and furrow, such that the contribution the landscape makes to their historical interest as part of their setting will still be readily appreciable. Existing vegetation at the site boundary is to be strengthened, and the scale of development limited to mainly 2 storeys with the potential for some 2 ½ storey in the centre of the site in order to screen inter-visibility and thus reduce the effect of encroaching development on views from the designated assets. Areas of ridge and furrow will be preserved within the scheme, and the alignment of the earthworks will be broadly reflected in the structure of the scheme.

7.2 Archaeology and Non-Designated Heritage

- 7.2.1 Whilst there is no known archaeology within the site boundary, an assessment of currently available evidence within a 1 km study area has indicated a potential for the survival of as yet unrecorded archaeological remains within the site, comprising a moderate potential for remains relating to prehistoric activity which is likely to have been impacted by medieval farming practices. Whilst the significance of any remains is unknown, prehistoric remains could be of medium significance in enhancing knowledge of activity within the area, although this significance is likely to be lower due to the loss of integrity and poor survival from extensive historically ploughing. A programme of geophysical survey has been undertaken to remotely evaluate this potential which has highlighted the potential presence of a number of

circular features of possible archaeological origin.

- 7.2.2 There are well defined ridge and furrow earthworks across the site. Review of terrain models and historical and modern aerial imagery covering the historic parish of Glen Magna has indicated that the earthworks within the site form a well preserved part of a wider relict medieval open field system. The degree of loss of the fields north of the village due to urban expansion, and loss of ridge and furrow to the south and east from modern ploughing have affected the integrity of the landscape as a whole, and it is considered for these reasons that Great Glen was not identified as a priority township for the management and preservation of ridge and furrow during Historic England's "Turning the Plough" research programme in the 1990s and 2010s. Whilst not nationally important the ridge and furrow earthworks within the site do hold significance as non-designated heritage assets. The scheme will result in the loss of areas of these earthworks, and an impact on the legibility of the general historic landscape character surrounding the village. However extensive area of ridge and furrow will remain around the village and in locations that make a higher contribute to the setting of designated heritage assets.

7.3 Summary

- 7.3.1 It is considered that the overall impact of the proposed development will amount to less-than-substantial harm to the Grade II* Church of St Cuthbert and Grade II The Sycamores. This impact derives from the reduction of the contribution made by existing historic landscape character to the significance of these assets. Paragraph 134 of NPPF states that "where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use".
- 7.3.2 In addition the proposed development will result in the loss of an area of non-designated ridge and furrow of medium significance, and impact any previously unknown archaeological remains within the site which may include prehistoric settlement evidence of unknown significance. The scheme has been designed to retain an area of ridge and furrow with public open space. Paragraph 135 of NPPF states that in relation to impacts to non-designated heritage assets a 'balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset'. Due to the unknown significance of archaeological remains within the site, the local authority may require (in accordance with para. 128 of NPPF) further field evaluation to be submitted, although any surviving archaeological remains could be investigated and recorded as part of a programme of archaeological evaluation and mitigation as part of a planning condition.

8. References

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Illustrations

Appendix 1: Gazetteer of Heritage Assets

HA	Period	NAME	HER ref	NGR		Designation & NHLE no.	
1	Prehistoric	Worked flint found south/south-east of Great Glen	MLE16694	466079	296661		
2	Prehistoric	Prehistoric pit west of Stoneygate School	MLE21142	466107	296970		
3	Neolithic	Late Neolithic/Early Bronze Age flint scatter south of Mount Farm	MLE9581	464557	297512		
4	Bronze Age	Bronze Age axe hammer from east of Gorse Spinney	MLE6345	463650	297754		
5	Iron Age	Iron Age site south of Glen Farm	MLE16693	465787	296854		
6	Iron Age - Romano British	Iron Age/Roman pottery from south of Orchard Court	MLE7841	465570	297202		
7	Romano British	Possible Roman villa, Recreation Ground	MLE1613	465534	298210		
8	Romano British	Roman finds from south of Church Road	MLE7842	465379	297745		
9	Saxon	Saxon pottery from south of Church Road	MLE6149	465371	297758		
10	Saxon - Medieval	Possible Anglo-Saxon/medieval enclosed area, north part of Great Glen	MLE21839	465428	297971		
11	Saxon - Post-Medieval	CHURCH OF ST. CUTHBERT, CHURCH ROAD (SOUTH SIDE), GREAT GLEN	MLE10714	465219	297771	GII* LB	1061596
12	Medieval	Medieval village remains east of Orchard Court	MLE1603	465676	297249		
13	Medieval	Medieval village earthworks south of Church Road	MLE1605	465413	297736		
14	Medieval	Windmill north west of Great Glen House	MLE1606	466192	297493		
15	Medieval	Possible site of medieval watermill, Millerdale	MLE1608	465937	297373		
16	Medieval	Medieval village earthworks west of Lanchester House	MLE1610	465517	297603		
17	Medieval	St Cuthbert's Church burial ground, Church Road	MLE21461	465253	297724		
18	Medieval	Medieval windmill north-east of the Coppice	MLE2669	464535	297251		
19	Medieval	Medieval horse fitting from 7, Fordview Close	MLE6725	465460	298105		
20	Medieval	Medieval plots, south of Kingswood Lodge	MLE8446	465789	297323		

HA	Period	NAME	HER ref	NGR		Designation & NHLE no.	
21	Medieval	Historic settlement core of Great Glen	MLE8447	465508	297640		
22	Medieval - Post-Medieval	Medieval/post-medieval village remains south of Orchard Court	MLE1604	465578	297168		
23	Medieval - Post-Medieval	Manuring scatter, west of Stoneygate School	MLE20925	466031	296883		
24	Medieval	CROWN INN STEAK HOUSE, LONDON ROAD (NORTH SIDE)	MLE10722	465641	297469	GII LB	1061598
25	Post-Medieval	39 LONDON ROAD (NORTH SIDE)	MLE10690	464838	298333	GII LB	1180229
26	Post-Medieval	CRICK'S RETREAT, 1 - 10 (CONSEC, LONDON ROAD (NORTH SIDE))	MLE10691	464791	298303		
27	Post-Medieval	THE VICARAGE, CHURCH ROAD (SOUTH SIDE), GREAT GLEN	MLE10715	465273	297772	GII LB	1180195
28	Post-Medieval	24 HIGH STREET (WEST SIDE)	MLE10717	465434	298019	GII LB	1360682
29	Post-Medieval	GREAT GLEN HALL, LONDON ROAD (NORTH SIDE)	MLE10719	465855	297686	GII LB	1061597
30	Post-Medieval	CISTERN AT GREAT GLEN HALL, LONDON ROAD (NORTH SIDE)	MLE10720	465863	297700	GII LB	1061597
31	Post-Medieval	ICEHOUSE AT AND 150M SOUTH-EAST OF GREAT GLEN HALL, LONDON ROAD (NORTH SIDE)	MLE10721	465945	297536	GII LB	1180218
32	Post-Medieval	BRIDGE OVER RIVER SENCE, LONDON ROAD	MLE10724	465431	297565	GII LB	1360683
33	Post-Medieval	OLD GREYHOUND INN PUBLIC HOUSE, LONDON ROAD (SOUTH SIDE)	MLE10728	465580	297459	GII LB	1180270
34	Post-Medieval	26 LONDON ROAD (SOUTH SIDE)	MLE10729	465063	297957	GII LB	1061600
35	Post-Medieval	TRENT HOUSE, MAIN STREET (EAST SIDE)	MLE10730	465621	297494	GII LB	1180278

HA	Period	NAME	HER ref	NGR		Designation & NHLE no.	
36	Post-Medieval	CHESTERFIELD HOUSE (FORMERLY LISTED AS THE FIRS) NOW 2 PROPERTIES, MAIN STREET (WEST SIDE)	MLE10731	465572	297550	GII LB	1061601
37	Post-Medieval	45A MAIN STREET	MLE10732	465576	297560		
38	Post-Medieval	RUPERT'S REST, MAIN STREET (WEST SIDE)	MLE10733	465563	297689	GII LB	1360685
39	Post-Medieval	GREAT GLEN METHODIST CHURCH, OAKS ROAD (South Side)	MLE10734	465663	297892	GII LB	1295005
40	Post-Medieval	GLENN FARMHOUSE, ORCHARD LANE (West Side)	MLE10735	465623	297290	GII LB	1061602
41	Post-Medieval	ORCHARD HOUSE, ORCHARD LANE (West Side)	MLE10736	465622	297272	GII LB	1294969
42	Post-Medieval	BASSETS, 3 THE NOOK (West Side)	MLE10737	465477	297508	GII LB	1360686
43	Post-Medieval	5 THE NOOK (West Side)	MLE10739	465473	297489	GII LB	1180295
44	Post-Medieval	Post-medieval watermill, Millerdale	MLE1609	465943	297372		
45	Post-Medieval	Outbuildings at The Sycamores, 26, London Road	MLE17376	465046	297986		
46	Post-Medieval	Post-medieval/modern features, The Mere	MLE19531	465311	297891		
47	Post-Medieval	Turnpike Road, 'London to Manchester Road' (Market Harborough to Leicester)	MLE20647	466795	296371		
48	Post-Medieval	Watermill leat, Burton Brook	MLE21119	466078	297431		
49	Post-Medieval	Peep Row, 21-35, Main Street	MLE21120	465595	297811		
50	Post-Medieval	Lodge to Great Glen Hall, 11, London Road	MLE21121	465759	297429		
51	Post-Medieval	Garden around Great Glen Hall	MLE21122	465873	297589		
52	Post-Medieval	Glenn House, Church Road	MLE21838	465267	297905		
53	Post-Medieval	Post-medieval mill north-east of the Coppice	MLE2670	464535	297251		

HA	Period	NAME	HER ref	NGR		Designation & NHLE no.	
54	Modern	K6 TELEPHONE KIOSK, VILLAGE GREEN	MLE10706	465609	297476	GII LB	1251004
55	Modern	WAR MEMORIAL, LONDON ROAD (NORTH SIDE), GREAT GLEN	MLE10723	465582	297512	GII LB	1180225
56	Undated	Undated structure on River Sence	MLE8370	465308	296755		

Appendix 2: Outline Setting Assessment

Heritage Group	Asset	Name	Distance	Outline Assessment	Detailed Assessment
Great Glen	Grade II* Listed Building, NHLE: 1061596	Church Of St Cuthbert	502 m	The Church of St Cuthbert is an early church restored and largely rebuilt in 1876. The building is surrounded by a large churchyard bordered by a low stone wall and tall mature trees. The building is situated on the western edge of Great Glen The site lies in an area of ridge and furrow which contributes towards the character of the historic environment in which the church is situated and there are screened views across to the site from the church. As such it is considered likely that the site will be considered to contribute towards the setting of the church and therefore it is considered that further assessment is necessary.	Y
Great Glen	Grade II Listed Building, NHLE: 1061597	Great Glen Hall, Including Cistern	1123 m	Great Glen Hall is a small country house dating to the early 19 th century. The building is situated on the south-western outskirts of Great Glen and is surrounded by a large planned garden. The setting of this building is defined by its surrounding grounds and its relationship to contemporary buildings including the listed cistern, icehouse and lodge house. The grounds are surrounded by dense borders of mature trees and to the west the built form of Great Glen further screens views from this setting towards the site. As the site shares no historic or visual relationship with this building or its setting it is considered that the building will receive no affect as a result of development within the site and therefore no further assessment is required.	N
Great Glen	Grade II Listed Building, NHLE: 1061598	Crown Inn Steak House	1005 m	The Crown Inn is an inn dating to the late 18 th century. It is situated off Main Street on the northern side of London Road. The setting of the building is defined by its central location in regards to the village and the proximity and relationship to London Road which enables an understanding of the building as a stop and rest point for travellers along this major route. Due to the built form of Great Glen and the curve of London Road from this point towards the site there is no visual	N

Heritage Group	Asset	Name	Distance	Outline Assessment	Detailed Assessment
				connection between the site and the setting of the building. As the site shares no historic or visual relationship with this building or its setting it is considered that the building will receive no affect as a result of development within the site and therefore no further assessment is required.	
Great Glen	Grade II Listed Building, NHLE: 1061600	26, London Road	87 m	26 London Road (also known as The Sycamores) is a late 18 th century red brick farmhouse. The building is located on the western outskirts of Great Glen. The setting of the building is defined by its surrounding gardens, associated outbuildings and nearby farmland of which the site forms part of. As the site is situated within the setting of this building is its considered that further assessment of potential affects will be required.	Y
Great Glen	Grade II Listed Building, NHLE: 1061601	Chesterfield House	905 m	A red brick house dating to c.1800. The building is situated on the western side of Main Street at the northern end of the village green. The setting of this building is defined by its central village location and its position off the green. Due to the built up form of Great Glen between the setting of this building and the site it is considered that there is no visual connection between the two. As there is also no historic connection it is considered that the building will receive no affect as a result of development within the site and therefore no further assessment is required.	N
Great Glen	Grade II Listed Building, NHLE: 1061602	Glenn Farmhouse	1001 m	Glenn Farmhouse is an 18 th century, rendered brick building located on the west side of Orchard Lane. The setting of this building is defined by Orchard Lane, its garden to the rear and buildings of a similar character and appearance nearby. Due to the dense mature garden planting to which surrounds the garden to the rear and a house situated beyond this it is considered that there is no visual connection between the setting of the building and the site. As there is also no historic connection it is considered that the building will receive no affect as a result of development within the site and therefore no further assessment is required.	N

Heritage Group	Asset	Name	Distance	Outline Assessment	Detailed Assessment
Great Glen	Grade II Listed Building, NHLE: 1180195	The Vicarage	553 m	The Vicarage is an 18 th century colour-washed brick and Swithland slate. This building is situated east of the Church of St Cuthbert and surrounded by a large garden bordered by mature trees and mature garden planting. The setting of this building is defined by its surrounding gardens and its relationship to the village and the Church of St Cuthbert's. The Church of St Cuthbert's forms an important part of the Vicarage's setting as it contributes towards an understanding of the purpose of the building. Although views to and from the Vicarage are effectively screened by the surrounding mature planting. There will be views towards the site from the wider setting of the building. As such further assessment of the potential affects of the development is required.	Y
Great Glen	Grade II Listed Building, NHLE: 1180218	Icehouse At, And 150 Metres South East Of Great Glen Hall	1255 m	An early 19 th century red brick ice house, located in the grounds of Great Glen Hall. The setting of this building is defined by the surrounding grounds of Great Glen Hall, its relationship to the surrounding buildings and its relationship to the nearby pond, from which ice would have been taken and stored in the ice house. The grounds are surrounded by dense borders of mature trees and to the west the built form of Great Glen further screens views from this setting towards the site. As the site shares no historic or visual relationship with this building or its setting it is considered that the building will receive no affect as a result of development within the site and therefore no further assessment is required.	N
Great Glen	Grade II Listed Building, NHLE: 1180225	War Memorial	937 m	The War memorial dates to c.1920 and is a granite stepped plinth and pedestal cross. The memorial is situated in the centre of the village green. The setting of the memorial is defined by its position in the centre of the village green, a public space which draws attention from the village as a whole. Due to the built up form of Great Glen between the setting of the memorial and the site it is considered that there is no visual connection between the two. As there is also no historic connection it is considered that the building will receive no affect as a result of development within the site and therefore no further	N

Heritage Group	Asset	Name	Distance	Outline Assessment	Detailed Assessment
				assessment is required.	
Great Glen	Grade II Listed Building, NHLE: 1180229	39, London Road	355 m	39 London Road is a mid 18 th century red brick house. The house is situated at the end of a tree lined avenue, south of Leicester Grammar School. The setting of the building is defined by its relationship to the L-Shape building to the north which would have formed part of the original set of farm buildings, surrounding agricultural land and the tree lined avenue which the would have originally formed he principle approach to the house. As the site sits at the end of the tree lined avenue further assessment of the potential affects of the development is required.	Y
Great Glen	Grade II Listed Building, NHLE: 1180270	Old Grey Hound Inn Public House	967 m	The Old Greyhound Inn is a 17 th century timber framed building located south of the village green The setting of the building is defined by its central location in regards to the village and the proximity and relationship to London Road which enables an understanding of the building as a stop and rest point for travellers along this major route. Due to the built form of Great Glen and the curve of London Road from this point towards the site there is no visual connection between the site and the setting of the building. As the site shares no historic or visual relationship with this building or its setting it is considered that the building will receive no affect as a result of development within the site and therefore no further assessment is required.	N
Great Glen	Grade II Listed Building, NHLE: 1180278	Trent House	992m	Trent House is a late 18 th century red brick building situated off Main Street, adjacent to the village green. The setting of the building is defined by its central location and relationship to the village green. Due to the built form of Great Glen and the curve of London Road from this point towards the site there is no visual connection between the site and the setting of the building. As the site shares no historic or visual relationship with this building or its setting it is considered that the building will receive no affect as a result of development within the site and therefore no further assessment is required.	N
Great Glen	Grade II Listed	5, The Nook	854 m	The Nook is a red brick house dating to c.1800. It is situated on the western side of The Nook and has a large rear garden which is planted	N

Heritage Group	Asset	Name	Distance	Outline Assessment	Detailed Assessment
	Building, NHLE: 1180295			with mature trees and garden planting and bordered to the west by the River Sence. The setting of this building is defined by The Nook, its garden to the rear and buildings of a similar character and appearance nearby. Due to the dense mature garden planting to which surrounds the garden to the rear and a house situated beyond this it is considered that there is no visual connection between the setting of the building and the site. As there is also no historic connection it is considered that the building will receive no affect as a result of development within the site and therefore no further assessment is required.	
Great Glen	Grade II Listed Building, NHLE: 1251004	K6 Telephone Box, Village Green	977 m	A K6 Telephone Kiosk located at the south-eastern end of the village green. The setting of this building is defined by its location on the village green. Here the kiosk would have been accessible to the entirety of the village. Due to the built form of Great Glen and the curve of London Road from this point towards the site there is no visual connection between the site and the setting of the building. As the site shares no historic or visual relationship with this building or its setting it is considered that the building will receive no affect as a result of development within the site and therefore no further assessment is required.	N
Great Glen	Grade II Listed Building, NHLE: 1294969	Orchard House	1107 m	Orchard Farmhouse is an 18 th century, rendered brick building located on the west side of Orchard Lane. The setting of this building is defined by Orchard Lane, its garden to the rear and buildings of a similar character and appearance nearby. Due to the dense mature garden planting to which surrounds the garden to the rear and a house situated beyond this it is considered that there is no visual connection between the setting of the building and the site. As there is also no historic connection it is considered that the building will receive no affect as a result of development within the site and therefore no further assessment is required.	N
Great Glen	Grade II Listed Building, NHLE:	Great Glen Methodist Church	889 m	Great Glen Methodist Church is a colour washed brick building dating to 1827. The building is situated on the southern side of Oaks Road. The setting of the building is defined by its street front position and the	N

Heritage Group	Asset	Name	Distance	Outline Assessment	Detailed Assessment
	1295005			narrow terraced housing situated west of the building. Due to the intervening built form of Great Glen, there is no visual connection between the site and the setting of the building. As the site shares no historic or visual relationship with this building or its setting it is considered that the building will receive no affect as a result of development within the site and therefore no further assessment is required.	
Great Glen	Grade II Listed Building, NHLE: 1360682	24, High Street	662 m	A whitewashed 18 th century brick building, located at the end of High Street. The setting of this building is defined by its street front position and by the garden to the rear. Due to the intervening built form of Great Glen, there is no visual connection between the site and the setting of the building. As the site shares no historic or visual relationship with this building or its setting it is considered that the building will receive no affect as a result of development within the site and therefore no further assessment is required.	N
Great Glen	Grade II Listed Building, NHLE: 1360683	Bridge Over River Sence	781 m	The Bridge over the River Sence is a coursed rubble stone bridge, which carries London Road over the River Sence. The setting of the bridge is tightly confined by the course of the road and its juncture with the river. There will be no views from the bridge along London Road, towards the site as a result of the mature hedgerows of the fields which lie in-between.. It is therefore considered that no further assessment is required.	N
Great Glen	Grade II Listed Building, NHLE: 1360685	Rupert's Rest	841 m	Rupert's Rest is an early 18 th century colour washed brick house. The building is located on the northern side of Main Street, north of the village green. The setting of this building is defined by its street front position and by the garden to the rear. Due to the intervening built form of Great Glen, there is no visual connection between the site and the setting of the building. As the site shares no historic or visual relationship with this building or its setting it is considered that the building will receive no affect as a result of development within the site and therefore no further assessment is required.	N

Heritage Group	Asset	Name	Distance	Outline Assessment	Detailed Assessment
Great Glen	Grade II Listed Building, NHLE: 1360686	Bassets	853 m	Bassets is a red brick house, constructed c.1800. It is situated on the western side of The Nook and has a large rear garden which is planted with mature trees and garden planting and bordered to the west by the River Sence. The setting of this building is defined by The Nook, its garden to the rear and buildings of a similar character and appearance nearby. Due to the dense mature garden planting to which surrounds the garden to the rear and a house situated beyond this it is considered that there is no visual connection between the setting of the building and the site. As there is also no historic connection it is considered that the building will receive no affect as a result of development within the site and therefore no further assessment is required.	N
Great Glen	Grade II Listed Building, NHLE 1061599	1-10 Crick's Retreat	322 m	Crick's Retreat is a row of former alms-houses, comprising ten dwellings, situated near 39 London Road on the western outskirts of Great Glen. The setting of these buildings is defined by their enclosed gardens and relationship to the village. The site is screened from the houses by mature hedgerows and a modern building to the south, and as there is no historic connection between the building and the site it is considered that the building will receive no affect as a result of development and therefore no further assessment is required.	N

Appendix 3: OASIS Form

OASIS ID: ecusltd1-225022

Project name Great Glen, Leicestershire – Heritage Assessment

Ecus Ltd. were commissioned by Bovis Homes Limited in August 2015 to undertake a heritage assessment to support the preparation of an outline planning application for the development of a site southwest of Great Glen, Leicestershire (hereafter 'the site'), located at NGR 464900 297855. The proposed scheme is for a residential development. The scheme may also include new tree planting, proposed equipped children's play spaces and amenity and meadow grassland. The site is located on land between London Road and the A6 on the south-western outskirts of Great Glen, Leicestershire. The site is predominantly farmland, comprising a number of fields, separated by hedgerow field boundaries and crossed with ridge and furrow.

Project dates Start: 01-08-2015 End: 29-09-2015

Previous/future work No / Not known

Any associated project reference codes 6171 - Contracting Unit No.

Type of project Desk based assessment

Site status None

Current Land use Cultivated Land 1 – Minimal cultivation

Site location LEICESTERSHIRE HARBOROUGH GREAT GLEN Great Glen

Site coordinates NG – 464900 297855

Project creators

Name of Organisation ECUS ltd

Project brief originator Consultant

Project design originator ECUS ltd

Project director/manager Paul White

Project supervisor James Thomson

Type of sponsor/funding body Developer

Project bibliography 1

Title Great Glen, Leicestershire – Heritage Assessment

Author(s)/Editor(s) Oliver, J

Other bibliographic details 6171

Date 2015

Issuer or publisher Ecus Ltd

Place of issue or publication Sheffield

Description Single, A4 spiral bound report

Appendix 4: Geophysical Survey Report



Land off London Road
Great Glen
Leicestershire

Geophysical Survey

Report no. 2920
December 2016

Client: Bovis Homes



Land off London Road, Great Glen, Leicestershire

Geophysical Survey

Summary

A cart-based magnetometer survey was undertaken on a pasture field dominated by prominent ridge and furrow to the immediate south of London Road, Great Glen, in advance of the proposed development of the site. Anomalies commensurate with ridge and furrow and magnetic disturbance have been detected. In addition, a former field boundary which bisects the survey area has been revealed, as have possible features which may have an archaeological origin. The archaeological potential of the site is considered to be low to moderate.



Report Information

Client: ECUS Ltd
Address: 3 Blackburn Road, Sheffield, S61 3DW
Report Type: Geophysical survey
Location: Great Glen
County: Leicestershire
Grid Reference: SP 64754 98015
Period(s) of activity: Prehistoric? / Medieval/ Modern
Report Number: 2920
Project Number: 6574
Site Code: GGL16
OASIS ID: archaeo11-xxxxx
Date of fieldwork: November and December 2016
Date of report: December 2016
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Report: Christopher Sykes
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Photography: Mark Evans
Research: Christopher Sykes

Authorisation for
distribution: -----



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1 Introduction

Archaeological Services WYAS (ASWYAS) were commissioned by James Thomson of ECUS Limited, on behalf of Bovis Homes (the Client), to undertake a geophysical (magnetometer) survey on land off London Road, Great Glen, Leicestershire to inform an outline planning application, for residential development of the site. Guidance contained within the National Planning Policy Framework (DCLG 2012) was followed, in line with current best practice (CIfA 2014; David *et al.* 2008). The survey was carried out between the 30th November and 6th December 2016 to provide additional information on the archaeological resource of the Proposed Development Area (PDA).

Site location, topography and land-use

The overall PDA totals approximately 10ha. The survey area is located to the west of Great Glen, and approximately 10km to the southeast of Leicester. It is bound by London Road to the north, the A6 bypass to the south, and fields to the west and east. The survey area undulates because of the ridge and furrow, and slopes from c. 122m above Ordnance Datum (aOD) in north to c.112m aOD in the southeast. The site is centred at SP 64754 98015.

Soils and geology

The underlying geology of the site is of the Charmouth mudstone formation, with superficial deposits of Oadby member - Diamiction. The overlying soils are considered to be of the Ragdale (712g) classification of soils, described as chalky till of slowly permeable seasonally waterlogged fine loams over clays (SSEW 1983).

2 Archaeological and Historical Background

Aside from ridge and furrow there are no known archaeological assets within the PDA. An archaeological Desk-based Assessment for a survey area to the east of Great Glen, did conclude that the landscape held archaeological potential from prehistory to the medieval period. Archaeological investigations in the area have included excavation in advance of the A6 bypass, and a geophysical survey, performed by ASWYAS in 2013, to the southeast of the hamlet.

3 Aims, Methodology and Presentation

The aim of the geophysical survey was to gather sufficient information to establish the presence/absence, character, extent and date of any archaeological remains within the site, and to inform further investigative strategies should they become necessary.

The general objectives of the geophysical survey were:

- to provide information about the nature and possible interpretation of any magnetic anomalies identified;
- to therefore determine the presence/absence and extent of any buried archaeological features; and
- to prepare a report summarising the results of the survey.

Magnetometer survey

The magnetometer survey was undertaken using a Sensys Magneto MXPDA cart-based instrument. The instrument has 5 fluxgate gradiometers spaced 0.5m apart with readings recorded at 20Hz. The gradiometers have a range of recording between 0.1nT and 10,000nT. They are linked to a Trimble R6 RTK dGPS system with data recorded by Sensys Magneto MXPDA software on a rugged PDA device. The data was stored on an SD memory card within the PDA and later downloaded to a computer for processing and interpretation. MAGNETO (Sensys GmbH) and MAGNETO software was used to process and present the data. Further details are given in Appendix 1.

Reporting

A general site location plan, incorporating the 1:50000 Ordnance Survey (OS) mapping, is shown in Figure 1. Figure 2 displays processed magnetometer data and plate locations at a scale of 1:2500. Figure 3 is an overall interpretation of the data at the same scale. Figures 4 to 9 display processed greyscales and interpretations of the three sectors at a scale of 1:1000. Figure 10 is a 3D visualisation of the geophysical data, in order to understand a topographical aspect of the site.

Technical information on the equipment used, data processing and survey methodologies are given in Appendix 1. Technical information on locating the survey area is provided in Appendix 2. Appendix 3 describes the composition and location of the archive. A copy of the completed OASIS form is included in Appendix 4.

The survey methodology, report and any recommendations comply with guidelines outlined by English Heritage (David *et al.* 2008) and by the Chartered Institute for Archaeologists (CIfA 2014). All figures reproduced from Ordnance Survey mapping are with the permission of the controller of Her Majesty's Stationery Office (© Crown copyright).

The figures in this report have been produced following analysis of the data in processed formats and over a range of different display levels. All figures are presented to most suitably display and interpret the data from this site based on the experience and knowledge of Archaeological Services staff.

4 Results and Discussion – (see Figures 3 to 9)

Ferrous anomalies

Ferrous anomalies, as individual ‘spikes’, or as large discrete areas are typically caused by ferrous (magnetic) material, either on the ground surface or in the plough-soil. Little importance is normally given to such anomalies, unless there is any supporting evidence for an archaeological interpretation, as modern ferrous debris or material is common on rural sites, often being present as a consequence of manuring or tipping/infilling. There is no obvious pattern or clustering to their distribution in this survey to suggest anything other than a random background scatter of ferrous debris in the plough-soil.

In the northeast corner of the field (Sector 3, Figs 8-9) there is an area of significant disturbance. Similarly around the periphery of the field, a service and magnetic responses indicative of material within the boundary hedges has been detected.

Agricultural anomalies

Ridge and furrow is prominent in the PDA and of substantial breadth and depth that any anomalies of archaeological origin are likely to have been obscured. Figure 10 is able to give an indication of the terrain. Orientation of the ridge and furrow follows that of the field boundaries. This is further re-enforced with ridge and furrow in Sector 3 (Figs 8-9) which terminates along its western extent at a former field boundary. Analysis of first edition mapping shows that this boundary appears on mapping from 1886, but has been removed by 1966 editions (NLS 2016).

Within Sector 2 (Figs 6-7) a series of linear anomalies indicative and characterising of field drains have been identified.

Possible archaeological anomalies

A number of semi-circular anomalies have been detected, largely in Sector 2 (Figs 6-7) which have an undetermined origin. It is unlikely that they are archaeological in origin because of their size (c.1m), however their position in the landscape and form means that a possible archaeological origin has been assigned.

The results and subsequent interpretation of data from the surveys should not be treated as an absolute representation of the underlying archaeological and non-archaeological remains. Confirmation of the presence or absence of archaeological remains can only be achieved by direct investigation of sub-surface deposits.

5 Conclusions

The area of survey is covered in prominent ridge and furrow, the breadth and depth of which is likely to obscure any clear archaeological anomalies. It dominates the dataset. However within the data, a number of anomalies which appear to be semi-circular in shape have been detected. Their size means they are not likely to be archaeological in origin, however, the strength of the response in the dataset, in comparison to the ridge and furrow means that they may have possible archaeological potential. They may be related to the linear responses which have been indicated. Former field boundaries and field drains have been indicated along with areas of magnetic disturbance. Based on the geophysical dataset the archaeological potential of the site is deemed to be low to moderate.

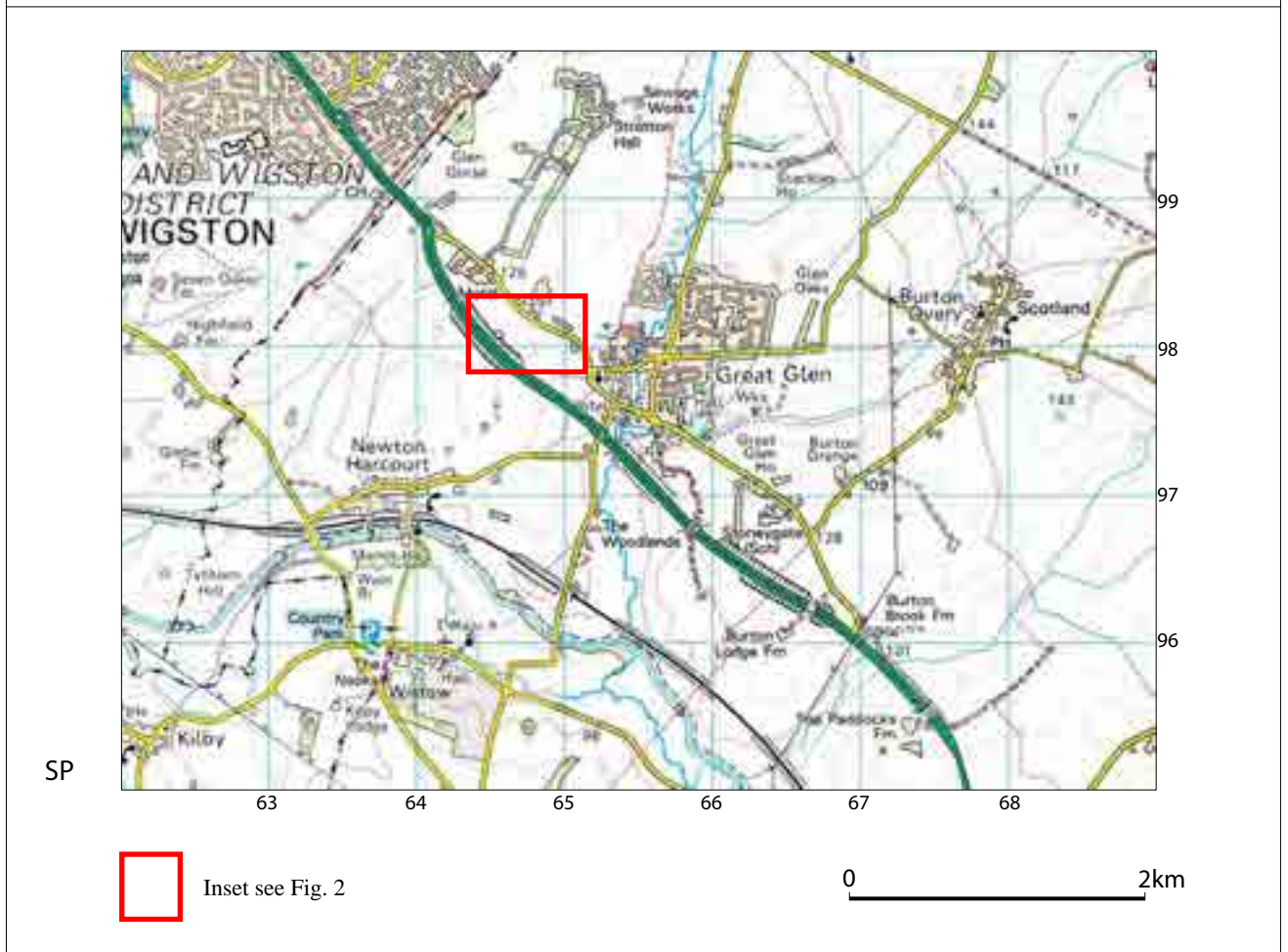
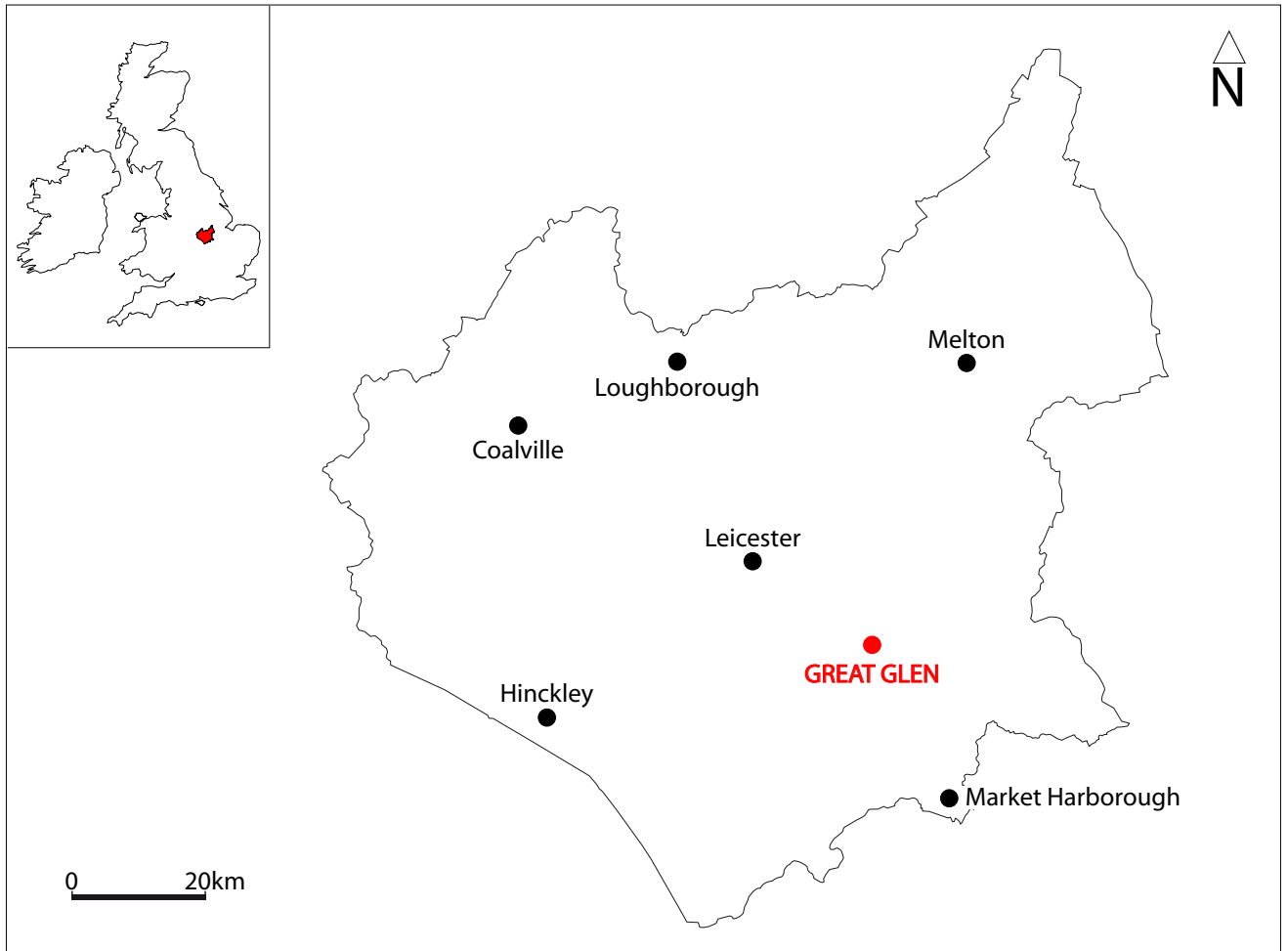






Fig. 1. Site location

PROJECT ID: 6574_GGL16	
	SURVEY BOUNDARY
	SECTOR BOUNDARY
	LOCATION AND DIRECTION OF PLATES
	VIEWPOINTS OF FIG 10

SECTOR 1
SEE FIGS 4-5

SECTOR 3
SEE FIGS 8-9

SECTOR 2
SEE FIGS 6-7



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Tel: 0113 383 7500 Fax: 0113 383 7501

Fig. 2. Survey location showing greyscale magnetometer data (1:2500 @ A3)

0 100m

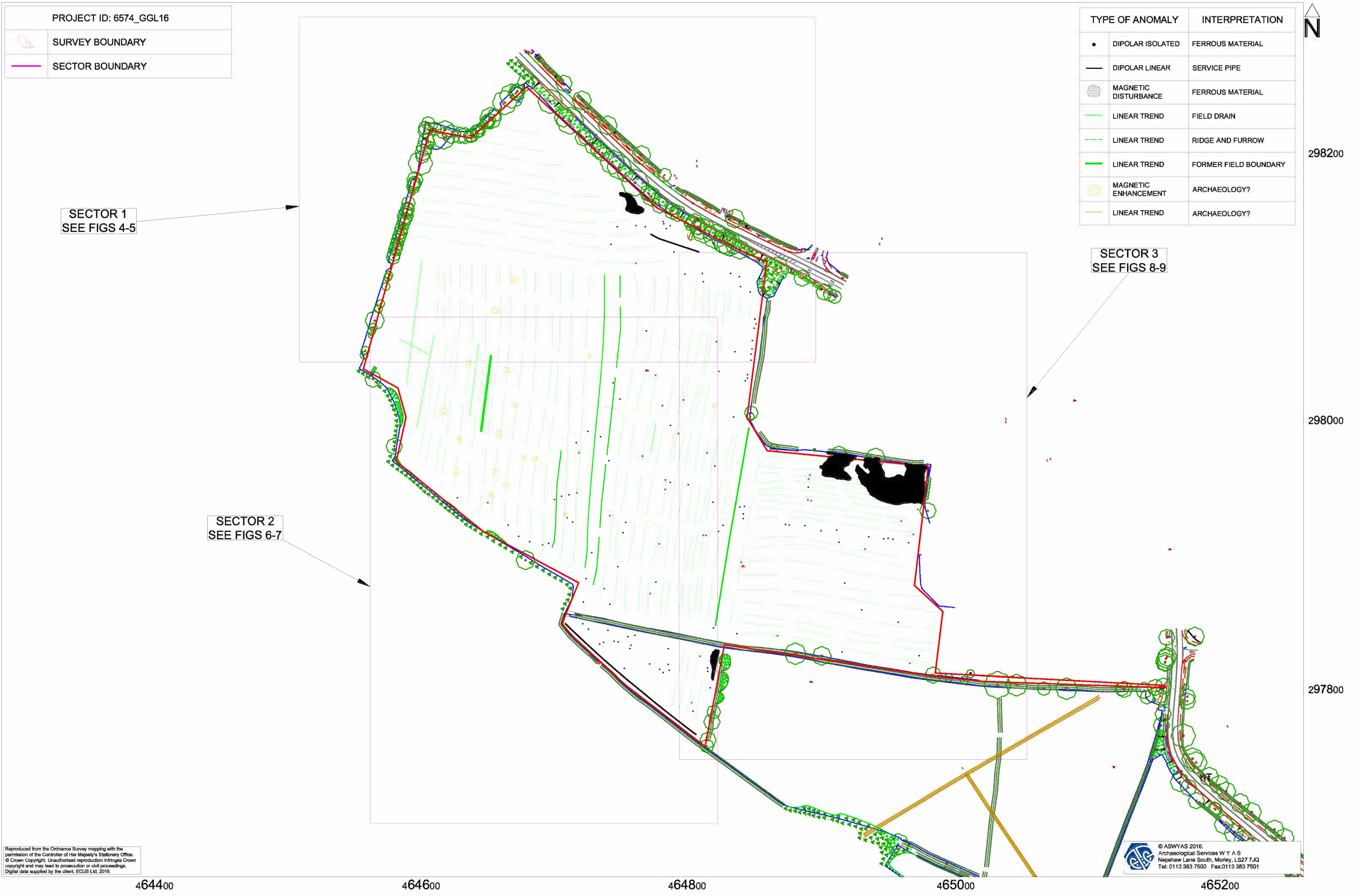
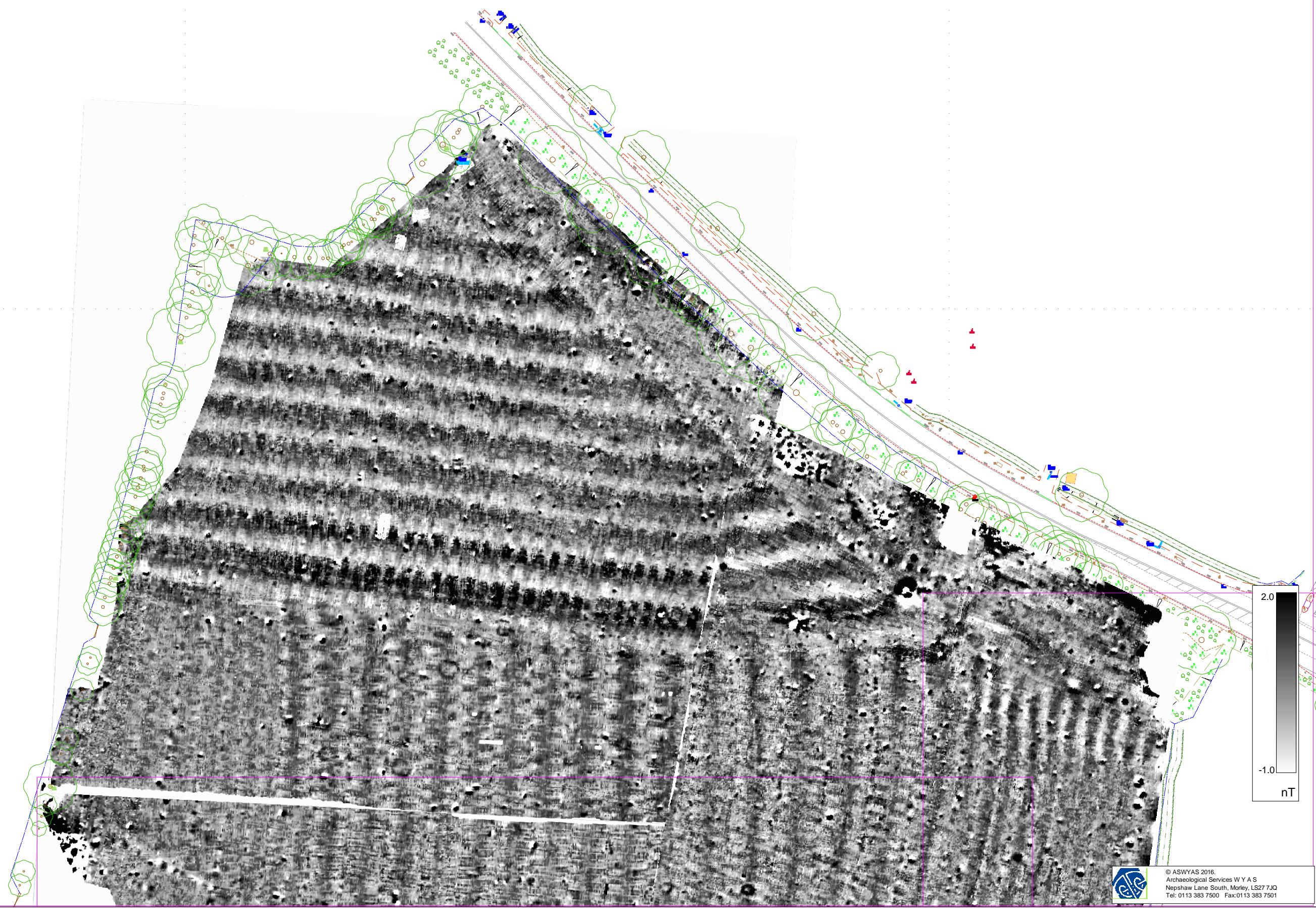


Fig. 3. Overall interpretation of magnetometer data (1:2500 @ A3)

PROJECT ID: 6574_GGL16

SECTOR BOUNDARY



298200

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464600

464800

Fig. 4. Processed greyscale magnetometer data; Sector 1 (1:1000 @ A3)

0 50m

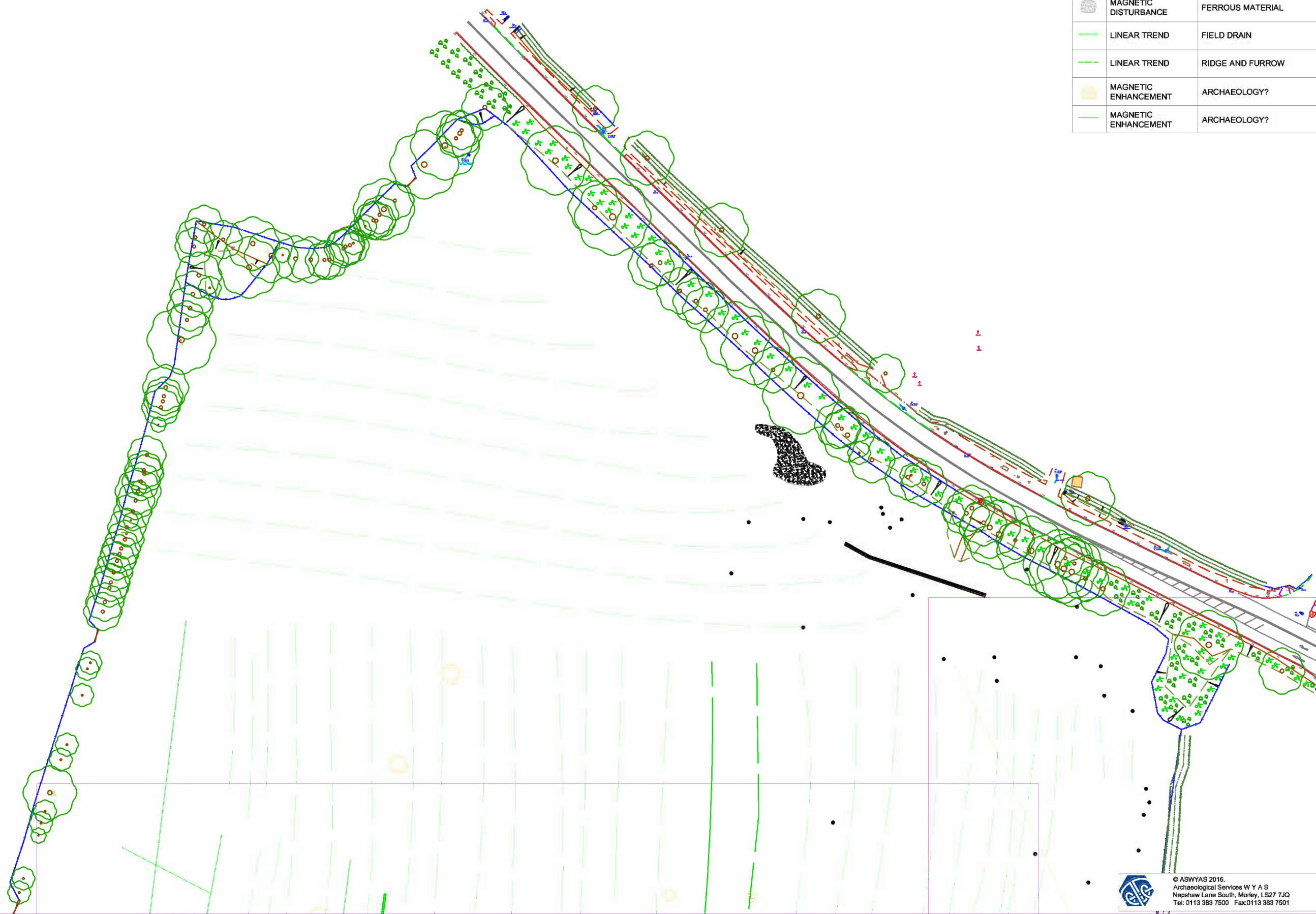
PROJECT ID: 6574_GGL16

SECTOR BOUNDARY

TYPE OF ANOMALY		INTERPRETATION
•	DIPOLAR ISOLATED	FERROUS MATERIAL
—	DIPOLAR LINEAR	SERVICE PIPE
⊗	MAGNETIC DISTURBANCE	FERROUS MATERIAL
—	LINEAR TREND	FIELD DRAIN
- - -	LINEAR TREND	RIDGE AND FURROW
⊙	MAGNETIC ENHANCEMENT	ARCHAEOLOGY?
—	MAGNETIC ENHANCEMENT	ARCHAEOLOGY?



298200



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Fig. 5. Interpretation of magnetometer data; Sector 1 (1:1000 @ A3)

0 50m

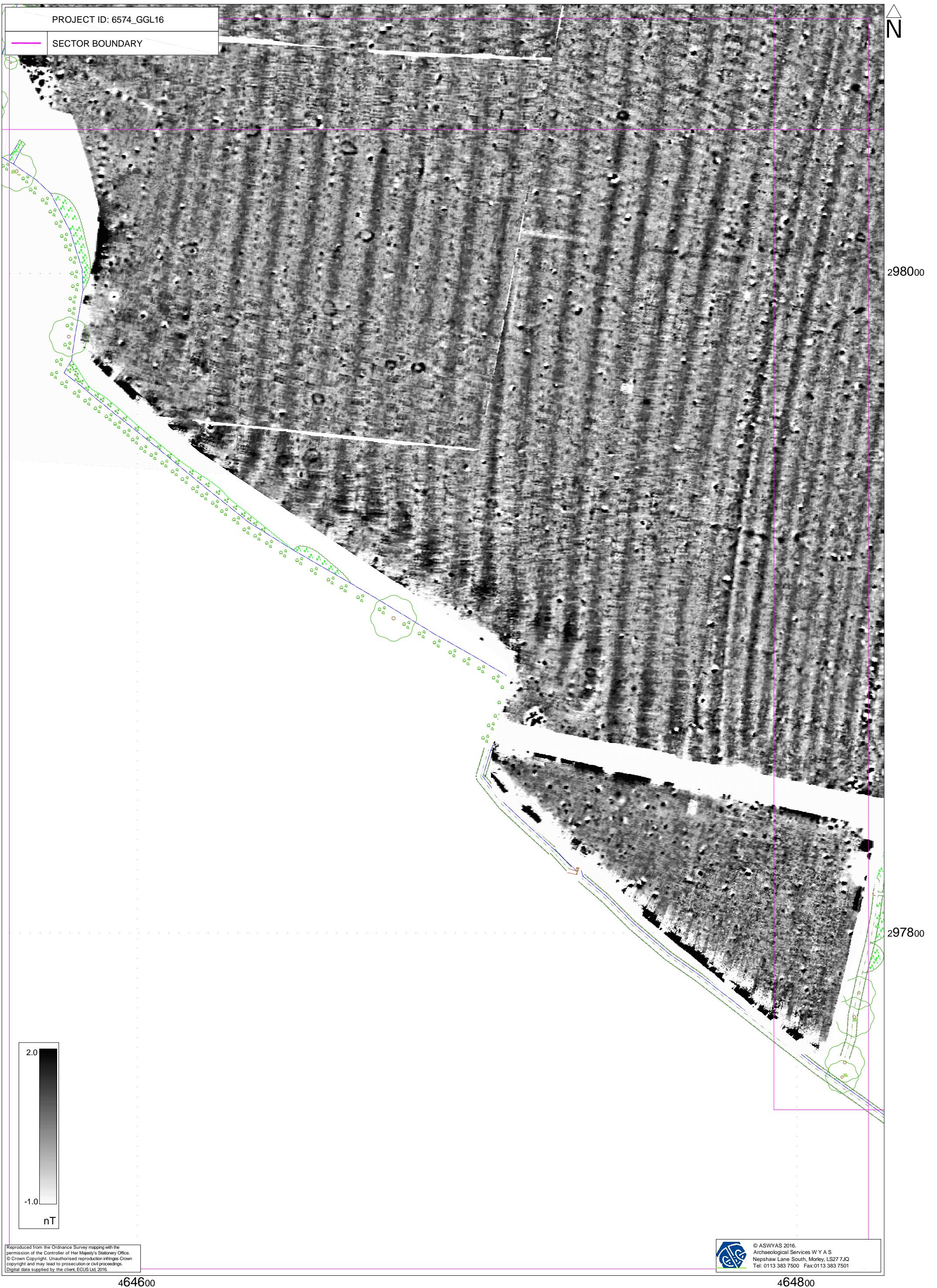
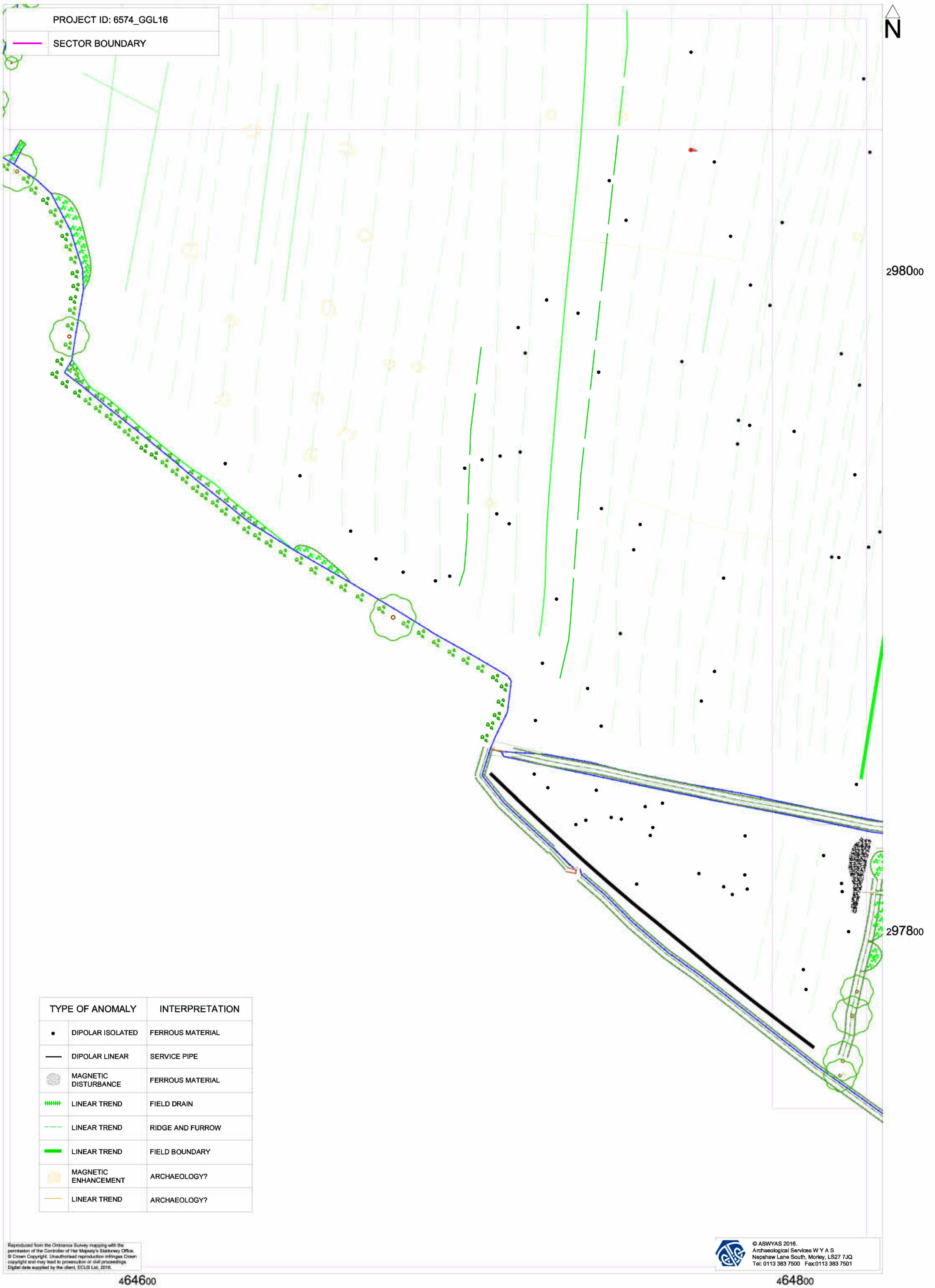


Fig. 6. Processed greyscale magnetometer data; Sector 2 (1:1000 @ A3)



PROJECT ID: 6574_GGL16

SECTOR BOUNDARY



298000

297800

TYPE OF ANOMALY	INTERPRETATION
•	DIPOLAR ISOLATED FERROUS MATERIAL
—	DIPOLAR LINEAR SERVICE PIPE
■	MAGNETIC DISTURBANCE FERROUS MATERIAL
----	LINEAR TREND FIELD DRAIN
- - - -	LINEAR TREND RIDGE AND FURROW
————	LINEAR TREND FIELD BOUNDARY
○	MAGNETIC ENHANCEMENT ARCHAEOLOGY?
—	LINEAR TREND ARCHAEOLOGY?

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464600

464800

Fig. 7. Interpretation of magnetometer data; Sector 2 (1:1000 @ A3)

0 50m

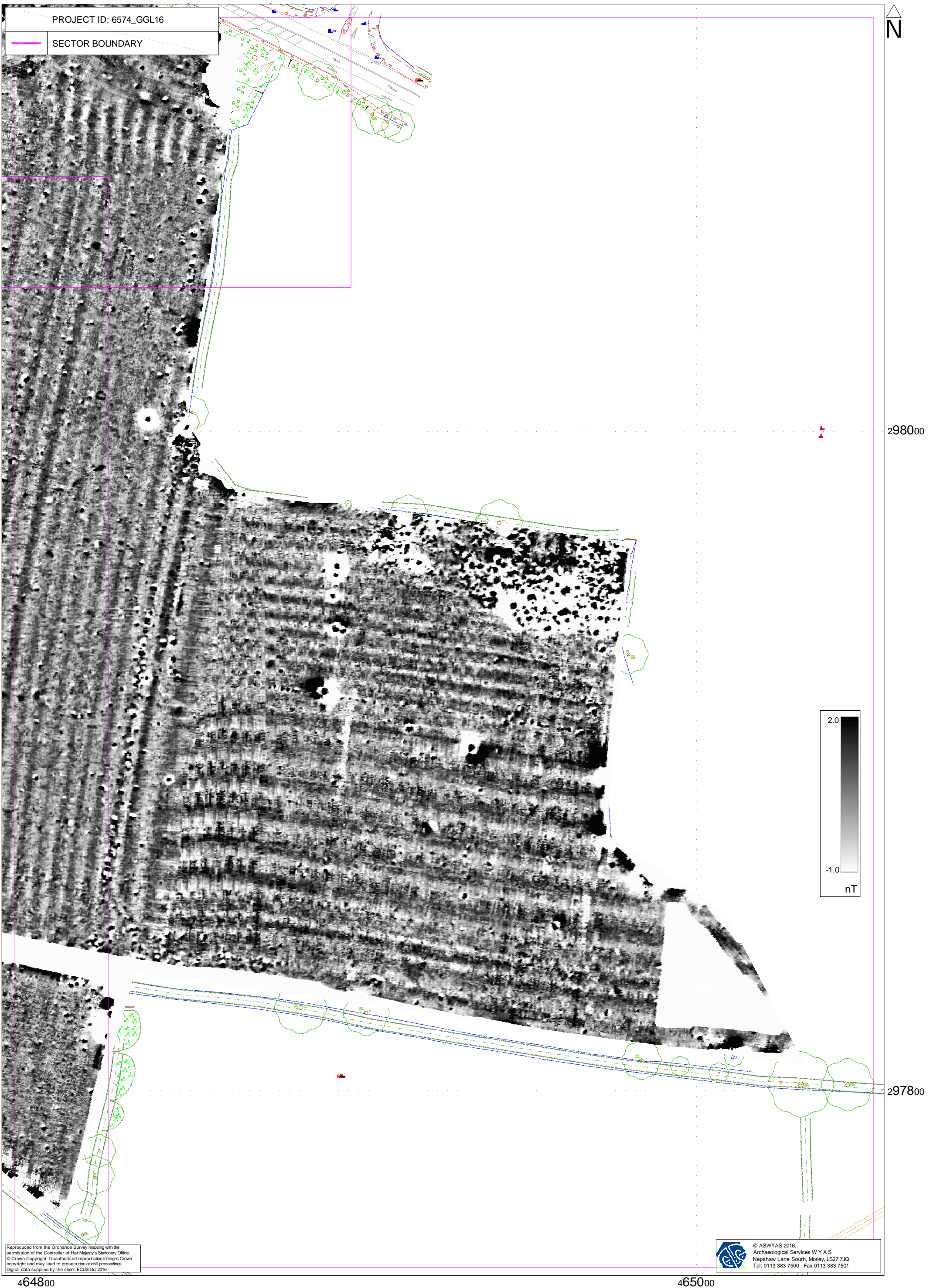


Fig. 8. Processed greyscale magnetometer data; Sector 3 (1:1000 @ A3)

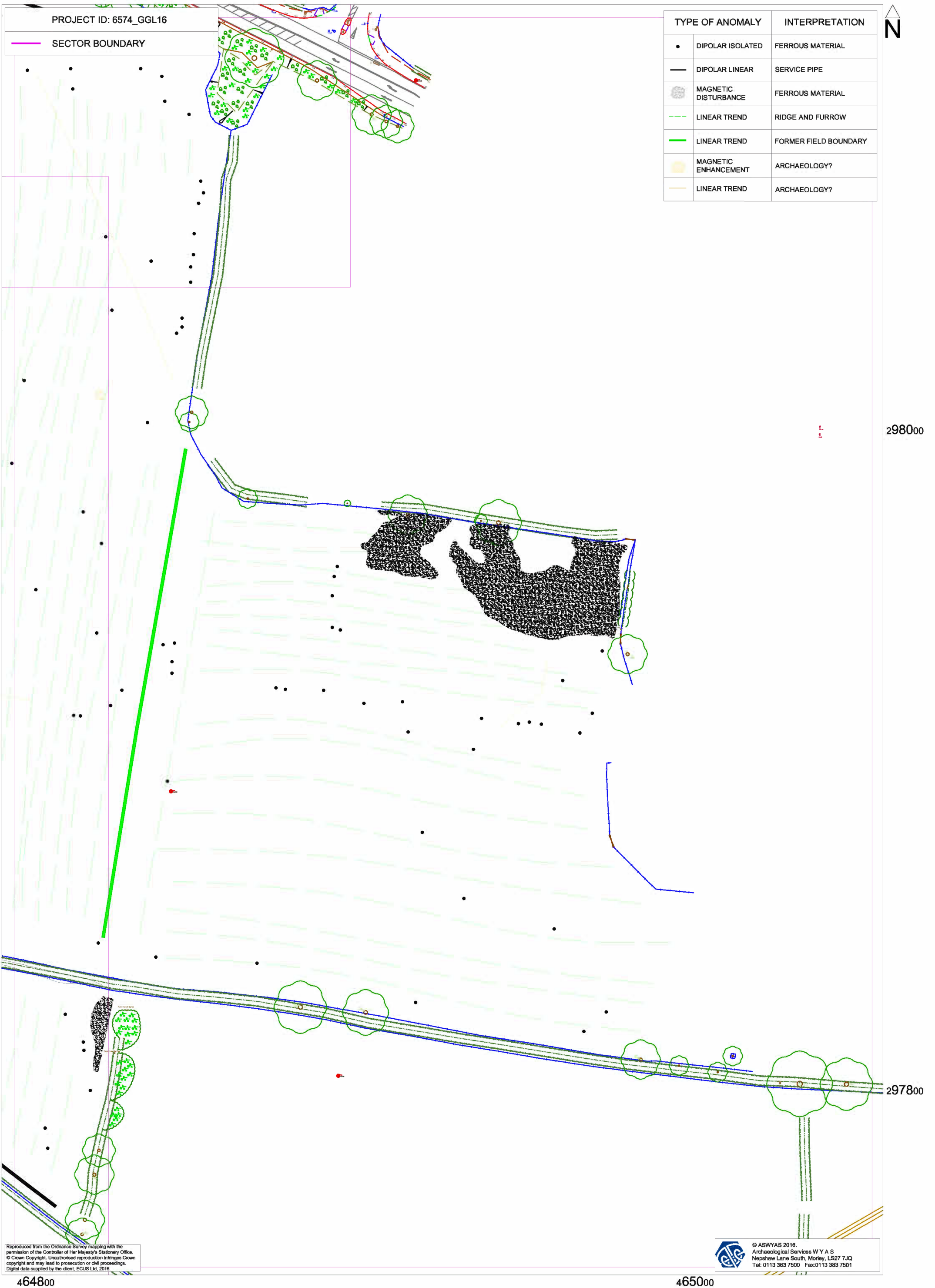
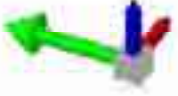
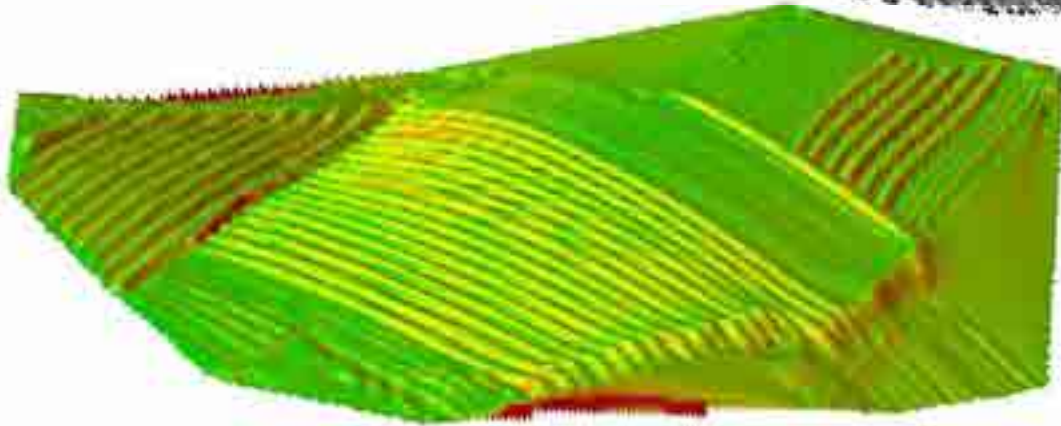


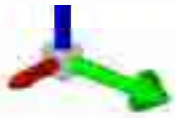
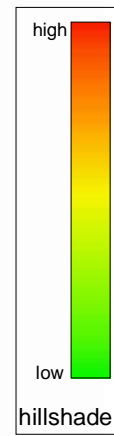
Fig. 9. Interpretation of magnetometer data; Sector 3 (1:1000 @ A3)



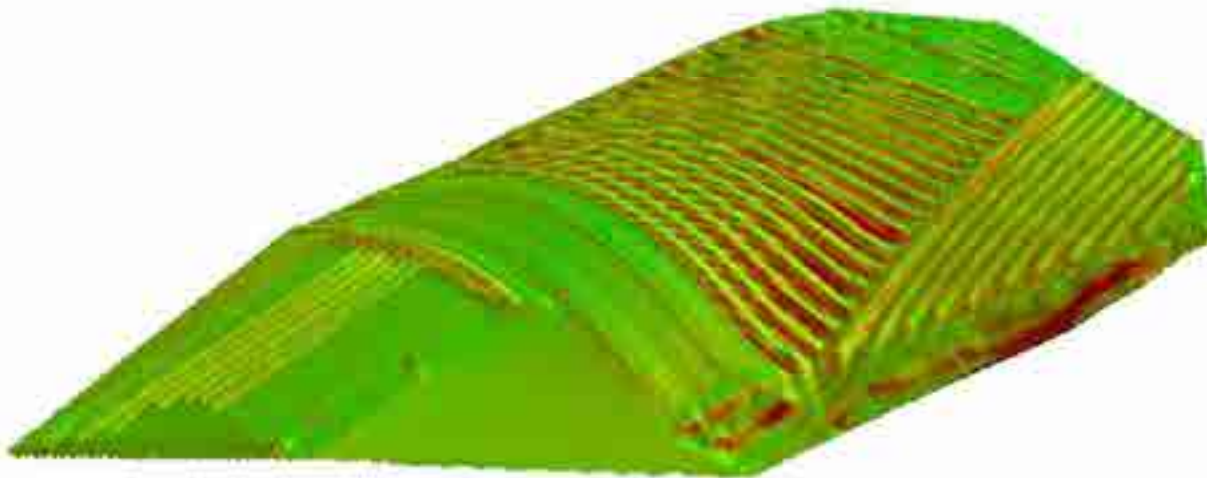
N



Viewed looking northeast with illumination at an azimuth of 45° and an altitude of 21°



N



Viewed looking northwest with illumination at an azimuth of 45° and an altitude of 21°

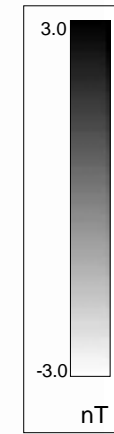


Fig. 10. Topographical contextulisation (not to scale)

Appendix 1: Magnetic survey - technical information

Magnetic Susceptibility and Soil Magnetism

Iron makes up about 6% of the Earth's crust and is mostly present in soils and rocks as minerals such as maghaemite and haemetite. These minerals have a weak, measurable magnetic property termed magnetic susceptibility. Human activities can redistribute these minerals and change (enhance) others into more magnetic forms. Areas of human occupation or settlement can then be identified by measuring the magnetic susceptibility of the topsoil because of the attendant increase (enhancement) in magnetic susceptibility. If the enhanced material subsequently comes to fill features, such as ditches or pits, localised isolated and linear magnetic anomalies can result whose presence can be detected by a magnetometer (fluxgate gradiometer).

In general, it is the contrast between the magnetic susceptibility of deposits filling cut features, such as ditches or pits, and the magnetic susceptibility of topsoils, subsoils and rocks into which these features have been cut, which causes the most recognisable responses. This is primarily because there is a tendency for magnetic ferrous compounds to become concentrated in the topsoil, thereby making it more magnetic than the subsoil or the bedrock. Linear features cut into the subsoil or geology, such as ditches, that have been silted up or have been backfilled with topsoil will therefore usually produce a positive magnetic response relative to the background soil levels. Discrete feature, such as pits, can also be detected. The magnetic susceptibility of a soil can also be enhanced by the application of heat and the fermentation and bacterial effects associated with rubbish decomposition. The area of enhancement is usually quite large, mainly due to the tendency of discard areas to extend beyond the limit of the occupation site itself, and spreading by the plough.

Types of Magnetic Anomaly

In the majority of instances anomalies are termed 'positive'. This means that they have a positive magnetic value relative to the magnetic background on any given site. However some features can manifest themselves as 'negative' anomalies that, conversely, means that the response is negative relative to the mean magnetic background.

Where it is not possible to give a probable cause of an observed anomaly a '?' is appended.

It should be noted that anomalies interpreted as modern in origin might be caused by features that are present in the topsoil or upper layers of the subsoil. Removal of soil to an archaeological or natural layer can therefore remove the feature causing the anomaly.

The types of response mentioned above can be divided into five main categories that are used in the graphical interpretation of the magnetic data:

Isolated dipolar anomalies (iron spikes)

These responses are typically caused by ferrous material either on the surface or in the topsoil. They cause a rapid variation in the magnetic response giving a characteristic 'spiky' trace. Although ferrous archaeological artefacts could produce this type of response, unless there is supporting evidence for an archaeological interpretation, little emphasis is normally given to such anomalies, as modern ferrous objects are common on rural sites, often being present as a consequence of manuring.

Areas of magnetic disturbance

These responses can have several causes often being associated with burnt material, such as slag waste or brick rubble or other strongly magnetised/fired material. Ferrous structures such as pylons, mesh or barbed wire fencing and buried pipes can also cause the same disturbed response. A modern origin is usually assumed unless there is other supporting information.

Linear trend

This is usually a weak or broad linear anomaly of unknown cause or date. These anomalies are often caused by agricultural activity, either ploughing or land drains being a common cause.

Areas of magnetic enhancement/positive isolated anomalies

Areas of enhanced response are characterised by a general increase in the magnetic background over a localised area whilst discrete anomalies are manifest by an increased response on two or three successive traverses. In neither instance is there the intense dipolar response characteristic exhibited by an area of magnetic disturbance or of an 'iron spike' anomaly (see above). These anomalies can be caused by infilled discrete archaeological features such as pits or post-holes or by kilns. They can also be caused by pedological variations or by natural infilled features on certain geologies. Ferrous material in the subsoil can also give a similar response. It can often therefore be very difficult to establish an anthropogenic origin without intrusive investigation or other supporting information.

Linear and curvilinear anomalies

Such anomalies have a variety of origins. They may be caused by agricultural practice (recent ploughing trends, earlier ridge and furrow regimes or land drains), natural geomorphological features such as palaeochannels or by infilled archaeological ditches.

Methodology: Gradiometer Survey

The magnetometer survey was undertaken using a Sensys Magneto MXPDA cart-based instrument. The instrument has 5 fluxgate gradiometers spaced 0.5m apart with readings recorded at 20Hz. The gradiometers have a range of recording between 0.1nT and 10,000nT. They are linked to a Trimble R6 RTK dGPS system with data recorded by Sensys Magneto MXPDA software on a rugged PDA device. The data was stored on an SD memory card

within the PDA and later downloaded to a computer for processing and interpretation. MAGNETO (Sensys GmbH) software was used to process and present the data

Data Processing and Presentation

The detailed gradiometer data has been presented in this report in processed greyscale format. The data in the greyscale images has been interpolated and selectively filtered to remove the effects of drift in instrument calibration and other artificial data constructs and to maximise the clarity and interpretability of the archaeological anomalies.

MAGNETO was used to produce the greyscale images. All greyscale plots are displayed using a linear incremental scale.

The results and subsequent interpretation of data from geophysical surveys should not be treated as an absolute representation of the underlying archaeological and non-archaeological remains. Confirmation of the presence or absence of archaeological remains can only be achieved by direct investigation of sub-surface deposits

Appendix 2: Survey location information

An initial survey station was established using a Trimble VRS differential Global Positioning System (Trimble R6 model). The cart data was geo-referenced using the geo-referenced survey station with a Trimble RTK differential Global Positioning System (Trimble R6 model). The accuracy of this equipment is better than 0.01m. The survey grids were then super-imposed onto a base map provided by the client to produce the displayed block locations. However, it should be noted that Ordnance Survey positional accuracy for digital map data has an error of 0.5m for urban and floodplain areas, 1.0m for rural areas and 2.5m for mountain and moorland areas. This potential error must be considered if co-ordinates are measured off hard copies of the mapping rather than using the digital co-ordinates.

Archaeological Services WYAS cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party.

Appendix 3: Geophysical archive

The geophysical archive comprises:-

- an archive disk containing compressed (WinZip 8) files of the raw data, report text (Microsoft Word 2000), and graphics files (Adobe Illustrator CS2 and AutoCAD 2008) files; and
- a full copy of the report.

At present the archive is held by Archaeological Services WYAS although it is anticipated that it may eventually be lodged with the Archaeology Data Service (ADS). Brief details may also be forwarded for inclusion on the English Heritage Geophysical Survey Database after the contents of the report are deemed to be in the public domain (i.e. available for consultation in the Leicestershire Historic Environment Record).

Appendix 4: Oasis form

OASIS DATA COLLECTION FORM: England

[List of Projects](#) | [Manage Projects](#) | [Search Projects](#) | [New project](#) | [Change your details](#) | [HER coverage](#) | [Change country](#) | [Log out](#)

Printable version

OASIS ID: archaeol11-271400

Project details

Project name	Land off London Road, Great Glen
Short description of the project	A cart-based magnetometer survey was undertaken on a pasture field dominated by prominent ridge and furrow to the immediate south of London Road, Great Glen, in advance of the proposed development of the site. Anomalies commensurate with ridge and furrow and magnetic disturbance have been detected. In addition, a former field boundary which bisects the survey area has been revealed, as have possible features which may have an archaeological origin. The archaeological potential of the site is considered to be low to moderate.
Project dates	Start: 28-11-2016 End: 02-12-2016
Previous/future work	No / Not known
Any associated project reference codes	GGL16 - Sitecode
Type of project	Field evaluation
Site status	None
Current Land use	Grassland Heathland 3 - Disturbed
Monument type	RIDGE AND FURROW Post Medieval
Monument type	- None
Significant Finds	- None
Significant Finds	- None
Methods & techniques	"Geophysical Survey"
Development type	Housing estate
Prompt	Planning condition
Position in the planning process	Not known / Not recorded
Solid geology	OOLITE - UNDIFFERENTIATED
Drift geology	LACUSTRINE CLAYS, SILTS AND SANDS
Techniques	Magnetometry

Project location

Country England
Site location LEICESTERSHIRE OADBY AND WIGSTON OADBY Land off London Road,
Great Glen
Postcode LE8 9FL
Study area 10 Hectares
Site coordinates SP 64255 98031 52.575936496798 -1.05170877378 52 34 33 N 001 03 06 W
Point
Height OD / Depth Min: 112m Max: 122m

Project creators

Name of Organisation Archaeological Services WYAS
Project brief originator ECUS Ltd
Project design originator Archaeological Services WYAS
Project director/manager C. Sykes
Project supervisor Evans, M.
Type of sponsor/funding body Landowner

Project archives

Physical Archive Exists? No
Digital Archive recipient ASWYAS
Digital Archive ID SMM16
Digital Contents "Survey"
Digital Media available "Images raster / digital photography", "Survey", "Text", "Geophysics"
Paper Archive Exists? No

Entered by Christopher Sykes (christopher.sykes@aswyas.com)
Entered on 15 December 2016



Plate 1. General view of survey area, looking west



Plate 2. General view of survey area, looking west



Plate 3. General view of survey area, looking east



Plate 4. General view of survey area, looking west

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Land off London Road
Great Glen
Leicestershire

Geophysical Survey

Report no. 2920
December 2016

Client: Bovis Homes



Land off London Road, Great Glen, Leicestershire

Geophysical Survey

Summary

A cart-based magnetometer survey was undertaken on a pasture field dominated by prominent ridge and furrow to the immediate south of London Road, Great Glen, in advance of the proposed development of the site. Anomalies commensurate with ridge and furrow and magnetic disturbance have been detected. In addition, a former field boundary which bisects the survey area has been revealed, as have possible features which may have an archaeological origin. The archaeological potential of the site is considered to be low to moderate.



Report Information

Client: ECUS Ltd
 Address: 3 Blackburn Road, Sheffield, S61 3DW
 Report Type: Geophysical survey
 Location: Great Glen
 County: Leicestershire
 Grid Reference: SP 64754 98015
 Period(s) of activity: Prehistoric? / Medieval/ Modern
 Report Number: 2920
 Project Number: 6574
 Site Code: GGL16
 OASIS ID: archaeo111-xxxxx
 Date of fieldwork: November and December 2016
 Date of report: December 2016
 Project Management: Christopher Sykes BA MSc
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 Report: Christopher Sykes
 Illustrations: Christopher Sykes & Emma Brunning BSc MCifA
 Photography: Mark Evans
 Research: Christopher Sykes

Authorisation for
distribution: -----



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- 6 Greyscale of processed magnetometer data; Sector 2 (1:1000 @A3)
- 7 Interpretation of magnetometer data; Sector 2 (1:1000 @A3)
- 8 Greyscale of processed magnetometer data; Sector 3 (1:1000 @A3)
- 9 Interpretation of magnetometer data; Sector 3 (1:1000 @A3)
- 10 Topographical contextualisation

List of Plates

- 1 General view of survey area, looking west
- 2 General view of survey area, looking west
- 3 General view of survey area, looking east
- 4 General view of survey area, looking west

1 Introduction

Archaeological Services WYAS (ASWYAS) were commissioned by James Thomson of ECUS Limited, on behalf of Bovis Homes (the Client), to undertake a geophysical (magnetometer) survey on land off London Road, Great Glen, Leicestershire to inform an outline planning application, for residential development of the site. Guidance contained within the National Planning Policy Framework (DCLG 2012) was followed, in line with current best practice (CIfA 2014; David *et al.* 2008). The survey was carried out between the 30th November and 6th December 2016 to provide additional information on the archaeological resource of the Proposed Development Area (PDA).

Site location, topography and land-use

The overall PDA totals approximately 10ha. The survey area is located to the west of Great Glen, and approximately 10km to the southeast of Leicester. It is bound by London Road to the north, the A6 bypass to the south, and fields to the west and east. The survey area undulates because of the ridge and furrow, and slopes from c. 122m above Ordnance Datum (aOD) in north to c.112m aOD in the southeast. The site is centred at SP 64754 98015.

Soils and geology

The underlying geology of the site is of the Charmouth mudstone formation, with superficial deposits of Oadby member - Diamiction. The overlying soils are considered to be of the Ragdale (712g) classification of soils, described as chalky till of slowly permeable seasonally waterlogged fine loams over clays (SSEW 1983).

2 Archaeological and Historical Background

Aside from ridge and furrow there are no known archaeological assets within the PDA. An archaeological Desk-based Assessment for a survey area to the east of Great Glen, did conclude that the landscape held archaeological potential from prehistory to the medieval period. Archaeological investigations in the area have included excavation in advance of the A6 bypass, and a geophysical survey, performed by ASWYAS in 2013, to the southeast of the hamlet.

3 Aims, Methodology and Presentation

The aim of the geophysical survey was to gather sufficient information to establish the presence/absence, character, extent and date of any archaeological remains within the site, and to inform further investigative strategies should they become necessary.

The general objectives of the geophysical survey were:

- to provide information about the nature and possible interpretation of any magnetic anomalies identified;
- to therefore determine the presence/absence and extent of any buried archaeological features; and
- to prepare a report summarising the results of the survey.

Magnetometer survey

The magnetometer survey was undertaken using a Sensys Magneto MXPDA cart-based instrument. The instrument has 5 fluxgate gradiometers spaced 0.5m apart with readings recorded at 20Hz. The gradiometers have a range of recording between 0.1nT and 10,000nT. They are linked to a Trimble R6 RTK dGPS system with data recorded by Sensys Magneto MXPDA software on a rugged PDA device. The data was stored on an SD memory card within the PDA and later downloaded to a computer for processing and interpretation. MAGNETO (Sensys GmbH) and MAGNETO software was used to process and present the data. Further details are given in Appendix 1.

Reporting

A general site location plan, incorporating the 1:50000 Ordnance Survey (OS) mapping, is shown in Figure 1. Figure 2 displays processed magnetometer data and plate locations at a scale of 1:2500. Figure 3 is an overall interpretation of the data at the same scale. Figures 4 to 9 display processed greyscales and interpretations of the three sectors at a scale of 1:1000. Figure 10 is a 3D visualisation of the geophysical data, in order to understand a topographical aspect of the site.

Technical information on the equipment used, data processing and survey methodologies are given in Appendix 1. Technical information on locating the survey area is provided in Appendix 2. Appendix 3 describes the composition and location of the archive. A copy of the completed OASIS form is included in Appendix 4.

The survey methodology, report and any recommendations comply with guidelines outlined by English Heritage (David *et al.* 2008) and by the Chartered Institute for Archaeologists (CIfA 2014). All figures reproduced from Ordnance Survey mapping are with the permission of the controller of Her Majesty's Stationery Office (© Crown copyright).

The figures in this report have been produced following analysis of the data in processed formats and over a range of different display levels. All figures are presented to most suitably display and interpret the data from this site based on the experience and knowledge of Archaeological Services staff.

4 Results and Discussion – (see Figures 3 to 9)

Ferrous anomalies

Ferrous anomalies, as individual ‘spikes’, or as large discrete areas are typically caused by ferrous (magnetic) material, either on the ground surface or in the plough-soil. Little importance is normally given to such anomalies, unless there is any supporting evidence for an archaeological interpretation, as modern ferrous debris or material is common on rural sites, often being present as a consequence of manuring or tipping/infilling. There is no obvious pattern or clustering to their distribution in this survey to suggest anything other than a random background scatter of ferrous debris in the plough-soil.

In the northeast corner of the field (Sector 3, Figs 8-9) there is an area of significant disturbance. Similarly around the periphery of the field, a service and magnetic responses indicative of material within the boundary hedges has been detected.

Agricultural anomalies

Ridge and furrow is prominent in the PDA and of substantial breadth and depth that any anomalies of archaeological origin are likely to have been obscured. Figure 10 is able to give an indication of the terrain. Orientation of the ridge and furrow follows that of the field boundaries. This is further re-enforced with ridge and furrow in Sector 3 (Figs 8-9) which terminates along its western extent at a former field boundary. Analysis of first edition mapping shows that this boundary appears on mapping from 1886, but has been removed by 1966 editions (NLS 2016).

Within Sector 2 (Figs 6-7) a series of linear anomalies indicative and characterising of field drains have been identified.

Possible archaeological anomalies

A number of semi-circular anomalies have been detected, largely in Sector 2 (Figs 6-7) which have an undetermined origin. It is unlikely that they are archaeological in origin because of their size (c.1m), however their position in the landscape and form means that a possible archaeological origin has been assigned.

The results and subsequent interpretation of data from the surveys should not be treated as an absolute representation of the underlying archaeological and non-archaeological remains. Confirmation of the presence or absence of archaeological remains can only be achieved by direct investigation of sub-surface deposits.

5 Conclusions

The area of survey is covered in prominent ridge and furrow, the breadth and depth of which is likely to obscure any clear archaeological anomalies. It dominates the dataset. However within the data, a number of anomalies which appear to be semi-circular in shape have been detected. Their size means they are not likely to be archaeological in origin, however, the strength of the response in the dataset, in comparison to the ridge and furrow means that they may have possible archaeological potential. They may be related to the linear responses which have been indicated. Former field boundaries and field drains have been indicated along with areas of magnetic disturbance. Based on the geophysical dataset the archaeological potential of the site is deemed to be low to moderate.

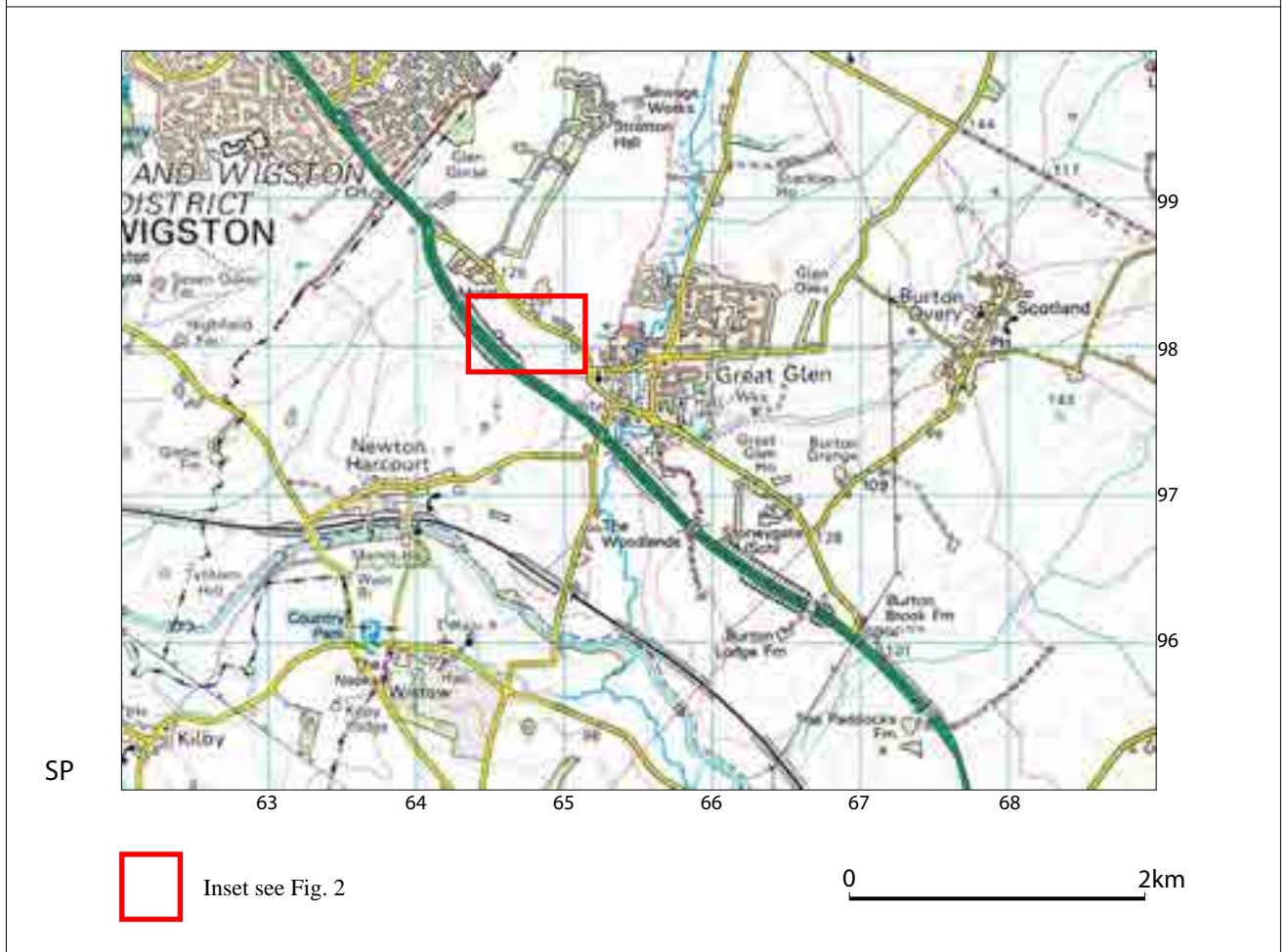
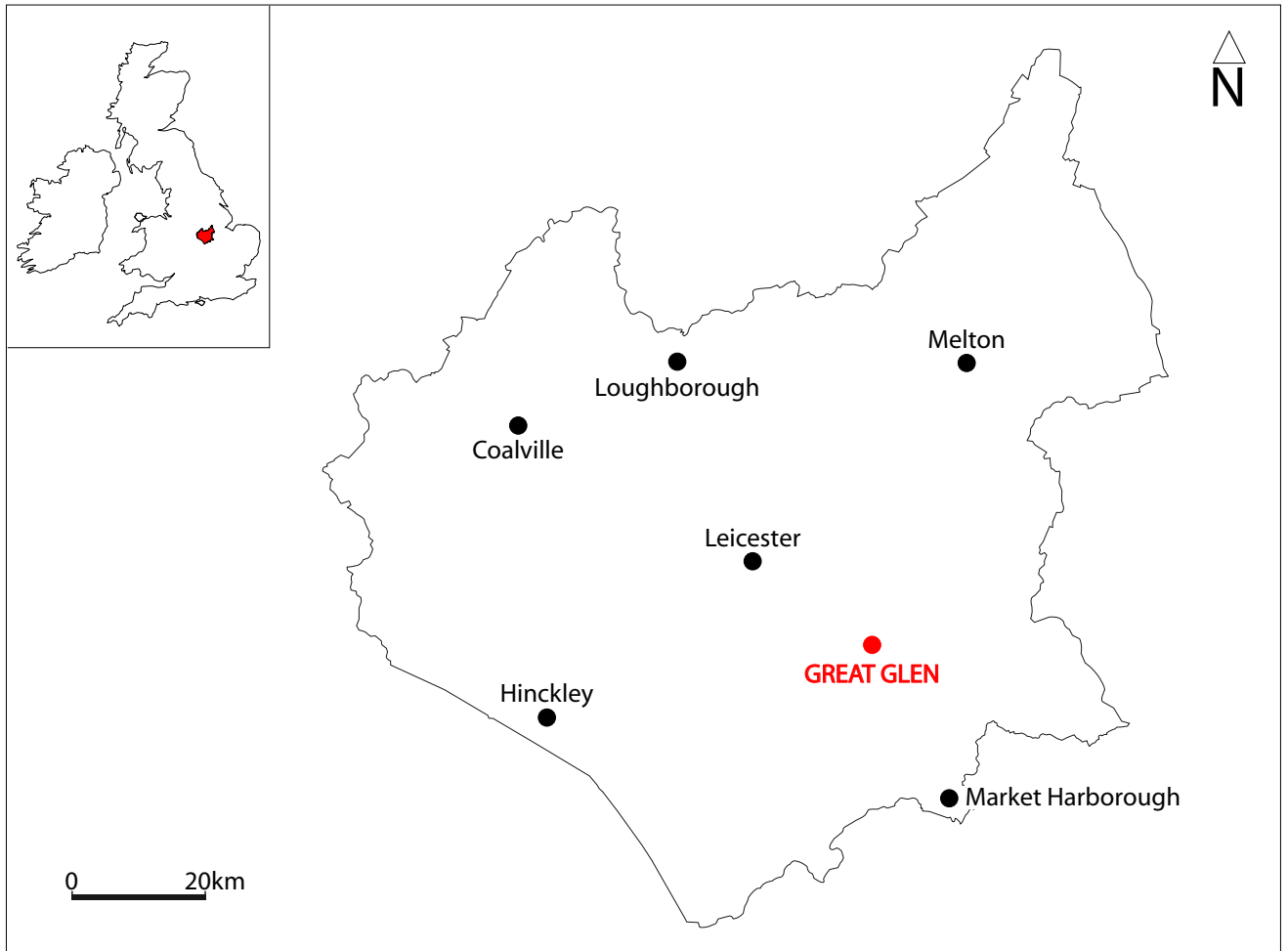






Fig. 1. Site location

PROJECT ID: 6574_GGL16	
	SURVEY BOUNDARY
	SECTOR BOUNDARY
	LOCATION AND DIRECTION OF PLATES
	VIEWPOINTS OF FIG 10

SECTOR 1
SEE FIGS 4-5

SECTOR 3
SEE FIGS 8-9

SECTOR 2
SEE FIGS 6-7



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Tel: 0113 383 7500 Fax: 0113 383 7501

Fig. 2. Survey location showing greyscale magnetometer data (1:2500 @ A3)

0 100m

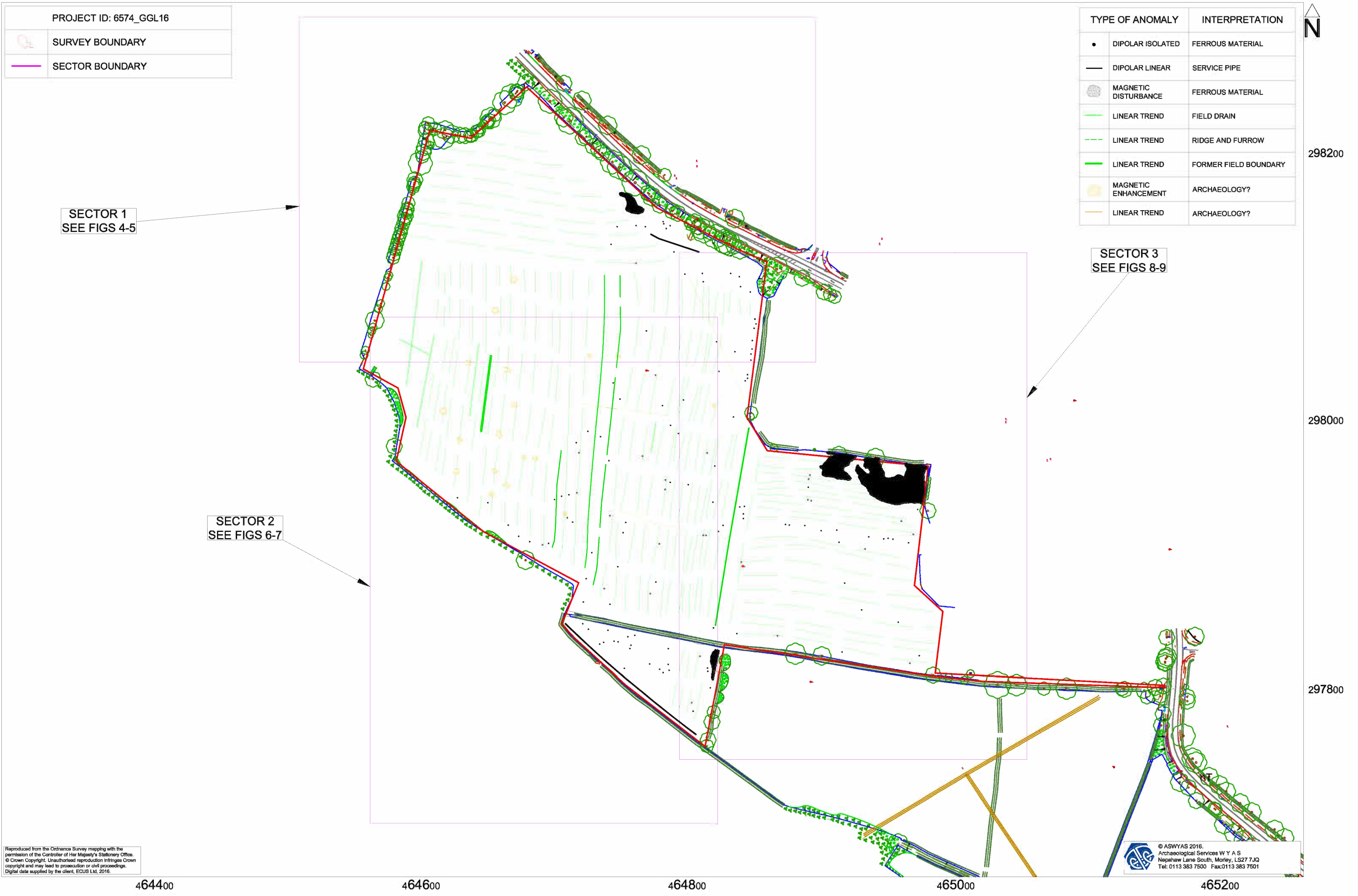
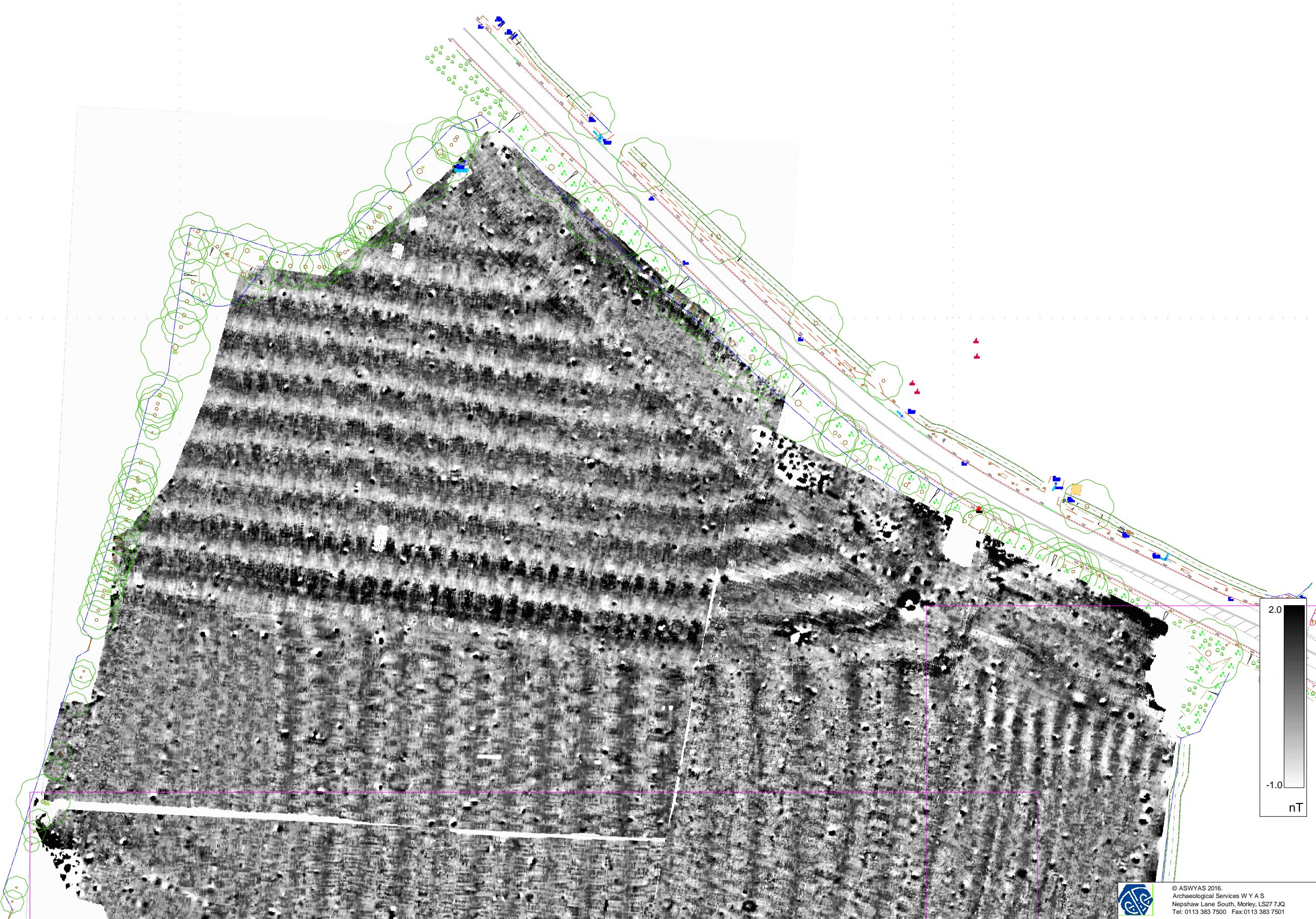


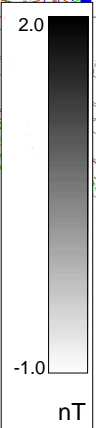
Fig. 3. Overall interpretation of magnetometer data (1:2500 @ A3)

PROJECT ID: 6574_GGL16

SECTOR BOUNDARY



298200



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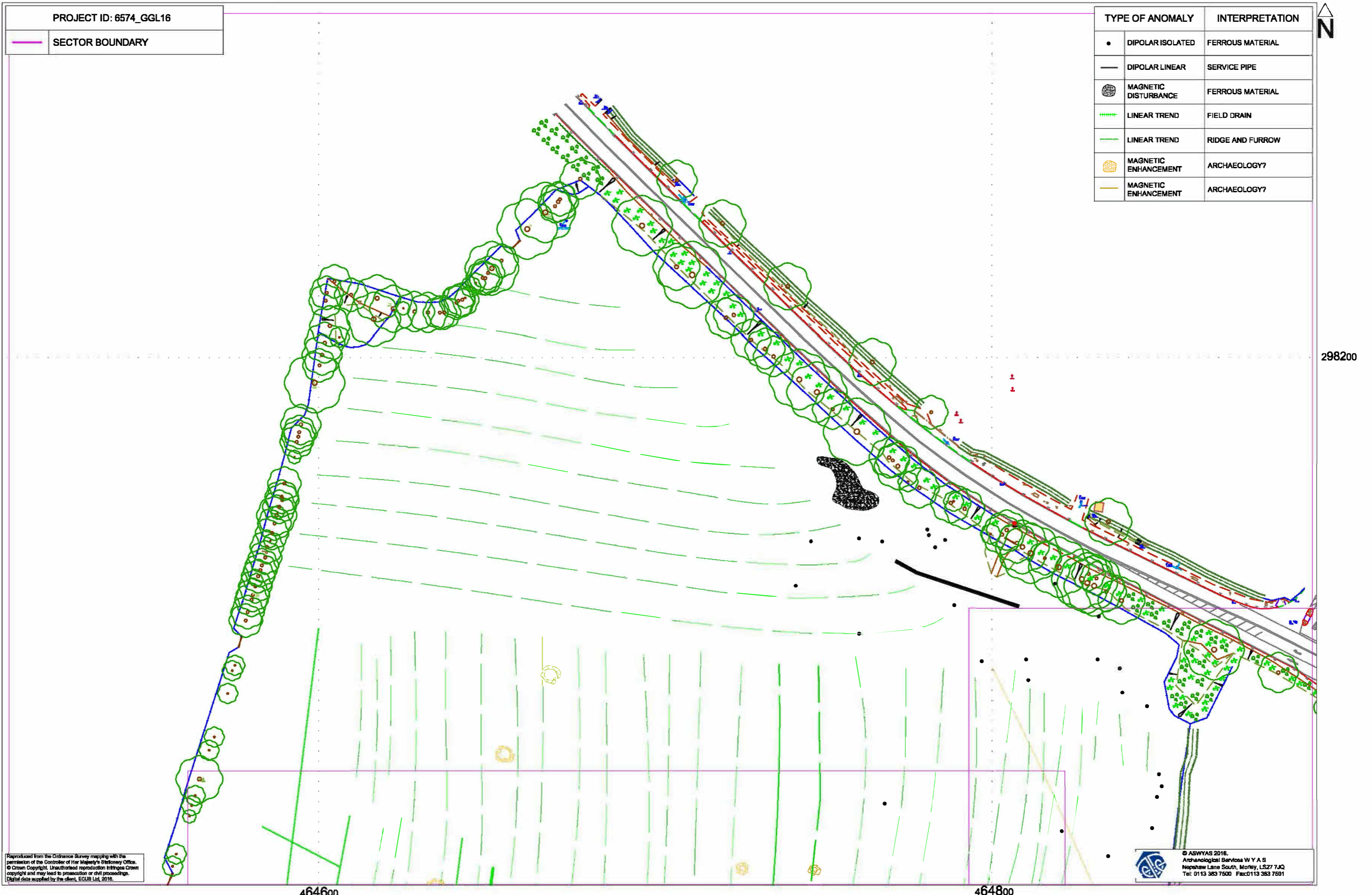
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Tel: 0113 383 7500 Fax: 0113 383 7501

464600

464800

Fig. 4. Processed greyscale magnetometer data; Sector 1 (1:1000 @ A3)

0 50m



PROJECT ID: 6574_GGL16

SECTOR BOUNDARY

TYPE OF ANOMALY	INTERPRETATION
•	DIPOLAR ISOLATED FERROUS MATERIAL
—	DIPOLAR LINEAR SERVICE PIPE
⊗	MAGNETIC DISTURBANCE FERROUS MATERIAL
+	LINEAR TREND FIELD DRAIN
—	LINEAR TREND RIDGE AND FURROW
⊙	MAGNETIC ENHANCEMENT ARCHAEOLOGY?
—	MAGNETIC ENHANCEMENT ARCHAEOLOGY?

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Fig. 5. Interpretation of magnetometer data; Sector 1 (1:1000 @ A3)

0 50m

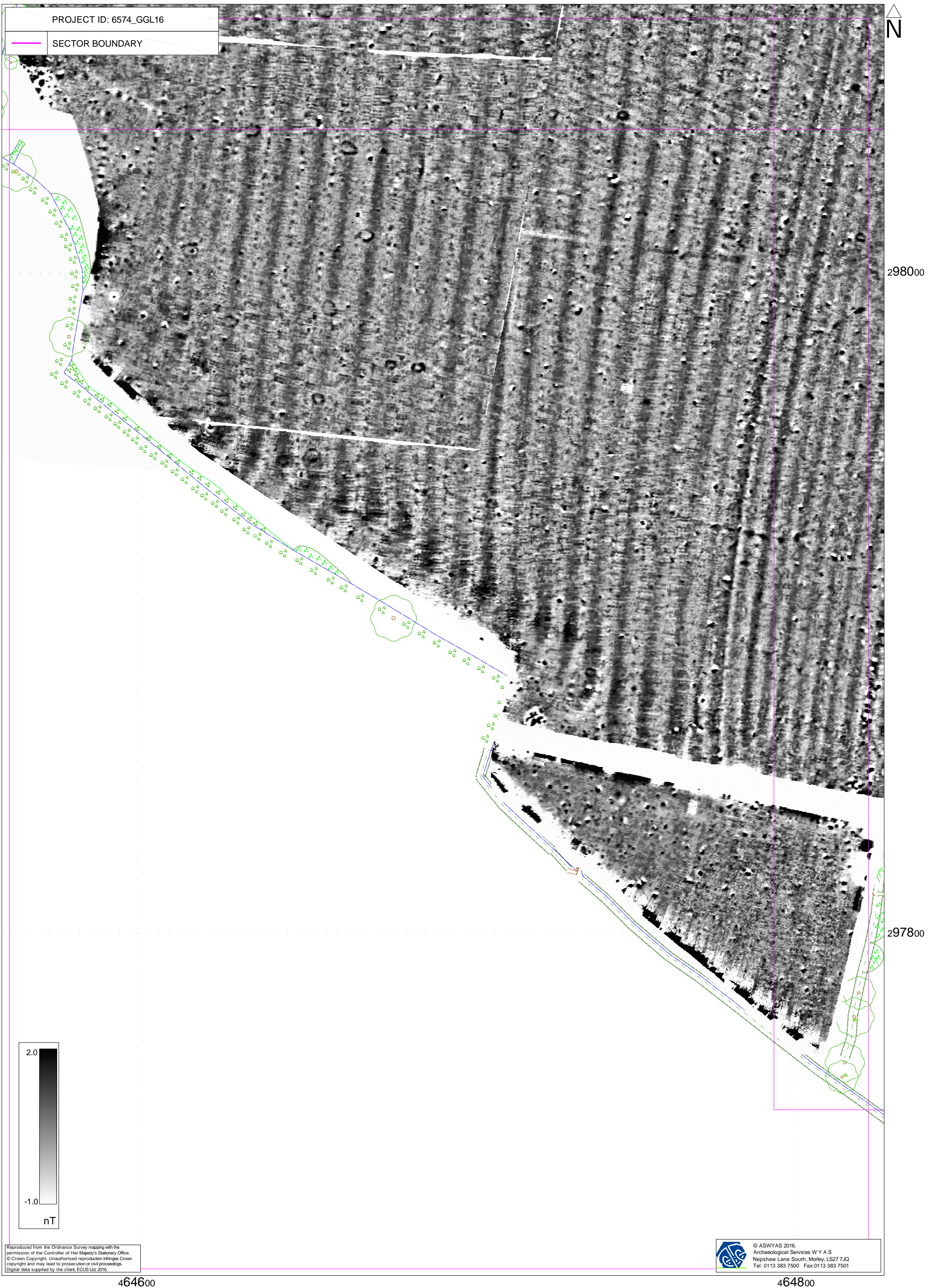


Fig. 6. Processed greyscale magnetometer data; Sector 2 (1:1000 @ A3)

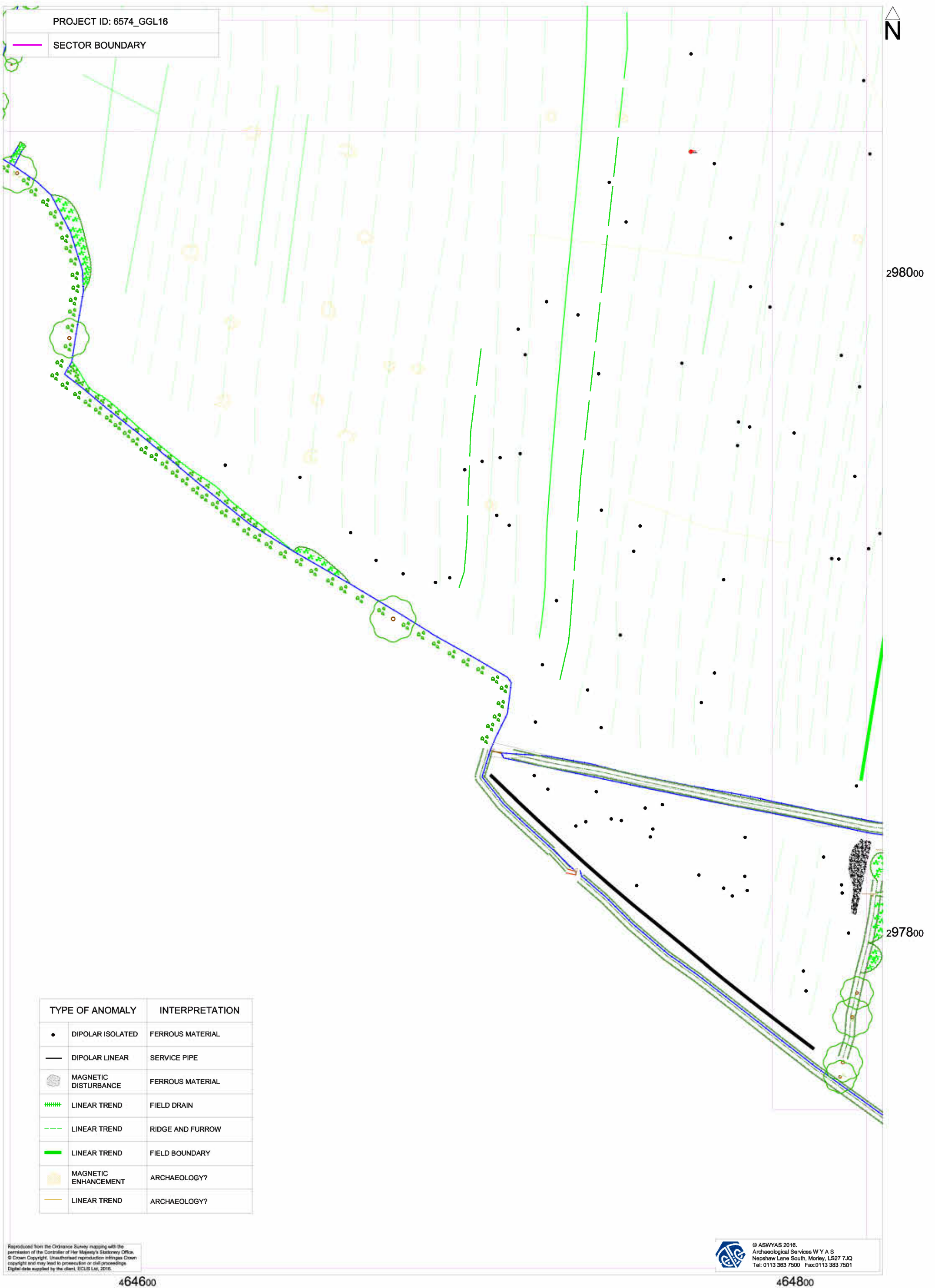


Fig. 7. Interpretation of magnetometer data; Sector 2 (1:1000 @ A3)

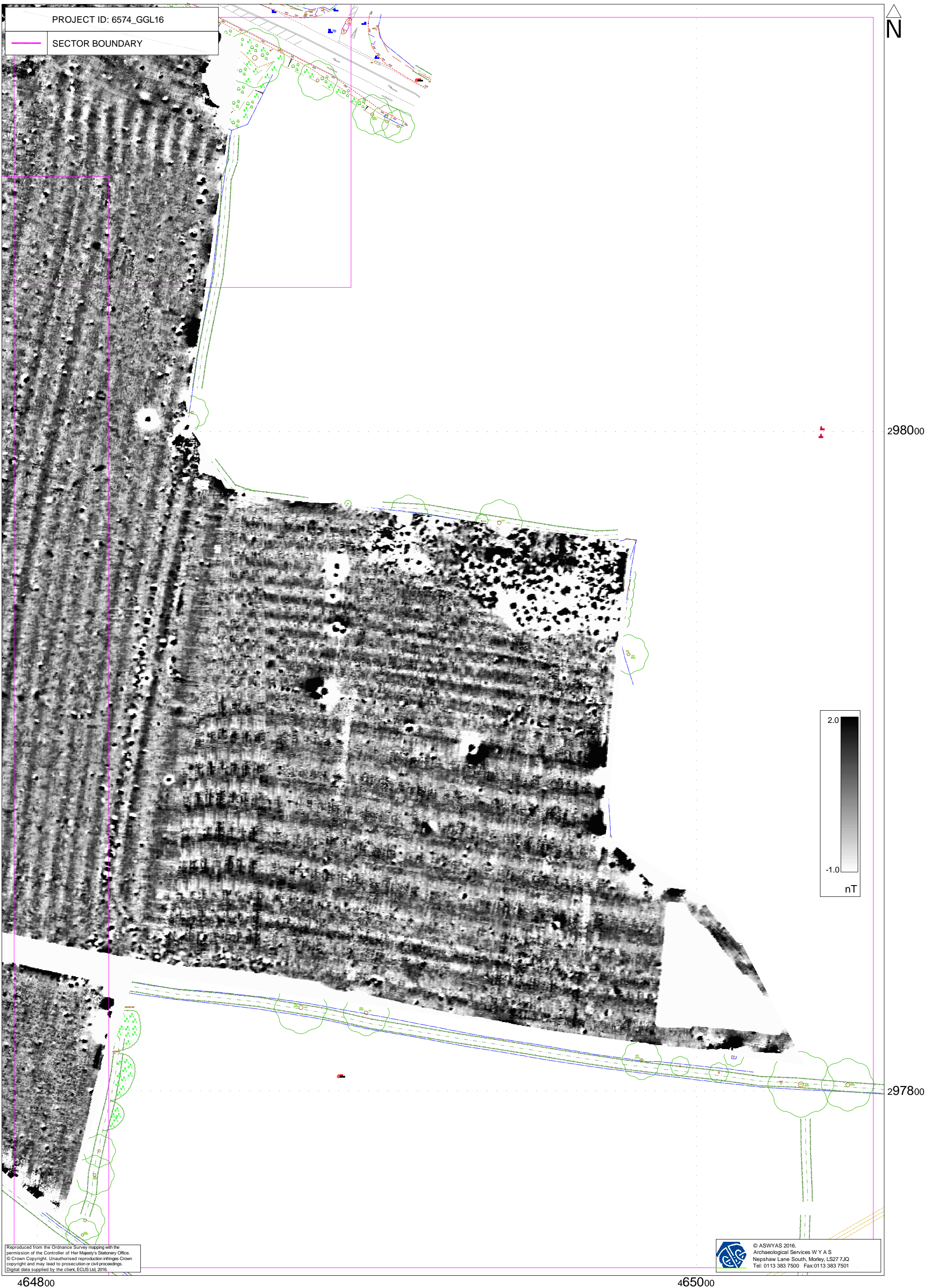


Fig. 8. Processed greyscale magnetometer data; Sector 3 (1:1000 @ A3)

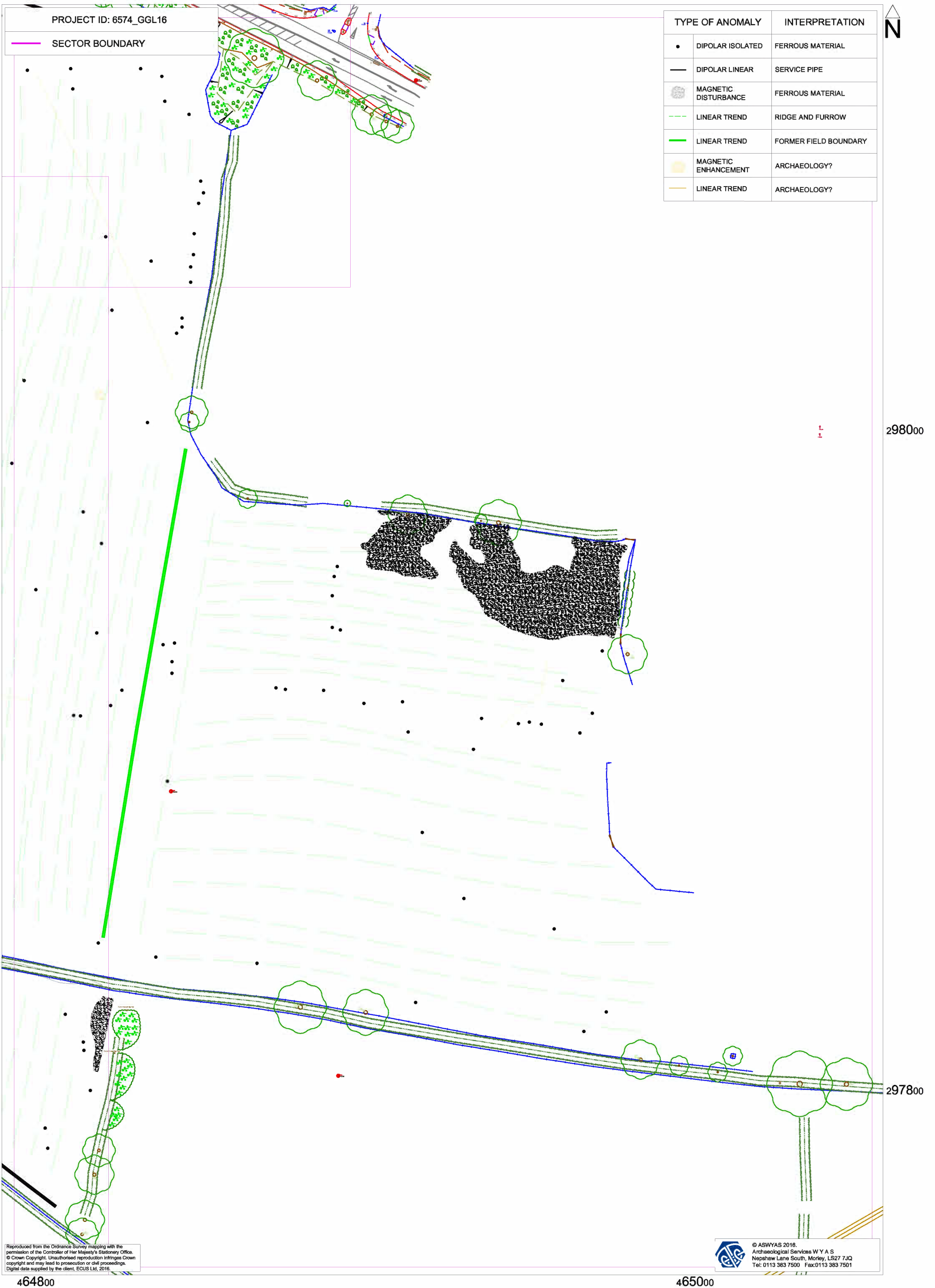
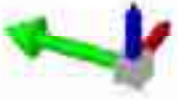
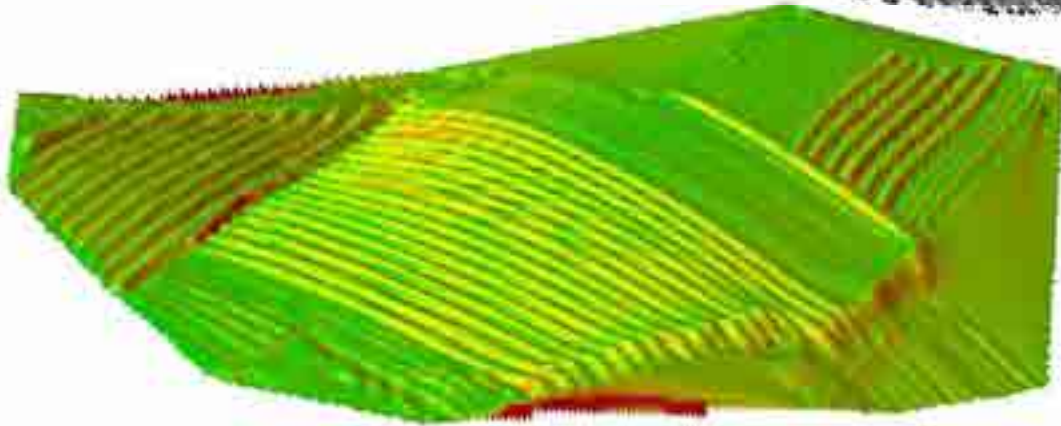


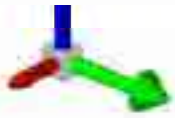
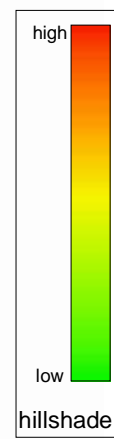
Fig. 9. Interpretation of magnetometer data; Sector 3 (1:1000 @ A3)



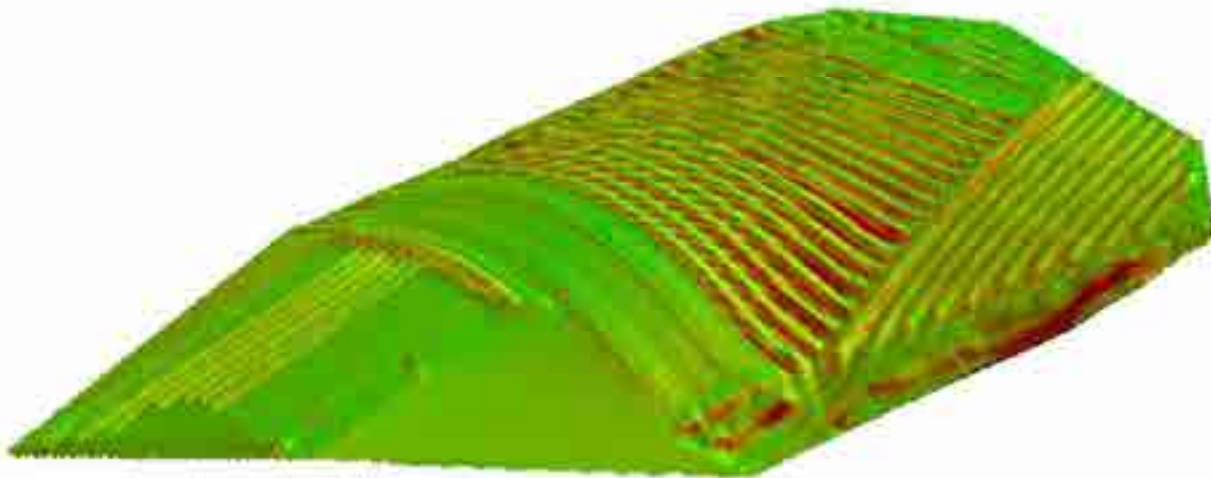
N



Viewed looking northeast with illumination at an azimuth of 45° and an altitude of 21°



N



Viewed looking northwest with illumination at an azimuth of 45° and an altitude of 21°

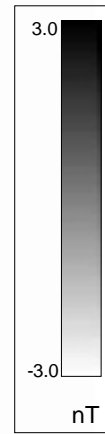


Fig. 10. Topographical contextulisation (not to scale)

Appendix 1: Magnetic survey - technical information

Magnetic Susceptibility and Soil Magnetism

Iron makes up about 6% of the Earth's crust and is mostly present in soils and rocks as minerals such as maghaemite and haemetite. These minerals have a weak, measurable magnetic property termed magnetic susceptibility. Human activities can redistribute these minerals and change (enhance) others into more magnetic forms. Areas of human occupation or settlement can then be identified by measuring the magnetic susceptibility of the topsoil because of the attendant increase (enhancement) in magnetic susceptibility. If the enhanced material subsequently comes to fill features, such as ditches or pits, localised isolated and linear magnetic anomalies can result whose presence can be detected by a magnetometer (fluxgate gradiometer).

In general, it is the contrast between the magnetic susceptibility of deposits filling cut features, such as ditches or pits, and the magnetic susceptibility of topsoils, subsoils and rocks into which these features have been cut, which causes the most recognisable responses. This is primarily because there is a tendency for magnetic ferrous compounds to become concentrated in the topsoil, thereby making it more magnetic than the subsoil or the bedrock. Linear features cut into the subsoil or geology, such as ditches, that have been silted up or have been backfilled with topsoil will therefore usually produce a positive magnetic response relative to the background soil levels. Discrete feature, such as pits, can also be detected. The magnetic susceptibility of a soil can also be enhanced by the application of heat and the fermentation and bacterial effects associated with rubbish decomposition. The area of enhancement is usually quite large, mainly due to the tendency of discard areas to extend beyond the limit of the occupation site itself, and spreading by the plough.

Types of Magnetic Anomaly

In the majority of instances anomalies are termed 'positive'. This means that they have a positive magnetic value relative to the magnetic background on any given site. However some features can manifest themselves as 'negative' anomalies that, conversely, means that the response is negative relative to the mean magnetic background.

Where it is not possible to give a probable cause of an observed anomaly a '?' is appended.

It should be noted that anomalies interpreted as modern in origin might be caused by features that are present in the topsoil or upper layers of the subsoil. Removal of soil to an archaeological or natural layer can therefore remove the feature causing the anomaly.

The types of response mentioned above can be divided into five main categories that are used in the graphical interpretation of the magnetic data:

Isolated dipolar anomalies (iron spikes)

These responses are typically caused by ferrous material either on the surface or in the topsoil. They cause a rapid variation in the magnetic response giving a characteristic ‘spiky’ trace. Although ferrous archaeological artefacts could produce this type of response, unless there is supporting evidence for an archaeological interpretation, little emphasis is normally given to such anomalies, as modern ferrous objects are common on rural sites, often being present as a consequence of manuring.

Areas of magnetic disturbance

These responses can have several causes often being associated with burnt material, such as slag waste or brick rubble or other strongly magnetised/fired material. Ferrous structures such as pylons, mesh or barbed wire fencing and buried pipes can also cause the same disturbed response. A modern origin is usually assumed unless there is other supporting information.

Linear trend

This is usually a weak or broad linear anomaly of unknown cause or date. These anomalies are often caused by agricultural activity, either ploughing or land drains being a common cause.

Areas of magnetic enhancement/positive isolated anomalies

Areas of enhanced response are characterised by a general increase in the magnetic background over a localised area whilst discrete anomalies are manifest by an increased response on two or three successive traverses. In neither instance is there the intense dipolar response characteristic exhibited by an area of magnetic disturbance or of an ‘iron spike’ anomaly (see above). These anomalies can be caused by infilled discrete archaeological features such as pits or post-holes or by kilns. They can also be caused by pedological variations or by natural infilled features on certain geologies. Ferrous material in the subsoil can also give a similar response. It can often therefore be very difficult to establish an anthropogenic origin without intrusive investigation or other supporting information.

Linear and curvilinear anomalies

Such anomalies have a variety of origins. They may be caused by agricultural practice (recent ploughing trends, earlier ridge and furrow regimes or land drains), natural geomorphological features such as palaeochannels or by infilled archaeological ditches.

Methodology: Gradiometer Survey

The magnetometer survey was undertaken using a Sensys Magneto MXPDA cart-based instrument. The instrument has 5 fluxgate gradiometers spaced 0.5m apart with readings recorded at 20Hz. The gradiometers have a range of recording between 0.1nT and 10,000nT. They are linked to a Trimble R6 RTK dGPS system with data recorded by Sensys Magneto MXPDA software on a rugged PDA device. The data was stored on an SD memory card

within the PDA and later downloaded to a computer for processing and interpretation. MAGNETO (Sensys GmbH) software was used to process and present the data

Data Processing and Presentation

The detailed gradiometer data has been presented in this report in processed greyscale format. The data in the greyscale images has been interpolated and selectively filtered to remove the effects of drift in instrument calibration and other artificial data constructs and to maximise the clarity and interpretability of the archaeological anomalies.

MAGNETO was used to produce the greyscale images. All greyscale plots are displayed using a linear incremental scale.

The results and subsequent interpretation of data from geophysical surveys should not be treated as an absolute representation of the underlying archaeological and non-archaeological remains. Confirmation of the presence or absence of archaeological remains can only be achieved by direct investigation of sub-surface deposits

Appendix 2: Survey location information

An initial survey station was established using a Trimble VRS differential Global Positioning System (Trimble R6 model). The cart data was geo-referenced using the geo-referenced survey station with a Trimble RTK differential Global Positioning System (Trimble R6 model). The accuracy of this equipment is better than 0.01m. The survey grids were then super-imposed onto a base map provided by the client to produce the displayed block locations. However, it should be noted that Ordnance Survey positional accuracy for digital map data has an error of 0.5m for urban and floodplain areas, 1.0m for rural areas and 2.5m for mountain and moorland areas. This potential error must be considered if co-ordinates are measured off hard copies of the mapping rather than using the digital co-ordinates.

Archaeological Services WYAS cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party.

Appendix 3: Geophysical archive

The geophysical archive comprises:-

- an archive disk containing compressed (WinZip 8) files of the raw data, report text (Microsoft Word 2000), and graphics files (Adobe Illustrator CS2 and AutoCAD 2008) files; and
- a full copy of the report.

At present the archive is held by Archaeological Services WYAS although it is anticipated that it may eventually be lodged with the Archaeology Data Service (ADS). Brief details may also be forwarded for inclusion on the English Heritage Geophysical Survey Database after the contents of the report are deemed to be in the public domain (i.e. available for consultation in the Leicestershire Historic Environment Record).

Appendix 4: Oasis form

OASIS DATA COLLECTION FORM: England

[List of Projects](#) | [Manage Projects](#) | [Search Projects](#) | [New project](#) | [Change your details](#) | [HER coverage](#) | [Change country](#) | [Log out](#)

Printable version

OASIS ID: archaeol11-271400

Project details

Project name	Land off London Road, Great Glen
Short description of the project	A cart-based magnetometer survey was undertaken on a pasture field dominated by prominent ridge and furrow to the immediate south of London Road, Great Glen, in advance of the proposed development of the site. Anomalies commensurate with ridge and furrow and magnetic disturbance have been detected. In addition, a former field boundary which bisects the survey area has been revealed, as have possible features which may have an archaeological origin. The archaeological potential of the site is considered to be low to moderate.
Project dates	Start: 28-11-2016 End: 02-12-2016
Previous/future work	No / Not known
Any associated project reference codes	GGL16 - Sitecode
Type of project	Field evaluation
Site status	None
Current Land use	Grassland Heathland 3 - Disturbed
Monument type	RIDGE AND FURROW Post Medieval
Monument type	- None
Significant Finds	- None
Significant Finds	- None
Methods & techniques	"Geophysical Survey"
Development type	Housing estate
Prompt	Planning condition
Position in the planning process	Not known / Not recorded
Solid geology	OOLITE - UNDIFFERENTIATED
Drift geology	LACUSTRINE CLAYS, SILTS AND SANDS
Techniques	Magnetometry

Project location

Country England
Site location LEICESTERSHIRE OADBY AND WIGSTON OADBY Land off London Road,
Great Glen
Postcode LE8 9FL
Study area 10 Hectares
Site coordinates SP 64255 98031 52.575936496798 -1.05170877378 52 34 33 N 001 03 06 W
Point
Height OD / Depth Min: 112m Max: 122m

Project creators

Name of Organisation Archaeological Services WYAS
Project brief originator ECUS Ltd
Project design originator Archaeological Services WYAS
Project director/manager C. Sykes
Project supervisor Evans, M.
Type of sponsor/funding body Landowner

Project archives

Physical Archive Exists? No
Digital Archive recipient ASWYAS
Digital Archive ID SMM16
Digital Contents "Survey"
Digital Media available "Images raster / digital photography", "Survey", "Text", "Geophysics"
Paper Archive Exists? No

Entered by Christopher Sykes (christopher.sykes@aswyas.com)
Entered on 15 December 2016



Plate 1. General view of survey area, looking west



Plate 2. General view of survey area, looking west



Plate 3. General view of survey area, looking east



Plate 4. General view of survey area, looking west

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