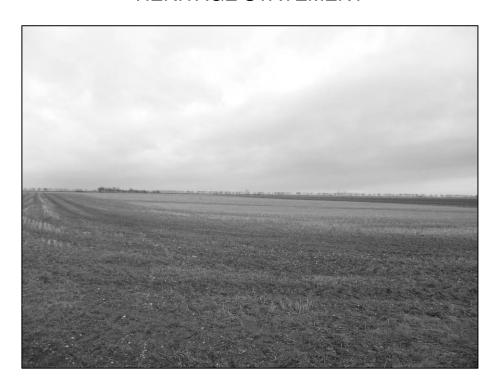
PROPOSED PIG BUILDINGS AND ASSOCIATED STRUCTURES, SOMERBY TOP, SOMERBY WOLD LANE, SOMERBY, BARNETBY, LINCOLNSHIRE, DN38 6BN

HERITAGE STATEMENT



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PROPOSED PIG BUILDINGS AND ASSOCIATED STRUCTURES, SOMERBY TOP, SOMERBY WOLD LANE, SOMERBY, BARNETBY, LINCOLNSHIRE, DN38 6BN

HERITAGE STATEMENT

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HERITAGE STATEMENT, PROPOSED PIG BUILDINGS AND ASSOCIATED STRUCTURES, SOMERBY TOP, SOMERBY WOLD LANE, SOMERBY, BARNETBY, LINCOLNSHIRE DN38 6BN

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EXECUTIVE SUMMARY

Several new pig buildings and associated structures are proposed at Somerby Top, Somerby, near Barnetby le Wold, Lincolnshire (NGR TA 0788 0752 centred). This Heritage Statement has been produced by Ed Dennison Archaeological Services Ltd (EDAS), on behalf of the applicant, to support a planning application. It follows advice from the Local Planning Authority and is in accordance with guidance contained in the 2012 National Planning Policy Framework and Local Plan policies.

This Heritage Statement describes the archaeology and heritage of the area, and assesses the nature, extent and significance of any heritage assets which might be affected by the proposed development. A non-intrusive geophysical survey of the proposed development site was also undertaken, and the results are included in this report. A total of nine heritage assets were identified within a study area defined as being within 1km of the proposed development site; five assets were assessed as being of Low Value, one of potential Low Value, and three of Negligible grade.

Two assets, identified by the geophysical survey, will be destroyed by the proposed development. The interpretation of one asset (Site 6) is unclear but it might be a modern feature. The other (Site 7) may represent the ploughed-down and now isolated remains of part of an Iron Age/Romano-British field system, other elements of which have been recorded as cropmarks in the general area. In both cases, the overall significance of effects of the development on the identified assets are considered to be Slight adverse.

The impacts of the proposed development on the identified archaeological resource can be mitigated by undertaking a continuously monitored scheme of archaeological observation, investigation and recording during the initial phase of groundworks. This would enable any features or deposits of archaeological interest that might be uncovered to be properly recorded prior to their destruction, to achieve 'preservation by record'. It is envisaged that the requirement for archaeological recording would be made a condition of any planning approval, in accordance with national and regional planning guidance.

1 INTRODUCTION

- 1.1 In November 2017, Ed Dennison Archaeological Services Ltd (EDAS) were commissioned by Mr Sam Godfrey of R J and A E Godfrey to produce a Heritage Statement in support a planning application for proposed new pig buildings and associated structures at Somerby Top, Somerby, near Barnetby le Wold, Lincolnshire (NGR TA 0788 0752 centred) (see figures 1 and 2).
- 1.2 Advice from West Lindsey District Council (WLCD), in response to a pre-planning inquiry, stated that A full archaeological evaluation report including heritage impact statement is required which explores in the first instance non-intrusive evaluation of the site, and, if this suggests that further information is required, intrusive evaluation should be submitted in the form of trial trenching to further inform the heritage impact statement as to [the] presence/absence/location, depth, survival and significance of any remains. This should inform a suitable mitigation strategy for the impact (WLDC Screening Option application 136921). This report supplies the required heritage statement, incorporates the results of a geophysical survey and provides an appropriate mitigation strategy. All the work associated with the Heritage Statement was funded by the site owners, R J and A E Godfrey.
- 1.3 The purpose of this Heritage Statement is to describe the archaeology and heritage of the area, and to assess the nature, extent and significance of any heritage assets which might be affected by the proposed development. It has been produced by Ed Dennison Archaeological Services Ltd (EDAS), and is in accordance with the National Planning Policy Framework (NPPF) paragraph 128 (DCLG 2012, 30). It should be noted that this is not a 'Design and Access Statement'.

2 METHODOLOGY AND SOURCES

- 2.1 For the purposes of this Heritage Statement, a study area of 1km centred on the proposed development site at Somerby Top was defined, although information for the more general area was also collected (see figures 1 and 2). The extent of this study area was confirmed with the Places Manager at Lincolnshire County Council.
- 2.2 In line with standard archaeological practice (e.g. ClfA 2014a), and guidance contained in the National Planning Policy Framework (NPPF) (DCLG 2012) and the requirements of the local archaeological curators (Lincolnshire County Council Historic Environment Record), the following sources of information were examined to produce this Heritage Statement.

Sources of Information

2.3 The Lincolnshire County Council Historic Environment Record (LCC HER), which is held and maintained by the Environment and Economy Directorate of the Council in Lincoln, was consulted for information on the known archaeological heritage of the area. As the study area extended into North Lincolnshire, information from the North Lincolnshire Historic Environment Record (NLHER) was also collated. Other on-line data from the 'Heritage Gateway' website (http://www.heritagegateway.org.uk/gateway), which provides links to the National Heritage List for England (NHLE), the National Record of the Historic Environment (NRHE - Pastscape), the National Monument Record Excavation Index and the Register of Historic Parks and Gardens, was also collected. A number of other archaeological databases were searched for relevant information, for example the Defence of Britain database for details of Second World War sites

(http://archaeologydataservice.ac.uk/archives/view/dob/), the British and Irish Archaeological Bibliography for records of previous archaeological investigations (https://archaeologydataservice.ac.uk/library/), and the artefacts and finds recorded by the Portable Antiquities Scheme (http://finds.org.uk/). Information on those buildings listed as being of Special Architectural or Historic Interest was obtained from Historic England's 'Images of England' website (http://www.imagesofengland.org.uk).

- 2.4 The Ordnance Survey's historic maps of the study area were also consulted, at both 6" and 25" scales, from those available via the National Library of Scotland website (http://maps.nls.uk/index.html). No visit was made to the Lincolnshire County Record Office in Lincoln to examine other historic maps. Information relating to the Lincolnshire Historic Landscape Characterisation (HLC) was also made available by the LCC HER.
- 2.5 A range of published and unpublished documentary sources in both local and national collections were consulted for background information and specific data on specialised aspects of the history and archaeology of the study area. A list of all the sources consulted for this assessment is provided in the bibliography (Chapter 7) below.

Records of Previous Research or Investigations

- 2.6 There have been no previous archaeological investigations carried out within the 1km search area, although several of the 19th century farmsteads such as Somerby Top, Bigby Top and Searby Top were included in English Heritage's 2015 Lincolnshire Farmsteads Project. Slightly further afield, the deserted medieval village at Somerby and the 16th/17th century garden remains at Somerby House have been the subject a detailed earthwork survey (Everson *et al* 1991, 164-168), and there were some limited excavations undertaken at the deserted village in 1957 (Mynard 1969).
- 2.7 A significant archaeological investigation was also undertaken at Barnetby Wold Farm, 1.5km to the north-east of Somerby Top Farm, in 1991 by the Humber Archaeology Unit in advance of the construction of a southern extension of the main runway at Humberside Airport (Didsbury & Steedman 1992; Steedman & Tibbles 1991). An initial geophysical (magnetometer) survey identified a complex of linear anomalies of probable archaeological origin to the east of Barnetby Wold Farm. Subsequent excavation revealed three small groups of pits which contained Bronze Age and early Iron Age pottery, and a few Neolithic and Bronze Age flint artefacts were recovered during topsoil stripping and later fieldwalking. Some of the pits may have represented the positions of the timber posts of buildings, although there was no structural pattern apparent in their distribution.
- 2.8 The study area also lies just outside a large area examined in 2003 to establish the archaeological potential of the airport site (Hall 2003). This assessment established that there is multi-period archaeological potential in the vicinity of the airport ranging in date from the Palaeolithic to the present time. A considerable amount of archaeological investigation has been undertaken at the airport site, all of which is summarised by Hall (2003). Another desk-top assessment relevant to the study area was undertaken in 2007 for proposed mineral extraction between Kettleby Thorpe Farm and Bigby (Wood 2007). Searby Top Farm, on the southeastern edge of the study area, was the subject of a recent building recording project (Trimble 2012).

Geophysical Survey

2.9 A geophysical survey was undertaken by Archaeological Services WYAS over the proposed development site, an area measuring c.1.5ha, on 14th December 2017 (ASWYAS 2017). The survey grid was laid out using a Trimble R8s GNSS system, and a Bartington Grad601 magnetic gradiometer was used for the data collection. Readings were taken at 0.25m intervals on zig-zag traverses 1m apart within 30m by 30m grids, so that 3,600 readings were recorded in each grid. These readings were stored in the memory of the instrument and later downloaded to a computer for processing and interpretation; Geoplot 3 (Geoscan Research) software was used to process and present the data. Appendix 1 provides a non-edited copy of the survey report and the results of the survey are given and discussed in Chapter 5 below.

3 DESIGNATED ASSETS AND PLANNING POLICY CONTEXT

Designated Assets

3.1 Designated Heritage Assets are defined as comprising World Heritage Sites, Scheduled Monuments, Listed Buildings, Protected Wreck Sites, Registered Parks and Gardens, Registered Battlefields and Conservation Areas (DCLG 2012, 51). It should be noted that there is also a lower level of heritage assets, which may or may not be of equivalent significance to a Scheduled Monument, but which are currently undesignated.

Scheduled Monuments

- 3.2 Scheduled Monuments are considered to be of national importance and are protected under the Ancient Monuments and Archaeological Areas Act 1979, and they are administered by Historic England (formerly English Heritage) on behalf of the Secretary of State. Under the terms of Part 1 Section 2 of the Act, it is an offence to damage, disturb or alter a Scheduled Monument either above or below ground without first obtaining permission (Scheduled Monument Consent) from the Secretary of State.
- 3.3 There are no Scheduled Monuments within or immediately adjacent to the study area. The nearest are a moated site and fishpond 200m south-east of Melton Hall in Melton Ross (NHLE 1007747) and a Roman settlement and fort complex to the west of Kirmington village (NHLE 1005206). These assets are 3.07km to the north and 4.14km to the north-east of the proposed development site respectively.

Listed Buildings

- 3.4 Listed Buildings are afforded protection under the Planning (Listed Buildings and Conservation Areas) Act 1990. Listing is a national designation, but Listed Buildings are divided into three grades, I, II* and II, which relate to their architectural and historical value. Section 66 of the 1990 Act states that planning authorities must have special regard for the desirability of preserving (*inter alia*) the setting of any Listed Building that may be affected by the grant of planning permission.
- 3.5 There are no Listed Buildings within the study area, although there several within the villages scattered along the edge of the Wolds scarp to the west for example, five in Bigby (one Grade I and four Grade II), two in Somerby (one Grade II* and one Grade II), and five in Searby cum Owmby (all Grade II). The nearest Listed

Buildings to the proposed development site are Grange Farm farmhouse in Somerby (Grade II - NHLE 1308696) and the Manor House in Searby cum Owmby (Grade II - NHLE 1063370), which are 1.70km to the south-west and south-southwest respectively.

Other Designated Assets

3.6 There are no World Heritage Sites, Protected Wreck Sites, Registered Parks and Gardens, Registered Battlefields or Conservation Areas within or immediately adjacent to the study area. The nearest Registered Park and Garden is the Grade 1 Brocklesby Park (NHLE 1000971), the core of which is centred on Brocklesby Hall to the east of Kirmington village, but whose shelter belts extend closer to the study area at Hendale Wood (c.2km). The nearest Conservation Area is Great Limber village, which is 5.53km to the east of the proposed development site.

National Planning Policy Framework (2012)

- 3.7 The National Planning Policy Framework (DCLG 2012) sets out the Government's planning policies for England and how these are to be achieved, with the purpose of planning being to help achieve sustainable development. At the heart of the policy framework is the presumption in favour of sustainable development (paragraph 14). The conservation of heritage assets in a manner appropriate to their significance is one of the twelve core planning principles that should underpin both plan-making and decision-making (paragraph 17). Significance is defined as "the value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting" (Appendix 2).
- 3.8 NPPF policies relating to conserving and enhancing the historic environment state that, when determining applications, local planning authorities should require an applicant to describe the significance of any affected heritage asset, including any contribution made by their setting. This should be proportionate to the assets' importance and, where a development site may include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, undertake a field evaluation (paragraph 128).
- 3.9 When considering the impact of a proposed development on the significance of a designated heritage asset, the NPPF notes that great weight should be given to the asset's conservation. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Substantial harm to a Grade II Listed Building, park or garden should be exceptional. Substantial harm to or loss of heritage assets of the highest significance, including Scheduled Monuments and Grade I and II* Listed Buildings, should be wholly exceptional (paragraph 132).
- 3.10 Where a proposed development would lead to substantial harm or total loss of significance of a designated heritage asset, the NPPF states that local planning authorities should refuse consent unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits (paragraph 133). Where a development will lead to less than substantial harm of the significance of a designated asset, this harm should be weighed against the public benefits of the proposal (paragraph 134). The document goes on to state that the effect of an application on the significance of a non-designated heritage

asset should also be taken into account when determining an application, a balanced judgement being required having regard to the scale of any harm or loss and the significance of the heritage asset (paragraph 135).

3.11 Finally, the NPPF states that local planning authorities should make information about the significance of the environment gathered as part of the development publicly accessible. They should also 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 importance and the impact, and to make this evidence (and the archive generated) publicly accessible (paragraph 141).

Central Lincolnshire Local Plan

- 3.12 The Central Lincolnshire Local Plan 2012-2036 was adopted by the Central Lincolnshire Joint Strategic Planning Committee on 24th April 2017, replacing the former West Lindsey District Local Plan (CLJSPC 2017).
- 3.13 The Historic Environment falls within Chapter 5 (A Quality Central Lincolnshire) of the Local Plan, and covers Listed Buildings and their settings, Conservation Areas, and Archaeology (CLJSPC 2017, 60-64). In relation to archaeological sites, the Local Plan notes that "Local Planning Authorities may require developers to assess the potential impacts of their proposal on archaeological remains in order to reach a decision on a development proposal. Where archaeological impacts are indicated, developers are expected to work with the local planning authority to devise a scheme for mitigating such impacts, which may form part of a planning condition or a planning obligation. Such conditions are designed to ensure that such remains are either preserved in situ or recorded".
- 3.14 It further states "All archaeological work should be based on a thorough understanding of the available evidence, and of the local, regional and national contribution it makes. The known and potential archaeological heritage of the area is recorded by the Lincolnshire Historic Environment Record and, in Lincoln, by the Lincoln Heritage Database. These and other sources, such as the Lincolnshire Archives, The Lincolnshire Archaeological Handbook and the Lincolnshire Historic Landscape Characterisation should be used to inform all proposals and decisions".
- 3.15 There are similar statements relating to Listed Buildings and their settings, and Conservation Areas.
- 3.16 There is one policy (Policy LP25) covering the Historic Environment, as follows.

Policy LP25: The Historic Environment

"Development proposals should protect, conserve and seek opportunities to enhance the historic environment of Central Lincolnshire.

In instances where a development proposal would affect the significance of a heritage asset (whether designated or non-designated), including any contribution made by its setting, the applicant will be required to undertake the following, in a manner proportionate to the asset's significance:

- (a) describe and assess the significance of the asset, including its setting, to determine its architectural, historical or archaeological interest;
- (b) identify the impact of the proposed works on the significance and special character of the asset; and

(c) provide clear justification for the works, especially if these would harm the significance of the asset or its setting, so that the harm can be weighed against public benefits.

Unless it is explicitly demonstrated that the proposal meets the tests set out in the NPPF, permission will only be granted for development affecting designated or non-designated heritage assets where the impact of the proposal(s) does not harm the significance of the asset and/or its setting.

Development proposals will be supported where they:

- (d) Protect the significance of designated heritage assets (including their setting) by protecting and enhancing architectural and historic character, historical associations, landscape and townscape features and through consideration of scale, design, materials, siting, layout, mass, use, and views and vistas both from and towards the asset;
- (e) Promote opportunities to better reveal significance of heritage assets, where possible;
- (f) Take into account the desirability of sustaining and enhancing non-designated heritage assets and their setting.

The change of use of heritage assets will be supported provided:

- (g) the proposed use is considered to be the optimum viable use, and is compatible with the fabric, interior, character, appearance and setting of the heritage asset;
- (h) such a change of use will demonstrably assist in the maintenance or enhancement of the heritage asset; and
- (i) features essential to the special interest of the individual heritage asset are not lost or altered to facilitate the change of use.

Listed Buildings

Permission to change the use of a Listed Building or to alter or extend such a building will be granted where the local planning authority is satisfied that the proposal is in the interest of the building's preservation and does not involve activities or alterations prejudicial to the special architectural or historic interest of the Listed Building or its setting.

Permission that results in substantial harm to or loss of a Listed Building will only be granted in exceptional or, for grade I and II* Listed Buildings, wholly exceptional circumstances.

Development proposals that affect the setting of a Listed Building will be supported where they preserve or better reveal the significance of the Listed Building.

Conservation Areas

Development within, affecting the setting of, or affecting views into or out of, a Conservation Area should preserve (and enhance or reinforce it, as appropriate) features that contribute positively to the area's character, appearance and setting. Proposals should:

- (j) Retain buildings/groups of buildings, existing street patterns, historic building lines and ground surfaces;
- (k) Retain architectural details that contribute to the character and appearance of the area;

- (I) Where relevant and practical, remove features which are incompatible with the Conservation Area:
- (m) Retain and reinforce local distinctiveness with reference to height, massing, scale, form, materials and lot widths of the existing built environment;
- (n) Assess, and mitigate against, any negative impact the proposal might have on the townscape, roofscape, skyline and landscape;
- (o) Aim to protect trees, or where losses are proposed, demonstrate how such losses are appropriately mitigated against.

Archaeology

Development affecting archaeological remains, whether known or potential, designated or undesignated, should take every practical and reasonable step to protect and, where possible, enhance their significance.

Planning applications for such development should be accompanied by an appropriate and proportionate assessment to understand the potential for and significance of remains, and the impact of development upon them.

If initial assessment does not provide sufficient information, developers will be required to undertake field evaluation in advance of determination of the application. This may include a range of techniques for both intrusive and non-intrusive evaluation, as appropriate to the site.

Wherever possible and appropriate, mitigation strategies should ensure the preservation of archaeological remains in-situ. Where this is either not possible or not desirable, provision must be made for preservation by record according to an agreed written scheme of investigation submitted by the developer and approved by the planning authority.

Any work undertaken as part of the planning process must be appropriately archived in a way agreed with the local planning authority.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Introduction

4.1 The following summary of the archaeological and historical background to the study area has been complied from a variety of sources and databases, listed in the bibliography (Chapter 7 below).

Prehistoric Periods (14600 BC-AD 43)

Early Prehistoric Periods (before c.2500 BC)

- 4.2 Much of the evidence for prehistoric activity and settlement around the study area has come from archaeological investigations undertaken in and around Kirmington International Airport. This is a reflection of recent development pressure, which in turn influences the locations of most investigations, rather than being any true distribution of archaeological sites or material. It is likely that the results of the work around Kirmington can be replicated throughout the northern part of the Lincolnshire Wolds.
- 4.3 The palaeolithic era represents the earliest period of human activity when nomadic hunter-gatherers followed and hunted migratory animal herds. Evidence for activity

from this period is rare and usually consists of finds of flint tools and implements. A large and particularly important assemblage of such artefacts including hand axes was recovered at two locations within Kirmington village during the 1930s from the clay pits and a gravel quarry (NLHER 2260; Pastscape 80501 & 1300072).

4.4 A Neolithic perforated hammerhead was found in an archaeological evaluation at Franklin Way close to the airport in 2002, and a flint axe of the same date was found in a field to the north-west of Little Limber Grange (Pastscape 80283). Other long barrows or enclosures have also been found further afield, for example at Swinthorpe and Stainton le Vale (Everson *et al* 1991, 6). These finds and monuments attest to some activity on the north part of the Wolds during this period. In addition, several finds of prehistoric material, such as flint tools and lithic scatters, were found during fieldwalking to the east of Wellholmes Holt, on the low-lying ground to the north-west of Bigby, showing that this area was also being exploited at this time (Wood 2007, 5-6).

Bronze Age (c.2500-800 BC)

- In April 1991, an archaeological evaluation was undertaken by the Humber Archaeology Unit, in advance of a southern extension of the main runway at Kirmington airport to the east of Barnetby Wold Farm (Steedman & Tibbles 1991). This revealed three small groups of pits which contained Bronze Age and early Iron Age pottery. A few Neolithic and Bronze Age flint artefacts were also recovered during topsoil stripping and later fieldwalking. Some of the pits are thought to have represented postholes for a timber building, although there was no structural pattern to their distribution. No other archaeological features were seen, although they may have been removed by subsequent ploughing or simply reflect low settlement density. However, the archaeological features that were identified implied two widely separated phases of settlement activity spanning a period of up to 1000 years.
- 4.6 The ploughed-out remains of a Bronze Age round barrow, now represented by a ring ditch, have been identified at Micklow Hill to the south of Southfield Farm (NLHMR 2259; Pastscape 78619). A further ring ditch has been noted from aerial photographs just to the north-east of Bigby village (LCC HER MLI53681). Other Bronze Age material, including flint scatters and bronze axes, has been found in the area east of Wellholmes Holt (Wood 2007, 6).

Iron Age (c.800 BC-AD 43)

- 4.7 Yarborough Camp, to the north-west of Melton Ross Quarry, is a small univallate fortified earthwork of possible Iron Age and/or Romano-British-British date; it is also a Scheduled Monument (NLHER 743; Pastscape 78829; NHLE 1016427). The earthwork comprises a single sub-rectangular shaped bank and ditch, and measures c.90m east-west and c.70m north-south; the ditch is silted up but the chalk rubble bank is up to c.3m high. The site is situated some 1.5km to the north of the major Iron Age and Romano-British settlement site at Kirmington, and also stands on the line of a prehistoric trackway known as the 'High Street' (see below). William Stukeley, the noted 18th century Lincolnshire antiquarian, noted that 'vast quantities of Romano-British coins' have been found at the site (Hall 2003, 19).
- 4.8 An Iron Age bone weaving comb was found in a field to the south-west of Kirmington in 1977 (Pastscape 883586). An Iron Age settlement including

- roundhouses, enclosure ditches and burials has also been excavated at Barnetby le Wold (Wood 2007, 6).
- 4.9 The prehistoric landscape of this part of the north Lincolnshire Wolds was almost certainly dominated by the 'High Street', a prehistoric trackway that extended along the eastern edge of the Lincolnshire Wolds from South Ferriby on the River Humber to Horncastle in the south (NLHER 15493; LCC HER MLI99396); near the study area, the route is thought to be represented by the present-day parish boundary between Kirmington and Barnetby le Wold. This important and early thoroughfare would have provided a focus for contemporary settlement activity, but as yet little evidence for it has been proven (Hall 2003, 34).

Romano-British Period (AD 43-410)

- A significant multi-period settlement lies to the west of Kirmington village, off the 4.10 north end of the airport; the site is a Scheduled Monument (NLHER 2265; NHLE 1005206). It is mainly visible as a complex series of cropmarks which suggest three main phases of settlement. An early prehistoric presence may be implied by a possible funerary monument or ring ditch located on the north-eastern periphery of the complex, and surface finds appear to date this first period of continuous occupation of the site to the late Iron Age (1st century BC); this early period of settlement was probably represented by a series of irregular droveways and two large curvilinear enclosures. The next phase is formed by late 1st century AD Romano-British military occupation, represented by a trapezoidal-shaped fort, which appears to have been superimposed on the Iron Age settlement. The rectilinear double-ditched monument, now visible as cropmarks, encloses an area of c.3.8ha, and gaps through the defences suggest two possible gateways and roads. In the final phase, the fort was superseded by a major civilian settlement focussed on an extended network of irregular roads and enclosures, and traces of rectangular buildings which have been seen, built over the levelled fort defences. The fort was also overlain by several metalled roads, visible as lines of parchmarks, which bear little relationship to the fortress (Jones & Whitwell 1991). There has been a considerable amount of archaeological investigation and fieldwork in and around this complex, involving cropmark analysis, geophysical survey, trial trenching and detailed excavation; this work has uncovered a wealth of artefactual and structural material, all of which has been summarised by Hall (2003).
- 4.11 There are further cropmark features to the north, west and south-west of the Kirmington settlement complex, which include enclosures and a possible double-ditched rectilinear feature to the south-west. The irregular roads and trackways, which are often flanked by ditches, appear to be linked to a series of enclosures amongst which are the outlines of rectangular strip buildings, of either stone or timber construction and robber trenches marking the outline of the walls.
- 4.12 As the above text implies, much of the evidence for later prehistoric and Romano-British settlement and activity, especially on the chalk Wolds, comes from aerial photographs. A survey of available aerial photographs in 1988 over a sample transect across the northern part of West Lindsey confirmed that the chalk uplands were intensively occupied with a high proportion of cropmark sites compared to other parts of the region (Jones 1988), although this imbalance is beginning to change with more sites being discovered in the clay vales and on the limestone dipslopes. The evidence is that there was some form of Roman occupation in almost all areas of West Lindsey, and the majority of parishes have two or three Roman sites within their boundaries, whether they be major villa sites or small

farmsteads with their attendant field systems (Everson *et al* 1991, 7). One such possible Roman complex has been noted on the low-lying land to the west of Somerby, where the 1886 Ordnance Survey 6" map (sheet 20SW) marks "Roman tessellated pavement found"; a surface scatter of pottery, tile and other building debris was found here in the 1950s (LCC HER MLI53669).

4.13 Sections of linear cropmarks have been identified from aerial photographs all around the study area, and these probably represent the remains of late prehistoric or Romano-British field systems. One such cropmark lies just south-east of Prospect Farm (NLHER 19581), another can be seen on Mealand Hill, perhaps associated with a small square enclosure (NLHER 1963 & 19632), and there is another just to the south of Owmby Wold Lane (LCC HER MLI53624). Slightly more complex cropmarks of rectilinear enclosures and a trackway have also been noted on the northern edge of Mealand Hill and east of Mill Farm (NLHER 19630 & 19633). Several linear ditches and possible enclosures, disturbed by overlying medieval ridge and furrow, have also been seen on the north-eastern edge of Searby (LCC HER MLI53623), and another sub-circular enclosure lies to the south-east of Somerby Low Farm (LCC HER MLI98848).

Saxon and Early Medieval Periods (c.410 to 1065 AD)

- 4.14 It seems that many of the existing villages originated in the Saxon or Early Medieval period, with generally little evidence to show that settlements continued from the Roman period into the Saxon. However, Roman and early Saxon material has been found on the deserted medieval village site at Kettleby in Bigby parish, but this is unusual (Everson *et al* 1991, 7). Nevertheless, place-name evidence in particular points to a post-Roman origin for many villages, for example, the name of 'Somerby' stems from a combination of the Scandinavian personal name of *Sumarlithi* and *-by*, meaning a farmstead (Mills 1991, 301). The names of Bigby, Searby and Owmby are similarly early farmsteads. As a general rule, it is likely that many of the West Lindsey villages were in existence by the late 11th or early 12th century, but that they were not very old and not always on the same site as the later medieval villages (Everson *et al* 1991, 9).
- 4.15 An Anglo-Saxon disc brooch was found in a field to the south-west of Kirmington in 1982, while a coin of Eanred of c.AD 835 was found in the same locality in 1979 (Pastscape 883587 & 883590). There is also some evidence to suggest that settlement at the Kirmington Romano-British complex may have continued into the 5th century and beyond, from finds of quantities of Germanic metalworked objects, including early Anglo-Saxon cruciform brooches, together with two transitional sub-Romano-British/early Anglo-Saxon stamped pottery sherds, and middle Anglo-Saxon pottery found on the northern fringe of the disused airfield (Hall 2003, 26). An extensive, apparently late 5th to early 6th century, cemetery containing several burials as well as other finds, has also been found at Searby in a disused chalk pit (LCC HER MLI50589).

Medieval Period (AD 1066-1540)

4.16 In the medieval period, the parish was the basic unit of ecclesiastical administration, while the township was the economic basis of settlement. Generally, parishes were made up of more than one township, although in many cases the two units were synonymous. The central part of the study area lies within the medieval parish and township of Somerby, while the southern edge is in Searby township (part of Searby cum Owmby parish) and the northern part is in Bigby township and parish and Barnetby le Wold parish; the division between the

latter two is the present county boundary between Lincolnshire to the south and North Lincolnshire to the north. These parishes and townships have a strip-like plan form, allowing them to take in both the low-lying ground to the west, the steep Wold escarpment, and the flatter Wold chalkland above.

- 4.17 Many of the West Lindsey villages show evidence for shrinkage or movement during the medieval period, and this is also the case for those spring-line villages along the Wolds escarpment near the study area. Somerby village is predominately deserted (LCC HER MIL50536; see below), Owmby is shrunken while Bigby and Searby are still extant, although with some evidence of shrinkage (LCC HER MLI53607). The complex of earthworks surrounding Kettleby House in Bigby are characteristic of the area, and emphasis the multi-period nature of these types of remains. The site comprises a medieval moated enclosure which contains the remains of a 16th or early 17th century house with its associated gardens. A series of linear ponds just to the east of the moat probable represent a water garden of two phases, and there are other later paddocks and enclosures to the north-west. A large rectangular walled garden of probable early 17th century date overlies the remains of Kettleby village which was probably deserted by the mid 16th century (Everson et al 1991, 70-71; LCC HER MLI53674).
- 4.18 Documentary evidence shows that Somerby was divided into two main holdings at the time of the 11th century Domesday survey, and remained so for much of the medieval period. Population levels in the parish were always small, with perhaps only 18-19 inhabitants in 1086 and in the early 14th century, although 63 people paid the Poll Tax in 1377 and at least 10 households existed in 1428, perhaps indicating some recovery. However, only seven taxpayers are noted in 1542-43. and only five households in 1563, and there was no increase in numbers until the later 18th century and between 11 and 13 households are recorded in the 19th century (Everson et al 1991, 164-165). The remains of Somerby deserted village lie in a poorly drained part of the parish, and it may be that the original settlement lay further to the north, nearer the church. Its later unsatisfactory position could be result of an arbitrary decision by the medieval landowner to move it with little regard for his disadvantaged tenants, possibly in the 11th or 12th century, to make way for an expanded manorial complex (Everson et al 1991, 12). Alternatively, the earthworks nearer the church may represent a secondary nucleus of settlement associated with the second medieval manor (Everson et al 1991, 165).
- 4.19 An earthwork survey of the deserted village site shows that it comprised a number of separate farmsteads linked by a meandering holloway, rather than being a nucleated village with a main street as we would normally recognise today. The reason for desertion was due to the conversion of the village and its arable fields into sheep pasture by the then landowner, Sir Thomas Cumberworth, in the 15th century (Everson *et al* 1991, 164-167). By 1603, the few remaining inhabitants petitioned to have the chancel of the medieval church, which was already severely decayed, taken down and the crossing tower turned into a chancel. Small-scale excavations in 1957 revealed the plan of a 15th-16th century two-bay house with adjoining workshop, as well as numerous other features dating from the 11th to the 15th centuries (Mynard 1969; LCC HER MLI50536).
- 4.20 Further earthworks lie around and to the west of Somerby House. This house was originally much larger, commensurate with the importance of the manorial landlord, Sir Thomas Cumberworth, who was High Sheriff and a Member of Parliament. However, the manor was acquired by the Rossiter family in the early 16th century, and in 1660 Sir Edward Rossiter built a new house of classical design on the same site. Somerby and much of adjacent Searby township was then bought by his

relative, Edward Weston (1703-1770), a writer and politician, and he built a large walled garden and lake to the west of the house in the mid 18th century. The 17th century house was then rebuilt in the 19th century and its formal gardens were replaced by open parkland, although some earthworks remain, overlying part of the deserted village. This later house was, in turn, demolished in 1964, and its replacement is a modern structure (Everson *et al* 1991, 167-168; LCC HER MLI53617).

4.21 Few other medieval remains lie within or immediately adjacent to the study area. St Margaret's church in Somerby, mentioned above, is 13th century in origin and, despite a heavy restoration in 1884, still preserves some early fabric; it is a Grade II* Listed Building (LCC HER MLI53616; NHLE 1359824). St Nicholas's church in Searby, a Grade II Listed Building, was rebuilt in 1832, although some medieval stonework may remain at the base of the tower (LCC HER MLI53613; NHLE 1063371). There are the remains of medieval ridge and furrow, indicative of medieval arable cultivation, around the extant, shrunken and deserted villages along the spring line, and in some cases, the villages can be shown to have been established over the former open field systems. This was previously much more extensive but large areas have recently be ploughed out (LCC HER MLI53609, MLI53620, MLI53622 & MLI53683), although some extant earthworks can be seen, for example, in Somerby Park and south of the A1084 through Bigby (LCC HER MLI53684). Each village was surrounded by small enclosures associated with the individual farmsteads or houses, but further away the land was divided into a number of large open fields. On the higher Wold land in the eastern part of the townships, there were usually two fields, North and South Fields, separated by a central track or path and divided into numerous individually-owned strips; in Searby, the North and South High Fields both covered 240 acres (Russell 1987, 169).

Post-medieval Period (AD 1540 onwards)

- 4.22 The majority of the standing buildings in the spring-line settlements such as Somerby, Searby and Bigby date to the 17th century and later, although many have had subsequent alterations and modifications. Several are Listed Buildings, such as Searby Manor farmhouse (built in the late 18th century) (NHLE 1063370; LCC HER MLI96407), White Hall in Bigby (17th century but refronted in c.1760) (NHLE 1063406; LCC HER MLI96433), the Old Rectory in Bigby dating from 1790 and possibly designed by T Robinson (NHLE 1063407; LCC HER MLI96434), Grange farmhouse in Somerby built in 1756 (NHLE 1308696; LCC HER MLI96867), and Island Cottage in Somerby built in the late 17th century as one cottage (NHLE 1308714; LCC HER MLI96868). Of particular interest is a monument to the north of the church which takes the form of a tall ashlar Doric column erected in 1770 to commemorate the 29 years of marriage between Edward Weston of Somerby Hall and his second wife Anne (NHLE 1063373; LCC HER MLI96409).
- 4.23 The economic base of the spring-line parishes and settlements such as Bigby, Somerby and Searby cum Owmby remained firmly based in agriculture during the post-medieval period. Agricultural productivity greatly increased due to the enclosure of the former open fields and commons, which re-distributed ownership from individually-owned strips into large rectangular fields under single ownership. The enclosure process was largely brought about by various Acts of Parliament in the late 18th or early 19th century, for example Somerby parish in 1811 and Searby in 1763-65 (Russell 1960; Russell 1987, 168-171). However, some enclosure through agreement could be much earlier, for example an agreement

between Sir Edward Rossiter and his tenants to create various fields in the former open west field of Grasby in 1649 (LRO MISC DON 275/9/5). The distinctive pattern of newly created large rectangular-shaped fields can be seen on the 1886 Ordnance Survey 6" map (sheet 20SE) (see figure 3); Somerby Wold Lane, which would have been formalised as part of the same process, neatly bisects the field system and the field boundaries are laid out at right angles to the lane. It is interesting to note the slightly different field sizes of the adjoining parishes, those in Bigby parish to the north being larger and generally less regular (but still rectangular), while those in Searby to the south are smaller and slightly more haphazard but still straight-sided; this reflects the different periods of enclosure and the fact that the townships were self-contained economic units.

- 4.24 It is likely that many of the Wold-top farmsteads were built at the same time or soon after the enclosure process, so that the newly-created fields could be efficiently managed and farmed. Most of them have "Top" included in their names, in some cases to distinguish them from the "Low" farms in the low-lying land to the west of the Wold scarp (see figure 3). Many of these new complexes were outliers or satellites to the main larger home or manor farms in the villages, which explains why not all of them had attendant farmhouses. Most are characterised by cattle sheds and foldyards, with barns, granaries, cart sheds, loose boxes, shelter sheds and stables. In addition to providing storage and shelter for machinery and stock. their foldyards meant there was an important and readily available supply of manure with which to fertilise the adjacent fields; exactly the same process occurred in the Yorkshire Wolds, where these isolated collections of farm buildings have been termed "manure factories" (Hayfield 1991); straw was taken from the fields, distributed in the cattle yards and shelters, and mixed with manure before being collected and returned to the fields, thereby obviating the need to transport straw and manure between the primary farm and outlying fields (Harvey 1984, 138). These remote units were often overseen by a stockman operating from the main farmstead, although on-site cottages were also provided for labourers. In recent years, many of these "Top" farm complexes have been demolished or reduced in size, or adapted to other uses, reflecting changing agricultural practices.
- 4.25 There is some evidence for small-scale industrial activity around the study area. Chalk and gravel quarries, and clay pits, would have been dug to provide building materials, for example a chalk pit lies close to Searby village (LCC HER MLI53604), and there is a larger quarry with the remains of processing works to the north of Bigby (LCC HER MLI53681). Lime and marl pits would have been excavated for agricultural fertilisers. Most of the villages would have had a mill to grind locally-grown corn, in this area usually a windmill rather than a water mill; one windmill mound has been noted to the north-west of Searby (LCC HER MLI53610).
- 4.26 Other improvements were made to the local transport system, for example the main Brigg to Caistor road, which passes through the scarp settlements (the present A1084), was improved and turnpiked in 1765. The other roads and tracks, leading east from this road into the Wold land, were formalised as part of the enclosure process, each road being given the name of the township; in the Searby enclosure award, the public roads were to be 40 feet (12m) wide (Russell 1960, 26).
- 4.27 There is no evidence for any Secord World War activity immediately adjacent to the study area, but Kirmington airport dates from this period. Construction of the airfield began in late 1941 for the use of No 1 Group of RAF Bomber Command and was completed in the summer of 1942. It was a standard heavy bomber

airfield with three concrete runways and dispersed accommodation; the extension of these runways meant that the A18 trunk road had to be diverted to the west of Kirmington village, and another minor road running along the eastern edge of the airfield to Caistor had to be closed. The airfield had the typical arrangement of the time, with pan-shaped and loop-type hardstandings, various hangars, a maintenance site and control tower in the north-west part of the complex, a bomb store well to the south (to the south of Southfield Farm), and a total of eleven camp sites and associated sewerage works dispersed to the north-east of the airfield and Kirmington village. The airfield was closed in December 1945, and in February 1946 the Labour Government put the airfield under a 'care and maintenance' regime, which continued until 1953, when control of the airfield was relinquished by the Air Ministry to the Ministry of Agriculture. From then the airfield and its wartime buildings were used by private operators for crop spraying and commercial flying, before the site was bought by West Lindsey District Council with the aim of developing a regional airport in 1970 (Hall 2003, 28-29).

5 THE STUDY AREA

Introduction

As previously noted, the study area for this Heritage Statement measures 1km in all directions from the centre point of the proposed development (see figure 4).

Physical Characteristics

- 5.2 The study area lies on the northern edge of the Lincolnshire Wolds, at a height of 70m AOD. Around the proposed development site, the land slopes gently to the north-east, forming a dip slope away from the steep western scarp of the Wolds along which the spring-line villages of Bigby, Somerby and Searby are located (see figure 1). The underlying geology is upper Cretaceous chalk of the Welton Chalk Formation, a white massive or thickly bedded chalk with common flint nodules ("burrow-form flints") but which generally lacks tabular flint bands (http://mapapps.bgs.ac.uk/geologyofbritain/home.html). The bedrock is overlain by a typical brown calcareous fine loamy soil of the Swaffham Prior Association (Soil Survey 1983).
- 5.3 Somerby Top Farm is accessed via Somerby Wold Lane, which runs north-west from the A1084 Brigg to Grasby road, at Bigby Hill (see figure 2). The track formerly extended north-east to link with an unnamed route running approximately north-south through this part of the Wolds, from New Barnetby and Melton Ross to Caistor, which connects the northern ends of the various townships and parishes in this area. As noted in Chapter 4 above, the Wold land to the east of the A1084 was laid out as part of the enclosure process, which took occurred in the late 18th or early 19th century, for example Somerby parish in 1811 and Searby in 1763-65. Since then, however, many of the field boundaries have been removed due to changing agricultural practices requiring larger fields.

Identified Heritage Assets

The Heritage Statement has identified six heritage assets or sites within the study area, as set out below. Their locations are shown on figures 4 and 6. Where appropriate, the numbered assets are correlated with identifiers assigned by the LCC HER, the National Heritage List for England (NHLE), the National Record of the Historic Environment (NRHE), and the National Monument Record Excavation Index (NMRE). It should be noted that the stated National Grid References

(NGRs) only relate to the study area, and may not necessarily be the full extent of the identified assets.

Designated Heritage Assets

5.5 As noted in Chapter 3 above, there are no designated assets (i.e. World Heritage Sites, Scheduled Monuments, Listed Buildings, Protected Wreck Sites, Registered Parks and Gardens, Registered Battlefields or Conservation Areas) within or immediately adjacent to the study area.

Non-Designated Heritage Assets

- A total of 41 items are recorded on the Portable Antiquities Scheme database (http://finds.org.uk), from Somerby parish, ranging from a Neolithic stone axe fragment (record NLM-E77148), an Iron Age spear and ring (record NLM-38F3B1 and NLM-DB9B76) and three Roman coins and a sherd of pottery (records NLM-FF71A4, NLM-FF0077 & NLM-FEF122) to three early medieval pins and one coin, and various other medieval and post-medieval artefacts. However, where locations are recorded, these finds were discovered from the lower ground to the west of the A1084 road, and none have been found in or immediately adjacent to the study area.
- 5.7 No sites have been recorded by the National Monument Record Excavation Index, the British and Irish Archaeological Bibliography for records of previous archaeological investigations, or the Defence of Britain database for details of Second World War sites, within the study area. There are also no sites recorded on the North Lincolnshire HER for the northern part of the study area.
- An examination of the available databases (see Chapter 2) established that five non-designated assets lay within the defined study area, while two others were identified from the geophysical survey (ASWYAS 2017), as follows:
 - Site 1: Somerby Top Farm (site of) (NGR TA 0770 0733 centred) (LCC HER MLI116808) (see figures 4 and 5)
- 5.9 Somerby Top Farm is recorded on the LCC HER as being a re-developed 19th century farmstead, the source being English Heritage's 2015 Farmsteads Project. It has a regular courtyard with linked working buildings to all four sides of the yard, and the farmhouse is detached from the main working complex. It lies in an isolated location and there are large modern sheds located on the site.
- 5.10 As noted above, the high land of Somerby parish and township was enclosed in 1811, and it is likely that Somerby Top was established as part of the same process or soon afterwards, almost certainly by the Weston family, who had purchased the manor, effectively the whole of the parish, in 1750 and held it until the 1930s (Everson *et al* 1991, 167).
- 5.11 It is not clear whether the complex is shown on Bryant's map of c.1825, as the area is confused with a depiction of the sloping ground to the east, but it is shown on Greenwood's map of 1830 as a small square enclosure with buildings on the north side of the unnamed lane (Trimble 2012, figures 3 & 4). The Ordnance Survey 6" map of 1886 (sheet 20SE) shows the site in more detail, as a square foldyard enclosed on three sides by agricultural ranges and a detached small building, probably two cottages with external privies, to the west, all surrounded by an L-shaped shelter belt plantation (see figure 5A). The Ordnance Survey 25" map of

1907 (sheet 20/15) shows even more detail, with an L-shaped range along the east and south sides of the foldyard, another range along the north side, and three co-joined barns, some open to the outside, along the west side; the entrance into the sub-divided foldyard is in the south-east corner, and there is a smaller secondary yard off the north-east corner (see figure 5B). The farm buildings are surrounded by an L-shaped shelter belt, and two small cottages lie to the west, against the north side of the lane. As on the 1886 map, the lane terminates a short distance to the east, after which it is an unenclosed track which connects with the long-distance lane running from Melton Ross and New Barnetby over Mealand Hill to Grasby Bottom and thus to Caistor. There is no change in the depiction on the later 1947 edition map.

- 5.12 As mentioned in Chapter 4 above, it is clear that Somerby Top was a collection of farm buildings for managing the high land of the parish, forming a satellite of the main home farm in the village. There was no farmhouse as such, and the 19th century census data shows that the two cottages were occupied by agricultural labourers and their families, such as John Booth and William Mason in 1861, John Altoft and John Cammack in 1871, and Anne Crow (widow) and Charles Houghton in 1891 (TNA RG 9/2393, RG 10/3422 & RG 12/2622).
- 5.13 Virtually nothing of the 19th century farmstead survives within the modern complex of Somerby Top, and all buildings were demolished before the current owners bought the site in 2003. The area of the former farm buildings is now occupied by large modern agricultural sheds forming a potato storage facility and ancillary structures (built in 2008), with a modern pig rearing and finishing complex to the north-east built between 2010 and 2012. A pair of modern, presumably farm workers, cottages lies on the west side of the complex, but these do not correspond to those shown on the 19th century maps. Perhaps the only part of the earlier farm complex which does remain is a portion of the shelter belt on the west side of the modern sheds.
 - Site 2: Former quarry, east of Somerby Top Farm (NGR TA 0827 0738 centred) (LCC HER MLI53626) (see figure 4)
- 5.14 The LCC HER notes an old disused quarry is recorded on the c.1880 Ordnance Survey 6" series map. It is shown on the 1886 map, straddling the boundary between Somerby and Searby cum Owmby parish, and is named as an oval-shaped "Gravel Pit". By the time of the 1907 25" map it is more globular in shape and named as an "Old Quarry", the same depiction is evident on the 1947 6" edition. The site is now an area of woodland, named as "Clark's Plantation".
 - Site 3: Bigby Top Farm (site of) (NGR TA 0730 0794 centred) (LCC HER MLI116761) (see figures 4 and 5)
- 5.15 Bigby Top Farm is recorded on the LCC HER as a re-developed 19th century farmstead, the source again being English Heritage's 2015 Farmsteads Project. It has a regular courtyard of U-shaped plan, and the farmhouse is detached from the main working complex. It lies in an isolated location and there are large modern sheds located on the site.
- 5.16 The complex is not shown on Bryant's map of c.1825, or Greenwood's map of 1830 (Trimble 2012, figures 3 & 4). It had been constructed on the north side of an unnamed track by the time the Ordnance Survey 6" map of 1886 (sheet 20SE) was published. This map shows a sub-divided foldyard with agricultural ranges on the west, north and east sides, with two cottages and outside privies to the west (see

- figure 5E). The buildings lie within its own enclosure, but there is no protective shelter belt. The Ordnance Survey 25" map of 1907 (sheet 20/15) shows the site in more detail, although there are no further buildings or development of the complex (see figure 5F). There is no change in the depiction on the later 1947 edition map.
- 5.17 An examination of modern aerial photographs suggests that all the farm buildings were demolished before January 2003 (Google Earth imagery).
 - Site 4: Searby Top Farm (NGR TA 0882 0723 centred) (LCC HER MLI98419) (see figures 4 and 5)
- 5.18 Searby Top Farm is recorded on the LCC HER as a partially extant 19th century farmstead, the source again being English Heritage's 2015 Farmsteads Project. It has a regular courtyard with an 'E'-shape plan, and the farmhouse is detached from the main working complex; there has been significant loss (greater than 50%) of traditional buildings.
- 5.19 As with Bigby Top (see above), the complex is not shown on Bryant's map of c.1825, nor Greenwood's map of 1830 (Trimble 2012, figures 3 & 4). However, it had been constructed on the south-east side of Searby Wold Lane by the time the Ordnance Survey 6" map of 1886 (sheet 20SE) was published. It is depicted on this map as comprising two foldyards open to the south-east divided by an agricultural range, with a further range on the east side and others around the north-west corner. There was also a circular pond and pump, and a detached building to the west (see figure 5C). It is similarly depicted in 1907 (see figure 5D).
- 5.20 A building survey of the complex was undertaken in March 2012 by Witham Archaeology (Trimble 2012), which revealed a complex sequence of development. This survey and documentary research established that the farm originated in the 2nd quarter of the 19th century. The north-eastern part of the central building functioned as a barn/granary, and was constructed in about 1825 to 1850; original plans dating to September 1850 were found. The rest of the central building functioned as a 6-bay shelter shed, and was probably constructed at the same time or soon after the barn. In about 1850, another 4-bay shelter shed and probably the cart shed, attached to the west of the central building, were built. The original stables were also built at this time, but these were demolished around 1923 to 1956. The new stables, which form the southern building, were constructed in 1907 to 1923, though these were converted into an office at a much later date. A Dutch barn, forming the north-eastern building, was added between 1923 and 1956.
- 5.21 The above survey work was a requirement of a planning condition to convert some of the farm buildings to domestic use, and most of the structures are still standing.
 - Site 5: Linear ditch boundary (cropmark), south of Somerby Wold Lane (NGR TA 0760 0697-TA 0742 0678 linear) (NRHE 1327366) (see figure 4)
- 5.22 A linear ditch boundary has been identified as a cropmark on an aerial photograph taken in July 1999 to the south of Somerby Wold Lane. It is c.300m long and is orientated north-east/south-west, and is of uncertain date. It runs counter to the field boundaries shown on the historic Ordnance Survey maps, and so is not connected to this field system. It is possible that it is remnant of an Iron Age/Romano-British field system.

- Site 6: Geophysical anomaly, north-east of Somerby Top (NGR TA 0795 0755 centred) (see figure 6)
- 5.23 An isolated strong magnetic response was recorded towards the east central side of the geophysical survey area (ASWYAS 2017; see Appendix 1). A full interpretation for the anomaly proved inconclusive; it lies to the east of a former field boundary shown on the 1886 Ordnance Survey map and nothing is indicated on this and later editions. The anomaly may have an archaeological origin, or it may be a modern feature, such as a stock burial site.
 - Site 7: Geophysical anomaly, north-east of Somerby Top (NGR TA 0795 0750 centred) (see figure 6)
- 5.24 A handful of anomalies on an approximate east-west linear alignment were recorded towards the southern part of the geophysical survey area, extending over a distance of c.50m (ASWYAS 2017; see Appendix 1). These responses do not appear on any available historic mapping (e.g. such as a former field boundary) and the disjointed nature of the readings suggests it is not a modern feature (i.e. a field or service drain). It is more likely to have an archaeological origin, and it could well be a ploughed-down ditch or field boundary, similar to other isolated lengths of ditches or boundaries recorded as cropmarks in the general area (for example see Site 5 above), which may be a remnant of an Iron Age/Romano-British field system.

Historic Landscape Units

- 5.25 An Historic Landscape Characterisation project for Lincolnshire was started in 2008 and completed with the reporting phase in 2011 (Lord & MacIntosh 2011). This established ten main character units, each then sub-divided into smaller areas. The study area lies within the Wolds character unit, and mainly within the Caistor Spring-Line Character Zone sub-division (WOL2), although a small part lies within the Brocklesby Heath Character Zone sub-division (WOL1).
 - Site 8: The Caistor Spring-Line Historic Landscape Character Zone (WOL2)
- 5.26 The Caistor Spring-Line character zone sub-division is described as follows (Lord & MacIntosh 2011 vol 2, 34-35):

Description

The character zone includes a line of small nucleated settlements, starting with Nettleton in the south and terminating with South Ferriby in the north. To the north they are situated on the B1204 road, approximately following the 20m contour line. While the settlements are fairly small, they do have much more modern development within and around them than those settlements elsewhere in the Wolds Character Area, perhaps because of their proximity to Scunthorpe and Grimsby. Traditional buildings are typically brick-built with pantile roofs. Many buildings in the north are whitewashed. Settlement cores are generally well defined and well preserved with modern developments limited to the edges. Away from the villages there are many examples of isolated farmsteads. These are typically found on the plateau at the top of the slope and are set among large areas of rectilinear fields.

Much of the farmland in this zone is the result of modern boundary removal, resulting in large irregularly shaped fields. Many examples of modern consolidated

fields occur on the top of the scarp, which gives this zone an open character. There are older enclosures throughout the character zone which are typically small with irregular shapes. These are often used as grazing land for livestock, or as paddocks for horses, and are typically found adjacent to the nucleated settlements in the zone.

There are small to medium sized areas of woodland throughout the character zone, which appear to be predominantly 18th and 19th century plantations. There are several areas of sinuous narrow woodland, which may have once formed part of the boundary of small landscape parks. There is at least one former park in the zone.

There are two former military airfields within this character zone both of which retain enough of their military character to confidently be assigned to the 'Military' broad type. The technical site at the former RAF Elsham Wolds is now an industrial estate and the airfield has reverted to agricultural land, but the lines of the runways and some taxiways are still visible. The perimeter track at the site of the former RAF Caistor is still visible, as are the three 'Thor' ballistic missile launch pads dating from the early 1960s.

Historic Landscape Evolution

There is evidence for occupation of the zone during the early medieval period. Estates with the names of many of the current settlements are mentioned within the Domesday survey. It is likely that any settlement associated with these estates was located in the vicinity of the present historic settlement cores within the zone.

Much of the zone was subject to planned enclosure of the open fields and commons in the 18th and 19th centuries. This new fieldscape was subsequently populated by isolated farmsteads occupied by the owners of the newly enclosed fields.

Both of the airfields within the character zone were established during the Second World War. RAF Elsham Wolds was closed at the end of the war and partially returned to agricultural use before the site was developed as an industrial estate in the 1970s. RAF Caistor was used as a nuclear missile base between 1958 and 1963, before reverting to agricultural use. The post Second World War period also saw the consolidation and enlargement of many of the fields within the character zone by the removal of some of the field boundaries.

Legibility

Elements of the medieval landscape can still be seen in the survival of the settlement pattern and the long east to west orientated field and parish boundaries. The historic settlement cores still retain some of their historic character, but in some cases the scale of modern development reduces the legibility of the historic core.

The widespread survival of planned enclosure and isolated 19th century farmsteads across the character zone are survivals from the late post medieval period. Modern fields, which have been primarily formed from the loss of boundaries of older field patterns, often retain significant legibility through their external boundaries.

The legibility of the former military airfields within the character zone is evident in the good survival of many of their Second World War elements, despite the airfields having gone out of use.

Site 9: The Brocklesby Heath Historic Landscape Character Zone (WOL1)

5.27 The Brocklesby Heath character zone sub-division is described as follows (Lord & MacIntosh 2011 vol 2, 31-33):

Description

The rural landscape of the zone is characterised by roughly equal areas of surviving planned enclosure and large 20th century arable fields formed from the consolidation of older fields by the removal of boundaries and hedges. As in other zones, ancient enclosures, possibly dating to the late medieval period, are found in close proximity to the historic settlements. Today, these small, irregular fields are mostly used for grazing.

The settlements in this zone are generally small and are irregularly scattered throughout the character zone. Many of the buildings within the character zone are brick-built with pantile roofs, materials which were easily available from the brick-kilns of the Humber Estuary. The village cores are typically well-preserved with little modern development either as infill or in the form of peripheral housing estates.

As well as the main estate villages of Brocklesby and Great Limber, there are examples of estate housing in villages throughout the zone, identifiable by their ornamented appearance and by the presence of family crests in prominent positions. These tend to be constructed in stone, although the more modern examples are largely indistinguishable from other 20th century housing except for the presence of heraldic shields.

There are many small to medium sized areas of woodland throughout the character zone, which appear from their names, and from their rectilinear form, to be predominantly 18th and 19th century plantations. Some of these were intended to form a designed hunting landscape, a use which can be inferred from the fact that many of them are called 'coverts'. In the area around Brocklesby there are also several large areas of sinuous woodland, which were planted in the 19th century to form the boundary of Brocklesby Park.

Brocklesby Park, a major feature of the zone, was created by the Pelham family who have owned an estate here since the 16th century. Charles Anderson Pelham was created Earl of Yarborough in 1837 and the park continues to be maintained and developed by the present Earl. The park was landscaped in the 18th century by Lancelot 'Capability' Brown. However it is not quite so extensive as it once was, with some of the former parkland having been ploughed up for arable cultivation.

Humberside Airport, in the western part of the character zone, is a former Second World War RAF airfield, which was subsequently developed as a civilian facility. Its runway has been lengthened in recent years, and a number of other facilities developed on the site in association with its use as a civilian airfield.

Historic Landscape Evolution

There is evidence in the character zone for activity in the landscape during the Prehistoric and Roman periods. It is possible that the line of the A1077, which in places forms the eastern edge of the character zone, dates from the Prehistoric period.

There is evidence for occupation of the zone during the early medieval period with estates sharing the names of many of the current settlements being mentioned in the Domesday survey. It is likely that during the medieval period certain elements of the present landscape were established. Most of the historic parish boundaries and village settlement cores were established during this period.

Much of the zone was subject to planned enclosure in the 18th and 19th century and much of this survives, along with its associated isolated farmsteads. Some of the isolated farmsteads are associated with deserted village earthworks, and it is possible that these are remnants of the earlier settlement cores as opposed to isolated farmsteads established as a result of the enclosure movement.

From the early part of the 20th century there was a reduction in the numbers of large country house estates after they became subject to inheritance tax following the extension, in 1894, of the old probate duty to all the possessions of a deceased person. One result of this has been the conversion to agricultural use of many of the parkland landscapes that were associated with country houses.

The Second World War saw the establishment of at least one airfield in the character zone, which has subsequently been redeveloped as a civilian airport. The post war period saw the consolidation and enlargement of many of the fields within the character zone by the removal of some of the field boundaries. There is evidence of post Second World War field consolidation and some expansion of the rural settlements in the 20th century. Much of this later 19th and early 20th century development survives to the present.

Legibility

The medieval landscape is well represented in the form of extant ridge and furrow earthworks, which are typically associated with small irregular enclosures at the edge of settlements. Areas of surviving landscape parks also provide a setting for survival of ridge and furrow, as they have not been ploughed for several hundred years. The historic settlement cores are generally identifiable in smaller villages. Many of the deserted or shrunken village sites are visible as earthworks and are a particular characteristic of this character zone.

Humberside Airport retains some features associated with its use as a Second World War bomber airfield. Some of the dispersal pads and elements of the Ashaped runway arrangement are retained.

Much of Brocklesby Park retains its designed form, and the areas that have been converted to arable cultivation typically retain the woodland boundaries indicative of their origins. In some cases, isolated trees are found in the middle of cultivated areas, representing survivals from the preceding designed landscape.

Modern fields often retain significant legibility through their remaining boundaries. Where the preceding fields were planned enclosures, the modern fields often retain long, straight boundaries. Those fields formed from the consolidation of

ancient enclosures often retain sinuous boundaries, which are indicative of the early enclosure of former open field farmland.

Assessment of Importance or Significance

- 5.28 Using the data gathered by this Heritage Statement, an initial assessment of the grade of importance or significance of each identified site or asset within the study area can be made. This assessment is based on professional judgement, and a combination of the Secretary of State for Culture, Media and Sport's criteria for scheduling Ancient Monuments or listing buildings of Special Architectural or Historic Interest, and the four values used by Historic England to assess significance, namely evidential value, aesthetic value, historical value and communal value (English Heritage 2008, 27-32).
- 5.29 A value or significance grading system can be applied to identified heritage assets, namely Very High/International, High/National, Medium/Regional, Low/Local, Negligible and Unknown. Further details on how these grades can be generally applied is contained in Appendix 2.
- 5.30 The value or significance grade given to each of the nine identified assets within the study area is given below. This shows that the study area contains five assets of Low Value, three assets of Negligible grade, and one of potentially Low Value.

Site No	Site Name	Value
1	Somerby Top Farm (site of)	Negligible
2	Former quarry, east of Somerby Top Farm	Low
3	Bigby Top Farm (site of)	Negligible
4	Searby Top Farm	Low
5	Linear ditch boundary (cropmark), south of Somerby	Low
	Wold Lane	
6	Geophysical anomaly, north-east of Somerby Top	Negligible
7	Geophysical anomaly, north-east of Somerby Top	Low?
8	The Caistor Spring-Line Historic Landscape Character	Low
	Zone (WOL2)	
9	The Brocklesby Heath Historic Landscape Character	Low
	Zone (WOL1)	

5.31 It should be noted that the above grades have been based on data collected to date, and the value or significance of some sites may be graded higher or lower as or when more information is obtained.

6 THE PROPOSED DEVELOPMENT

Description of the Development

6.1 The proposed development involves the construction of six pig buildings, a lairage, two circular slurry stores and seven feed bins, all to the north-east of the existing four finishing housings (see figure 7 and plates 1 and 2). A certain amount of excavation will be required to level out the existing landform, and the buildings are expected to be buried to a significant depth (perhaps as much as 4m) below existing ground level, both to prevent leakage and to accommodate the requirements of the nearby Humberside Airport. It is envisaged that excavated material will be used to create a screening bund around the new development.

Assessment of Development Impact

Impact and Effect Grades

In general, an assessment of development impact on any heritage asset will depend on the value or significance of that asset combined with the degree or magnitude of potential impact. Details of the value grades applied to the nine identified assets within the study area were given above, and the magnitude of development impact can also be graded according to whether it is Substantial/Major, Moderate, Slight/Minor, Negligible or No Change. Details of how these grades can be applied in principle is given in Appendix 2, and it should be noted that impacts can be positive as well as negative or adverse. The overall Significance of Effect or impact can then be determined by combining the value/significance of an asset and the magnitude of impact. The way in which this overall effect is calculated is also explained in Appendix 2.

Identified Assets

- 6.3 Only two identified assets will be directly affected by the proposed development, Sites 6 and 7, both magnetic anomalies recorded by the geophysical survey.
- 6.4 The interpretation of Site 6, an isolated strong magnetic response adjacent to a former enclosure-period field boundary, is unclear, and it does not coincide with an feature shown on the historic Ordnance Survey mapping it may have an archaeological origin, but it could equally be a modern feature, such as a stock burial site. Site 7 was represented by a general east-west linear alignment extending over a distance of c.50m, which again does not correspond with any feature (such as a field boundary) shown on the historic mapping. The disjointed nature of the anomaly suggests it may be the ploughed-down remains of part of an Iron Age/Romano-British field system, other elements of which have been recorded as cropmarks in the general area. It was given a potentially Low value grade of importance.
- 6.5 Both assets will be destroyed by the proposed development, and there is no potential for any preservation *in situ*. Site 6 was given a *Negligible* value grade which, combined with a *Substantial* magnitude of impact, produces an overall *Slight Adverse* significance of effect (see table in Appendix 2). Site 7 was given a *Low* value grade which, combined with a *Substantial* magnitude of impact, also produces an overall *Slight Adverse* significance of effect.
- The proposed development will have no direct impact on the two Historic Landscape Character Zones, and it is questionable whether there will be any visual impact on Site 9, the Brocklesby Heath Historic Landscape Character Zone (WOL1), which lies on the very edge of the study area, given that the development will be screened and largely buried beneath the existing ground level. It is therefore suggested that there will be a *No Change* magnitude of impact on this *Low* value asset, which produces an overall *Neutral* significance of effect. The proposed development does lie within the area of Site 8, the Caistor Spring-Line Historic Landscape Character Zone (WOL2). However, given the existence of the existing large-scale potato store and pig buildings immediately adjacent, and the fact that the new buildings will be screened and partly buried, it is considered that any increased visual impact will be very minor and small-scale. Accordingly, therefore, it is suggested that there will be a *No Change* magnitude of impact on this *Low* value asset, which also produces an overall *Neutral* significance of effect.

Recommended Mitigation Measures

- 6.7 When a proposed development is permitted in an area of historic landscape (irrespective of its date or complexity), it is expected that some form of archaeological intervention is undertaken, to mitigate the effects of the proposals so that any archaeological features that might be disturbed or destroyed can be recorded. Such intervention may take place before or during development, and can involve archaeological excavation, evaluation (usually by trial trenching), or a watching brief (the monitoring of groundworks). It should be noted that no archaeological investigations were undertaken as part of the construction of the existing potato storage facility and ancillary structures in 2008, or the more recent modern pig rearing and finishing complex to the north-east, constructed between 2010 and 2012.
- 6.8 The slight adverse effects of the current development proposals on the identified archaeological resource can be mitigated by undertaking a continuously monitored scheme of archaeological observation, investigation and recording during the initial phase of groundworks associated with the construction of the proposed buildings; this work is also traditionally known as a "strip, map and record" exercise. This would involve an archaeological contractor being on site during the initial topsoil stripping, so that any features or deposits of archaeological interest that might be uncovered can be properly recorded by means of scaled drawings, photographs and written descriptions. This action, which would be taken across the whole site, would also allow for any other archaeological remains not recorded by the geophysical survey to be identified and recorded. On completion of the site recording, an appropriate level of post-fieldwork analysis and reporting, commensurate with the results of the fieldwork and in accordance with standard archaeological procedures (e.g. ClfA 2014b & 2014c), would need to be undertaken, and an ordered archive deposited with the local registered museum. The adoption of this mitigation strategy would allow for the identification and recording of any archaeological deposits and/or structures affected by the development proposals, to achieve 'preservation by record'.
- 6.9 It is envisaged that the requirement for archaeological recording would be made a condition of any planning approval, in accordance with national and regional planning guidance. As a part of any such conditions, the archaeological investigations would be defined by a detailed 'Written Scheme of Investigation', which would need to be approved by the Local Planning Authority and their archaeological advisors in advance of any site investigations.

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1907	Ordnance Survey 25" to 1 mile map Lincolnshire sheet 20/15 (revised 1905)
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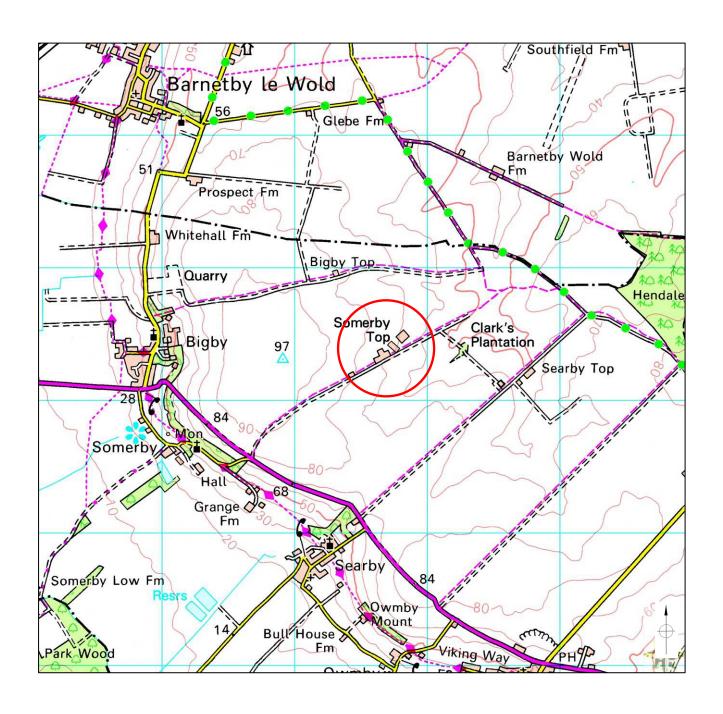
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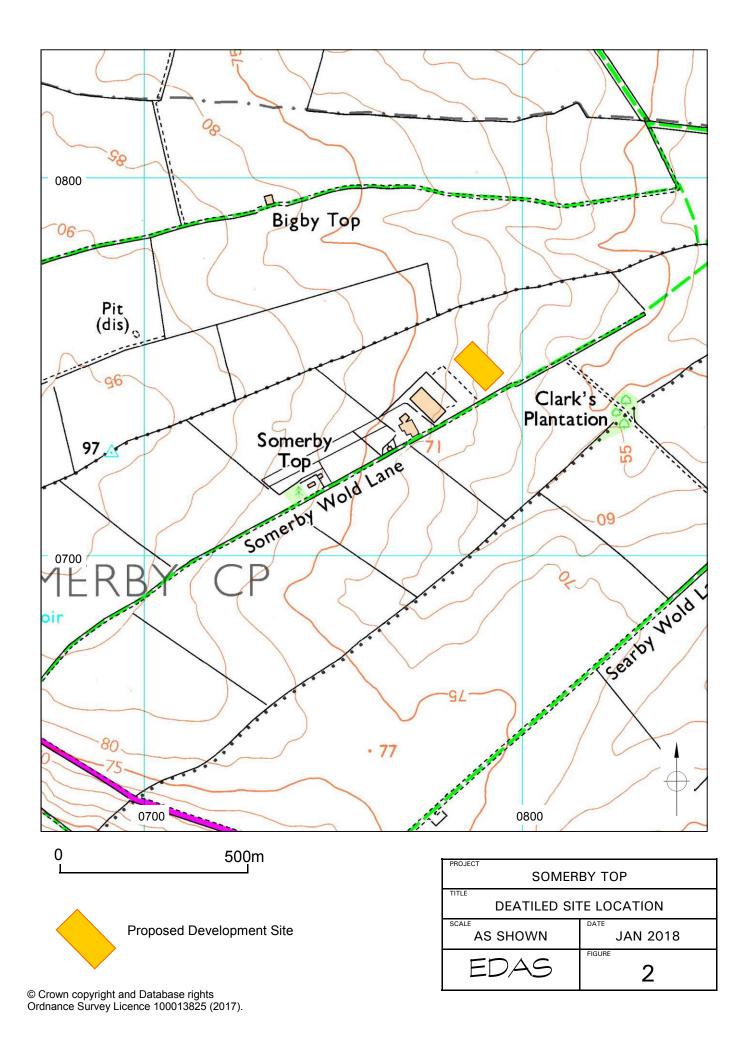
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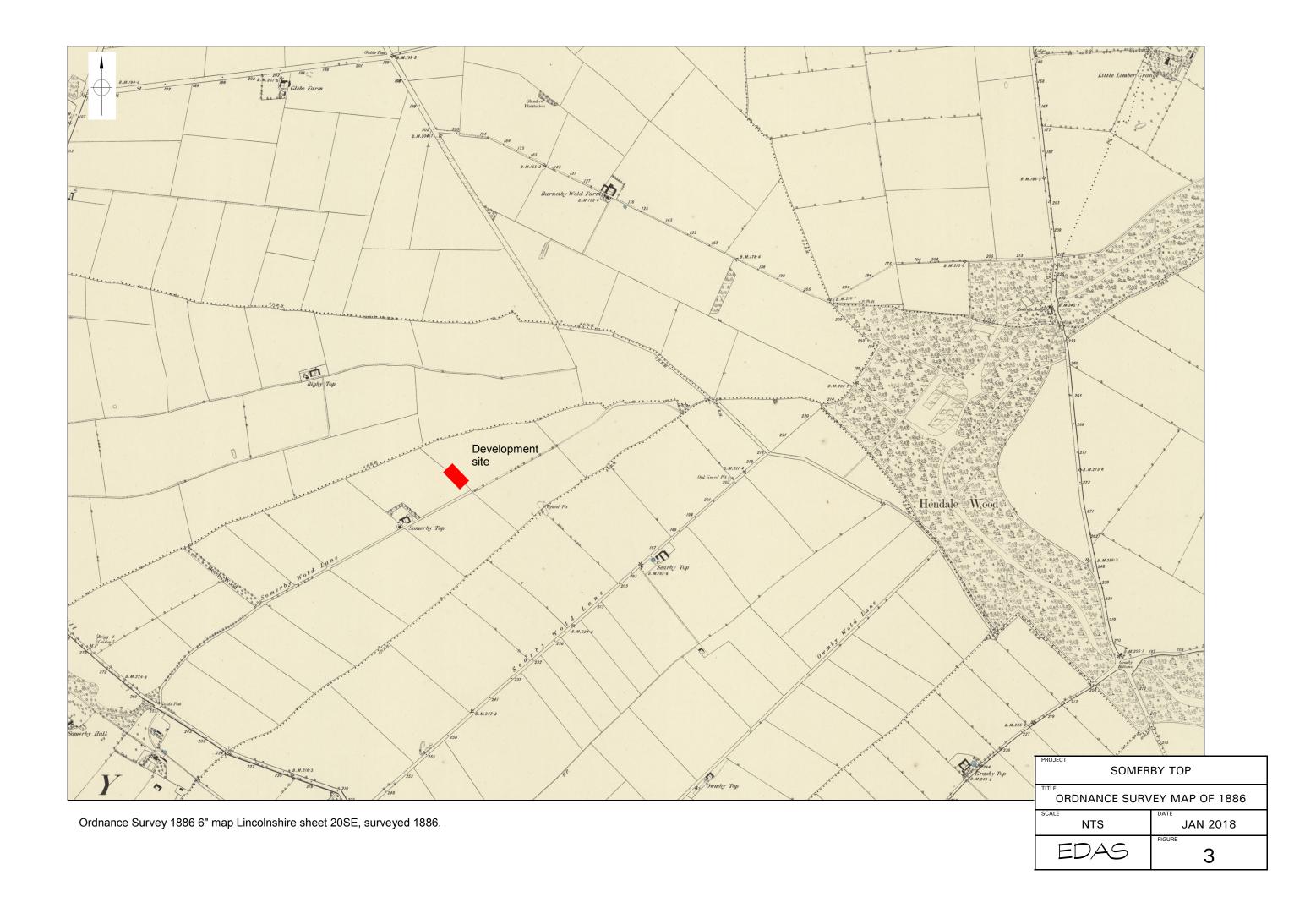
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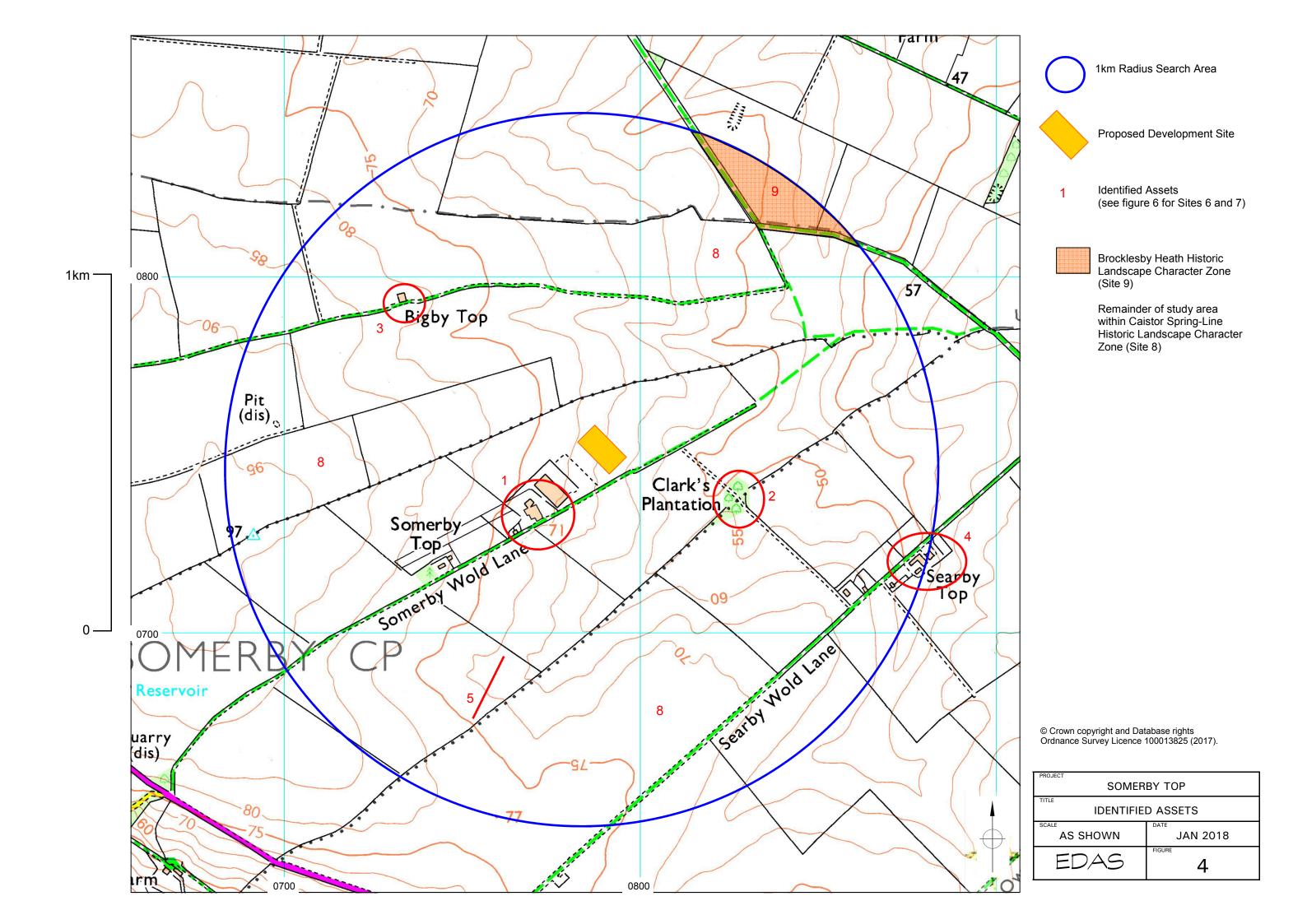


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EDAS	FIGURE 1		





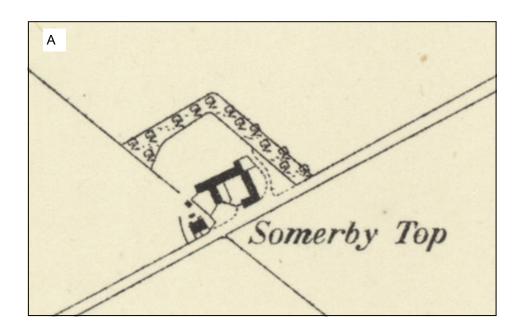


SOMERBY TOP

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Somerby Top

A: Ordnance Survey 1886 6" map Lincolnshire sheet 20SE, surveyed 1886. B: Ordnance Survey 1907 25" map Lincolnshire sheet 20/15, revised 1905.

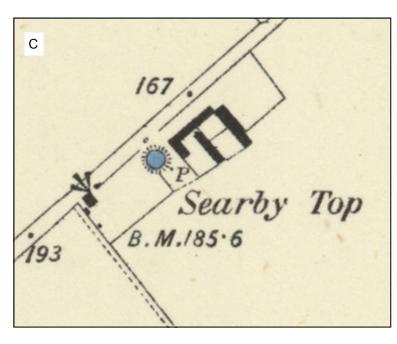


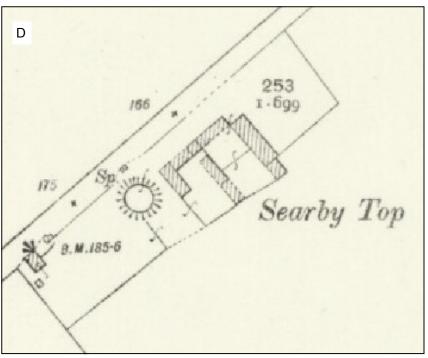
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SEARBY TOP

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D: Ordnance Survey 1907 25" map Lincolnshire sheet 20/16, revised 1905.

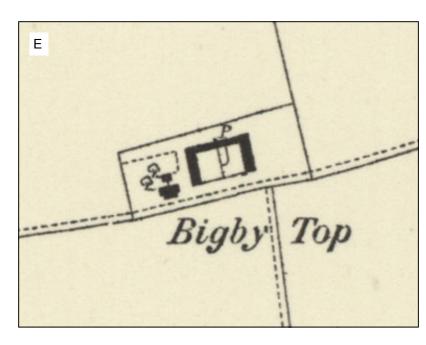


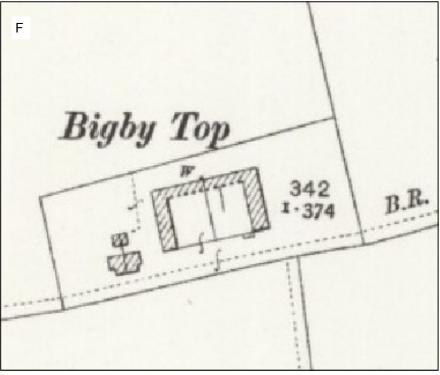


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F: Ordnance Survey 1907 25" map Lincolnshire sheet 20/11, revised 1905.

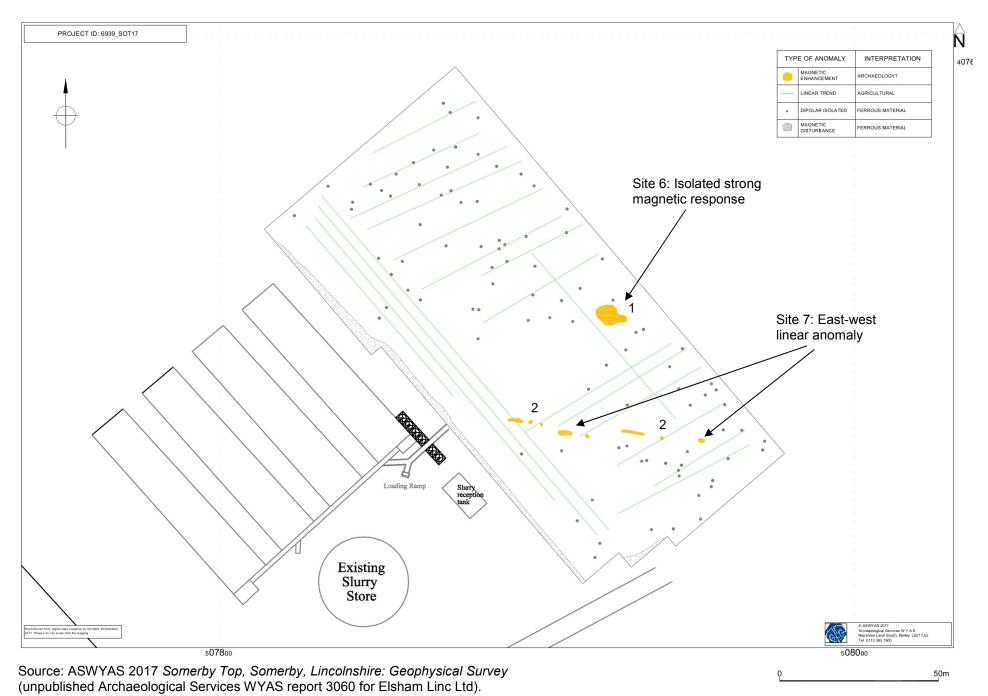






PROJECT	SOMERBY TOP			
TITLE				
****=	'TOP' FARM COMPLEXES			
SCALE NTS	JAN 2018			
EDAS	FIGURE 5			





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Proposed Slury Store R 15000			<u> </u>	\wedge	\wedge			EDAS	FIGURE	7
						Proposed Slurry Stars				
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PROJECT

APPENDIX 1 ARCHAEOLOGICAL SERVICES WYAS GEOPHYSICAL SURVEY REPORT



Somerby Top
Somerby
Lincolnshire

Geophysical Survey

Report no. 3060 December 2017

Client: RJ & AE Godfrey





Somerby Top, Somerby, Lincolnshire

Geophysical Survey

Summary

A geophysical (magnetometer) survey, covering approximately 1.5 hectares, was undertaken on land to the east of Somerby Top Farm, Somerby Top, Lincolnshire. The magnetic survey has detected a small number of anomalies of possible archaeological origin which may be of some interest. Agricultural ploughing trends can be seen throughout the area along with small ferrous responses. Overall the archaeological potential of the site is low to medium.



Report Information

Client: RJ and AE Godfrey

Address: Cadas House, Wootton Road, Elsham Top, Brigg, North

Lincolnshire, DN20 0NU

Report Type: Geophysical Survey

Location: Somerby Top
County: Lincolnshire
Grid Reference: TA 078 075

Period(s) of activity: ?Romano-British / ?Medieval / Modern

Report Number: 3060
Project Number: 6939
Site Code: SOT17

OASIS ID: Archaeol11-305529
Date of fieldwork: December 2017
Date of report: January 2018

Project Management: Emma Brunning BSc MCIfA

Fieldwork: Emma Brunning
Report: Emma Brunning
Illustrations: Emma Brunning
Photography: Emma Brunning

Authorisation for

distribution: -----



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Email: admin@aswyas.com



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	Soils and geology	
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1 Introduction

Archaeological Services WYAS (ASWYAS) were commissioned by Ed Dennison Archaeological Services Ltd, on behalf of RJ & AE Godfrey, to undertake a geophysical (magnetometer) survey on agricultural land at Somerby Top, Somerby, Lincolnshire. 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 on the 14th December 2017.

Site location, topography and land-use

The survey area is located to the east of Somerby Top Farm approximately 1.8km to the east of Somerby and 3.5km to the southwest of Humberside Airport, centred on National Grid Reference TA 0788 0751 (Fig. 1.) and totals approximately 1.5ha. It lies between 68m above Ordnance Datum (aOD) in the north to 62m aOD in the south. The Site is bounded to the south by Somerby Wold Lane, to the west by Somerby Top Farm and to the north and east by further agricultural land. At the time of survey the field conditions consisted of stubble.

Soils and geology

The underlying bedrock geology is upper Cretaceous chalk of the Welton chalk formation. This sedimentary bedrock formed approximately 90 to 101 million years ago in the Cretaceous period. No superficial deposits have been recorded (BGS 2017). Soils of the area belong to the Swaffam Prior association (511e) described as well drained calcareous coarse and fine loams over chalk rubble (SSEW 1983).

2 Archaeological Background

Somerby Top Farm was established by 1830, after the enclosure of the high Wold land of Somerby parish in 1811 (HER number MLI116808). Nothing of the 19th century farm complex now remains, its site now being occupied by a potato storage facility with a pig rearing complex to the east.

To the south of the survey area an old disused quarry (HER number MLI53626) is marked on OS maps dated 1880 (HG 2017).

A former field boundary is depicted on old mapping dating from 1887 which has been removed by the 1970 map. The boundary crosses through the survey area on a northwest to southeast alignment (OS 2017).

3 Aims, Methodology and Presentation

The main aim of the geophysical survey was to provide additional information on the known archaeology within the area. To achieve this, a magnetometer survey covering all available parts of the PDA was undertaken (see Fig. 2).

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 site grid was laid out using a Trimble R8s GNSS system. The survey was undertaken using Bartington Grad601 magnetic gradiometers. These were employed taking readings at 0.25m intervals on zig-zag traverses 1.0m apart within 30m by 30m grids, so that 3600 readings were recorded in each grid. These readings were stored in the memory of the instrument and later downloaded to computer for processing and interpretation. Geoplot 3 (Geoscan Research) 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 shows a more detailed site location plan at a scale of 1:1000. The processed and minimally processed data, together with an interpretation of the survey results are presented in Figures 3 to 5 inclusive at a scale of 1:750.

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 Figs 3 to 5)

Possible archaeological anomalies

An isolated response (1) in the east of the data has given a strong magnetic response. A full interpretation is unclear for this anomaly and whilst an archaeological origin is possible it may also have a more modern one. This anomaly roughly lies on the line of a former field boundary mentioned in the Archaeological Background, and may therefore be associated with the boundary itself.

A handful of anomalies (2) on an approximate east to west alignment have been recorded. These responses do not appear on any available old mapping and may therefore have an archaeological origin. There is a possibility that they indicate a boundary ditch of some sort, perhaps associated with an underlying Iron Age/Romano-British field system, the truncated remains of which have been seen on aerial photographs in the general area. Alternatively, it may be a more modern feature.

Agricultural anomalies

Parallel linear trends can be seen throughout the dataset which are associated with modern ploughing.

Ferrous anomalies and magnetic disturbance

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.

Magnetic disturbance along the western limits of the dataset are due to the nearby farm buildings.

5 Conclusions

The magnetic data have detected a small number of anomalies which may be of some archaeological interest consisting of an isolated response and a group of anomalies along a line which may indicate a boundary ditch. Modern ploughing trends along with ferrous

responses have also been recorded. Overall, based on the geophysical survey, the archaeological potential of the survey area is deemed to be low to medium.

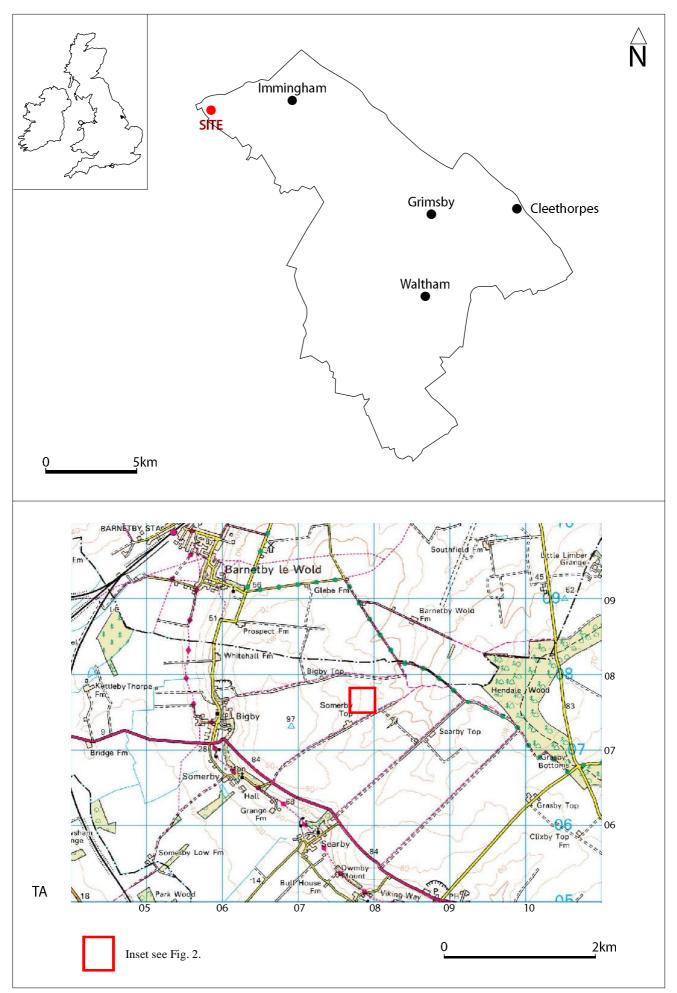


Fig. 1. Site location

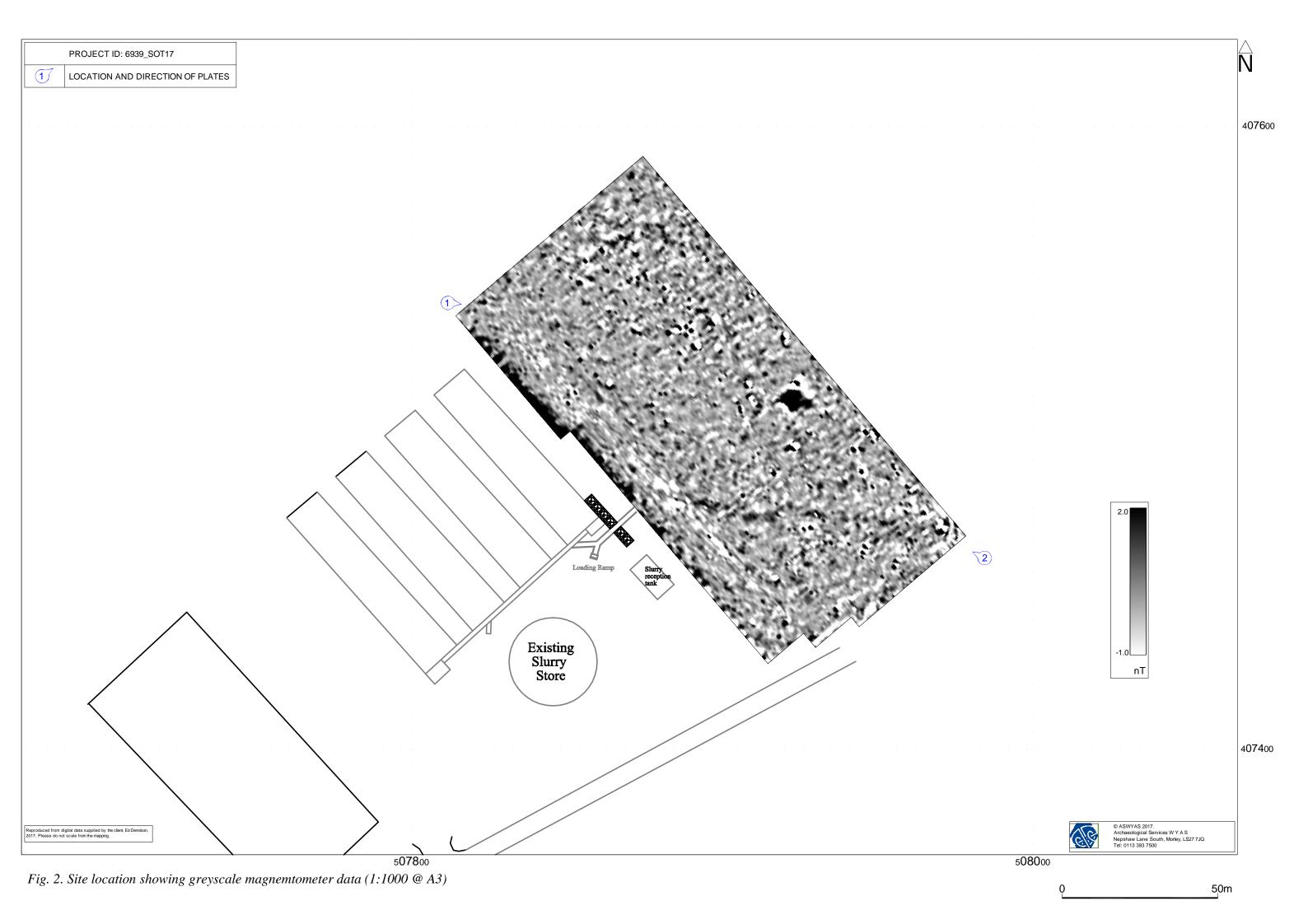




Fig. 3. Greyscale magnetometer data (1:750 @ A3)



Fig. 4. XY trace plot of minimally processed magnetometer data (1:750 @ A3)

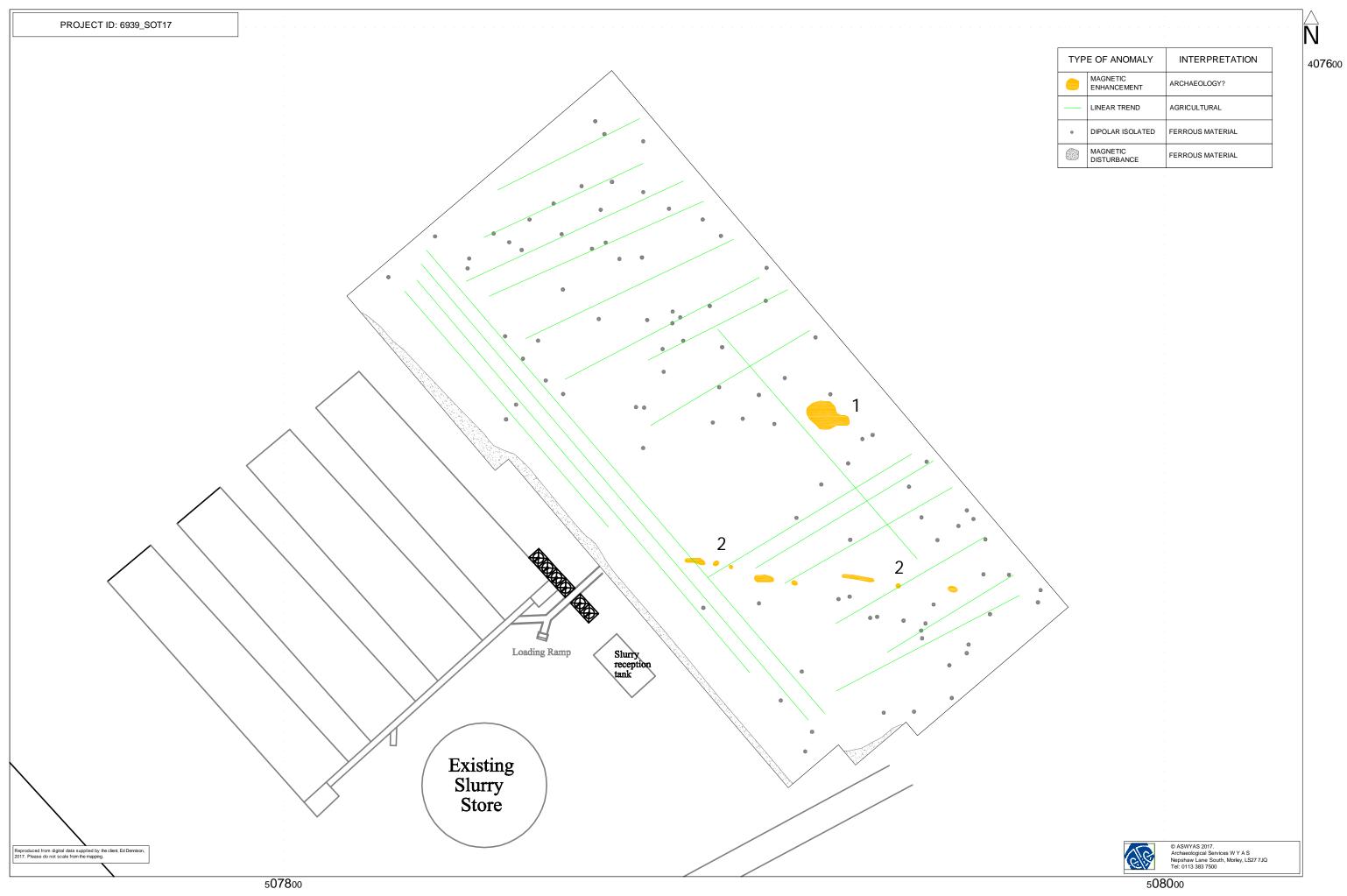


Fig. 5. Interpretation of magnetometer data (1:750 @ A3)

0 50m



Plate 1. General view of site, looking southeast



Plate 2. General view of site, looking northwest

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 main method of using the fluxgate gradiometer for commercial evaluations is referred to as *detailed survey* and requires the surveyor to walk at an even pace carrying the instrument within a grid system. A sample trigger automatically takes readings at predetermined points, typically at 0.25m intervals, on traverses 1m apart. These readings are stored in the memory of the instrument and are later dumped to computer for processing and interpretation.

During this survey a Bartington Grad601 magnetic gradiometer was used taking readings on the 0.1nT range, at 0.25m intervals on zig-zag traverses 0.5m apart within 30m by 30m square grids. The instrument was checked for electronic and mechanical drift at a common point and calibrated as necessary. The drift from zero was not logged.

The gradiometer data have been presented in this report in processed greyscale format. The data in the greyscale images have 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.

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

The survey grid was set out using a Trimble R8s GNSS system with its integrated Trimble 360 tracking technology which supports signals from all existing and planned constellations and augmentation systems tracking the full range of satellite systems including GPS, GLONASS, Galileo, BeiDou and QZSS. 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 CS6 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 Lincolnshire Historic Environment Record).

Appendix 4: Oasis form

Lincolnshire. The magnetic survey detected a small number of anomalies of possible archaeological origin which may be of some interest. Agricultural ploughing trends can be seen throughout the area along with					
Short description of the project and the proje	OASIS ID: archaeol11-305529				
Short description of the project of possible archaeological origin which may be of some interest. Agricultural ploughing trends can be seen throughout the area along with small ferrous responses. Overall the archaeological potential of the site is low to medium of the project dates. Project dates Start: 14-12-2017 End: 14-12-2017 Previous/future work No / Not known Any associated project reference codes. Any associated project reference codes. Any associated project reference codes. Type of project Field evaluation. Site status None. Current Land use Cultivated Land 3 - Operations to a depth more than 0.25m. Monument type FIELD SYSTEM Iron Age. Monument type CULTIVATION MARKS Modern. Significant Finds NONE None. Methods & "Geophysical Survey" techniques. Development type Not recorded. Prompt National Planning Policy Framework - NPPF. Position in the planning process. Solid geology CHALK (INCLUDING RED CHALK)	Project details				
the project hectares on land to the east of Somerby Top Farm. Somerby Top, Lincolnshire. The magnetic survey detected a small number of anomalies of possible archaeological origin which may be of some interest. Agricultural ploughing trends can be seen throughout the area along with small ferrous responses. Overall the archaeological potential of the site is low to medium Project dates Start: 14-12-2017 End: 14-12-2017 Previous/future work Any associated project reference codes Any associated project reference codes Type of project Field evaluation Site status None Current Land use Cultivated Land 3 - Operations to a depth more than 0.25m Monument type FIELD SYSTEM Iron Age Monument type CULTIVATION MARKS Modern Significant Finds NONE None Methods & "Geophysical Survey" Development type Not recorded Prompt National Planning Policy Framework - NPPF Position in the planning process Solid geology CHALK (INCLUDING RED CHALK)	Project name	Somerby Top			
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project reference codes Any associated project reference codes Type of project Field evaluation Site status None Current Land use Cultivated Land 3 - Operations to a depth more than 0.25m Monument type FIELD SYSTEM Iron Age Monument type CULTIVATION MARKS Modern Significant Finds NONE None Methods & "Geophysical Survey" Development type Not recorded Prompt National Planning Policy Framework - NPPF Position in the planning process Solid geology CHALK (INCLUDING RED CHALK)	Previous/future work	No / Not known			
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Site status None Current Land use Cultivated Land 3 - Operations to a depth more than 0.25m Monument type FIELD SYSTEM Iron Age Monument type CULTIVATION MARKS Modern Significant Finds NONE None Methods & "Geophysical Survey" Development type Not recorded Prompt National Planning Policy Framework - NPPF Position in the planning process Solid geology CHALK (INCLUDING RED CHALK)	project reference	6939 - Contracting Unit No.			
Current Land use Cultivated Land 3 - Operations to a depth more than 0.25m Monument type FIELD SYSTEM Iron Age Monument type CULTIVATION MARKS Modern Significant Finds NONE None Methods & "Geophysical Survey" Development type Not recorded Prompt National Planning Policy Framework - NPPF Position in the planning process Solid geology CHALK (INCLUDING RED CHALK)	Type of project	Field evaluation			
Monument type FIELD SYSTEM Iron Age Monument type CULTIVATION MARKS Modern Significant Finds NONE None Methods & "Geophysical Survey" Development type Not recorded Prompt National Planning Policy Framework - NPPF Position in the planning process Solid geology CHALK (INCLUDING RED CHALK)	Site status	None			
Monument type CULTIVATION MARKS Modern Significant Finds NONE None Methods & "Geophysical Survey" Development type Not recorded Prompt National Planning Policy Framework - NPPF Position in the planning process Solid geology CHALK (INCLUDING RED CHALK)	Current Land use	Cultivated Land 3 - Operations to a depth more than 0.25m			
Significant Finds NONE None Methods & "Geophysical Survey" Development type Not recorded Prompt National Planning Policy Framework - NPPF Position in the planning process Solid geology CHALK (INCLUDING RED CHALK)	Monument type	FIELD SYSTEM Iron Age			
Methods & techniques Development type Not recorded Prompt National Planning Policy Framework - NPPF Position in the planning process Solid geology CHALK (INCLUDING RED CHALK)	Monument type	CULTIVATION MARKS Modern			
Development type Not recorded Prompt National Planning Policy Framework - NPPF Position in the planning process Solid geology CHALK (INCLUDING RED CHALK)	Significant Finds	NONE None			
Prompt National Planning Policy Framework - NPPF Position in the planning process Solid geology CHALK (INCLUDING RED CHALK)		"Geophysical Survey"			
Position in the planning process Solid geology CHALK (INCLUDING RED CHALK)	Development type	Not recorded			
planning process Solid geology CHALK (INCLUDING RED CHALK)	Prompt	National Planning Policy Framework - NPPF			
		Pre-application			
Drift geology Unknown	Solid geology	CHALK (INCLUDING RED CHALK)			
	Drift geology	Unknown			

Techniques	Magnetometry
Project location	
Country	England
Site location	LINCOLNSHIRE WEST LINDSEY SOMERBY Somerby Top
Postcode	DN38 6BN
Study area	1.5 Hectares
Site coordinates	TA 078 075 53.55279230382 -0.3726104197 53 33 10 N 000 22 21 W Point
Height OD / Depth	Min: 62m Max: 68m
Project creators	
Name of Organisation	Archaeological Services WYAS
Project brief originator	Ed Dennison Archaeological Services Ltd
Project design originator	ASWYAS
Project director/manager	E. Brunning
Project supervisor	E. Brunning
Project archives	
Physical Archive Exists?	No
Digital Archive recipient	Ed Dennison Archaeological Services Ltd.
Digital Contents	"Survey"
Digital Media available	"Geophysics","Images raster / digital photography","Survey","Text"
Paper Archive Exists?	No
Project bibliography 1	

Publication type	Grey literature (unpublished document/manuscript)
Title	Somerby Top, Somerby, Lincolnshire. Geophysical Survey
Author(s)/Editor(s)	Brunning, E.
Other bibliographic details	Report no. 6030
Date	2018
Issuer or publisher	ASWYAS
Place of issue or publication	Morley, LEEDS
Description	PDF report of approximately 25 pages including text, figures and plates.
URL	http://archaeologydataservice.ac.uk/
Entered by	Adam Dyson (adam.dyson@aswyas.com)
Entered on	8 January 2018

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APPENDIX 2 METHODOLOGY FOR IMPACT ASSESSMENTS ON HERITAGE ASSETS

APPENDIX 2: METHODOLOGY FOR IMPACT ASSESSMENTS ON HERITAGE ASSETS

Based on Highways Agency's 2007 Design Manual for Roads and Bridges volume 11, Section 3 Part 2 (HA 208/07), and in accordance with advice contained in the 2012 National Planning Policy Framework, and the previous Planning Policy Statement 5 (Planning for the Historic Environment).

Assessing Value or Significance of Heritage Assets

Value	Examples
Very High	World Heritage Sites, Scheduled Monuments of exceptional quality, or assets of
(International)	acknowledged international importance or can contribute to international research objectives.
	Other buildings and built heritage of exceptional quality and recognised international importance.
	Historic landscapes and townscapes of international value or sensitivity, whether
	designated or not, or extremely well preserved historic landscapes and
	townscapes with exceptional coherence, integrity, time-depth, or other critical factor(s).
High	Scheduled Monuments, or undesignated archaeological assets of national quality and
(National)	importance, or than can contribute significantly to national research objectives.
	Grade I and II* Listed Buildings, other built heritage assets that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in their listing grade.
	Conservation Areas containing very important buildings or with very strong character
	and integrity, undesignated structures of clear national importance.
	Grade I and II* Registered Parks and Gardens, Registered Battlefields and
	designated or non-designated historic landscapes and townscapes of outstanding
	interest, quality and importance, or well preserved historic landscapes which exhibit
	considerable coherence, integrity time-depth or other critical factor(s).
Medium	Undesignated archaeological assets of regional quality and importance that
(Regional)	contribute to regional research objectives.
	Grade II Listed Buildings, historic unlisted buildings that can be
	shown to have exceptional qualities in their fabric or historical associations.
	Conservation Areas containing buildings that contribute significantly to its historic
	character. Historic townscapes or built-up areas with important historic integrity in
	their buildings, or built settings (e.g. including street furniture and other structures). Designated special landscapes, undesignated historic landscapes that would justify
	special historic landscape designation, landscapes of regional value, and averagely
	well preserved historic landscapes with reasonable coherence, integrity, time-depth
	or other critical factor(s).
	Assets that form an important resource within the community, for educational or
	recreational purposes.
Low	Undesignated archaeological assets of local importance, assets compromised by
(Local)	poor preservation and/or poor survival of contextual associations, or assets of limited
	value but with potential to contribute to local research objectives.
	Locally listed buildings, historic (unlisted) buildings of modest quality in their fabric or
	historical association.
	Historic landscapes or built-up areas of limited historic integrity in their buildings or
	built settings (including street furniture and other structures).
	Robust undesignated historic landscapes, historic landscapes with importance to
	local interest groups, historical landscapes whose value is limited by poor
	preservation and/or poor survival of contextual associations. Assets that form a resource within the community with occasional utilisation for
	educational or recreational purposes.
Negligible	Archaeological assets with very little or no surviving interest.
racgiigibic	Buildings of no architectural or historical note.
	Landscapes and townscapes that are badly fragmented and the contextual
	associations are severely compromised or have little or no historical interest.
	associations are severely compromised of have fittle of no historical interest.

Unknown	The importance of the asset has not been determined.				
	Buildings with some hidden (i.e. inaccessible) potential for historic significance.				

Assessing Magnitude of Impact (Negative or Positive)

Magnitude of Impact	Typical Criteria Descriptors
Substantial (Major)	Negative: Impacts will damage or destroy cultural heritage assets; result in the loss of the asset and/or its quality and integrity; causes severe damage to key characteristic features or elements; almost complete loss of setting and/or context of the asset. The asset's integrity or setting is almost wholly destroyed or is severely compromised, such that the resource can no longer be appreciated or understood.
	Positive: The proposals would remove or successfully mitigate existing damaging and discordant impacts on assets; allow for the restoration or enhancement of characteristic features; allow the substantial re-establishment of the integrity, understanding and setting for an area or group of features; halt rapid degradation and/or erosion of the heritage resource, safeguarding substantial elements of the heritage resource.
Moderate	Negative: Substantial impact on the asset, but only partially affecting the integrity; partial loss of, or damage to, key characteristics, features or elements; substantially intrusive into the setting and/or would adversely impact on the context of the asset; loss of the asset for community appreciation. The assets integrity or setting is damaged but not destroyed so understanding and appreciation is compromised.
	Positive: Benefit to, or restoration of, key characteristics, features or elements; improvement of asset quality; degradation of the asset would be halted; the setting and/or context of the asset would be enhanced and understanding and appreciation is substantially improved; the asset would be bought into community use.
Slight (Minor)	Negative: Some measurable change in assets quality or vulnerability minor loss of or alteration to, one (or maybe more) key characteristics, features or elements; change to the setting would not be overly intrusive or overly diminish the context; community use or understanding would be reduced. The assets integrity or setting is damaged but understanding and appreciation would only be diminished not compromised.
	Positive: Minor benefit to, or partial restoration of, one (maybe more) key characteristics, features or elements; some beneficial impact on asset or a stabilisation of negative impacts; slight improvements to the context or setting of the site; community use or understanding and appreciation would be enhanced.
Negligible	Negative: Very minor loss or detrimental alteration to one or more characteristics, features or elements; minor changes to the setting or context of the site.
	Positive: Very minor benefit to or positive addition of one or more characteristics, features or elements; minor changes to the setting or context of the site.
No change	No discernible change in baseline conditions.

Identifying Significance of Effect (Negative or Positive)

	Magnitude of Impact						
Value of Asset	Substantial	Moderate	Slight	Negligible	No change		
Very High	Very Large	Large/ Very Large	Moderate/Large	Slight	Neutral		
High	Large/ Very Large	Moderate/Large	Moderate/Slight	Slight	Neutral		
Medium	Moderate/Large	Moderate	Slight	Slight/Neutral	Neutral		
Low	Moderate/Slight	Slight	Neutral/Slight	Slight/Neutral	Neutral		
Negligible	Slight	Neutral/Slight	Neutral/Slight	Neutral	Neutral		