



Gravity

Smart Campus

Gravity LDO Environmental Statement

Volume 2 – Appendices

Appendix 16.1 Heritage Planning Policy & Guidance

Appendix 16.1 – Harm and NPPF and Heritage Planning Policy

Harm – NPPF and Environmental Statements

The Desk-based Assessment which forms Technical Appendix 16.2 uses the criteria set out within NPPF for determining the potential for harm to an asset and uses NPPF compliant language, while the Environmental Statement uses a methodology which reflects the requirements of the EIA regulations, and for heritage is set out in a form widely used across the industry and sets out the Magnitude of Impact that an asset may experience from a development. Consequently, this technical appendix is provided to assist in correlating “harm” (or otherwise) to the heritage significance of heritage assets in terms of the NPPF with the significance of an effect in EIA terms.

Where an assessment of substantial harm is made, this must transfer through to the Environmental Statement as a significant effect. The nuance of the scale that substantial harm should then be made against the High and Medium levels of magnitude within the table which best represents the impact being experienced.

For example, the total demolition of a Grade II listed building would be reported as substantial harm within an assessment guided by NPPF, and then transferred into the Environmental Statement with a High Magnitude of Impact. However, the removal of elements of a Grade II listed building, i.e. loss but not total loss, would result in substantial harm in NPPF but, depending on the nuances of the listed building and its significance, may only transfer into the Environmental Statement with a Medium Magnitude of Impact should much of its significance remain intact.

Where an assessment of less than substantial harm is made, this cannot then result in a significant effect within the Environmental Statement. The nuance of that scale should then be made against the Low and Negligible levels of magnitude within the table which best represents the impact being experienced.

For example, if a development is constructed within the setting of a Grade II listed building where that setting contributes to its significance there may be an effect on that significance. The scale of that effect would depend on the nuances of that development and what other elements of the asset contribute to its significance; however, this may be reported as less than substantial harm. This would then transfer to the Environmental Statement with a Low Magnitude of Impact as there is a limited loss of significance.

However, if a development is constructed within the setting of a Grade II listed building where that setting makes a limited contribution to its significance, there may be a limited effect upon its significance. This would be reported as less than substantial harm, but at the bottom end of the scale and then transfer to the Environmental Statement with a Negligible Magnitude of Impact as there is minimal change to the asset’s significance.

Section 66 Planning (Listed Buildings and Conservation Areas) Act 1990

The desk-based assessment identified that the Proposed Development will lead to harm to the significance of a designated heritage asset, the Grade II listed Manor Farmhouse, Puriton, through the removal of part of its setting which contributes to its significance. This harm has been assessed as being less than substantial in NPPF terms which must be considered against the benefits of the proposed scheme.

As a result, Section 66 Planning (Listed Buildings and Conservation Areas) Act 1990 applies in this case where any development ‘...shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possess.’

Planning Policy

Policy D2

Promoting High Quality and Inclusive Design

The Council is committed to achieving high quality, sustainable and inclusive design for all new developments throughout the district to deliver buildings, places and spaces that are;

- Attractive and safe;
- Accessible for all;
- Enjoyable to use;
- Convivial and socially interactive;
- Environments to encourage healthy lifestyles;
- Conducive to walking and cycling;
- Designed with flair, imagination, style and innovation;

Responsive to and reinforce local context, character, scale and distinctiveness of place.

Development will need to demonstrate how it maximises its contribution to the following relevant principles, with information provided proportionate to the nature, scale and location of proposals:

- High quality sustainable and inclusive design that responds positively to and reflects the particular local characteristics of the site and the identity of the surrounding area as well as taking into account climate change;
- Safe and attractive public open spaces and street scenes through the creation of high quality public realm using appropriate materials/surface treatments, landscaping, public art, street lighting and furniture which is appropriate for their locations;
- That it respects the amenity value of the occupiers of nearby buildings or the wider area;
- The promotion of safety and security through design, location and layout in a way that reduces the incidents of anti-social behaviour, vulnerability to crime, the fear of crime and distinguishes between spaces which are private or public;
- High quality design practice approach demonstrated through the Design and Access Statement and supporting plans and drawings using imagination, flair and innovation to create visually attractive places, spaces and buildings;
- Design solutions that make the most efficient use of land with appropriate densities justified as part of the design process with positive treatment of the spaces around and between buildings;
- Landscaping that creates new and retains and integrates existing features and assets to build a coherent structure beneficial to biodiversity and ecology and which integrates innovative and sustainable urban drainage water management techniques;
- Landscape proposals have been prepared in conjunction with the site layout as the design process evolves and take into account all site constraints and opportunities and the relationship of the site to its surrounding landscape;
- Accessibility to all users via a range of transport modes and which is integrated into existing patterns of movement in a legible and permeable way connecting to existing patterns of movement to facilities that people need to use;

- That consideration has been given to historic character and assets, particularly in conservation areas;
- That consideration has been given through the design process to climate change mitigation and adaptation, including good design of layout, aspect, massing and use of materials in order to reduce energy consumption and thereby minimise contributions to climate change.

Policy D26

Historic Environment

General

Development proposals should avoid harm to, sustain and, where appropriate enhance the significance of heritage assets and their setting (including those on Local Lists), in a manner consistent with their historical significance. This will ensure a continued role in distinguishing the District's unique sense of identity and place.

The Council will require development proposals affecting heritage assets or their setting to be supported by sufficient information (proportionate to the assets importance) to understand the significance of the heritage asset and how it will be potentially affected. This should have appropriate regard to the Somerset Historic Environment Record. Development proposals affecting heritage assets, or their settings will be expected to exhibit appropriately sympathetic design in terms of siting, mass, scale and use of materials.

The Council will encourage proposals that make a positive contribution to the conservation of heritage assets and their setting, including through sensitive regeneration that brings redundant or under-used buildings and areas into appropriate and viable use in a manner consistent with their conservation. The Council will also encourage schemes that promote the management, interpretation and improved public access to heritage assets, or promote local skills and crafts relevant to the historic environment.

The Council will work with partners to:

- Provide relevant guidance and assistance to owners and developers on particular aspects of the historic environment and their responsibilities, including information on owning designated heritage assets, their interpretation and access by members of the public as well as advice on appropriate development schemes;
- Carry out regular surveys to identify designated heritage assets at risk that are not currently part of Historic England's surveys and develop strategies to protect them;
- Encourage and help communities to develop Local Lists within relevant Neighbourhood Plans; and
- Carry out conservation area appraisals of the conservation areas within the district and, as part of this, prepare management plans for them.

Designated Heritage Assets

Great weight will be given to the conservation of Sedgemoor's designated heritage assets. Where applicable development will be supported where it proposes:

- The repair and conservation of designated heritage assets, including the regeneration of heritage at risk or any designated heritage assets that are vacant;

- Appropriate design, form, scale and materials including contemporary solutions which positively enhance the character, appearance and significance of the designated heritage asset;
- A viable use for designated heritage assets, consistent with their historic character, with a clear presumption against their demolition;
- An emphasis on the importance of the setting of designated heritage assets, as well as important views to or from the assets themselves; and
- Appropriate energy efficiency measures where the principles of minimum intervention and reversibility are adopted and that do not harm the significance of the asset.

Any harm to the significance of a designated heritage assets must be clearly justified. Harm that is less than substantial will be weighed against the public benefits of the proposal; whether it has been demonstrated that all reasonable efforts have been made to sustain the existing use, find new uses, or mitigate the extent of the harm to the significance of the asset; and whether the works proposed are the minimum required to secure the long term use of the asset.

Where development resulting in the loss of a designated heritage asset is exceptionally permitted, the Council will require the recording of features of interest that would be destroyed in the course of any proposed works. The recording shall be carried out in accordance with appropriate building recording and analysis standards. The results shall form part of the Somerset Historic Environment Record for that site and made publicly available.

Non-Designated Heritage Assets

Non-designated heritage assets include buildings, monuments, sites, places, areas or landscapes identified as having a degree of significance meriting consideration in planning decisions. The weight given to the conservation of non-designated heritage assets during the determination of Local Plan 2011-2032 - Adoption Version Sedgemoor District Council 2019 159 District Wide Policies 7 the planning applications will be based on the assets significance and the magnitude of any harm. Harm or loss will only be permitted where it is judged that the benefits of the development outweigh the local significance of the asset and the scale of harm caused.

Non-designated heritage assets should be identified early in the design process to ensure that the impact on their significance is addressed in any development proposal. The retention, repair and re-use of non-designated heritage assets will be encouraged.

Local Archaeological Remains

Where development proposals will affect Areas of Archaeological Potential (as defined on the Policies Map) and elsewhere where there is reason to believe that there may be archaeological remains, a sufficiently detailed assessment of the nature, character and importance of the site will be sought prior to the determination of any application. A proportionate response will be taken to the detail of the assessment required. Where an initial assessment suggests a site includes or has the potential to include archaeological remains applicants will be required to submit an appropriate desk-based assessment. Where necessary and proportionate this should be followed by a more detailed assessment (e.g. including field evaluation).

Development proposals which would damage or destroy locally important archaeological remains will not be supported, unless the benefits of the development outweigh the local significance of the remains and a suitable mitigation strategy of recording, analysis and publication is designed. Where

physical preservation in situ is not possible, mitigation strategies will be required for the protection and/or recording of the site.



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Appendix 16.2 Historic Environment DBA



Gravity

Historic Environment
Desk-based Assessment



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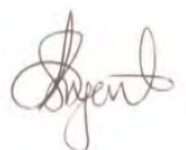
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Summary

Wessex Archaeology was commissioned by This is Gravity Limited to assess the potential impact to the historic environment resource from development of land primarily formed of a former Royal Ordnance Factory located near Puriton.

The former Royal Ordnance Factory was subject to a previous planning application under the name of the 'Huntspill Energy Park' in 2017 which comprised an outline plan for an energy related employment park along and associated infrastructure and was consented in 2017. As a result, there has been a series of previous archaeological work undertaken in and around the site with the identified impacts from the 2017 consented scheme already mitigated.

This assessment therefore focuses on the new areas of land added for the application of a Local Development Order and will act as a technical appendix to an Environmental Statement.

This assessment has established there is a potential for archaeological remains to be present within the Site which are most likely to relate to the prehistoric and/or Romano-British occupation of the area, evidence for which has have been identified through previous archaeological investigations within the Site and the Study Area. There is also a potential for remains associated with the former medieval and post-medieval agricultural landscape to be present which have been identified on aerial imagery.

While remains are likely to be present, and as a result have the potential to be impacted upon by construction works associated with the proposed development, there is no evidence to suggest any remains would be of sufficient significance to preclude development and that their loss could be successfully dealt with through the planning process.

The assessment considered a number of designated heritage assets including the Scheduled Brent Knoll hillfort which, although will share visibility with the proposed development, will not lead to harm to its significance. The proposed development will not reduce the ability to appreciate the asset from the vast majority of the surrounding landscape and will have no impact on its topographic prominence.

Through this assessment of designated heritage assets, it has been established that the Proposed Development will result in harm to the significance of the Grade II listed Manor Farmhouse through a change in its setting. This is due to the removal of the agricultural fields between the Site and the asset which make a positive contribution to its significance through the ability to the farmhouse in its original position at the edge of the settlement in combination with a rural landscape.

The conclusion is that this harm will be be less than substantial as while this element of its setting will be altered, its primary setting of the village of Puriton will remain unchanged as will the ability to appreciate its architectural and historic interest which are best understood in close proximity and within the asset itself. As a result, as per paragraph 202 of NPPF, this harm should be weighed against the public benefit and that 'special regard' should be paid to the desirability of preserving its setting as set out in Section 66 of the Planning (Listed Buildings and Conservation Areas Act) 1990.

No other designated heritage assets will be harmed as a result of a change in setting through the construction of the Proposed Development.



Gravity

Historic Environment Desk-based Assessment

1 INTRODUCTION

1.1 Project Background

- 1.1.1 This Historic Environment Desk-based Assessment (HEDBA) was commissioned by This is Gravity Limited ('the Client') to assess the potential impact to the historic environment resource from development of land on the site of the former ROF Puriton, Woolavington, Somerset centred on National Grid Reference (NGR) 333321, 142387 (hereafter, 'the Site'; Figure 1).
- 1.1.2 This study will be submitted in support of the application for a Local Development Order (LDO) and will act as a technical appendix to an Environmental Statement (ES).
- 1.1.3 The Site is primarily formed of a former Royal Ordnance Factory (ROF) which was subject to a previous planning application under the name of the 'Huntspill Energy Park' which comprised an outline plan for an energy related employment park along and associated infrastructure. The application was supported with an Environmental Statement and was consented in 2017.
- 1.1.4 Many of the previous archaeological investigations (section 4.3) were carried out in support of this planning application and as a result have already mitigated the impacts set out in the Environmental Statement for the consented scheme.
- 1.1.5 In order to ensure clarity of reference, the following terms will be used within this assessment to describe the various elements and are visually represented on Figure 2:
- The Consented Scheme – the extent of the area for the 'Huntspill Energy Park' consented in 2017;
 - The Additional Land – new areas of land to the south of the Consented Scheme along Woolavington Road which are to be included within the LDO; and
 - The Site - The area to be submitted for the LDO which comprises the Consented Scheme plus the Additional Land.

2 AIMS OF THE ASSESSMENT

2.1 Introduction

- 2.1.1 This assessment is required to comply with the appropriate assessment planning guidance as outlined in paragraph 189 of the NPPF, 2019 and in line with ClfA Guidance Standards and Guidance (2017). This assessment will also identify and reference any other relevant and/or appropriate documents such as existing heritage or archaeological site management plans that may be in operation in the locality.

2.2 Aim of the desk-based assessment

- 2.2.1 This report will determine, as far as is reasonably possible from existing records, the nature, extent and significance of the historic environment within a specified area. Desk-based assessment will be undertaken using appropriate methods and practices which satisfy the stated aims of the project, and which comply with the Code of Conduct and other relevant regulations of the Chartered Institute for Archaeologists.
- 2.2.2 This report will establish the impact of the proposed development on the significance of the historic environment, or will identify the need for further evaluation to do so, and will enable reasoned proposals and decisions to be made to mitigate, offset or accept without further intervention that impact.

3 GUIDANCE, METHODOLOGY AND PLANNING BACKGROUND

3.1 Introduction

- 3.1.1 The methodology employed during this assessment was based upon relevant professional guidance, including the Chartered Institute for Archaeologists' *Standard and guidance for historic environment desk-based assessment* (CIfA 2017).

3.2 Study Area

- 3.2.1 Baseline conditions were established through a desk-based review of publicly accessible sources of primary and synthesised information pertaining to the historic environment within a 1 km radial Study Area. The recorded historic environment resource within the Study Area was considered to provide a context for the discussion and interpretation of the known and potential historic environment resource (heritage assets) that could be affected by the proposed development, via the application of informed professional judgement.

3.3 Sources

- 3.3.1 The following publicly accessible sources of primary and synthesised information were consulted:
- *the National Heritage List for England (NHLE), which is the only official and up to date database of all nationally designated heritage assets;*
 - *the Somerset Historic Environment Record (HER), comprising a database of recorded archaeological sites, find spots, and archaeological events within the county;*
 - *relevant national, regional and thematic Research Frameworks;*
 - *national heritage datasets including the Archaeological Data Service (ADS), Heritage Gateway, OASIS, PastScape and the National Record of the Historic Environment (NRHE) Excavation Index;*
 - *historic manuscripts, surveyed maps, and Ordnance Survey maps; and*
 - *relevant primary and secondary sources including published and unpublished archaeological reports relating to excavations and observations in the vicinity of the Site.*

- 3.3.2 Sources consulted during the preparation of this assessment are listed in the References section at the end of this report. Records obtained from the NHLE and HER are listed in Appendix 3 and illustrated in Figures 4-5.

3.4 Site visit

- 3.4.1 The Site was visited on the 22nd February 2021.
- 3.4.2 The aim of the Site visit was to assess the general aspect, character, condition and setting of the Site and to identify any prior impacts not evident from secondary sources. The Site visit also sought to ascertain if the Site contained any previously unidentified features of archaeological, architectural or historic interest.
- 3.4.3 A key objective of the Site visit was the gathering of observations upon which to assess the potential for the development proposals to change the settings of heritage assets.

3.5 Assessment of significance

- 3.5.1 NPPF defines significance as: the value of a heritage asset to this and future generations because of its heritage interest. The interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting. For World Heritage Sites, the cultural value described within each site's Statement of Outstanding Universal Value forms part of its significance.
- 3.5.2 Current national guidance for the assessment of the significance of heritage assets is based on criteria provided by Historic England in Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment (English Heritage 2008). Within the guidance, significance is weighed by consideration of the potential for the asset to demonstrate differing 'values'.
- 3.5.3 These values are broadly analogous to the 'interests' defined by NPPF, which are used within this report, as per Statements of Heritage Significance: Analysing Significance in Heritage Assets (Historic England 2019). These are:
- Archaeological Interest: there will be archaeological interest in a heritage asset if it holds, or potentially holds, evidence of past human activity worthy of expert investigation at some point.
 - Architectural and Artistic Interest: these are interests in the design and general aesthetics of a place. They can arise from conscious design or fortuitously from the way the heritage asset has evolved. More specifically, architectural interest is an interest in the art or science of the design, construction, craftsmanship and decoration of buildings and structures of all types. Artistic interest is an interest in other human creative skill, like sculpture.
 - Historic Interest: An interest in past lives and events (including pre-historic). Heritage assets can illustrate or be associated with them. Heritage assets with historic interest not only provide a material record of our nation's history but can also provide meaning for communities derived from their collective experience of a place and can symbolise wider values such as faith and cultural identity.
- 3.5.4 This assessment was also informed by the advice published by Historic England in the document entitled Managing Significance in Decision-Taking in the Historic Environment: Good Practice Advice in Planning Note 2 (2015).

3.6 Setting assessment

3.6.1 Annex 2 of the NPPF defines the setting of a heritage asset as:

'the surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.'

3.6.2 The setting assessment was guided by *The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3* (GPA 3; Historic England 2017), which states that:

'Setting is not itself a heritage asset, nor a heritage designation, although land comprising a setting may itself be designated.... Its importance lies in what it contributes to the significance of the heritage asset or to the ability to appreciate that significance.' (GPA 3, para. 9)

3.6.3 When undertaking settings assessment, intervisibility between the development and a heritage asset does not, in and of itself, constitute an adverse effect to significance. A specific adverse effect on the significance of an asset, occurring as a result of changes within its setting, must be identified in order for 'harm' to be deemed to occur.

3.6.4 GPA3 advocates a systematic and staged approach to the assessment of the effects of development:

- Step 1 of the approach is to *'identify which heritage assets and their settings are affected'*
- Step 2 requires assessment of *'the degree to which these settings and views make a contribution to the significance of the heritage asset(s) or allow significance to be appreciated'*
- Step 3 is to *'assess the effects of the proposed development, whether beneficial or harmful, on the significance or on the ability to appreciate it'*
- Step 4 is to explore ways to *'maximise enhancement and avoid or minimise harm'*
- Step 5 is to *'make and document the decision and monitor outcomes'*

3.6.5 For the purposes of this assessment, only Steps 1-4 of the process have been followed (as required). Step 5 is not included as part of this assessment, as this is the responsibility of the Local Planning Authority.

3.7 Assumptions and limitations

3.7.1 Data used to compile this report consists of secondary information derived from a variety of sources, only some of which have been directly examined for the purposes of this Study. The assumption is made that this data, as well as that derived from other secondary sources, is reasonably accurate. The records held by the HER are not a record of all surviving heritage assets, but a record of the discovery of a wide range of archaeological and historical components of the historic environment. The information held within it is not complete and does not preclude the subsequent discovery of further elements of the historic environment that are, at present, unknown.

3.8 Copyright

- 3.8.1 This report may contain material that is non-Wessex Archaeology copyright (e.g., Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which Wessex Archaeology are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferable by Wessex Archaeology. Users remain bound by the conditions of the Copyright, Designs and Patents Act 1988 with regard to multiple copying and electronic dissemination of the report.

4 BASELINE RESOURCE

4.1 Site description

- 4.1.1 The Site is located on the northern edge of the Somerset Levels between the villages of Puriton and Woolavington, approximately 4 km north-east of the town of Bridgwater, Somerset.
- 4.1.2 The Site mainly comprises the remnants of the former Royal Ordnance Factory (ROF) Puriton which is currently in the process of being remediated. Many of the former buildings have been removed as the Site undergoes remediation following the granting of consent for implementation of the Huntspill Energy Park.
- 4.1.3 The Additional Land included within the LDO application is situated around the former ROF to the north, east and south along with the route of an access road into the Site.
- 4.1.4 The majority of the Additional Land to the south and east are primarily agricultural fields subdivided with mature hedgerows and used as either pasture or grassland for silage. The area to the west mainly comprises the route of a former railway line into the ROF with some agricultural fields on either side, while to the north a long extension is comprised of a number of drainage ditches and grassland.
- 4.1.5 The topographic elevation of the Site varies between 50 m above Ordnance Datum (aOD) on a ridge of high ground to the south, sloping down to c. 7 m aOD to the north.
- 4.1.6 The underlying geology is mapped as Langport Member, Blue Lias Formation, and Charmouth Mudstone Formation interbedded Limestone and Mudstone which are overlain, across most of the Site, by superficial Tidal Flat Deposits (British Geological Survey online viewer).

4.2 Development Proposal

- 4.2.1 The proposal for the Site comprises the development of a smart campus including:
- commercial building or buildings with a total Gross External Area of up to 1,000,000m² which would sit within current Use Classes E(g), B2, B8 and sui generis floorspace uses and
 - a range of buildings up to 100,000m² within Use Classes C1, C2, E (a) – (f) and F, B8, including restaurants / cafes, shops, leisure, education and sui generis uses and
 - up to 750 homes in Use Class C3,
 - together with associated infrastructure including restoration of the railway line for passenger and freight services, rail infrastructure including terminals, sidings and operational infrastructure and change of use of land to operational rail land, multi-

modal transport interchange, energy generation, energy distribution and management infrastructure, utilities and associated buildings and infrastructure, digital infrastructure, car parking, a site wide sustainable water management system and associated green infrastructure, access roads and landscaping.

- 4.2.2 Proposals also indicate the prospective heights of the buildings which is illustrated within the heights plan in Appendix 4. The maximum height proposed is within the centre of the Site with 35 m ridge heights getting lower towards the edges and the settlement centres. In areas adjacent to Puriton the maximum height will be up to 11 m with those adjacent to Woolavington up to 12 m in height.

4.3 Previous archaeological investigations

- 4.3.1 There have been a number of previous archaeological investigations carried out within the Site:

- A desk-based assessment undertaken across the ROF (Wessex Archaeology 2008)
- An archaeological evaluation comprising 14 trenches which found evidence of Romano-British activity including a possible trackway and pottery indicating a nearby settlement (Wessex Archaeology 2012b)
- A Historic Building Record of the ROF site undertaken to Historic England Level 2 standards (Wessex Archaeology 2012c)
- A desk-based assessment carried out for an access road (Wessex Archaeology 2012d)
- A geophysical survey carried out across the access road which identified a number of anomalies consistent with linear and pit-like features which were of archaeological interest (Wessex Archaeology 2012e)
- A programme of mitigation carried out in the area of Trench 6 from the 2012 evaluation (Wessex Archaeology 2012b) which uncovered evidence of occupation from the Middle Iron Age, a wall and a number of robbed out trenches from the Romano-British period and a number of discrete features which were not able to be dated (Wessex Archaeology 2020a)
- A geophysical survey carried out in two fields to the south of Puriton which were part of the access road which identified a number of anomalies consistent with archaeological features. Those features were interpreted as potentially representing Romano-British enclosures along with evidence for extraction activities in the post-medieval period (Wessex Archaeology 2019); and
- A programme of intrusive archaeological works which included an evaluation and subsequent excavation identified a number of archaeological features representing four main periods of activity: Early to Middle Bronze Age, Romano-British, medieval and modern, with several features remaining undated.

- 4.3.2 Within the Study Area, the HER records approximately 100 previous archaeological investigations. These will not be included as a full list within this assessment, rather specific references will be made in text where relevant with the location of any referenced activities displayed on Figure 6.

4.4 Archaeological and historical background

Prehistoric and Romano-British

- 4.4.1 The Site is situated on at the edge of two distinct environments, the Somerset Levels to the north and a prominent topographic ridge which overlooks the River Parrett and tidal flats further to the south. The Somerset levels have been subject to continual cycles of sea regression and transgression throughout prehistory which will have been reflected in the human activity within the area.
- 4.4.2 The earliest evidence for activity in the Study Area dates the Mesolithic period which is characterised by a number of flint flakes (PRN 10711) recovered during excavations during the construction of the M5 motorway, approximately 900 m west of the Site.
- 4.4.3 Given the periodic flooding due to the tidal movements, those areas on a higher topographic level will have proven attractive for more permanent settlement which has been evidenced through recent excavations carried out prior to the construction of the Gravity Energy Park Access Road.
- 4.4.4 Here, evidence of prehistoric activity was uncovered in the form of a rectangular ditched enclosure which has been tentatively dated to the Early to Middle Bronze Age (Wessex Archaeology 2012d).
- 4.4.5 The HER records the location of a number of additional finds and features to the south of the Site which date to the Bronze Age including anomalies identified during a geophysical survey (PRN 42550), adjacent to the Site, which were interpreted as a rectilinear enclosure and an L-Shaped ditch that may represent the site of a Bronze Age settlement (Donaldson 2020). Approximately 680 m to the south of the Site, the HER also records the location of a single couched burial found (PRN 28484) in association with a Beaker vessel which dates to the Bronze Age.
- 4.4.6 By the Iron Age, the Somerset Levels were being used for extensive salt production, an activity which continued into the Romano-British period. Excavations carried out within the Site recently uncovered a substantial curvilinear ditch dated by pottery to the Middle to Late Iron Age which may have formed part of an enclosure (Wessex Archaeology 2020). The excavations could not identify the projected course of the ditch which seemed to suggest an associated, opposing ditch which would have formed an entrance.
- 4.4.7 Further evidence of Iron Age activity is recorded approximately 600 m to the west of the Site where excavations recovered evidence indicating the presence of an Iron Age settlement located on a low promontory (PRN 10702).
- 4.4.8 Salt production across the continued into the Romano-British period with low rising mounds recorded in the wider landscape to the north. The HER records the potential site of such a salt production area (PRN 30221) approximate 350 m to the south, although this interpretation is tentative and the uncovered mounds are more likely to have been associated with pottery production.
- 4.4.9 Within the Study Area, the most substantial evidence for activity is located in the area of Junction 23 of the M5 during its construction, approximately 800 m to the south-west of the Site. The settlement was situated on the edge of a ridge, overlooking the River Parrett. Excavations revealed stone paving, wall foundations and pottery including Samian ware and was observed to extend beyond the motorway to the west, with the limit of the settlement not identified during the excavations (PRN 10705).

- 4.4.10 Excavations undertaken within the Site (Wessex Archaeology 2020) also uncovered a substantial masonry wall which was constructed from randomly coursed, large angular limestone blocks and slabs. In association with the wall, the excavations also uncovered a series of other features including a rubble filled trench, a rubble filled drain and a long linear feature all of which were potentially representative of robbed out walls. The pottery from each of these features dated the wall to the Romano-British period, potentially to the 3rd or 4th century AD and suggested the location of a possible area of settlement nearby.
- 4.4.11 Excavations within the Site also uncovered several east to west orientated field boundary ditches from which a small quantity of Roman pottery was recovered and suggested the area was subject to intensive agricultural activity at the time. (Wessex Archaeology 2012d).
- 4.4.12 Further areas of Roman activity are also recorded within the surrounding area including the route of a potential Roman road from Ilchester to Combwich, located approximately 80 m south of the Site (PRN 10707). Stone metalling associated with the Roman road was uncovered during the works at the M5 construction while mounds thought to be associated with pottery and possible salt production are recorded south of the Roman road.

Anglo-Saxon and Medieval

- 4.4.13 Although there are no finds or features recorded by the HER which have been dated to the Anglo-Saxon period, the Site and the Study Area were part of an active landscape which comprised a number of dispersed settlements and the agricultural land which surrounded them.
- 4.4.14 The settlement at Puriton is known to have been established in the Anglo-Saxon period with documentary evidence from the mid-9th century indicating it was part of the Glastonbury Abbey estate at this time (Dunning 2004). The name 'Puriton' is derived from Old English, meaning 'Pear-tree farm/settlement' (kepn.nottingham.ac.uk) and is recorded within the Domesday Survey of 1086 as having a population of around 80 people, which was a medium-sized settlement for the time (opendomesday.org).
- 4.4.15 The now Grade I listed Church of St Michael (NHLE 1344664), located approximately 480 m south-east of the Site was constructed in the 13th century, although documentary evidence suggests that the church was founded in 1113 (Dunning 2004). Documentary evidence also indicates that the churchyard has remained in use since the founding of the church.
- 4.4.16 The settlement at Woolavington, meaning a farm/settlement connected with Hunlaf (kepn.nottingham.ac.uk), is also recorded in the Domesday Survey where it is noted as a relatively large settlement with a population of close to 100 which puts it in the top 40% of settlements in the country (opendomesday.org).
- 4.4.17 The pattern of establishing settlement areas on the islands of slightly higher topography continued into the Anglo-Saxon and medieval periods and is still appreciable in the landscape today through the change in topographic levels in Puriton where the Church is located on a discernible raised platform. However, there was also an increase in the reclamation of parts of the Somerset levels which had been affected by a substantial tidal inundation during the earlier parts of the Anglo-Saxon period.
- 4.4.18 This reclamation process allowed for the improvement of the land immediately outside of the settlement centres which were then used for agricultural purposes. The Site lies in one of these areas with evidence still remaining in the landscape for the medieval open field system characterised by earthworks remaining within the south-eastern section of the Site in fields adjacent to Woolavington Road.

4.4.19 Within the Study Area, the HER records the presence of a number of other settlement centres from the medieval period which includes an example at Down End, approximately 600 m to the west of the Site. Here, the HER records the extent of the medieval borough of Caput Montis (PRN 10703) which is thought to have been established before 1159 by the De Combers who were lords of the Puriton Manor. The settlement was located on a promontory projecting to the west and comprised two parallel east-west roads with crossroads that formed a simple grid. Archaeological investigations here uncovered evidence for medieval activity in the form of a number of pits, post-holes and the remains of metal working (Brigers, 2010).

4.4.20 The settlement also contained a possible chapel and port along with the now scheduled remains of its Motte and Bailey Castle (NHLE 1019291). The remains of the castle comprise part of a mound and three broadly concentric mounds which form the earthwork of a motte with two baileys. A partial excavation carried out in the early 20th century found evidence for occupation at the castle from immediately prior to the Norman Conquest in 1066 through into the medieval period.

Post-medieval and 19th century

4.4.21 The general character of the Site and the Study Area changed little from that of the Anglo-Saxon and medieval period which is one of a primarily agricultural landscape interspersed with settlement centres.

4.4.22 The fertile land of the Somerset Levels continued to be managed and used intensively for cultivation. This management is still visible in the current landscape which was largely formed at this time, including within the Site.

4.4.23 Beyond the agricultural landscape, the settlements at Puriton and Woolavington formed the majority of the character during this period which is evidenced by the number of now listed buildings which were constructed. This includes the Grade II listed Manor Farmhouse (NHLE 1060137), located approximately 250 m west of the Site, which dates to the 16th century. The farmhouse is located on the edge of the settlement to allow crops and produce to be brought in from the immediate hinterland outside the village centre.

4.4.24 In Woolavington, there are more examples of post-medieval buildings which include now Grade II listed buildings like the mid-18th century Causeway Farmhouse (NHLE 1344687), the late 18th century Goldcleeve (NHLE 1060103) and the early 19th century Pool House (NHLE 1060104). There are also a number of non-designated buildings which date to this period like the late 17th century Former White Lion (PRN 36459) and Apple Tree Cottage (PRN 334753).

4.4.25 Archaeological excavations undertaken approximately 120 m to the east of the Site uncovered quantities of post-medieval pottery, clay-pipes and burnt brick which led to the tentative interpretation that it may have represented a lime kiln (PRN 11828). Cartographic and documentary evidence also suggests the presence of a number of mills within the Study Area including

Modern

4.4.26 In 1938-1939, the Site and the Study Area underwent the most substantial change in character with the construction of the Royal Ordnance Factory. The ROF was one of a number of purpose-built armament production sites built prior to the outset of the Second World War and to preserve its secrecy, was identifiable only by its code number: ROF 37.

- 4.4.27 The Site was selected due to its remote location, while still situated close to coal, chemical supplies and a plentiful source of water. The cutting of the Huntspill River, to the north, was accelerated to accommodate the ROF eventually providing the factory with approximately 230 million gallons of water per day.
- 4.4.28 The original factory comprised around 500 buildings and was completed by 1941. By 1943, the factory had nearly 3000 employees, many of whom were housed in 'pre-fabs' constructed on an estate in the village of Woolavington.
- 4.4.29 The ROF was tasked with manufacturing RDX (Research Department Explosive) and tetryl which was used to make detonators and explosive booster charges. From August 1941 to the end of the war 4 years later some 20,000 tonnes of RDX were produced at the ROF which was then sent to other factories to be filled into bombs, shells and other weapons. RDX was used in the bouncing bombs used on the 'Dambuster' raids of the Mochne-Eder dams in 1943.
- 4.4.30 The HER records the location of a number of contemporary pill boxes both within the Site and in the immediate vicinity designed to protect the factory in the event of invasion. One such example which is still in situ is located immediately opposite the Western Access Road from Woolavington Road (PRN11994) which sits on an elevated position, protecting the entrance.
- 4.4.31 The cessation of the Second World War in 1945 led the ROF to briefly stop producing explosives, turning instead to produce hexamine and formaldehyde for the chemicals and plastics industry alongside manufacturing pre-cast Airy houses which were used to bolster the housing stock in the post-war years.
- 4.4.32 By the early 1950s, the change in global politics and an increase in animosity between the West and the Soviet Union led to the implementation of a major rearmament programme leading to the re-establishment of high explosive production at ROF 37. The ROF was involved in the manufacture of plastic propellants for rocket motors used in surface-to air-missiles and in the production of high explosives (HMX) to detonate nuclear devices.
- 4.4.33 Production of explosives continued at ROF 37 until the late 2000s when the factory was finally closed. Prior to its decommissioning, the factory layout had remained relatively unaltered since its establishment in the 1930s. The ROF has since been subject to substantial remediation works following the approval of planning consent in 2017. Only one building of any heritage significance remains, Building 1:7, although its loss has been mitigated by way of a programme of building recorded (Wessex Archaeology 2012c).

5 ARCHAEOLOGICAL INTEREST AND SIGNIFICANCE

5.1 Potential impact

- 5.1.1 The Parameters Plan (Appendix 4) sets out the potential scale of development across the Site. At present, the exact construction methods are unknown, however, it is likely that the following activities have the potential to result in disturbance, including total removal, of any below ground archaeological remains:
- The remediation of any contaminated land (if required);
 - Creation of a development platform;
 - Excavation of trenches/piling for foundations;

- Installation of services and utilities; and
- Hard and/or soft landscaping.

5.1.2 As the above list is neither exhaustive nor exclusive, for the purposes of this assessment it is assumed that the entire area of Additional Land will be disturbed.

5.2 Conditions for survival

5.2.1 Previous archaeological investigations have indicated the presence of well-preserved archaeological remains within the area dating to the prehistoric and Romano-British periods. As the Additional Land has been primarily used for agriculture since the medieval period, there is unlikely to have been any substantial disturbance to the ground.

5.2.2 As a result, the conditions for survival of potential archaeological features are good.

5.3 Interest and significance

5.3.1 Through the information collected during this assessment, coupled with the results of previous archaeological investigations undertaken within the Site, there is a high likelihood of encountering archaeological remains from the prehistoric and Romano-British periods. Any remains uncovered within the Site from these periods would be useful in gathering information as to the occupation and activity of the local area during these periods. In particular, any remains which demonstrate the occupation of the area during periods of tidal regressions and transgression would be of importance to local and regional research objectives.

5.3.2 The agricultural character of the Site remained throughout the medieval period into the early 20th century with the landscape changing little aside from the alteration of the field boundary configurations. Remains associated with this period of activity of limited significance beyond their indication that the landscape was used for agricultural practices.

5.3.3 There is no indication, based on current evidence, that any archaeological remains within the Site would be of sufficient significance to be considered nationally important. Therefore, any remains would be considered non-designated heritage asset and could successfully be dealt with through the planning process.

6 SETTING ASSESSMENT

6.1 Introduction

6.1.1 The scoping exercise aims to identify any designated heritage assets (Figure 5) that could experience an impact (either beneficial or harmful) through development within their setting.

6.2 Scoping exercise (Step 1)

6.2.1 The scoping process was undertaken primarily by means of a GIS analysis combined with observations made during the Site visit. This allowed for a consideration of the significance of potentially affected assets and an appraisal of the degree of change likely to arise from the development proposals.

6.2.2 There are a total of 15 designated heritage assets located within 1 km of the Site comprising one scheduled monument and fourteen listed buildings. Aside from the Scheduled Monument, a motte with two baileys (NHLE 1019291) located approximately 900 m to the

west of the Site, all the designated heritage assets are located within the settlements of Puriton and Woolavington.

- 6.2.3 In Puriton, the Grade I listed Church of St Michael and the Angels (NHLE 1344664) (Plate 1) is situated at the centre of the village and lies on a plateau of slight topographic prominence which is perhaps best appreciated when walking up Rye from the south-west (Plate 2). The church sits in the centre of a well enclosed churchyard which also contains the Grade II listed Unidentified Monument (NHLE 1173477) (Plate 3). The Churchyard is surrounded by both vegetation and buildings although there are limited views towards the Site (Plate 4).
- 6.2.4 Elsewhere in the settlement lies the Grade II listed Gateway to Puriton Manor (NHLE 1296223) which sits on the corner of Rye and Middle Street (Plate 5), approximately 500 m south-west of the Site. The asset shares no relationship with the Site with its setting confined to its immediate surroundings.
- 6.2.5 The Grade II listed Manor Farmhouse (NHLE 1060137) located on the eastern edge of the settlement of Puriton, approximately 250 m to the west of the Site (Plate 6). As the asset lies on the edge of the settlement, there are uninterrupted views towards the Site across agricultural land (Plate 7).
- 6.2.6 In Woolavington, the ten designated assets, including the Grade I Listed Church of St Mary (NHLE 1060144) are clustered within the settlement centre, spanning approximately 250 m from end to end. The settlement extends for approximately 320 m beyond the most westerly asset towards the boundary of the Site which blocks views from the centre out to the landscape beyond (Plate 8).
- 6.2.7 The cluster of assets, along with other buildings in the settlement centre, form a relatively coherent centre of historic buildings which are best appreciated in close proximity and in combination with each other (Plates 9 and 10). Within that cluster, the Grade I Listed Church of St Mary is the focal point and sits neatly within its church yard (Plate 11) with its tower a prominent feature of the settlement. There are no views from these designated assets towards the Site while the intervening development is likely to mitigate any potential visual intrusion from the Proposed Development.
- 6.2.8 Beyond the 1 km Study Area, and through the application of a bare earth ZTV covering 5 km of the surrounding landscape, a number of designated heritage assets were identified as potentially sharing intervisibility with the Site. However, the vast majority of these assets are located within settlement centres which provides reasonable intervening built form between them and the Site and, given the distance, the Site does not lie within a setting which contributes to their significance.
- 6.2.9 Those assets which lie outside of the settlement centres primarily comprise farm buildings which whose setting is primarily comprised of the spatial relationship between the farm buildings and which draw some significance from their immediate surrounding fields. The Site, therefore, is too distant from any of these assets to be considered to lie within their setting which contributes to their significance. Rather, the Site lies within the wider landscape which while predominantly rural is interspersed with large scale industrial units, particularly near large roads and motorways.
- 6.2.10 These were assessed as part of the scoping exercise and confirmed during the Site visit where there were no distinguishable heritage assets visible from the Site aside from the Scheduled Monument at Brent Knoll which lies beyond the 5 km ZTV.

- 6.2.11 Brent Knoll (NHLE 1008248) is a large Iron Age univallate hillfort situated on a large island rising to approximate 140 m above the surrounding levels (Plate 12), approximately 7 km to the north of the Site. It offers commanding views towards the Bristol Channel and across the inland landscape including the area within which the Site is located. The topographic prominence is a key element of the asset's significance as is the appreciation of that prominence from the surrounding landscape. Due to the scale of the Proposed Development, it will represent a new visual addition which will be noticeable from Brent Knoll and as such has the potential to be harmed.
- 6.2.12 As a result of the scoping exercise, therefore, the Grade I listed Church of St Michael and the Angels, the Grade II listed Manor Farmhouse and the Brent Knoll Scheduled Monument have been scoped in for further assessment due to the potential for a visual change in their setting from the Proposed Development.
- 6.2.13 All other assets have been scoped out of further assessment as the either the Site does not lie within their setting which contributes to their significance, or their setting does not make any contribution to their significance.

6.3 Assessment of significance and contribution of setting (Step 2)

The Grade I listed Church of St Michael and All Angels, Puriton (NHLE 1344664)

Asset

- 6.3.1 The asset (Plate 1), located approximately 470 m to the west of the Site, is an Anglican parish church which traces its origins to the early 13th century with later additions in the 14th and 15th centuries. The church is constructed in an Early English and Perpendicular architectural style from coursed and squared rubble with freestone dressing and slate and lead sheeting roofs which was restored in the late 19th century. The tower is squat and unbuttressed with embedded parapets (Plate 13) with a single pitched roof while the nave comprises four bays with two simple pointed-head windows. The chancel has been much restored and features two original light square head windows with three mid-19th century neo-Early English windows. Internally, there are a number of original features including a 15th century font, two 17th century chests alongside Jacobean and medieval rendos.

Setting

- 6.3.2 The setting of the asset is principally defined by its churchyard which sits on an area of relative topographic prominence within the village of Puriton. This topographic change is best appreciated when moving through the village, heading north along Rye towards the southern elevation of the church (Plate 2). The churchyard is well enclosed by adjacent development and vegetation allowing a full appreciation of the churches architectural interest (Plate 14) and an understanding of its historical development and position at the centre of the historic settlement.
- 6.3.3 Beyond the churchyard, the asset's setting comprises the village of Puriton which is currently dominated by later buildings, many of which are modern, interspersed with a number of historic buildings like the Grade II listed Manor Farmhouse to the west. The squat church tower is visible from parts of the village, however, its low height means that it is not a prominent feature of the landscape beyond the settlement core.

Significance

- 6.3.4 The asset derives its significance primarily from its historic and architectural interest which is vested in the physical building, the architectural quality of the original church and the visible signs of its evolution over time which can be seen in the differences in building styles and architectural detailing.

Contribution of setting to significance

- 6.3.5 The immediate setting of the asset does make a positive and important contribution to the setting of the asset allowing it to be appreciated within an enclosed environment with the church and the associated graves.
- 6.3.6 The surrounding village also makes a contribution to the significance, albeit significantly less than the churchyard itself, where it can be understood and appreciated as the oldest structure, and one of the settlement's focal points (Plate 15).
- 6.3.7 Small gaps in the surrounding vegetation (Plate 4) allow for some slight glimpsed views out to the wider landscape, although these are limited and make no real contribution to how the church is appreciated or to how it is experienced within its immediate churchyard setting or as the focal point of the village.

*The Grade II listed Manor Farmhouse, Puriton (NHLE 1060137)*Asset

- 6.3.8 The asset is a 16th century farmhouse (Plate 6), located approximately 250 m to the west of the Site, constructed from rough cast stone with a pantile roof. The farmhouse is of a cross-passage design with later alterations and additions in the 18th, 19th and 20th centuries leading to its current irregular plan. The majority of the visible elements of the house on its main elevation facing the road date to the 19th century (Plate 16) as evidenced by the 2-light casement windows. Internally, there are a number of exposed ceiling beams, a stone spiral staircase while the roof structure is thought to be original.

Setting

- 6.3.9 The setting of the asset is principally defined by the village of Puriton which is currently dominated by later buildings, many of which are modern, interspersed with a number of historic buildings (Plate 17).
- 6.3.10 Beyond the village, the assets setting comprises the agricultural land within the immediate hinterland of the settlement, to the west of the Site. There has been little development within this area, although there have been some residential buildings constructed further to the south along Middle Street. However, the rural and agricultural nature of this immediate hinterland is still appreciable within the landscape (Plate 18).

Significance

- 6.3.11 The asset derives its significance primarily from its historic and architectural interest which is derived from its remaining historic fabric from the 16th century and from the appreciable evolution the farmhouse has undergone through the later alterations.

Contribution of setting to significance

- 6.3.12 The immediate setting of the asset is defined by the village of Puriton with the main elevation of the asset facing towards the centre. This makes a positive contribution to its significance as it allows the asset to be understood as part of the evolving village townscape over time.
- 6.3.13 Also important to the setting of the asset is its spatial location at the edge of the village and its relationship with the agricultural land outside. The farmhouse would have been a key building in the village during the post-medieval period with crops brought in from the immediate hinterland. Therefore, that relationship is still appreciable both in plan and on the ground where the importance of its location can be understood.

*Brent Knoll hillfort and associated field system (NHLE 1008248)*Asset

- 6.3.14 The asset is an Iron Age univallate hillfort located approximately 7 km to the north of the Site (Plate 12). It is situated on a larger island of topographic prominence which overlooks the surrounding landscape towards the Bristol Channel and inland. The fort itself comprises a low, earthwork rampart approximately 1 m in height which encloses an area of approximately 1.6 ha.
- 6.3.15 Internally, the fort has been impacted upon by later quarrying activities in the medieval period, however, excavations have uncovered the remains of a Roman building. While the fort itself is considered to be of Iron Age origin, some of the outer ramparts are probably Romano-British in date. Items found during excavation include Iron Age pottery and Roman pottery and building material.
- 6.3.16 The remains of the fort have been altered and truncated through later activity including its use by the military during the second world war, however, there likely still remains much in the way of archaeology preserved within the fort's boundaries in addition to the standing earthwork remains.

Setting

- 6.3.17 The setting of the asset is defined by its position of topographic prominence over the landscape and the commanding views and visibility that position offered.

Significance

- 6.3.18 The asset derives its significance primarily from its archaeological interest and through the information that could yield relating to the occupation and use of the fort from the Iron Age through to the Romano-British period. There is also an archaeological potential for later activities from the medieval period through to the 20th century.

Contribution of setting to significance

- 6.3.19 The setting of the asset makes a positive and important contribution to its significance. The topographical prominence of the island upon which it sits was key to the selection of that location for the hillfort both as a defensive structure and as a reflection of its status. That prominence and the understanding of it is two-way with views from and to the hill fort of importance in understanding its significance.

6.4 Effects of the proposed development (Step 3)*The Grade I listed Church of St Michael and All Angels, Puriton (NHLE 1344664)*

- 6.4.1 The asset is located approximately 470 m to the west of the Site and is almost entirely screened by intervening vegetation and buildings. The wider landscape beyond the village makes no distinguishable contribution to the significance of the asset, however, there may be some limited visibility of the Proposed Development due to the scale of the buildings.
- 6.4.2 The change in this wider landscape will be barely perceptible when in the churchyard where the Church and its immediate setting will remain unaltered as will the relationship of the asset to the village. Therefore, there will be no harm to the asset through the construction of the Proposed Development.

The Grade II listed Manor Farmhouse, Puriton (NHLE 1060137)

- 6.4.3 The asset is located on the periphery of the village of Puriton with the Site located approximately 250 m to the east. Although the primary setting of the asset is defined by the

settlement and its principal elevation faces away from the Site, the asset does derive some significance from its relationship to the field system immediately outside of the village.

6.4.4 The Proposed Development will therefore result in harm to the designated heritage asset through a change in setting.

6.4.5 The level of that harm must be tempered against the fact that primary significance of the asset is derived from its architectural and historic interest which will both still be appreciable and unaffected by the Proposed Development. However, the loss of the fields will lead to a loss of significance through the removal of the ability to appreciate the farmhouse in its original position at the edge of the settlement in combination with a rural landscape.

6.4.6 The scale of harm, therefore, will be less than substantial as the primary significance will remain unaltered.

Brent Knoll hillfort and associated field system (NHLE 1008248)

6.4.7 The asset is located on perhaps the most prominent topographic location within a substantial distance and offers wide ranging views across the low-lying levels stretching to the Bristol Channel and includes the area in and around the Site.

6.4.8 The nature of the development of the area in the past 50 years has seen a substantial increase in the number of large industrial units constructed within that landscape. The topographic position of the hillfort means that any such changes will be visible from the asset and as such the Proposed Development will also be visible. The Proposed Development will therefore not represent a novel intrusion into the surrounding landscape, rather a continuation along a similar vein and, over time, will be no more noticeable than the existing modern developments to the west and south-west of the Site adjacent to the M5.

6.4.9 The Proposed Development will, however, will prevent some visibility towards the asset from a few very specific points of the landscape to the south of the Site along Woolavington Road. While this may be the case, the visibility of the scheduled monument is incidental and the appreciation of its prominence and understanding of its importance will not be altered by the Proposed Development, and as such will not lead to any harm to its significance.

7 CONCLUSION

7.1 Archaeological interest

7.1.1 This assessment has established there is a potential for archaeological remains to be present within the Site, and in particularly within the area of Additional Land to the south of the former ROF Site.

7.1.2 This potential is primarily vested in prehistoric and/or Romano-British remains which have been identified through previous archaeological investigations within the Site and the Study Area.

7.1.3 There is also a potential for remains associated with the former medieval and post-medieval agricultural landscape to be present which have been identified on aerial imagery.

7.1.4 There is no suggestion, based on the current information, that any of the potential remains would be of sufficient significance to preclude development and that their loss could be successfully dealt with through the planning process.



7.2 Setting

- 7.2.1 The assessment has established that the Proposed Development will result in harm to the significance of the Grade II listed Manor Farmhouse through a change in its setting. This is due to the removal of the agricultural fields between the Site and the asset which make a positive contribution to its significance through the ability to see the farmhouse in its original position at the edge of the settlement in combination with a rural landscape.
- 7.2.2 The conclusion is that this harm will be less than substantial as while this element of its setting will be altered, its primary setting of the village of Puriton will remain unchanged as will the ability to appreciate its architectural and historic interest which are best understood in close proximity and within the asset itself.
- 7.2.3 The assessment considered a number of designated heritage assets including the Scheduled Brent Knoll hillfort which, although will share visibility with the Proposed Development, will not lead to harm to its significance. The Proposed Development will not reduce the ability to appreciate the asset from the vast majority of the surrounding landscape and will have no impact on its topographic prominence.
- 7.2.4 No other designated heritage assets will be harmed as a result of a change in setting through the construction of the Proposed Development.

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APPENDICES

Appendix 1: Terminology

Glossary

The terminology used in this assessment follows definitions contained within Annex 2 of NPPF:

Archaeological interest	There will be archaeological interest in a heritage asset if it holds, or potentially may hold, evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.
Conservation (for heritage policy)	The process of maintaining and managing change to a heritage asset in a way that sustains and, where appropriate, enhances its significance.
Designated heritage assets	World Heritage Sites, Scheduled Monuments, Listed Buildings, Protected Wreck Sites, Registered Park and Gardens, Registered Battlefields and Conservation Areas designated under the relevant legislation.
Heritage asset	A building monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage assets include designated heritage assets and assets identified by the local planning authority (including local listing).
Historic environment	All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora.
Historic environment record	Information services that seek to provide access to comprehensive and dynamic resources relating to the historic environment of a defined geographic area for public benefit and use.
Setting of a heritage asset	The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.
Significance (for heritage policy)	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.
Value	An aspect of worth or importance

Chronology

Where referred to in the text, the main archaeological periods are broadly defined by the following date ranges:

Prehistoric		Historic	
Palaeolithic	970,000–9500 BC	Romano-British	AD 43–410
Early Post-glacial	9500–8500 BC	Saxon/Early Medieval	AD 410–1066
Mesolithic	8500–4000 BC	Medieval	AD 1066–1500
Neolithic	4000–2400 BC	Post-medieval	AD 1500–1800
Bronze Age	2400–700 BC	19th century	AD 1800–1899
Iron Age	700 BC–AD 43	Modern	1900–present day

Appendix 2: Legislative and planning framework

There is national legislation and guidance relating to the protection of important archaeological sites or historic buildings within planning regulations as defined under the provisions of the *Town and Country Planning Act 1990*. In addition, local authorities are responsible for the protection of the historic environment within the planning system. This section summarises the main components of the national and local planning and legislative framework governing the treatment of the historic environment within the planning process.

Legislation

Legislation	
Title	Summary
<i>Ancient Monuments and Archaeological Areas Act 1979</i>	The main legislation pertaining to archaeological sites is the <i>Ancient Monuments and Archaeological Areas Act 1979</i> , which builds on previous Acts in confirming legal protection for nationally important archaeological remains through their addition to a centrally maintained 'schedule' (Scheduled Monuments). The consent of the Secretary of State (Department of Culture, Media and Sport), as advised by Historic England, is required for certain works within a scheduled area (Scheduled Monument Consent). For archaeological sites that are not covered by the Act, protection is afforded through the overall framework of national and local planning policy.
<i>Planning (Listed Buildings and Conservation Areas) Act 1990</i>	The <i>Planning (Listed Buildings and Conservation Areas) Act 1990</i> provides specific protection for buildings and areas of special architectural or historic interest. Any decisions relating to Listed Buildings and their settings, and Conservation Areas must address the statutory considerations of the Act (in particular, Sections 16, 66 and 72), as well as satisfying relevant national and local planning policies. Section 66 of the Act states that: <i>'In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.'</i> Section 69 enables Local Planning Authorities to designate conservation areas. Conservation areas are those 'areas of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance'. Section 72 requires that in the exercise of planning duties 'special attention shall be paid to the desirability of preserving or enhancing the character or appearance' of conservation areas. Under the provisions of the Act, Listed Building Consent is normally required for works of demolition, alteration or extension to a Listed Building that affect its character as a building of special architectural or historic interest.
<i>Hedgerows Regulations 1997 (as amended in 2002)</i>	Hedgerows that fulfil certain criteria are afforded protection under <i>The Hedgerows Regulations 1997</i> (as amended in 2002). The administration of the regulations is the responsibility of the Local Planning Authority (LPA).

National Planning Policy Framework

The National Planning Policy Framework (NPPF) was published on 27 March 2012 and revised on 24 July 2018 and updated in February 2019 and again in June 2021. It sets out the government's planning policies for England and how these are expected to be applied.

Protecting and enhancing the historic environment is an important component of the National Planning Policy Framework's drive to achieve sustainable development (as defined in Section 2 'Achieving sustainable development'). The NPPF recognises that heritage assets are an irreplaceable resource and that effective conservation delivers wider social, cultural, economic and environmental benefits.

Section 16 of the NPPF, entitled 'Conserving and enhancing the historic environment', sets out the principal national guidance on the importance, management and safeguarding of heritage assets within the planning process (paragraphs 184-2)

On 6 March 2014 the Department for Communities and Local Government (DCLG) launched the Planning Practice Guidance (PPG) web-based resource. The resource provides additional guidance intended to accompany the NPPF. It includes a section entitled 'Conserving and enhancing the historic environment' (ID: 18a), which expands upon the corresponding sections of the NPPF. The PPG will, where necessary, be updated in due course to reflect changes to the NPPF since the new framework was published in February 2019.

National Planning Policy Framework (NPPF)	
Reference	Quote
Para. 189	In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.
Para. 190	Plans should set out a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. This strategy should take into account: a) the desirability of sustaining and enhancing the significance of heritage assets, and putting them to viable uses consistent with their conservation; b) the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring; c) the desirability of new development making a positive contribution to local character and distinctiveness; and d) opportunities to draw on the contribution made by the historic environment to the character of a place.
Para. 191	When considering the designation of conservation areas, local planning authorities should ensure that an area justifies such status because of its special architectural or historic interest, and that the concept of conservation is not devalued through the designation of areas that lack special interest.
Para. 192	Local planning authorities should maintain or have access to a historic environment record. This should contain up-to-date evidence about the historic environment in their area and be used to: a) assess the significance of heritage assets and the contribution they make to their environment; and b) predict the likelihood that currently unidentified heritage assets, particularly sites of historic and archaeological interest, will be discovered in the future.
Para. 193	Local planning authorities should make information about the historic environment, gathered as part of policy-making or development management, publicly accessible.
Para. 194	In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.
Para. 195	Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise. They

National Planning Policy Framework (NPPF)	
Reference	Quote
	should take this into account when considering the impact of a proposal on a heritage asset, to avoid or minimise any conflict between the heritage asset's conservation and any aspect of the proposal.
Para. 196	Where there is evidence of deliberate neglect of, or damage to, a heritage asset, the deteriorated state of the heritage asset should not be taken into account in any decision.
Para. 197	In determining applications, local planning authorities should take account of: a) the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation; b) the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and c) the desirability of new development making a positive contribution to local character and distinctiveness.
Para. 198	In considering any applications to remove or alter a historic statue, plaque, memorial or monument (whether listed or not), local planning authorities should have regard to the importance of their retention in situ and, where appropriate, of explaining their historic and social context rather than removal.
Para. 199	When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.
Para. 200	Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification. Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional; b) assets of the highest significance, notably scheduled monuments, protected wreck sites, registered battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional
Para. 201	Where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply: a) the nature of the heritage asset prevents all reasonable uses of the site; and b) no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and c) conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and d) the harm or loss is outweighed by the benefit of bringing the site back into use.
Para. 202	Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use.
Para. 203	The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.
Para. 204	Local planning authorities should not permit the loss of the whole or part of a heritage asset without taking all reasonable steps to ensure the new development will proceed after the loss has occurred.
Para. 205	Local planning authorities should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible ⁶⁹ . However, the ability to record evidence of our past should not be a factor in deciding whether such loss should be permitted.
Para. 206	Local planning authorities should look for opportunities for new development within Conservation Areas and World Heritage Sites, and within the setting of heritage assets, to enhance or better reveal their significance. Proposals that preserve those elements of the



National Planning Policy Framework (NPPF)	
Reference	Quote
	setting that make a positive contribution to the asset (or which better reveal its significance) should be treated favourably.
Para. 207	Not all elements of a Conservation Area or World Heritage Site will necessarily contribute to its significance. Loss of a building (or other element) which makes a positive contribution to the significance of the Conservation Area or World Heritage Site should be treated either as substantial harm under paragraph 201 or less than substantial harm under paragraph 202, as appropriate, taking into account the relative significance of the element affected and its contribution to the significance of the Conservation Area or World Heritage Site as a whole.
Para. 208	Local planning authorities should assess whether the benefits of a proposal for enabling development, which would otherwise conflict with planning policies but which would secure the future conservation of a heritage asset, outweigh the disbenefits of departing from those policies.



Appendix 3: Gazetteer

PRN	Name	Easting	Northing	Period
10711	Mesolithic flint finds, Long Field, Champion's Farm, Puriton	331633	142129	Mesolithic
28495	Neolithic wooden structures, Walpole	331131	143570	Neolithic
37491	Early neolithic aurochs remains, Walpole landfill site, Pawlett	331046	143453	Neolithic
28482	Probable late bronze age ditch, Puriton Hill	332196	140924	Bronze Age
12894	Round barrow, SW of Woolavington	333777	140615	Bronze Age
28484	Early bronze age crouched burial, Crandon Bridge, Bawdrip	332745	140473	Bronze Age
42550	Early Bronze Age enclosed settlement, E of Puriton	332795	141532	Bronze Age
10702	Iron age and Roman settlement site, Crockland, Churchfield Lane, Puriton	331502	141846	Iron Age
32798	Late prehistoric and Roman settlement and enclosures, Riverton Road, Puriton	331700	141701	Prehistoric
17904	Buried prehistoric landsurface, Walpole landfill site, Pawlett	331305	143367	Prehistoric
17960	Prehistoric buried landsurface, Walpole, Pawlett	331355	142560	Prehistoric
31625	Prehistoric or Roman road, burials etc, Dunball brick pits, Puriton	331630	142549	Prehistoric
44744	Roman finds, south of Knowle Hall, Bawdrip	332950	140269	Romano-British
10714	Roman road remains, Puriton Hill, Puriton	332257	140948	Romano-British
12863	Roman salt mound, W of Woolavington Bridge, East Huntspill	334310	143700	Romano-British
12862	Roman salt mound, W of Woolavington Bridge, East Huntspill	334310	143770	Romano-British
12856	Roman salt mound, E of Woolavington Bridge, East Huntspill	334570	143700	Romano-British
12848	Roman salt mound, W of Woolavington Bridge	334390	143680	Romano-British



12847	Roman salt mound, W of Woolavington Bridge	334410	143790	Romano-British
15974	Roman settlement, N of Puriton	333200	141901	Romano-British
34800	Saltern at Pyde Drove, near Woolavington	335098	143148	Romano-British
30221	Roman pottery mounds, Chilton and Shapwick Moor and Huntspill River	332500	140700	Romano-British
42918	Roman settlement, E of Puriton	332732	141554	Romano-British
32069	Roman pottery finds, SW of Withy Farm, East Huntspill	333290	143730	Romano-British
11709	Roman salt mound E of Cornmoor Farm, East Huntspill	334506	144038	Romano-British
12961	Roman salt mound, Woolavington Bridge, S of East Huntspill	334820	143620	Romano-British
12960	Roman salt mound, Woolavington Bridge, S of East Huntspill	334760	143640	Romano-British
12959	Roman salt mound, Woolavington Bridge, S of East Huntspill	334580	143650	Romano-British
12865	Roman salt mound, E of Woolavington Bridge, East Huntspill	334670	143670	Romano-British
12860	Roman salt mound, E of Woolavington Bridge, East Huntspill	334630	143600	Romano-British
12857	Roman salt mound, E of Woolavington Bridge, East Huntspill	334790	143630	Romano-British
10979	Roman salt mounds, area of Woolavington Bridge, East Huntspill	334736	143631	Romano-British
10039	Romano-British settlement, Crandon Bridge, Bawdrip	332733	140357	Romano-British
11831	Roman Road from Ilchester to Combwich	341995	132239	Romano-British
10705	Roman settlement, Down End	331561	141373	Romano-British
10498	Shrunken medieval village, Withy	332873	144094	Medieval
10152	Medieval and post medieval pottery finds, E of Bleak Bridge, West Huntspill	330925	144838	Medieval
10132	Church of St Mary and churchyard, Woolavington	334802	141649	Medieval
28485	Medieval activity, Crandon Bridge, Bawdrip	332753	140468	Medieval
27792	Flood defences, S of Dunball	331302	140543	Medieval



27011	Medieval settlement, S of Knowle Hall, Bawdrip	333010	140195	Medieval
10709	Church of St Michael and churchyard, Puriton	332031	141710	Medieval
12817	Medieval settlement site, North Mead Drove, Puriton	332365	142039	Medieval
27796	Medieval ridge and furrow cultivation, Dunball and Pawlett	330768	143102	Medieval
17293	Enclosure and Ridge and Furrow, North of Black Ditch, East Huntspill	333081	143306	Medieval
29686	Medieval and earlier River Siger, Burnham and East Huntspill	334358	147656	Medieval
11447	Motte and bailey castle, Down End	330899	141364	Medieval
10703	Medieval borough of Caput Montis, Down End	331129	141327	Medieval
10946	Tower windmill site, Darkfield Farm, Woolavington	334626	140831	Post-medieval
11828	Post medieval pottery finds, Puriton	331836	141085	Post-medieval
41612	King's Sedgemoor Drain	341725	133653	Post-medieval
13754	Unidentified monument in churchyard, about 10 m south-east of chancel, Church of St Michael and All Angels, Rye, Puriton	332042	141712	Post-medieval
13779	Gateway to Puriton Manor, Rye, Puriton	332070	141580	Post-medieval
36440	Remains of church house, 1 Rye View, Puriton	332083	141703	Post-medieval
36439	Puriton Manor House	332133	141648	Post-medieval
36433	Court Farmhouse, Puriton	332159	141728	Post-medieval
10707	Windmill site, Windmill Cottage, Puriton	331969	141001	Post-medieval
13776	No 12 (Grange Cottage), Lower Road, Woolavington	334654	141679	Post-medieval
13771	Unidentified monument in churchyard, about 15 m south-east of east end of Church of St Mary, Church Street, Woolavington	334809	141642	Post-medieval
13770	Unidentified monument in churchyard, about 10 m south of chancel, Church of St Mary, Church Street, Woolavington	334791	141635	Post-medieval



42876	Mortimers Farm, Woolavington	334635	141704	Post-medieval
36466	Jubilee Cottages, Woolavington	334767	141665	Post-medieval
36464	Elm Farmhouse, Woolavington	334660	141716	Post-medieval
36461	Manor House, Woolavington	334798	141732	Post-medieval
36459	Former White Lion, The Square, Woolavington	334740	141635	Post-medieval
39136	Apple Tree Cottage, 1 The Square, Woolavington	334753	141622	Post-medieval
39139	Tossels Cottage, Hectors Stone, Woolavington	334564	141745	Post-medieval
13777	Hallacott, 3 and 5 Lower Road, Woolavington	334698	141641	Post-medieval
13775	Causeway Farmhouse, 4 Lower Road, Woolavington	334717	141674	Post-medieval
13774	East Grange and The Grange, 7 Lower Road, Woolavington	334646	141631	Post-medieval
13772	No 8 (Goldcleeve), Church Street, Woolavington	334859	141601	Post-medieval
36465	Parsonage Farmhouse, Woolavington	334969	141690	Post-medieval
36457	4 Vicarage Road, Woolavington	334762	141459	Post-medieval
39137	Dawbins, Wolavington	334912	141615	Post-medieval
39138	Harrisons Farm, 16 Church Street, Woolavington	334940	141610	Post-medieval
13755	Manor Farmhouse, Rye, Puriton	332267	141766	Post-medieval
36432	Cann's Farmhouse, Cann's Lane, Puriton	332430	141652	Post-medieval
36431	Batch Farmhouse, Batch Road, Puriton	332109	141753	Post-medieval
10708	Windmill site, N of Home Covert, Puriton	332512	140901	Post-medieval
38968	Withy Farm, East Huntspill	332901	143867	Post-medieval
24587	Eighteenth-century Turnpike road, East Brent to Thurloxton	330989	140870	Post-medieval
10715	Lime kiln site, Puriton Hill, Puriton	331500	141100	Post-medieval



17051	Former course of River Parrett, Dunball	331521	140615	Post-medieval
10706	Windmill site, Windmill Furlong, Puriton	332309	141125	Post-medieval
12884	Dunball Wharf	330988	140855	19th century
12964	Bristol and Exeter Railway	325548	132290	19th century
36437	Puriton Inn, Puriton Hill, Puriton	331658	141446	19th century
36435	Hillside, Puriton	332113	141431	19th century
12888	Nineteenth-century cement works, Downend, Puriton	331342	141344	19th century
29680	Nineteenth-century workers' housing, Downend, Puriton	331310	141384	19th century
36438	The Admiral's Table hotel, Dunball, Puriton	331055	140883	19th century
36436	Exchange Inn, Puriton	331119	141334	19th century
16472	Dovecot, The Cockpit, Woolavington	334614	141618	19th century
32021	Knowle Hall, Bawdrip	333110	140294	19th century
29853	Icehouse, Knowle Park, Bawdrip	333189	140349	19th century
13773	No 4 (Pool House), Higher Road, Woolavington	334683	141533	19th century
36468	Former school, Woolavington	334813	141600	19th century
36460	Prince of Wales, Woolavington	334708	140962	19th century
36434	Waterloo Terrace, Puriton	332457	141643	19th century
41372	Shortedge Quarry, Puriton	332501	141231	19th century
18362	Dunball Station	331345	141103	19th century
42115	Walled garden, Knowle Hall, Bawdrip	332971	140483	19th century
42114	Lodge site, Knowle Hall, Bawdrip	332841	140512	19th century
10048	Dunball Cement Works, Bawdrip	331552	141018	19th century



10710	Colthurst Symons Brick and Tile Works, Puriton	331788	142723	Modern
39151	Second World War pillbox, W of ROF Bridgwater, Puriton	332392	143049	Modern
42202	Second World War road block, Black Ditch Bridge, Pawlett	331714	143613	Modern
39088	Sentry post, ROF Bridgwater, Puriton	334110	142440	Modern
39087	Sentry post, ROF Bridgwater, Puriton	334109	142171	Modern
39089	Sentry post, ROF Bridgwater, Puriton	334113	142715	Modern
39162	Second World War pillbox site, ROF Bridgwater, Puriton	333665	142096	Modern
39155	Second World War pillbox site, ROF Bridgwater, Puriton	334121	142665	Modern
39093	Building 3/42B, ROF Bridgwater, Puriton	333193	142291	Modern
39154	Second World War pillbox site, ROF Bridgwater, Puriton	333842	142725	Modern
39156	Second World War pillbox site, ROF Bridgwater, Puriton	333949	142660	Modern
42226	Second World War roadblock (N.Rd.104) site, Hillside, Puriton	332165	141308	Modern
42203	Second World War road block, Pawlett Road, Puriton	331438	141730	Modern
18129	School, Village Centre, Puriton	332022	141648	Modern
42221	Second World War roadblock (N.Rd.105) site, Puriton Hill, Puriton	331917	141208	Modern
42204	Second World War road block (N.Rd.103), Pawlett Road, Puriton	331396	141438	Modern
41373	Fourteen Acre Quarry, S of Puriton	332193	141305	Modern
18178	Methodist chapel and schoolhouse, Causeway, Woolavington	334770	141677	Modern
39153	Second World War pillbox site, ROF Bridgwater, Puriton	333307	141837	Modern
39157	Second World War pillbox site, ROF Bridgwater, Puriton	333061	141874	Modern
11994	Second World War pillbox, E of Puriton	333166	141628	Modern
36458	Ordnance Factory workers' housing, Woolavington	334551	140846	Modern



39098	Second World War water treatment plant, Puriton	333353	140550	Modern
32158	First World War munitions store, Dunball Pottery, Puriton	331672	142619	Modern
31773	Second World War pillbox, NW of ROF Bridgwater, Puriton	332622	143003	Modern
39090	Building 9/46, ROF Puriton	333729	142774	Modern
39163	Second World War pillbox site, ROF Bridgwater, Puriton	333423	142921	Modern
39159	Second World War pillbox site, ROF Bridgwater, Puriton	332566	142160	Modern
39152	Second World War pillbox site, ROF Bridgwater, Puriton	333127	142994	Modern
39092	Building 1/7, ROF Bridgwater, Puriton	332817	141947	Modern
39091	Sentry post, ROF Bridgwater, Puriton	333340	142986	Modern
39158	Second World War pillbox site, ROF Bridgwater, Puriton	332640	141938	Modern
39160	Second World War pillbox site, ROF Bridgwater, Puriton	332567	142426	Modern
39161	Second World War pillbox site, ROF Bridgwater, Puriton	332572	142796	Modern
12502	Royal Ordnance Factory (ROF Bridgwater), Puriton	333336	142434	Modern
10720	Second World War pillbox site, Down End	331260	141085	Modern
17595	Second World War Vickers machine gun pillbox site (NV8), Dunball	331319	141137	Modern
17594	Second World War Vickers machine gun pillbox site (NV7), Dunball	331305	141130	Modern
17593	Second World War Vickers machine gun pillbox (NV10) site, Dunball	331568	141030	Modern
17592	Second World War Vickers machine gun pillbox (NV9) site, Dunball	331508	141070	Modern
17591	Second World War workers camp, Dunball	331133	141038	Modern
16120	Second World War pillbox (N102) site, Dunball	331490	141491	Modern
12713	Second World War pillbox (N101), W of Puriton	331441	141613	Modern
11684	Twentieth-century reservoir, Huntspill River, West Huntspill	333129	144138	Modern



42403	Second World War pumping station, Woolavington Bridge	334470	143646	Modern
18128	Quarry, Woolavington, Puriton	333592	141557	Modern
18126	Quarry, south east of Puriton	331604	141153	Modern
18125	Industrial tramway, south of Puriton	331960	141230	Modern
18123	Congregational Church, 11 Woolavington Road, Puriton	332165	141499	Modern
10050	Salt Works, Dunball Cement Works, Dunball, Down End	331815	140925	Modern
12627	Cropmark boundaries, SE of Puriton	333309	140896	Undated
11164	Floodbank, Brent's Rhyne, Huntspill	331712	145471	Undated
11177	Trackway, E of Withery Bow Bridge, East Huntspill	332989	144632	Undated
10949	Stoning Pound, N of Woolavington	334648	142381	Undated
29181	Possible Duck Decoy, Withery Pool, Bridgwater Without	332256	140144	Undated
15531	Briquetage finds, Middlemoor Lake, Woolavington	335516	142464	Undated
31661	Blacklands fieldname, Hillside farm, Puriton	333500	141291	Undated
17050	Milestone, north west of Knowle Hall, Bawdrip	332668	140627	Undated
16544	Rifle ranges, Horsey Level, Dunball	331782	140545	Undated
10719	Pur Well, Puriton	332309	141598	Undated
11175	Cropmark enclosure, E of Batch Road, Puriton	332047	142632	Undated
10495	Floodbank, Withery Pill Rhyne, East Huntspill	332696	145234	Undated
11183	Deserted farm site, SE of Lakehouse Farm, East Huntspill	334110	144783	Undated
11171	Extensive field system, S of Mark Causeway, N of the Polden Hills	335705	143947	Undated
10945	Cropmark of enclosure, Woolavington Level	335004	143020	Undated
12625	Cropmark enclosures, S of Withery Farm, East Huntspill	332376	143414	Undated



11179	Floodbanks on Withy Pill and Pyde Rhynes, Woolavington	333990	143580	Undated
11829	Cropmark enclosures, Pawlett Level	330666	143014	Undated
11180	Cropmark of enclosure, S side of Combe Lane, Woolavington	334849	141194	Undated
11834	Cropmark of ringditch, NW of Cossington	335157	140971	Undated
10223	Cropmarks, S of Kings Sedgemoor Drain, Bridgwater Without	332180	140362	Undated



Plate 1) The Grade I listed Church of St Michael and All Angels, Puriton



Plate 2) View from the Grade I Listed Church of St Michael and All Angels towards Rye


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	Scale:	N/A	Illustrator: Andy_R
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Plate 3) View of the churchyard at the Grade I listed Church of St Michael and All Angels, Puriton



Plate 4) View from the Grade I Listed Church of St Michael and All Angels towards the Site, looking east


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Plate 5) The Grade II listed Gateway to Puriton Manor, Puriton



Plate 6) The Grade II listed Manor Farmhouse, Puriton


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Plate 7) View from the edge of Puriton towards the Site



Plate 8) View to the west from the centre of Woolavington along Lower Road towards the Site


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Plate 9) View from the Church of St Mary church yard towards the centre of Woolavington



Plate 10) View along Church Street looking to the west


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Plate 11) The Grade I listed Church of St Mary and its church yard, from the east

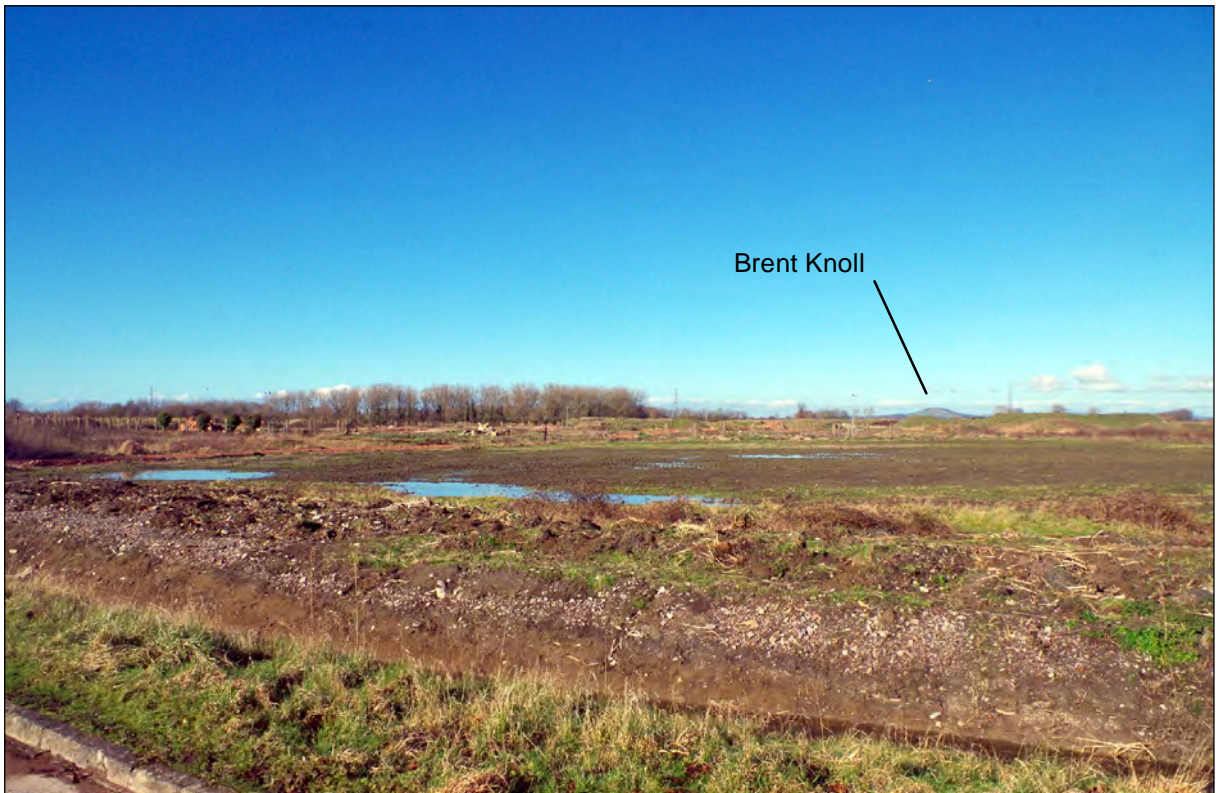


Plate 12) View towards Brent Knoll from the Site


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Plate 13) The tower of the Grade I listed Church of St Michael and All Angels



Plate 14) View of the buildings and vegetation surrounding the Grade I listed Church of St Michael and All Angels


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Plate 15) View of the centre of Puriton



Plate 16) View of the primary elevation of the Grade II listed Manor Farmhouse



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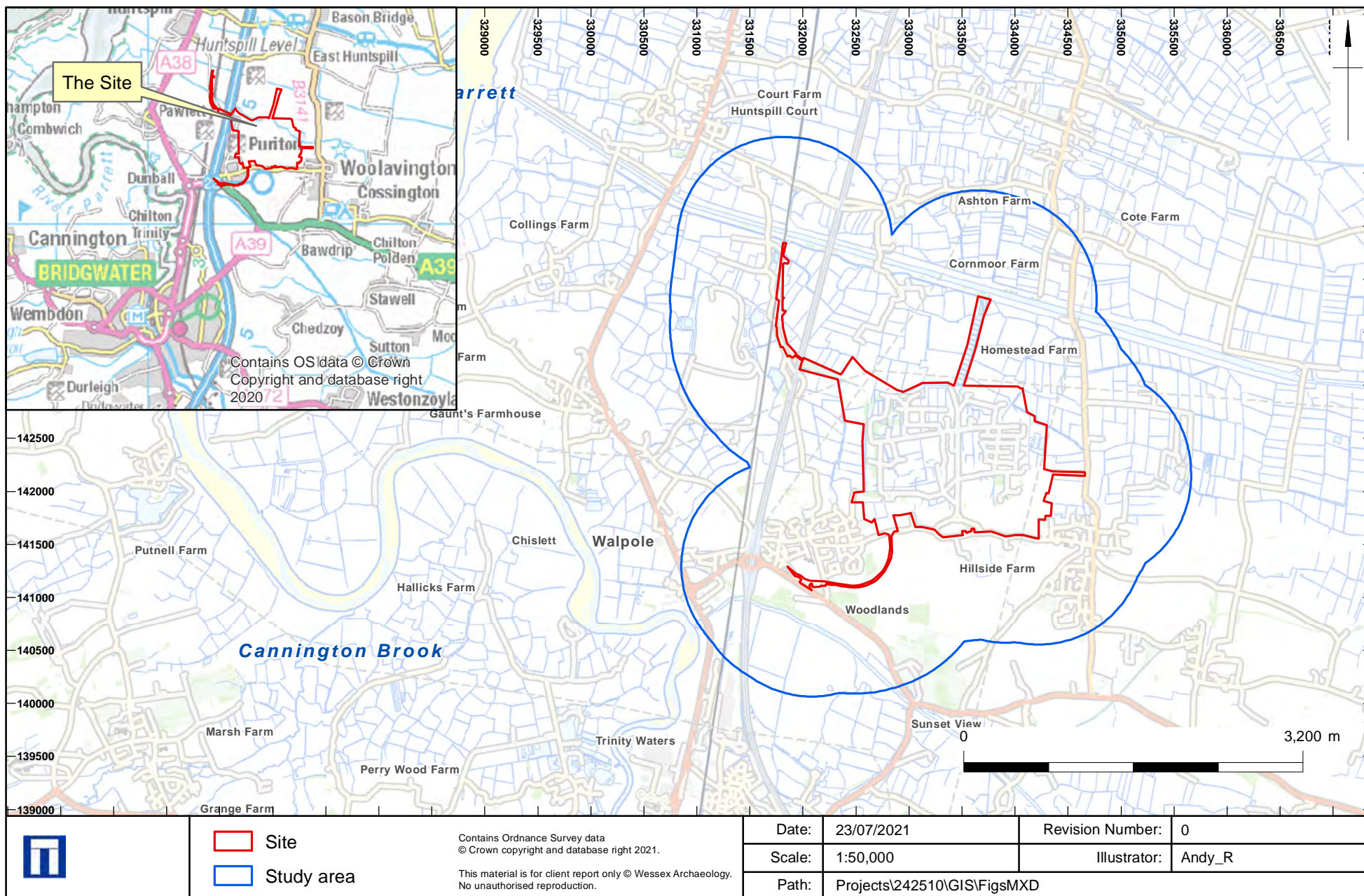


Plate 17) View of the immediate vicinity of the Grade II listed Manor Farmhouse, Puriton



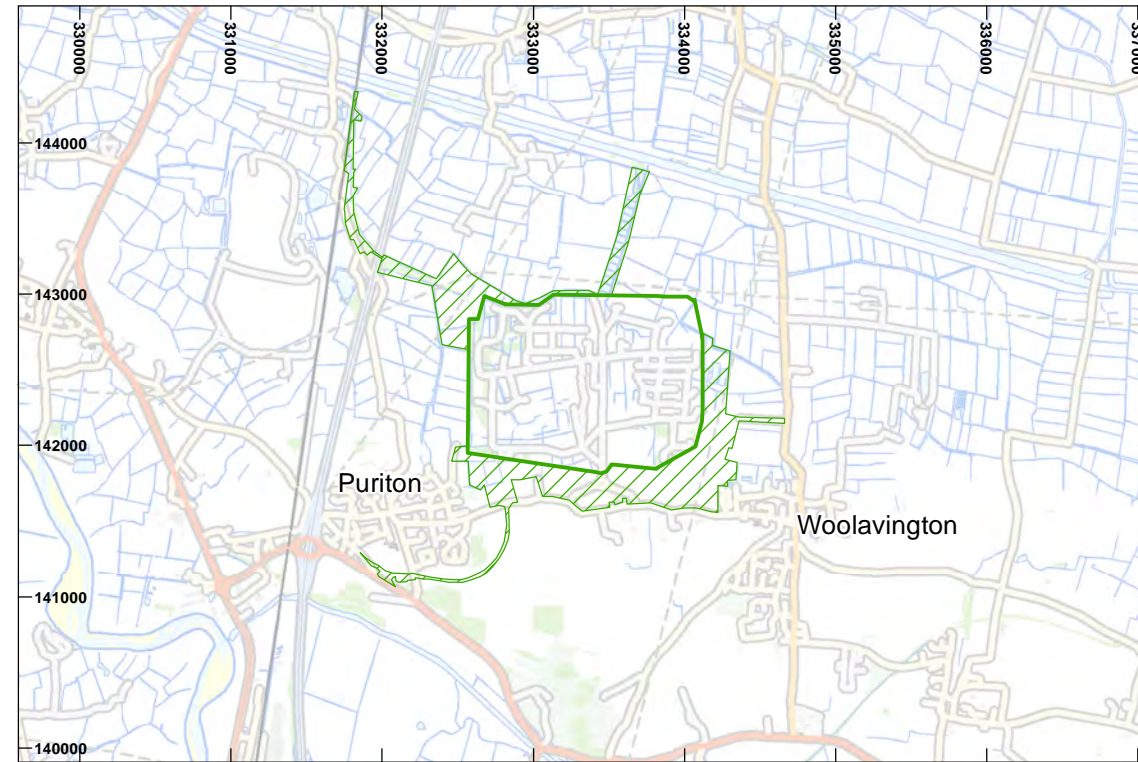
Plate 18) View of the agricultural land to the east of the Grade II listed Manor Farmhouse, Puriton

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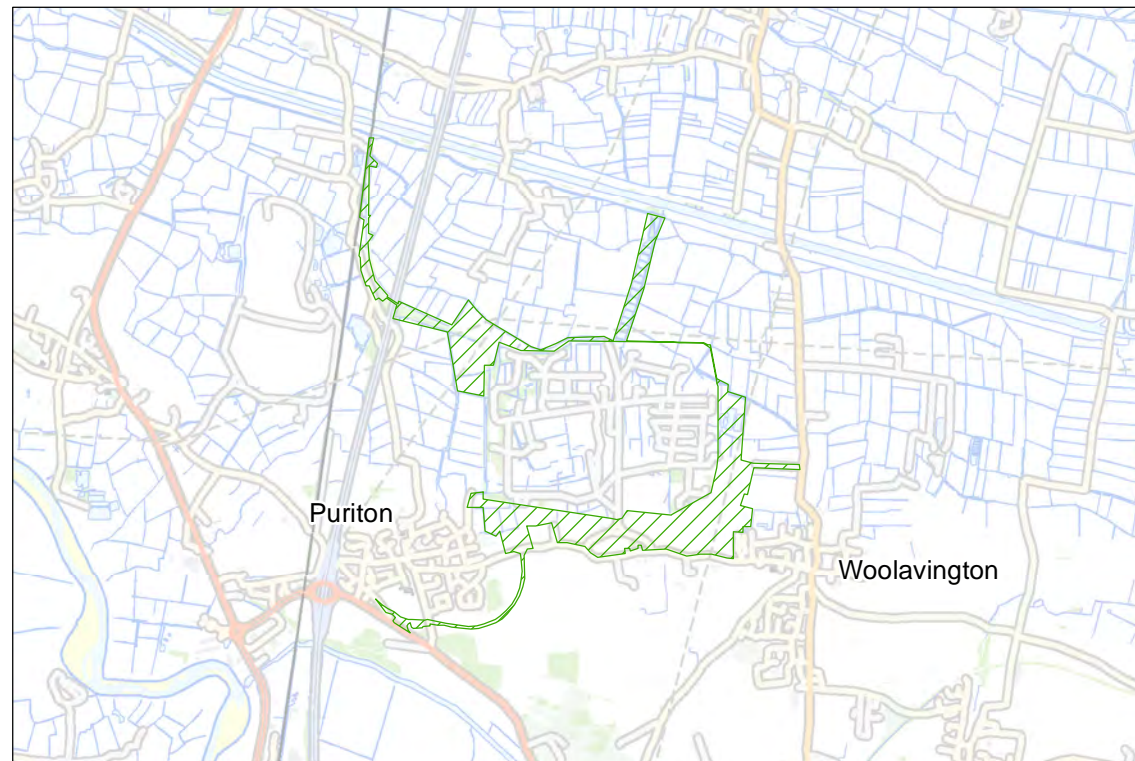


Site location and Study Area

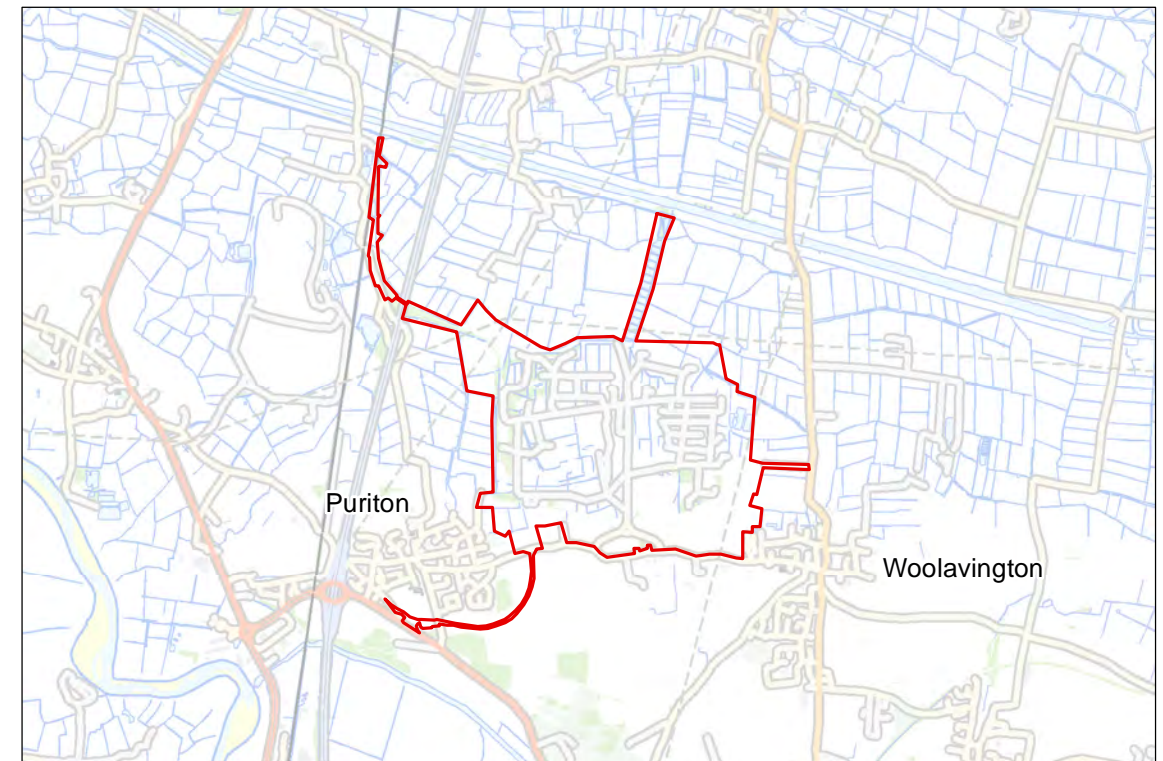
Figure 1



A) The Consented Scheme



B) The Additional Land



C) The Site

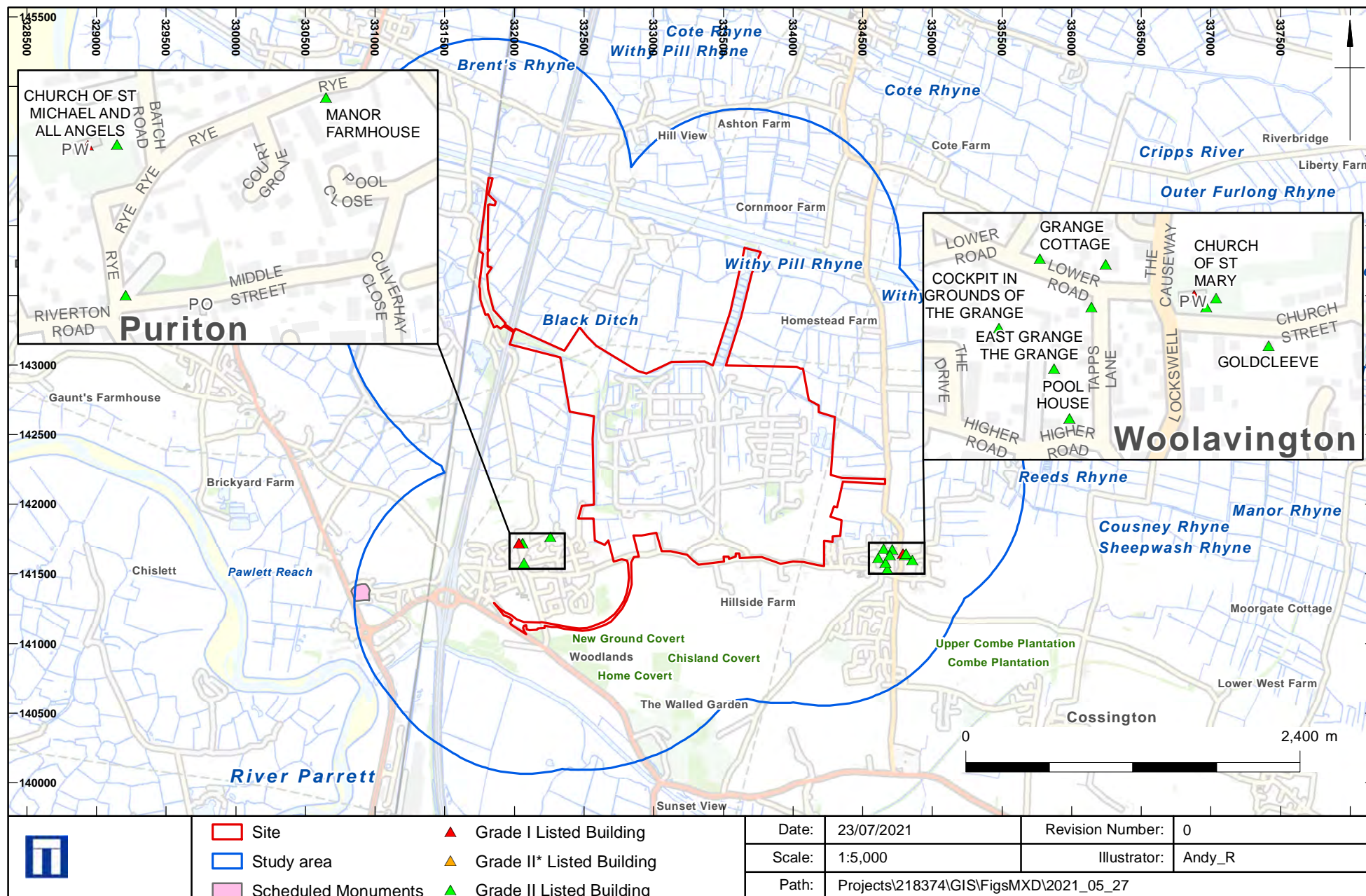


 The Consented Scheme Additional Land Site

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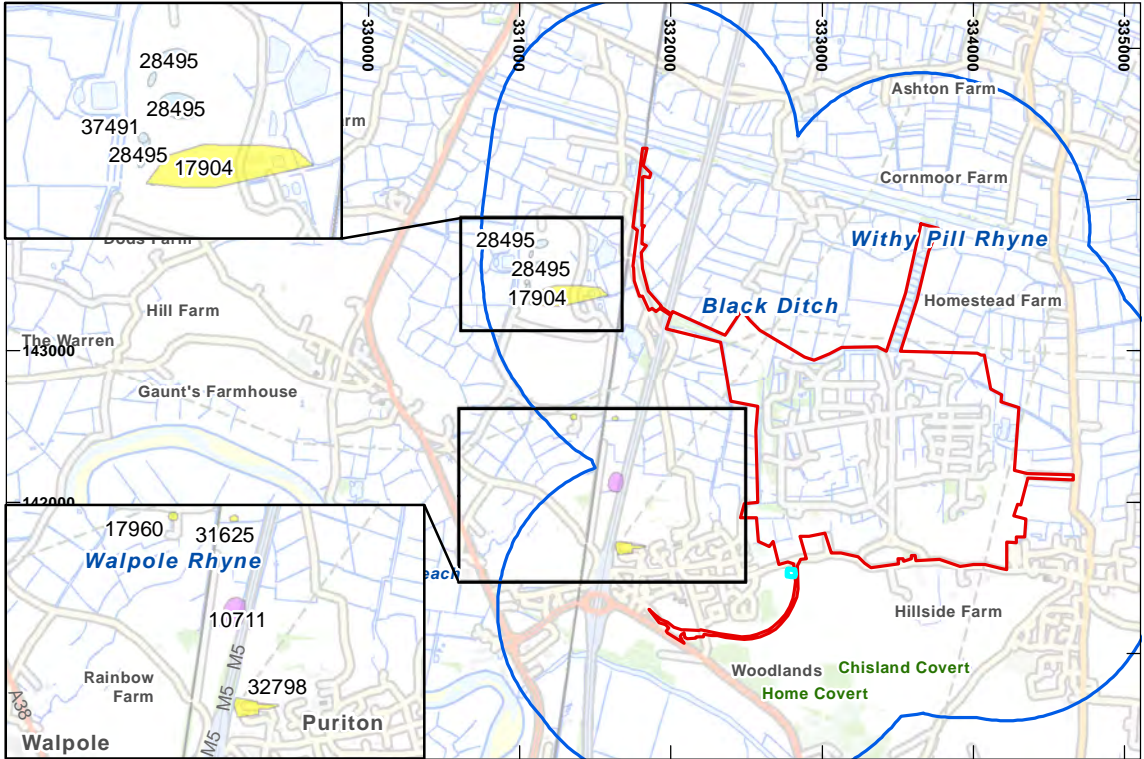
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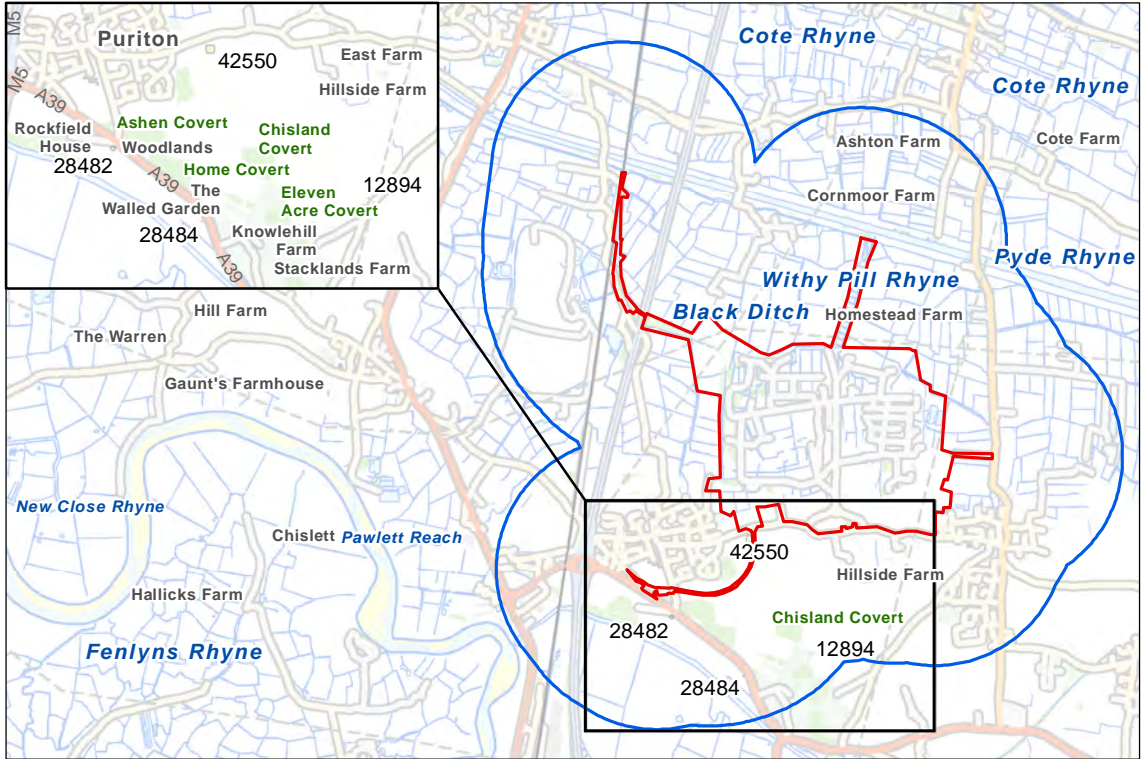


Key Designated Heritage Assets

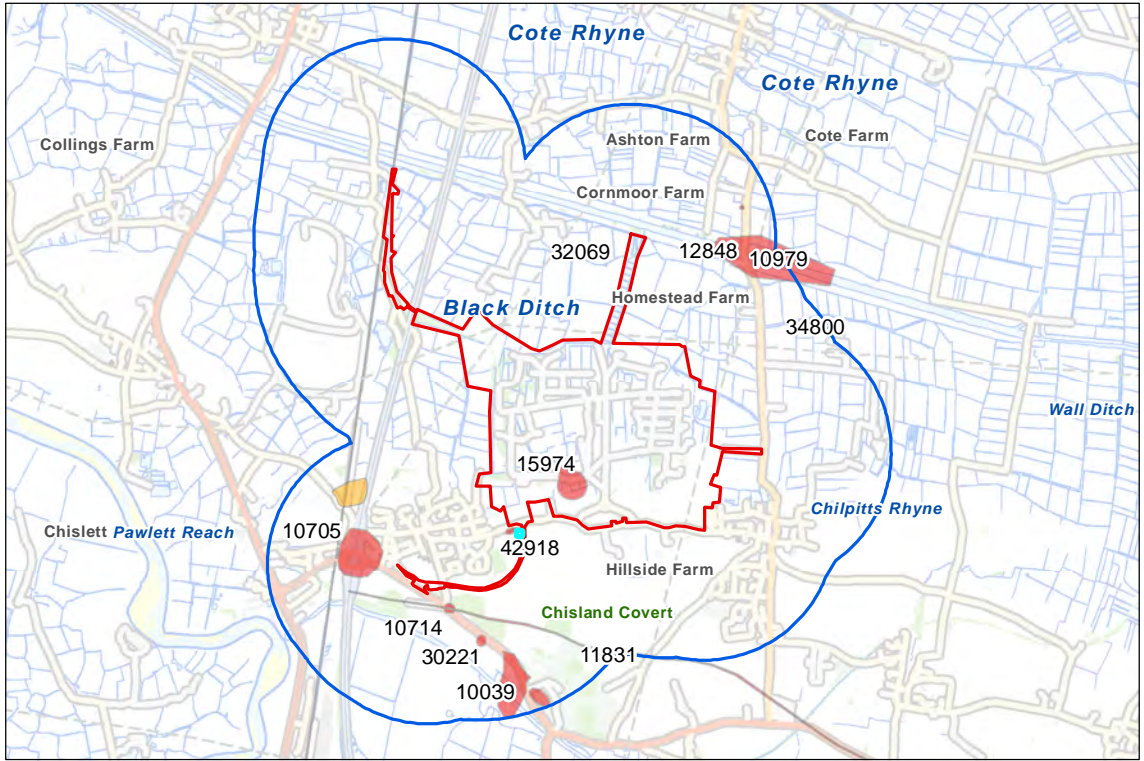
Figure 3



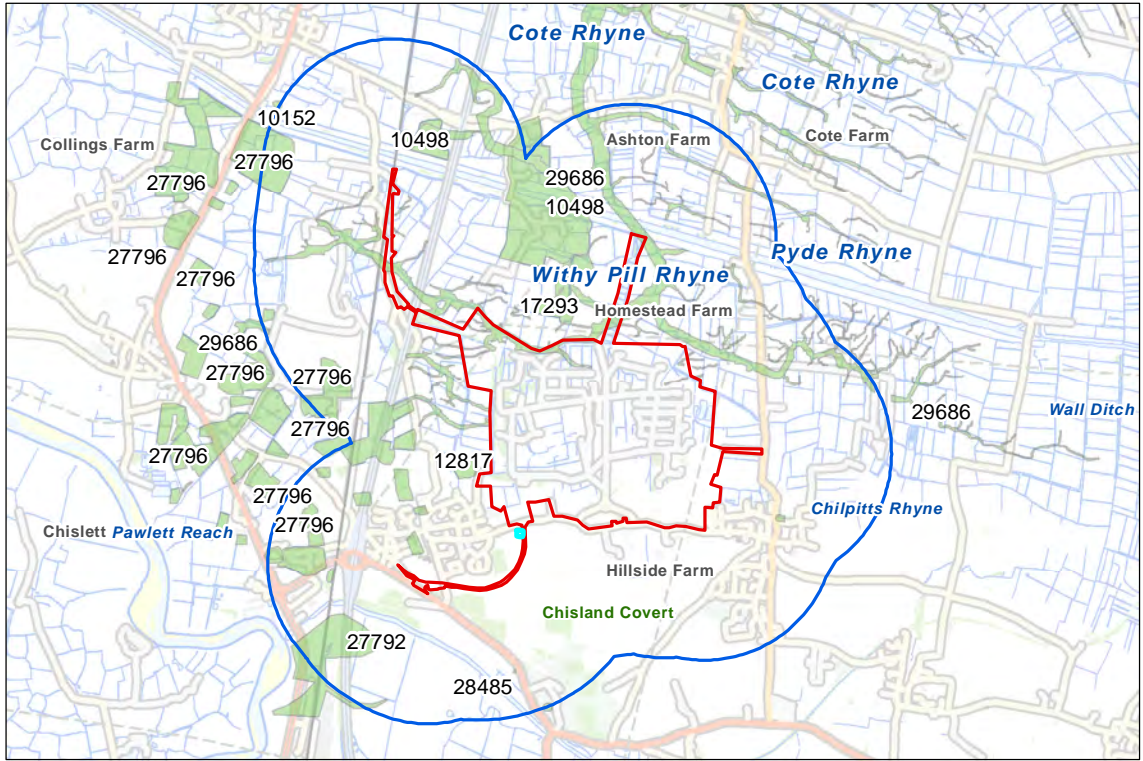
A) Prehistoric, Mesolithic and Neolithic



B) Bronze Age



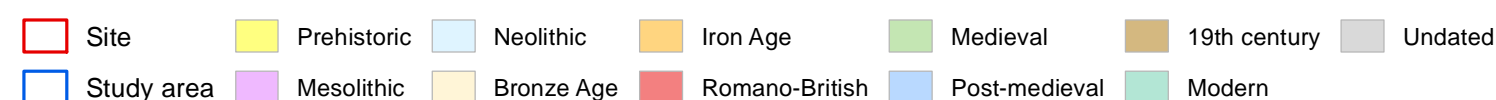
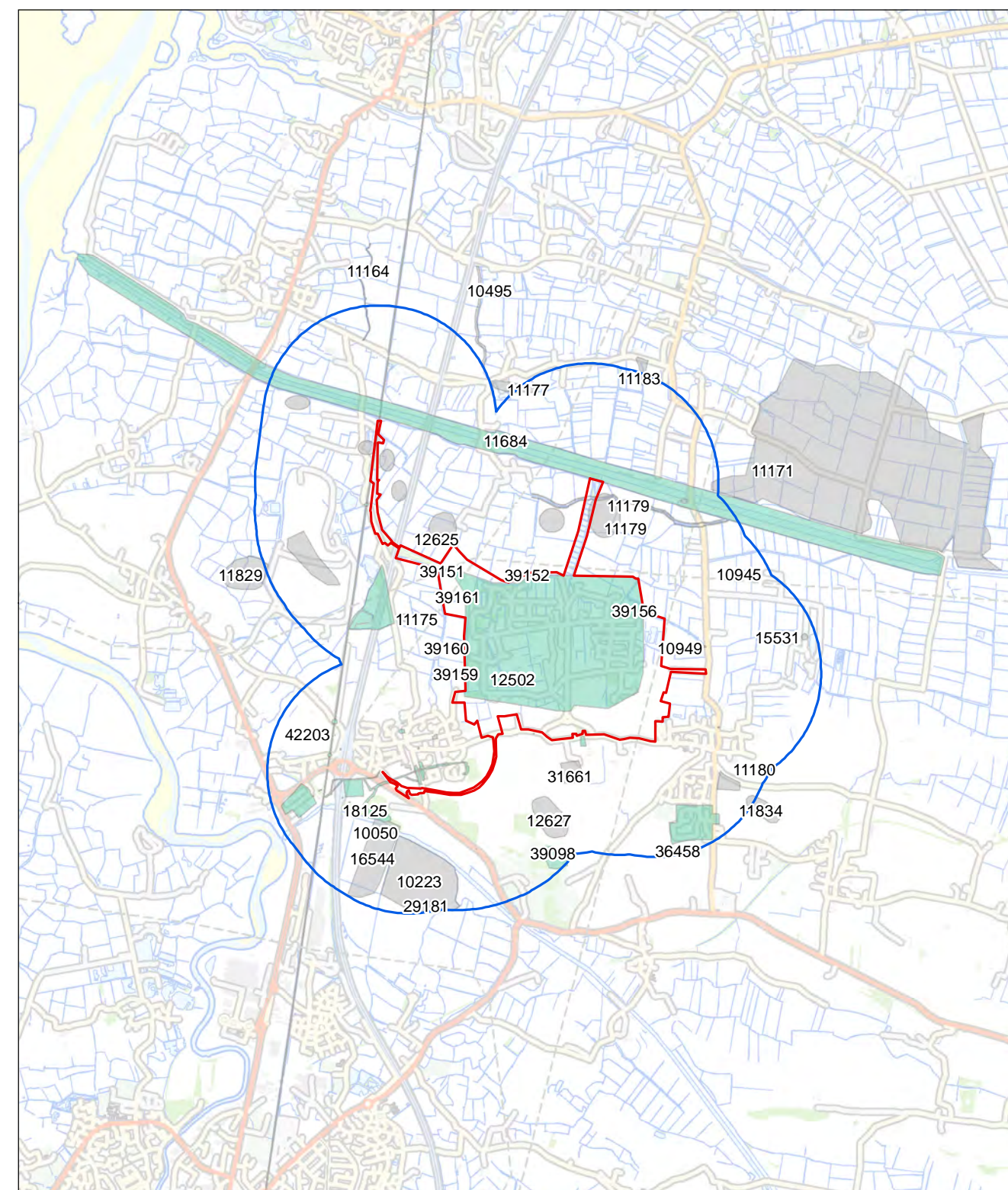
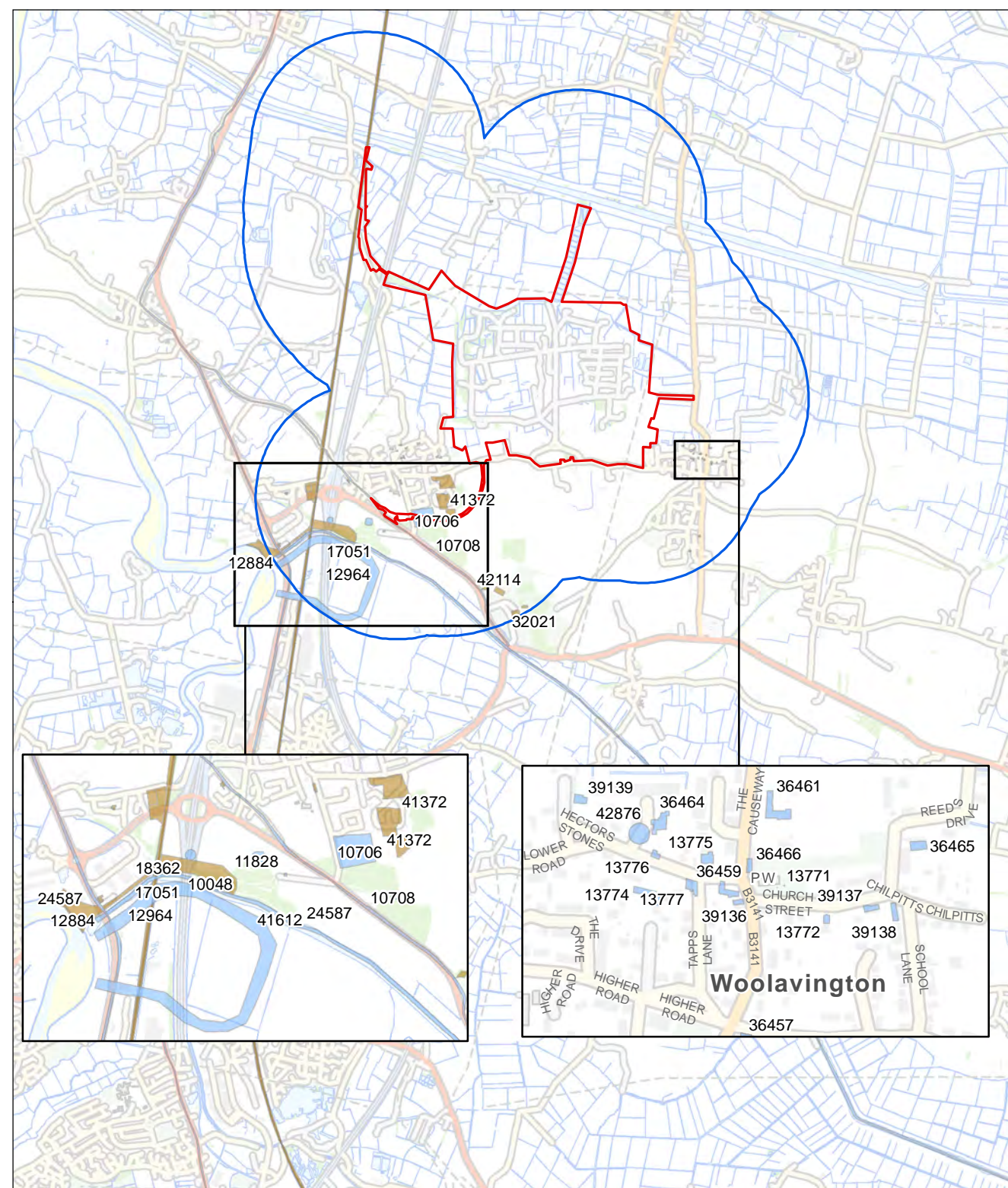
C) Iron Age and Romano-British

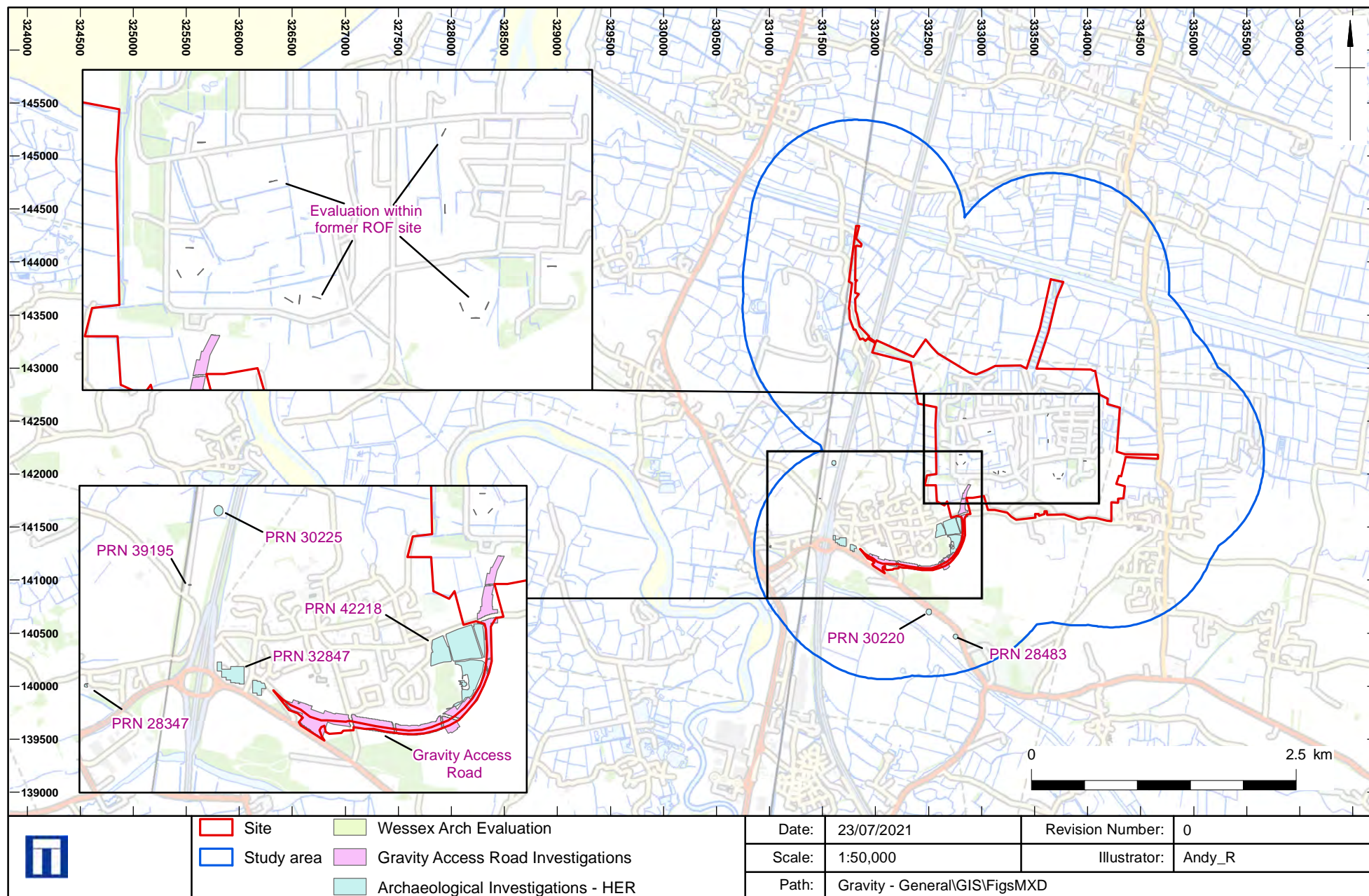


D) Medieval

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	Site Study area	Prehistoric Mesolithic Bronze Age	Neolithic Romano-British	Iron Age Post-medieval	Medieval Modern	19th century Undated	Date:	23/07/2021	Revision Number:	0
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							Path:	Gravity - General\GIS\FigsMXD		





Archaeological Investigations Relevant to the DBA

Figure 6



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Gravity

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Gravity LDO Environmental Statement

Volume 2 – Appendices

**Appendix 16.3 Geophysical Survey undertaken
outside the ROF Fence**



Gravity, Puriton, Cowslip Meadow, Somerset

Detailed Gradiometer Survey Report

Ref: 218373.03
September 2021



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Document Information

Document title	Gravity, Puriton, Cowslip Meadow, Somerset
Document subtitle	Detailed Gradiometer Survey Report
Document reference	218373.03
Client name	This is Gravity Limited
Address	c/o Salamanca Group 3 Burlington Gardens London W1S 3EP
Site location	West Approach Road, Puriton, Sedgemoor, TA7 8AD
County	Somerset
National grid reference	334315 141845 (ST 34315 41845) (East) 332590 141825 (ST 32590 41825) (West)
Statutory designations	None
Planning authority	Somerset District Council
Primary record number	41280
WA project name	Gravity, Puriton, Cowslip Meadow, Somerset - TGS
WA project code	218373
Dates of fieldwork	19/07/2021 – 22/07/2021
Fieldwork directed by	Rok Plesnicar
Project management by	Tom Richardson
Document compiled by	Andrés Pérez Arana
Contributions from	Alexander Schmidt
Graphics by	Alexander Schmidt

Quality Assurance

Issue	Date	Author	Approved by
1	23/09/2021	APA/AJS	 TR



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Summary

A detailed gradiometer survey was conducted over land north of Woolavington Road, Puriton, Bridgwater. The eastern perimeter of the site is centred on NGR 334315 141845 and the western perimeter centred on NGR 332590 141825. The project was commissioned by This Is Gravity Limited with the aim of establishing the presence, or otherwise, and nature of detectable archaeological features in support of a planning application for Huntspill Energy Park.

The site comprises 27 pasture fields located to the north of Woolavington Road, Puriton, Bridgwater, covering an area of 50 ha. The geophysical survey was undertaken between 19 and 22 July 2021 and has demonstrated the presence of numerous anomalies of archaeological and possible archaeological interest throughout the areas subject to survey.

In the north-east an interconnected network of recti-linear enclosures has been identified. This is characteristic of a Romano-British ladder settlement but could form part of a wider settlement extending west and north outside of the surveyed area.

Further evidence of possible Roman settlement activity has been identified in the south-west of the surveyed area. A smaller area of enclosures has been identified alongside the possible remains of two structures.

In the centre of the surveyed area of field boundaries has been identified. These are of unknown date, but it is possible they relate to the settlement activity in the north-east as the area between them was not surveyed.

Several peripheral areas of archaeological or possible archaeological activity have been identified. In the north-east of the survey area, a key-hole shaped enclosure has been identified along with two rectangular enclosures. These are likely associated with the probable Romano-British settlement to the south but are slightly removed from the main focus of activity evident in the data.

Modern activity is evident in the form of an enhanced magnetic background of the fields located in the centre of the survey area. This enhancement could be caused by the spread of 'green-waste' for agricultural purposes but also by a dump of industrial material or rubble, likely related to the activity or construction of the ROF in the immediate vicinity. Other modern activity identified in the area is the probable infill of a pond on the centre north of the survey area. This is likely to have impacted the detection of potential archaeological features in this area.

Acknowledgements

Wessex Archaeology would like to thank This Is Gravity Limited for commissioning the geophysical survey. The assistance of Paul Lowndes is gratefully acknowledged in this regard.

The fieldwork was undertaken by Rok Plesnicar and Davor Cakanic. Alexander Schmidt processed and interpreted the geophysical data. Andrés Pérez Arana wrote the report. Illustrations were prepared by Alexander Schmidt. The geophysical work was quality controlled by Tom Richardson, who managed the project on behalf of Wessex Archaeology.



Gravity, Puriton, Cowslip Meadow, Somerset

Detailed Gradiometer Survey Report

1 INTRODUCTION

1.1 Project background

- 1.1.1 Wessex Archaeology was commissioned by This is Gravity Limited to carry out a geophysical survey at land north of Woolavington Road, Puriton, Bridgwater, Somerset (The eastern perimeter centred on NGR 334315 141845, and the western perimeter centred on NGR 332590 141825 NGR) (**Figure 1**). The survey forms part of an ongoing programme of archaeological works being undertaken in support of a planning application for the development of the proposed Huntspill Energy Park.

1.2 Scope of document

- 1.2.1 This report presents a brief description of the methodology followed by the detailed survey results and the archaeological interpretation of the geophysical data.

1.3 The site

- 1.3.1 The site is located immediately to the east of Puriton and the west of Woolavington, Somerset and comprises an area spanning 27 fields. The town of Bridgwater is located 4.5 km to the south-south-west and Weston-Super-Mare is 20 km to the north.
- 1.3.2 The survey comprises 50 ha of agricultural land, currently utilised for pasture. The site is bounded by droeways and open pastureland to the north, fields and residential property at Puriton to the west, fields to the east, residential property at Woolavington to the south-east, and Woolavington Road to the south.
- 1.3.3 The site is on a gentle north-facing incline, sloping from 6 m above Ordnance Datum (aOD) at the northern edge to 20 m aOD at the southern edge.
- 1.3.4 The solid geology comprises interbedded Limestone, Mudstone, Siltstone, and Sandstone of the Langport Member, Blue Lias Formation and Charmouth Mudstone Formation (undifferentiated). There are no recorded overlying superficial geological deposits except for the north-eastern corner where clay, silt, and sand Tidal Flat Deposits are recorded (BGS 2021).
- 1.3.5 The soils underlying the site to the north are likely to consist of brown rendzinas soils of the 343d (Sherborne) association and with palaeo-calcareous alluvial gley soils of the 814c (Newchurch 2) association recorded to the south (SSEW SW Sheet 5 1983). Soils derived from such geological parent material have been shown to produce magnetic contrasts acceptable for the detection of archaeological remains through magnetometer survey.

2 ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

- 2.1.1 An archaeological desk-based assessment (DBA) was prepared by Wessex Archaeology for the land at Huntspill Energy Park Access Road, Puriton, Somerset which examined the potential for the survival of buried archaeological remains within the development area and a 500 m study area around the wider development area (Wessex Archaeology 2012a). The



following background is not exhaustive but is summarised from aspects of the DBA that are considered relevant to the interpretation of the geophysical survey data.

2.2 Summary of the archaeological resource

- 2.2.1 One Grade I Listed building is noted within 500 m of the survey area – Church of St Mary in Woolavington (NHLE 1060144). Nine Grade II Listed buildings are noted in Woolavington. These comprise 17th – 19th century dwellings.
- 2.2.2 The site is broadly located at the edge of two distinct environments: the Somerset Levels to the north, and a distinct ridge overlooking the River Parrett and the tidal flats to the south, suggesting an archaeological potential for a variety of activity throughout prehistory and later periods. The Somerset Levels have been subject to continual cycles of sea ingressions and regression throughout prehistory. There is evidence of seasonal activity from the Mesolithic period onwards, with the Levels utilised as seasonal pasture during the Bronze Age to Iron Age. During the Iron Age, the Levels were used for salt production and industrial activities.
- 2.2.3 Evidence of Bronze Age settlements have been identified 900 m south of the site where archaeological investigations identified a substantial ditch.
- 2.2.4 A potential Iron Age settlement located 1.5 km to the west of the site is also recorded, this settlement continued into the Romano-British period.
- 2.2.5 An extensive Roman settlement was uncovered at Junction 23 of the M5 during its construction, 1 km west of the survey area. The settlement was situated on the edge of a ridge, overlooking the River Parrett. Excavations revealed stone paving, wall foundations, and pottery, including Samian ware. The settlement was observed to extend beyond the motorway to the west, with the limit of the settlement not identified during the excavations.
- 2.2.6 A potential Roman road from Ilchester to Combeitch is recorded 1 km south of the site. Stone metalling associated with the Roman road was uncovered during the works at the M5 construction.
- 2.2.7 Further Romano-British mounds thought to be associated with pottery and possibly salt production are recorded south of the Roman road, 1.4 km to the south of the site.
- 2.2.8 Archaeological investigations 100 m north of the site have identified small amounts of Romano-British pottery during the construction of a pipeline. This may indicate the presence of further Romano-British settlements to the north of the survey area.
- 2.2.9 The site is located on the periphery of several known medieval settlements, such as the village of Puriton established in the Saxon period. A further medieval settlement with surviving earthworks is recorded 1.2 km north of the site. Beyond the north-west of the site and the village of Puriton, extensive series of earthworks either representing ridge and furrow or field drainage lines, are recorded. These remains indicate later Saxon and medieval land management and reclamation across the Somerset Levels.
- 2.2.10 Several mills are recorded in the wider study area dating from the early 15th to the 17th century. A further potential mill site is located to the west of the site as the 1842 Tithe map describes the field as 'In Mill Field'. It is not clear whether this name is due to an additional mill or due to the proximity of known windmills in the surrounding area.



- 2.2.11 Further indications of post-medieval industrial activity are found 450 m south-west of the site where a possible 17th century lime kiln and pottery has been recorded.
- 2.2.12 The 1842 Puriton Tithe map also shows that the site was subdivided into numerous, narrow strips or strip lynchets, farmed by different occupiers. These fields were aligned approximately north – south.
- 2.2.13 A tramway is recorded on the 1904 Ordnance Survey (OS) map 1.5 km to the south-west of the site. This tramline linked a number of quarries to the cement and lime works located in Dunball. Several quarries are recorded in the surrounding area of the site on the 1888 and 1904-1930s OS maps. Some of these quarries are located within the site with two linear extensions of Shorthedge quarry, shown on the 1887 OS map located in the east of the site, on a north – south alignment.
- 2.2.14 Extensive military activity relating to World War II (WWII) has been identified 200 m to the north of the site where the site of a Royal Ordnance Factory (ROF) is located. Now decommissioned, it was one of a number of specialised production sites constructed during WW II to produce armaments. An extensive concentration of pillboxes is noted surrounding the site. The location of these features was designed to protect the ROF. The closest of these to the site is located 1.5 km to the west at Dunball.

2.3 Recent investigations in the area

- 2.3.1 A previous phase of detailed gradiometer survey was undertaken by Wessex Archaeology 2012 (2012b). This was a linear scheme starting at the A39 just south of Puriton heading east before turning north towards the former BAE Systems Properties Limited. The survey identified anomalies of archaeological interest as well as a large number of coherent ferrous responses. It identified a number of features associated with known quarries and the line of the former tramway to the north-west of the current survey area.
- 2.3.2 Further linear features possibly related to former quarrying were identified near the south-east corner of Puriton, 1.2 km to the south-west of the site. These features correspond with location of the Fourteen Acre Quarry as shown on OS mapping from 1910 – 1940.
- 2.3.3 600 m west of the site the survey identified linear features corresponding with a quarry recorded on the 1904 OS map. OS mapping from 1930s depicts that this quarry was subsequently abandoned.
- 2.3.4 700 m west of the site a series of ditches were identified which may form part of potential enclosures of unknown date. However, the presence of Romano-British artefacts previously discovered near these features may indicate their chronology.
- 2.3.5 In 2019, a geophysical survey undertaken by Wessex Archaeology revealed portions of linear features spanning the linear survey area as well as former quarrying activity. A later geophysical survey undertaken to the east of the survey area by Archaeological Surveys in 2020 revealed a number of ditched enclosures as well as areas of former quarrying.

3 METHODOLOGY

3.1 Introduction

- 3.1.1 This phase of geophysical survey was undertaken by Wessex Archaeology's in-house geophysics team between the 19 – 22 July 2021. Field conditions at the time of the survey were adequate. An overall coverage of 17.1 ha was achieved. Towards the western end of



the survey area, 16.1 ha was not subject to survey. Throughout the eastern portion, 13 ha was not subject to survey. This was the result of both overgrowing vegetation and ground cover, as well as the presence of livestock.

- 3.1.2 The methods and standards employed throughout the geophysical survey conform current best practice, and guidance outlined by the Chartered Institute for Archaeologists' (CIfA 2014) and European Archaeologiae Consilium (Schmidt *et al.* 2015).

3.2 Aims and objectives

- 3.2.1 The aims of the survey comprise the following:

- To determine, as far as is reasonably possible, the nature of the detectable archaeological resource within a specified area using appropriate methods and practices; and
- To inform either the scope and nature of any further archaeological work that may be required; or the formation of a mitigation strategy (to offset the impact of the development on the archaeological resource); or a management strategy.

- 3.2.2 In order to achieve the above aims, the objectives of the geophysical survey are:

- To conduct a geophysical survey covering as much of the specified area as possible, allowing for on-site obstructions;
- To clarify the presence/absence of anomalies of archaeological potential; and
- Where possible, to determine the general nature of any anomalies of archaeological potential.

3.3 Fieldwork methodology

- 3.3.1 The cart-based gradiometer system used a Leica Captivate RTK GNSS instrument, which receives corrections from a network of reference stations operated by the Ordnance Survey (OS) and Leica Geosystems. Such instruments allow positions to be determined with a precision of 0.02 m in real-time and therefore exceeds European Archaeologiae Consilium recommendations (Schmidt *et al.* 2015).

- 3.3.2 The detailed gradiometer survey was undertaken using four SenSys FGM650/3 magnetic gradiometers spaced at 1 m intervals and mounted on a non-magnetic cart. Data were collected with an effective sensitivity of 0.03 nT at a rate of 20 Hz, producing intervals of 0.08 m along transects spaced 4 m apart.

3.4 Data processing

- 3.4.1 Data from the survey were subjected to minimal correction processes. These comprise a moving window function (200 m window length), applied to correct for any variation between the sensors, and interpolation used to grid the data and discard overlaps where transects have been collected too close together.

- 3.4.2 Further details of the geophysical and survey equipment, methods and processing are described in **Appendix 1**.



4 GEOPHYSICAL SURVEY RESULTS AND INTERPRETATION

4.1 Introduction

- 4.1.1 The detailed gradiometer survey has identified magnetic anomalies across the site. Results are presented as a series of greyscale plots, and archaeological interpretations at a scale of 1:1500 (**Figures 2 to 13**). The data are displayed at -2 nT (white) to +3 nT (black) for the greyscale
- 4.1.2 The interpretation of the datasets highlights the presence of potential archaeological anomalies, ferrous responses, burnt or fired objects, and magnetic trends (**Figure 3, 5, 7, 9, 11 and 13**). Full definitions of the interpretation terms used in this report are provided in **Appendix 2**.
- 4.1.3 Numerous ferrous anomalies are visible throughout the dataset. These are presumed to be modern in provenance and are not referred to, unless considered relevant to the archaeological interpretation.
- 4.1.4 It should be noted that small, weakly magnetised features may produce responses that are below the detection threshold of magnetometers. It may therefore be the case that more archaeological features may be present than have been identified through geophysical survey.
- 4.1.5 Gradiometer survey may not detect all services present on site. This report and accompanying illustrations should not be used as the sole source for service locations and appropriate equipment (e.g. CAT and Genny) should be used to confirm the location of buried services before any trenches are opened on site.

4.2 Gradiometer survey results and interpretation

- 4.2.1 The geophysical survey has identified a number of anomalies that are likely to be related to archaeological remains throughout the surveyed areas. These anomalies indicate recti-linear and curvilinear ditch and enclosure features. Other anomalies corresponding to ridge and furrow cultivation and former field boundaries have been identified. In addition, modern agricultural trends are noted, as well as underlying services and field drains.
- 4.2.2 In Field 9, several weak positive linear anomalies have been identified at **4000 – 4002 (Figure 5)**. This network of anomalies forms several recti-linear alignments on a north – south axis covering an area of 101 m x 58 m. At **4000**, a recti-linear anomaly is noted. This measures 32 m x 17 m and indicates a ditched enclosure. In the south-east corner of the recti-linear form, an area of possible thermoremanent activity has been identified. Further investigation would be required to confirm whether this anomaly corresponds to an area of burning. Such a response could be more recent in origin, potentially relating to ferrous debris.
- 4.2.3 At **4001**, a second enclosure is noted measuring 27 m x 33 m. In the south-east corner of the enclosure, a 12 m x 12 m square anomaly is noted. A further sub-square enclosure is noted at **4002** measuring 14.5 m east – west, although any northern side has not been clearly identified by the survey. The defined edges and the continuous, albeit weak, positive response of the anomalies and their consistent orientation indicates a network of enclosures. This type of feature can date to the Iron Age – Romano-British period.
- 4.2.4 At **4003** in Field 9, two distinct negative, square shaped anomalies have been identified (**Figure 5**). The anomalies both cover an area of 6 m x 8 m and are on a shared west-north-west to east-south-east alignment. The negative responses have a positive response contained within and could indicate walls based on their magnitude and size/shape. This type of response is characteristic of structural remains that are likely associated with the surrounding enclosures.



- 4.2.5 A number of weaker positive linear and curvi-linear anomalies at **4004** are noted to the north-west of the complex at **4000 – 4003 (Figure 5)**. These anomalies are interpreted as ditch features, possibly relating to further enclosures and settlement activity. It is possible that they are an extension of the nearby activity or a separate phase. However, their weak nature makes confident interpretation difficult. They could equally relate to agricultural activity or natural variation.
- 4.2.6 Numerous discrete positive anomalies are noted in the area of **4000 – 4004**. These are 1 – 2.5 m in diameter and indicative of pit features. While it is possible these relate to settlement activity, such as refuse or storage pits, it is equally possible that they represent natural variation in the soils and bedrock.
- 4.2.7 In the west of Field 9, a positive linear anomaly has been identified at **4005 (Figure 5)**. This is 80 m long and up to 3 m wide on a north – south alignment. Towards the southern end an area of increased magnetic response has been identified. This corresponds to a former extraction pit or pond noted on OS mapping dating to 1904. The linear portion of the anomaly at **4005** could indicate a track of path associated with this extraction pit. A parallel linear trend of increased magnetic response is noted to the west. This is further evidence a former trackway. However, an earlier origin for positive element of the anomaly cannot be ruled out based on its positive magnitude and shared north – south alignment of the response corresponding to the complex at **4000 – 4003**.
- 4.2.8 In the centre of Field 16, two weak positive and parallel linear anomalies measuring 35 m long and 1 – 2 m wide are noted on a north-west – south-east orientation at **4006 (Figure 7)**. The anomalies are spaced 4.5 m apart and are interpreted as a probable ditch-features. Two perpendicular responses project from either end of the anomaly. The first extends to the north-north-east for 62 m and is 2 m wide (**4007**). The second extends south-south-west for 34 m and is 2 m wide (**4008**).
- 4.2.9 Adjacent to the response at **4007**, a small, square-shaped anomaly has been identified at **4009**. This measures 6 m x 7 m and indicates a small, ditched enclosure. A larger square trend is noted to the north-west measuring 16 m x 14 m. However this response is too weak to interpret more confidently, despite its proximity to the ditch-like anomalies and could be modern.
- 4.2.10 A smaller, semi-circular anomaly is noted adjacent to the south at **4010**. This response is 7 m in diameter and incomplete on its southern side. This indicates a further probable ditch that could form part of an enclosure or ring ditch.
- 4.2.11 Together, these anomalies (**4006 – 4010**) likely evidence an unrecorded field system comprising linear ditch boundaries and small enclosures. While a prehistoric origin cannot be ruled out, the limited and relatively isolated nature of the anomalies makes suggestion of a date difficult. Further investigation would be required to determine the origin of these anomalies.
- 4.2.12 In the north-east of the survey area, in Field 36, a weak positive subcircular / key-hole shaped anomaly is noted at **4011 (Figure 13)**. The anomaly is 2 m wide and has a 15 m diameter with a 10 m extension to the south. A 3 m gap is noted in the south-western corner. This is indicative of a ditched enclosure. The large size and lack of evidence for burning suggests this is unlikely to be associated with a corn dryer, which typically have this form. However, the exact purpose and date of this feature is unclear from the geophysical survey alone.
- 4.2.13 In the south-east corner of Field 36, a positive rectilinear anomaly is noted at **4012**. This extends west from the eastern survey boundary for 33 m, before turning south for 22 m. The anomaly is up to 3 m wide and is indicative of a ditch feature. While the date of this is

unclear, the fact that it does not extend south beyond the field boundary suggests it may be contemporary with the current field system.

- 4.2.14 In the north of Field 34, a stronger positive linear anomaly has been identified at **4013 (Figure 13)**. The anomaly is 2 m wide and extends south from the northern boundary for 80 m, forming a right angle on its southern tip and continuing towards the west for 56 m. This type of anomaly indicates a ditch-feature, probably forming part of a larger rectangular or square shaped enclosure. The north-western portion of the feature likely extends beyond the surveyed area. A small square-shaped anomaly measuring 8 m x 10 m is noted to the north-east of the visible portion of the anomaly at **4014**. This is likely evidence of a smaller internal enclosure ditch.
- 4.2.15 Extending south from the enclosure at **4013**, a series of interconnected rectilinear positive anomalies has been identified at **4015 – 4020 (Figure 11)**. This comprises at least 13 distinct enclosures formed of 1 – 2 m wide ditches. These are on a north-north-east – south-south-west alignment, spanning 250 m across Field 22, 33, and 34. The individual enclosures are 15 – 35 m east – west by 10 – 31 m north – south, although some are not fully realised due to the extent of the survey area. There is some evidence for internal features within the enclosures, such as at **4019**, where internal boundaries or divisions have been identified.
- 4.2.16 The anomalies at the south-western end of the series (**4017** and **4018**) extend to the west of a parallel linear anomaly comprised of two ditch-like positive anomalies spaced 5 m apart. This may form a central trackway adjacent to the enclosures. This trackway continues south into Field 32 for 55 m at **4020**. It is not clear whether this possible trackway extends to the north as this falls outside the current survey area. The trackway may also extend to the south. However, due to the modern pattern of land division and extent of the findings in this portion of the survey area, a confident interpretation is not possible.
- 4.2.17 At the northern end of the complex a slightly curved linear anomaly crosses the enclosures on an east – west alignment at **4021**. This is 58 m long and 2.5 m wide. While this shares some alignment with the surrounding anomalies it does not appear to respect all of them, crossing in places. This may represent a ditch or boundary feature associated with a separate phase of activity.
- 4.2.18 Combined, the anomalies at **4015 – 4020** form a linear series of enclosures typical of a Romano-British ladder settlement. However, given the somewhat linear nature of this portion of the survey it is equally possible this forms part of a wider settlement that potentially extends north and west outside of the survey area.
- 4.2.19 East of the anomalies at **4020** are a series of negative linear anomalies at **4022** and **4023**. Five anomalies are noted at **4022**, three on an east – west orientation for 25 m and two north – south for 20 m. These appear to form a corner of a square anomaly that likely joins up with the two anomalies to the east at **4023**. The anomalies at **4023** are both orientated north – south for 12 and 43 m respectively. These anomalies are spaced 24 m apart and interpreted as possible archaeology. While it is possible these anomalies are associated with the ladder settlement or field system, it is considered more likely these anomalies evidence a former orchard (as noted in adjacent fields on 1886 OS mapping) that have been removed with the perpendicular parallel linear trends between the anomalies indicative of former tree-lines.
- 4.2.20 Across the south-east of the site there are several weakly positive linear anomalies that are interpreted as possible archaeology (**4024 – 4027**). These are all indicative of ditch features and have the potential to be associated with the wider settlement activity. However, their weak nature and lack of direct relationship with other anomalies makes a more confident interpretation difficult.

- 4.2.21 In the east of Field 32 (**Figure 11**), two linear anomalies have been identified at **4024**. These extend 30 and 22 m north – south respectively. While these could relate to the settlement to the north-west, they are most likely associated with orchards or agricultural activity. Similarly anomalies to the south in Field 27 at **4025** could relate to either the settlement or orchards. These are 40 m long north-east to south-west, turning east for 17 m at the northern end. They may form part of an enclosure or field boundary.
- 4.2.22 Two weak positive linear anomalies have been identified on the south of Field 27 at **4026** (**Figure 9**). The eastern anomaly is curved and extends for 50 m and is 1.5 m wide. The weak magnitude and sinuous nature of the anomaly is suggestive of a natural feature. The western anomaly is split into two portions, measuring 26 m long by 1.2 m wide and oriented on a north – south axis with a 12 m long turn to the east on its northern tip. These anomalies could form a larger enclosure feature. However, their weak magnitude and fragmented and isolated nature makes a confident interpretation difficult.
- 4.2.23 There is a broad and weak positive linear anomaly the centre of Field 27 and the eastern side of Field 26 at **4027** (**Figure 9**). The anomaly is on an east – west orientation and measures 90 m long by up to 6 m wide. This anomaly could relate to an unrecorded former field boundary following the projection of the existing hedgerow boundary located to the east. However, given its broad nature it could equally be natural.
- 4.2.24 Numerous, isolated discrete positive anomalies have been identified across the survey area. They are 1 – 3 m in diameter and are indicative of pit-like features of unknown origin. It is possible that they represent extraction activity similar to the recorded quarrying sites noted on historical OS mapping in the surrounding area. They may also relate to refuse pits associated with the Bronze Age to Romano-British settlement activity recorded in the wider area. However, they could equally be caused by localised variation in the magnetic susceptibility of the underlying deposits. Further investigations would be required to understand their provenance.
- 4.2.25 Across Fields 9–15, there is a notably increased magnetic response (**Figure 7**). This could relate to the spreading of green waste on fields, but it could also be caused by the presence of rubble of demolished buildings on the nearby area visible on OS maps from 1949-1970 or some form of industrial activity related to the ROF located adjacent to the north of these areas. The potential for the detection of potential archaeological features in this area is severely reduced as a result.
- 4.2.26 A series of dipolar linear anomalies have been identified in Fields 13, 14 and 15 at **4028 – 4031** (**Figure 11**). They are located on an east – west and north – south orientation. Despite the strong magnetic background of the area it has been possible to identify a correlation between the linear anomalies and former field boundaries recorded on the Somerset OS County Series from 1887-1888.
- 4.2.27 In Fields 27 and 36, weakly positive parallel anomalies aligned north – south and spaced 7 m apart indicate the presence of ridge and furrow cultivation (**Figure 9**). This corresponds to the modern pattern of land division that remains largely unchanged in these areas since the late 19th century. Such activity dates to the mid – late medieval period. In Fields 32 and 33, closer spaced (~1 m) positive linear trends have been identified following an east – west and north – south alignment. These trends suggest a modern ploughing regime.
- 4.2.28 In the west of Field 22, an irregular area of increased magnetic response has been identified at **4032** (**Figure 11**). This covers 20 m x 28 m and represent a concentration of material with a high magnetic contrast to the surrounding background magnetic response. This likely is evidence of an area of infilling, such as a former pond or extraction pit, although no such feature is recorded on available historical mapping. A similar response is noted in the south-west of the site (**4005**), so such activity is noted in the landscape.



- 4.2.29 In the north of the survey area, in Fields 35 and 36, an area of sinuous and broader linear anomalies have been identified. This corresponds to a recorded change in the underlying superficial alluvial deposits and is interpreted as natural in origin.
- 4.2.30 Numerous, weak magnetic trends of unknown origin have been identified within the data. It has not been possible to assign these anomalies a specific origin because some of these anomalies appear within areas of increased magnetic response, and others present a very weak magnitude and are isolated. The lack of a clear distinctive shape or any indicative context implies that all these anomalies could correspond to an agricultural, modern, natural, or even an archaeological origin, impossible to define without additional studies.
- 4.2.31 A number of highly magnetic linear anomalies have been identified throughout the survey results. These are interpreted as evidence of underlying services such as pipes or cables. A highly magnetic response is noted to the east at **4033** in Field 27 (**Figure 9**). This corresponds to an extant pylon.

5 DISCUSSION

- 5.1.1 The gradiometer survey has been successful in detecting anomalies of an archaeological origin across the survey area. Three distinct groups of anomalies indicative of ditch-features have been identified on the western edge, the centre and the north-east of the survey area.
- 5.1.2 In the north-east an interconnected network of recti-linear enclosures has been identified. This is characteristic of a Romano-British ladder settlement. However, this section of the survey area is generally linear in nature, so it may be that the anomalies form part of a wider settlement extending west and north outside of the surveyed area. This would be consistent with Romano-British activity recorded in the surrounding area.
- 5.1.3 Further evidence of possible Roman settlement activity has been identified in the south-west of the surveyed area. A smaller area of enclosures has been identified alongside the possible remains of two structures. While this area is smaller than that in the north-east, it may extend west beyond the survey extents.
- 5.1.4 In the centre of the surveyed area of field boundaries has been identified. These are of unknown date, but it is possible they relate to the settlement activity in the north-east as the area between them was not surveyed.
- 5.1.5 Several peripheral areas of archaeological or possible archaeological activity have been identified. In the north-east of the survey area, a key-hole shaped enclosure has been identified along with two rectangular enclosures. These are likely associated with the probable Romano-British settlement to the south but are slightly removed from the main focus of activity evident in the data.
- 5.1.6 Further possible small ditch and pit-like features have been identified throughout the survey area. Given the proximity of prehistoric and Romano-British settlements in the surrounding area an archaeological interpretation cannot be ruled out for these anomalies. However, they could equally be evidence of modern agricultural activity, post-medieval material extraction, or natural variations in the underlying geological deposits.
- 5.1.7 Former field boundaries identified on post-medieval mapping have been identified. However, an earlier origin cannot be ruled out for these features as ridge and furrow are evident in the central and eastern fields of the survey area respecting the modern pattern of land division which is evident on the same mapping.
- 5.1.8 Modern activity is evident in the form of an enhanced magnetic background of the fields located in the centre of the survey area. This enhancement could be caused by the spread of 'green-waste' for agricultural purposes but also by a dump of industrial material or rubble, likely related to the activity or construction of the ROF in the immediate vicinity. Other



modern activity identified in the area is the probable infill of a pond on the centre north of the survey area. This is likely to have impacted the detection of potential archaeological features in this area.

- 5.1.9 Natural variations likely caused by alluvial deposits are noted in the north-eastern corner of the survey area.
- 5.1.10 More recent activity relating to ploughing, modern services, and ferrous debris have been identified throughout the dataset.



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APPENDICES

Appendix 1: Survey Equipment and Data Processing

Survey methods and equipment

The magnetic data for this project were acquired using a non-magnetic cart fitted with four SenSys FGM650/3 magnetic gradiometers. The instrument has four sensor assemblies fixed horizontally 1 m apart allowing four traverses to be recorded simultaneously. Each sensor contains two fluxgate magnetometers arranged vertically with a 1m separation and measures the difference between the vertical components of the total magnetic field within each sensor array. This arrangement of magnetometers suppresses any diurnal or low frequency effects.

The gradiometers have an effective resolution of 0.03 nT over a ± 100 nT range, and measurements from each sensor are logged at intervals of 0.08 m. All of the data are then relayed to a Leica Viva CS35 tablet, running the MLgrad601 program, which is used to record the survey data from the array of probes at a rate of 20 Hz. The program also receives measurements from a GPS system, which is fixed to the cart at a measured distance from the sensors, providing real time locational data for each data point.

The cart-based system relies upon accurate GPS location data which is collected using a Leica Viva system with rover and base station. This receives corrections from a network of reference stations operated by the Ordnance Survey and Leica Geosystems, allowing positions to be determined with a precision of 0.02m in real-time and therefore exceed the level of accuracy recommended by European Archaeologiae Consilium recommendations (Schmidt *et al.* 2015) for geophysical surveys.

Data may be collected with a higher sample density where complex archaeological anomalies are encountered, to aid the detection and characterisation of small and ephemeral features. Data may be collected at up to 0.125 m intervals along traverses spaced up to 0.25m apart.

Post-processing

The magnetic data collected during the detail survey are downloaded from the SenSys cart system for processing and analysis using both commercial and in-house software. This software allows for both the data and the images to be processed in order to enhance the results for analysis; however, it should be noted that minimal data processing is conducted so as not to distort the anomalies.

The cart-based system generally requires a lesser amount of post-processing than (for example) the handheld Bartington Grad 601-2 fluxgate gradiometer instrument. This is largely because mounting the gradiometers on the cart reduces the occurrence of operator error; caused by inconsistent walking speeds and deviation in traverse position due to varying ground cover and topography.

Typical data and image processing steps may include:

- GPS DeStripe – Determines the median of each transect and then subtracts that value from each datapoint in the transect. May be used to remove the striping effect seen within a survey caused by directional effects, drift, etc.
- GPS Base Interpolation – Sets the X & Y interval of the interpolated data and the track radius (area around each datapoint that is included in the interpolated result).



- Discard Overlaps - Intended to eliminate a track(s) that have been collected too close to one another. Without this, the results of the interpolation process can be distorted as it tries to accommodate very close points with potentially differing values.

Typical displays of the data used during processing and analysis:

- Greyscale – Presents the data in plan using a greyscale to indicate the relative strength of the signal at each measurement point. These plots can be produced in colour to highlight certain features but generally greyscale plots are used during analysis of the data.
- XY Plot – Presents the data as a trace or graph line for each traverse. Each traverse is displaced down the image to produce a stacked profile effect. This type of image is useful as it shows the full range of individual anomalies. XY plots can be made available upon request.



Appendix 2: Geophysical Interpretation

The interpretation methodology used by Wessex Archaeology separates the anomalies into four main categories: archaeological, modern, agricultural, and uncertain origin/geological.

The archaeological category is used for features when the form, nature and pattern of the anomaly are indicative of archaeological material. Further sources of information such as aerial photographs may also have been incorporated in providing the final interpretation. This category is further sub-divided into three groups, implying a decreasing level of confidence:

- Archaeology – used when there is a clear geophysical response and anthropogenic pattern.
- Possible archaeology – used for features which give a response, but which form no discernible pattern or trend.

The modern category is used for anomalies that are presumed to be relatively modern in date:

- Ferrous – used for responses caused by ferrous material. These anomalies are likely to be of modern origin.
- Modern service – used for responses considered relating to cables and pipes; most are composed of ferrous/ceramic material although services made from non-magnetic material can sometimes be observed.

The agricultural category is used for the following:

- Former field boundaries – used for ditch sections that correspond to the position of boundaries marked on earlier mapping.
- Ridge and furrow – used for broad and diffuse linear anomalies that are considered to indicate areas of former ridge and furrow.
- Ploughing – used for well-defined narrow linear responses, usually aligned parallel to existing field boundaries.
- Drainage – used to define the course of ceramic field drains that are visible in the data as a series of repeating bipolar (black and white) responses.

The uncertain origin/geological category is used for features when the form, nature and pattern of the anomaly are not sufficient to warrant a classification as an archaeological feature. This category is further sub-divided into:

- Increased magnetic response – used for areas dominated by indistinct anomalies which may have some archaeological potential.
- Trend – used for low amplitude or indistinct linear anomalies.
- Superficial geology – used for diffuse edged spreads considered to relate to shallow geological deposits. They can be distinguished as areas of positive, negative, or broad bipolar (positive and negative) anomalies.



Appendix 3: OASIS form

Project Details:

Project name		Gravity, Puriton, Cowslip Meadow, Somerset			
Type of project		Detailed gradiometer survey			
Project description		<p>Three distinct groups of anomalies indicative of ditch-features have been identified on the western edge, the centre and the north-east of the survey area.</p> <p>The ditches from the north-eastern area form an interconnected network of recti-linear enclosures and evidence a ladder settlement or field system. The anomalies thought to be archaeological in origin in the south-west indicate a localisation of small enclosure features.</p> <p>While evident in the surrounding landscape, no obvious settlement activity has been identified by this phase of geophysical survey, with the exception of a small area of possible thermoremanent activity in the far south-west of the survey results.</p> <p>Further possible small ditch and pit-like features have been identified throughout the survey area. Given the proximity of prehistoric and Romano-British settlements in the surrounding area an archaeological interpretation cannot be ruled out for these anomalies. However, they could equally be evidence of modern agricultural activity, post-medieval material extraction processes or natural variations in the underlying geological deposits. Further investigation would be required to understand the nature of these features.</p> <p>Former field boundaries identified on post-medieval mapping have been identified as well as natural variations likely caused by changes on the superficial geological composition in the area. More recent activity relating to ploughing, modern services and ferrous debris have been identified throughout the dataset.</p>			
Project dates		Start: 19-07-2021		End: 22-07-2021	
Previous work		Yes			
Future work		Not known			
Project Code:	218373	HER event no.	N/A	OASIS form ID:	wessexar1-431227
		NMR no.	N/A		
		SM no.	N/A		
Planning Application Ref.					
Site Status		None			
Land use		Cultivated Land 3 – operations to a depth of greater than 0.25 cm			
Monument type			Period		

Project Location:

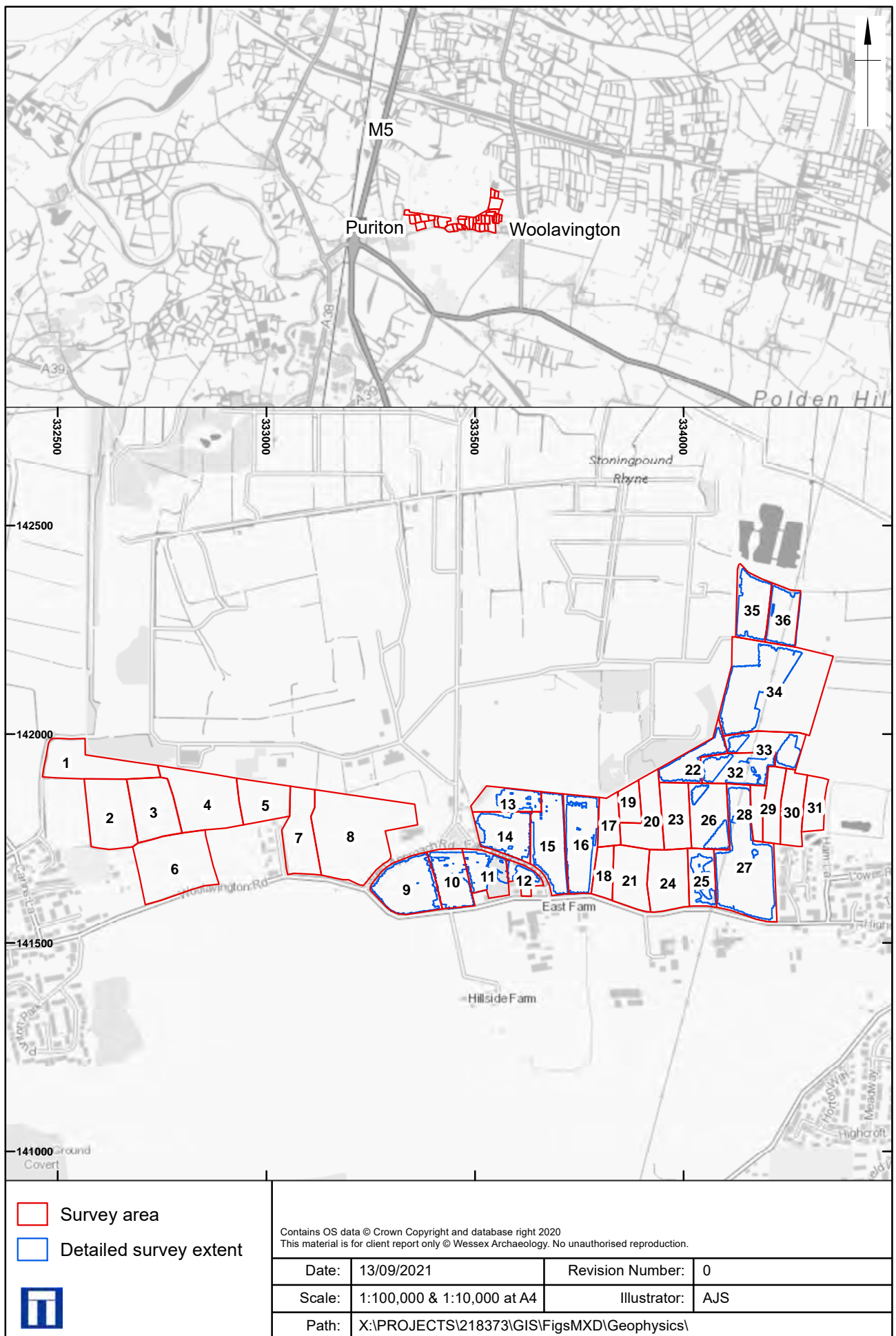
Site Address	West Approach Road, Puriton, Sedgemoor			Postcode	TA7 8AD
County	Somerset	District	Sedgemoor	Parish	Puriton
Study Area	51 ha	Height OD	6 – 20 m aOD	NGR	343150 141845 332590 141825

Project Creators:

Name of Organisation	Wessex Archaeology		
Project brief originator	This is Gravity Ltd	Project design originator	Wessex Archaeology
Project Manager	Tom Richardson	Project Supervisor	Rok Plesnicar
Sponsor or funding body	This is Gravity Ltd	Type of Sponsor	Client

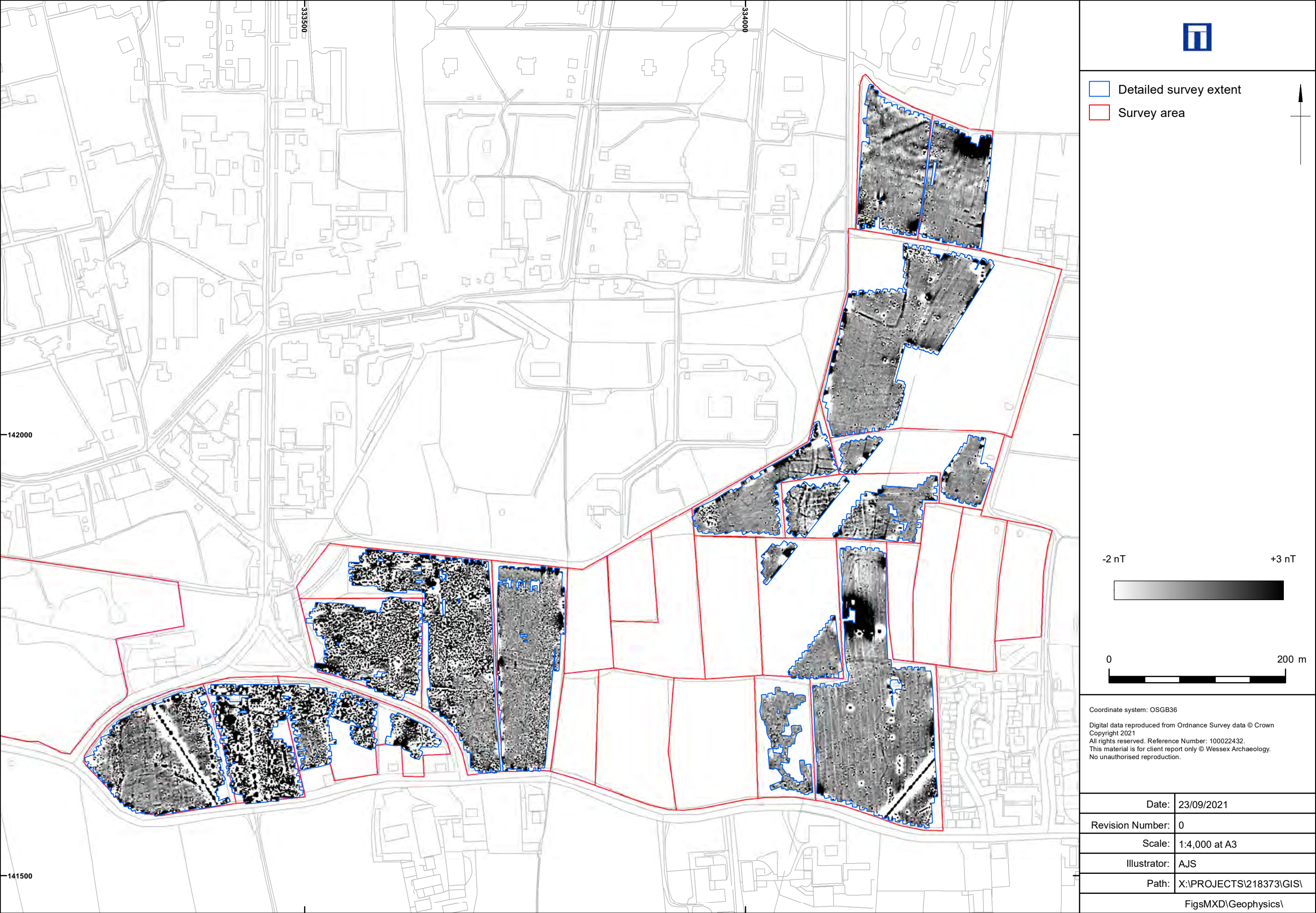
Project Archive and Bibliography:

Physical archive	N/A	Digital Archive	Geophysical survey and report	Paper Archive	N/A
Report title	Gravity, Puriton, Cowslip Meadow, Somerset Detailed Gradiometer Survey Report			Date	2021
Author	Wessex Archaeology	Description	Unpublished report	Report ref.	218373.03



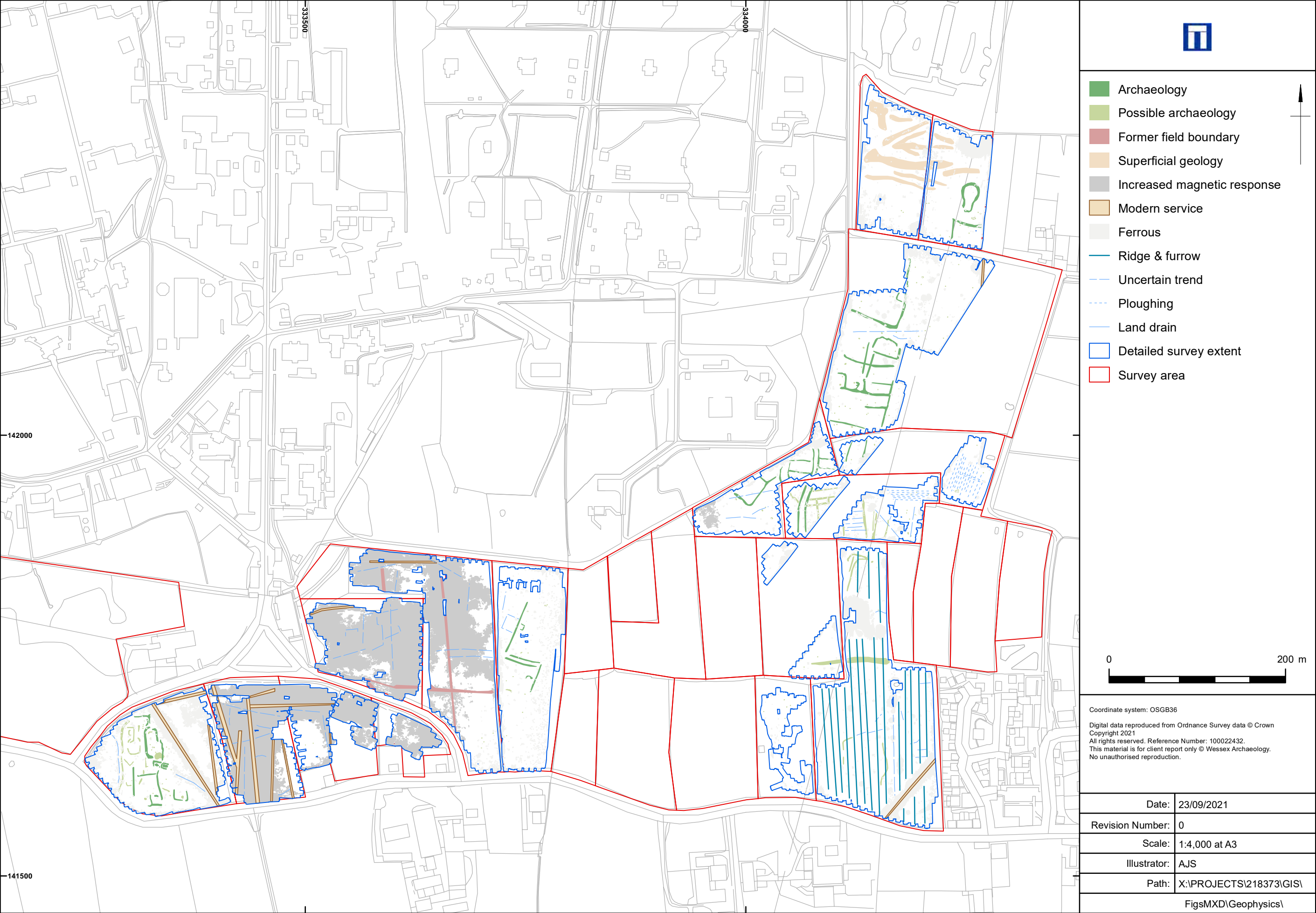
Site location and survey extent

Figure 1



Detailed gradiometer survey results: overall greyscale plot

Figure 2



Detailed gradiometer survey results: overall interpretation

Figure 3



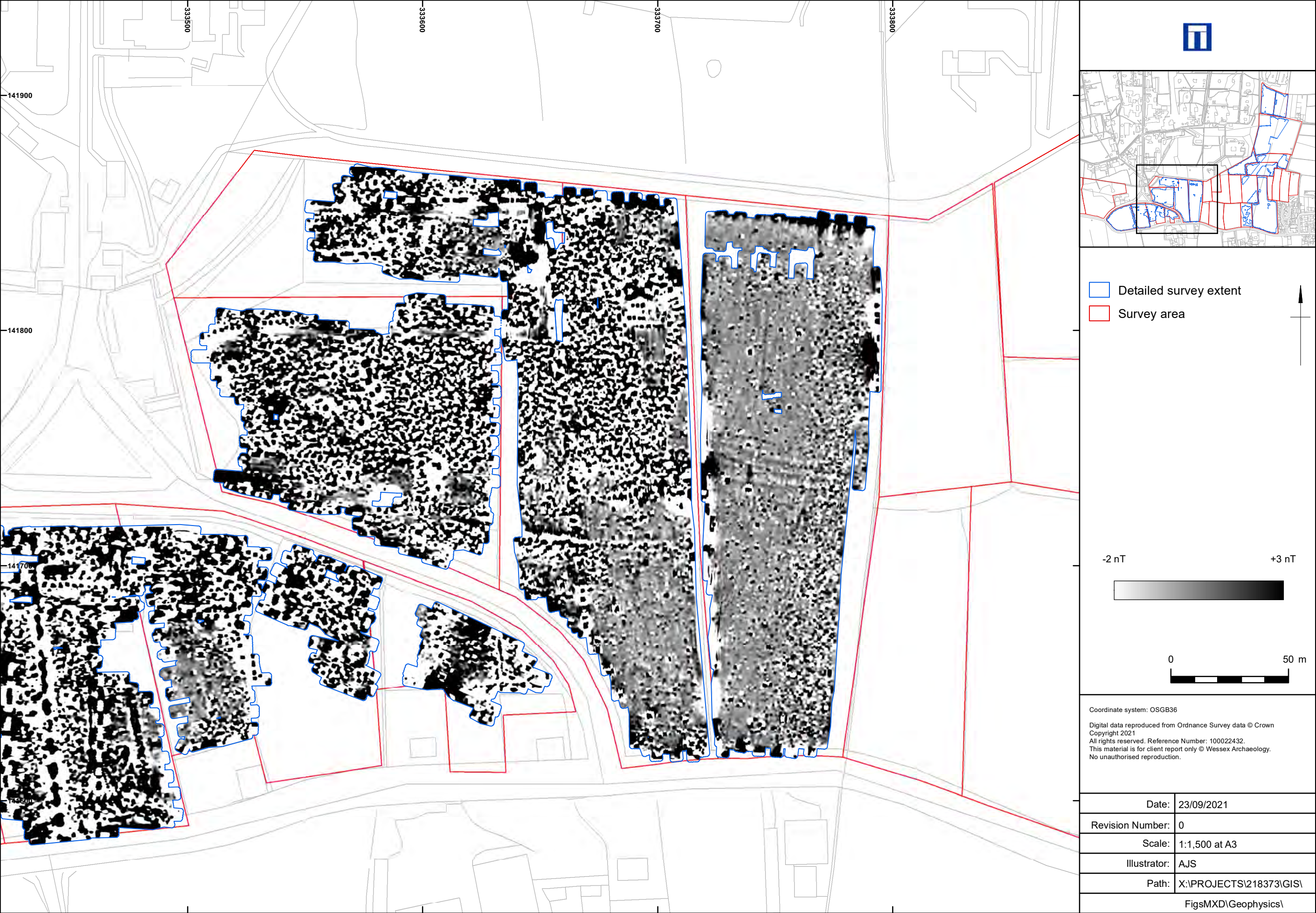
Detailed gradiometer survey results: greyscale plot (Areas 9-14)

Figure 4



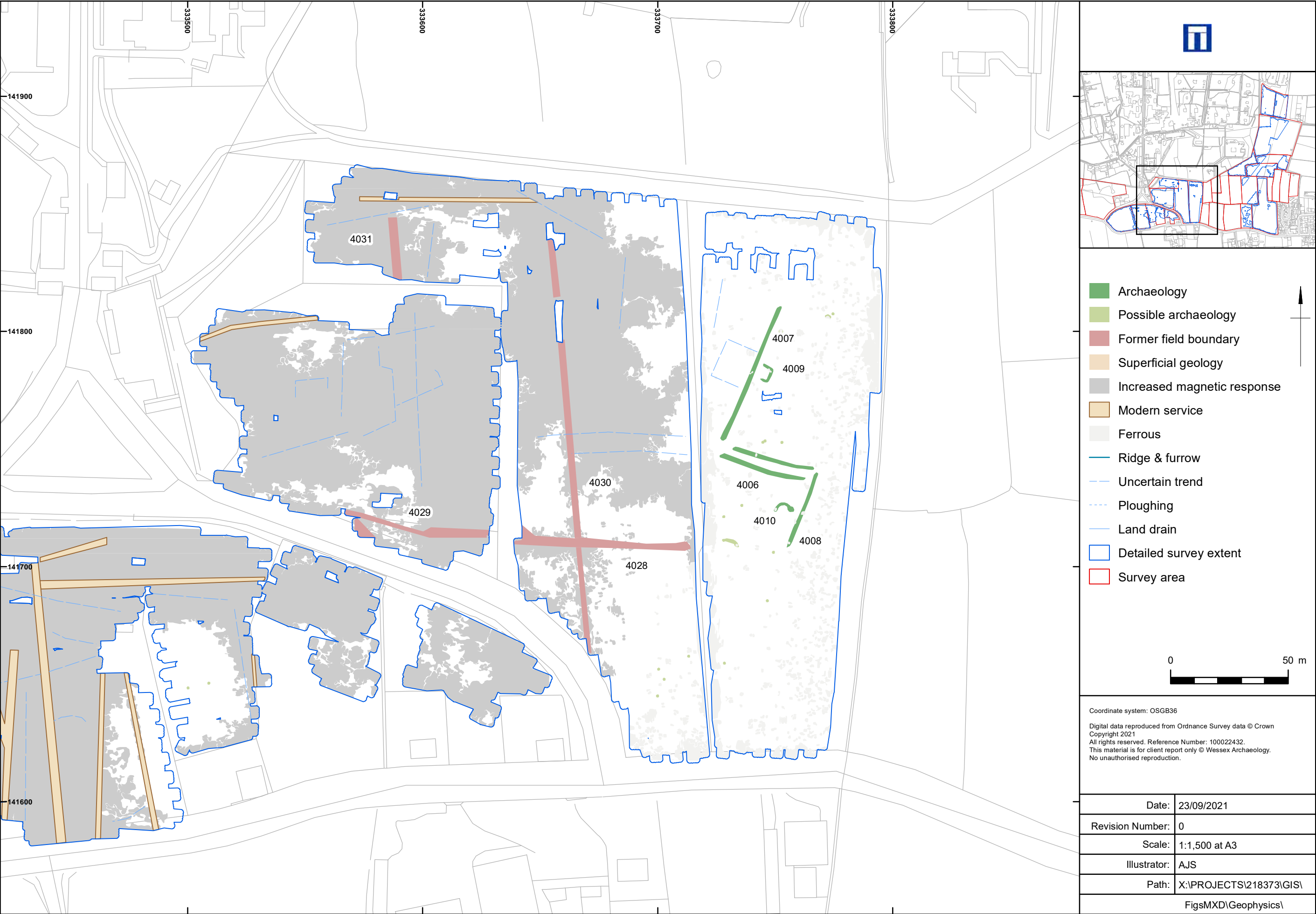
Detailed gradiometer survey results: interpretation (Areas 9-14)

Figure 5



Detailed gradiometer survey results: greyscale plot (Areas 11-16)

Figure 6



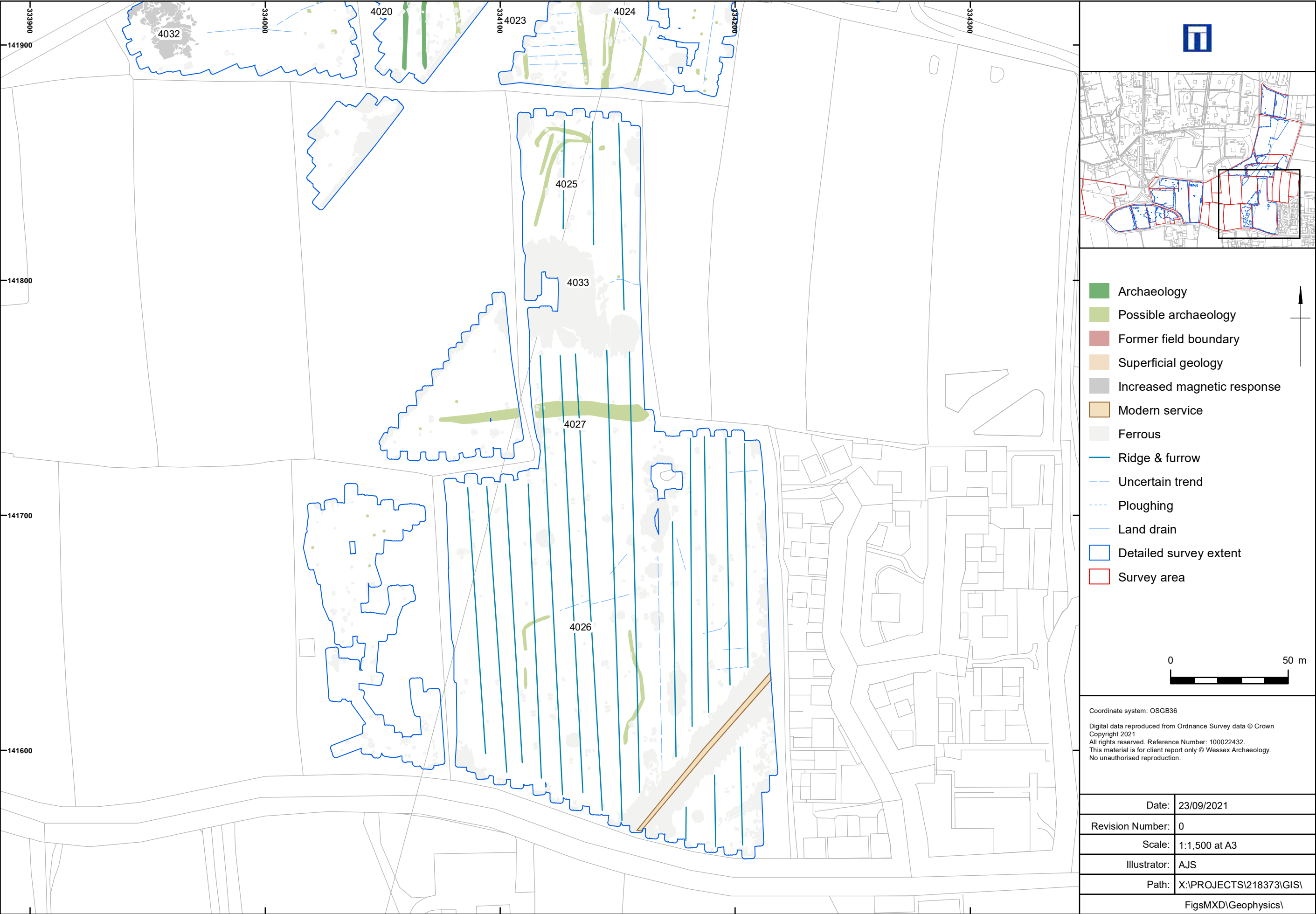
Detailed gradiometer survey results: interpretation (Areas 11-16)

Figure 7



Detailed gradiometer survey results: greyscale plot (Areas 25-27)

Figure 8

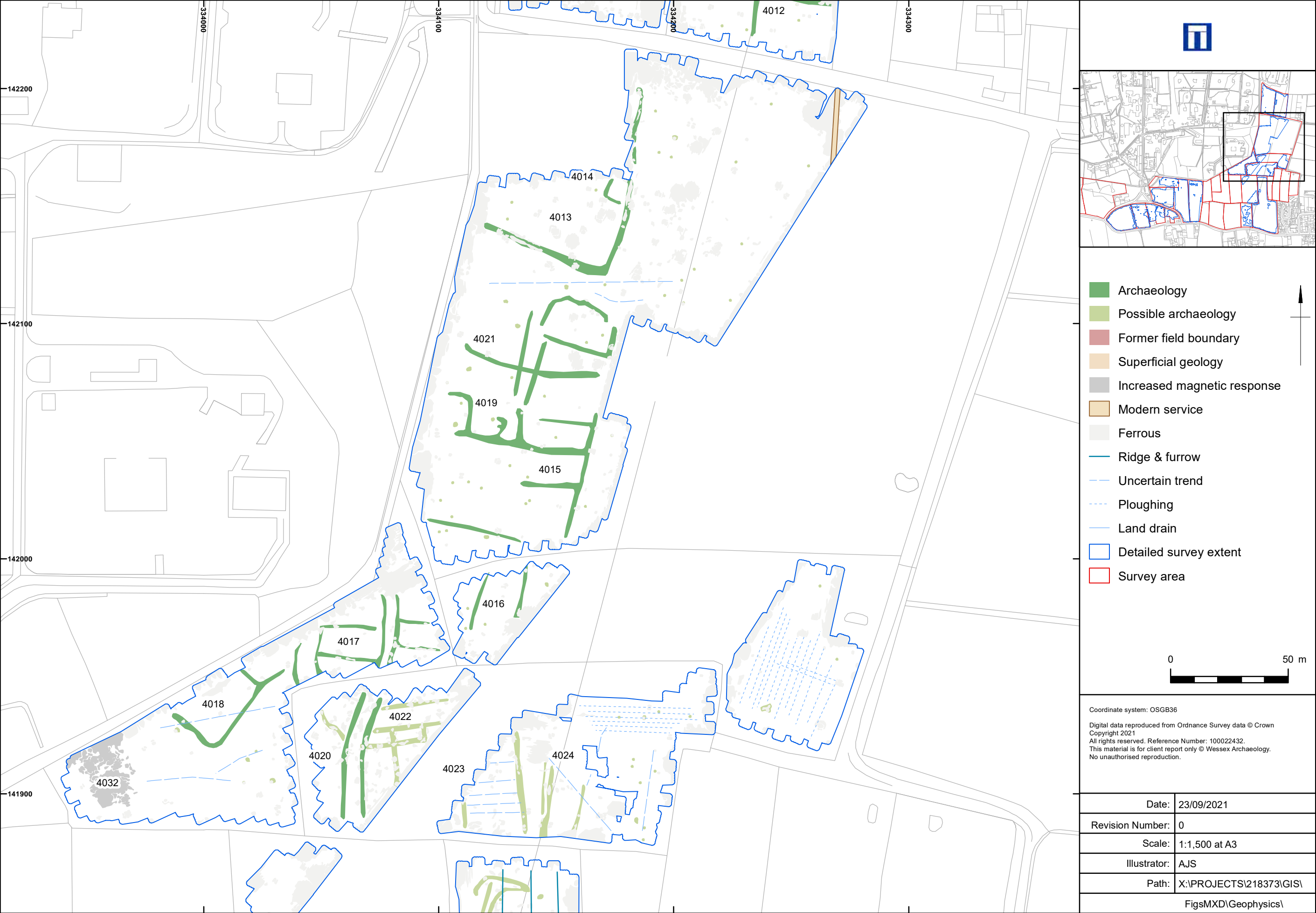


Detailed gradiometer survey results: interpretation (Areas 25-27)

Figure 9



Detailed gradiometer survey results: greyscale plot (Areas 22, 32, 33 and 34)



Detailed gradiometer survey results: interpretation (Areas 22, 32, 33 and 34)

Figure 11



Detailed gradiometer survey results: greyscale plot (Areas 35 and 36)

Figure 12



Detailed gradiometer survey results: interpretation (Areas 35 and 36)

Figure 13



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