APPENDIX 2.1
FORMAL SCOPING REQUEST

Land South of Radwinter Road, Saffron Walden
Rosconn Strategic Land
March 2021

BIDWELLS

ENVIRONMENTAL IMPACT ASSESSMENT SCOPING REPORT

Quality Assurance

Site name:	Land South of Radwinter Road, Saffron Walden
Client name:	Rosconn Strategic Land
Type of report:	EIA Scoping Report
Prepared by:	Caroline Rodger BSc (Hons) MSc PIEMA
Signed	
Date	March 2021
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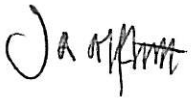
Signed	
Date	March 2021

SMARTER PLANNING CHAMPION

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1.0 Introduction

1.1 This Scoping Report has been prepared by Bidwells LLP on behalf Rosconn Strategic Land (hereafter "the Applicant") to inform the formal scoping procedures with Uttlesford District Council (UDC) in the preparation of an Environmental Impact Assessment (EIA) to accompany an outline planning application for Land South of Radwinter Road, Saffron Walden (hereafter 'the Site'). The Proposed Development consists of the residential development of up to 240 dwellings, new access and associated landscaping and infrastructure.

1.2 Section 4 of this report sets out the information for the Competent Authority, in this case UDC to confirm its formal Screening Opinion. The purpose of this is to confirm that the Proposed Development, as set out in Section 3 of this report, constitutes a project which has the potential to be considered under Schedule 2, 10(b) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. Section 4 of the report offers the Competent Authority the opportunity, based upon the evidence contained within this report, to consider whether an EIA is required. Notwithstanding the above, at this stage, it is the Applicant's intention to voluntarily submit an Environmental Statement (ES) to ensure the Competent Authority has the appropriate environmental information before them to inform their planning decision making.

1.3 We, therefore, now request that UDC provide their formal EIA Scoping Opinion for the Proposed Development. This document sets out the suggested scope for the EIA and requests a formal Scoping Opinion from UDC in accordance with Regulation 15. A plan showing the extent of the Site area under consideration, for the purposes of scoping, is attached in **Appendix 1**.

Legislative Background

1.4 A Directive of the European Community on the *'assessment of the effects of certain public and private projects on the environment'* was adopted in 1985 (85/337/EEC). The EIA Directive has been amended several times since its approval in 1985. The most recent and far reaching amendments were made through Directive 2014/52/EU ('the EIA Directive') which was approved in May 2014. In order to implement these Directives, the UK Government has made a series of Regulations. The relevant Regulations for projects that require planning permission are the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, (hereafter referred to as 'the EIA Regulations'), which came into force in May 2017.

1.5 The aim of the EIA Regulations is to ensure that major projects that are likely to have significant effects upon the environment are subject to EIA, and that minor projects and those outside sensitive areas which are extremely unlikely to have significant environmental effects, are not subject to these EIA regulations.

1.6 The EIA process is designed to draw together, in a systematic way, an assessment of the development's likely significant environmental effects (alongside economic and social factors). The process ensures that the importance of the predicted effects, and the scope for reducing them, are reported and understood by the public, statutory consultees, and the relevant Competent Authority before it makes its decision. The output from the EIA process is reported within an ES submitted with the application. This allows environmental factors to be given due weight when assessing and determining planning applications.

1.7 The content of the submitted request, informed by the information that is currently available, outlines the anticipated scope of the assessment process for each environmental topic area likely to give rise to significant environmental effects to the extent we consider they require assessment, the scope of which is outlined in sections 6-12 of this report.

2.0 Site Context

Site Location and Description

2.1 The Site is located to the east of Saffron Walden and lies wholly within the jurisdiction of UDC.

2.2 The Site is approximately 17 hectares (ha) in size and is bound on two sides by agricultural land to the east and south, a new housing development to the west (planning references: UTT/13/3467/OP & UTT/16/1856/DFO) and Radwinter Road (B1053) to the north.

2.3 The land rises to the south and east, away from the road, and is in arable agricultural use. Whilst being located adjacent to the existing built edge of Saffron Walden, the parish boundary line runs along the Site's western boundary and it is located wholly within Sewards End Parish.

2.4 Radwinter Road (B1053), a bus route, is set within a cutting and a pedestrian footpath runs along its side. To the north of the B1053 is the Saffron Walden fuel depot. Part of the northern area of the Site is subject to the relevant HSE consultation zone.

Transport and Access

2.5 The Site is accessed via Radwinter Road which runs along the northern boundary of the Site and connects to the west the town centre of Saffron Walden and the village of Sewards End to the east.

Archaeological and Heritage Features

2.6 There are no Scheduled Monuments onsite. The closes Scheduled monuments to the Site are Tiptoft's Moated Site and Fishponds Scheduled Monument approximately 1.1km south east and the Maze Scheduled Monument is approximately 1.2km north west of the Site.

2.7 There are no Listed Buildings on the Site. The closest to the Site is Springfield Grade II Listed Building which is approximately 200m east of the Site.

2.8 With regard to Registered Parks and Gardens, The Maze Grade II Registered Garden is approximately 1.2km north west of the Site, Bridge End Gardens a Grade II* Registered Garden is approximately 1.9km north west and Audley End Grade 1 Listed Park and Garden is approximately 2.1 km west of the Site.

Flood Risk and Drainage

2.9 A minor watercourse flows west through the northern section of the Site alongside the existing track present.

2.10 The closest section of Environment Agency designated Main River (eastern arm of The Slade) is located 567m west of the Site. The Slade flows west through Saffron Walden to its confluence with the River Cam approximately 3.2km west of the Site.

2.11 The Environment Agency Flood Map for Planning indicates that the Site is located in Flood Zone 1. This is land assessed as having a less than 1 in 1,000 annual probability of river flooding (<0.1%).

Geology, Hydrogeology and Soils

2.12 Geological data held by the British Geological Survey (BGS) shows that the bedrock geology underlying the Site is Chalk. Superficial deposits of Lowestoft Formation Diamicton are present within the south east of the Site. Soilscapes mapping indicates the underlying soil as freely draining lime-rich loamy soils.

Environmental Designations and Ecological Features

2.13 The Site comprises an arable field, dominated by bare ground with areas of tall ruderal habitat in the field margin. The field boundaries of the Site are dominated by species rich hedgerows with scattered and mature trees.

2.14 There are no international sites designated for conservation on the Site or within 10km of the Site. Additionally, there are no nationally designated sites within 2km of the Site. The closest non-designated site for nature conservation is the Pounce Wood Local Wildlife Site (LWS) which is approximately 180m north of the Site. Pounce Wood and Martins Wood Ancient Woodland are approximately 150m north and 600m north east of the Site respectively.

Air Quality and Pollution

2.15 The Site is not located within an Air Quality Management Area (AQMA) however UDC have declared an AQMA for exceedances in annual mean nitrogen dioxide (NO_2) in the town centre of Saffron Walden. The boundary of the AQMA is approximately 800m west of the Site.

3.0 Proposed Development

Introduction

3.1 The Proposed Development will deliver the following:

- Up to 240 homes;
- New access into the Site off Radwinter Road;
- New landscaping as well as retention and enhancement of existing landscape features;
- Sustainable Drainage Systems; and
- Other associated infrastructure.

Planning Application

3.2 The planning application will be an outline application with all matters reserved except for access.

Assessment Parameters

3.3 As the application will be made in outline, it is standard practice (implementing relevant caselaw), to identify the key design parameters that "tie" the assessment into particular design characteristics.

3.4 The design parameters will be presented on figures graphically and described in the ES. The parameters will be refined through the design and EIA process and are likely to be:

- Land use;
- Building heights;
- Access and movement; and
- Open space/green infrastructure.

Construction

3.5 An indicative construction programme will be provided in the ES in the form of a likely worst-case in terms of local disturbance, particularly with regards to HGV traffic

4.0 EIA Methodology and Scope

Introduction

4.1 The Applicant has committed to undertaking an EIA of the Proposed Development. The Proposed Development exceeds the applicable screening threshold at Schedule 2,10(b) of the EIA Regulations. Due to the Site location, environmental sensitivities and the scale of development, it is considered that it has the potential to give rise to likely significant environmental effects. An ES to support the planning application will, therefore, be prepared voluntarily.

4.2 EIA is a systematic process through which the likely significant environmental effects of a Proposed Development can be identified, assessed and where possible, adverse impacts are reduced, and beneficial impacts enhanced. EIA ensures that information on the potential for significant environmental effects is available for decision-makers and the public to consider in the determination of an application.

Need for EIA - Screening

4.3 Certain types of development are required to be the subject of EIA ('EIA development'). Schedule 1 of the EIA Regulations lists the type and scale of development that automatically require EIA ('Schedule 1 development').

4.4 Schedule 2 of the EIA Regulations sets out the development types that may require EIA ('Schedule 2 development'). To qualify as a Schedule 2 development, it must be either located in a "Sensitive Area" as defined in Regulation 2(1) or exceed the applicable threshold in Schedule 2. Not all Schedule 2 development will require EIA and they consequently need to be screened on a case-by-case basis using the criteria set out in Schedule 3 of the Regulations.

4.5 The proposals which form the subject of this report are not of a type or scale described in Schedule 1 but are of a type that falls within Schedule 2(10) 'Infrastructure Projects'; specifically, 10(b) 'Urban Development Projects'. The scale of the Proposed Development exceeds the applicable thresholds. Consequently, the Proposed Development is Schedule 2 development. Schedule 3 of the Regulations sets out the screening criteria in relation to Schedule 2 developments, drawing attention to the character and complexity of effects resulting from the scheme, as well as a range of issues relating to the sensitivity of sites.

4.6 It is our view, based upon a review of the EIA Regulations, that the proposed project constitutes Schedule 2 development. From the evidence collected to date, we do not anticipate the project is likely to give rise to significant environmental effects. However, following early pre-application engagement with the Local Planning Authority, it would appear that by virtue of factors including the Site location and the project's cumulation with other development commitments within the locality, the Local Planning Authority considers the project has the potential to trigger the requirement for EIA. In view of this, the Applicant volunteers this report to establish the scope of any forthcoming EIA process in connection with this project, and the content of the ES which will subsequently accompany the planning application for the development proposed.

4.7 Notwithstanding the above, we would request that UDC, as the Competent Authority for the purposes of the Regulations, considers this section of the report and confirms whether the proposals constitute EIA development, and that an EIA is required.

4.8 This document also sets out the suggested scope of the EIA and resulting ES. It informs a formal request for a Scoping Opinion from UDC in line with Regulation 15 of the EIA Regulations.

4.9 In accordance with Regulation 15(2), this request includes:

- A plan sufficient to identify the land (**Appendix 1**);
- A brief description of the nature and purpose of the development, including its location and technical capacity: see Sections 2 and 3;
- An explanation of the likely significant effects of the development on the environment: see Sections 6-12; and
- Such other information or representations as the person making the request may wish to provide or make: see other sections of this Scoping Report, notably this Section (4).

4.10 Guidance on the EIA Regulations is provided in the National Planning Practice Guidance (NPPG). The NPPG states that:

"Whilst every Environmental Statement should provide a full factual description of the development, the emphasis should be on the "main" or ***"significant"*** *environmental effects to which a development is likely to give rise. The Environmental Statement should be proportionate and not be any longer than is necessary to assess properly those effects.* ***Where, for example, only one environmental factor is likely to be significantly affected, the assessment should focus on that issue only. Impacts which have little or no significance for the particular development in question will need only very brief treatment to indicate that their possible relevance has been considered"*** *(emphasis added) (Paragraph: 035 Reference ID: 4-035-20170728).*

4.11 The proposed scope of the EIA is summarised in the following tables. Topics which will be detailed further in the following sections.

4.12 **Table 4.1** sets out the broad aspects of the environment required to be considered in Schedule 4 of the EIA Regulations, and identifies which topics are necessary to be considered in this EIA, with reasons provided. Topics listed in **Table 4.1** are those for which significant effects are considered likely or cannot be ruled out at this stage and have consequently been scoped into the EIA. Not all topics scoped into the EIA are considered to merit a full technical assessment in the form of an ES chapter. Some topics are, therefore, proposed to be 'scoped down' such that they would be reported in the ES on a commentary level, drawing on publicly available sources. Scoping has been based on the professional judgement of the EIA consultant team and the information currently available on the Proposed Development, the Site and the surrounding area.

4.13 **Table 4.2** summarises topics which are proposed to be scoped out of the EIA on the basis that they are unlikely to give rise to significant environmental effects, together with a justification. Some of these topics may still be covered by technical reports that will be submitted in any event, but not as part of the ES as environmental impacts are not considered likely or significant.

4.14 **Table 4.3** synthesises **Tables 4.1** and **4.2** and summarises the proposed scope of the EIA.

Table 4.1: Consideration of Broad Environmental Aspects Scoped into the EIA

TOPIC	CONSIDERATION
Air and Climate	
Air Quality	UDC has declared an Air Quality Management Area (AQMA) for exceedances of the annual mean nitrogen dioxide (NO_2) objective covering Saffron Walden. The boundary of the AQMA is approximately 800m west of the Site. There is the potential for significant impacts during the construction phase at sensitive receptors within 350m of the Site. The most significant impacts are likely to occur at those receptors closest to the Site including properties to the west of the Site on Griffin Place, Leverett Way, Sativus Close and Fairfax Drive. Potential impacts on these receptors include: • Temporary increases in dust deposition; and • Temporary increases in air pollutant concentrations near the local road network due to emissions from construction traffic. The operational phase of the Proposed Development will generate additional vehicle movement on the adjacent road network, including within the Saffron Walden AQMA. There is the potential for these additional vehicle movements to result in impacts on air quality within the AQMA. Air Quality impacts may be significant and will, therefore, be scoped into the EIA.
Noise and Vibration	The main source of noise at the Site is from road traffic on Radwinter Road. There are no other notable noise sources at the Site. There is the potential for noise and vibration effects as part of the construction phase of the Proposed Development which may impact sensitive receptors including residences to the west of the Proposed Development including those on Fairfax Drive, Sativus Close and Griffin Place. Construction noise and vibration will, therefore, be scoped into the EIA. There is the potential for development generated traffic which may give rise to adverse noise effects at sensitive receptors. Operational noise as a result of the Proposed Development will, therefore, be scoped into the EIA. Significant effects from road traffic vibration are not considered likely and have, therefore, been scoped out of the EIA.
Population and Human Health	
Economy and Employment	The Proposed Development will provide employment opportunities for local construction contractors and labourers. Once operational, the Proposed Development will result in an increase in the local population which may result in an increase in the working age population which is beneficial for the local economy. Impacts on economy and employment may be significant and will, therefore, will be scoped into the EIA.

TOPIC	CONSIDERATION
Social Infrastructure	Once the Proposed Development is operational, this will have beneficial effects on the housing provision within the local area. However, a potential increase in the population generates demand for social infrastructure in particular, education and health care. Social infrastructure will, therefore, be scoped into the EIA.
Material Assets	
Transport	Construction of the Proposed Development will generate an increase in HGVs travelling to and from the Site. As a result, there may be occasional temporary nuisance where construction traffic is encountered by local road users on local routes. The increase in construction vehicles in the local area has the potential to negatively impact on driver severance, driver delay, pedestrian severance, pedestrian delay, pedestrian amenity, fear and intimidation, and accidents and safety in/along routes within the study area. Any increase in vehicular movements associated with the Proposed Development during operation has the potential to impact on driver delay, pedestrian delay, fear and intimidation and accidents and safety. Transport will, therefore, be scoped into the EIA for both construction and operational phases of the Proposed Development.
Land, Soil and Water	
Water and Flood Risk	The Site is located within Flood Zone 1, indicating a low probability of flooding. The Slade is classified by the Environment Agency as a Main River and is approximately 567m to the west of the Site. There is also a minor watercourse which flows west through the northern section of the Site. The development of the existing greenfield Site will result in an increase in impermeable area and has the potential to increase surface water runoff, which could have a long-term impact on flood risk at the Site and off site. Flood risk and drainage will, therefore, be scoped into the EIA.
Agricultural Land	An Agricultural Land Quality Report has been prepared (**Appendix 2**) which has identified that the land quality is mainly limited to subgrade 3a. An area in the centre of the Site has deeper freely-draining soils and is grade 2 quality. The Proposed Development will result in a loss of agricultural land quality and there are unlikely to be any measures to mitigate this loss of land. These impacts, alongside the effects upon the existing rural farming enterprise by taking this land out of agricultural potential will be addressed in the EIA.
Cultural Heritage and the Landscape	
Landscape and Visual effects	The Proposed Development has the potential to have effects on the physical and perceptual aspects of the landscape, and on the general visual amenity of people who have (or will have) views of the development. For this reason, landscape and visual effects will be scoped into the ES.

4.15 An EIA should only assess the significant environmental effects of a development. A number of topics are not considered to be significant. The topics to be scoped out of the ES and the rationale for their exclusion is set out in **Table 4.2** below.

Table 4.2: Non-Significant Environmental Topics

TOPIC	CONSIDERATION
Air and Climate	
Microclimate	**Odour** With the implementation of a waste strategy for the operational phase of the Proposed Development, significant odour effects are not anticipated. **Lighting** The Proposed Development will require external lighting on roads and paths. Given the outline nature of the scheme, potential lighting impacts will be considered in general terms as part of the LVIA and not considered to be significant. It is anticipated that an appropriate lighting scheme will be required and implemented in response to an appropriately worded planning condition, to provide sufficient safeguards and controls by the LPA to consider this at the detailed design stage.
Climate Change	Potential climate implications from the Proposed Development are two separate but interrelated issues: 1. Climate Change Adaptation (how the project has been designed to be resilient to a changing climate); and 2. Climate Change Mitigation (how the project may contribute to climate change through the emission of greenhouse gases (GHGs) and how it seeks to mitigate such emissions). The above issues will be considered insofar as they relate to the various topics scoped into the EIA and, therefore, the requirement for a standalone assessment of climate change is proposed to be scoped out of the EIA.
Population and Human Health	
Health and Wellbeing	The construction of the Proposed Development may result in increased noise, dust and vehicle emissions which can have impacts on human health. Once the Proposed Development is operational and occupied, the main impacts on human health are likely to be from increased traffic. Increased traffic can affect pedestrian amenity and safety as well as lead to increased air pollution and noise, with consequent effects on health and quality of life. There will, however, be some positive health impacts resulting from the creation of more formalised open space throughout the Proposed Development and links to sustainable movement e.g. maintained and adequately lit footpaths encouraging movement and activity. It is proposed that a Human Health and Wellbeing Assessment (adhering to the Rapid Health Impact Assessment guidance published by the Healthy Urban Development Unit (HUDU) is prepared in support of the Proposed Development. The Health Impact Assessment (HIA) is proposed to form a Technical Appendix to the ES, but will not be a topic chapter within the ES.

TOPIC	CONSIDERATION
Tourism and Retail	There are unlikely to be any tourism and retail benefits as a result of the Proposed Development, therefore, tourism and retail has been scoped out of the EIA.
Biodiversity	
Ecology	A Preliminary Ecological Appraisal (PEA) has been undertaken at the Site The main findings of the PEA are summarised below. • There are no international sites designated for conservation on the Site or within 10km of the Site. Additionally, there are no nationally designated sites within 2km of the Site. • The Site comprises an arable field, dominated by bare ground with areas of tall ruderal habitat in the field margin. The field boundaries of the Site are dominated by species rich hedgerows with scattered and mature trees. • The pond on the Site offers suitable habitat for great crested newts. • There is potential for breeding birds in the hedgerows and trees and arable/ grassland for foraging. • The trees along the boundary of the Site offer bat roost potential and the hedgerows are likely used by bats for foraging. • No badger setts were recorded on Site but there is the potential for badgers to be using the Site. • There were no records of hazel dormice on Site, but the hedgerow offers suitable habitat. • The watercourse present on Site is unsuitable habitat for otter and water vole. • A number of measures to mitigate potential ecological impacts have been included as part of the design of the Proposed Development. These include: – The creation of new areas of grassland to compensate for the loss of arable and semi-improved grassland; – The watercourse (ditch) has been realigned and incorporated into the Sustainable Drainage System (SuDS) to benefit amphibians and reptiles; and – Additional planting of hedgerows, trees and woodland to benefit bats, hazel dormice and breeding birds. • It is anticipated that with the implementation of the design measures noted above, a CEMP, a Landscape and Ecological Management Plan (LEMP) and an appropriate lighting scheme for bats, significant impacts on ecology are not anticipated. Ecology has, therefore, been scoped out of the EIA.
Arboriculture	Arboricultural features on Site include scattered mature and semi-mature trees and hedgerows on the Site boundary, several of which are considered to support sufficient species to potentially qualify as important under the Hedgerow Regulations 1997. However, the majority of the hedgerows and trees will be retained as part of the Proposed Development. Some of the hedgerow will also be replaced and enhanced with new native planting. With

TOPIC	CONSIDERATION
	this mitigation in place, significant impacts on arboricultural features are not considered likely, therefore, arboriculture has been scoped out of the EIA.
Cultural Heritage and the Landscape	
Built Heritage	There are no heritage assets located on Site, therefore, direct impacts on heritage assets as a result of the Proposed Development are not anticipated. The closest heritage asset to the Site is Pounce Hall, a Grade II Listed Building which is approximately 200m east of the Site. Indirect impacts on this heritage asset, and other heritage assets in close proximity to the Site through changes to their setting are not considered likely. Significant impacts on heritage are not considered likely, therefore, heritage has been scoped out of the EIA.
Archaeology	A Geophysical Survey of the Site was undertaken in January 2021 (**Appendix 3**) which identified a single feature in the eastern extent of the Site which was assessed as having moderate archaeological potential. No other potential archaeological remains were identified within the Proposed Development area. Further archaeological work including trial trenching may be required in the eastern extent of the Site. If this is required, this can be secured by a suitably worded planning condition. Impacts on archaeology are not considered to be significant and will, therefore, be scoped out of the EIA.
Material Assets	
Ground Conditions (including contamination, stability and hydrogeology)	The Site is currently in use as agricultural land, therefore, sources of contamination are likely to be limited to use of agricultural fertilisers and pesticides. These are unlikely to pose a significant risk to human health, the environment, controlled waters or buildings/services. For these reasons, ground conditions are scoped out of the EIA.
Utilities	Provision of utilities (electricity, gas, fresh/drinking water and foul water) will be addressed through appropriate technical reports, as needed, but are not considered a likely significant environmental effect. In addition to this, utility providers have a statutory duty to provide capacity in line with permitted demand. For these reasons, utilities will be scoped out of the EIA.
Waste	A Site Waste Management Plan (SWMP) and a waste and recycling strategy will be developed for the operational phase. This will ensure that waste is dealt with appropriately and recycled where possible during operation, ensuring that any wider impacts are sufficiently mitigated. For the construction phase, preparation of a CEMP, in response to appropriate planning conditions will cover the management of construction waste. It is considered that impacts arising from waste are not likely to be significant and, therefore, waste is scoped out of the EIA.
The Inter-Relationship Between the Above Factors	
Secondary Effects	No significant effects have been identified but will be re-considered during the assessments.

Table 4.3: Scoping Matrix

	CONSTRUCTION		OPERATION	
	LIKELY TO BE SIGNIFICANT?	SCOPE IN/OUT	LIKELY TO BE SIGNIFICANT?	SCOPE IN/OUT
Population and Human Health				
Social Infrastructure	No	Out	Yes	In
Economy and Employment	Yes	In	Yes	In
Human Health	No	Out	No	Out
Tourism and Retail	No	Out	No	Out
Biodiversity				
Ecology	No	Out	No	Out
Arboriculture	No	Out	No	Out
Land, Soil and Water				
Contaminated Land	No	Out	No	Out
Agricultural Land	Yes	In	Yes	In
Flood Risk and Surface Water Drainage	Yes	In	Yes	In
Air and Climate				
Local Air Quality	Yes	In	Yes	In
Noise	Yes	In	Yes	In
Vibration	Yes	In	No	Out
Microclimate (including wind, artificial light and natural light)	No	Out	No	Out
Climate Change (including greenhouse gas emissions, environmental performance, and vulnerability to climate change)	No	Out	No	Out
Material Assets				
Transport	Yes	In	Yes	In
Utilities	No	Out	No	Out
Waste	No	Out	No	Out
Cultural Heritage and the Landscape				
Archaeology	No	Out	No	Out
Built Heritage	No	Out	No	Out
Landscape and Visual Amenity (including public rights of way)	Yes	In	Yes	In
The Interaction Between the Factors Referred to Above				
No significant interactions identified will be reconsidered in the EIA	No	Out	No	Out

4.16 For each of the environment aspects to be scoped into the EIA, further detail relating to the scope of the assessment is provided in sections 6-12 of this report.

5.0 Cumulative Impacts

Approach

5.1 The EIA Regulations require an ES to consider cumulative effects resulting from the *'cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources.'* Schedule 4, 5(e).

5.2 No cumulative impact assessment guidance methodology exists for EIA within the Town and Country Planning regime; thus, standard practice has been developed based on approaches used in other types of EIA, as well as professional experience. The proposed approach for cumulative effects draws on these resources and is set out in the following section.

Screening of Cumulative Projects

5.1 The Cumulative Screening Assessment has been undertaken according to the following methodology. Firstly, existing and approved projects in line with the requirements of the EIA Regulations have been identified. Secondly, projects which are known to be in the earlier stages of planning (pre-consent) are considered. There will be less information available about non-consented projects, and consequently this will have limitations on the level of assessment that will be undertaken.

5.2 To assist with the identification of the cumulative projects, the following criteria have been applied:

- Development which is within a zone of influence of the Proposed Development. This zone has been set at 2km;
- Planning applications during the last two years;
- Development which is expected to be constructed at the same time as the Proposed Development;
- EIA development (which is likely to have significant effects in its own right);
- Development which introduces sensitive receptors in close proximity to the Site (acknowledging that the agent of change principle means the introducer of any sensitive receptors is responsible for assessing impacts on those receptors); and
- Major Development.

5.3 Major Development is classified as development involving one or more of the following:

- The winning or working of minerals or the use of land for mineral-working deposits;
- Waste development;
- The provision of dwelling houses where:
  - The number of dwelling houses to be provided is 10 or more; or
  - The development is to be carried out on a site having an area of 0.5 hectares or more.

- The provision of a building or buildings where the floor space to be created is 1,000 square metres or more.

5.4 These criteria have been used to identify applications which should be assessed for likely significant cumulative effects in conjunction with the Proposed Development. Reasons have been provided for the inclusion or exclusion of applications for this assessment in **Table 5.1**.

Table 5.1: Results of Cumulative Impact Screening Assessment

PROJECT	PLANNING REFERENCE	KEY ELEMENTS OF PROPOSAL	REASONS FOR INCLUSION/EXCLUSION BASED ON CRITERIA PROVIDED ABOVE
Projects to be Included in the Cumulative Assessment			
Land South of Radwinter Road	UTT/13/3467/OP UTT/16/1856/DFO	Up to 230 dwellings including link road and access to and preparation of land for one form entry primary school.	A Reserved Matters Application (RMA) for 200 dwellings was approved in January 2017. This project is directly adjacent to the Proposed Development and is currently under construction. Due to the proximity of the project to the Proposed Development, there may be cumulative impacts, therefore, this project has been included in the cumulative assessment.
Land South of Radwinter Road (former Printpack Site)	UTT/20/2007/FUL	Demolition of existing buildings and erection of a discount food store, a 70-bed care home and 49 no. retirement living apartments with access, car parking, landscaping and associated works.	This project was submitted in August 2020 but has not yet been approved. The project is approximately 560m west of the Proposed Development. If this project is approved, there may be some overlap in timings of construction, therefore, this project has been included in the cumulative assessment.
Land North of Shire Hill Farm	17/2832/OP	Up to 100 dwellings.	This project was approved in July 2020 and is directly adjacent to the south west of the Proposed Development. There may be some overlap in the timing of constructions works with this project and the Proposed Development, therefore, this project has been included in the cumulative assessment.

PROJECT	PLANNING REFERENCE	KEY ELEMENTS OF PROPOSAL	REASONS FOR INCLUSION/EXCLUSION BASED ON CRITERIA PROVIDED ABOVE
Land East of Thaxted Road	18/0824/OP 19/2355/DFO	Up to 150 dwellings.	The RMA (19/2355/DFO) for this project was allowed on appeal on 29 January 2020. The project is approximately 590m south west of the Proposed Development. There may some overlap in the timing of constructions works with this project and the Proposed Development, therefore, this project has been included in the cumulative assessment.
Land at Ashdon Road	UTT/13/2423/OP	Redevelopment of the site for up to 167 residential units.	Although this project was consented on 26 November 2014, this scheme is only partially built out and ECC requested that the level of occupation in 2018 when the base traffic counts were undertaken is established. This project has, therefore, been included in the cumulative assessment.
Land East of Little Walden Road	UTT/16/2210/OP	Up to 85 residential dwellings.	This project was granted permission at appeal and is located approximately 1.9km north west of the Proposed Development. This project has been included in the cumulative assessment at the request of ECC.
Projects to be Excluded from the Cumulative Assessment			
Former Friends School Mount Pleasant Road	UTT/19/1744/OP	Development of 30 dwellings, re-provision of swimming pool with new changing rooms, artificial grass pitches, sports pavilion	The application was submitted in July 2019, and refused on 19 March 2021 and, therefore, has been excluded from the cumulative assessment.
Land North of Ashdon Road	UTT/17/3413/OP - granted permission in October 2019.	Erection of 4 commercial buildings.	An RMA (UTT/20/0921/DFO) was submitted in April 2020 for a combined floor area, of 1,664 sqm.

PROJECT	PLANNING REFERENCE	KEY ELEMENTS OF PROPOSAL	REASONS FOR INCLUSION/EXCLUSION BASED ON CRITERIA PROVIDED ABOVE
			The project is approximately 700m north west of the Proposed Development. Given the nature of this project, cumulative impacts are not considered likely, therefore, this project has not been included in the cumulative assessment.
Upcoming Projects			
Land at Cole End Farm Lane Wimbish	UTT/20/3024/SCO	Development of a Solar Farm.	A request for an EIA Screening Opinion was submitted in November 2020. A Screening Opinion was adopted in February 2021, confirming that an EIA is not required. The project is approximately 1.7km south east of the Proposed Development. If this project comes forward, given the nature of this project and the distance from the Proposed Development, cumulative impacts are not considered likely, therefore, this project has not been included in the cumulative assessment.

Conclusion

5.5 Projects to be considered in the Cumulative Assessment are:

- Land South of Radwinter Road UTT/16/1856/DFO and UTT/20/2007/FUL;
- Land North of Shire Hill Farm;
- Land East of Thaxted Road;
- Land at Ashdon Road UTT/13/2423/OP; and
- Land East of Little Walden Road.

6.0 Agriculture

Introduction

6.1 This assessment will consider the likely significant environmental effects of the Proposed Development upon agricultural activity within the area, during both construction and operational phases of the Proposed Development.

Baseline Conditions

6.2 The Site is predominantly in arable agricultural production and, therefore, the Proposed Development will remove this land out of production, giving rise to a potential loss of agricultural land, the impact this has on local agricultural production, and the local farming business activity within the locality.

6.3 An Agricultural Land Quality Report (**Appendix 2**) has confirmed that land quality is mainly limited to subgrade 3a. An area in the centre of the Site has deeper freely-draining soils and is grade 2 quality.

Potential Impacts

6.4 The assessment will consider potential impacts upon three receptors: the loss of agricultural land; loss of/damage to soil resources; and effects upon farming businesses.

Approach and Method

6.5 The approach to the assessment will include:

- Desk based analysis of the likely soils and agricultural land classification using MAFF Agricultural Land Classification of England and Wales;
- Desk based analysis of the soil types of the Site using data from the Soil Survey of England and Wales;
- Desk based assessment of farms and farming businesses potentially affected by the Proposed Development, including an assessment of any Agri Environment Schemes in place;
- Understand agricultural users in order to determine the nature and basis of the farming operations;
- Assessment of the significance of potential effects on the three receptors;
- Introduction of design elements into the project to minimise and mitigate adverse impacts, wherever possible; and
- Assessment of the residual effects of development after mitigation.

Consultation

6.6 Preparation of this assessment will be undertaken in consultation with the landowner and their agent. Baseline information includes soil and agricultural information available from the Government's MAGIC website, published soil surveys, and unpublished soil information available from the National Soil Resources Institute.

7.0 Air Quality

Introduction

7.1 This Chapter will set out the findings of the Air Quality Assessment undertaken in support of the planning application. The Assessment will consider the impact of the Proposed Development on the surrounding area, during both the construction and operational phases.

7.2 Existing local air quality, the likely future air quality in the absence of the Proposed Development, and the likely future air quality if the Proposed Development goes ahead will all be defined. The assessment of construction impacts will focus on the anticipated duration of works. The assessment of operational impacts will focus on the earliest year that the development is likely to be operational to provide a worst-case assessment.

7.3 UDC has declared an Air Quality Management Area (AQMA) for exceedances of the annual mean nitrogen dioxide (NO_2) objective covering Saffron Walden, incorporating a circular area of 1400m diameter centred on Elm Grove in the town centre. The Site falls outside of the AQMA, however, traffic generated by the Proposed Development has the potential to impact air quality within the AQMA.

7.4 UDC have published Air Quality Technical Planning Guidance. The development proposals will be assessed in accordance with the requirements of this guidance[1].

Baseline Conditions

7.5 Monitoring carried out by UDC has shown a downward trend in NO_2 concentrations in recent years and during 2019 the data shows no exceedances of the relevant objective limits. However, concentrations at some locations of relevant exposure within the AQMA remain close to the NO_2 objective limit. However, there is no monitoring carried out in the immediate vicinity of the Site, therefore, it is not possible to establish current baseline air quality at the Site.

7.6 It is expected that traffic related NO_2 concentrations will continue to decline in future years due to improvements in vehicle emissions, however, there is the potential that increases in traffic associated with the Proposed Development and other committed developments may result in an overall increase in NO_2 concentrations in future years.

7.7 Radwinter Road is a significant source of vehicle related emissions that will influence air quality at the Site. Due to the proximity of the Site to Radwinter Road there is the potential for NO_2 and particulate matter (PM) concentrations to be close to the objective limited along the northern boundary of the Site, particularly as a result of increase vehicle movements along this route due to proposed and committed development.

[1] UDC (2018) Air Quality Technical Planning Guidance, June 2018

Potential Impacts

Construction Phase

7.8 There is the potential for significant impacts during construction at sensitive receptors within 350m of the Site. The most significant impacts are likely to occur at those receptors closest to the Site including properties to the west within the new development areas at Griffin Place, Leverett Way, Sativus Close and Fairfax Drive. The most sensitive receptors will be residential properties in these locations.

7.9 There is also the potential for significant impacts on local air quality from construction traffic travelling to and from the Site along Radwinter Road and through the adjoining development areas. Although trip generation during the construction phase is generally lower than the trips associated with the operational phase, construction vehicles include a high proportion of heavy-duty vehicles, which can generate higher emissions, and in conjunction with trips associated with other developments being constructed at the same time, can result in significant impacts on local air quality, all be it of a temporary and short-term nature.

Operation

7.10 As previously discussed, the operational phase of the Proposed Development will generate additional vehicle movements on the adjacent road network, including within the Saffron Walden AQMA. There is the potential for these additional vehicle movements to result in a significant impact on air quality within the AQMA, particularly in conjunction with traffic generated by other committed development in the area. The main receptors of concern will be residential properties, educational facilities and health/community related facilities located close to the main road network where traffic flows are likely to be most significant.

7.11 There is no monitoring carried out along Radwinter Road in close proximity to the Site, therefore, it is not known whether the objective limits for NO_2 or PM are being exceeded at the Site. Due to Radwinter Road being a significant source of traffic emissions, there is the potential for significant effects in terms of new exposure due to the introduction of residential receptors to the Site.

Approach and Method

7.12 Existing local air quality will be defined within the study area drawing on monitoring carried out by UDC with the information provided within the Council's Air Quality Review and Assessment reports. For construction and demolition effects, the study area will be within 350m of the Site. For construction and operational traffic effects, the study area will be defined by the transport data where changes in traffic are significant, considering the thresholds defined by the current air quality planning guidance published by the Institute of Air Quality Management (IAQM)[2].

7.13 Air quality will be assessed at a range of worst-case receptor locations. For construction activities, these will be existing properties closest to the Proposed Development. For traffic-

[2] IAQM (2017) Land-Use Planning & development Control: Planning for Air Quality

related impacts, these will be existing sensitive receptors (i.e. residential and educational properties) that are closest to busy roads, in particular those close to junctions, where traffic emissions are greatest. Consideration will also be given to the potential location of dwellings and other sensitive uses proposed within the Site.

7.14 The potential impacts of dust during construction will be assessed, making reference to the IAQM guidance on the assessment of dust from demolition and construction.[3] Emissions from on-site plant during construction will be assessed if any potentially significant sources are identified.

7.15 The assessment of road traffic impacts (construction and operational) will be undertaken using the ADMS Roads detailed dispersion model. Model outputs will be verified against local air quality monitoring data using the latest full years' worth of data available. This modelling will make use of mapped background concentration data provided by Defra or local background monitoring data, and of traffic flow projections. Air quality at the Site will be assessed in relation to the national air quality objectives, established by the Government to protect human health. The objectives are set as concentrations below which effects are unlikely even in sensitive population groups, or below which risks to public health would be exceedingly small. Predicted concentrations will be used to determine impacts associated with exposure of future occupants of the Site.

7.16 The road traffic modelling will assess the with and without construction/operational traffic scenarios (where trips exceed the IAQM screening criteria) to determine impacts of construction and operational phase traffic on local air quality. The significance of identified effects from development traffic will be determined referring to criteria defined by the IAQM guidance on land-use planning and development control and the UDC Air Quality Technical Planning Guidance.

7.17 All practical and reasonable measures which can be implemented to mitigate any detrimental impacts associated with construction and operation of the Proposed Development will be considered and highlighted within the Air Quality Chapter of the ES. The mitigation measures will be based on the measures and requirements set out within the UDC Air Quality Technical Planning Guidance, while mitigation during the construction phase will be based on the measures recommended within the IAQM construction assessment guidance.

Consultation

7.18 Consultation was undertaken with the Environmental Health Department at UDC on 12th January 2021 regarding the methodology and overall scope of the assessment. The Council, in a response email dated 15th January 2021, agreed with the assessment scope proposed, but also requested that the assessment considered the specific requirements for modelling, assessment of significance and mitigation as set out in the UDC Air Quality Technical Guidance.

[3] IAQM (2016) Guidance on the Assessment of Dust from Demolition and Construction, Version 1.1

8.0 Flood Risk and Drainage

Introduction

8.1 The Flood Risk and Water Resources Chapter of the ES will set out the methodology applied to assess the potential effects of the Proposed Development, in terms of the water environment. The drainage requirements will also be assessed as part of this Chapter.

8.2 The assessment within the ES would enable the potential flood risk and hydrology impacts to be clearly determined and comprehensive mitigation measures to be put forward as part of the planning application. The Chapter will be supported by a Flood Risk Assessment (FRA) which will be appended to the ES. The FRA will be produced in accordance with the requirements of the NPPF, Environment Agency guidance, local authority planning policy and Lead Local Flood Authority (LLFA) guidance.

Baseline Conditions

8.3 The Site is located on land classified as Greenfield, with a current arable farmland use, with an approximate area of 17.3ha. A minor watercourse flows west through the northern section of the Site alongside the existing track present.

8.4 The closest section of Environment Agency designated Main River (eastern arm of The Slade) is located 567m west of the Site. The Slade flows west through Saffron Walden to its confluence with the River Cam approximately 2 miles west of the Site at Home Farm.

8.5 The Site is located within Flood Zone 1, as shown on the Environment Agency Flood Map for Planning. This is the area shown to be at low risk of river flooding.

8.6 The Environment Agency Long Term Flood Risk Map indicates that the Site is predominantly at very low risk of surface water flooding. Some areas of potential low risk are shown within the north of the Site, considered to be associated with the minor watercourse present. The mapping also indicates reservoir flooding presents no risk to the Site.

8.7 Geological data held by the British Geological Survey (BGS) shows that the bedrock geology underlying the Site is Chalk. Superficial deposits of Lowestoft Formation Diamicton are present within the south east of the Site. Soilscapes mapping indicates the underlying soil as freely draining lime-rich loamy soils.

8.8 Onsite infiltration testing to BRE 365 has been undertaken and infiltration found to be unviable. Following the drainage hierarchy, if infiltration does not work discharge must be sought to a watercourse. Failing the presence of a watercourse, connection can be sought to an existing sewer.

8.9 Existing Greenfield runoff rates have been calculated for the Site using ICP SUDS (**Table 8.1**), available through Microdrainage Source Control. The rates are as follows for the key storm periods based on the developable Site area.

Table 8.1: Greenfield Runoff rates for the Site

RETURN PERIOD (YEARS)	GREENFIELD RATE (L/S)
1	14.3
30	39.4
100	58.4
QBar	16.4

8.10 Clarification was sought on the Greenfield runoff rates as LLFA guidance states that Greenfield runoff for development "*must be the total pre-development site area, in hectares."* Since the developable area of the Site is significantly lower than the total site area this would have had a significant impact on runoff rates and subsequent attenuation retirements. It was confirmed by the LLFA that "*areas of significant public open space or areas remaining greenfield should not be included in the greenfield run off rate calculations."* This provides validation of the above rates.

Potential Impacts

8.11 The potential impacts of the Proposed Development on water quality and flood risk will be evaluated with regard to the construction phase and operational phases and, where necessary, mitigation measures will be proposed to address and identify potential adverse impacts.

8.12 The Proposed Development will require new foul drainage infrastructure to remove wastewater from the Site. Capacity checks will need to be undertaken by the relative water authority, Anglian Water, to ensure their network can accept these new flows, or requires upgrading.

8.13 During construction, where works are to be undertaken in or adjacent to watercourses, there is risk of sediment or accidental spillage of fuels entering watercourse systems. There may also be temporary alteration to the existing surface water and overland flow runoff regime throughout the construction phase.

8.14 Once the Site is operational, an increase in hard surfaces on the Site has the potential to reduce infiltration and, therefore, increase rates of surface water runoff. Impacts of this include reducing groundwater recharge affecting the groundwater table and increasing rates and volumes of surface water leaving the Site, thus increasing the risk of flooding. However, a suitable Surface Water Drainage Strategy can over attenuate flows and reduce peak runoff rates from the Site to actually improve the existing situation in terms of reduced flood risk, improved water quality and increased habitat potential. LLFA guidance will be consulted to ensure the drainage features proposed are appropriate to manage flood risk.

8.15 In assessing the above impacts, the Flood Risk and Water Resources Chapter will consider the following matters:

- 2023 base year;
- Proposed construction (2023);
- Assessment year (2026) with Proposed Development;

- Appropriate measures to mitigate any unacceptable impacts; and
- Residual impacts.

Approach and Method

8.16 The ES will consider the effects of the Proposed Development in comparison to the existing Site baseline conditions. These will be preserved, where possible, and will be considered as possible receptors when assessing the environmental impact of the Proposed Development.

8.17 The scale and extent of the assessment will be defined in consideration of environmental assessment guidance provided in Table A4.3 of the Design Manual for Roads and Bridges (DMRB) (Highways Agency et al, 2009) [4] which can be applied to assessing flood risk impacts; and on the author's professional judgement. DMRB assessments are developed for the assessment of highways projects and many of the criteria are developed around the results of highways specific assessment tools in the DMRB. Consequently, the assessment method is not followed in its entirety; only transferrable elements are adapted for use in the assessment.

8.18 The proposed Drainage Strategy will be designed in accordance with LLFA requirements and The SuDS Manual (C753). Any drainage, including SuDS features, to be offered for adoption must be designed in accordance with Sewerage Sector Guidance, specifically the Design and Construction Guide, DCG.

8.19 All potential environmental impacts can be reduced by suitable mitigation and management and will be considered within the assessment and presented within the Flood Risk and Water Resources ES Chapter.

References

8.20 This Chapter has been based on the following sources of information:

- The completed onsite infiltration testing to BRE 365;
- OS Explorer Series Mapping;
- Site Topographical Survey;
- DEFRA MAGIC Mapping;
- Environment Agency Mapping;
- LLFA Guidance (ECC);
- UDC Strategic Flood Risk Assessment (May 2016);
- Web Based Soil Mapping;
- British Geological Survey Drift & Geology Maps; and
- Anglian Water Sewer Records.

[4] http://www.standardsforhighways.co.uk/ha/standards/dmrb/

9.0 Landscape and Visual

Introduction

9.1 This Chapter will be prepared by Chartered Landscape Architects at Define, who are qualified and experienced in preparing Landscape and Visual Impact Assessments (LVIA). It will assess the likely significant effects of the Proposed Development on the environment with respect to landscape and visual effects.

9.2 This assessment will follow the Guidelines for Landscape and Visual Impact Assessment 3rd Edition (2013) as published by the Landscape Institute and Institute for Environmental Management and Assessment (GVLIA3).

9.3 This Chapter will:

- Assess and describe the existing baseline conditions with regards to key landscape components and available views to identify receptors to change;
- Assess and evaluate the sensitivity of those receptors to changes based on their susceptibility and value;
- Describe the nature of the changes resulting from the Proposed Development and assess and evaluate the magnitude of change upon landscape and visual receptors with regard to scale, duration, permanence and value;
- Determine the significance of identified effects;
- Identify mitigation measures to reduce, offset or remedy identified adverse impacts. The design process is iterative and some mitigation measures are intrinsic to the design;
- Assess the cumulative effect of the scheme in combination with the committed developments that have the potential for cumulative landscape and visual effects with this development; and
- Assess the residual effects after mitigation has been accounted for.

Baseline Conditions

9.4 A study area of 3 kilometres from the centre of the Site has been established as the study area. Baseline viewpoints and ZTV (Zone of Theoretical Visibility) have been produced for this study area (see **Appendix 4**).

9.5 There are a number of published landscape character studies that inform the baseline assessment of the landscape, these include the following:

- National Character Area 86: South Suffolk & North Essex Clayland; and
- Local Landscape Studies: Uttlesford Landscape Character Assessment (Chris Blandford Associates September 2006).

Potential Impacts

9.6 The Proposed Development has the potential to have the following effects on the physical and perceptual aspects of the landscape:

- Landscape elements: introduction or removal of trees, vegetation and built features and other elements, which together form landscape patterns;
- Landscape patterns: degradation or erosion of groups and arrangements of landscape elements, which form patterns that are characteristic of landscape character types;
- Landscape character: the landscape character is a product of a combination of factors that contribute to the creation of a unique setting. Landscape character is a product of the combination of geological features, geomorphic processes, floral and wildlife associations, with social, economic and cultural forces; and
- Cumulative landscape effects: these are defined by the Landscape Institute as resulting from additional changes to landscape amenity caused by the Proposed Development in conjunction with other development (associated or separate from it), or actions that occurred in the past, present or are likely to occur in the foreseeable future.

9.7 The Proposed Development has the potential to have the following effects on views, and general visual amenity of people who have (or will have) views of the development. Visual effects may include the following:

- Visual obstruction: physical blocking of view;
- Visual intrusion: the visual intrusion of the Proposed Development into an existing view or loss of a particular landscape element or features already present in the view; and
- Cumulative visual effects: the cumulative or incremental visibility of similar types of development may combine to have cumulative visual effects. This may concern intervisibility where more than one development may be viewed simultaneously from a viewpoint, or occur sequentially where developments may be viewed from a number of differing locations, most commonly from a road, rail route or long-distance path.

Approach and Method

9.8 The approach and methodology follows the guidance set out in the Guidelines for Landscape and Visual Impact Assessment 3rd Edition 2013 (GLVIA3) as published by the Landscape Institute and Institute for Environmental Management and Assessment.

9.9 In respect of photography, the approach and methodology follows the guidance set out in Technical Guidance Note 06/19, published by the Landscape Institute in September 2019.

9.10 The extent and depth of the assessment should be appropriate and proportionate to the scale of the project that is being appraised and the nature of its likely effects.

9.11 To assist with clarity of assessment, the terms low, medium or high are used to assess susceptibility, value and sensitivity as well as to assess magnitude of effect; and negligible, slight, moderate, substantial or very substantial are used in relation to significance of effect. Nature of effect is judged to be beneficial, neutral or adverse.

9.12 Matrices and tables are not used to determine judgements in respect of sensitivity, magnitude of effect or significance, but are provided to assist in the communication of these matters.

9.13 Sensitivity is particular to the type of change, rather than inherent. The emphasis of the assessment, therefore, relies on explanation of the logic behind a judgement of sensitivity, magnitude of effect and significance, with matrices provided only to summarise and communicate the various assessment considerations.

9.14 Reference can be made to both ‘impact ’and ‘effect’. ‘Impact ’is used in reference to the action being taken (such as vegetation loss), whereas the ‘effect ’is defined as the change (beneficial or negative) that results from that action, or from the whole development.

9.15 The representativeness of the viewpoint location should be considered (for example, if a ‘worst case ’condition, such as through a gap in a hedgerow, is not representative of the typical visual experience this should be explained). Similarly, is a viewpoint in kinetic, or the subject of a series of changing views this should be explained in the assessment process, with a single representative viewpoint, supported by illustrative viewpoints as appropriate (as per GLVIA paragraph 6.19).

9.16 The likely seasonal effects should be addressed where this leads to a notable change in effect.

9.17 Mitigation will be assessed by defining primary mitigation (iterative design) as part of the effects at completion. Secondary mitigation (the establishment and maturity of the proposed landscape elements and weathering of the built form elements) over a 15-year post completion time horizon (as per GLVIA paragraph 4.31) will be described and assessed at the residual effects stage.

Consultation

9.18 ZTV and near, mid and distant range representative viewpoints sent to UDC Landscape Officer (Ben Smeeden) on 26 February 2021 and 11th March 2021. Further email dialogue received 11 March 2021.

References

- Guidelines for Landscape and Visual Impact Assessment 3rd Edition (2013) as published by the Landscape Institute and Institute for Environmental Management and Assessment (GVLIA3);
- Technical Guidance Note 06/19, published by the Landscape Institute in September 2019;
- National Character Area Profile 86: South Suffolk & North Essex Clayland;
- Uttlesford Landscape Character Assessment (Chris Blandford Associates September 2006);
- Interactive 2005 Local Plan map - http://www.planvu.co.uk/udc/; and
- National Policy Framework - https://www.gov.uk/government/publications/national-planning-policy-framework--2.

10.0 Noise and Vibration

Introduction

10.1 This Chapter will consider the potential impacts from noise and vibration, to determine the scope of the ES assessment, and to identify the criteria and methodology that will be adopted.

10.2 The following noise and vibration considerations are proposed to be assessed within the ES:

- Temporary noise and vibration effects during the construction phase of the Proposed Development on existing and proposed sensitive receptors; and
- Permanent effects from off-site road traffic noise once the Proposed Development is complete on existing sensitive receptors.

10.3 Through discussions with the Environmental Health Department of UDC, it has been agreed that there will not be significant adverse effects from noise or vibration on the Proposed Development itself from existing sources, and that the Site is considered to be suitable for residential development. The consideration of the potential effect of existing sources of noise and vibration on the Proposed Development have, therefore, been scoped-out of the ES.

10.4 Similarly, there are expected to be no long-term effects from road traffic vibration on the local road network, once the Proposed Development is complete. This is also scoped-out of the ES.

Baseline Conditions

10.5 The noise climate at the Site is influenced by road traffic noise primarily from Radwinter Road, which borders the northern boundary of the Site.

10.6 Information on the baseline noise climate is normally required for the assessment of construction noise; the baseline noise levels determine the appropriate assessment criteria. For this Site, it is likely that the most stringent criteria will apply, so no baseline noise survey is considered necessary.

10.7 The baseline road traffic flows will be considered as part of the assessment of off-site, development-generated traffic.

Potential Impacts

10.8 During construction, noise and vibration from construction activity may affect off-site sensitive receptors. The nature of construction is such that short-duration high noise levels are likely at times during the works, with possible moderate to major adverse effects occurring should heavy ground engineering works be undertaken in close proximity to sensitive receptors.

10.9 Vibration from construction works is less likely to be perceptible as it is attenuated in the ground more effectively than noise is in air. It is possible that minor adverse effects will occur where heavy ground engineering works are undertaken in close proximity to sensitive receptors.

10.10 There is potential for development-generated traffic to give rise to adverse noise effects at existing sensitive receptors away from the Site, particularly if the traffic from the Proposed Development combines with traffic from other consented schemes in the area.

10.11 Significant adverse effects from road traffic vibration are not considered likely and have, therefore, been scoped-out of the ES.

Approach and Method

10.12 The potential magnitudes of impacts will be determined for the following aspects of the Proposed Development:

- The impact of noise and vibration from construction works will be predicted and assessed in accordance with the guidance set out in British Standard 5228: 2009+A1: 2014 *Code of Practice for noise and vibration control on construction and open sites*; and
- Changes in road traffic noise levels along roads in the vicinity of the Site will be assessed for both the construction and long-term use of the Proposed Development. The traffic noise levels will be calculated in accordance with the *Calculation of Road Traffic Noise* (CRTN) and the impact of any changes assessed in broad accordance with Design Manual for Roads and Bridges (DMRB) LA 111 *Noise and vibration* (2020).

10.13 The impacts will be identified as either negligible, low, moderate or high, adverse or beneficial.

10.14 The sensitivity of affected receptors will be determined according to the scale set out in **Table 10.1.**

Table 10.1: Sensitivity of Receptors

RECEPTOR SENSITIVITY	TYPE OF RECEPTOR
High	Hospitals (e.g. operating theatres or high dependency units), residential accommodation, private gardens, hospital wards, care homes, research facilities
Medium	Schools, universities, national parks, during the day; and temporary holiday accommodation at all times including hotels
Low	Offices, shops, outdoor amenity areas, canal towpaths, long distance footpaths, doctors' surgeries, sports facilities and places of worship
Negligible	Warehouses, light industry, car parks, agricultural land

10.15 The impact magnitude will be related to the receptor sensitivity to determine the overall significance of the effect, in accordance with **Table 10.2.** An effect of moderate or major significance can be considered to be significant in EIA terms.

Table 10.2: Significance of Effect

MAGNITUDE OF IMPACT	SENSITIVITY OF RECEPTOR			
	HIGH	MEDIUM	LOW	NEGLIGIBLE
High	Major	Moderate	Minor	None
Moderate	Moderate	Minor	Minor	None
Low	Minor	Minor	None	None
Negligible	None	None	None	None

10.16 Where significant adverse effects are identified, mitigation measures will be recommended to minimise the adverse effects of the Proposed Development. Any residual effects that may exist after mitigation has been applied will be identified.

Geographical Scope

10.17 Direct effects from the construction of the Proposed Development on surrounding sensitive receptors will be assessed within an area up to approximately 500m from the Site boundary. However, in practice, the receptors closest to the Site will be the worst-affected, with noise and vibration levels reducing with increasing distance from the Site.

10.18 The assessment of off-site road traffic noise impacts will be determined by the traffic patterns away from the Site. It is likely that the assessment will consider roads within approximately 3km of the Site.

Temporal Scope

10.19 The assessment will consider both the short-term and medium-term effects that might result from the construction of the Site, and the medium to long-term effects associated with the use of the Site once completed.

Consultation

10.20 The Environmental Health department of UDC was consulted on 2nd February 2021 as part of the preparation of this Scoping Report. It was agreed that an assessment of the suitability of the Site for residential development in terms of noise and vibration, and the potential effects of off-site traffic vibration, could be scoped-out.

10.21 An assessment of potential noise and vibration effects from the construction of the Proposed Development and the assessment of off-site road traffic noise once the development is complete have been scoped into the ES.

References

- British Standard 5228: 2009+A1: 2014 Code of practice for noise and vibration control on construction and open sites, BSi (2014);
- Design Manual for Roads and Bridges (DMRB) LA 111 Noise and vibration (2020); and
- Calculation of Road Traffic Noise, Department of Transport etc al (1988).

11.0 Socio-Economics and Health

Introduction

11.1 A Socio-Economic Assessment and a Health Impact Assessment (HIA) will form part of the ES. The Assessment will consider the effects of the Proposed Development on the economy, population, quality of life and human health.

Baseline Conditions

11.2 The Site is located to the east of Saffron Walden, within the Uttlesford District of Essex. The Site is located within Ashdon Ward but is in close proximity to Saffron Walden Castle Ward and Saffron Walden Shire Ward. Saffron Walden is one of four market towns within Uttlesford. Based on the 2011 census data, Saffron Walden had a resident population of 15,210 people, and is one of the mostly densely populated areas of Uttlesford. Uttlesford has a resident population of 91,284, based on 2019 population estimates. Uttlesford has a generally low population of over 65s (based on population statistics in 2015) but this is expected to increase by 32% by 2025. The working age population on the other hand is forecast to decrease by 3% by 2025.

11.3 Uttlesford is generally affluent with few areas of deprivation. According to the Index of Multiple Deprivation 2019, none of the areas within Uttlesford fall within the 40% most deprived and 8 areas are within the 10% least deprived in the country. Ashdown Ward is within the 40% least deprived neighbourhoods in the country. Uttlesford has a low unemployment rate compared to the county and national average.

11.4 A high level review of the Public Health England website shows the population of Uttlesford compares favourably in some health indicators, 74.7% of people are physically active compared with a national average of 66.9% and a regional average of 69.7%. Similarly, the percentage of adults classified as obese or overweight is comparatively favourable with Uttlesford having 57.6% compared with the national average of 63.3% and a regional average of 66.6%.

11.5 There are six primary schools and one secondary school within approximately 5km of the Site (Department of Education, 2021). There are two GP surgeries and two dental practices within 5km of the Site. The closest large hospital with accident and emergency is at Addenbrookes, Cambridge, approximately 19km away.

11.6 A desk study will be undertaken to obtain more detailed socio-economic and health data from publicly available sources such as the Local Plan, UDC website, Census 2011 data, Office for National Statistics (ONS), Department for Education (DfE), Public Health England (PHE) and National Health Service (NHS). The key baseline data that will be collected will include:

- General demographics;
- Employment / economic activity / housing tenure;
- Number of schools / available places / demand for places;
- Early years education / amenity provision / demand;
- Health of local population / facilities;

- Public and recreational amenities – especially open space / access;
- For the purposes of the assessment a Local Impact Area (LIA) will be set at an approximately 5km radius around the Site to allow consideration of impacts on nearby communities. This will include the following wards:
  - Ashdon Ward;
  - Saffron Walden Castle Ward;
  - Saffron Walden Shire Ward;
  - Saffron Walden Audley Ward; and
  - Debden & Wimbish Ward.

11.7 A Wider Impact Area (WIA) covering Uttlesford District, Essex and the East of England, as appropriate, will also be included (these categories have been made with respect to the availability of information for these areas).

Potential Impacts

Socio-Economics

11.8 The construction of the Proposed Development would provide for employment opportunities for local construction contractors and labourers. Although not all workers are likely to be sourced from within a commutable distance, it is likely that only a small portion would be resident in the local community during the construction phase. Due to the short-term nature of the construction phase, this is unlikely to result in significant demand on local services during construction.

11.9 The Proposed Development would provide for up to 240 residential units once completed. This would have beneficial effects on the housing provision within the local area. An increase in population may also result in an increase in the working age population. However, a potential increase in the population would also result in additional demand and pressure on public services, in particular on education and healthcare.

Health and Quality of Life

11.10 The construction of the Proposed Development may result in increased noise, dust, plant and vehicle emissions. Air pollution is a major environmental risk to health and bigger dust particles can result in nuisance, resulting in reduced quality of life. Construction noise can also result in nuisance, also effecting the quality of life and wellbeing. Increased traffic due to construction vehicles can have an effect on pedestrian amenity and cause fear and intimidation, as well as lead to a reduction of safety and increased car accidents. These impacts would, however, be short-term and temporary due to the short-term nature of the construction phase.

11.11 Once the Site is operational and occupied, the main impacts are likely to be from increased traffic. Increased traffic can affect pedestrian amenity and safety, as well as lead to increased air pollution and noise, with consequent effects on health and quality of life. There would, however, be some positive health impacts resulting from the creation of more formalised open space throughout the Proposed Development and links to sustainable movement e.g. maintained and adequately lit footpaths encouraging movement and activity.

Approach and Method

Socio-Economics

11.12 The Assessment will consider the impact of the Proposed Development in terms of:

- Construction;
  - Employment.
- Operation;
  - Change to demographics;
  - Housing provision; and
  - Demand on public services including education, healthcare and open space.

11.13 There is no formalised technical guidance or criteria available in regard to the assessment of socio-economic effects. As such, the Assessment will be qualitative in nature and the criteria used to determine the significance of effects will be formulated with professional judgement and experience of similar developments.

11.14 The criteria in **Table 11.1** is proposed to assess the sensitivity and importance of the receptor, while the criteria in **Table 11.2** will be used to define the magnitude of impact. The significance of effect will be assessed based on the receptor sensitivity and the impact magnitude.

Table 11.1: Receptor Sensitivity / Importance

RECEPTOR SENSITIVITY / IMPORTANCE	VALUE	DESCRIPTION
International / national	Very high	Receptor of international importance and scale with very limited potential for substitution e.g. the international economy.
National	High	Receptor of national importance and scale with limited potential for substitution or reparation e.g. the national economy, national cycle routes, nationally recognised tourist attractions or designated sites, cities.
Regional / District	Medium	Receptor of regional importance and scale with limited potential for substitution or reparation e.g. regional and council level economy, regional attractions and associated visitors, towns and significant settlements.
District / Local	Low	Receptor of local importance and scale which is difficult to substitute, rare of unusual at a local level e.g. local economy within the LIA, local tourist attractions and businesses, active workers in the LIA.
Local	Very low	Receptor of local importance and scale which is either not vulnerable to change or can be readily substituted.

Table 11.2: Impact Magnitude

MAGNITUDE	DEFINITION
Major	Irreversible, substantial (>20%) and permanent impact.
Moderate	Considerable (>10%) and permanent impact.
Minor	Temporary and/or reversible impact, or modest (<10%) permanent impact.
Neutral	No discernible impact.

Health Impact Assessment

11.15 The potential health impacts will be considered through the completion of the London Healthy Urban Development Unit (HUDU) Rapid Health Impact Assessment tool (2019) matrix. The matrix consists of eleven key topic areas and is designed to rapidly assess the likely health impacts of development plans and proposals. The HIA will take into consideration potential impacts during both the construction and operational phases in areas such as air quality, noise and traffic whilst also sign posting the reader to the specific chapters within the wider document that look at these topics in more detail. The HIA will from a Technical Appendix to the ES.

Consultation

11.16 A virtual consultation took place with Dave Toombs from Uttlesford Council on 12th March 2021. The meeting covered the make up of the socio-economic and health baseline, relevant data sources and proposed methods of assessment. Dave Toombs agreed with the methods put forward relating to health impact assessment and asked for a brief written summary that can be shared with district level health officers as needed. This summary was provided by email on 18th March, 2021.

References

- DfE, Get information about schools. Retrieved from https://www.get-information-schools.service.gov.uk/ in February 2021;
- Ministry of Housing, Communities & Local Government, (2019). English indices of deprivation 2019: mapping resources. Retrieved from https://www.gov.uk/guidance/english-indices-of-deprivation-2019-mapping-resources in February 2021;
- NHS, NHS Services. Retrieved from https://www.nhs.uk/ in February 2021;
- ONS, nomis official labour market statistics. Retrieved from https://www.nomisweb.co.uk/ in February 2021; and
- Organisational Intelligence and ECC, (2016). Essex Local Authority Portraits A product of the Essex Joint Strategic Needs Assessment (JSNA): A profile of people living in Uttlesford.

12.0 Transport

Introduction

12.1 The Traffic and Transportation Chapter of the ES will set out the methodology applied to assess the potential likely significant effects of the Proposed Development, in terms of transportation and access. The scale and extent of the Assessment will be defined in accordance with Institute of Environmental Assessment (IEA) Guidelines (Guidelines for The Environmental Assessment of Road Traffic, IEA (now IEMA) 1993). Guidance provided by the IEMA will be consulted in order to identify significance criteria applicable to the assessment. Where there are no thresholds of significance, case interpretation and judgement will be applied based on knowledge of the Site or quantitative data where available.

12.2 The technical input to the Chapter will be based on a Transport Assessment (TA) of the impact of the Proposed Development. The TA will follow the guidelines on Travel Plans, Transport Assessments and Statements published by the Ministry of Housing, Communities & Local Government 6 March 2014. This guidance provides advice on when Transport Assessments and Transport Statements are required, and what they should contain.

12.3 The TA will assess the impacts of the Proposed Development and will provide outline mitigation measures where necessary. This will involve summarising the existing conditions, the extant permissions, and comparing them with the Proposed Development in terms of the Site plan, land-uses with numbers of units and the existing/proposed access arrangements.

12.4 Two meetings have been held with ECC with a view to agreeing the geographic extent of the assessment and the methodology to produce trip generation rates, modal splits and spatial distribution to inform the TA. The environmental assessment will draw from the findings of the TA.

Baseline Conditions

12.5 There will be a review of the accessibility of the Site by public transport and the quality of pedestrian and cyclist facilities in the area.

12.6 Traffic counts have not been undertaken due to the ongoing Coronavirus pandemic. Instead, base flows will be taken from the PBA Transport Addendum – Link Road Assessment (September 2018), prepared for Land East of Thaxted Road for Kier Living. At Appendix F of this document, there are AM and PM peak traffic flow diagrams showing 2023 Forecast Year Cumulative Link Road Scenario. These show the reassignment of background traffic to the Link Road together with committed development traffic from the Kier Living, Shire Hill Farm and Linden Homes sites.

12.7 The use of the PBA 2023 Forecast Year Cumulative Link Road Scenario traffic flows as an appropriate baseline for the Proposed Development, has been agreed with ECC.

12.8 The 2023 data provides peak hour turning flows as total vehicles and number of Heavy Goods Vehicles (HGV) at the following junctions:

- Radwinter Road / Link Road priority junction (Linden access);
- Thaxted Road / Link Road priority junction (Kier Living access);
- Thaxted Road / Peaslands Road mini roundabout;
- Debden Road / Mount Pleasant Road / Borough Lane traffic signals;
- Borough Lane / London Road mini roundabout;
- London Road / Newport Road / Audley End Road mini roundabout;
- Debden Road / High Street / Audley Road priority junction;
- High Street / George Street / Abbey Lane traffic signals;
- High Street / Church Street priority junction;
- High Street / Bridge Street / Castle Street / Myddylton Place priority junction; and
- Radwinter Road / East Street / Thaxted Road / Chaters Hill traffic signals.

12.9 To fully assess the impact of the Proposed Development, the network will be extended to include the following junctions:

- Radwinter Road / Elizabeth Way / Horn Brook traffic signals;
- Ashdon Road / Elizabeth Way priority junction;
- Ashdon Road / Chaters Hill priority junction;
- Ashdon Road / Common Hill / Castle Hill / Church Street mini roundabout; and
- Castle Hill / Castle Street / Little Walden Road / Pound Walk priority junction.

12.10 The base flows for these additional junctions have been taken from the Iceni Highways Impact Assessment (April 2018) prepared for Land at Shire Hill Farm for Dianthus Land Ltd. The 2018 observed peak hour flows are contained in Appendix A3. Flow Diagrams of their assessment.

12.11 The use of the Iceni 2018 observed flows as an appropriate baseline for the Proposed Development at the five junctions identified in the bulleted list above, has been agreed with ECC.

12.12 In addition, the PBA and Iceni transport reports collected data at various locations using automatic traffic counters (ATCs). ATCs involve the laying down of rubber tubes across a carriageway linked to a roadside recorder box. These tubes measure both the number of vehicle movements and speed of vehicles using a particular section of road. They also allow the number of HGVs to be recorded.

12.13 ATCs are normally in place for a period of at least one week. They, therefore, provide a continuous flow of information allowing hourly and daily variations to be reported. They are also used to provide flow data for Noise and Air Quality Assessments in the form of AADT and AAWT.

12.14 ATCs were installed on Radwinter Road, Thaxted Road and Rylstone Road and the use of this data has been agreed with ECC.

Potential Impacts

12.15 The EIA for the Proposed Development will address the following issues in relation to transport, both during construction and on occupation:

- Severance;
- Driver delay;
- Pedestrian delay and amenity;
- Accidents and safety;
- Hazardous loads; and
- Fear and intimidation.

12.16 In assessing the above impacts, the Traffic and Transport Chapter will consider the following matters:

- 2023 base year;
- Proposed construction (2023);
- Assessment year (2026) baseline conditions i.e., without the Proposed Development but with the consented link road;
- Assessment year (2026) with the Proposed Development with consented Link Road;
- Appropriate measures to mitigate any unacceptable impacts; and
- Residual impacts.

Approach and Method

12.17 A comprehensive Transport Assessment (TA) will be undertaken in line with local and national planning policy. This study, which will be a stand-alone document, will be submitted in support of the planning application. The ES will provide a summary of the key issues, the conclusions of the TA and the likely significance of identified impacts. The TA work to be undertaken will comprise:

- Establishment of baseline movement flows for road traffic based on available data from recent surveys undertaken for Land East of Thaxted Road and Shire Hill Farm;
- An outline of the Site context including consideration of accessibility by all main transport modes;
- A review of the planning policy context ranging from general principles through to specific proposals at the local scale;
- Establishment of construction traffic flows (to be reported within the Demolition and Construction Chapter of the ES);
- An assessment of the travel demands expected to arise from the development including the split of transport modes and likely distribution of trips across the catchment area;
- An assessment of the impacts arising to different transport modes;
- Travel Plan;
- A description of the parking and servicing proposals; and

- A summary of the residual and cumulative impacts and consideration of mitigation measures, where appropriate, to reduce adverse effects of changes in trip generation and distribution.

Cumulative Impact

12.18 It has been agreed with ECC that the base flows for the assessment of impacts of the Proposed Development are the AM and PM peak traffic flow diagrams showing 2023 Forecast Year Cumulative Link Road Scenario prepared by PBA for Land East of Thaxted Road. These show the reassignment of background traffic to the Link Road together with committed development traffic from the Kier Living, Shire Hill Farm and Linden Homes sites. Traffic from these three sites will, therefore, be included as part of the baseline.

12.19 The TA will also include the impact from Land at Ashdon Road (UTT/13/2423/OP) and Land East of Little Walden Road (UTT/16/2210/OP).

12.20 Although not yet committed, it has been agreed with ECC that the TA will include the former Pulse Packaging site as a committed development. This is being promoted by Endurance Estates for a food store and a care home under planning reference: UTT/20/2007/FUL.

12.21 No other schemes have been identified at this time as having a significant impact on the highway network surrounding the Proposed Development.

Consultation

12.22 A meeting was held with the Highway Authority, ECC on 4 February 2021, with a view to agreeing the geographic extent of the assessment and the methodology for the production of trip generation rates, modal splits, and spatial distribution to inform the TA. The environmental assessment will draw from the findings of the TA.

12.23 A second meeting was held with the Highway Authority on 17 March 2021, during which the trip generation rates, the geographic extent of the junction assessments, and the approach to be taken to junction modelling were all agreed.

References

- Guidelines for the Environmental Assessment of Road Traffic – Institute of Environmental Assessment;
- Land East of Thaxted Road, Saffron Walden – Transport Addendum – Link Road Assessment – PBA, September 2018; and
- Land North of Shire Hill Farm, Saffron Walden – Highways Impact Assessment – Iceni, April 2018.

13.0 Proposed Structure of the ES

13.1 Outlined by Schedule 4 of the Regulations, the ES will comprise three parts: The Main Report, its Technical Appendices and the Non-Technical Summary (NTS). The ES forms part of a sequence of reports that will support the planning application for the Proposed Development.

13.2 In recognition of the consultant team approach proposed for preparing the ES, the document will be structured on a topic basis. This is an alternative to the process approach, whereby baseline conditions are described first, then the construction and operational effects, then the mitigating measures and finally any residual effects. This approach will, however, be adopted in the presentation of each of the individual topic chapters.

13.3 After the initial context setting sections, each topic chapter will approach the assessment by following a consistent structure, which is generally as follows:

Introduction

13.4 The introduction provides a brief summary of the topic to be addressed.

Assessment Methodology

13.5 This section will outline the methods used to undertake the assessment of the environmental effects for the particular topic area. Reference will be made to the data sources used and the relevant standards, guidelines and best practice. Sensitive receptors and significance criteria are also identified.

Baseline Conditions

13.6 The assessment of baseline conditions is fundamental to the EIA process; environmental effects are measured by the degree of deviation from the baseline. In addition, this section will cover how the baseline environment would otherwise evolve without the Proposed Development. The detailed studies and surveys that inform the baseline will be included in the Technical Appendices.

Predicted Impacts (and their Evaluation)

13.7 This will address the nature, extent and magnitude of any potential effects, as a consequence of the Proposed Development, both during the construction phases and once the development is complete, operational and occupied.

13.8 Where possible, estimation of impacts will be in measurable quantities with ranges and/or confidence limits, as appropriate.

13.9 Where potential environmental effects are identified, this section will outline:

- The source and/or cause of the effect(s);
- The receptor(s) of the effect;
- The way in which the effect is transmitted from the source to receptor; and
- Potential consequences.

13.10 The significance of predicted impacts will be assessed and categorised as follows:

- Major, minor or no significance;
- Adverse, beneficial;
- Short, medium or long term;
- Permanent or temporary;
- Reversible or irreversible;
- Direct or indirect; and
- Unavoidable or uncertain.

Mitigation and Monitoring

13.11 This section will detail the scope for mitigation of any adverse effects and the effectiveness of the mitigating measures, along with any monitoring of the suggested mitigation measures, if necessary.

Residual Impacts

13.12 This section will evaluate the significance of any unavoidable or residual impacts that remain after the mitigation measures. Monitoring of residual impacts, if necessary, is also addressed.

Summary and Conclusions

13.13 A table to summarise the impacts will be provided in this section.

13.14 The EIA will be compiled into an ES, which will be produced in accordance with the EIA Regulations.

13.15 The ES will comprise the following chapters:

- **Volume 1: Main Report**

Chapter 1	Introduction
Chapter 2	Methodology
Chapter 3	Site Context
Chapter 4	Description of the Proposed Development (including assessment of alternatives)
Chapter 5	Planning Policy Context
Chapter 6	Agriculture

Chapter 7	Air Quality
Chapter 8	Flood Risk and Drainage
Chapter 9	Landscape and Visual
Chapter 10	Noise and Vibration
Chapter 11	Socio-Economics and Health
Chapter 12	Transport
Chapter 13	Conclusions

- **Volume 2: Technical Appendices**
- **Volume 3: ES Non-Technical Summary**

APPENDIX 1
SITE LOCATION PLAN

DEFINE

95m

90m

85m

100m

LEGEND

Site Boundary

N

SCALE 1:2,000

10 30

0m 20 50 100

Rev	Description	Date
		Rev
DE_436-002		Dwg No
Rosconn Ltd		Client
Saffron Walden		Project
Red Line Plan		Title
1:2,000@A2		Scale

DRAFT

APPENDIX 2
AGRICULTURAL LAND QUALITY REPORT

AGRICULTURAL QUALITY
OF LAND OFF RADWINTER ROAD
SAFFRON WALDEN

Report 1777/1

24th February 2021

Land Research ASSOCIATES
www.lra.co.uk

AGRICULTURAL QUALITY

OF LAND OFF RADWINTER ROAD, SAFFRON WALDEN

M W Palmer PhD, CSci, MISoilSci

Report 1777/1
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24th February, 2021

SUMMARY

An agricultural land quality survey has been undertaken of 17.1 ha of land off Radwinter Road, Saffron Walden.

The land has a mixture of moderately shallow soils over chalk and deeper soils with impeded drainage over chalky glacial till. Land quality is mainly limited to subgrade 3a by droughtiness and/or wetness. An area in the centre of the site has deeper freely-draining soils and is of grade 2 quality.

1.0 Introduction

1.1 This report provides information on the soils and agricultural quality of 17.1 ha of land off Radwinter Road, Saffron Walden.

SITE ENVIRONMENT

1.2 The survey area covers two fields, bordered to the north by Radwinter Road, to the west by residential development and to the south and east by adjoining agricultural land. The site is gently sloping, at an average elevation of approximately 90 m AOD.

1.3 At the time of survey the land of the larger field was under arable cropping, and the small field in the north under grass.

PUBLISHED INFORMATION

1.4 1:50,000 scale BGS information records the solid geology of the land as Lewes Nodular Chalk Formation. Chalky glacial till of the Lowestoft Formation is recorded to overlie the chalk in the east of the site.

1.5 The National Soil Map (published at 1:250,000 scale) records the land as Swaffham Prior Association, typically moderately shallow loamy calcareous soils over chalk or chalk rubble. In the south-east Hanslope Association is recorded: deep clayey calcareous soils with impeded subsoil drainage formed in chalky till[1].

[1]Hodge, C.A.H. *et al.*, (1984). *Soils and their use in Eastern England.* Soil Survey of England and Wales Bulletin No. 13, Harpenden.

2.0 Soils

2.1 A detailed soils and agricultural quality survey was carried out in February 2021 in strict accordance with MAFF (1988) guidelines[2]. It was based on observations at intersects of a 100 m grid, giving a density of one observation per hectare. During the survey, soils were examined by a combination of pits and augerings to a maximum depth of 1.1 m. A log of the sampling points and a map (Map 1) showing their locations are in an appendix to this report.

2.2 The soils were found to vary in depth and drainage, as described below.

MODERATELY SHALLOW LOAMY SOILS

2.3 These soils are found over lower ground in the south and west of the site. They comprise calcareous clay loam topsoil and subsoil, over chalk or chalk rubble at variable depth (typically between 50 and 80 cm).

2.4 An example profile is described below from a pit at observation 6 (Map 1).

0-26 cm	Dark greyish brown (2.5Y 4/2) Heavy clay loam; slightly stony (10% small rounded hard and soft chalk and 2-3% medium angular flints); moderately developed medium sub-angular blocky structure; friable; very calcareous; common fine fibrous roots; smooth clear boundary to:
26-62 cm	Olive yellow (2.5Y 6/6) medium clay loam with reddish brown (5YR 4/4) sandy inclusions; slightly stony; weakly developed fine sub-angular blocky structure; very friable; few fine fibrous roots; low packing density; very calcareous; uneven clear boundary to:
62+ cm	Hard chalk

2.5 These soils are freely-draining (Soil Wetness Class I).

DEEPER CLAY SOILS

2.6 These soils are found over higher ground in the south-east of the site. They comprise calcareous clay topsoil and subsoil, mainly becoming dense, chalky and slowly permeable at depth.

2.7 An example profile is described below from a pit at observation 14 (Map 1).

0-27 cm	Dark greyish brown (2.5Y 4/2) clay; slightly stony (5% small rounded hard chalk and 5% small and medium angular flints); weakly developed coarse and very coarse sub-angular blocky structure; very firm; few fine fibrous roots; calcareous; common fine fibrous roots; smooth clear boundary to:
27-46 cm	Light yellowish brown (2.5Y 6/3) clay with 10% distinct fine yellowish brown (10YR 5/8) and 10-15% fine and medium grey (10YR 5/1) mottles; slightly

[2]MAFF, (1988).*Agricultural Land Classification for England and Wales: Guidelines and Criteria for Grading the Quality of Agricultural Land*.

stony; weakly developed very coarse angular blocky structure; very firm; 1-2% fine fibrous roots; no macro-pores; high packing density calcareous; smooth diffuse boundary to:

46-110 cm Dark grey (5Y 4/1) clay with 40% diffuse yellowish brown (10YR 5/8) mottles; moderately stony (mainly small soft weathering chalk); weakly developed very coarse prismatic structure to structureless (massive); moderately strong; 1-2% no roots or macro-pores; high packing density calcareous.

2.8 These soils are imperfectly to moderately freely-draining (Soil Wetness Class III or II).

3.0 Agricultural land quality

3.1 To assist in assessing land quality, the Ministry of Agriculture, Fisheries and Food (MAFF) developed a method for classifying agricultural land by grade according to the extent to which physical or chemical characteristics impose long-term limitations on agricultural use for food production. The MAFF ALC system classifies land into five grades numbered 1 to 5, with grade 3 divided into two subgrades (3a and 3b). The system was devised and introduced in the 1960s and revised in 1988.

3.2 The agricultural climate is an important factor in assessing the agricultural quality of land and has been calculated using the Climatological Data for Agricultural Land Classification[3]. The relevant site data for an average elevation of 90 m is given below.

• Average annual rainfall:	596 mm
• January-June accumulated temperature >0°C	1373 day°
• Field capacity period (when the soils are fully replete with water)	115 days early Dec-Late Mar
• Summer moisture deficits for:	wheat: 112 mm potatoes: 105 mm

3.3 The survey described in the previous section was used in conjunction with the agro-climatic data above to classify the site using the revised guidelines for ALC issued in 1988 by MAFF[4]. There are no climatic limitations at this locality.

SURVEY RESULTS

3.4 The agricultural quality of the land is primarily determined by soil wetness. Land of grades 2 and 3 has been identified.

Grade 2

3.5 This grade includes land with deeper freely-draining soils (Soil Wetness Class I or II), found in valley depressions in the centre of the site (see Map 2). They are slightly limited by droughtiness (caused by slightly impeded rooting depth) and/or wetness causing occasional waterlogging at depth.

[3]Meteorological Office, (1989).*Climatological Data for Agricultural Land Classification*.
[4]MAFF, (1988).*Agricultural Land Classification for England and Wales: Guidelines and Criteria for Grading the Quality of Agricultural Land*.

Subgrade 3a

3.6 This subgrade includes land with deeper clay soils in the south-east: the combination of high topsoil clay content and significant drainage restrictions (Soil Wetness Class III) means land access is restricted in winter and early spring, although late spring (as well as autumn) sowings are usually possible.

3.7 Also included are shallower soils over chalk: the restricted soil moisture reserve means average yields of cereal crop are likely to be reduced by summer droughtiness.

Other land (non-agricultural)

3.8 This land comprises tracks and hard standings and an agricultural building.

Grade areas

3.9 The land grades are shown on Map 2 and the areas occupied shown below.

Table 1: Areas occupied by the different land grades

Grade/subgrade	*Area (ha)*	*% of the land*
Grade 2	3.8	22
Subgrade 3a	13.1	76
Other land	0.3	2
Total	17.1	100

APPENDIX

DETAILS OF OBSERVATIONS

MAPS

Land off Radwinter Road: Soils and ALC survey – Details of observations at each sampling point

Obs	Topsoil			Upper subsoil			Lower subsoil			Slope	Wetness	Agricultural quality	
No	Depth (cm)	Texture	Stones >20 mm (%)	Depth (cm)	Texture	Mottling	Depth (cm)	Texture	Mottling	(°)	Class	Grade	Main limitation
1	0-32	HCL/ash(dist)	<5	32-50	Cchky	o	50+	Stopped		3	I	-	-
2	0-32	HCLca	5-10	32+	Chalk					4	I	3b	D
3	0-29	HCLca	<5	29-63	C	x	63-100+	Cchky	xx	4	I/II	2	D
4	0-22	C/ HCLca	5-10	22-49	chalk rubble	-	49+	Chalk		4	I	3a	D
5	0-31	Cca	5-10	31-45	Cca	xx	45-60 60+	C(brashy) Chalk	xx	1	I/II	3a	D
6	0-21	HCLca	5-10	21-42	HCL(brashy)	o	42-60 60+	C(brashy) Chalk	o	4	I	3a	D
7	0-25	HCL/Cca	5-10	25-55	Cchky	xx	55-90+	Cchky	xxx	4	II	2	W/D
8	0-26	Cca	<5	26-100+	C	o				3	I	2	D
9	0-26	Cca	5-10	26-54	Cchky	xx	54-80+	Cchky	xxx	4	II	2	W/D
10	0-32	Cca	<5	32-42	Cchky	xxx	42-100+	Cchky	xxx	3	III	3a	W
11	0-28	HCLca	<5	28-47	Cchky	xx	47-60 60+	HCL(brashy) Chalk	x	4	I	3a	D
12	0-25	Cca	<5	25-46	C	xxx	46-90+	HCL(brashy)	xx	3	III	3a	W/D
13	0-30	Cca	<5	30-46	Cchky	xx	46-100+	HCL(brashy)	xx	4	I/II	2	D
14	0-30	Cca	<5	30-90+	Cchky	xxx				3	III	3a	W/D
15	0-26	HCLca	5-10	26-50	HCLchky	xxx	50-90+	HCLchky	xxx	5	II/III	2/3a	W
17	0-31	Cca	<5	31-42	C	xxx	42-90+	Cchky	xxx	2	III	3a	W

Survey log key

Gley indicators[1]

o	unmottled
x	1-2% ochreous mottles and brownish matrix (or a few to common root mottles (topsoils))[3]
xx	>2% ochreous mottles and brownish matrix and/or dull structure faces (slightly gleyed horizon)
xxx	>2% ochreous mottles and greyish or pale matrix (gleyed horizon) or reddish matrix and >2% greyish, brownish or ochreous mottles and pale ped faces mottles or f-m concentrations (gleyed horizon)
xxxx	dominantly blueish matrix often with some ochreous mottles (gleyed horizon)

Slowly permeable layers[4]

a depth underlined (e.g. 50) indicates the top of a slowly permeable layer

A wavy underline (e.g. 50 indicates the top of a layer borderline to slowly permeable

Texture[2]

C - clay
ZC - silty clay
SC - sandy clay
CL - clay loam (H-heavy, M-medium)
ZCL - silty clay loam (H-heavy, M-medium)
SZL - sandy silt loam (F-fine, M-medium,C-coarse)
LS - loamy sand (F-fine, M-medium, C-coarse)
SL - sandy loam (F-fine, M-medium, C-coarse)
S - sand (F-fine, M-medium, C-coarse)
SCL - sandy clay loam
P - peat (H-humified, SF-semi-fibrous, F-fibrous)
LP - loamy peat; PL - peaty loam

Wetness Class[5]

I (freelly drained) to VI (very poorly drained)

Limitations:

W - wetness/workability
D - droughtiness
De - depth
F - flooding
St – stoniness
Sl – slope
T – topography/microrelief

Suffixes & prefixes:

r-reddish, gn – greenish
o - organic
(m, v, x)st – (moderately, very, extremely) stony, chky-chalky
(vsl, sl, m, v, x)(very slightly, slightly, moderately very, extremely) calcareous

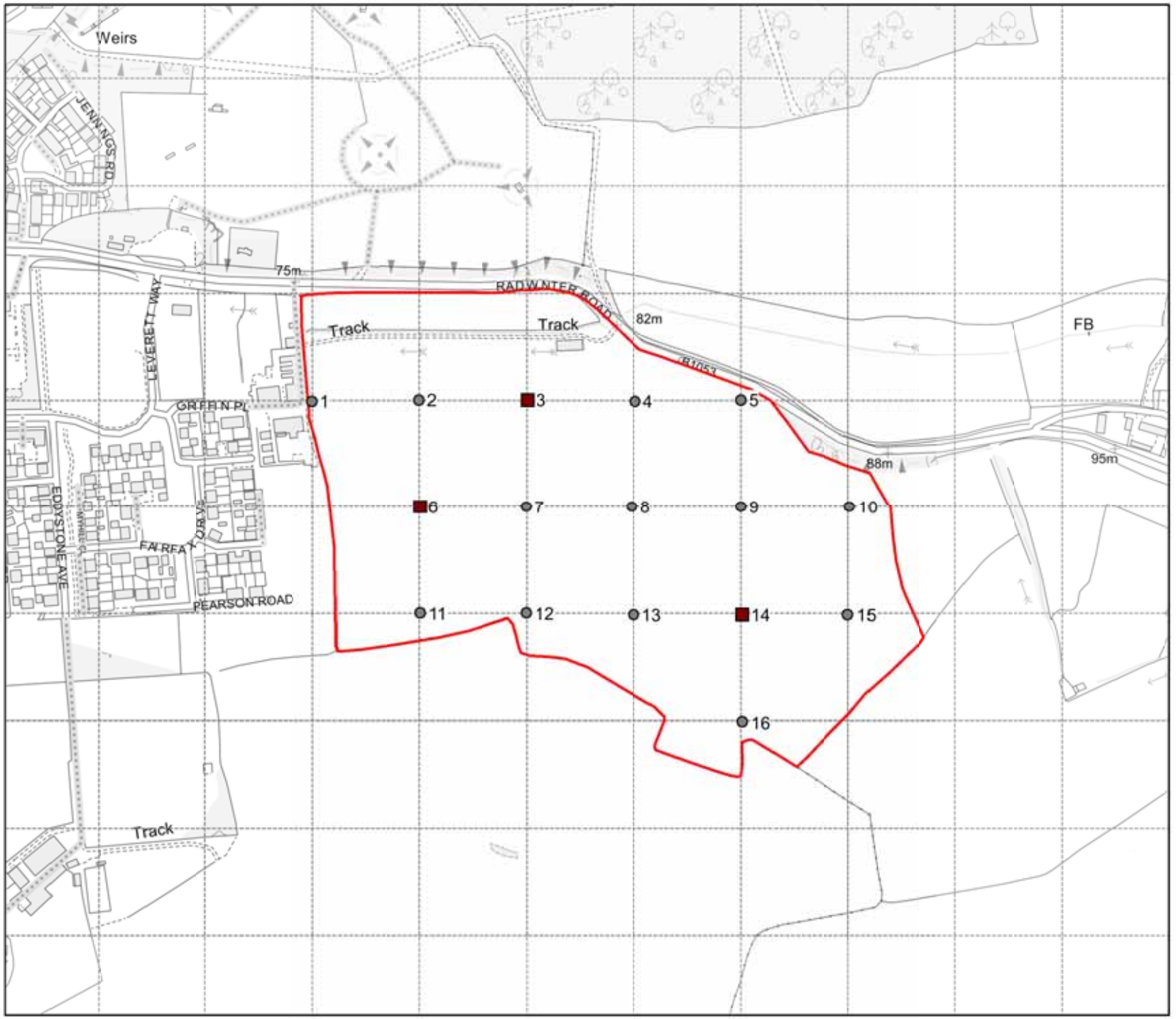
Other abbreviations

fmn - ferri-manganiferous concentrations
dist - disturbed soil layer;
R – bedrock (CH – chalk, SST – sandstone LST – limestone, MST – Mudstone)

[1]Gley indicators in accordance with Hodgson, J.M., 1997. Soil Survey Field Handbook (third edition). Soil survey technical monograph No. 5

[2]Texture in accordance with particle size classes in Hodgson (1997)

[3] Occasionally recorded in the texture box



KEY

- Auger observations
- Pits
- Site boundary

Client

ROSCONN GROUP

Site:

Radwinter Road
Saffron Walden

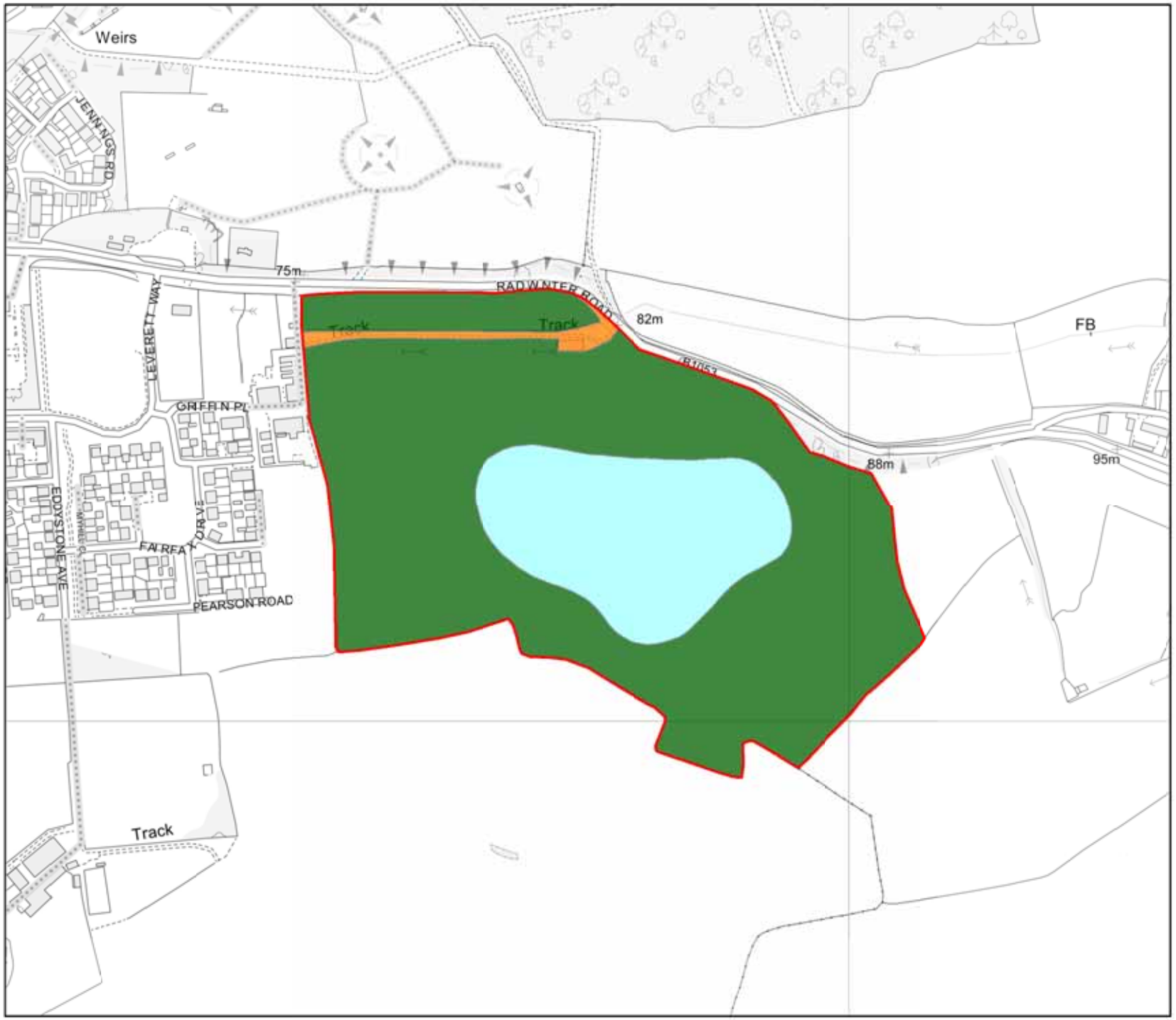
Map title:

MAP 1
Observations

Land Research Associates
Lockington Hall
Lockington
Derby
DE74 2RH
www.lra.co.uk

Date: 24/02/2021

Scale: 1:5,000



KEY

- Grade 2
- Subgrade 3a
- Other land
- Site boundary

Client

ROSCONN GROUP

Site:

Radwinter Road
Saffron Walden

Map title:

MAP 2
Agricultural Land
Classification

Land Research Associates
Lockington Hall
Lockington
Derby
DE74 2RH
www.lra.co.uk

Date: 24/02/2021

Scale: 1:5,000

APPENDIX 3
ARCHAEOLOGY GEOPHYSICAL SURVEY

RRSW21

Land south of Radwinter Road, Saffron Walden, Essex

GEOPHYSICAL SURVEY REPORT

PLANNING REF. pre-application

Headland Archaeology Yorkshire & North
Units 23–25 & 15 | Acorn Business Centre | Balme Road | Cleckheaton BD19 4EZ

for Rosconn Group

Draft v.1.0
08/02/2021

HEADLAND ARCHAEOLOGY

PROJECT INFORMATION:

PROJECT NAME	Land south of Radwinter Road, Saffron Walden, Essex
TYPE OF WORK	Geophysical Survey
PLANNING REF.	Pre-application
PARISH NUMBER	n/a
CONSULTANT/AGENT	BSA Heritage Ltd
CLIENT	Rosconn Group
PROJECT CODE	RRSW21
HAS. NO (HEREFORD ONLY)	n/a
NGR	TL 5620 3875
PARISH	Saffron Walden
LOCAL AUTHORITY	Essex County Council
FIELDWORK DATES	25/01/2021 – 27/01/2021
OASIS REF.	Headland5-?????
ARCHIVE REPOSITORY	Headland Archaeology Ltd

PROJECT TEAM:

PROJECT MANAGER	Alistair Webb
AUTHOR	Alistair Webb
FIELDWORK	Ross Bishop, Michael Puntorro
GRAPHICS	Sam Harrison, Ross Bishop

PROJECT SUMMARY

Headland Archaeology (UK) Ltd undertook a geophysical (magnetometer) survey on approximately 17 hectares of agricultural land under permanent pasture south of Radwinter Road, Saffron Walden, Essex to provide supporting information for a planning application for a proposed residential development and will inform future archaeological strategy at the site, if required. The survey was undertaken to assess the impact of the proposed development on the historic environment.

The survey has successfully evaluated the proposed development area (PDA) and has identified a single feature of possible archaeological origin; a large possible rectangular enclosure of unknown date recorded immediately south of Radwinter Road. No other anomalies of archaeological potential are present within the PDA. The remainder of the identified anomalies are caused by modern and recent agricultural activity and natural events. Overall, the PDA is assessed as of low archaeological potential, reflecting the conclusions of the heritage assessment, except in the vicinity of the enclosure where it is assessed as moderate.

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LIST OF ILLUSTRATIONS

LAND SOUTH OF RADWINTER ROAD, SAFFRON WALDEN, ESSEX

GEOPHYSICAL SURVEY REPORT

1. INTRODUCTION

Headland Archaeology (UK) Ltd was commissioned by BSA Heritage Ltd, on behalf of Rosconn Group (The Client) to undertake a geophysical (magnetometer) survey south of Radwinter Road, Saffron Walden, in advance of the submission of a planning application for a proposed residential development. The survey extended across two fields (F1 and F2) covering approximately 17 hectares (Illus 1).

The results of the survey will be submitted together with an Archaeology and Heritage Statement (BSA Heritage 2020) in support of a future planning application and will inform future archaeological strategy at the site, if required. The survey was undertaken to assess the impact of the proposed development on the historic environment and in accordance with an Archaeological Written Scheme of Investigation (WSI) (Headland 2021), approved by Essex County Council. The survey also complies with guidance within the National Planning Policy Framework (MHCLG 2019) and in line with current best practice (Chartered Institute for Archaeologists 2014, Europae Archaeologia Consilium 2016).

The surveys were carried out between January 25th and January 27th 2021.

1.1. SITE LOCATION, TOPOGRAPHY AND LAND-USE

The Proposed Development Area (PDA – Illus 1) is located east of Saffron Walden's historic core, centred at NGR TL 5620 3875, and covers approximately 17 hectares. The PDA comprises a narrow pasture field in the north-west (Illus 4 and Illus 5) and a much larger arable field extending across the rest of the PDA (Illus 2, Illus 3 and Illus 5). The PDA is defined by Radwinter Road (B1053) to the north and open agricultural land to the east and south. To the west lies recently constructed new housing and buildings at Turnip Hall Farm.

Topographically the PDA is north facing and rises from the north-west (80 metres Above Ordnance Datum - AOD) to the south-east (105 metres AOD- Illus 6) from where the land continues to rise to the east, towards the settlement at Sewards End and to a ridge of higher ground to the south-west.

1.2. GEOLOGY AND SOILS

The underlying bedrock geology comprises Lewes Nodular Chalk and Seaford Chalk Formation (undifferentiated). Superficial deposits of Lowestoft Formation Till (Diamicton) are recorded for the east of the site only (NERC 2021).

The soils are classified in the Soilscape 5 Association, characterised as freely draining lime rich loams (Cranfield 2021).

2. ARCHAEOLOGICAL BACKGROUND

An Archaeology and Heritage Statement (BSA Heritage 2020) has identified that there are no known recorded assets within the PDA and also that very little of archaeological significance was present in an extensive trial trenching evaluation carried out in advance of a housing development immediately to the west of the PDA. The Statement also noted that a north-facing slope (which the PDA is situated on) is unlikely to have been an attractive location for

settlement in the Iron Age or Roman periods and that there are examples of settlements in more suitable locations (of both periods) to the north and south of the PDA. On this basis it was concluded that the PDA has low archaeological potential.

3. AIMS, METHODOLOGY AND PRESENTATION

The general aim of the geophysical survey was to provide enough information to establish the presence/absence, character and extent of any archaeological remains within the PDA. This will therefore enable an assessment to be made of the impact of the proposed development on any sub-surface archaeological remains, if present.

The specific archaeological objectives of the geophysical survey were:

to gather enough information to inform the extent, condition, character and date (as far as circumstances permit) of any archaeological features and deposits within the PDA;

to obtain information that will contribute to an evaluation of the significance of the scheme upon cultural heritage assets; and

to prepare a report summarising the results of the survey.

3.1. MAGNETOMETER SURVEY

Magnetic survey methods rely on the ability of a variety of instruments to measure very small magnetic fields associated with buried archaeological remains. A feature such as an infilled ditch, pit or kiln can act like a small magnet, or series of magnets, that produce distortions (anomalies) in the earth's magnetic field. In mapping these slight variations, detailed plans of sites can be obtained as buried features often produce reasonably characteristic anomaly shapes and strengths (Gaffney & Gater 2003). Further information on soil magnetism and the interpretation of magnetic anomalies is provided in Appendix 1.

The survey was undertaken using four Bartington Grad601 sensors mounted at 1m intervals (1m traverse interval) onto a rigid carrying frame. The system was programmed to take readings at a frequency of 10Hz (allowing for a 10-15cm sample interval) on roaming traverses (swaths) 4m apart. These readings were stored on an external weatherproof laptop and later downloaded for processing and interpretation. The system was linked to a Trimble R8s Real Time Kinetic (RTK) differential Global Positioning System (dGPS) outputting in NMEA mode to ensure a high positional accuracy for each data point.

MLGrad601 and MultiGrad601 (Geomar Software Inc.) software was used to collect and export the data. Terrasurveyor V3.0.36.0 (DWConsulting) software was used to process and present the data.

3.2. REPORTING

A general site location plan is shown in Illus 1 at a scale of 1:7,500. Illus 2 to Illus 4 inclusive are site condition photographs. Illus 5 shows the GPS swaths at 1:2,500. Illus 6 to Illus 8 inclusive present the fully processed (greyscale) data, minimally processed data (XY trace plot) data and an interpretative plot respectively, all also at a scale of 1:2,500.

Technical information on the equipment used, data processing and magnetic survey methodology is given in Appendix 1. Appendix 2 details the survey location information and Appendix 3 describes the composition and location of the site archive. Data processing details are presented in Appendix 4. A copy of the OASIS entry (Online Access to the Index of Archaeological Investigations) is reproduced in Appendix 5.

The survey methodology, report and any recommendations comply with the Written Scheme of Investigation (Headland 2020), guidelines outlined by Europae Archaeologia Consilium (EAC 2016) and by the Chartered Institute for Archaeologists (CIfA 2014). All illustrations from Ordnance Survey (OS) mapping are reproduced with the permission of the controller of Her Majesty's Stationery Office (© Crown copyright).

The illustrations in this report have been produced following analysis of the data in 'raw' (minimally processed) and processed formats and over a range of different display levels. All illustrations are presented to display and interpret the data to best effect. The interpretations are based on the experience and knowledge of management and reporting staff.

4. RESULTS AND DISCUSSION

The whole of the PDA was suitable for survey although the ground conditions were generally poor being waterlogged throughout (Illus 2 to Illus 4), particularly in the low-lying northern parts of the PDA. Despite this data quality was maintained and only minimal post-processing was required.

Overall, the magnetic background is relatively homogenous and numerous anomalies, both non-archaeological and possibly archaeological (see below), have been identified against this 'flat' background. The anomalies are classified into categories depending on their origin and are discussed below. It is considered likely that the survey is giving an accurate indication of the sub-surface archaeological resource within the PDA.

4.1. FERROUS AND MODERN ANOMALIES

Ferrous anomalies, characterised as individual 'spikes', are typically caused by ferrous (magnetic) material, either on the ground surface or in the plough-soil. Little importance is normally given to such anomalies, unless there is any supporting evidence for an archaeological interpretation, as modern ferrous debris is common on most sites, often being introduced into the topsoil during manuring or tipping/infilling. There is no obvious clustering to the ferrous anomalies within any of the fields or across the PDA more generally to indicate an archaeological origin. Far more probable is that the 'spike' responses are likely caused by the random distribution of ferrous debris in the upper soil horizons.

Two, parallel high magnitude linear anomalies (Illus 8 – SP1 and SP2) aligned north-west/south-east crossing through the centre of the PDA are due to buried pipes. A third, similarly strong, response (SP3) is recorded parallel and adjacent to the western boundary of the PDA and is also caused by a buried pipe.

A sub-square area of enhanced readings is identified to the west of the site adjacent to SP3. This anomaly (FQ?) is interpreted as a possible former small area of mineral extraction although none is recorded on the first edition (1896) Ordnance Survey (OS) mapping.

4.2. AGRICULTURAL ANOMALIES

A single former boundary (Illus 8 – FB1), recorded on the first edition OS map, is identified as a line of 'spike' responses aligned north-west/south-east close to the eastern boundary of the PDA. A second (possible) former boundary (FB2) is also identified although this possible feature, and a third (FB3), to the south, are not recorded on the historic mapping. Alternatively, these latter two anomalies may be interpreted as drains.

Numerous other weakly magnetic linear trends in the data are also interpreted as of agricultural origin being caused by ploughing, or possibly drains.

4.3. GEOLOGICAL ANOMALIES

A short, broad and sinuous anomaly (G1) adjacent to the northern boundary is located next to a stream or drain and is therefore interpreted as locating a former stream channel or perhaps a band of alluvium deposited following flooding.

A negative linear anomaly (G2) in the south-west of the PDA is likely also of natural origin, probably marking the accumulation of soil at a break in slope.

4.4. ANOMALIES OF POSSIBLE ARCHAEOLOGICAL ORIGIN

To the east of the PDA and immediately south of Radwinter Road linear ditch type anomalies define a possible enclosure (Illus 8 – E1) of broadly rectangular morphology. Parallel ditches define the eastern side of the 'enclosure' which is aligned north-north-east/south-south-west along its long axis, the same orientation as ploughing trends further to the west. Low magnitude linear ditch type anomalies indicate sub-division at the southern end of the 'enclosure'. Several discrete anomalies have also been identified within and immediately adjacent to the enclosure which could be caused by pits. A low magnitude linear anomaly, (Illus 8 – D1) extends west for approximately 100m from the 'enclosure' before petering out. The 'enclosure' is previously unknown and is not recorded on the historic mapping.

5. CONCLUSION

The survey has successfully evaluated the PDA and has identified a single feature of possible archaeological origin; a large possible rectangular enclosure of unknown date recorded immediately south of Radwinter Road. Although the anomalies are low magnitude possible internal divisions and possible discrete features can also be discerned. This feature is assessed as of moderate archaeological potential. No other anomalies of archaeological potential are present within the PDA.

The remainder of the identified anomalies are caused by modern and recent agricultural activity and natural events.

Overall, the PDA is assessed as of low archaeological potential, reflecting the conclusions of the heritage assessment, except in the vicinity of the enclosure where it is assessed as moderate.

6. REFERENCES

BSA Heritage 2020 Land south of Radwinter Road, Saffron Walden, Essex: Archaeology and Heritage Assessment Unpublished Client Doc Ref. BSA 2053

Chartered Institute for Archaeologists (CIfA) 2014 Standard and guidance for archaeological geophysical survey (Reading) https://www.archaeologists.net/sites/default/files/CIfAS%26GGeophysics_3.pdf accessed 8th February 2021

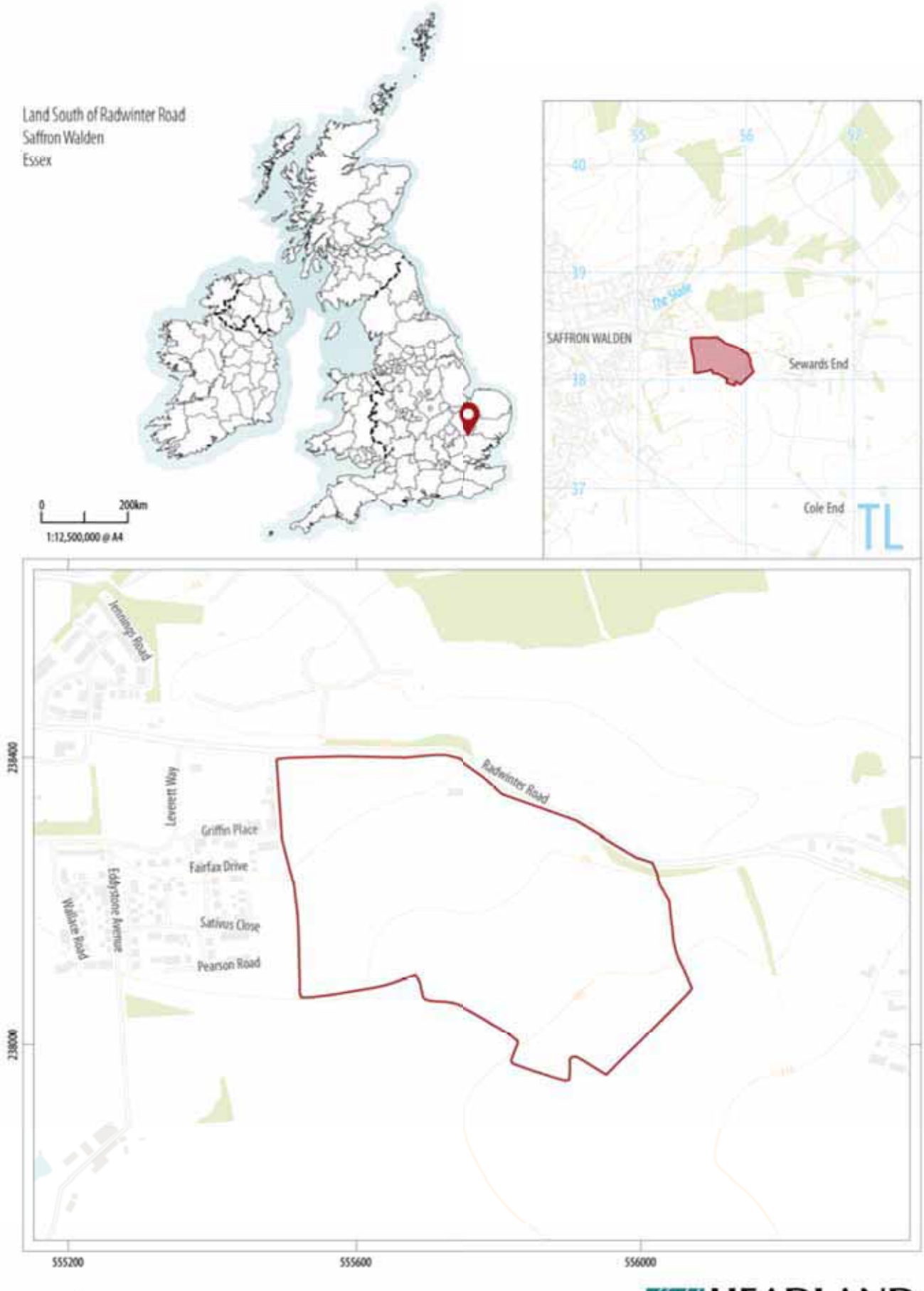
Natural Environment Research Council (NERC) 2018 British Geological Survey http://www.bgs.ac.uk/ accessed 8th February 2021

Europae Archaeologia Consillium (EAC) 2016 EAC Guidelines for the Use of Geophysics in Archaeology: Question to Ask and Points to Consider (Namur, Belgium) https://www.europae-archaeologiae-consilium.org/eac-guidlines accessed 8th February 2021

Gaffney C & Gater J 2003 Revealing the Buried Past: Geophysics for Archaeologists Stroud

Headland 2020 Land south of Radwinter Road, Saffron Walden, Essex: Written Scheme of Investigation for Geophysical Survey Unpublished Client Doc Ref. RRSW21

Ministry of Housing, Communities and Local Government (MHCLG) 2019 National Planning Policy Framework https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf accessed 8th February 2021



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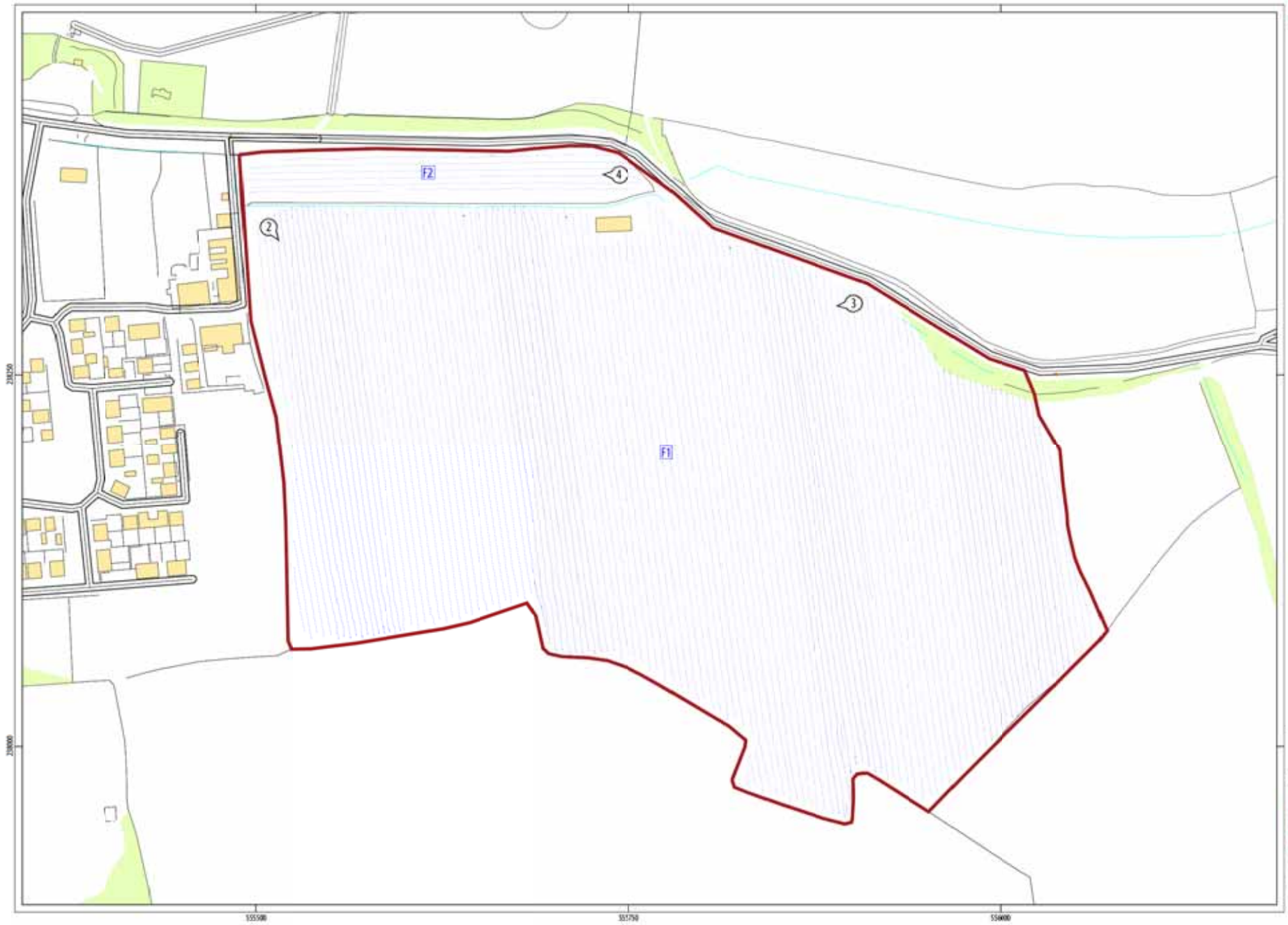
e yorkshireandnorth@headlandarchaeology.com
w www.headlandarchaeology.com

ILLUS 1 Site location

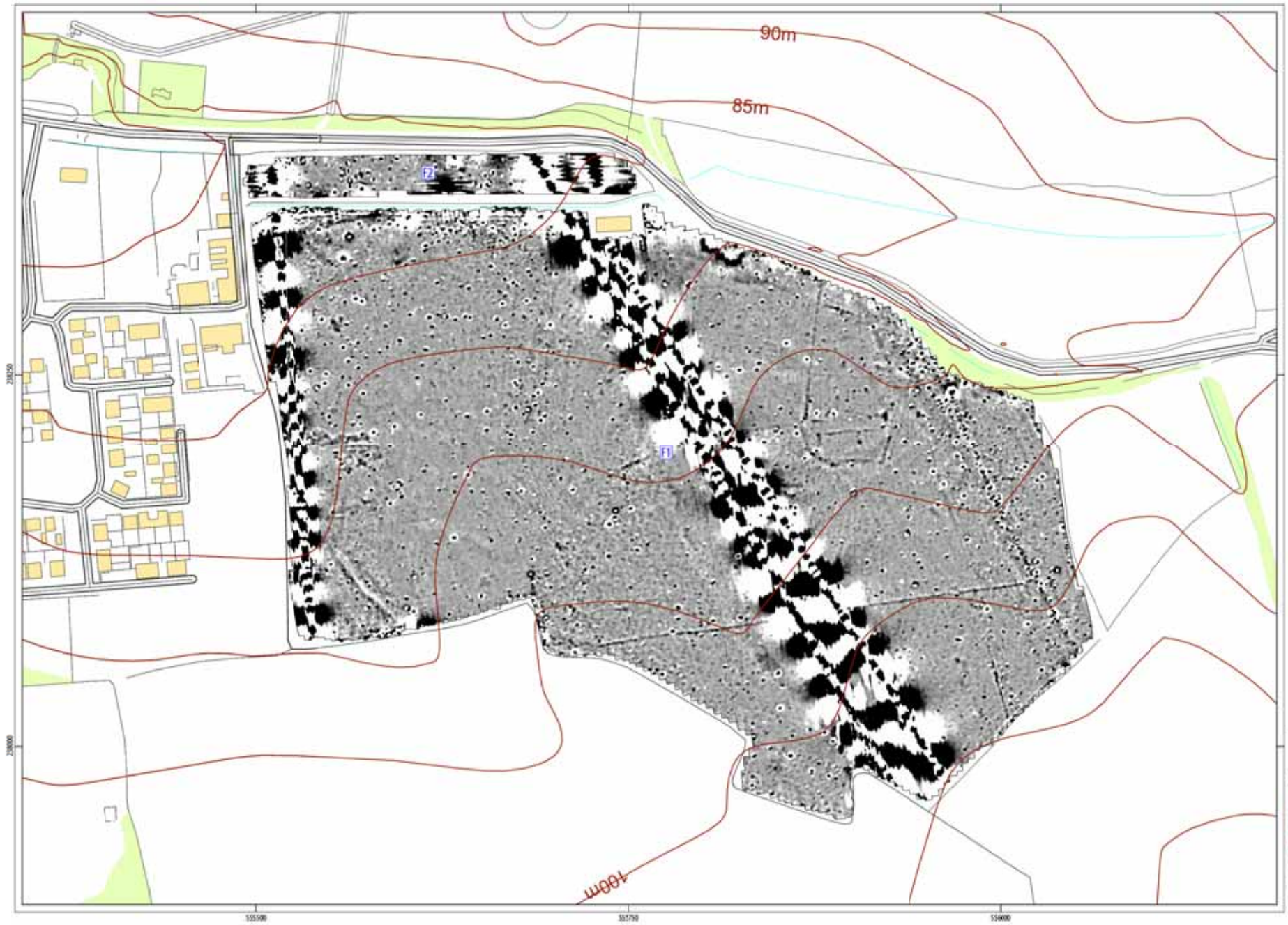
Illus 2. F1, looking south-east

Illus 3. F1, looking west

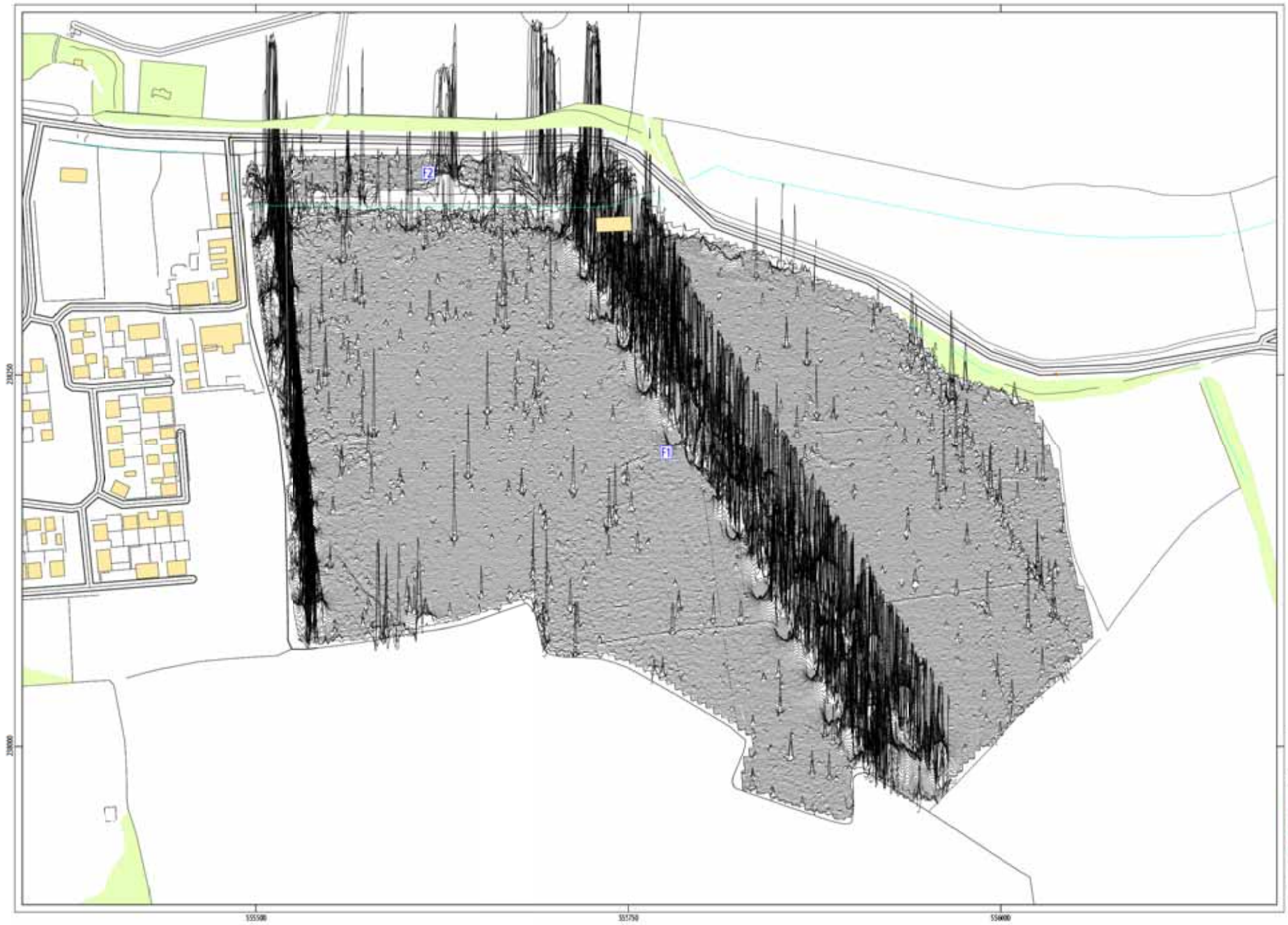
Illus 4. F2, looking west



ILLUS 5 Survey location showing GPS swaths and photo locations



ILLUS 6 Processed greyscale magnetometer data



21.0m/1cm

0 50m

1:2,500 @ A3

PROJECT BRSW21
Radwinter Road
Saffron Walden
Essex

CLIENT Rosconn Group

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ILLUS 7 XY trace plot of minimally processed magnetometer data

ILLUS 8 Interpretation of magnetometer data

7. APPENDICES

APPENDIX 1 MAGNETOMETER SURVEY

Magnetic susceptibility and soil magnetism

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

In general, it is the contrast between the magnetic susceptibility of deposits filling cut features, such as ditches or pits, and the magnetic susceptibility of topsoils, subsoils and rocks into which these features have been cut, which causes the most recognisable responses. This is primarily because there is a tendency for magnetic ferrous compounds to become concentrated in the topsoil, thereby making it more magnetic than the subsoil or the bedrock. Linear features cut into the subsoil or geology, such as ditches, that have been silted up or have been backfilled with topsoil will therefore usually produce a positive magnetic response relative to the background soil levels. Discrete feature, such as pits, can also be detected.

The magnetic susceptibility of a soil can also be enhanced by the application of heat. This effect can lead to the detection of features such as hearths, kilns or areas of burning.

Types of magnetic anomaly

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

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

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

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

Isolated dipolar anomalies (iron spikes)

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

Areas of magnetic disturbance

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

Lightning-induced remnant magnetisation (LIRM)

LIRM anomalies are thought to be caused in the near surface soil horizons by the flow of an electrical current associated with lightning strikes. These observed anomalies have a strong bipolar signal which decreases with distance from the spike point and often appear as linear or radial in shape.

Linear trend

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

Areas of magnetic enhancement/positive isolated anomalies

Areas of enhanced response are characterised by a general increase in the magnetic background over a localised area whilst discrete anomalies are manifest by an increased response (sometimes only visible on

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

Linear and curvilinear anomalies

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

APPENDIX 2 SURVEY LOCATION INFORMATION

An initial survey base station was established using a Trimble VRS differential Global Positioning System (dGPS). The magnetometer data was georeferenced using a Trimble RTK differential Global Positioning System (Trimble R8s model).

Temporary sight markers were laid out using a Trimble VRS differential Global Positioning System (Trimble R8s model) to guide the operator and ensure full coverage. The accuracy of this dGPS equipment is better than 0.01m.

The survey data were then super-imposed onto a base map provided by the client to produce the displayed block locations. However, it should be noted that Ordnance Survey positional accuracy for digital map data has an error of 0.5m for urban and floodplain areas, 1.0m for rural areas and 2.5m for mountain and moorland areas. This potential error must be considered if coordinates are measured off hard copies of the mapping rather than using the digital coordinates.

Headland Archaeology cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party.

APPENDIX 3 GEOPHYSICAL SURVEY ARCHIVE

The geophysical archive comprises an archive disk containing the raw data in XYZ format, a raster image of each greyscale plot with associate world file, and a PDF of the report.

The project will be archived in-house in accordance with recent good practice guidelines (http://guides.archaeologydataservice.ac.uk/g2gp/Geophysics_3). The data will be stored in an indexed archive and migrated to new formats when necessary.

APPENDIX 4 DATA PROCESSING

The gradiometer data has been presented in this report in processed greyscale and minimally processed XY trace plot format.

Data collected using RTK GPS-based methods cannot be produced without minimal processing of the data. The minimally processed data has been interpolated to project the data onto a regular grid and de-striped to correct for slight variations in instrument calibration drift and any other artificial data.

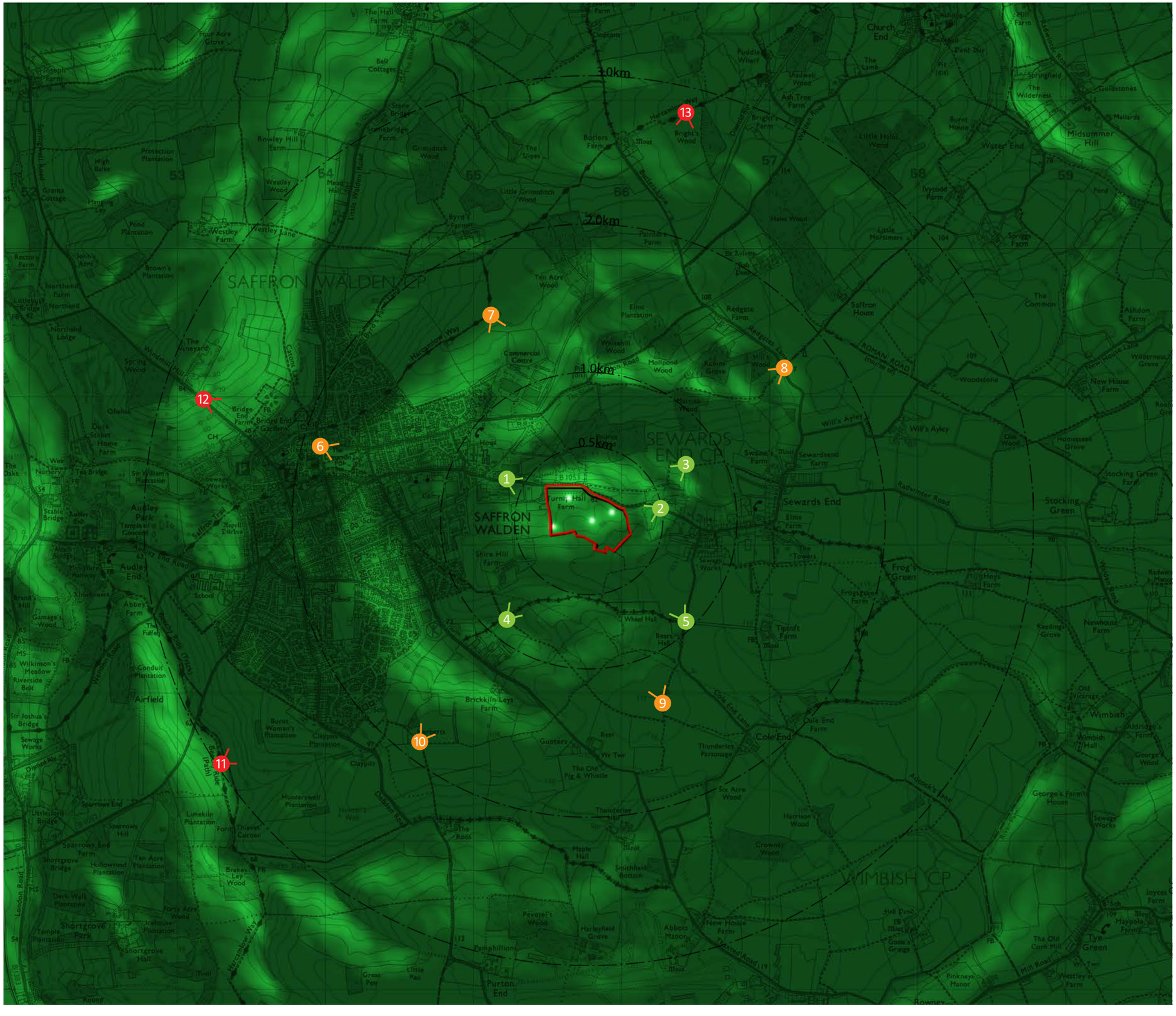
A high pass filter has been applied to the greyscale plots to remove low frequency anomalies (relating to survey tracks and modern agricultural features) to maximise the clarity and interpretability of the archaeological anomalies.

The data has also been clipped to remove extreme values and to improve data contrast.

APPENDIX 5 OASIS ARCHIVE

APPENDIX 4
BASELINE VIEWPOINTS & ZTV

DEFINE



LEGEND

Site Boundary

Viewpoint Locations

Near

Mid

Distant

ZTV Light Source (8m above ground)

ZTV based on DTM/DSM and is used to show a worst case likely visibility of the existing site and is to be used only to guide representative viewpoint positions

Visibility more likely

↓

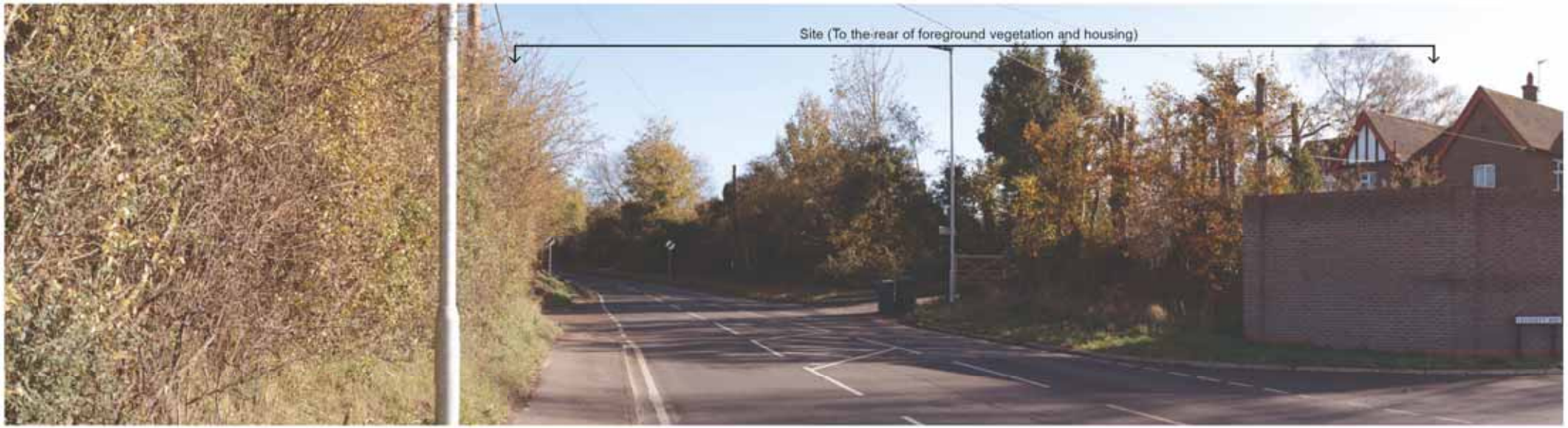
Visibility less likely

SCALE 1:25,000

0m 100 200 300 500 1000

N

07	Figure
Viewpoints	Title
1:25,000 @A3	Scale



Panoramic to illustrate the location of the full-size single image frame in its context

Viewpoint Data

Based on information required for Type 1 - Annotated Viewpoint (Photograph Visual Representation of Development Proposals LI TGN 06/19)

Camera	Nikon D7000
Lens	DX AF-S Nikkor 35mm 1:1.8G
Focal Length	Cropped Frame +35mm Lens (Equivalent of 50mm on full sensor)
Height of Camera Lens	N/A for Type 1 Imagery
Elevation	N/A for Type 1 Imagery
Direction of View	Looking east to southeast
National Grid Reference	N/A for Type 1 Imagery
Date	04.11.2020
Time	13:15
Distance to Site	circa 130m
HFoV (Main Image)	39.6o

Viewpoint 1

View from highway footpath along B1053 directly opposite the entrance to the Linden Homes development.

Receptors

The view would be gained by road users on Radwinter Road. This includes occupants of vehicles, pedestrians and cyclists.

Description

The view is taken from a transitional urban-rural location at the eastern settlement edge of Saffron Walden and on a relatively busy 'B' road that is highly contained by tall/dense roadside vegetation on either side. There are a number of minor detractors in the view including highway paraphernalia and other urban influences. The site lies unseen to the rear of several layers of tall and dense native tree/shrub belts at the centre of the view.

Susceptibility

-

Value

-

View Sensitivity

-

Baseline Photograph - Full size single image printed at a size of 390mm x 260mm on an A3 sheet - When viewed at arms length (approximately 542mm from the eye), represents actual scale of viewing experience

Panoramic to illustrate the location of the full-size single image frame in its context

Viewpoint Data

Based on information required for Type 1 - Annotated Viewpoint (Photograph Visual Representation of Development Proposals LI TGN 06/19)

Camera	Nikon D7000
Lens	DX AF-S Nikkor 35mm 1:1.8G
Focal Length	Cropped Frame +35mm Lens (Equivalent of 50mm on full sensor)
Height of Camera Lens	N/A for Type 1 Imagery
Elevation	N/A for Type 1 Imagery
Direction of View	Looking west to southwest
National Grid Reference	N/A for Type 1 Imagery
Date	04.11.2020
Time	14:30
Distance to Site	circa 165m
HFoV (Main Image)	39.6o

Viewpoint 2

View from highway footpath along B1053 at the eastern settlement edge of Sewards End where it joins the PROW 315_21.

Receptors

The view would be gained by road users on Radwinter Road and local footpath users. This includes occupants of vehicles, pedestrians and cyclists.

Description

The view is taken from a relatively busy 'B' road that has just past along linear development through Sewards End and enters a stretch of winding rural sunken lane,enclosed by dense and tall roadside vegetation. Some electrical poles are the only minor detractor in the view. The site lies unseen to the rear of a thick belt of native thicket foreground vegetation, a small field that can be glimpsed through the foreground vegetation, and then a further tree/hedge belt along the eastern boundary of the site.

Note on kinetic views: Viewpoint 2 represents a single open view along a vehicular and footpath route between Sewards End & VP1. For the majority of the route both the road and footpath are heavily contained by dense roadside vegetation that offers only glimpse views when directly adjacent the sites northern edge.

Susceptibility

-

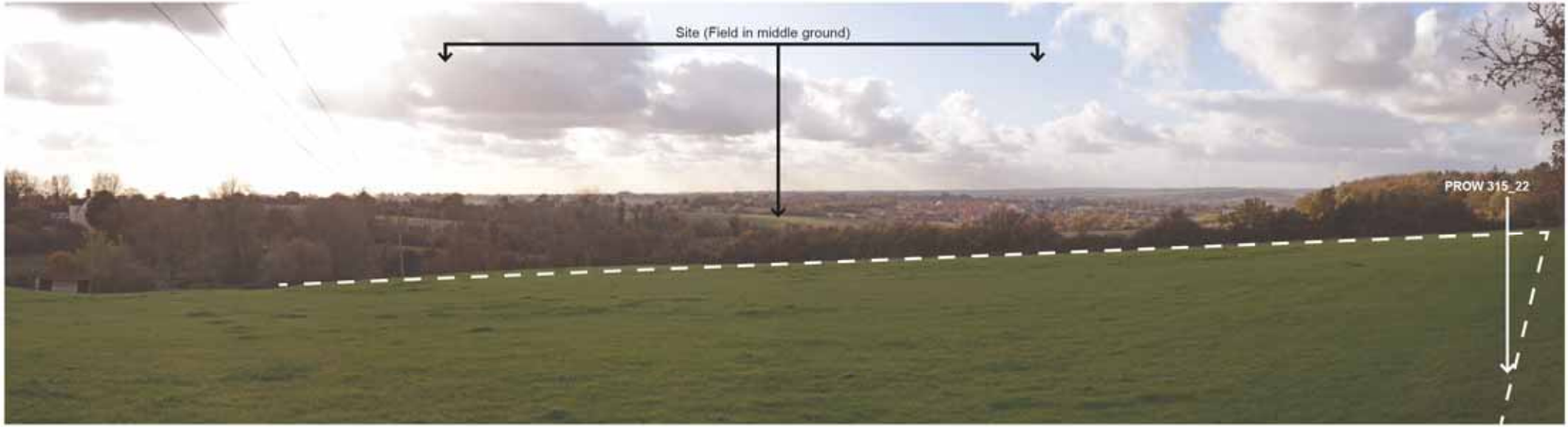
Value

-

View Sensitivity

-

Baseline Photograph - Full size single image printed at a size of 390mm x 260mm on an A3 sheet - When viewed at arms length (approximately 542mm from the eye), represents actual scale of viewing experience



Panoramic to illustrate the location of the full-size single image frame in its context

Viewpoint Data

Based on information required for Type 1 - Annotated Viewpoint (Photograph Visual Representation of Development Proposals LI TGN 06/19)

Camera	Nikon D7000
Lens	DX AF-S Nikkor 35mm 1:1.8G
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Elevation	N/A for Type 1 Imagery
Direction of View	Looking southwest
National Grid Reference	N/A for Type 1 Imagery
Date	04.11.2020
Time	10:30
Distance to Site	circa 515m
HFoV (Main Image)	39.6o

Viewpoint 3

Elevated view from PROW footpath along 315_22 that connects Sewards End to the B1053 (and site) along a falling ridgeline.

Receptors

The view would be gained by local footpath pedestrian users and ramblers.

Description

The view is taken from a rural PROW footpath through tranquil open countryside. The scene is an far reaching panoramic one of rolling/undulating landform falling down the valley towards Saffron Walden and is interlaced by well vegetated field boundaries and woodland shaws/belts. Pounce Wood is seen to the right and minor settlement elements of Sewards End are glimpsed to the left of the scene. The edge of Saffron Walden is already clear to the lower ground in the centre of the view with the Linden development a prominent feature of the settlement pattern. The site lies on an open field in front of and to the left of the Linden development and development would is clearly visible.

Note on kinetic views: Viewpoint 3 represents a single view along footpath 315_22 where the site is highly visible. For the majority of the route that zig-zags down the slope between viewpoint 3 and viewpoint 1 the site is obstructed by a strong network of vegetation and intervening rolling landform, and the receptors focus and interest is highly variable.

Susceptibility

-

Value

-

View Sensitivity

-

Baseline Photograph - Full size single image printed at a size of 390mm x 260mm on an A3 sheet - When viewed at arms length (approximately 542mm from the eye), represents actual scale of viewing experience

Panoramic to illustrate the location of the full-size single image frame in its context

Viewpoint Data

Based on information required for Type 1 - Annotated Viewpoint (Photograph Visual Representation of Development Proposals LI TGN 06/19)

Camera	Nikon D7000
Lens	DX AF-S Nikkor 35mm 1:1.8G
Focal Length	Cropped Frame +35mm Lens (Equivalent of 50mm on full sensor)
Height of Camera Lens	N/A for Type 1 Imagery
Elevation	N/A for Type 1 Imagery
Direction of View	Looking northeast
National Grid Reference	N/A for Type 1 Imagery
Date	04.11.2020
Time	12:15
Distance to Site	circa 650m
HFoV (Main Image)	39.6o

Viewpoint 4

View from PROW Byway 44_18 at the junction with PROW 44_36, a short distance from the Thaxted Road retail park.

Receptors

The view would be gained by local PROW users and ramblers. This includes occupants of off-road vehicles, horse riders, pedestrians, and cyclists.

Description

The view is taken from a byway that runs between the Thaxted Road and Cole Lane (and historically Tiptoft Farm) along a rising valley landform and runs parallel to the southern boundary of the site. The byway in this location is boarded by dense thicket vegetation to the left that blocks all views beyond and towards the site. The retail park, that lies to the rear of the scene, is also a significant detractor here but this is quickly lost further along the byway where a more isolated rural experience is obtained.

Note on kinetic views: Viewpoint 4 represents a single view along byway 44_18 where the site is not visible. For the majority of the route between VP4 and VP5 the byway is sunken and boarded by similar dense thicket vegetation on either side, however the vegetation does break up in places allowing views through to the adjacent arable field which lies of rising ground and with an intervening ridgeline that prevents views of the site. This is shown by the lack of sight of the Linden Homes development that sits on similar height landform as the application site.

Susceptibility

-

Value

-

View Sensitivity

-

Baseline Photograph - Full size single image printed at a size of 390mm x 260mm on an A3 sheet - When viewed at arms length (approximately 542mm from the eye), represents actual scale of viewing experience

Panoramic to illustrate the location of the full-size single image frame in its context

Viewpoint Data

Based on information required for Type 1 - Annotated Viewpoint (Photograph Visual Representation of Development Proposals LI TGN 06/19)

Camera	Nikon D7000
Lens	DX AF-S Nikkor 35mm 1:1.8G
Focal Length	Cropped Frame +35mm Lens (Equivalent of 50mm on full sensor)
Height of Camera Lens	N/A for Type 1 Imagery
Elevation	N/A for Type 1 Imagery
Direction of View	Looking north-west
National Grid Reference	N/A for Type 1 Imagery
Date	04.11.2020
Time	12:45
Distance to Site	circa 540m
HFoV (Main Image)	39.6o

Viewpoint 5

View from Cole End Lane at the junction with PROW Byway 44_18. The byway in this location also serves as a driveway to two properties located a short distance to the left of the scene. It also marks the entrance to the long avenue approach to Tiptoft Farm to the right of the scene.

Receptors

The view would be gained by road & PROW users as well as the residents of the two properties. This includes occupants of vehicles, pedestrians, horse riders, and cyclists.

Description

The view is taken from a quiet rural lane contained by tall roadside vegetation and with only minor detractors. The site lies to the rear of the foreground vegetation and over 500m across a large intervening arable use field. The well vegetated eastern edge of the site would potentially be glimpsed through gaps in foreground vegetation but would not stand out amongst the background landscape patterns.

Susceptibility

-

Value

-

View Sensitivity

-

Baseline Photograph - Full size single image printed at a size of 390mm x 260mm on an A3 sheet - When viewed at arms length (approximately 542mm from the eye), represents actual scale of viewing experience

Panoramic to illustrate the location of the full-size single image frame in its context

Viewpoint Data

Based on information required for Type 1 - Annotated Viewpoint (Photograph Visual Representation of Development Proposals LI TGN 06/19)

Camera	Nikon D7000
Lens	DX AF-S Nikkor 35mm 1:1.8G
Focal Length	Cropped Frame +35mm Lens (Equivalent of 50mm on full sensor)
Height of Camera Lens	N/A for Type 1 Imagery
Elevation	N/A for Type 1 Imagery
Direction of View	Looking east to southeast
National Grid Reference	N/A for Type 1 Imagery
Date	04.11.2020
Time	16:00
Distance to Site	circa 1.5km
HFoV (Main Image)	39.6o

Viewpoint 6

View from high Northwest corner of 'The Common' and at the junction of Common Hill, Church Street, & Ashdon Road.

Receptors

The view would be gained by road users and recreational users of 'The Common'. This includes occupants of vehicles, pedestrians, and cyclists.

Description

The scene is of a large open recreational grassed area in the centre of Saffron Waden with historic street frontages facing the space and a well vegetated contextual settlement framework beyond. The site lies far to the rear of the view and is well screened. It is unclear but potentially the roof-line of Linden development (or other nearby new development is glimpsed amongst the background vegetation, but has little significance as a minor element in a myriad of rooftop patterns within the view.

Susceptibility

-

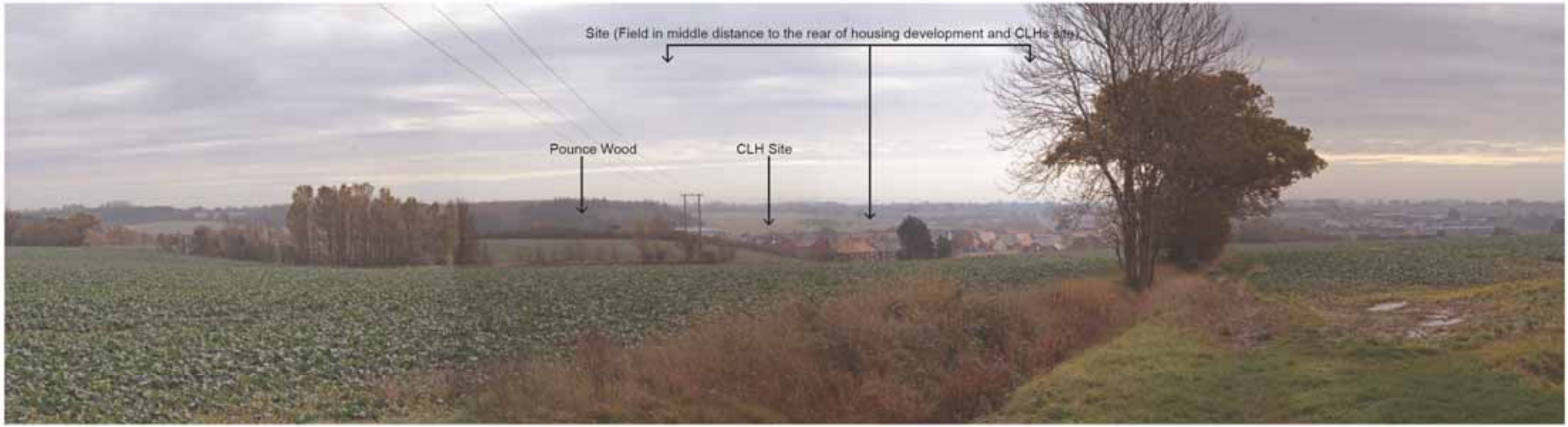
Value

-

View Sensitivity

-

Baseline Photograph - Full size single image printed at a size of 390mm x 260mm on an A3 sheet - When viewed at arms length (approximately 542mm from the eye), represents actual scale of viewing experience



Panoramic to illustrate the location of the full-size single image frame in its context

Viewpoint Data

Based on information required for Type 1 - Annotated Viewpoint (Photograph Visual Representation of Development Proposals LI TGN 06/19)

Camera	Nikon D7000
Lens	DX AF-S Nikkor 35mm 1:1.8G
Focal Length	Cropped Frame +35mm Lens (Equivalent of 50mm on full sensor)
Height of Camera Lens	N/A for Type 1 Imagery
Elevation	N/A for Type 1 Imagery
Direction of View	Looking south to southeast
National Grid Reference	N/A for Type 1 Imagery
Date	05.11.2020
Time	12:30
Distance to Site	circa 1.2km
HFoV (Main Image)	39.6o

Viewpoint 7

View from the Harcamlow Way (National PROW Bridleway Route) on a high point of a rising ridgeline from the north-eastern settlement edge of Saffron Walden.

Receptors

The view would be gained by local and national PROW users and ramblers. This includes horse riders, pedestrians, and cyclists.

Description

The scene is an rural agricultural setting with panoramic views of rolling/undulating landform and vegetation pattern falling down the valley towards Saffron Walden. Pounce Wood is seen to the centre-left with the site immediately to the right and to the rear of the CLH fuel depot site where it forms an open field. Saffron Waldens eastern settlement expansion is clearly exposed in the lower valley sides where there is a distinct lack of field boundary vegetation to help assimilate new development into the landscape setting.

Note on kinetic views: Viewpoint 7 represents a single view along footpath 44_1 where the site is clearly visible. Prior to this viewpoint from the north the site is well screened behind field boundary thicket vegetation. Beyond this viewpoint and down to Saffron Walden the availability of the view is hit & miss through a broken hedge on the southern side of the bridleway, and that focuses users attention to more open countryside to the north.

Susceptibility

-

Value

-

View Sensitivity

-

Baseline Photograph - Full size single image printed at a size of 390mm x 260mm on an A3 sheet - When viewed at arms length (approximately 542mm from the eye), represents actual scale of viewing experience

Panoramic to illustrate the location of the full-size single image frame in its context

Viewpoint Data

Based on information required for Type 1 - Annotated Viewpoint (Photograph Visual Representation of Development Proposals LI TGN 06/19)

Camera	Nikon D7000
Lens	DX AF-S Nikkor 35mm 1:1.8G
Focal Length	Cropped Frame +35mm Lens (Equivalent of 50mm on full sensor)
Height of Camera Lens	N/A for Type 1 Imagery
Elevation	N/A for Type 1 Imagery
Direction of View	Looking southwest
National Grid Reference	N/A for Type 1 Imagery
Date	05.11.2020
Time	13:00
Distance to Site	circa 1.5km
HFoV (Main Image)	39.6o

Viewpoint 8

View from a high point along PROW footpath 315_23 just off the junction with Redgates Lane.

Receptors

The view would be gained by local footpath pedestrian users and ramblers.

Description

The scene is of a tranquil unspoilt rural agricultural setting with rolling landform and a strong pattern of hill top vegetation with few detractors. The scene is relatively constrained to near/mid distant views but one far reaching view is afforded to the centre of the scene and lies in the general direction of the site. However the intervening distance, ridgeline, and vegetation pattern does restrict the likelihood of any potential view of the site.

Susceptibility

-

Value

-

View Sensitivity

-

Baseline Photograph - Full size single image printed at a size of 390mm x 260mm on an A3 sheet - When viewed at arms length (approximately 542mm from the eye), represents actual scale of viewing experience

Panoramic to illustrate the location of the full-size single image frame in its context

Viewpoint Data

Based on information required for Type 1 - Annotated Viewpoint (Photograph Visual Representation of Development Proposals LI TGN 06/19)

Camera	Nikon D7000
Lens	DX AF-S Nikkor 35mm 1:1.8G
Focal Length	Cropped Frame +35mm Lens (Equivalent of 50mm on full sensor)
Height of Camera Lens	N/A for Type 1 Imagery
Elevation	N/A for Type 1 Imagery
Direction of View	Looking north to north-west
National Grid Reference	N/A for Type 1 Imagery
Date	04.11.2020
Time	12:00
Distance to Site	circa 1.15km
HFoV (Main Image)	39.6o

Viewpoint 9

View from hilltop on PROW footpath 57_7and junction of PROW 57_1 & 57_8.

Receptors

The view would be gained by local footpath pedestrian users and ramblers.

Description

This is a relatively expansive rural view from elevated ground above the site and looks out over a number of intervening valleys with a wooded backdrop in the far distance (as can be seen by evidence of pylons in front of the woods which are located over 3km away beyond Little Walden to the north). The scene is predominantly taken up by an intensively farmed arable field in the foreground with only glimpses of the wider landscape beyond on the horizon. The site sits on a north facing valley side over 1km away in lower landform and is screened by at least two intervening ridgelines and tall field boundary vegetation in the immediate horizon.

Note on kinetic views: Viewpoint 9 represents a single view from the start of a PROW route (57_8) down a ridgeline to VP4. Throughout the site is well hidden behind intervening landform and layered vegetation patterns.

Susceptibility

-

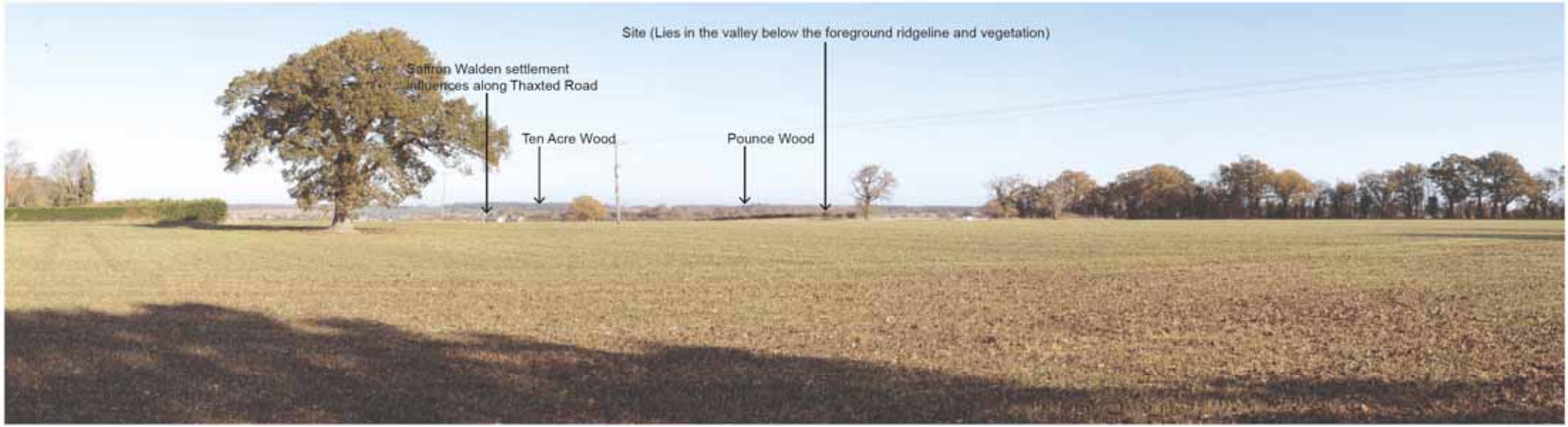
Value

-

View Sensitivity

-

Baseline Photograph - Full size single image printed at a size of 390mm x 260mm on an A3 sheet - When viewed at arms length (approximately 542mm from the eye), represents actual scale of viewing experience



Panoramic to illustrate the location of the full-size single image frame in its context

Viewpoint Data

Based on information required for Type 1 - Annotated Viewpoint (Photograph Visual Representation of Development Proposals LI TGN 06/19)

Camera	Nikon D7000
Lens	DX AF-S Nikkor 35mm 1:1.8G
Focal Length	Cropped Frame +35mm Lens (Equivalent of 50mm on full sensor)
Height of Camera Lens	N/A for Type 1 Imagery
Elevation	N/A for Type 1 Imagery
Direction of View	Looking northeast
National Grid Reference	N/A for Type 1 Imagery
Date	04.11.2020
Time	11:15
Distance to Site	circa 1.65km
HFoV (Main Image)	39.6o

Viewpoint 10

View from hilltop on PROW footpath 44_66 at intersection with footpath 57_96.

Receptors

The view would be gained by local footpath pedestrian users and ramblers.

Description

This is a relatively expansive rural view from elevated ground above the site and looks out over a number of intervening agricultural farmed valleys, with a wooded backdrop including Pounce Wood which lies just to the north of the site. Detractors are visible including the eastern settlement edge of Saffron Walden which is clearly evident in the lower valley areas, and the southern settlement edge is a prominent just out of sight to the left of the view. The site sits on a north facing valley side approximately 1.65km away in lower landform and is screened by a number of intervening ridgelines and vegetation pattern. The Thaxted Road retail park sits between the viewpoint and the site and is not seen in the view.

Susceptibility

-

Value

-

View Sensitivity

-

Baseline Photograph - Full size single image printed at a size of 390mm x 260mm on an A3 sheet - When viewed at arms length (approximately 542mm from the eye), represents actual scale of viewing experience

Panoramic to illustrate the location of the full-size single image frame in its context

Viewpoint Data

Based on information required for Type 1 - Annotated Viewpoint (Photograph Visual Representation of Development Proposals LI TGN 06/19)

Camera	Nikon D7000
Lens	DX AF-S Nikkor 35mm 1:1.8G
Focal Length	Cropped Frame +35mm Lens (Equivalent of 50mm on full sensor)
Height of Camera Lens	N/A for Type 1 Imagery
Elevation	N/A for Type 1 Imagery
Direction of View	Looking northeast
National Grid Reference	N/A for Type 1 Imagery
Date	09.12.2020
Time	09:45
Distance to Site	circa 2.7km
HFoV (Main Image)	39.6o

Viewpoint 11

View from the Harcamlow Way (National PROW Footpath Route) to the south-west of Saffron Walden.

Receptors

The view would be gained by local and national PROW users and ramblers.

Description

This is a distant view (c2.7km) and of a relatively open and expansive rural scene from a PROW following a route down along a valley floor skirting the south-eastern side of Saffron Walden. The scene is of large rolling arable farmed fields with only minimal sporadic boundary vegetation. Views beyond the immediate adjacent fields are contained by the rising landform and localised ridgelines that are marked by small woodland blocks, shaws, and hedgerows. Some low density housing is visible and marks the south-western settlement edge of Saffron Walden.

The site sits on higher ground to the north-east but on a north facing valley side and is completely screened by intervening landform and settlement pattern.

Susceptibility

-

Value

-

View Sensitivity

-

Baseline Photograph - Full size single image printed at a size of 390mm x 260mm on an A3 sheet - When viewed at arms length (approximately 542mm from the eye), represents actual scale of viewing experience

Panoramic to illustrate the location of the full-size single image frame in its context

Viewpoint Data

Based on information required for Type 1 - Annotated Viewpoint (Photograph Visual Representation of Development Proposals LI TGN 06/19)

Camera	Nikon D7000
Lens	DX AF-S Nikkor 35mm 1:1.8G
Focal Length	Cropped Frame +35mm Lens (Equivalent of 50mm on full sensor)
Height of Camera Lens	N/A for Type 1 Imagery
Elevation	N/A for Type 1 Imagery
Direction of View	Looking east to southeast
National Grid Reference	N/A for Type 1 Imagery
Date	05.11.2020
Time	13:30
Distance to Site	circa 2.4km
HFoV (Main Image)	39.6o

Viewpoint 12

View from highway footpath along B184.

Receptors

The view would be gained by road and footpath users on Windmill Hill. This includes occupants of vehicles, pedestrians and cyclists.

Description

The view is taken from a transitional urban-rural location at the north-western settlement edge of Saffron Walden and on a straight and relatively busy 'B' road. The road is deeply sunken and sharply falling towards the town. Dense tree planting on a substantial embankment is seen to the left of the view, and in the general direction of the site which is well screened, and to the right, a tall flint and brick wall marks the edge of Audley Park.

Susceptibility

-

Value

-

View Sensitivity

-

Baseline Photograph - Full size single image printed at a size of 390mm x 260mm on an A3 sheet - When viewed at arms length (approximately 542mm from the eye), represents actual scale of viewing experience

Panoramic to illustrate the location of the full-size single image frame in its context

Viewpoint Data

Based on information required for Type 1 - Annotated Viewpoint (Photograph Visual Representation of Development Proposals LI TGN 06/19)

Camera	Nikon D7000
Lens	DX AF-S Nikkor 35mm 1:1.8G
Focal Length	Cropped Frame +35mm Lens (Equivalent of 50mm on full sensor)
Height of Camera Lens	N/A for Type 1 Imagery
Elevation	N/A for Type 1 Imagery
Direction of View	Looking southwest
National Grid Reference	N/A for Type 1 Imagery
Date	05.11.2020
Time	12:00
Distance to Site	circa 2.6km
HFoV (Main Image)	39.6o

Viewpoint 13

View from a high point along PROW footpath 44_42, forming part of the Harcamlow Way national route.

Receptors

The view would be gained by local and national PROW pedestrian users and ramblers.

Description

The scene is of a high plateaux with expansive open views looking over a rural agricultural setting of rolling/undulating landform and interwoven vegetation pattern that includes some significant woodland blocks on high ridgelines. The site lies at a significant distance and is well hidden below intervening landform and vegetation patterns.

Susceptibility

-

Value

-

View Sensitivity

-

Baseline Photograph - Full size single image printed at a size of 390mm x 260mm on an A3 sheet - When viewed at arms length (approximately 542mm from the eye), represents actual scale of viewing experience

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