



Commercial Estates Group

EIA Scoping Report

Adastral Park

660961



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RSK

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13th December 2016

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1 INTRODUCTION

1.1 Overview of the Proposed Development

- 1.1.1 Commercial Estates Group (CEG) has commissioned RSK Environment Ltd to conduct an Environmental Impact Assessment (EIA) Scoping Study for a proposed urban extension on land at Adastral Park.
- 1.1.2 The proposal is to develop an urban extension of 2,000 dwellings and associated infrastructure on and around Adastral Park, near Martlesham Heath, Ipswich.
- 1.1.3 Further detail is provided in Section 2 of this report.

1.2 Context of EIA Scoping Study

- 1.2.1 It is considered that EIA will be required for this development, as the proposed development will be a significant urban development and is therefore considered to be of more than local importance.
- 1.2.2 An EIA normally comprises a series of distinct phases, one of which is termed scoping. Although not a statutory requirement, scoping is designed to ascertain which issues the EIA process should cover. This Scoping Report considers the potential issues relating to the proposal and discusses which issues are likely to be significant. It then outlines how the EIA will deal with each of the issues raised, providing the scope for further desk based study and site surveys as required.
- 1.2.3 It is intended that this report be submitted to Suffolk Coastal District Council (as the relevant authority), for the purpose of obtaining a formal Scoping Opinion, and to other consultees for discussion, as recommended in European Commission and UK guidance on scoping and EIA.

1.3 Scoping Methodology

Scoping Guidance

- 1.3.1 The Institute of Environmental Management and Assessment (IEMA) has published the *Guidelines for Environmental Impact Assessment*, which includes guidance on scoping¹. In addition, the European Union has published guidance on various aspects of the EIA process including the *European Commission Guidance on EIA: Scoping*². This document has been prepared with reference to both the above documents.

¹ *Guidelines for Environmental Impact Assessment*, Institute of Environmental Management & Assessment, 2004.

² *Guidance on EIA: Scoping*, European Commission, 2001, Luxembourg: Office for Official Publications of the European Communities, 2001 - 35 pp, ISBN 92-894-1335-2.

Proposed Scope for the EIA

- 1.3.2 Based upon the potential impacts identified, experienced specialists in each environmental discipline have put together a proposed scope for consideration of each aspect within the proposed EIA, based upon professional knowledge and experience of previous projects. The scope of works for each environmental aspect is presented in Sections 5-16. The proposed scopes provided are for circulation among the relevant stakeholders for comment and discussion.
- 1.3.3 The present intention is to submit one planning application for the entire site as shown in Figure 2.2 below.

2 PROJECT DESCRIPTION

2.1 Overview of the Proposed Development

2.1.1 The Site covers approximately 161ha and currently comprises agricultural land and sand and gravel workings. The Site lies to the east of Martlesham Heath and is separated from the village by the A12, which is a strategic road in Suffolk. The Site is approximately 8.5km east of Ipswich city centre.

The development of 2,000 new homes at Adastral Park is identified in the Suffolk Coastal District Local Plan, Core Strategy and Development Management Policies, Development Plan Document, July 2013.

The proposal is for 2,000 residential units and associated infrastructure including:

- education facilities;
- open space and sports facilities;
- local centres; and
- community facilities and infrastructure.

Figure 2.1 – Site Location Plan in a Regional Context

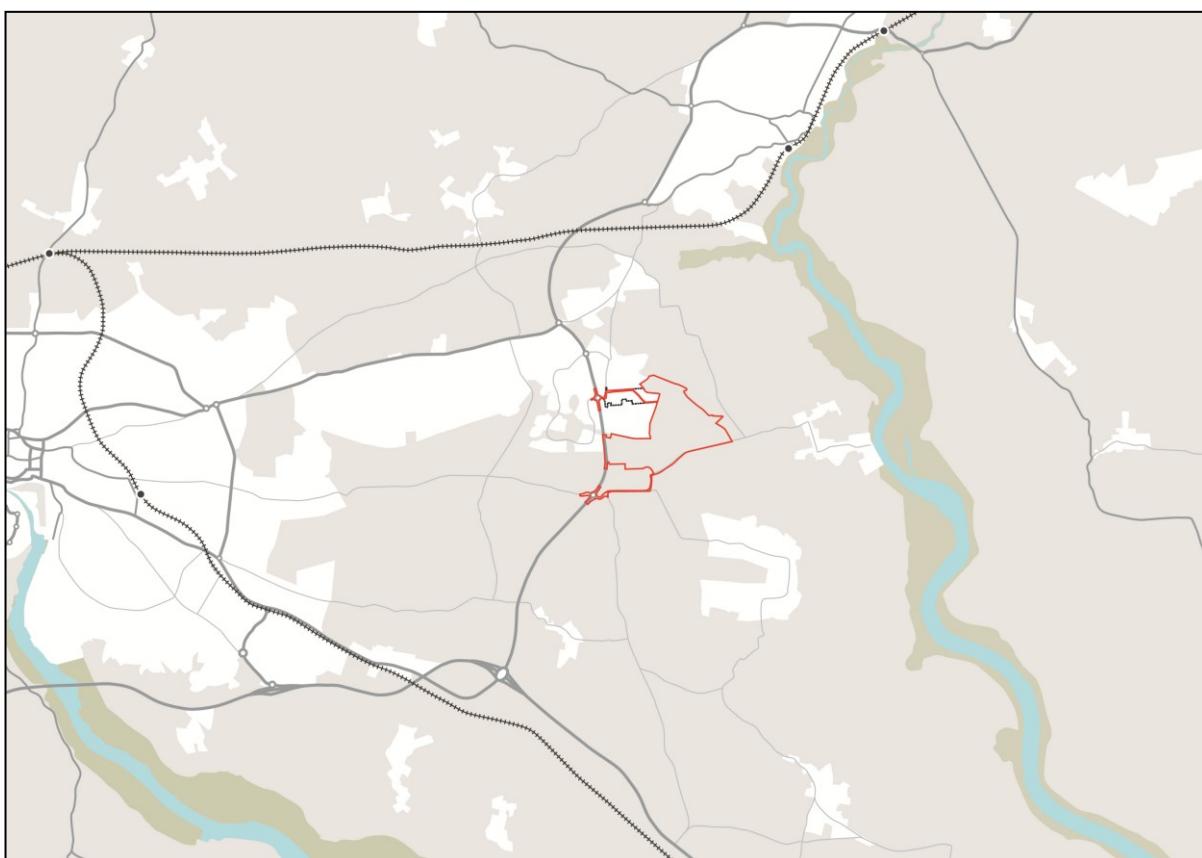
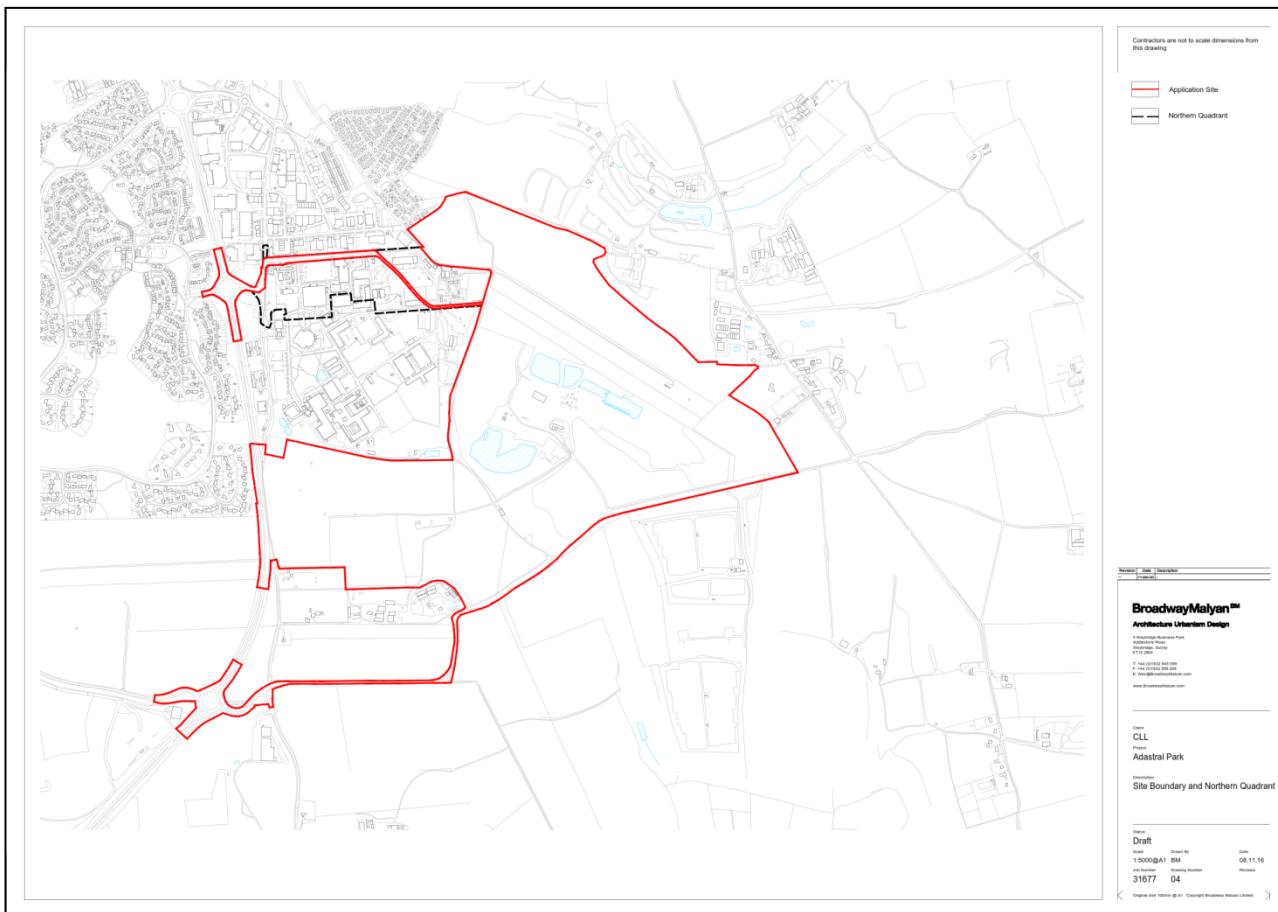


Figure 2.2 – Site Plan in Local Context



3 ENVIRONMENTAL IMPACT ASSESSMENT AND THE PLANNING CONTEXT

3.1 Requirement for EIA

- 3.1.1 The Environmental Impact Assessment legislation was introduced through European Directive 85/337/EEC in 1985 and subsequently amended under European Directive 97/11/EC.
- 3.1.2 This European Directive was written into UK Regulations and, after several amendments, is presently included in the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 ("the 2011 Regulations"). These regulations include two schedules, which specify the types of proposal that should be subject to mandatory EIA and those for which the need for EIA should be determined by the relevant competent authority. Further Schedules also specify the criteria for determining the need for EIA and the information to be included within the resultant Environmental Statement.

3.2 National Legislation

- 3.2.1 The 2011 Regulations set out the requirements and provisions for scoping (setting out the scope for the EIA) and the submission of the EIA. Schedule 4 of the Regulations provides a list of information that should be provided within an Environmental Statement.

3.3 The EIA Process

- 3.3.1 The EIA process typically comprises a series of phases, which are shown in Table 3.1. The EIA for the proposed development will satisfy the requirements of Schedule 4 of the EIA Regulations. This will include a description of the proposed development, a description of the aspects of the environment likely to be significantly affected by the proposed works (the baseline), the likely significant effects of the proposals on the environment, mitigation measures proposed, and residual impacts i.e. those impacts that remain once the effects of mitigation have been taken into account.

Table 3.1 – The EIA Process

Stage of the process	Activities associated with this stage of EIA
Data Gathering ↓	Project Data Gathering Basic description of the construction and operation of the development, including identification of the project activities, materials to be used, discharges and emissions that are likely to occur.
Scoping ↓	Environmental Data Gathering Collection of information within a suitable area of search. Identification of Environmental Sensitivities Identification of receptors and the key environmental sensitivities, which could potentially be affected by the proposed development. Consultation with regulatory authorities to discuss aspects associated with the proposed project activities.
Assessment ↓	Site Survey Work Surveys of the baseline environmental conditions to fill gaps in data, identify and confirm potential constraints identified within the data collection and assist in the determination of impacts.
Management ↓	Environmental Impact Assessment A detailed assessment of the identified potential effects associated with project activities.
Compilation of Environmental Statement	Evaluation of Significance Evaluation of significance, including qualitative estimation of magnitude and severity of impacts.
Management ↓	Mitigation Measures Identification and definition of mitigation measures to be applied to eliminate, minimise or manage the identified potential significant environmental effects.
	Environmental Statement submission Presentation of the findings of the baseline studies and mitigation measures in a systematic way to determine the significance of the residual effect on the environment. Schedule of environmental commitments and monitoring requirements.

3.4 Planning Context

3.4.1 As a part of the application, the Environmental Statement will address relevant national and local policy, and assess the extent to which the development conforms to this policy. The review of relevant planning policy will include, but not be limited to, the following:

National Planning Policy

3.4.2 Relevant national planning policy is captured principally in the National Planning Policy Framework (NPPF). The Framework explains that the purpose of the planning system is to contribute to the achievement of sustainable development. It identifies three dimensions to sustainable development: economic, social and environmental.

3.4.3 The proposal has the potential to affect all three dimensions.

3.4.4 The Framework sets a clear presumption in favour of sustainable development and confirms twelve core land-use planning principles. The application will consider, explain and utilise all relevant principles:

- Be genuinely plan-led. Following extensive public consultation and testing the adopted development plan document for Suffolk Coastal District identifies land to the South and East of Adastral Park to provide in the plan period to 2027, 2,000 new homes;
- Be creative;
- Proactively drive and support sustainable economic development to deliver homes, business and industrial units, infrastructure and thriving local places that the country needs;
- Seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings;
- Take account of the different roles and character of different areas;
- Support the transition to a low carbon future in a changing climate;
- Contribute to conserving and enhancing the natural environment and reducing pollution;
- Encourage the effective use of land;
- Promote mixed use developments and encourage multiple benefits from the use of land;
- Conserve heritage assets in a manner appropriate to their significance;
- Actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling; and
- Take account of and support local strategies to improve health, social and cultural wellbeing for all and deliver sufficient community and cultural facilities and services to meet local needs.

Local Planning Policy

- 3.4.5 The principal local planning policy document from which the majority of relevant policies emerge is the Suffolk Coastal District Local Plan Core Strategy and Development Management Policies, adopted in July 2013. The plan was adopted following extensive consultation, assessment and testing.
- 3.4.6 Strategic policy SP 20 identifies a requirement for 2000 new homes as well as a number of principles against which any subsequent application for planning permission will be considered.
- 3.4.7 The application will consider the proposal against all other relevant up to date policies.

4 SCOPE OF THE EIA

4.1 Introduction

4.1.1 This section identifies the scope of each of the environmental aspects that would potentially be affected by the proposed development.

4.2 Consultation

4.2.1 As the proposed development is anticipated to proceed to a full EIA, it is intended that this report will form the basis of initial discussions with statutory and non-statutory consultees. Throughout the development of the scheme, consultations will be undertaken through correspondence and meetings. The aim of these consultations will be to:

- Gather appropriate information;
- Agree the scope of survey work required;
- Discuss the concerns of interested parties; and
- Identify the key environmental constraints associated with the project.

4.2.2 As part of the overall EIA process, the likely consultees will include the following:

- Suffolk Coastal District Council – various departments;
- Suffolk County Council – various departments;
- Environment Agency;
- Natural England;
- Historic England;
- Suffolk Wildlife Trust;
- Local wildlife groups for mammals (otters, dormice, badgers, bats, water voles etc.); reptiles & amphibians; invertebrates, birds, etc.;
- Royal Society for the Protection of Birds (RSPB);
- Sites and Monuments Record (SMR);
- National Monuments Record (NMR);
- Utilities (electricity, gas, water, telecommunications etc);
- UK Air Quality Archive; and
- British Geological Survey.

4.3 Public Consultation

4.3.1 In addition to regular meetings with Parish Councils, it is proposed to hold public consultation events in early December 2016 with further feedback events in 2017. Following these, a Statement of Community Involvement (SCI) will be prepared for inclusion with the planning application. This will set out who was consulted, the

methodology for consultation, feedback and how this has been taken into account in the revised masterplan.

4.4 Scope and Methodology of the EIA

4.4.1 The EIA will satisfy the requirements of Schedule 4 of the EIA Regulations and will comprise baseline surveys, assessment of impacts, development of mitigation measures, and identification of residual effects.

4.4.2 The objective of the assessment will be:

- to ensure, through an extensive consultation exercise with statutory and non-statutory consultees, interest groups and affected parties, that concerns about the environmental effects of the project are identified and fully considered;
- to work together with the engineering and design teams to develop an environmentally sensitive project design;
- to assess the potential environmental effects, suggest mitigation measures during the construction phase of the project; and
- to identify how the finished development may affect the surrounding environment and how any adverse effects can be mitigated.

4.5 Structure and Content of the Environmental Statement

4.5.1 The ES for the proposed development will include a description of the proposed works and an overview of the likely impacts of the proposed works on the environment. Each topic within the ES will provide an overview of baseline conditions with a brief methodology of how the impacts of the development were assessed. The significance of the impact will then be defined and appropriate mitigation measures recommended.

4.5.2 The following aspects will be addressed within the ES:

- Air Quality;
- Archaeology and Cultural Heritage;
- Ecology, including Recreation;
- Flood Risk and Drainage;
- Ground Conditions and Contamination;
- Landscape and Visual;
- Noise;
- Socio Economics;
- Transport and Travel Planning;
- Cumulative Impacts; and
- Environmental Management.

5 AIR QUALITY

5.1 Introduction

- 5.1.1 The air quality impact assessment will consider the effects of the Proposed Development during both the construction and operational phases on local air quality. The assessment will consider impacts both within the Application Site and in the surrounding wider area focusing on locally sensitive receptors and road links which would experience a change in traffic as a result of the development.

5.2 Legislation and Policy Context

National

Table 5.1 – Air Quality National Planning Policy

National Policy	Key Provisions
<i>Air Quality Strategy for England Scotland, Wales and Northern Ireland</i>	Framework for reducing hazards to health from air pollution. Sets Air Quality Standards and objectives for protection of health, vegetation and ecosystems.
<i>National Planning Policy Framework</i>	Planning Policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants. Planning decisions should ensure any new development in Air Quality Management Areas is consistent with the local air quality action plan

Local

Table 5.2 – Air Quality Local Planning Policy

Local Policy	Key Provisions
<i>Core Strategy and Policies Development Plan</i>	Policy DM5 – the Council will require all new development to be well designed and sustainable. In relation specifically to air quality the policy refers to new buildings built in or around the Air Quality Management Areas. Policy DM15 – Travel Demand Management – states that for proposals of 10 or more dwellings, 1000m ² or more of non-residential floors space or where more than 50 people will be employed the Council will require an assessment of the air quality impacts with appropriate mitigation measures proposed if necessary.

Local Policy	Key Provisions
	Policy NE20 requires consideration to be given to air pollution in respect of new planning applications. The policy will not permit Development which could lead to serious adverse effects on the amenity or environment of neighbouring uses, nor will it permit sensitive uses that would be materially affected by the conduct of established or potentially polluting uses nearby.

5.3 Existing Baseline

- 5.3.1 Ipswich Council (IC) has declared a number of Air Quality Management Areas (AQMAs) within the centre of Ipswich due to exceedances of the annual mean nitrogen dioxide (NO_2) air quality objective. The closest AQMA to Adastral Park is located approximately 6km to the west at Neptune Marina. Air quality in the vicinity of the Application Site has not been found to exceed the relevant air quality objectives.
- 5.3.2 The Application Site lies to the east of the A12, a potentially significant source of emissions to air, although IC do not currently monitor pollutant concentrations adjacent to the A12 and no exceedances have been identified in the vicinity of the road.

5.4 Potential Air Quality Impacts

Construction

- 5.4.1 The main impacts associated with the construction phase potentially include:
- impacts on local air quality as a result of traffic related emissions generated by construction traffic associated with the development;
 - impacts associated with dust and PM₁₀ generated during the construction phase and the potential to cause nuisance and health impacts at nearby sensitive receptors;
 - emissions to air from construction vehicles accessing and leaving the Application Site. These emissions will primarily be oxides of nitrogen (NOx) (affecting NO_2 concentrations) and PM₁₀; and
 - releases of dust and particulate material from materials handling and movement on the Application Site itself during the construction works. This has the potential for deposited dust to cause soiling of property and increase the potential for complaints attributed to nuisance.

Operation

- 5.4.2 The main impacts associated with the operational phase of the development are expected to be:
- the introduction of new exposure to the Application Site resulting in increased exposure to local pollutant levels;
 - impacts associated with emissions generated by operational traffic on local air quality. The main effect on air quality will result from changes in local

concentrations of NO₂ and PM₁₀ due to traffic generated by the Proposed Development; and

- impact of emissions to air from any on-site plant that may be provided as part of the Proposed Development.

5.5 Proposed Scope and Methodology of the Assessment

Consultation

- 5.5.1 IC Environmental Health Officer will be consulted to confirm the scope of the assessment and the methodology that will be used within the assessment process.

Construction Phase

- 5.5.2 There are a number of premises in close proximity to the development site which may be sensitive to dust and particulate emissions from construction activities. Consideration must therefore be given to the potential for annoyance and health related impacts to occur at neighbouring properties during construction of the Proposed Development.
- 5.5.3 An assessment of potential impacts would be carried out in accordance with the Institute of Air Quality Management (IAQM) document 'Guidance on the Assessment of Dust from Demolition and Construction'³. The methodology includes a qualitative assessment of the potential sources of dust and the likely impacts that may occur at adjacent premises, providing a risk assessment to identify those receptors that are likely to experience significant impacts. Appropriate mitigation measures would be recommended based on the identified level of risk and significance of impacts occurring.

Operational Phase

- 5.5.4 The assessment of operational impacts and new exposure will be undertaken using detailed dispersion modelling (ADMS Roads) for road traffic emissions. The assessment will take account of all relevant national and local policies and relevant DEFRA technical guidance relating to air quality, in particular the Environmental Protection UK (EPUK) & Institute of Air Quality Management (IAQM) guidance published in May 2015⁴.
- 5.5.5 The assessment will focus on NO₂ and fine particulate matter (PM₁₀ and PM_{2.5}) the main pollutants associated with traffic emissions.
- 5.5.6 The extent of the assessment of the traffic-related air quality impacts will be determined by the extent of the Transport Assessment as agreed with the relevant bodies. It is anticipated that this will cover the local road network and any roads predicted to experience significant changes according to the criteria set out in the EPUK & IAQM guidance.

³ IAQM, Guidance on the Assessment of Dust from Demolition and Construction V1.1, January 2016

⁴ EPUK & IAQM (2015) Land-use Planning & Development Control: Planning for Air Quality

- 5.5.7 The ADMS Roads modelling will be verified against existing monitoring data for the area (where relevant data exists, the nearest monitoring currently available is located in Ipswich at Alexandra Park, near the Neptune Marina) and the approach will be agreed with the IC. It is not intended at this stage to carry out further air quality monitoring.

6 BELOW GROUND ARCHAEOLOGY

6.1 Introduction

- 6.1.1 This chapter will evaluate the known and potential archaeological resource within the study site and its surroundings. This section of the EIA will present a consideration of designated and non-designated archaeological heritage assets on the site and in its vicinity, set out the significance of these assets, identify potential impacts on heritage assets and present mitigation measures.
- 6.1.2 The archaeology assessment will be placed in the local, regional and national context, and assessed against national criteria.

6.2 Legislation and Policy Context

- 6.2.1 The relevant legislation is the Ancient Monuments & Archaeological Areas Act 1979.

National

Table 6.1 – Archaeological National Planning Policy

National Policy	Key Provisions
<i>NPPF Section 12</i>	<p>Understanding the wider social, cultural, economic and environmental benefits brought by the conservation of the historic environment</p> <p>Conservation of England's heritage assets in a manner appropriate to their significance; and</p> <p>Recognition of the contribution that heritage assets make to our knowledge and understanding of the past.</p>

Local

Table 6.2 – Archaeological Local Planning Policy

Local Policy	Key Provisions
<i>Suffolk Coastal District Local Plan Core Strategy & Development Management Policies</i>	Conservation of the historic environment of Suffolk Coastal District

6.3 Existing Baseline

- 6.3.1 The proposed development site has been subject to a series of archaeological investigations in relation to a previous planning application on the Site. These studies have established that there are two scheduled Bronze Age barrows within the Site and with further barrows (scheduled and non-scheduled) within the wider area. The archaeological evaluation of the site in 2008 revealed that the Site contains Iron Age settlement remains of local significance to the east of Spratts Plantation. The Site also contains a WWII trench shelter which is considered to be of local significance. Large parts of the Site have been subject to previous quarrying works which will have removed all archaeological remains within the area.

6.4 Potential Archaeological Impacts

Construction

- 6.4.1 Prior to the implementation of mitigation measures, the likely significant effects are likely to come from the physical impact of the construction of the proposed development on the non-designated Iron Age archaeological heritage assets that are known to be within the Site.

Operation

- 6.4.2 There will be no operational impacts on non-designated heritage assets. The potential effect on the setting of the Bronze Age barrows will be considered in the built heritage chapter.

6.5 Proposed Scope and Methodology of the Assessment

- 6.5.1 As stated above, the Site has already been subject to various archaeological investigations. The results of these investigations will form the basis of the baseline conditions assessment.

Significance Criteria

- 6.5.2 Determination of the importance/significance of heritage assets is based on existing statutory designations and, for non-designated archaeological assets, the Secretary of State's non-statutory criteria and professional judgement.
- 6.5.3 Using this approach, the criteria for establishing the importance of assets are described in the table below:

Table 6.3 – Archaeological Significance Criteria

Importance/ Significance	Description
International	Archaeological sites or monuments of international importance, including World Heritage Sites. Structures and buildings inscribed as of universal importance as World Heritage Sites. Other buildings or structures of recognised international importance.
National	Ancient monuments scheduled under the Ancient Monuments and Archaeological Areas Act 1979, or archaeological sites and remains of comparable quality, assessed with reference to the Secretary of State's non-statutory criteria.
Regional/ County	Archaeological sites and remains which, while not of national importance, score well against most of the Secretary of State's criteria
Local	Archaeological sites that score less well against the Secretary of State's criteria.
None	Areas in which investigative techniques have produced negligible or only minimal evidence for archaeological remains, or where previous large-scale disturbance or removal of deposits can be demonstrated.

- 6.5.4 Determining the magnitude of impact is based on an understanding of how, and to what extent, the proposed development would impact heritage assets.
- 6.5.5 The magnitude of the effect is a product of the extent of development impact on an asset. Effects are rated as High, Medium, Low and Negligible/Neutral. Impacts can be direct or indirect, adverse or beneficial. The criteria for assessing the magnitude of impact are set out in the table below.

Table 6.4 – Archaeological Magnitude Criteria

Magnitude	Direct Impacts	Indirect Impacts
High Adverse	Complete removal of an archaeological site.	Radical transformation of the setting of an archaeological monument.
Medium Adverse	Removal of a major part of an archaeological site and loss of research potential.	Partial transformation of the setting of an archaeological site e.g. the introduction of significant noise or vibration levels to an archaeological monument leading to changes to amenity use, accessibility or appreciation of an archaeological site.

Magnitude	Direct Impacts	Indirect Impacts
Low Adverse	Removal of an archaeological site where a minor part of its total area is removed but the site retains a significant future research potential.	Minor harm to the setting of an archaeological monument or built heritage asset or Conservation Area.
Negligible/Neutral	Negligible impact from changes in use, amenity or access.	Negligible perceptible change to the setting of a building, archaeological site.
Low beneficial	Land use change resulting in improved conditions for the protection of archaeological remains.	Decrease in visual or noise intrusion on the setting of a building, archaeological site or monument.
Medium Beneficial	Land use change resulting in improved conditions for the protection of archaeological remains plus interpretation measures (heritage trails, etc.)	Significant reduction or removal of visual or noise intrusion on the setting of a building, archaeological site or monument.
High Beneficial	Arrest of physical damage or decay to an archaeological heritage asset.	Significant enhancement to the setting of an archaeological site

- 6.5.6 The significance of the impact of the proposed development on heritage assets is determined by the importance of the asset and the magnitude of impact to the asset.
- 6.5.7 The table below presents a matrix that demonstrates how the significance of impact has been calculated:

Table 6.5 – Archaeological Magnitude of Impact Criteria

Magnitude of Impact	High	Medium	Low	Negligible/Neutral
International Importance	Major	Major	Major	Negligible
National Importance	Major	Major/ Moderate	Moderate	Negligible
Regional/County Importance	Major/ Moderate	Moderate/ Minor	Minor	Negligible

Local Importance	Minor	Minor	Negligible	Negligible
Negligible Importance	Negligible	Negligible	Negligible	Negligible

- 6.5.8 Once any impacts have been identified, means by which they can be avoided through design will be explored as a priority. If impacts cannot be avoided through design then alternative strategies, which may include site investigation and recording, will be proposed. The residual impacts following the implementation of these measures will then be defined and significance criteria applied.

Consultation

- 6.5.9 Consultation will be undertaken with Suffolk Coastal District Council.

7 ABOVE GROUND ARCHAEOLOGY

7.1 Introduction

- 7.1.1 This section of the ES will assess the likely direct and indirect effects on both designated and non-designated above ground heritage assets within the Site boundary and within the surrounding area.
- 7.1.2 The chapter will be prepared by Montagu Evans LLP who are a leading heritage consultancy.

7.2 Legislation and Policy Context

- 7.2.1 Legislation regarding buildings of special architectural or historic interest is contained in the Planning (Listed Buildings and Conservation Areas) Act 1990. Section 66 of the 1990 Act is relevant as it states that the decision maker, when exercising planning functions, must give special regard to the desirability of preserving a listed building and its setting.
- 7.2.2 Recent case law established the strong presumption in law against harm to designated heritage assets, which is a matter of considerable importance and weight in the planning balance.
- 7.2.3 Section 38 of the Planning and Compulsory Purchase Act 2004 states that planning decisions should be taken in accordance with policies in the local development plan.
- 7.2.4 Section 2(2) of the Ancient Monuments and Archaeological Areas Act 1979 requires applicants to seek scheduled monument consent for any works that demolish, repair or alter scheduled monuments. Scheduled monument consents are determined by the Secretary of State. There is no statutory protection of the setting of scheduled monuments, but setting is protected in national planning policy.

National

Table 7.1 – Above Ground Heritage National Planning Policy

National Policy	Key Provisions
NPPF Section – Conserving the Historic Environment	<ul style="list-style-type: none"> • The NPPF places an understanding of the significance of heritage assets at the heart of planning decisions on the historic environment. • Significance is defined in the Glossary as ‘The value of a heritage asset to this and future generations because of its heritage interest’, which can be archaeological, architectural, artistic or historic. • Setting defined in the Glossary as: ‘The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings

National Policy	Key Provisions
	evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.'
Paragraph 128	Requires applicants to describe the significance of any heritage asset affects, including any contribution made by their setting.
Paragraph 132	Emphasises that great weight should be given to the conservation of designated heritage assets. It also emphasises proportionality, so the more significant a heritage asset is, the more information that is required to understand its significance and the greater the presumption in favour of its preservation.
Paragraph 134	States where harm to a designated heritage asset is less than substantial, this should be balanced with the public benefits of the scheme.
Paragraph 133	Deals with substantial harm e.g. total loss of a designated heritage asset, so is not relevant to this application.
Paragraph 137	States LPAs should look for opportunities for new development with the setting of heritage assets to enhance or better reveal their significance

Local

Table 7.2 – Above Ground Heritage Regional Planning Policy

Regional Policy	Key Provisions
Suffolk Minerals Site Specific Allocations DPD: Sites 1A and 2A Waldringfield Quarry - 2: Environmental Safeguards	<ul style="list-style-type: none"> 2.3 Prior archaeological investigation would be required. The area contains cropmarks, Scheduled Monuments and known prehistoric sites. Working and restoration would need to be managed to minimise the adverse impact on the setting of the scheduled burial mounds.
Suffolk Minerals Site Specific Allocations DPD: Sites 1A and 2A Waldringfield Quarry - 3: Buffer protection areas	<ul style="list-style-type: none"> In order to protect the integrity of the Scheduled Monument on the north-west boundary, a stand-off margin would be required on that boundary.

Table 7.3 - Above Ground Heritage Local Planning Policy

Local Policy	Key Provisions
Suffolk Coastal District Local Plan (2013), Policy DM21 (Design: Aesthetics)	Layouts should incorporate and protect existing site features of landscape, ecological, heritage or amenity value
Suffolk Coastal District Local Plan (2013), SP15- Landscape and Townscape	In addition to the protected landscape of the AONB, the valleys and tributaries of the Rivers Alde, Blyth, Deben, Fynn, Hundred, Mill, Minsmere, Ore, Orwell and Yox, and the designated Parks and Gardens of Historic or Landscape Interest are considered to be particularly significant.
Suffolk Coastal Local Plan remaining Saved Policies (2013)- AP1- Conservation Areas- Control of Development and Enhancement	Controls development within or affecting Conservation Areas to protect their character and ensure that new buildings, alterations or other development preserve or enhance them.
AP4- Parks and Gardens of Historic or Landscape Interest	The District Council will encourage the preservation and/ or enhancement of parks and gardens of historic landscape interest and their surroundings. Planning permission for any proposed development will not be granted if it would have a materially adverse impact on their character, features or immediate setting.

7.2.5 In addition to legislation and policy, the assessment will take into consideration relevant planning guidance and any material considerations, including:

- National Planning Practice Guidance (Online);
- Conservation Principles: English Heritage (2008);
- Managing Significance in Decision-Taking in the Historic Environment, Historic Environment Good Practice Advice in Planning 2, Historic England (2015);
- The Setting of Heritage Assets, Historic Environment Good Practice Advice in Planning 3, Historic England (2015); and
- The Suffolk Coastal Local Plan Supplementary Planning Guidance 6: Historic Parks and Gardens (1995).

7.3 Existing Baseline

- 7.3.1 The application site encompasses part of Adastral Park, which contains BT's research labs and offices of associated businesses. The majority of the site contains Waldringfield Quarry, a sand and gravel quarry, to the south and east of Adastral Park.
- 7.3.2 Site observations, a manual desk-based review of OS maps and relevant heritage receptors have been used to determine the study area. The study area has been informed by building locations and heights, topography and townscape features, and an understanding of the scale of the Proposed Development. The study area incorporates

all above ground heritage assets within 1km from the site boundary, including listed buildings, conservation areas, World Heritage Sites, scheduled monuments, registered parks and gardens and non-designated heritage assets identified by the Council. These are labeled on the Heritage Asset Map (Figure 7.1). Where referred to below, the number of the asset on the map has been given in brackets to enable clear identification.

7.3.3 There are three scheduled monuments in the application site, including:

- Two bowl barrows in Spratt's Plantation (SAM) (8);
- Bowl barrow and pill box 450m north-west of Sheep Drift Farm, in the north-west of the site (4).

7.3.4 The barrows are Bronze Age funerary monuments.

7.3.5 The following designated heritage assets are located outside the application site, within 1km of the site boundary:

- Bowl barrow 155m east of Sheep Drift Farm, adjacent to the site to the south (5);
- Bowl barrow 180m ENE Sheep Drift Farm, adjacent to the site to the south (6);
- Bowl barrow in Lancaster Drive, Martlesham Heath (SAM) (10);
- Bowl barrow in Birch Grove, Martlesham Heath (SAM) (9);
- Bowl barrow on Waldringfield Heath, 150m South of Heath Farm (SAM) (7);
- Church of St John the Baptist (Grade II* listed) (1);
- Howe's Farmhouse (Grade II listed) (2); and
- Thatch Cottage (Grade II listed) (3).

7.3.6 The site is located to the east of RAF Martlesham Heath, which was an operational airfield between 1916 and 1963. At least one building in the site is contemporary with the airfield, dating from c. 1927.

7.3.7 During a site visit, we identified some additional potential non-designated heritage assets in the study area associated with the RAF base, including:

- a Nissan Hut to the south west of the Site (17); and
- four red brick RAF barracks buildings, surrounding a Second World War Memorial (16).

7.3.8 There are a number of WWII pillboxes and gunposts within the study area, including a pill box on top of the barrow, which is covered by the scheduling. The others are not designated but are of cultural value and in our opinion qualify as non-designated heritage assets.

7.3.9 The following designated heritage assets were identified by Historic England in their comments on the 2009 ES so have been included in the assessment for completeness. These are illustrated on a second Heritage Asset Map (Figure 7.2), which extends beyond the study area. They are more than 1km from the site boundary:

- Sutton Hoo (SAM) (4);
 - Church of St Mary, Martlesham (Grade II*) (1);
 - Martlesham Hall (Grade II) (2); and
 - The Old Rectory (Grade II) (3).
- 7.3.10 There are no conservation areas, Registered Parks and Gardens or non-designated heritage assets in the study area (1km from the site boundary).
- 7.3.11 The assessment will be supported by accurate visual representations ('AVR') of the application site from locations that have been agreed with the Council during the pre-application stage.
- 7.3.12 Each viewpoint will be reproduced in the following formats:
- Existing – baseline photography;
 - Proposed – 'existing' plus wire line (AVR1) or grey block render (AVR2) or render (AVR3) of the Proposed Development;
 - Cumulative – 'proposed' plus material consents surrounding the site.
- 7.3.13 The AVRs will be prepared to industry standard by independent visualisation consultants. The methodology will be in accordance with Appendix C of the London View Management Framework (2012), which is considered best practice.
- 7.3.14 The following views will inform the assessment of effects on above ground heritage:
- View 3 from the 2009 ES Chapter: Old Main Road, Brightwell Heath; and
 - View 5 from the 2009 ES Chapter: Dobbs Lane, just north of Foxall Road Junction.

7.4 Potential Above Ground Heritage Impacts

Construction

- 7.4.1 Construction effects on above ground heritage, being short to medium-term, are generally treated as less significant than permanent effects.
- 7.4.2 We are considering the treatment of the SAM in the north-west of the site during the design process. One option is to incorporate interpretation, either in the form of a board or potentially in a building, possibly by converting the pill box. It is therefore possible that there will be some direct effects on this SAM during construction, to be confirmed during the design process.
- 7.4.3 The construction effects are likely to affect the setting of heritage assets within the application site or near it, which are likely to be minor adverse to negligible indirect effect. The following designated heritage assets may be affected:
- Two bowl barrows in Spratt's Plantation (SAM);

- Bowl barrow and pill box 450m north west of Sheep Drift Farm, in the north-west of the site;
- Bowl barrow 155m east of Sheep Drift Farm, in the south-west of the site;
- Bowl barrow 180m ENE Sheep Drift Farm, also in the south-west of the site;
- Bowl barrow in Lancaster Drive, Martlesham Heath (SAM);
- Bowl barrow in Birch Grove, Martlesham Heath (SAM);
- Bowl barrow on Waldringfield Heath, 150m South of Heath Farm (SAM); and
- Church of St John the Baptist (Grade II* listed).

Operation

- 7.4.4 At the operational phase the proposed development incorporates primary mitigation measures that have embedded into the project design.
- 7.4.5 The primary mitigation measures, include the design response to possible effects identified in the iterative design process, which seek to avoid significant adverse effects through careful planning, siting, access, layout and scale of buildings.
- 7.4.6 Again, we are considering the treatment of the SAM in the north-west of the site during the design process. One option is to incorporate interpretation, either in the form of a board or potentially in a building, possibly by converting the pill box. It is therefore possible that there will be some direct effects on this SAM during operation, to be confirmed during the design process. We will also be advising on the buffer zones around the SAMs and treatment of WWII pill boxes in the development.
- 7.4.7 There will be no effect on the setting of the majority of cultural heritage assets in the study area, because the proposed development will be screened by interposing development and vegetation.
- 7.4.8 There is potential for setting effects on the following designated heritage assets, which are within or near the application site:
- Two bowl barrows in Spratt's Plantation (SAM);
 - Bowl barrow and pill box 450m north west of Sheep Drift Farm, in the north-west of the site;
 - Bowl barrow 155m east of Sheep Drift Farm, in the south-west of the site;
 - Bowl barrow 180m ENE Sheep Drift Farm, also in the south-west of the site;
 - Bowl barrow in Lancaster Drive, Martlesham Heath (SAM);
 - Bowl barrow in Birch Grove, Martlesham Heath (SAM);
 - Bowl barrow on Waldringfield Heath, 150m South of Heath Farm (SAM); and
 - Church of St John the Baptist (Grade II* listed).

7.5 Proposed Scope and Methodology of the Assessment

- 7.5.1 The assessment will be informed by the guidance in Historic England's, The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning (GPA3) (2015), and Conservation Principles Policies and Guidance (2008).
- 7.5.2 Heritage effects will be assessed in terms of the proposed development's interaction with the form and character of the existing townscape, as well as the setting of above ground heritage assets.
- 7.5.3 The assessment will be supported by Accurate Visual Representations (AVRs), which will provide the basis for the assessment of the Proposed Development and its effect on agreed key views. It is important to note, however, that AVRs, even the most 'realistically' rendered, have limitations. They are 2-D representations from a fixed point of scenes which are perceived as one moves around.
- 7.5.4 Critically, they lack depth cues and are rendered in clear lighting conditions at times of greatest visibility (generally). Neither do they capture transient significant effects arising from noise or traffic on perception, or that wider range of expectations and associations that anyone in an urban scene may have.
- 7.5.5 Professional judgement will be used to gauge the likely extent of significant visibility of the proposed development, on the basis of site visits and prior knowledge of the urban/rural form around the application site.
- 7.5.6 The assessment will report on cumulative impacts and effects and illustrate cumulative schemes within the AVRs where appropriate. A summary of the cumulative effects will be provided in the cumulative assessment chapter of the ES.

Consultation

- 7.5.7 We will consult with conservation and design officers at Suffolk Coastal District Council and Historic England as part of the iterative design process.



HERITAGE ASSET MAP

Application Site

Grade II*

- Church of St John the Baptist (Grade II*)

Grade II

- Howe's Farmhouse (Grade II)
- Thatch Cottage (Grade II)

Scheduled Monuments

- Bowl Barrow and Pill Box 450m north west of Sheep Drift Farm
- Bowl Barrow 155m east of Sheep Drift Farm
- Bowl Barrow 180m ENE of Sheep Drift Farm
- Bowl Barrow on Waldringfield Heath, 150m south of Heath Farm
- Two Bowl Barrows in Spratt's Plantation
- Bowl Barrow in Birch Grove, Martlesham Heath
- Bowl Barrow in Lancaster Drive, Martlesham Heath
- Pole Hill Bowl Barrow
- Two Bowl Barrows 312m south west of Dobbs Corner

Non-designated Heritage Assets

- Brick built structure with L shaped wing to rear
- Eight sided brick built pillbox
- Small, rectangular brick built shed
- Brick barrack blocks and war memorial
- Nissan Hut



HERITAGE ASSET MAP

■ Application Site

Grade II*

1. Church of St Mary Martlesham

Grade II

2. Martlesham Hall
3. The Old Rectory

Scheduled Monuments

4. Prehistoric settlement and group of barrows (including site burial) at Sutton Hoo

8 ECOLOGY

8.1 Introduction

- 8.1.1 Adastral Park is a varied area of land consisting of habitats of generally low ecological value such as arable land, offices and warehouses and quarry as well as areas of relatively higher ecological value, such as woodland, lakes and semi-natural grasslands. The site is situated to the east of Ipswich, between Waldringfield, Martlesham and Martlesham Heath.

8.2 Legislation and Policy Context

- 8.2.1 The National Planning Policy Framework (NPPF) sets out the government's planning policies for England which must be considered during planning decisions and in the making of local and neighbourhood plans, as required by planning law (Department for Communities and Local Government, 2012). Local Planning Policy is formed from the Suffolk Coastal District Local Plan: Core Strategy & Development Management Policies (Suffolk Coastal District Council, 2013) and the Suffolk Coastal Local Plan: remaining 'Saved Policies' (Suffolk Coastal District Council, 2013).
- 8.2.2 There are a number of protected sites and species which are protected under various legislation and policy as shown in Table #. The highest level of protection is listed first.

Table 8.1 Legislation and Policy Protecting Designated Sites and Protected Species.

Legislation / Policy	Designated Sites	Protected Species
Conservation of Habitats and Species Regulations 2012 (based on EU directives)	Special Areas of Conservation (SAC's) and Special Protection Areas (SPA's)	Otter, Hazel Dormouse, Great Crested Newt and Bats
Government policy to apply the same level of protection as to European sites	Wetlands of global importance (Ramsar sites)	-
Wildlife and Countryside Act 1981 (as amended)	Sites of Special Scientific Interest (SSSI's) Local Nature Reserves (LNR's)	Reptiles, Water Voles, Badgers, White Clawed Crayfish and some Birds, of national importance
Planning Policy	County Wildlife Sites (CWS's)	Biodiversity Action Plan (BAP) species / Natural Environment and Rural Communities Act (NERC, 2006) species of principle importance

National

Table 8.2 – Ecological National Planning Policy

National Policy	Key Provisions
<i>National Planning Policy Framework</i>	<p><i>Chapter 11: Conserving and Enhancing the Natural Environment, paragraphs 109-125. Specifically, 109, 117, 118, 119 and 125.</i></p> <p>109 – The planning system should contribute to and enhance the natural and local environment by:</p> <ul style="list-style-type: none"> • protecting and enhancing valued landscapes, geological conservation interests and soils; • recognising the wider benefits of ecosystem services; • minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; • preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and • remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate. <p>117 – To minimise impacts on biodiversity and geodiversity, planning policies should:</p> <ul style="list-style-type: none"> • plan for biodiversity at a landscape-scale across local authority boundaries; • identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat • restoration or creation; • promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan; • aim to prevent harm to geological conservation interests; and • where Nature Improvement Areas are identified in Local Plans, consider specifying the types of development that may be appropriate in these Areas. <p>118 – When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:</p> <ul style="list-style-type: none"> • if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

National Policy	Key Provisions
	<ul style="list-style-type: none"> • proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest; • development proposals where the primary objective is to conserve or enhance biodiversity should be permitted; • opportunities to incorporate biodiversity in and around developments should be encouraged; • planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and • the following wildlife sites should be given the same protection as European sites: <ul style="list-style-type: none"> ○ potential Special Protection Areas and possible Special Areas of Conservation; ○ listed or proposed Ramsar sites; and ○ sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites. <p>119 – The presumption in favour of sustainable development (paragraph 14) does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined.</p> <p>125 – By encouraging good design, planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.</p>

Local

Table 8.3 – Ecological Local Planning Policy

Local Policy	Key Provisions
<i>AP216 – Ipswich Fringe: Martlesham Heath Industrial Estate</i>	The industrial area including the British Telecommunication PLC Complex, to be retained as a general employment area.

Local Policy	Key Provisions
<i>AP217 – Ipswich Fringe: BT Laboratories, Martlesham</i>	Any proposals to extend or intensify the experimental test range facilities will need to be considered on their merits, taking account of (inter alia) their impact on the countryside.
<i>SP20 – Eastern Ipswich Plan Area</i>	Specifically, on land to the south and east of Adastral Park, strategic open space in the form of a country park or similar high quality provision will be required to mitigate the impact of development at this site and the wider cumulative impact of residential development on the relevant designated European nature conservation sites.
<i>SP14 - Biodiversity and Geodiversity</i>	<p>Biodiversity (and geodiversity) will be protected and enhanced using a framework based on a network of: designated sites, wildlife corridors and links, rivers, estuaries and coast, identified habitats and geodiversity features, landscape character areas and protected species.</p> <p>The Suffolk Biodiversity Action Plan (BAP) will be implemented. The strategy will also be to contribute to county targets through restoration, creation and on-going management of new priority habitats as identified in those documents.</p>
<i>DM27- Biodiversity and Geodiversity</i>	<p>All development proposals should:</p> <ul style="list-style-type: none"> - protect the biodiversity value of land and buildings and minimise fragmentation; - Maximise opportunities for restoration, enhancement and connection of natural habitats; and - Incorporate beneficial biodiversity conservation features where appropriate. <p>Development proposals that would cause a direct or indirect adverse effect (alone or combined with other plans or projects) to the integrity of internationally and nationally designated environmental sites or other designated areas, priority habitats or protected/priority species will not be permitted unless:</p> <ul style="list-style-type: none"> - prevention, mitigation and, where appropriate, compensation measures are provided such that net impacts are reduced to a level below which the impacts no longer outweigh the benefits of the development*; or - with regard to internationally designated sites that the exceptional requirements of Reg. 62 of the Conservation of Habitats and Species Regulations 2010 (as amended) relating to the absence of alternative solutions and Imperative Reasons of Overriding Public Interest have been met.

8.3 Existing Baseline

8.3.1 Adastral Park contains several habitats which could support protected species (including Bats, Birds, Badgers, Invertebrates, Reptiles and Great Crested Newts, as

well as some of the habitats themselves being of biodiversity value, for example: woodland, semi-natural grasslands, bunds, mature trees).

8.4 Potential Environmental Impacts

Construction

- 8.4.1 Impacts from the development during the construction period could include disturbance to, loss of and damage to (i.e. pollution) habitats of biodiversity value. In addition, there is potential for any protected species utilising these habitats to be killed, injured or disturbed and their resting and / or breeding places destroyed, damaged or disturbed.
- 8.4.2 Furthermore, there is the potential for designated sites / their associated features to be impacted through pollution events.

Operation

- 8.4.3 During the operational phase of the development the potential for disturbance to retained habitats and species, their resting and breeding places remains. In addition, designated sites and their associated features could be impacted through disturbance from increased recreation.

8.5 Proposed Scope and Methodology of the Assessment

- 8.5.1 A number of habitat and species surveys have been and will be undertaken following best practice guidance (included below in brackets), including:

- Desk top data search;
- Shadow Habitat Regulations Assessment (IEA, 1995 & Natural England, 2008);
- Habitats (including botanical and macro-fungal survey) (JNCC, 2010);
- Badger (Harris *et al.*, 1989 & Natural England, 2009);
- Bats (Collins, 2016);
 - Activity
 - Roosting
- Birds (Gilbert *et al.*, 1998, Bibby *et al* 1992);
 - Breeding
 - Migrant
 - Wintering
- Great Crested Newt (English Nature, 2001);
- Invertebrates (Drake *et al.*, 2007 and Colin Plant Associates, 2006);
- Reptiles (Froglife, 1999 and Gent and Gibson, 2003); and
- Small Mammals (Harris & Yalden, 2008).

Consultation

- 8.5.2 Consultation with Natural England will be undertaken with regard to impacts on designated sites through their discretionary advice service (DAS).

9 FLOOD RISK AND DRAINAGE

9.1 Introduction

- 9.1.1 This scoping section has been prepared to set out the methodology for the assessment of the Proposed Development on Flood Risk and Drainage.
- 9.1.2 The assessment will deal with the separate but interlinked issues of:
- Flood Risk: The potential effects of the development upon the existing hydrological regime including for the potential impacts of the site on the surrounding area;
 - Surface Water Drainage: The potential effects of the development on drainage downstream of the site;
 - Water Quality: The potential effects of the development on water quality in the wider catchment; and
 - Foul Water Drainage: The potential effects of the development on the existing foul water network.

9.2 Legislation and Policy Context

- 9.2.1 The assessment will be carried out with due regard to the following guidance:
- National Planning Policy Framework (NPPF), 2012;
 - Planning Practice Guidance (PPG), 2014; and
 - Suffolk Coastal and Waveney District Council - Strategic Flood Risk Assessment and Local Plan.

9.3 Existing Baseline

- 9.3.1 The site lies entirely within Flood Zone 1. This area is defined as being at little or no flood risk at all, with a 1 in 1000 annual probability (0.1% chance) or less of flooding from rivers or the sea in any one year.
- 9.3.2 Assessment of other potential flooding mechanisms shows the land to have a low probability of flooding from overland flow, ground water and sewer flooding.
- 9.3.3 The key receptors at the site will be defined through the completion of the detailed assessment work within the Flood Risk Assessment.

9.4 Potential Flood Risk and Drainage Impacts

- 9.4.1 This Chapter will identify the drainage characteristics of the existing site and its environs along with any potential issues and risks associated with the former use of the site. It will consider impacts on groundwater, nearby watercourses and water resources.

Recommendations for any mitigation measures required to minimise the potential environmental impacts of the proposed development will be considered.

Construction

9.4.2 As a result of the Proposed Development, two potential construction phase environmental effects have been identified relating to hydrology and hydrogeology. These mechanisms are as follows:

- direct and indirect contamination of surface water due to mobilisation of soils, existing contamination and spillage of oils and the like from construction plant; and
- direct and indirect flooding and changes to baseline drainage hydrology due to disturbance of the ground during construction works.

Operation

9.4.3 As a result of the Proposed Development, four potential operational environmental effects are identified relating to water. These mechanisms are as follows:

- direct and indirect flooding of surrounding watercourses, the wider catchment area, adjacent land and property due to increases in surface water runoff from positively drained hard areas;
- direct flooding of the Proposed Development due to inadequate flooding resilience and management of residual flood risk;
- direct contamination or deterioration of surface water quality due to leakages of fuel oils, general spillages and other contaminants from within the development and the associated collection of surface water drainage from hardstanding areas; and
- direct and indirect contamination of surface water, soil and potential groundwater contamination due to surcharging of the foul water network or the discharge of untreated foul flows.

9.4.4 A number of flood risk and drainage impacts could occur as a result of the development proposals as described above. However, with mitigation some of these could potentially offer beneficial effects such as a reduction in flood risk to the immediate area surrounding the development site.

9.4.5 All potential impacts can be reduced by suitable mitigation and management and will be considered within the assessment and presented within the Flood Risk and Drainage ES Chapter.

9.5 Proposed Scope and Methodology of the Assessment

9.5.1 A Flood Risk Assessment and surface water drainage strategy will be undertaken to establish flood risk to and from the proposed development and recommend mitigation measures where necessary. This will form the Appendix to the ES chapter.

- 9.5.2 Impacts in relation to flood risk and drainage will be assessed against the methodology which will first identify potential receptors and impacts. These impacts will then be described as beneficial to adverse, short to long term, direct and indirect, permanent or temporary. Cumulative impacts will also be considered within the assessment. Assessed against each other, the sensitivity of the receptors compared to the nature of the impact will indicate the significance of the environmental effect.
- 9.5.3 It is anticipated that regulatory control will ensure that developments completed elsewhere in the catchment will be required to implement sustainable drainage measures and controls on drainage discharge rates that at least meet current standards. In such circumstances, the environmental effects resulting from cumulative development will be negligible.
- 9.5.4 Ground contamination testing and infiltration tests will be undertaken to identify the most suitable locations for the proposed sustainable drainage systems.

Consultation

- 9.5.5 Consultation with the Environment Agency, Suffolk County Council as Local Lead Flood Authority (LLFA), Suffolk Coastal District Council and Anglian Water will be required to understand the relevant flood risk and drainage hydrology issues relating to the site and the potential wider catchment area.

10 GROUND CONDITIONS AND CONTAMINATION

10.1 Introduction

- 10.1.1 This scoping section has been prepared to set out the methodology for the assessment of the Proposed Development on ground conditions.
- 10.1.2 The Ground Conditions assessment will deal with the separate but interlinked issues of:
 - existing contamination: The potential effects of the development upon the existing hydrological regime including for the potential impacts of the site on the surrounding area; and
 - development contamination: The potential effects of the development on drainage downstream of the site.
- 10.1.3 Data used in the assessment will be drawn from a Geo-Environmental Phase 1 Assessment for the Proposed Development. The desk study will be attached as an appendix to the ES. The desk study will set out ground condition issues relating to the Proposed Development and identify any necessary interventions to mitigate the anticipated effects.

10.2 Legislation and Policy Context

- 10.2.1 The assessment will be carried out with due regard to the following guidance:
 - National Planning Policy Framework (NPPF), 2012;
 - DEFRA: Environmental Protection Act 1990: Part 2A – Contaminated Land Statutory Guidance; and
 - Planning Practice Guidance: Contaminated Land.

10.3 Existing Baseline

- 10.3.1 Existing baseline conditions will be assessed through a Phase 1 Geoenvironmental Desk Study which will review data on historic land use activities such as mining and landfill, as well previous site investigation data.
- 10.3.2 The key receptors at the Site will be defined through the completion of the above detailed assessment work and the following information sources will be used:
 - historical land use data and mapping;
 - published geology and British Geological Survey borehole and mining records; and
 - environmental statutory registers.

10.4 Potential Ground Conditions and Contamination Impacts

10.4.1 The potential ground conditions and contamination impact on the environment will be assessed for the construction and operational phases, as follows:

Construction

10.4.2 As a result of the Proposed Development, one potential construction phase environmental effect has been identified relating to ground conditions. This mechanism is as follows:

- direct contamination of the soil and potential groundwater contamination due to earthwork operations and potential spillage of fuels oils and site stored materials during construction activities.

Operation

10.4.3 As a result of the Proposed Development, two potential operational environmental effects are identified relating to ground conditions. The mechanisms are as follows:

- existing contamination: Direct or indirect contamination of flora, fauna, controlled waters and building fabric due to the mobilisation of baseline contaminants during earthwork operations; and
- development contamination: Direct and indirect contamination of the soil and potential groundwater contamination due to leakages of fuel oils, general operational spillages and other contaminants from within the proposed development and the associated collection of surface water drainage from hardstanding areas.

10.4.4 The proposed development will be designed to avoid significant adverse effects resulting during the operational phase and construction works.

10.4.5 To minimise the potential environmental effects of the proposed development on the ground conditions and surrounding area, the following specific measures are being incorporated into the design.

- an efficient system for the collection of storm and foul water from the site and conveyance to an appropriate receptor; and
- measures to remove background contaminants from surface water drainage prior to discharge and to contain any accidental liquid spillages at the site.

10.5 Proposed Scope and Methodology of the Assessment

10.5.1 Methods of assessment have been employed that are consistent with current best practice and recommendations in the form of statutory documents and recognised publications to ensure that the findings represent a robust approach to the assessment.

10.5.2 For the purposes of the Phase 1 Geoenvironmental Desk Study assessment the study area will be taken as the site boundary including a 1,000m buffer.

- 10.5.3 The tables below outline the criteria for determining the magnitude of identified impacts, the sensitivity of receptors and the significance of the resulting effects.

Table 10.1 – Magnitude of Effect

Magnitude	Criteria
Substantial	Loss of attribute
Moderate	Losses on integrity or partial loss of attribute
Minor	Minor impact / minor loss of attribute
Negligible	Insignificant loss of attribute that does not affect use or integrity

Table 10.2 – Sensitivity Criteria

Sensitivity	Criteria
High	Water dependent SSSI, SPA/SAC, Ramsar sites or highly sensitive ecosystems. Protected areas including designated sites A source used for public or local potable water supply. Area of high amenity value, including areas of recreational land use or bathing and where water emersion sports are regularly practised.
Medium	Area of nature conservation importance at the regional level or a moderately sensitive ecosystem. Area of moderate amenity value including public parks, areas of recreational land use, popular footpaths adjacent to watercourses, or watercourses running through housing developments/town centres.
Low	Area of no or only local social interest. Area of low amenity value with only casual access.

Table 10.3 – Significance of Effect

Magnitude	Sensitivity		
	High	Medium	Low
Substantial	Major	Major	Moderate
Moderate	Major	Moderate	Minor
Minor	Moderate	Minor	Minor
Negligible	Minor	Negligible	Negligible

- 10.5.4 By confirming the sensitivity of a receptor coupled with the magnitude of the potential effect caused by development, it is possible to confirm the significance of the impact, i.e. should the development impact on an SSSI (High Sensitivity) resulting in a loss of this attribute (Substantial Magnitude), the significance of this would be Major.

10.5.5 Further ground condition assessments are to be carried out via a Phase II intrusive investigation which will confirm the existing geology, chemical characteristics and physical properties of the underlying soils and ground onsite. In addition to this any potential existing ground contamination on site will be quantified and delineated, in order to appropriately formulate potential remedial measures, where necessary.

Consultation

10.5.6 In advance of the Phase 1 Geoenvironmental Desk Study, the following relevant statutory bodies and interested parties will be consulted regarding the proposals to ensure the assessment is appropriate:

- Environment Agency;
- Suffolk Coastal District Council; and
- Natural England.

11 LANDSCAPE AND VISUAL IMPACT

11.1 Introduction

11.1.1 This chapter of the ES, to be prepared by Tyler Grange LLP, provides the Landscape and Visual Impact Scoping Assessment and discusses the potential for the development to affect these aspects of the environment. The chapter provides a summary of the potential effects and how this will be addressed in the EIA and presented in the subsequent ES.

11.2 Legislation and Policy Context

11.2.1 The following provides details of planning policy that is relevant to the Landscape and Visual Impact Assessment (LVIA). To avoid duplication other overarching policies will be addressed in the planning statement. The planning policy set out below has been used to set the context for the Masterplan and will inform the landscape mitigation proposals.

National

Table 11.1 – Landscape and Visual Impact National Planning Policy

National Policy	Key Provisions
National Planning Policy Framework (NPPF)	<p>The NPPF policies relevant to landscape and green infrastructure matters in the context of the proposed development are as follows:</p> <ul style="list-style-type: none"> • Achieving sustainable development; • Delivering a wide choice of high quality homes; • Promoting healthy communities; • Requiring good design; • Valued Landscapes; and • Conserving and enhancing the natural environment. <p>Particular attention will be given to issues relating to Valued Landscapes, Landscape character and Visual Amenity. These include consideration of the <i>Suffolk Coast & Heaths Area of Outstanding Natural Beauty</i> which is situated to the east of the application site. The NPPF affords great weight to the conserving landscape and natural beauty of AONBs, which have the “highest status of protection in relation to landscape and scenic beauty” (paragraph 115)</p> <p>Whilst not situated within the AONB, the proposals have the potential to affect the setting of the AONB and views towards and from within the designated landscape.</p>

Local

Table 11.2 – Landscape and Visual Impact Local Planning Policy

Local Policy	Key Provisions
Suffolk Coastal District Local Plan: Core Strategy & Development Management Policies DPD, July 2013	
<i>Objective 1 - Sustainability</i>	
Strategic Policy SP1 – Sustainable Development	Strategic Policy SP1 seeks to achieve sustainable development, including to conserve and enhance the area's natural, historic and built environment and maintain and enhance a sense of place.
<i>Objective 11 – Protecting and Enhancing the Physical Environment</i>	
<i>Strategic Policy SP15 – Landscape and Townscape</i>	<p>Strategic Policy SP15 seeks to protect and enhance the various landscape character areas within the district, through opportunities linked to development, or through other strategies.</p> <p>Reference is made within the supporting text to the Suffolk Landscape Character Assessment, which identifies a number of landscape types across the district. The supporting text states that the Council considers it important to conserve and enhance the different character areas, whilst recognising that this must be integrated with the need to accommodate change, whilst minimising harm to the environment and seeking opportunities to bring about improvements where possible.</p> <p>The Policy identifies the protected landscape of the AONB as being of significance, with the supporting text recognising the designated landscape as being of national importance, and stating that the AONB will be protected for its visual qualities, as well as tranquillity and ambience.</p> <p>The Policy also states that the Council will seek to enhance and preserve the distinctive historical and architectural value, as well as landscape value and character of towns and villages, and the quality of life in the generality of urban areas. The supporting text states that the setting of settlements within their wider landscape context as being an important function in defining and maintaining quality of place and identity.</p>
<i>Objective 12 - Design</i>	<p>Although there is no specific Strategic Policy relating to design, the DPD considers design and housing density, citing the use of appropriate development management policies and Supplementary Planning Guidance to ensure that development is of high quality, with local distinctiveness being important in making development fit the place.</p> <p>In relation to housing density, the DPD states that the Council will adopt a flexible approach to density, with proposals responding to existing distinctive character. It is expected that large scale developments deliver a range of densities.</p>

Local Policy	Key Provisions
<i>Objective 14 – Green Infrastructure</i>	The importance of Green Infrastructure as an environmental resource and its role in reducing pressure on sensitive high quality landscapes and wildlife areas to reduce recreation pressure upon them is recognised within the DPD and related policies.
<i>Strategic Policy SP17 – Green Space</i>	This Policy seeks to ensure that communities have access to Green Space that provides heath, community cohesion and a greater understanding of the environment, without detriment to wildlife and landscape character.
<i>Strategic Policy SP20 – Eastern Ipswich Plan Area</i>	<p>The DPD identifies an allocation of 2,000 new homes on land to the east and south of Adastral Park, including the application site area. The Council identify the area as having 'positive significant advantages' with the justification for the area including that:</p> <ul style="list-style-type: none"> • The development would utilise land that is to be the subject of mineral extraction (some parts already being worked) and consists of gently undulating land that is very much self-contained within the landscape. • The ability to properly mitigate the impact on the AONB through the provision of strategic landscaping at an early stage of the development and properly plan an appropriate layout and phasing requirements; • Access to and impact upon the countryside can be improved through mitigation measures including new open spaces as part of the overall development. <p>Within Strategic Policy SP20, the strategy for the Martlesham, Newbourne & Waldringfield Area Action Plan includes the following provisions:</p> <ul style="list-style-type: none"> • A planned direction of growth eastwards of the A12, to the south and east of Adastral Park • Creation of its own distinctive identity with smaller readily distinguishable villages, neighbourhoods and communities within the larger area; • Provision of advanced planting and landscaping to create new settlement boundaries that blend with the surrounding landscape and contribute to biodiversity and the ecological network; and • Maximises opportunities to achieve access to greenspace, including the countryside

Local Policy	Key Provisions
'Saved' policies from the previously adopted Suffolk Coastal Local Plan	<p>A number of policies have been saved from the former Suffolk Coastal Local Plan, including those relating to Special Landscape Areas (saved Policy AP13), Parks and Gardens of historic or Landscape Interest (saved Policy AP-4) and Conservation Areas (saved Policy AP1).</p> <p>The application site does not lie within or in close proximity to areas covered by any of these designations.</p>

- 11.2.2 Other documents for consideration include the following Supplementary Planning Guidance and published documents that form part of the evidence base and are of relevance to landscape and visual issues.

Supplementary Planning Documents and Guidance

SPG 9 - Suffolk Design Guide for Residential Areas

- 11.2.3 SPG 9 provides advice relating to the design of residential development, including the shape of development, material and design of individual dwellings. Section 3 includes advice relating to the landscaping of housing schemes and highlighting the importance of ensuring that the guiding principles of landscaping are discussed and agreed with the LPA early-on in the development process to ensure the landscape scheme has the best scope for positive design.
- 11.2.4 The use of pre-development planting and making alterations to topography to increase the effectiveness of planting, as well as providing variety are identified.

Local Plan Evidence Base

- 11.2.5 The Local Plan Evidence Base includes the following documents that are of relevance when considering the baseline conditions and potential effects of development:
- Suffolk Landscape Character Assessment, 2008;
 - Suffolk Historic Landscape Characterisation, 2009; and
 - Suffolk Coast and Heaths Area of Outstanding Natural Beauty Management Plan 2008-2013.

- 11.2.6 A summary of the Landscape Character Areas from the Landscape Character Assessment is available on the Landscape East website: <http://landscape-east.org.uk/>
- 11.2.7 The AONB Management Plan and Position Statements produced and published by the AONB are considered further below.

Suffolk Coast and Heaths Area of Outstanding Natural Beauty: Management Plan 2013 - 2018

- 11.2.8 The AONB Management Plan is a material consideration when determining planning applications, and has a role in supporting the Local Plans of various LPAs through the

identification of issues, aims, objectives and actions that are relevant to the AONB and can be underpinned by planning policy.

11.2.9 The plan identifies the character that makes up the special qualities of the AONB, as well as a number of social and environmental policy context and issues. The plan sets-out an Action Plan that includes a number of aims objectives and actions, based on the character, special qualities and the social and environmental context and issues. Those aims of relevance to landscape character and the situation of the application adjacent to, but outside the AONB, include the following:

- Aim 3: Conserve landscape character and enhance the distinctive nature of the AONB; and
- Aim 7: Retain the tranquillity of the area.

11.2.10 To the east of the application site, the AONB is identified within the Management Plan as falling within the 'Estate Sandlands' Landscape Character Type, which comprises large areas of lowland heath, with the western edge including ancient woodlands and historic parklands. Settlements within the Estate Sandlands comprise small villages and scattered estate farms.

Development in the setting of the Suffolk Coast & Heaths Area of Outstanding Natural Beauty, December 2015

11.2.11 This position statement that has been prepared by the AONB Partnership defines the setting of the AONB as:

"... including the views into and out of the AONB, to be the area within which development and land management proposals, by their nature; size; scale; siting, materials or design can be considered to have an impact, positive or negative, on the natural beauty and special qualities of the nationally designated landscape.

11.2.12 The position statement states that the AONB Partnership considers development in the setting of the AONB that would have a significant adverse impact on the natural beauty and special qualities of the area should not be supported. Whether a development affects the natural beauty and special qualities of the AONB will depend on the character, location, scale, material and design. Examples of adverse impacts identified by the position statement include the following:

- *Development not appropriate to the landscape setting of the AONB;*
- *Blocking or interference of views out of the AONB particularly from public viewpoints;*
- *Locating or interference of views of the AONB from public viewpoints outside the AONB;*
- *Loss of tranquillity through the introduction of lighting, noise, or traffic movement;*
- *Introduction of an abrupt change of landscape character; and*
- *Reduction in public access to or within the AONB.*

11.3 Existing Baseline

- 11.3.1 A desk based review of policy, guidance and published landscape character assessments (as detailed above) and initial fieldwork has been undertaken in order to gain an understanding of landscape and visual issues relating to the site and surrounding area and to inform the development of the masterplan and design of the proposals.

Site Features

- 11.3.2 The site consists of a mosaic of different land uses and areas with distinct character. These include areas of agricultural land, gravel and sand extraction, quarry operations and associated infrastructure, as well as areas of restored landscape to include a large central water body.
- 11.3.3 The site lies to the immediate south and east of Adastral Park Innovation Centre. The A12 bounds the site to the west with the Suffolk Coast AONB in close proximity to the east.
- 11.3.4 The site landform has been altered due to the mineral extraction operations which have resulted in a landscape containing large man made engineered features, of note are the peripheral earth bunds to the north / north-eastern site boundary and the southern and western boundaries.
- 11.3.5 The site boundary contains mature tree belts and woodland to the east and southern boundaries. A large coniferous tree belt runs adjacent to the southern boundary and heavily screens the site from the wider landscape to the south. Mature woodland defines the majority of the northeastern boundary and is associated with existing development to include the Moon and Sixpence Caravan Park. This woodland heavily screens the site from the wider landscape to the north and north-east. These features along with other tree plantations and woodland located to the south and south west offer a level of containment and screening to the majority of the site in the local area.
- 11.3.6 The northern and western areas of the site are influenced by the urbanising effects of Adastral Park Innovation Centre, including the dominant monolithic structure of the BT building and associated tower and array of large satellite dishes to the western site boundary. The dishes and BT tower are prominent features and focal points in the local landscape. The western site boundary with the A12 corridor is formed by a further large earth bund.
- 11.3.7 The site is crossed by two Public Rights of Way which run north-south from the southern boundary of Adastral Park to Ipswich Road. Further Public Rights of Way run around the periphery of the site and create a circular route that links up with Public Rights of Way within the wider landscape. At present the Public Rights of Way are separated from the site by the engineered bunds and planting. The bunds heavily screen the site for the majority of the site with elevated views possible from users of the bridleway which runs adjacent to the southern boundary.

- 11.3.8 The site is bisected by the BT sound testing corridor which runs from the satellite dishes in a south easterly direction with a receiving tower located at the southern extent. The height of the tower results in it being visible from the peripheral boundary rights of way.

Published Landscape Character

- 11.3.9 At a national level the site lies within Suffolk Coasts and Heath (No 82), and at a local level the site falls within the landscape character area Forested Estate Sandland as defined by the Landscape East Landscape Character Assessments (2009-2011).
<http://landscape-east.org.uk/>.
- 11.3.10 Key characteristics and features of the Forested Estate Sandlands LCA include the following:
- gently rolling landform, predominantly comprising open arable farmland;
 - extensive areas of conifer plantations, shelterbelt plantings and pine lines;
 - remnant heaths;
 - medium to large scale field pattern, with rectilinear field patterns resulting from planned enclosures;
 - settlement comprising nucleated villages surrounded by estate farmlands;
 - 18th and 19th century parks, ringed by shelterbelts;
 - strong sense of isolation resulting from nucleated settlement, open heath and extensive plantation woodland; and
 - blocky landscape structure creating strong visual contrast between containment in forested areas and wide expansive farmland.

- 11.3.11 As described above, the majority of the application site does not share these characteristics, comprising predominantly mineral extraction / quarrying and associated earth works. Given its location to the south and east of Adastral Park, the site is well related to the developed edge and urbanising features, as well as the busy A12 corridor to the west.
- 11.3.12 The containment of the site by shelterbelts and woodland, contrasting with the open arable fieldscape and nucleated villages within the wider landscape to the east are typical features of the wider landscape beyond the eastern edge of Ipswich and Martlesham.

11.4 Potential Landscape and Visual Impacts

- 11.4.1 The Masterplan is being designed in order to respond to the landscape context of the site, retaining positive features, including the existing boundary tree belts and on-site waterbody, and maximising the opportunity to provide high quality areas of open space and Green Infrastructure as part of a holistic approach to placemaking.
- 11.4.2 This includes for substantial areas of open space that connect with the existing countryside, landscape features and rights of way network that include the provision of a range of habitats. The landscape framework will ensure that the eastern boundary

adjacent to the AONB provides an appropriate transitional edge that reinforces the characteristics of the local landscape and respects the setting, views to and from the AONB obtained from local footpaths, roads, properties and recreational resources.

Landscape Character

- 11.4.3 As described above, the landscape character of the site is varied, and includes areas of degraded landscape, such as the mineral extraction workings and man-made earthwork features to site boundaries. The site and the surrounding landscape is also heavily influenced by the development at Adastral Park, which includes the dominant form and distinctive tower of the BT building, as well as satellites, industrial, commercial and office building development that bounds the site. The busy A12 corridor to the west also reduces the tranquility of the area.
- 11.4.4 As set-out above, there are opportunities for the proposals to provide a positive edge and transition with the open countryside that reinforces and respects the character of the area, including that of the AONB.

Landscape Resources

- 11.4.5 Physical landscape features/receptors within the site that may be directly affected by the development include the following:
- **Topographic and drainage features:** The reinstatement of the current quarrying and mineral extraction workings, including the potential removal and / or reprofiling of existing earth banks and bunds, provide opportunities to reprofile the land and assist in the creation of a robust landscape framework, augmented with the planting of trees and structural planting. There are also opportunities to retain the existing lake / waterbody within a central area of open space as a positive feature;
 - **Tree and hedgerow cover:** The proposals will seek to retain as much of the existing landscape structure provided by on-site and boundary woodland and tree belts. These are a characteristic feature of the local landscape and provide a high level of containment and visual screening from the surrounding landscape;
 - **Public Rights of Way:** The Masterplan seeks to retain all existing Public Rights of Way within the site and connections with the existing Rights of Way Network, as well as providing circular walks and areas of publicly accessible informal recreation space within the site as part of the Green Infrastructure integrated with the Landscape Framework; and
 - **Buildings and Structures:** The site includes temporary structures associated with the current mineral extraction. These and other utilitarian buildings and structures will be removed prior to the development. Existing buildings and structures of cultural and heritage value, including Scheduled Monuments and Listed Buildings will be preserved and sensitively incorporated into the proposals. Heritage Assets and their significance are to be considered within the Heritage ES Chapter. This element of work is to be undertaken by the appointed archaeological and heritage consultant.

Visual Receptors

- 11.4.6 The combination of onsite and offsite landscape features and surrounding landform results in the site being heavily contained from the surrounding landscape, both physically and visually. This limits the number of people who may see the development and the extent of impacts on their visual amenity.
- 11.4.7 Beyond views obtained from land adjacent to the site, views from the wider countryside are limited to those obtained from the southeast where there are views across the open arable fields towards the northern site area.
- 11.4.8 Those groups of people who have views of the site and who may be affected by the proposed development include the following:
- users of Public Footpaths and Bridleways within and bounding the site;
 - users of Public Rights of Way within the countryside to the east and southeast of the site;
 - workers at Adastral Park and business units / commercial premises to the south and north of the site;
 - visitors to the Moon & Sixpence Holiday Park to the north of the site area;
 - users of the A12 to the west; and
 - motorists using Ipswich Road and Newbourne Road to the east of the site.

Construction

- 11.4.9 There are likely to be short term impacts of construction plant and machinery on various receptors within and surrounding the site including public roads, private dwellings and public rights of way. These temporary impacts will be dependent on the phasing of the works, and will be identified once the construction phases have been defined.
- 11.4.10 Construction activities will include: earthworks to reprofile the land after the mineral extraction remediation; implementation of access, internal roads and infrastructure; construction of new housing, schools and local centres; and implementation of new planting and habitat creation.
- 11.4.11 Strategic landscape planting may be phased to allow for maturation ahead of development in the more sensitive areas towards the eastern edge of the site and thereby perform its function as effective mitigation.
- 11.4.12 There may be short – medium term impacts of construction activities, including: plant and machinery; storage of materials; site compounds; and lighting during the winter months. These may impact on various receptors within and surrounding the site including: public roads, private dwellings, places of work and public rights of way.

Operation

- 11.4.13 Upon completion of the development, residual, post mitigation impacts upon the wide landscape will be limited due to the containment of the site and the implementation of a robust and sensitively designed landscape framework incorporating existing tree belt and woodland planting and providing an appropriate new landscaped edge to the east where the site adjoins the wider landscape and faces the AONB.
- 11.4.14 Site specific landscape impacts will relate to the changes in the land use and land cover of the site resulting from the provision of substantial new areas of open space and Green Infrastructure, set within the landscape framework and connecting with the surrounding landscape features. New development will be contained within the wider landscape, and be of a height, density and character (materials and design) that reflects the local and distinctive Suffolk vernacular. New areas of accessible open space and circular walking routes will tie-in with the existing rights of way network.
- 11.4.15 It is envisaged that the provision of green corridors and open spaces incorporating new and existing tree and woodland planting will ensure that the visual impacts of the proposed scheme will be limited. It is likely that existing Public Rights of Way will be incorporated into the Green Infrastructure and open spaces within and bounding the site, providing attractive recreation areas that link with the existing rights of way network. New footpaths and substantial areas of open space are to be incorporated within the development.
- 11.4.16 The details of potential cumulative impacts on landscape and visual receptors will be set out once the cumulative sites have been identified and the LVIA assessment has been undertaken.
- 11.4.17 Full details of potential impacts on landscape and visual receptors will be set out within the LVIA once the proposals have been finalised.
- 11.4.18 The potential redevelopment of land within Adastral Park, known as the 'Northern Quadrant', as far as is known and anticipated at the time is to be assessed as part of the cumulative effect assessment.

11.5 Proposed Scope and Methodology of the Assessment

- 11.5.1 The assessment will be undertaken in accordance with the Guidelines for Landscape and Visual Impact Assessment (Landscape Institute and Institute of Environmental Management & Assessment, Third Edition dated 2013), which is the current published edition (GLVIA3).
- 11.5.2 In addition, other best practice guidance will be referred to as necessary:
 - An Approach to Landscape Character Assessment – Natural England dated 2014; and
 - Photography and Photomontage in landscape and visual impact assessment – Landscape Institute Note 01/11.

11.5.3 The methodology will include the following stages; Baseline Appraisal, Classification of Resources and Assessment of Effects.

Baseline Appraisal

11.5.4 The baseline appraisal process includes:

- an overview of statutory plans and other data regarding relevant designations and landscape and visual related planning policies for the area;
- an assessment of landscape character of the site and surroundings with reference to published works and checked and verified through fieldwork. This includes the classification of the landscape into units of distinct and recognisable character and land use at site specific level;
- fieldwork to determine the extent to which the site can be seen from the wider area, taking into account any significant vegetation or built form which restricts or limits the extent of visibility; and
- identification of representative viewpoints and determination of likely visual receptors.

Classification of Resources

11.5.5 This stage seeks to classify the landscape resources in terms of their individual or collective sensitivity to change. This is dependent on:

- the susceptibility of the landscape to the type of change proposed; and
- the value placed on the landscape (see GLVIA3 box 5.1).

11.5.6 As a general rule those landscape resources which make a notable contribution to the character and cannot be replaced or substituted will be of high sensitivity, those resources which are replaceable or contribute little to the overall character of the landscape will be of low sensitivity.

11.5.7 In terms of visual amenity, the representative viewpoints in terms of their sensitivity to change is classified. The sensitivity of the visual receptors will be dependent on:

- the location and context of the viewpoint;
- the expectations and occupation or activity of the receptors; and
- the importance of the view.

Assessment of Effects

11.5.8 The assessment of effects is undertaken in the knowledge of the scheme proposals and the existing baseline situation. It will also include a review of other consultant's work such as ecology and the arboriculture survey to ensure that their findings are accounted for in the baseline.

- 11.5.9 The significance of any landscape and visual effect is a function of the sensitivity of the affected landscape resources and visual receptors against the magnitude of change they would experience.
- 11.5.10 The magnitude of effect lies along a continuum from high, where there is a prominent and notable change to landscape character or view, to low where the change is barely perceptible.
- 11.5.11 The consideration of mitigation with the aim of avoiding, offsetting or reducing significant adverse landscape and visual effects is determined during the course of the assessment where this can be addressed through a suitably worded condition.
- 11.5.12 The evaluation of landscape and visual effects following mitigation is known as residual impacts.
- 11.5.13 The assessment of the nature of the landscape and visual effects depends on the degree to which the development:
- complements, respects and fits into the existing scale, landform and pattern of the landscape context;
 - enables enhancement, restoration or retention of the landscape character and visual amenity and delivers policy aspirations;
 - affects strategic and important views in addition to the visual context of receptors; and
 - affects the potential cumulative landscape and visual effects of the application site alongside agreed cumulative sites.
- 11.5.14 The LVIA will categorise landscape and visual impacts in order to provide a sound basis for conclusions. Significance criteria will be defined within the reporting and detailed descriptions of the significance criteria can be provided if required.

Design Development

- 11.5.15 Tyler Grange will work with the project design team to ensure that the proposed development respects the landscape setting and incorporates both existing and new Green Infrastructure to provide substantial areas of informal recreation space and creates a landscape framework that respects the interface with the adjacent countryside, including that of the AONB.
- 11.5.16 Landscape character and visual amenity have been strongly represented in terms of design iteration from the outset, ensuring that a landscape led approach is maintained throughout.

Consultation

- 11.5.17 Tyler Grange will liaise with Suffolk Coast District Council in due course and clarify the extent of the study area, confirm visual representative viewpoints and any particular requirements for additional information to support the LVIA ES Chapter.

11.5.18 We will also consult with the Suffolk Coast & Heaths AONB to agree the acceptability of the proposed masterplan and design approach in respecting the natural beauty and special qualities of the AONB.

12 NOISE

12.1 Introduction

12.1.1 The Proposed Development has the potential to generate noise and vibration during site preparation, earthworks and construction. Additional road traffic has the potential to increase noise levels post-construction. An assessment of the potential noise effects of the Proposed Development during construction and operation will be conducted and reported within the ES, this will also include an assessment of the road traffic noise on the development itself.

12.2 Legislation and Policy Context

12.2.1 The assessment will be carried out with due regard to the following guidance:

- National Planning Policy Framework (NPPF), 2012;
- Noise Policy Statement for England;
- National Planning Practice Guidance (NPPG), 2014;
- Application of the Noise Policy Statement for England (Defra);
- British Standard 8233:2014: Sound Insulation and Noise Reduction for Buildings;
- Calculation of Road Traffic Noise; and
- British Standard 5228: Code of Practice for Noise and Vibration Control on Construction and Open Sites.

12.3 Existing Baseline

- 12.3.1 Existing noise levels around the Proposed Development are principally influenced by road traffic on the A12 and are likely to be high both during the day and night-time periods. Noise from the operation of the site is not anticipated to lead to adverse effects with appropriate mitigation measures implemented within the design.
- 12.3.2 The existing baseline conditions will be recorded through 24 hour noise monitoring across the site.

12.4 Potential Noise Impacts

Construction

- 12.4.1 During the construction stage, it is envisaged that earthworks, installation of necessary services and building construction would form the main noise impacts upon existing residential properties in the environs of the site.
- 12.4.2 At the time of writing, it is considered that the impact of construction traffic would be negligible. The temporary increase in traffic due to construction is likely to be indiscernible from daily variations in traffic flow.

Operation

- 12.4.3 During the operation there will be two main considerations, as detailed below;
- Impact on proposed residential dwellings based traffic noise. The method to address this is discussed below.
 - Impact on existing properties based on increase in traffic due to the development. The method to address this is discussed below.

12.5 Proposed Scope and Methodology of the Assessment

- 12.5.1 To assess the onsite implications, a baseline 3D noise model will be created within SoundPlan. This model will be calibrated using the onsite baseline noise monitoring. This will then be factored forward to match the future assessment year adopted in the transport assessment. The noise model will then be interrogated to confirm the internal / external noise levels and assessed against the requirements of BS8233. Mitigation will then be suggested if necessary.
- 12.5.2 The potential impact of the increased traffic in the hinterland to the site will be assessed using the standard procedure outlined by CRTN.

Consultation

- 12.5.3 In advance of the Noise assessment, the relevant Environmental Health Office (EHO) will be contacted to ensure the assessment is appropriate.

13 SOCIO ECONOMICS

13.1 Introduction

- 13.1.1 This chapter of the scoping report has been prepared by RSK Environment Ltd. It provides an outline of relevant legislation and policy, together with a description of baseline conditions at the site and local area (Suffolk Coastal District). It considers potential socio-economic impacts of the proposed development during construction and operation and draws conclusions on the requirement for further assessment, its methodology and scope.
- 13.1.2 Baseline environmental information has been obtained from a desk-based review of publicly available information, including:
- Suffolk Coastal Local Plan Core Strategy (2013) and Saved Policies;
 - New Anglia Strategic Economic Plan (SEP);
 - Natural England Agricultural Land Classification (ALC) Plans;
 - Suffolk County Council, Martlesham Ward Census statistics 2013;
 - Ordnance Survey maps and Google Earth satellite imagery; and
 - Sustrans and Office for National Statistics (ONS) websites.
- 13.1.3 Given the scale and nature of the development, potential impacts considered include demographic change, employment, education and health provision and recreational facilities.

13.2 Legislation and Policy Context

- 13.2.1 A full planning policy review will be undertaken as part of the socio-economic assessment. This will include a detailed review of relevant national and local policies. However, for the purposes of scoping an overview of key policies is presented below.

National – National Planning Policy Framework (NPPF)

- 13.2.2 The NPPF aims to support strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generation; and by creating high quality built environment, with accessible local services that reflect the community's needs and support its health, social and cultural well-being (Para 7). In addition it requires that development takes account of and supports local strategies to improve health, social and cultural wellbeing for all, and deliver sufficient community and cultural facilities and services to meet local needs (Para 17).

Local

- 13.2.3 As explained in the Local Plan Core Strategy, the key corporate priorities of Suffolk Coastal District Council are to: 'develop a safe and healthy community with access to leisure facilities; support our economy; protect and enhance our environment; and meet housing needs.'

Table 13.1 – Socio Economic Local Planning Policy

Local Policy	Key Provisions
<i>SP1 Sustainable Development</i>	Relate new housing development to employment services, transport and infrastructure; achieve a local balance between employment opportunities, housing growth and environmental capacity; ensure the provision of appropriate infrastructure in order to support existing and proposed communities.
<i>SP2 Housing Numbers and Distribution</i>	Provision for at least 7,900 new homes across the district between 2010 and 2027, with land for new homes distributed accorded to the Settlement Hierarchy (SP19). 2,100 new homes are allocated for the Eastern Ipswich Plan area (excluding outstanding planning permissions).
<i>SP3 New Homes</i>	Increase the stock of housing to provide for the full range of size, type and tenure of accommodation to meet the needs of the current and future population.
<i>SP5 Employment Land</i>	Martlesham Heath Business Campus including Adastral Park is identified as a Strategic Employment Area of regional significance and a key economic driver for the Haven Gateway. It is intended to further develop this area to create a high-tech business cluster.
<i>SP16 Sport and Play</i>	Provision, protection and enhancement of formal and informal sport and recreation facilities for all sectors of the community will be supported, particularly where shortfalls in local provision can be addressed.
<i>SP17 Green Space</i>	Communities should have well-managed access to green space within settlements for health and community benefits. The Council will work on green infrastructure opportunities with partners in strategic housing growth areas
<i>SP19 Settlement Policy</i>	A settlement hierarchy is to be used in determining the scale of development appropriate to a location. The Area East of Ipswich (including Martlesham Heath) is classed as a Major Centre. Large scale development to meet strategic housing and employment needs is considered appropriate here.
<i>SP20 Eastern Ipswich Plan Area</i>	Sets out the strategy for the three sections within this area, including the Martlesham, Newbourne and Waldringfield Area Action Plan.
<i>DM2 Affordable Housing on Residential Sites</i>	For Major Centre developments of 6 or more homes 1 in 3 homes will be expected to be affordable, unless its provision is not required due to lack of local need or site conditions and suitability.

Local Policy	Key Provisions
<i>DM23 Residential Amenity</i>	New development should consider issues of residential amenity i.e. privacy / overlooking, outlook, access to daylight and sunlight, noise and disturbance, physical relationship with other properties, pollution including light and air quality, and safety and security.
<i>DM32 Sport and Play</i>	New residential development is expected to provide or contribute towards indoor and outdoor sport and play space, including equipment and maintenance where a local need has been identified.

- 13.2.4 In addition to the Core Strategy, a number of policies from the previously adopted Suffolk Coastal District Plan have been saved, until their replacement with detailed development plan documents, and will require consideration as part of the development application. Relevant policies may include:
- AP51 General Employment Areas;
 - AP216 Ipswich Fringe: Martlesham Heath Industrial Estate; and
 - AP217 Ipswich Fringe: BT Laboratories, Martlesham.

13.3 Existing Baseline

Population

- 13.3.1 The site is located in the Martlesham Ward of SCDC, with a population (ONS 2014 estimate) of 4,796. The SCDC Core Strategy notes that the district population is increasing, and that it has a significantly older than average population.
- 13.3.2 The Index of Multiple Deprivation is an overall measure of multiple deprivation experienced by people living in an area. No area of SCDC falls within the 10% most multiple deprived areas of the country, however, two areas fall within the 11-20% most multiple deprived areas⁵.

Economic Activity and Employment

- 13.3.3 The site currently comprises agricultural land (Agricultural Land Classification Grade 4 Poor⁶), an operational aggregates facility (Brett Aggregates) and a BT testing range. For access purposes the red line boundary also encompasses a section of Adastral Park science and business park which will provide access to the site from the northern roundabout. Land adjacent to the proposed access, identified in Fig 2.2 as 'Northern Quadrant' is envisaged will come forward in due course for commercial office/R&D floorspace. This will be assessed as part of the cumulative effect assessment, and further information is presented in the Cumulative Impacts chapter of this Scoping

⁵ <http://www.healthysuffolk.org.uk/assets/JSNA/20150215-AMD-Infographics-Indices-of-Deprivation-2015-HR.pdf>, accessed 17/11/16

⁶ <http://publications.naturalengland.org.uk/publication/127056?category=5954148537204736>, accessed 17/11/16

Report. Adastral Park is home to the BT Research and Development headquarters and the Innovation Martlesham ICT cluster (comprising over 50 businesses), both of which are considered to be regionally important assets.

- 13.3.4 At a district level key employment sectors include transport and logistics, Information and Communications Technology (ICT), energy generation, agriculture and food production and tourism⁷. Employment levels are above average, with 64% of the population economically active and employed, in comparison to the national average of 62.1%.
- 13.3.5 At a regional level the New Anglia SEP notes that the economy can be classed as middle-ranking but productivity is relatively low, with a GVA (Gross Value Added, an indicator to monitor economic performance at regional and national level) some 10% below the national average.

Education and Health

- 13.3.6 Nurseries and schools identified in proximity to the site are
 - Old School House Community Nursery (~1.78km to the north);
 - Martlesham Primary (~1.5km to the north west);
 - Gorseland Primary School (~1.3km to the north west);
 - Birchwood Primary (~800m to the north west); and
 - Kesgrave High School (~2.5km to the north west).
- 13.3.7 The nearest hospital is the Ipswich Hospital approximately 5.3km directly west of the site. In addition there are a number of health facilities in the local area.

Recreation and Leisure

- 13.3.8 An area of existing woodland, Spratts Plantation, is located within the Site adjacent to the northern boundary and the eastern edge of Adastral Park. Public Rights of Way (PRoW) are present along the north eastern and southern edges of the site, with a third footpath leading from the northern boundary along the eastern edges of Spratts Plantation and Adastral Park, before splitting into two to cross the site and continue across the southern boundary.
- 13.3.9 AtLAS is the leisure and sport umbrella organisation for Adastral Park employees (current and previous), with an ongoing programme of activities, events, societies and clubs.

⁷ Suffolk Coastal District Council, 2013 Suffolk Coastal Local Plan Core Strategy

13.4 Potential Social Economic Impacts

Construction

- 13.4.1 The potential socio-economic impacts of construction of the development include, but are not limited to:
- Permanent loss of farmland and displacement of remaining tenant farmers;
 - Creation of temporary employment opportunities, a positive impact;
 - Temporary positive indirect economic impacts resulting from increased spend in the local area (e.g. accommodation, travel and subsistence for construction staff);
 - Temporary adverse impacts on local PRoW through diversion of footpaths within the site;
 - Temporary adverse impacts on local residential amenity (combined effects of noise, dust, traffic, visual impacts etc); and
 - Temporary disturbance to businesses and research facilities in Adastral Park.
- 13.4.2 As the development is likely to be phased impacts would occur over a longer period of time, but the magnitude of the impact has the potential to be reduced.

Operation

- 13.4.3 The key potential socio-economic impacts as a result of operation of the development may include:
- Positive impacts on housing supply with construction of 2,000 new homes;
 - Positive impact on primary school provision with construction of two new schools;
 - Retention of the existing woodland;
 - Positive impacts with the provision of a range of jobs;
 - Positive impacts from development of new community facilities, such as medical facilities or dentists, or local shops;
 - Creation of accessible natural green space, formal recreation and play areas with associated positive recreational, health and wellbeing impacts; and
 - Creation of new walking / cycle routes through the site, improving accessibility and again providing positive recreational, health and wellbeing impacts.
- 13.4.4 The population increase resulting from the development would have the potential to result in:
- Negative impacts on secondary school facilities (in terms of competition for places);
 - Negative impacts due to the increase in associated demands on surrounding community facilities and jobs; and

- Negative impacts on residential amenity from combined transport and visual impacts.
- 13.4.5 Given the scale and nature of the proposed development there is considered to be potential for significant socio-economic effects and therefore it is proposed to complete a socio-economic assessment as part of the EIA, which will be reported as a chapter in the Environmental Statement (ES).

13.5 Proposed Scope and Methodology of the Assessment

- 13.5.1 RSK will assess the likely direct and indirect socio-economic effects of the proposed development during construction, operation and decommissioning. The scope of assessment will consider impacts on:
- Land use;
 - Demographics;
 - Education;
 - Employment;
 - Health and wellbeing;
 - Recreation and access; and
 - Existing businesses.
- 13.5.2 A study area of 3km radius around the red line boundary is proposed for assessment of local impacts. District (Suffolk Coastal District Council) and regional (County level) impacts will also be considered.
- 13.5.3 The socio-economic assessment will require a more comprehensive policy and strategy review, including (though not restricted to):
- Eastern Ipswich Plan Area and Action Plan;
 - Haven Gateway Partnership publications;
 - Anglia LEP and Essex, Kent and East Sussex LEP publications;
 - Suffolk County Council, Education and Learning Infrastructure Plan; and
 - The SCDC Sustainable Community Strategy.
- 13.5.4 The baseline data obtained to date will be supplemented with further desk-based study, using the most up to date publicly available data wherever possible. This will include a full review of local educational and health facilities and local amenities. In addition to revisiting the data sources already noted in the scoping report further sources will be consulted, such as the Suffolk County Council definitive map of Public Rights of Way and www.healthysuffolk.org.uk together with planning documents submitted for neighbouring committed developments.
- 13.5.5 There is currently no established EIA methodology for the assessment of socio-economic impacts in the UK, however, in order to provide robustness to the assessment

“*Guidelines and Principles for Social Impact Assessment*⁸” will be referenced where appropriate. Similarly, no formalised criteria are available in regard to socio-economic assessment. As such, the criteria used to determine effect significance will be formulated with professional judgement and experience of similar developments but will consider the scale, duration and magnitude of the impacts, as well as the capacity of the impact receptor to accommodate the impact.

- 13.5.6 The findings of other environmental assessments undertaken as part of the EIA, such as traffic and transport, noise, visual impacts and air quality will be used to inform the socio-economic assessment. No detailed quantitative economic modelling is proposed to be undertaken.
- 13.5.7 Mitigation measures to reduce identified adverse effects will also be described where required. Residual effects following implementation of the mitigation measures will then be determined.
- 13.5.8 The likely cumulative effects of the development together with other identified committed developments will also be predicted. Combined interaction of effects of the development on residential amenity will also be considered in the cumulative assessment.

Consultation

- 13.5.9 Prior to submission of the planning application consultation will be undertaken with relevant local statutory authorities e.g. Suffolk Coastal District Council and non-statutory groups and organisations e.g. AtLAS, in order to consider how local concerns may be properly taken into account. The findings from public consultation events will also be used to inform the EIA.

⁸ Interorganisational Committee for the Guidelines and Principles and Social Impact Assessment, 2003, *Guidelines and Principles for Social Impact Assessment*

14 TRANSPORT AND TRAVEL PLANNING

14.1 Introduction

- 14.1.1 This chapter of the ES will consider the potential effects in the vicinity of the Application Site which could arise on the transport network as a result of the Proposed Development during both the construction and operational phases. It will be prepared with reference to the IEMA Guidelines for the Environmental Assessment of Road Traffic.
- 14.1.2 The chapter will draw on details from the Transport Assessment (TA) which will be submitted with the planning application. The TA will contain more detailed operational analyses of travel characteristics associated with the Proposed Development. The TA is also required to provide the local highway authorities with the evidence they require to prepare their consultation response.

14.2 Legislation and Policy Context

- 14.2.1 The assessment will be carried out with due regard to the following guidance:

- National Planning Policy Framework (NPPF), 2012;
- Design Manual for Road and Bridges;
- Manual for Streets;
- Local Plan;
- Relevant Local Plan saved policies; and
- Local Transport Plan.

14.3 Existing Baseline

- 14.3.1 The local network adjacent to the site is dominated by the A12. To understand the existing traffic characteristics a comprehensive package of traffic counts has been commissioned. These will be used to validate and calibrate a Paramics micro-simulation traffic model.
- 14.3.2 The existing walking, cycling and public transport networks will also be considered.

14.4 Potential Transport and Travel Planning Impacts

Construction

- 14.4.1 During the construction stage, it is envisaged that there will be a need for deliveries and employees traffic movements to support the various construction processes on site which would form the main potential impacts upon existing residential properties in the environs of the site.

- 14.4.2 The EIA will consider the impact of the proposed development during the construction stage.

Operation

- 14.4.3 The delivery of the development will increase traffic in the local vicinity of the development. This could lead to a range of impacts as identified below.

14.5 Proposed Scope and Methodology of the Assessment

- 14.5.1 The methodology follows current best practice by assessing the impacts on the hierarchy of transport modes: pedestrians; cyclists; public transport users; and vehicle drivers and passengers.

- 14.5.2 The approach adopted for the traffic and transport assessment has been based on the Institute of Environmental Assessment (now IEMA) Environmental Assessment of Road Traffic (1993) (IEMA Guidance), which recommends screening criteria of:

- 1 Roads where traffic flow would increase by more than 30% as a consequence of a proposed development; or
- 2 Roads where traffic flows would increase by 10% and pass close to or through sensitive areas.

- 14.5.3 For the purposes of this assessment, the majority of the routes in the vicinity of the Site are considered to be sensitive as there are residential properties fronting onto the carriageways and there is also the potential for high volumes of pedestrian and cycle movements within the urban area.

- 14.5.4 The significance of each effect has been considered against the criteria within the IEMA Guidance, where possible. However, this states that:-

“...for many effects there are no simple rules or formulae which define the thresholds of significance and there is, therefore, a need for interpretation and judgement on the part of the assessor, backed-up by data or quantified information wherever possible. Such judgements will include the assessment of the numbers of people experiencing a change in environmental impact as well as the assessment of the damage to various natural resources.”

- 14.5.5 The degree of each potentially significant effect will be considered and an assessment will be made as to whether the Proposed Development would result in minor, moderate or major adverse impacts or would be beneficial. The criteria used to determine the significance of each of the traffic-related environmental effects will be based on the advice given in the IEMA Guidance as summarised below.

- 14.5.6 **Severance:** Severance is the perceived division that can occur within a residential area if it becomes separated by a major traffic artery and is used to describe the factors that separate people from other people and places. For example, severance may be affected as a result of an increase in traffic that could affect the difficulty of crossing a road. The effects of severance can be applied to motorists, pedestrians or residents.

The IEMA Guidance suggests that changes in traffic flow of 30%, 60% and 90% are regarded as producing "minor", "moderate" and "major" changes in severance respectively. However, there are no predictive formulae which give simple relationships between traffic factors and levels of severance. The IEMA Guidance states that marginal changes in traffic flow are unlikely to create or remove severance.

- 14.5.7 **Driver delay:** Delays to existing traffic can occur at several locations within the local highway network as a result of the additional traffic that would be generated by a development. The IEMA Guidance states that delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system. The theoretical capacity of a particular junction can be determined by assessing the Ratio of Flow Capacity (RFC) for priority controlled junctions and Degree of Saturation for signal controlled junctions. When an RFC value of 0.85 or more is experienced, or a degree of saturation of 90%, queuing and congestion are likely to occur during busy periods.
- 14.5.8 **Pedestrian delay:** Changes in the volume, composition or speed of traffic may affect the ability of people to cross roads, and therefore increases in traffic levels are likely to lead to greater increases in delay. Delays are dependent upon the general level of pedestrian activity and general physical conditions of the crossing location. Given the range of local factors and conditions which can influence pedestrian delay, the IEMA Guidance does not recommend that thresholds be used as a means to establish the significance of pedestrian delay, but recommends that reasoned judgements be made instead. However the IEMA Guidance does note that, when existing traffic flows are low, increases in traffic of around 30% can double the delay experienced by pedestrians attempting to cross a road.
- 14.5.9 **Pedestrian amenity:** Pedestrian amenity is broadly defined as the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic. The IEMA Guidance notes that changes in pedestrian amenity may be considered significant where the traffic flow is halved or doubled, with the former leading to a beneficial effect and the latter to an adverse effect.
- 14.5.10 **Fear and intimidation:** The scale of fear and intimidation experienced by pedestrians is dependent on the volume of traffic, its HGV composition, its proximity to people or the lack of protection caused by such factors as narrow pavement widths, as well as factors such as the speed and size of vehicles. There are no commonly agreed thresholds by which to determine the significance of this effect. However, the IEMA Guidance notes previous work that has been undertaken which puts forward thresholds that define the degree of hazard to pedestrians by average traffic flow, 18 hour/day heavy vehicle flow and average speed over an 18 hour day in miles per hour. The IEMA Guidance also notes that special consideration should be given to areas where there are likely to be particular problems, such as high speed sections of road, locations of turning points and accesses. Consideration should also be given to areas frequented by school children, the elderly and other vulnerable groups.
- 14.5.11 **Accidents and safety:** Where a proposed development is expected to produce a change in the character of the traffic on the local road network, as a result of increased

HGV movements for example, the IEMA Guidance states that the implications of local circumstances or factors which may elevate or lessen risks of accidents, such as junction conflicts, would require assessment in order to determine the potential significance of accident risk.

Consultation

- 14.5.12 In advance of the assessment, detailed discussions will be held with the Highway Authority to ensure the assessment is appropriate

15 CUMULATIVE IMPACTS

15.1 Introduction

- 15.1.1 This chapter has been prepared by RSK Environment Ltd and sets out the potential methodology for the assessment of the cumulative impacts arising from the proposed development.
- 15.1.2 Cumulative impacts can cover all aspects of the environment. While a single activity may itself result in a minor impact, it may, when combined with other impacts (minor or significant) in the same geographical area, and occurring at the same time, result in a cumulative impact that is collectively significant upon a given receptor or resource. Cumulative effects can also arise through interactions with other developments in the surrounding area,
- 15.1.3 Schedule 4 of the *Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011* states that, as with all aspects of the environment, cumulative impacts are to be considered where there are likely to be significant effects.

15.2 Potential Impacts

- 15.2.1 The most likely cumulative impacts from a development of this type relate to traffic from other planned development in the vicinity impacting in combination with the development of the urban expansion.
- 15.2.2 Potential cumulative impacts could also occur where the development of the proposed urban expansion encourages other similar developments to the area. This would be further investigated in the Cumulative Impacts chapter of the Environmental Statement.

15.3 Scope of Work

- 15.3.1 The Environmental Assessment will include an assessment of cumulative impact using IEMA EIA guidance and the 'Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions', prepared for the European Commission (DG X1) and the EPA Advice Notes on Current Practice.
- 15.3.2 An appraisal will be undertaken of potential cumulative impacts, which will include a check for other planning applications in the vicinity. A list of potential cumulative developments will be prepared and agreed with Suffolk Coastal District Council. Before their inclusion within the assessment of cumulative impact. These will include the anticipated development for commercial office/R&D floorspace in the 'Northern Quadrant' as described below.
- 15.3.3 An assessment will also be made of consequential development, i.e. that which would be unlikely to occur in the absence of the primary development.

'Northern Quadrant'

- 15.3.4 For access purposes the red line boundary, as shown in Fig 2.2 also encompasses a section of Adastral Park science and business park which will provide access to the site from the northern roundabout. The land adjacent to this proposed access is known as the 'Northern Quadrant' and is also identified in Fig 2.2. It is envisaged that this land will eventually be redeveloped to provide commercial office/R&D floorspace.
- 15.3.5 The 'Northern Quadrant' is not within the red line boundary for this planning application, and will be subject to a separate planning application at the relevant time.
- 15.3.6 The 'Northern Quadrant' will be assessed as a cumulative development, and will be considered by each of the environmental specialists in their cumulative impacts assessment section.

16 ENVIRONMENTAL MANAGEMENT

- 16.1.1 A concluding chapter will be produced which will consist of a summary table detailing the impacts of the proposed development and proposed mitigation measures. The chapter will detail how environmental issues will be managed during construction and operation including production of an Environmental Mitigation Strategy and Management Plan.

17 SCOPING RESPONSE

- 17.1.1 The purpose of this report is to obtain a formal Scoping Opinion for the Proposed Development at Adastral Park, in order to inform the EIA process. In accordance with the EIA Regulations, the statutory response time for a Scoping Opinion is 5 weeks. All responses are to be coordinated by Suffolk Coastal District Council and copied to RSK Environment Ltd at the following address:

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