Thanet Parkway Railway Station
Environmental Impact Assessment
Informal Scoping Report
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1. INTRODUCTION

1.1 Background

This Environmental Impact Assessment (EIA) Scoping Report has been prepared by URS on behalf of Kent County Council (KCC).

KCC proposes to build a new, two-platform station, car park and associated infrastructure (the ‘proposed development’) on the existing rail line between Ashford and Ramsgate, within the administrative area of Thanet District Council (TDC). The proposed development will be constructed and operated on an approximate two hectare (ha) site between Cliffsend and Pegwell in Kent in the Minster Ward areas (see Figure 1).

In order to take the proposed development forward KCC intends to submit a planning application in summer 2016. An EIA will be carried out and an Environmental Statement (ES) submitted with the application. This informal EIA Scoping Report has been prepared having taken into consideration the likely impacts associated with the proposed development and the potential for them to give rise to significant environmental effects. At this stage the Scoping Report has been submitted on an informal basis to begin discussions with KCC and TDC about the topics to be assessed within the EIA.

1.2 The need for Environmental Impact Assessment and the purpose of this EIA Scoping Report

The Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (the ‘EIA Regulations’) include two lists of different types of development projects. The first list is Schedule 1, which identifies all types of projects for which EIA is mandatory. The second list is Schedule 2 which identifies the types of projects for which EIA may be required if the project in question is considered likely to give rise to significant environmental effects.

The proposed development does not fall under any of the categories of Schedule 1. However, it is considered that the proposed development should most appropriately be treated as falling within either Part 10 (b) of Schedule 2, namely:

"Urban development projects, including the construction of shopping centres and car parks, sports stadiums, leisure centres and multiplex cinemas."

or Part 10 (c), namely:

"Construction of intermodal transhipment facilities and of intermodal terminals."

The proposed development is not located in a ‘Sensitive Area’ as defined by the EIA Regulations, but it does constitute Schedule 2 development by virtue of the area of development exceeding the applicable threshold (for Part 10 (b) or (c) of Schedule 2) of 0.5ha. The footprint of the proposed development is approximately 2ha. The area of the proposed development may change as the design work progresses.

If it is accepted that the proposed works constitute Schedule 2 development it is then necessary to determine whether or not EIA is required. Schedule 3 of the EIA Regulations provides section criteria for screening Schedule 2 development, which includes three broad categories for consideration:

- the characteristics of the development;
- the environmental sensitivity of the location; and
- the characteristics of the potential impacts.

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1 As the proposed development does not involve the construction of any permanent way, Part 10 (d) of Schedule 2 (namely the "Construction of railways") is not considered to be relevant.
With reference to these criteria, it is considered that the proposed development constitutes EIA development as it lies within, or within one kilometre (km), of a number of statutorily designated sites and has the potential to give rise to significant environmental effects.

The purpose of this EIA Scoping Report is to provide sufficient information to allow the planning authority to provide an opinion on the proposed scope of the topics and methods of assessment to be included in the EIA.

Paragraph 002, ID 4 of the National Planning Policy Guidance (NPPG) informs local planning authorities that they "should limit the scope of assessment to those aspects of the environment that are likely to be significantly affected."

1.3 Structure of this EIA Scoping Report

Section 2 of this report provides an overview of the proposed site (‘the site’) and surrounding area, with Section 3 providing an outline description of the proposed development. Section 4 describes how the scope of the assessment has been determined and the methodology that will be applied to assessment. Sections 5 to 14 provide details of the ‘technical’ assessment topics and issues to be scoped in or scoped out of the EIA. Details of the rationale for scoping the topic into or out of the assessment are provided, as well as details of the scope of any proposed assessment.

Section 15 outlines the proposed structure of the ES and Section 16 summarises the scoping approach.
2. THE SITE AND SURROUNDINGS

2.1 Introduction

In order to identify the scope of issues that will need to be addressed by the EIA and reported in the ES, it is necessary to understand the characteristics of the site and the surrounding area that may be affected by the proposed development. The following sections describe the location of the proposed development and summarise the existing environmental features/conditions of the site, the surrounding area and the potential sensitive receptors.

2.2 The site

Although the footprint of the proposed development itself would be approximately 2ha, a site of approximately 14ha is being considered for the purposes of EIA Scoping (see Figure 1). This is to reflect the early stages of design and any potential variations to the components, layout, access/egress and positioning of the station that may occur as the design is progressed.

The site is located within the county of Kent and the district of Thanet; adjacent to the north-eastern edge of the village of Cliffsend and approximately 1.5km west of the outskirts of the town of Ramsgate.

The triangular-shaped site is bound by the A299 Hengist Way to the north and the A256 Richborough Way to the west. To the south-east the site is partly bound by the existing rail line between Ashford and Ramsgate and partly by agricultural fields. The site currently comprises an area of flat agricultural land and is thought to be of best and most versatile quality on the Agricultural Land Classification (ALC). A Public Right of Way (PRoW) runs along southern boundary of the site, initially to the south of, and parallel with, the rail line and then crossing to run on the northern side.

The site lies within Natural England’s National Character Area (NCA) 113: North Kent Plain, described as ‘open, low and gently undulating. It is a very productive agricultural area with predominantly high-quality, fertile loam soils characterised by arable use’.

The site is largely open with substantial tree growth on its south-eastern edge, bordering the existing rail line. There are no watercourses within the site and the area is designated as Flood Zone 1, low probability of flooding (<0.1%).

2.3 The surroundings

The site lies within a largely rural area, characterised by large scale, open arable fields, grazing marsh and reed beds and the cliff-tops of the Kent coastline.

There are a number of national and international designations in the vicinity of the site (refer to Figure 2).

The following statutorily designated ecological sites lie approximately 700m to the south-east of the site boundary:

- Sandwich Bay to Hacklinge Marshes Site of Special Scientific Interest (SSSI);
- Thanet Coast and Sandwich Bay Ramsar Site;
- Thanet Coast and Sandwich Bay Special Protection Area (SPA);
- Sandwich Bay Special Area of Conservation (SAC); and
- Sandwich and Pegwell Bay National Nature Reserve (NNR).

There are three scheduled monuments within 3km of the site: the Anglo-Saxon cemetery south of Ozengell Grange is located approximately 1km north-east of the site; an enclosure and ring ditches north-east of Minster Laundry is located approximately 2km north-west of the site; and the Monastic grange and pre-Conquest nunnery at Minster Abbey is located approximately 3km west of the site.
There are six listed buildings within 1km of the wider site area (14ha site):

- the Grade II listed St Augustine’s Cross, located approximately 150m to the south of the site;
- the Grade II listed 53 and 55 Foad’s Lane, located approximately 350m to the south-east of the site;
- the Grade II listed Sevenscore House, Grade II listed barn and Grade II listed farm office located approximately 630m to the west of the site; and
- the Grade II listed Chapel House, located approximately 700m to the north-west of the site.

The nearest Conservation Area to the site is Pegwell, located approximately 1.8km to the east. Minster Conservation Area is located approximately 2.5km to the west.

Manston Airport (now closed)\(^2\) is located approximately 800m to the north of the site and St Augustine’s Golf Course is located approximately 100m to the south.

There are three Air Quality Management Areas (AQMAs) which have been declared in the surrounding TDC administrative area. The nearest, Thanet Urban, was declared an AQMA due to concern that annual average concentrations of NO\(_2\) will not meet the annual average Air Quality Objective of 40 µg/m\(^3\). This AQMA is located directly adjacent to the north-eastern corner of the application site. The two other AQMAs declared by TDC are approximately 2.5km east (Thanet AQMA High St, St Lawrence) and approximately 5.5km north (Birchington AQMA).

\(^2\) Thanet District Council’s draft Local Plan still considers this site as an airport.
Figure 1: Indicative Site Location and Boundary
Figure 2: Site Constraints
3. **THE PROPOSED DEVELOPMENT**

3.1 **The station**

The proposed station would consist of two platforms, a footbridge/underpass, a car park and forecourt, and cycle storage.

The platforms, each measuring up to 252m in length and 2.6m wide, would be capable of accommodating trains of up to 12 cars in length. Each platform would include customer information displays, shelters, a passenger help point and driver only operation viewing facilities. CCTV and public address speakers would be mounted on lighting columns at the back of each platform. A footbridge/underpass and lifts would provide access between platforms and car park.

The station forecourt would be located to the north of the rail line and include at least one ticket vending machine and further customer information displays. A shelter will be provided to protect the ticket vending machine and also serve passengers waiting to be collected by bus, taxi or cars. Disabled access will be considered during the design of the station. Considerations will include the gap between the platform and the train as well as the height of the platform.

3.2 **Car park and access**

In addition to the platforms and associated facilities, the parkway station would include:

- parking for cars, motorcycles and cycles; and
- pickup and drop off points for cars, buses and taxis.

The car park would include up to 300 long stay car spaces including reserved spaces for blue badge holders. The car park would include access/egress barriers and, similarly to the platforms, CCTV would be mounted on lighting columns.

A central pedestrian spine would be located in front of (and at right angles to) the station entrance, with long stay car parking on one side and short stay, bus and taxi facilities on the other. Cycle parking for 40 bikes would be located in the pedestrian spine. Shelters and real time passenger information would be provided for waiting passengers at the bus stop.

Road access to the station would likely be provided from either the A256 Richborough Way or A299 Hengist Way. In order to improve accessibility to the station for local residents, pedestrian and cycle access would be provided both from Cliffsend village and Cottington Road.
4. EIA – PROPOSED APPROACH

4.1 General assessment approach

The European EIA Directive 2014/52/EU came into force in 2014, replacing the previous Directive 2011/92/EU. Member states will be required to transpose the new Directive into domestic Regulations within three years and no later than 16th May 2017.

All projects screened, formally scoped or submitted for planning before EIA Directive 2014/52/EU is formally transposed onto the UK Regulations (or other Statutory Instruments that implement the Directive) will continue to be progressed against the existing regime. The ES for the proposed development will therefore will be prepared to comply with the EIA Regulations, which implement the Codified European EIA Directive No. 2011/92/EU.

Assessment topic specific guidance will be referenced in the relevant specialist chapters of the ES. In preparing the ES, the following general guidance will be considered:

- Department for Communities and Local Government (DCLG) 2014 – National Planning Practice Guidance;
- Department of the Environment (DoE) 1995 – Preparation of Environmental Statements for Planning Projects that require Environmental Assessment – A Good Practice Guide;
- Highways Agency 2008 (and amendments) – Design Manual for Roads and Bridges, Volume 11 (Environmental Assessment), Section 2 (Environmental Impact Assessment), Part 5 (Assessment and Management of Environmental Effects);
- Institute of Environmental Management and Assessment (IEMA) 2004 (and amendments) – Guidelines for Environmental Impact Assessment; and

The assessment of each topic included in the scope of the EIA will be carried out by specialists with relevant professional expertise and experience. The specialists will be responsible for ensuring that the methods they use are appropriate, reflect best practice and can be defended within the consent process. The assessment process for each topic will adopt a common framework comprising the following steps:

- definition of works to be assessed;
- identification and scoping of issues;
- consultation with relevant stakeholders to identify key concerns and to obtain data;
- confirmation of scope;
- collection of any required baseline environmental data by research and survey;
- evaluation of appropriateness and limitations of assessment methodology (including data constraints);
- identification of resources and receptors;
- prediction of impacts (including modelling where appropriate, consideration of the robustness of predictions and likelihood of occurrence);
- identification of effects;
- evaluation of significance;
- identification of any required mitigation options and evaluation of any impacts associated with the mitigation;
- evaluation of residual effects or risks; and
• any requirements for future monitoring and environmental management systems to verify predictions and fine-tune mitigation.

4.2 Determination of the scope

Establishing the scope of the assessment in a rigorous and transparent manner is a key step in the assessment process. Consultation with the local planning authority, relevant statutory organisations and other stakeholders is an essential element of this process and this EIA Scoping Report is designed to provide stakeholders with sufficient information to form an opinion over the adequacy of the proposed scope of assessment and so ensure that issues potentially giving rise to ‘likely significant effects’ will be addressed by the EIA.

Consultees will include but are not limited to the following:

• KCC;
• TDC;
• Natural England (NE);
• Environment Agency (EA);
• Department for Environment, Food and Rural Affairs (Defra);
• Cliffsend Parish Council;
• The River Stour (Kent) Internal Drainage Board;
• Southern Water;
• UK Power Network; and
• Proposed site landowners.

Initial engagement has taken place with KCC and TDC through project board, workshop and individual meetings. Information in this scoping report supports the request for a scoping opinion and provides a basis for further engagement with stakeholders.

Schedule 4 of the EIA Regulations requires the ES to include (inter alia) a description of the likely significant effects of the development on the environment. This should cover the direct effects and any indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative effects of the development, as well as a description of the forecasting methods used to assess the effects on the environment. Schedule 4 also identifies a number of aspects of the environment that should be considered, namely population (human), fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the interrelationship between the above factors.

A proposal of how these aspects will be considered and assessed in the EIA is included in the following sections. Based on the information currently available regarding the proposed development (as outlined in Section 3) and planning policy a judgement has been made on which topics or particular aspects of them should be ‘scoped in’ and ‘scoped out’ of the EIA.

Issues that are scoped into the EIA are judged likely, without effective mitigation, to have the potential to cause significant environmental effects. Issues that are scoped out of the EIA are those which it is considered are not likely to lead to significant effects, regardless of mitigation. Where insufficient information is available to make a reasonable judgement at this stage, a precautionary approach has been adopted and that issue scoped in. The decision to scope out issues is based upon factors such as a high degree of development-receptor separation, the lack of impact pathways or the known low value or low sensitivity of impacted resources/receptors.

It should however be noted that as the assessment proceeds, topics will be reviewed and their potential significance may be re-evaluated in response to additional information or changes to the project definition.
Further information regarding the rationale for inclusion or exclusion of issues is provided in the following specialist sections. For those included within the scope of the EIA, an outline of the assessment method is also provided.

4.2.1 Spatial scope

The following specialist sections describe the rationale for determining the specific area within which the assessment will be focussed. Study areas vary depending on the nature of the impacts and the locations of resources and receptors with the potential to be impacted.

4.2.2 Temporal scope: baseline and assessment years

The approach to the EIA will be to evaluate the environmental impacts of the proposed works for the whole life cycle of the project but with the focus on the key stages of construction and operation. The scenarios during construction and operation will be compared to the situation that will prevail at that time without the proposed development (i.e. the future baseline taking likely trends into account) and to the situation prevailing before the proposed development is commenced (i.e. the current baseline).

The proposed development is programmed to be operational in 2019. The key stages in the project programme and, therefore, the EIA are as follows:

- construction is to commence in summer 2017 and expected to take up to 15 months; it is therefore expected to be completed by autumn 2018 – the baseline against which construction effects will be assessed is 2015; and
- operation is to commence in 2019 – this is the future baseline against which operational effects will be assessed.

For the purpose of the landscape and visual impact assessment, it is usual practice to look at a further assessment period some point in the future when any required planting has fully taken effect, usually 15 years from date of opening.

The future baseline is the theoretical likely situation that would exist in the absence of the proposed development. It is typically based upon extrapolating the current baseline forward using technical knowledge of changes to predict this (e.g. habitat change over time, traffic and waste growth over time, etc.). In a number of assessments and where this is considered likely, the future baseline is assumed to remain as at present.

4.3 Assessment of effects and defining significance

EIA assesses environmental effects on resources and receptors, which for this assessment are defined as follows:

- resources are features or items of environmental capital; examples include heritage assets, aquifers, access routes and community facilities; and
- receptors comprise the biophysical features of the environment including human beings, either individually or collectively, and other organisms, including habitats.

For consistency and in an attempt to allow comparison between topics, the methodology described in this section will be applied where appropriate.

It should be noted that in the context of this assessment and the general methodology utilised, the terms impact and effect are distinctly different. The EIA Regulations, by their name, suggest that an assessment of project environmental impacts is required; however, the impacts of the proposed development may or may not result in significant effects on the environment. For example, a loud noise impact in the middle of an unpopulated desert is unlikely to result in a significant environmental effect as no receptors are present to hear it. It is an assessment of significant effects that is required by Schedule 4 of the EIA Regulations.
The methodology followed by most assessment chapters is designed to consider whether the impacts of the proposed development would have an effect on any resources or receptors. Assessments broadly consider the magnitude of impacts and sensitivity of resources/receptors that could be affected in order to classify effects according to the categories shown in Table 4.1.

For each topic area of assessment which fully or in part utilises the methodology, the categories of resource/receptor sensitivity (low to very high) and magnitude of impact (very low to high) will be appropriately described and defined.

Table 4.1: Classification of effects

<table>
<thead>
<tr>
<th>Sensitivity of resource / receptor</th>
<th>Magnitude of impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>High</td>
<td>Major</td>
</tr>
<tr>
<td>Medium</td>
<td>Major</td>
</tr>
<tr>
<td>Low</td>
<td>Moderate</td>
</tr>
<tr>
<td>Very low</td>
<td>Minor</td>
</tr>
</tbody>
</table>

Where appropriate, the definition of resultant effect categories as shown in Table 4.1 – from negligible to major will also be defined on a topic by topic basis. Where this is not practical or sensible for a particular topic, the generic definitions as shown in Table 4.2 will be used to guide assessment.

Table 4.2: Significance of effect definitions

<table>
<thead>
<tr>
<th>Effect</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td>These effects may represent key factors in the decision making process. Potentially associated with sites and features of national importance or likely to be important considerations at a regional or district scale. Major effects may relate to resources or features which are unique and which, if lost, cannot be replaced or relocated.</td>
</tr>
<tr>
<td>Moderate</td>
<td>These effects, if adverse, are likely to be important at a local scale and on their own could have a material influence on decision making.</td>
</tr>
<tr>
<td>Minor</td>
<td>These effects may be raised as local issues and may be of relevance in the detailed design of the project, but are unlikely to be critical in the decision making process.</td>
</tr>
<tr>
<td>Negligible</td>
<td>Effects which are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error, these effects are unlikely to influence decision making, irrespective of other effects.</td>
</tr>
</tbody>
</table>

Following the classification of an effect using this methodology, a clear statement is then made as to whether that effect is significant or not significant. As a general rule, major and moderate effects are considered to be significant, whilst minor and negligible effects are considered to be not significant. However, professional judgement can also be applied here where necessary, including taking account of whether the effect is permanent or temporary, its duration/frequency and/or its likelihood.

If additional mitigation is proposed, the residual effect following additional mitigation is categorised using the same system.
4.4 Mitigating adverse effects

Schedule 4 of the EIA Regulations states that an EIA should include a description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.

The EIA process provides the opportunity for likely significant environmental effects to be determined at an early stage in the formulation of development proposals, for the design to be developed to reduce or eliminate undesirable environmental effects, and where elimination is not possible for mitigation measures to be incorporated to reduce undesirable environmental effects.

Mitigation measures can be applied through the consideration of alternatives, physical design, provision of specific control equipment, project management or operation and other means. This process has already begun as part of the design and EIA process (mitigation through design) and will continue as the EIA progresses.

The fundamental aim of mitigation is to reduce the significance of the environmental effects. Where mitigation fails to eliminate entirely any (negative) environmental effect, the remaining component of the effect is known as the residual effect.

4.5 Inter-relationships and cumulative effects

As required by Schedule 4 of the EIA Regulations, the assessment will also have regard to cumulative effects. Whilst the technical chapters will address the environmental effects of the proposed development for each environmental discipline, it is also important to consider how these effects may combine with one another (inter-relationships) and with those of other proposed development projects in the vicinity (cumulative effects).

To fully define the terms:

- ‘Inter-Relationships’ occur between the individual environmental effects of the proposed development and have the potential to combine together with one another at receptors and lead to significant effects; and
- ‘Cumulative effects’ arise as a result of the proposed development in combination with other developments in the vicinity of the site.

Inter-relationships will be considered within specialist assessment chapters themselves, but will be summarised in the inter-relationships and cumulative effects chapter.

The assessment of any such cumulative effects requires information regarding other major developments which will be identified through consultation with the local planning authority and other relevant authorities as required. Developments will be considered as part of the cumulative effects assessments on the basis of those that are:

1. Under construction;
2. Permitted application(s), but not yet implemented; and
3. Submitted application(s), not yet determined.

Information regarding nearby developments will be fed into specialist assessments for consideration on a topic by topic basis. As per the approach to inter-relationships, cumulative effects assessments will be summarised in the inter-relationships and cumulative effects chapter.

4.6 Planning policy

Each assessment topic will, as appropriate, include a listing of relevant legislation and identification and assessment of adherence to relevant national, regional and local planning policies.
4.7 Proposed technical scope

The following Sections 5 to 14 provide details of the technical assessment topics and issues to be scoped in or scoped out of the EIA. Details of the rationale for scoping the topic into or out of assessment are provided, as well as details of the scope of proposed assessments.

4.8 Structure of assessment chapters

To ensure consistency throughout the ES and for ease of reference, the assessment chapters will be structured as follows:

- **Introduction**: a brief summary of the scope of the chapter and relevant background information;
- **Legislative and planning policy context**: relevant legislation and national, regional and local planning policies;
- **Assessment methodology**: the basis for the scope of assessment, topic specific guidance or standards, details of research or surveys undertaken to inform the assessment, method of assessing impacts and determining whether effects are likely to be significant and an indication of any difficulties or limitations in undertaking the assessment;
- **Baseline conditions**: environmental conditions on the site and in the surrounding area;
- **Mitigation through design**: e.g. incorporation of landscaping and drainage features within the design;
- **Assessment of impacts and effects**: findings of the assessment for construction operation phases. A statement is made as to whether the effects are significant or not significant;
- **Additional mitigation and monitoring**: may also include a recommendation for future monitoring and environmental management that could be considered necessary;
- **Residual effects**: the anticipated effects of the development following the implementation of mitigation measures. A statement is made as to whether the effects are significant or not significant;
- **Effects interactions and cumulative effects assessment**: the assessments will consider the potential for effect interactions and cumulative effects as described in Section 4.5; and
- **Conclusions**: a conclusion of the assessment and key findings.
5. LANDSCAPE AND VISUAL IMPACT

5.1 Introduction

This section sets out the proposed scope and methodology for the landscape and visual impact assessment (LVIA) of the proposed development.

This has been informed by an outline appraisal of the environmental baseline conditions and a preliminary assessment of the issues likely to be associated with the proposed development. The LVIA will be undertaken with reference to the following guidance:

- Guidelines for Landscape and Visual Impact Assessment, Third Edition (Landscape Institute and Institute of Environmental Management & Assessment, 2013);
- An Approach to Landscape Character Assessment (Natural England, 2014); and
- Advice Note 01/11: Photography and photomontage in landscape and visual impact assessment (Landscape Institute, 2011).

The adopted method of LVIA will be devised to address the specific effects likely to result from a development of the scale, nature and location of this proposed development.

The LVIA will provide information on the impacts and likely significant effects of the proposed development on the landscape resources and visual receptors within and around the site. A clear distinction is drawn between the two:

- landscape resources relate to the physical characteristics or components of the environment which together form the character of that landscape, including landform, buildings, trees and woodland, water, roads, paths and other land uses; and
- visual receptors are individuals whose views of that landscape could change as a result of the proposed development, such as pedestrians, people living locally, or people in vehicles passing through the area.

5.2 Baseline

5.2.1 Landscape resources

The site lies within Natural England's National Character Area (NCA) 113: North Kent Plain, described as ‘open, low and gently undulating. It is a very productive agricultural area with predominantly high-quality, fertile loam soils characterised by arable use’.

The Landscape Assessment of Kent (2004) shows the site lying near the border between two Landscape Character Areas (LCAs). To the north, Thanet LCA is described as ‘Open, large scale arable fields with predominance of brassicas. Long views. Central domed ridge to the island, with the aerodrome dominant on the crest. Exposed landscape, historically long denuded seaside/coastal influence with big skies. Suburban character to towns. Open cliff-tops, bleak, grassy spaces’. To the south, The Wantsum and Lower Stour Marshes LCA is described as ‘Flat, open and remote. No settlement on marshland ... Regular field pattern fringed with dykes and drainage ditches’.

TDC’s Landscape Character Areas (2012) shows the site lying within The Former Wantsum North Shore LCA: ‘This area largely comprises the distinctive and often quite steep hill slopes leading down from the Central Chalk Plateau to the former Wantsum Channel. The landscape is very open with few features and the former shoreline is more distinct in some places than in others’.

These published landscape character assessments will be reviewed as appropriate and references to relevant aspects included. Further character appraisal work will be undertaken to update in relation to changes since the original work was undertaken and in order to provide an assessment appropriate to the scale and specific location of the proposed development.
Although the site lies within a wider area of generally rural landscape, within its immediate vicinity the character of the landscape is heavily influenced by the existing transport infrastructure network notably comprising the Ashford-Ramsgate railway, and the A299 and A256 dual-carriageways, including nearby roundabout junctions. Although Manston Airport is currently not operational, it too has a major influence on the character of the landscape to the north of the site. There is also a network of minor roads across the area, which will be described in terms of their contribution to wider landscape character, including the effects of vehicles.

Extensive areas of the landscape to the north and east of the site are further affected by the urban fringe influences of Ramsgate, including both the visual influences of the commercial and residential built-up urban edge and the typical fringe land uses such as golf courses, caravan parks and a solar farm. There is also a variety of scattered settlements and other development across the area. The built-up area of Cliffsend to the east of the site extends from Sandwich Road (the coast road) in the south, almost to the airport runway in the north, a distance of about 1.5km. Manston lies less than 1km to the north of Cliffsend.

Beyond St Augustine’s Golf Course and Stonelees Golf Centre to the south of the site, Discovery Park Enterprise Zone, a string of industrial uses at and around Richborough Port and Great Stonar straddles the A256 towards Sandwich.

Pegwell Bay, forming the estuary of the river Stour, lies within 1km of the site to the south-east. The Thanet Coastal Path follows the edge of the bay. A regional cycle route follows Cottington Road and Sandwich Road through Cliffsend. A PRoW around the western side of Cliffsend passes through the eastern end of the triangular-shaped plot within which the site lies.

The particular nature and contribution of the above features to the existing landscape character will be considered, in order both to inform the design of the proposed development and to enable an assessment of the impact of the proposals upon them.

5.2.2 Visual receptors

The proposed site is open and exposed to its northern and western boundaries, but enclosed to the south-east by mature vegetation along the railway line. Within 1km to the north, the site is enclosed by the long, east-west oriented ridgeline on which the airport runway is located. Within 0.5km to the west, the site is enclosed by a more gentle ridgeline, and to the east, the site is enclosed by the built-up area of Cliffsend. The zone of visual influence (ZVI) of the proposed development is therefore likely to be largely limited to the area defined by these features.

Key potential visual receptors are as follows:

- people travelling on the A299 Hengist Way and A256 Richborough Way;
- cyclists, pedestrians and people in vehicles on Cottington Road;
- pedestrians using the PRoW between Cottington Road and Canterbury Road West, around the western side of Cliffsend;
- residents of Cliffsend (western edge);
- farm workers in the fields; and
- passengers on the Ashford-Ramsgate railway.

Since the line of trees along the railway could potentially be partially broken to enable the platforms to be constructed, new views from the south could also be opened-up from properties on Lavender Lane (off Cottington Road) and from St Augustine’s Golf Course. Further work will be required to assess this with reference to an Arboricultural Impact Assessment (see Section 15), when more detailed design information is available.
5.3 Potential environmental impacts

In line with Section 4.2.2, impacts will be assessed during construction, upon completion (Year 1) and after 15 years (residual). The following provides an overview of likely impacts on the various identified receptors.

5.3.1 Landscape character

The site is surrounded on all sides by transport infrastructure, comprising dual-carriageways on two sides and a railway line on the third. Implementation of both the roads and the railway has entailed substantial earth modelling in the form of embankments and cuttings, and the local landscape character is further influenced by road signs and highway lighting. The historic landscape pattern of field boundaries and the relationship between settlements and farmland has been largely destroyed locally by the introduction of these major transport routes. In terms of both landscape character and land use, the introduction of further transport infrastructure relating to the existing network of roads and railway is not anticipated to be a key issue considering the character of the immediate site context. Since the ZVI will be limited by existing landscape features, the extent of indirect impacts on the wider surrounding area is also likely to be limited.

5.3.2 Visual amenity

People driving vehicles on the main roads will be travelling at speed or concentrating on negotiating the A256/A299 Sevenscore Roundabout. Passengers are likely to have more interest in the view, but the site will represent a small part of a longer journey, and alternative views are available looking in other directions. Views from part of the stretch of the A299 to the north are screened by a cutting.

Potential views of the proposed development from south of the railway – Cottington Road, Cliffsend, PRoW, Lavender Lane, golf course – would be largely screened by trees along the railway embankment, on the assumption that it would be possible to retain a belt of vegetation alongside the southern platform. If it is necessary to remove trees to implement the platforms, views would be opened-up, with the new station infrastructure, including the footbridge and lifts structure, seen on the skyline.

Views from the northern part of Cliffsend (north of the A299) would be from the backs of properties, where boundary structures and garden vegetation provide partial screening. It is likely that such views are currently influenced by moving traffic and lighting at the Sevenscore Roundabout. Potential views from the southern part of Cliffsend (south of the railway) would be screened by a combination of trees along the western settlement edge and along the railway line, however, if it is necessary to remove trees to implement the platforms, the new station would be visible from a number of houses on Beech Grove and Earlsmead Crescent.

Train passengers are unlikely to have an adverse reaction to views of a new station along the route, since it would be entirely characteristic of a train journey.

From the fields around the site, the extent of views is restricted by a combination of landform, woodland belts and the built-up area of Cliffsend; few people are likely to have their visual amenity adversely affected.

After dark, station and car park lighting would be visible to local residents and people travelling on the A256/A299, on the site which is currently dark. However, the area around the site is already influenced by vehicle lights on the A299 and A256 and highway lighting at the Sevenscore Roundabout and Cliffsend Underpass, in addition to light from Cliffsend, in particular the elevated northern part.

Overall, because of the nature of the proposed development, which relates to the existing transport uses – both road and rail – combined with its form (mostly low-level with some vertical elements) and the enclosure offered by existing landscape features, it is not considered that the impact on visual amenity would be likely to be a key issue. The exception to this would be views for residents
of Lavender Lane, Beech Grove and Earlsmead Crescent, in the event that a substantial amount of mature vegetation is to be removed from the railway embankment.

There are opportunities to further reduce potential impact on visual amenity through the introduction of new planting, in addition to retention of existing vegetation. A landscape scheme will form part of the planning application.

5.4 Assessment methodology

This scoping chapter is based on information about the proposed development as set out in Section 3. Initial assessments are based on a desk study using material available on the internet. No field work specific to this project has yet been undertaken.

The LVIA will be undertaken in the context of planning policy at all levels, to include:

- The European Landscape Convention;
- National Planning Policy Framework (NPPF);
- National Planning Practice Guidance (NPPG);
- any specific requirements and guidance from KCC; and
- Thanet District Adopted Local Plan Saved Policies.

On the basis of initial studies, it is considered that a study area of 2km around the site will be appropriate; however, this will be confirmed as part of the baseline studies and agreement sought with the planning authority early in the assessment process. Part of that process will involve the production of a zone of theoretical visibility (ZTV) modelled in GIS.

A detailed study of the existing landscape components and character and views of the site and the study area will be carried out in consideration of the following:

- site context;
- topography and drainage;
- vegetation and land-cover;
- roads, PRoW and access;
- settlement and land-use;
- landscape character; and
- representative views.

This will be supported by tables, drawings and photographs as appropriate. The baseline study will form the basis of the assessment of the predicted effects of the proposed development.

5.4.1 Landscape character assessment methodology

The assessment of landscape effects will be structured around the identification of LCAs at the local level. Within the study area there will be areas where development would take place resulting in direct effects, or where there would be a degree of visibility of the proposed development from the surrounding landscape causing indirect effects, or where no change would be perceptible.

Each LCA will be assigned a category of sensitivity based on the quality and value of the existing landscape and its susceptibility to change likely to result from the type of development proposed, as shown in Table 5.1.

The magnitude of impact will be determined through consideration of the size and scale of the development, the geographical extent of the area influenced, the type of development, the level of integration of new features with existing elements, and its duration. Magnitude of change will be classified as shown in Table 5.2.
Table 5.1: Criteria for determining the sensitivity of resource/receptor for landscape character

<table>
<thead>
<tr>
<th>Sensitivity of resource / receptor</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Valued landscape, whether through landscape designations or by the community or a landscape of distinctive components and characteristics, susceptible to small changes.</td>
</tr>
<tr>
<td>Medium</td>
<td>Landscape with some value, of relatively common components and characteristics, reasonably tolerant of changes.</td>
</tr>
<tr>
<td>Low</td>
<td>Landscape of relatively inconsequential components and characteristics, the nature of which is potentially tolerant of substantial change.</td>
</tr>
<tr>
<td>Very low</td>
<td>Degraded landscape or landscape with very few or no natural or original features remaining.</td>
</tr>
</tbody>
</table>

Table 5.2: Criteria for determining the magnitude of impact for landscape character

<table>
<thead>
<tr>
<th>Magnitude of impact</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>The total loss of key characteristics or the addition of new features or components that would substantially alter the character or setting of the area.</td>
</tr>
<tr>
<td>Medium</td>
<td>The partial loss or alteration to key characteristics or the addition of new features or components that are prominent but largely in keeping with the existing character or setting of the area.</td>
</tr>
<tr>
<td>Low</td>
<td>The limited loss or alteration of common components or characteristics or the addition of new features or components that largely reflect the existing character or setting of the area.</td>
</tr>
<tr>
<td>Very low</td>
<td>Virtually imperceptible change in any component or to the setting of the character area.</td>
</tr>
</tbody>
</table>

5.4.2 Visual assessment methodology

It is widely accepted that magnitude of impact in relation to views tends to decrease with distance. The ZTV will identify areas where there could theoretically be views of the proposed development. Fieldwork will further clarify the influence of existing landform, vegetation and settlement on the degree of potential views of the development. Using the criteria below, a selection of representative viewpoints will be identified and agreed with the planning authority to illustrate views of the site from a range of distances, which will form the basis of the visual assessment:

- receptor function / activity;
- distance from the site;
- topography and elevation;
- degree of openness and period of exposure;
- designation of the viewing place; and
- distribution of receptors.

Visually verifiable montages (VVMs) of the proposed development from a number of the selected representative viewpoints, to be agreed with the planning authority, will be produced in line with
Landscape Institute Advice Note 01/11. At this stage based on the existing landscape and proposed development, it is anticipated that VVMs will be produced from three locations.

Visual receptors will be assigned a category of sensitivity based on a combination of the activity and expectations of the predominant receptor type (e.g. residents, people involved in recreational activities, people travelling on roads and PRoW) and the location, context and importance of the existing view as shown in Table 5.3.

**Table 5.3: Criteria for determining the sensitivity of resource/receptor for visual amenity**

<table>
<thead>
<tr>
<th>Sensitivity of resource / receptor</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High</strong></td>
<td>Activity resulting in a particular interest or appreciation of the view (e.g. residents or people engaged in outdoor recreation whose attention is focused on the landscape) and/or a high value of existing view (e.g. a designated landscape, unspoilt countryside or conservation area designation).</td>
</tr>
<tr>
<td><strong>Medium</strong></td>
<td>Activity resulting in a general interest or appreciation of the view (e.g. people engaged in outdoor recreation that does not focus on an appreciation of the landscape) and/or a medium value of existing view (e.g. suburban residential areas or intensively farmed countryside).</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>Activity where interest or appreciation of the view is secondary to the activity (e.g. people at work or motorists travelling through the area) and/or low value of existing view (e.g. featureless agricultural landscape, poor quality urban fringe).</td>
</tr>
<tr>
<td><strong>Very low</strong></td>
<td>Activity where interest or appreciation of the view is inconsequential (e.g. people at work with limited views out, or drivers of vehicles in cutting) and/or very low value of existing view (e.g. industrial areas or derelict land).</td>
</tr>
</tbody>
</table>

The magnitude of impact resulting from a combination of the degree of change to the view, including the extent over which the changes would be visible, and the period of exposure to the view and reversibility will be classified as shown in Table 5.4.

**Table 5.4: Criteria for determining the magnitude of impact for visual amenity**

<table>
<thead>
<tr>
<th>Magnitude of impact</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High</strong></td>
<td>Extensive change to the composition of the existing view (e.g. widespread loss of characteristic features or the addition of new features within the view) and/or high degree of exposure to view (e.g. close, direct or open views).</td>
</tr>
<tr>
<td><strong>Medium</strong></td>
<td>Partial change to the composition of the existing view (e.g. noticeable loss of some characteristic features or the addition of new features within the view) and/or medium degree of exposure to view (e.g. middle-distance or partially screened views).</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>Subtle change to existing view (e.g. limited loss of characteristic features or the addition of new features within the view) and/or low degree of exposure to view (e.g. long-distance, substantially screened or glimpsed views).</td>
</tr>
<tr>
<td><strong>Very low</strong></td>
<td>Barely perceptible change to the existing view and/or very brief exposure to view.</td>
</tr>
</tbody>
</table>
5.4.3 Definition of effects and significance

Whilst there will be a degree of subjectivity involved in determining the landscape and visual effects, they can broadly be determined by the interaction of the sensitivity of the receptor and magnitude of impact. This interaction results in categorisation of effects as shown in Table 5.5.

The matrix for the assessment of effects, as outlined in Section 4.3 and Table 4.2, will be adopted. Following the classification of an effect, a statement will then be made regarding whether the effect is significant or not. As a general rule, major and moderate effects will be considered to be significant and minor and negligible effects will be considered to be not significant. However, professional judgement can also be applied where necessary.
### Table 5.5: Criteria for determining the effect for landscape character and visual amenity

<table>
<thead>
<tr>
<th>Effect</th>
<th>Criteria: landscape character</th>
<th>Criteria: visual amenity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major beneficial</td>
<td>Where the proposed development enhances the scale, landform and pattern of the landscape and/or enriches quality or characteristic features.</td>
<td>Where the proposed development causes major improvement in the existing view.</td>
</tr>
<tr>
<td>Moderate beneficial</td>
<td>Where the proposed development is characteristic of the scale, landform and pattern of the landscape, and/or enhances quality or characteristic features.</td>
<td>Where the proposed development improves the existing view.</td>
</tr>
<tr>
<td>Minor beneficial</td>
<td>Where the proposed development fits with the scale, landform and pattern of the landscape and/or quality or characteristic features.</td>
<td>Where the proposed development causes minor improvement to the existing view.</td>
</tr>
<tr>
<td>Negligible</td>
<td>Where the proposed development causes scarcely any perceptible deterioration or improvement to the existing landscape.</td>
<td>Where the proposed development causes scarcely any perceptible deterioration or improvement to the existing view.</td>
</tr>
<tr>
<td>Minor adverse</td>
<td>Where the proposed development does not fit with the scale, landform and pattern of the landscape and/or detracts from quality or characteristic features.</td>
<td>Where the proposed development causes minor deterioration to the existing view.</td>
</tr>
<tr>
<td>Moderate adverse</td>
<td>Where the proposed development is not characteristic of the scale, landform and pattern of the landscape, and/or damages quality or characteristic features.</td>
<td>Where the proposed development causes noticeable deterioration to the existing view.</td>
</tr>
<tr>
<td>Major adverse</td>
<td>Where the proposed development is at considerable variance with the scale, landform and pattern of the landscape and/or is considerably detrimental to quality or characteristic features.</td>
<td>Where the proposed development causes major deterioration in the existing view.</td>
</tr>
</tbody>
</table>
6. ECOLOGY

6.1 Introduction

This section sets out the proposed scope and methodology for the ecological impact assessment of the proposed development.

This has been informed by publically available information indicating likely baseline conditions, the extent of the proposed development and a preliminary view of the likely ecological issues associated with the proposed development.

The assessment will be undertaken with reference to the following policy and guidance:

- National Planning Policy Framework\(^3\);
- National Planning Practice Guidance: Nature Conservation\(^4\);
- Natural England’s standing advice on protected sites and species\(^5\);
- Institute of Ecology and Environmental Management (IEEM) (now Chartered Institute of Ecology and Environmental Management) *Guidelines for Ecological Impact Assessment in the UK*;\(^6\)
- DMRB Volume II Section 3 Part 4 Ecology & Nature Conservation\(^6\);
- Bat Conservation Trust’s *Bat Surveys - Good Practice Guidelines 2nd Edition*; Kent Biodiversity Action Plan: Priority Habitat and Species Lists\(^7\); and
- Thanet Local Plan Saved Policy NC3\(^8\) (Local Wildlife Sites).

It should be noted that in parallel with the EIA process a Habitats Regulations Assessment (HRA) will be undertaken to ascertain if the integrity of local European designated sites may be subject to adverse effects due to the proposed development alone, or in combination with other proposed plans/projects.

6.2 Baseline

A total of seven statutory designated sites for nature conservation are located within a 5km radius of the Proposed Development. This includes the following which are all located approximately 700m to the south-east of the site, at which point the boundaries of these sites overlap:

- Thanet Coast and Sandwich Bay Special Protection Area (SPA);
- Sandwich Bay Special Area of Conservation (SAC);
- Thanet Coast and Sandwich Bay Ramsar Site;
- Sandwich Bay to Hacklinge Marshes Site of Special Scientific Interest (SSSI);
- Sandwich and Pegwell Bay National Nature Reserve (NNR).


\(^4\)Department for Communities and Local Government (2014) Planning Policy Guidance: Natural Environment


\(^7\)Biodiversity : Action for Kent’s Wildlife

\(^8\)Thanet District Council (2006) Thanet Local Plan - Nature Conservation
The Thanet Coast and Sandwich Bay SPA and Ramsar sites are designated on the basis of the overwintering populations of migratory birds, principally numbers of turnstone (*Arenaria interpres*), and are of importance at the European level. The Sandwich Bay SAC is designated on the basis of its shifting sand dune system which is also of importance at the European level. The Sandwich Bay to Hacklinge Marshes SSSI is of national importance and is designated on the basis of both the sand dune habitats present and the value of these habitats for various species groups including birds and invertebrates. The above sites are separated from the proposed development by the St Augustine’s Golf Course and the A256 Sandwich Road.

An extended Phase 1 habitat survey and desk study was undertaken in January 2015. The majority of the land within the site is arable field with narrow field margins. These areas are regularly disturbed and are considered unlikely to support any protected and/or notable arable weed species. These habitats are considered to be of negligible botanical value.

The narrow strips of woodland habitat that adjoin the existing railway are likely to qualify as semi-natural broadleaved woodland and therefore represent a habitat of principle importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). They are likely to be of at least Parish value. However, habitats within the active railway estate could not be accessed during the January 2015 survey.

The open arable fields contain habitat that has limited potential to be used by lapwing (*Vanellus vanellus*) and golden plover (*Pluvialis apricaria*). The Thanet Coast and Sandwich Bay SPA that lies 750m south-east is designated in part for its over-wintering golden plover.

Trees adjoining the existing railway have the potential to support roosting bats. In addition the linear strips of woodland may be of value to foraging/commuting bats.

In addition the areas of semi-improved grassland adjoining the A299 and A256, and those areas adjoining the existing railway were identified as potentially suitable to support common reptiles.

The site is isolated from known nearby water bodies that could support amphibians through the adjoining A299 and A256 which both represent likely barriers to movement.

No signs of badger were identified, but habitats adjoin the existing railway are potentially suitable.

### 6.3 Potential environmental impacts

Prior to mitigation, potential impacts on ecological receptors resulting from site preparation and construction of the proposed development which will be considered within the impact assessment will include:

- loss and/or fragmentation of on-site habitats;
- killing and/or injury of protected species;
- severance of ecological corridors and networks, resulting in a reduction in habitat connectivity;
- disturbance (e.g. noise, visual, vibration, lighting) of protected and/or notable habitats and species - including those within the nearby statutory designated sites);
- dust deposition and air pollution; and
- water quality changes from surface water run-off carrying sediments and pollutants.

Potential impacts (prior to mitigation) resulting from operational activities which will be considered in the assessment will include:

- disturbance of protected and/or notable habitats and species (e.g. noise from the operational station and from arriving and departing trains; operational lighting of the access road, station and car parks);
- changes in air pollution and dust deposition due to changes in pattern of train movements; and

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6.4 **Assessment methodology**

6.4.1 **Study area**

The study area considered within the ecological impact assessment will include all ecological receptors that are potentially subject to significant effects as a consequence of the proposed development. As a minimum this will include initial consideration of the following:

- statutory designated sites for nature conservation within 5km;
- non-statutory designated sites for nature conservation within 2km; and
- records of protected and/or otherwise notable habitats and species within 2km.

Following a review of the above data an informed decision will be made on which habitat and species known to occur in the local area could be subject to significant effects. Based on the outcomes of this review the study area for specific habitats and species will be revised (upwards or downwards) as appropriate.

6.4.2 **Desk study**

An initial desk study to identify the location of designated sites for nature conservation, and records of protected and/or notable habitat and species has been undertaken to encompass the initial study areas described above.

Records of statutory designated sites for nature conservation were obtained from the Multi-Agency Geographical Information for the Countryside (MAGIC) website. A data search for non-statutory sites for nature conservation and records of protected and/or notable species was submitted to Kent Biological Records Centre (KBRC).

Further records from specialist nature conservation groups will be obtained as required based on the results of the ongoing survey work.

6.4.3 **Field survey**

**Extended Phase 1 habitat survey**

With the exception of those areas within the Network Rail estate (i.e. those within the fence area immediately adjoining the existing railway) the extent of the site and immediately adjoining habitats were subject to a Phase 1 habitat survey according to the standard methodology set out in *Handbook for Phase 1 habitat survey - a technique for environmental audit* during January 2015.

The aim of the survey was to identify the type, quality and extent of habitats present within the vicinity of the proposed development. The survey was extended to include targeted searches to appraise the potential for these habitats to support protected or otherwise notable species, and confirm the requirements for more detailed survey.

A further survey is proposed in April 2015, and at this stage access will be made to the Network Rail estate in order to allow survey of the habitats which adjoin the railway line, and finalise protected species scoping.

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Wintering birds

The open arable fields contain habitat that is potentially suitable for use by lapwing \textit{(Vanellus vanellus)} and golden plover \textit{(Pluvialis apricaria)}. The Thanet Coast and Sandwich Bay Special Protection Area that lies 750m south-east is designated in part for its over-wintering golden plover.

On this basis surveys have commenced to confirm if the site is utilised by any of the species for which the nearby statutory designates sites are designated. Three survey visits will be undertaken during the period February to mid-March 2015. If further survey visits are required then these may be undertaken during winter 2015/2016.

Surveys will follow an adaptation of the Pilot British Trust for Ornithology (BTO) method, and involve walking transects across the site, stopping to look and listen for birds periodically. All bird activity would be recorded following the standard BTO species codes.

Bats

Based on the initial extended Phase 1 the rail corridor appears to contain semi-mature to mature trees which may be potentially suitable to support roosting bats.

Each tree of more than 0.25m diameter at breast height (DBH) within or adjacent to the site will be assessed from ground level using binoculars to identify features with the potential to support roosting bats. A description of each feature will be recorded including details of the nature of the feature concerned (e.g. branch cavity, woodpecker hole), and its height and orientation. Each feature will be graded as either being a confirmed roost, or as having negligible, low, moderate, or high potential to support a roost.

Those trees found to contain features with a moderate or high potential to support roosting bats will require further investigation, either via tree climbing or emergence survey depending on the nature of the features present.

In addition, a bat activity survey will be undertaken focussing on the potential value of the existing railway corridor to foraging and commuting bats. The remainder of the site is exposed and is considered to be of limited value for bats.

Three survey visits, including at least one dusk/dawn survey will be conducted during the period May to September 2015. The activity surveys are likely to be conducted from land adjacent to the active railway that lies outside of the Network Rail estate as night time access to the railway is unlikely to be available. The activity survey will be augmented by the deployment of a static bat detector in proximity to the railway corridor (access restrictions permitting) for at least three consecutive nights on three occasions during the proposed survey period.

Other protected species surveys

The requirement for other habitat and species surveys will be considered on the basis of additional information gained during the extended Phase 1 habitat survey of habitats directly adjoining the railway (to be conducted in April 2015).

Based on available information it is thought likely that a survey to confirm the presence/absence of reptiles from habitats within the railway corridor will be required.

6.4.4 Evaluation of ecological receptors

The evaluation of ecological resources or features will be undertaken in accordance with the IEEM’s Guidelines for Ecological Impact Assessment in the United Kingdom. As such the methodology utilised in the ecology chapter will differ from the generic approach identified in Section 4.3. A tabular approach to evaluation and matrix will not be utilised, and the assessment will be receptor led (e.g. the impacts on a bat population due to roost loss, disturbance from construction noise and vibration etc. will all be described and then the overall resultant effect on that receptor reported).
Data received through consultation, desk-based investigations and field-based investigations will be used to allow habitats, species and other features of ecological value to be identified, and the main factors contributing to their value described and related to available guidance.

The ecological value of each receptor will then be evaluated against the standard geographical frames of reference identified in the IEEM guidelines (i.e. international; national; regional; county/metropolitan; district/borough; local/parish; and within zone of influence/site).

In determining the value of ecological resources the social and economic values will be considered separately from the ‘ecological’ value, and the significance of any social and economic effects will (where applicable) be defined and reported within the community and socio-economics chapter of the ES.

6.4.5 Characterising potential ecological impacts

Each potential impact on an ecological receptor will be described with reference to the following parameters:

- Beneficial/adverse - positive or negative impact;
- Magnitude - the ‘size’ or ‘amount’ of an impact. This will be described on a quantitative basis where possible;
- Spatial extent - the area or distance over which the impact occurs;
- Duration - the time over which an impact is expected to last prior to recovery or replacement of the resource or feature. For the purposes of this assessment the following categories will be utilised where relevant: short-term (up to 1 year), medium-term (1-5 years), long term (more than 5 years) and permanent. The duration of an effect may be longer than the duration of an activity or impact;
- Reversibility - temporary or permanent impact. A reversible (temporary) impact is one from which recovery is possible or for which effective mitigation is both possible and an enforceable; and
- Timing and frequency - consideration of the point at which the impact occurs in relation to critical life-stages or seasons.

6.4.6 Methodology for determining significance of effects

For each receptor potentially subject to impacts the relevant parameters described above will be considered alongside the value (i.e. the geographical frame of reference at which it has been valued) of the receptor and a judgement made on if the resultant effect will be significant. This process will involve consideration of the sensitivity of the receptor to the various impacts to which it is likely to be subjected.

The IEEM guidelines state that ‘An ecologically significant effect is defined as an effect (negative or positive) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographical area.’

Effects on ecological integrity of designated sites are those which affect integrity as described by the Office of the Deputy Prime Minister (ODPM) circular 06/200511 as ‘...coherence of ecological structure and function….that enables it to sustain the habitat, complex of habitats and/or levels of populations or species for which it was classified.’ The IEEM guidelines also provide definitions for the conservation status of habitats and species as follows:

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• the conservation status of a habitat is “the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species”;

• the conservation status of a species is defined as “the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations”.

Taking the value of the receptor and the nature of the impacts to which it is likely to be subjected into account, an overall evaluation of the significance of an effect for the receptor in question will be derived. An impact will not always generate an effect at the same geographic level that the receptor has been valued. For example, an impact on a receptor valued at the national level may not generate an effect significant at a national level. However, the resultant effect may be significant at a lower level, for example a county or local level. All such judgements will be based, wherever possible, on quantitative evidence. However, where necessary the professional judgement of an experienced ecologist will be applied.

In accordance with the IEEM guidelines, all conclusions on the significance of effects are related to the concepts of integrity or conservation status and as being either:

• neutral and non-significant (i.e. no effect on integrity or conservation status);
• beneficial or adverse at a specific geographical scale (e.g. international, UK, national, regional etc.).

Within Table 6.1 the levels of significance derived from the IEEM Guidelines approach have been equated to the most relevant significance of effect definitions used in other chapters within this scoping report. On completion of the assessment the outputs of the IEEM methodology will be summarised in a table and displayed alongside their equivalent significance level from the methodology utilised elsewhere in this report in order to aid the comparison of conclusions across topics.

Table 6.1: Significance of ecological effects

<table>
<thead>
<tr>
<th>Significance following the IEEM Guidelines terminology</th>
<th>Equivalent significance level utilised elsewhere in this EIA Scoping Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant at the international level</td>
<td>Major (Significant)</td>
</tr>
<tr>
<td>Significant at the national level</td>
<td>Major (Significant)</td>
</tr>
<tr>
<td>Significant at the regional level</td>
<td>Moderate (Significant)</td>
</tr>
<tr>
<td>Significant at the county level</td>
<td>Moderate (Significant)</td>
</tr>
<tr>
<td>Significant at the district/borough level</td>
<td>Minor (Significant or Not significant)</td>
</tr>
<tr>
<td></td>
<td>(N.B. Significance level to be resolved through professional judgement)</td>
</tr>
<tr>
<td>Significant at the local/parish level</td>
<td>Minor (Not significant)</td>
</tr>
<tr>
<td>Not significant</td>
<td>Negligible (Not Significant)</td>
</tr>
</tbody>
</table>
7. CULTURAL HERITAGE

7.1 Introduction

This section sets out the proposed scope and methodology for the cultural heritage assessment of the proposed development.

This has been informed by an outline description of the environmental baseline conditions and a preliminary view of the issues likely to be associated with the proposed development. The assessment will be undertaken with reference to the following policy and guidance:

- National Planning Policy Framework (2012);
- National Planning Practice Guide - Conserving and Enhancing the Historic Environment (2014);
- Town and Country Planning Act (Listed Buildings and Conservation Areas) 1990;
- Ancient Monuments and Archaeological Areas Act 1979;
- The Thanet Local Plan 2006 (Saved Policies) and any emerging policy from the new Thanet Local Plan;
- English Heritage, The Setting of Heritage Assets (2011);
- English Heritage, ‘Seeing History in the View’ (2008);
- English Heritage, ‘Conservation Principles’ (2008);
- Institute for Archaeologists Standard and Guidance for Historic Environment Desk-based Assessment (IfA 2012);
- Institute for Archaeologists Code of Conduct (IfA 2014); and

7.2 Baseline

The site is located within a rich, multi-period, archaeological landscape just north of the former course of the Wansum Channel which would have separated the Isle of Thanet from the rest of Kent. Archaeological evidence has revealed a pattern of widespread occupation of the area from the Neolithic period and throughout the Bronze Age and Iron Age. The area surrounding the site is also associated with several key events in British history. The probable landing site of the Roman invasion of AD 43 lies approximately 4.7km to the southwest of the site at Richborough (Rutupiae). One of the principal port towns of the Roman province, Rutupiae became a Saxon shore fort during the Late Roman period. Closer to the site, Ebbsfleet approximately 1km to the south-west is traditionally identified as the first landing site of Saxons led by Hengis and Horsa in AD 449 and St Augustine in AD 597.

7.2.1 Designated assets

A review of data held by the English Heritage National Heritage List confirms that there are no World Heritage Sites, Registered Battlefields or Registered Parks and Gardens of Historic Interest in the vicinity of the site. The English Heritage National Heritage List also confirms that there are no Scheduled Monuments within or adjacent to the site. As noted in Section 2.3, within the wider area there are three Scheduled Monuments located within 3km of the site: the Anglo-Saxon cemetery south of Ozengell Grange; an enclosure and ring ditches north-east of Minster Laundry; and the Monastic grange and pre-Conquest nunnery at Minster Abbey.

Six listed buildings are recorded on the National Heritage List within 1km of the site:

- the Grade II listed St Augustine’s Cross, located approximately 150m to the south of the site;
- the Grade II listed 53 and 55 Foad’s Lane, located approximately 350m to the south-east of the site;
• the Grade II listed Sevenscore House, Grade II listed barn and Grade II listed farm office located approximately 630m to the west of the site; and
• the Grade II listed Chapel House, located approximately 675m to the north-west of the site.

The nearest Conservation Area to the site is Pegwell, located approximately 1.8km to the east. Minster Conservation Area is located approximately 2.5km to the west.

7.2.2 Non-designated assets

A high level appraisal of publically accessible data held by the Kent Historic Environment Record has identified a number of non-designated heritage assets in the immediate vicinity of the site.

Within the site itself Area 14 of the Margate to Weatherlees Hill Wastewater Treatment Works (WTW) Pipeline route runs parallel to the north side of the existing railway line. Archaeological investigations within this area revealed four pits containing Neolithic pottery and worked flint, numerous pits and postholes and 24 boundary ditches two of which enclosed a small Romano-British cemetery containing both inhumation burials and cremations. It is not clear whether the cemetery was confined to the excavated area; however, it is almost certain that boundary ditches and other archaeological remains will extend into the proposed Thanet Parkway site.

The archaeological desk-based assessment for the A256 East Kent Access (2003) also identified a number of chalk quarries which may extend into the site. The quarries are likely to be of medieval or post-medieval date.

Further Neolithic, Bronze Age and Anglo-Saxon remains have been found at the Oakleys Nursery, Cliffend approximately 510m to the south-east of the site and Iron Age activity has been recorded to the south-west on the route of the Margate to Weatherlees Hill WTW Pipeline and north-west at Thorn Farm. Numerous Iron Age coins have also been found on Cottington Hill.

Within the wider area archaeological investigations undertaken in advance of the East Kent Access Road also revealed a number of archaeological sites to the north, west and south of the site including: the remains of nine Bronze Age burial mounds; several Iron Age enclosures; an Iron Age settlement at Ebbsfleet that was occupied into the Roman period; evidence for disbursed rural Roman settlement set within landscape fields and trackways; Roman and Saxon cemeteries; evidence for several Saxon buildings and a large Saxon enclosure (http://eastkent.owarch.co.uk/tag/press-releases/).

The Kent Historic Environment Record also records a number of non-designated historic buildings and structures within 1km of the site including the post-medieval farm complexes at Great Cliffsend Farm and Thorn Farm and the remains of numerous Second World War anti-invasion defences to the south and southeast of the site including a coastal battery, anti-aircraft battery, pillboxes, slit trenches and gun pits.

The site also lies within a single historic landscape character type defined by the Kent Historic Landscape Characterisation Project as type 1.14 fields predominantly bounded by tracks, roads and other rights of way.

7.3 Potential environmental impacts

Construction of the proposed development has the potential to result in a number of direct impacts on the cultural heritage resource.

The direct construction impacts that may cause the truncation or loss of the buried archaeological resource leading to adverse effects during the construction phase of the proposed development could include:

• topsoil stripping/ site clearance;
• ground works for the construction of new car parking and set down areas;
• ground works for the construction of the station forecourt, and platform areas;
• ground works for the construction of the possible new footbridge foundations/underpass;
• enabling works for the provision of new utilities and services; and
• ground works for the construction of new road junction and access road.

At the time of writing it is anticipated that the construction of the new station platforms and footbridge/underpass will largely be undertaken within the existing railway cutting. Archaeological remains within the cutting are likely to have previously been removed by construction of the railway.

For designated heritage assets and non-designated historic buildings and structures identified within the study area the principal impacts will comprise visual and aural impacts on their setting which may affect the sensitivity (heritage significance) of the assets. These impacts may either be temporary during construction or permanent arising from the new station and its operation.

7.4 Assessment methodology

7.4.1 Baseline assessment

In order to place the site in its full archaeological and historical context, baseline information would be collected on the known heritage assets within the study area defined below. The primary repositories of such information consulted will include but may not be limited to:

• English Heritage National Heritage List;
• Kent Historic Environment Record;
• Centre for Kentish Studies;
• Kent History and Library Centre;
• Kent Historic Landscape Characterisation;
• previous archaeological investigation reports held by the Kent Historic Environment Record or Centre for Kentish Studies. In particular the results and records arising from Area 14 of the Margate to Weatherlees Hill Wastewater Treatment Works (WTW) Pipeline which runs through the proposed development area and the adjacent East Kent Access Road;
• journals and publications of the Trust for Thanet Archaeology;
• historic Ordnance Survey and pre-Ordnance Survey mapping;
• available ground investigation reports or borehole data;
• a site walkover survey and setting assessment; and
• various internet and documentary sources.

The archaeological datasets and the results from previous archaeological and geotechnical investigations will be collated and used to create a deposit model of the extent and depth (where known) of the archaeological resource and any previous ground disturbance. The deposit model and wider baseline data will then be used to assess the overall archaeological potential of the proposed development site.

Consultation will be undertaken throughout the EIA with Kent County Council’s Principal Archaeological Officer to ensure that all appropriate archaeological and heritage sources are consulted and that the key Cultural Heritage issues are identified and addressed within the ES chapter.
7.4.2 Study area

A core study area encompassing a 1km radius surrounding the site will be required to identify all known heritage assets and to inform and provide context for the assessment of the potential for architectural remains to survive within the site.

An extended study area may also be required to assess the visual and setting impacts on designated assets. This extended study area will be reviewed and confirmed during the site walkover survey and in collaboration with the landscape and visual assessment to reflect the ZTV for the proposed development.

7.4.3 Assessment methodology

The sensitivity (heritage significance) of a heritage asset is derived from its heritage interest which may be archaeological, architectural, artistic or historic (NPPF Annex 2, Glossary).

The sensitivity of a place is defined by the sum of its heritage values. English Heritage identifies these as being evidential, historical, aesthetic and communal (Conservation Principles, English Heritage 2008, 27-32). The setting of an asset can also contribute to its sensitivity.

Taking these criteria into account, each identified heritage asset can be assigned a level of sensitivity in accordance with a four-point scale as set in Table 7.1.

Table 7.1: Criteria for determining the sensitivity (heritage significance) of heritage assets

<table>
<thead>
<tr>
<th>Sensitivity of asset (heritage significance)</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Assets of inscribed international importance, such as World Heritage Sites</td>
</tr>
<tr>
<td></td>
<td>Grade I and II* listed buildings</td>
</tr>
<tr>
<td></td>
<td>Grade I and II* Registered Historic Parks and Gardens</td>
</tr>
<tr>
<td></td>
<td>Registered Battlefields</td>
</tr>
<tr>
<td></td>
<td>Scheduled Monuments</td>
</tr>
<tr>
<td></td>
<td>Non-designated archaeological assets of schedulable quality and importance</td>
</tr>
<tr>
<td>Medium</td>
<td>Grade II listed buildings</td>
</tr>
<tr>
<td></td>
<td>Grade II listed Registered Historic Parks and Gardens</td>
</tr>
<tr>
<td></td>
<td>Conservation Areas</td>
</tr>
<tr>
<td></td>
<td>Locally listed buildings included on an approved local list</td>
</tr>
<tr>
<td></td>
<td>Non-designated heritage assets of a regional resource value as identified through professional judgement informed by consultation, the criteria for designation and regional and local research agendas</td>
</tr>
<tr>
<td>Low</td>
<td>Non-designated heritage assets of a local resource value as identified through professional judgement informed by consultation, the criteria for designation and regional and local research agendas</td>
</tr>
<tr>
<td>Very low</td>
<td>Non-designated heritage assets whose heritage values are compromised by poor preservation or damage so that too little remains to justify inclusion into a higher grade</td>
</tr>
</tbody>
</table>

Having identified the sensitivity of the heritage asset, the next stage in the assessment will be to identify the level and degree of impact to an asset arising from the development. Impacts may arise during construction or operation and can be positive, negative, temporary or permanent. Impacts can occur to the physical fabric of the asset or affect its setting.

The level and degree of impact (magnitude of impact) is assigned with reference to a four-point scale as set out in Table 7.2.
Table 7.2: Criteria for determining the magnitude of impact on heritage assets

<table>
<thead>
<tr>
<th>Magnitude of impact</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Change such that the sensitivity of the asset is totally altered or destroyed. Comprehensive change to setting affecting sensitivity (heritage significance), resulting in a serious loss in our ability to understand and appreciate the resource and its historical context and setting.</td>
</tr>
<tr>
<td>Medium</td>
<td>Change such that the sensitivity of the asset is affected. Noticeably different change to setting affecting sensitivity, resulting in erosion in our ability to understand and appreciate the resource and its historical context and setting.</td>
</tr>
<tr>
<td>Low</td>
<td>Change such that the sensitivity of the asset is slightly affected. Slight change to setting affecting sensitivity resulting in a change in our ability to understand and appreciate the resource and its historical context and setting.</td>
</tr>
<tr>
<td>Very low</td>
<td>Changes to the asset that hardly affect sensitivity. Minimal change to the setting of an asset that have little effect on sensitivity resulting in no real change in our ability to understand and appreciate the resource and its historical context and setting.</td>
</tr>
</tbody>
</table>

Once the impacts of the scheme have been identified, an assessment of the level of effects arising from the proposed development will then be determined by using the matrix and criteria for the assessment of effects, as outlined in Section 4.3 and Tables 4.1 and Table 4.2. Effects can be negligible, adverse or beneficial.

Within the NPPF, impacts affecting the heritage significance (sensitivity) of heritage assets are considered in terms of harm and there is a requirement to determine whether the level of harm amounts to ‘substantial harm’ or ‘less than substantial harm’. The emerging on-line NPPG assists in determining whether works constitute substantial harm, and the guidance is that for harm to be substantial the impact needs to go ‘to the heart of why the place is worthy of designation’.

The ES reports on the significance of effect and there is no direct correlation between the significance of effect and the level of harm caused to sensitivity. A major significant effect on a heritage asset would, however, more often be the basis by which to determine that the level of harm to the sensitivity of the asset would be substantial. A moderate significant effect is unlikely to meet the test of substantial harm and would therefore more often be the basis by which to determine that the level of harm to the sensitivity of the asset would be less than substantial. In all cases determining the level of harm to the sensitivity of the asset arising from development impact is one of professional judgement.
8. WATER RESOURCES AND FLOOD RISK

8.1 Introduction

This section sets out the proposed scope and methodology for the water resources and flood risk assessment of the proposed development.

This has been informed by an outline description of the environmental baseline conditions and a preliminary view of the issues likely to be associated with the proposed development. The assessment will be undertaken with reference to the following policy and guidance:

- National Planning Policy Framework (NPPF)\textsuperscript{12} and the related web based National Planning Practice Guidance\textsuperscript{13};
- Web-based Transport Analysis Guidance (WebTAG) – specifically TAG Unit A3 - Environment\textsuperscript{14},
- Environment Agency guidance, information and mapping\textsuperscript{15};
- British Geological Society (BGS) data and mapping\textsuperscript{16};
- Thanet Stage 1 Surface Water Management Plan\textsuperscript{17}; and
- Thanet District Council Strategic Flood Risk Assessment\textsuperscript{18}.

8.2 Baseline

The following water resources and sources of flood risk have been identified as having the potential to be affected by impacts from the proposed development.

The Stour Estuary (transitional waterbody) is located approximately 1km to the south-east of the proposed development at its nearest point. There is also a drain to the south of the proposed site, which drains to the south into marshland and into Pegwell Bay.

A small reservoir is located approximately 350m to the north of the proposed site, north of the A256. This is not covered by the Environment Agency risk of flooding from reservoirs map as it holds less than 25,000m\textsuperscript{3} of water.

Based on the Environment Agency Flood Map for Planning (Rivers and Sea)\textsuperscript{15}, the proposed development covers an area designated as Flood Zone 1. Flood Zone 1 is an area at low flood risk with a greater than 1 in 1000 annual probability of fluvial or tidal flooding. As the proposed development is over 1ha, a Flood Risk Assessment (and a drainage strategy) will be required under the requirements of the NPPF\textsuperscript{12}.

\textsuperscript{12} Department for Communities and Local Government (2012); National Planning Policy Framework, Communities and Local Government Publications

\textsuperscript{13} Communities and Local Government (2014); ‘National Planning Practice Guidance’, Communities and Local Government Publications


\textsuperscript{15} Environment Agency website: http://maps.environment-agency.gov.uk/wyby

\textsuperscript{16} BGS website, www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer


\textsuperscript{18} Thanet District Council, (2009) Strategic Flood Risk Assessment
The British Geological Survey (BGS) website\textsuperscript{16} identifies the bedrock under the proposed development as Thanet Sand. This formation is classified by the Environment Agency as a Secondary A aquifer, described as permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. The proposed station site is not located within a Source Protection Zone (SPZ). However, a significant SPZ associated with the chalk is located to the north-east of the site.

The BGS website\textsuperscript{16} identifies the superficial deposits under the proposed development as Head Deposits – Clay and Silt. They are not classified by the Environment Agency as an aquifer, but have the ability to transmit water to the bedrock.

The Thanet District Council Strategic Flood Risk Assessment (SFRA)\textsuperscript{19} identifies the site as being in an area of low groundwater flood risk.

The Environment Agency’s latest and most up to date surface water flood mapping is the updated Flood Map for Surface Water (uFMfSW), which indicates that the proposed development is predominantly within an area of very low surface water flood risk. However, there are some small areas within the proposed development site, where surface water is shown to pond alongside the railway line. These areas have a high flood risk potential (greater than a 1 in 30 annual probability of surface water flooding). It should be noted that surface water modelling is not suited to assessment of flood risk at single site level, however it can provide an indication of potential flood risk issues.

Foul, surface and combined sewers are likely to be located in proximity to the proposed development, and the site may therefore discharge into the combined sewer network. There is no indication if sewer flooding has occurred in the area of the proposed development, attributed to either a lack of capacity or failure of infrastructure. Further information on surface and foul water drainage will be sought from Southern Water for the impact assessment.

8.3 Potential environmental impacts

The impacts of the proposed development on water resources are anticipated to be primarily in relation to:

- impact on surface water and groundwater quality from pollution due to increased sediment and or disturbance of contaminated material during construction;
- impacts on flood risk due to an increase in impermeable area increasing surface water runoff from the site;
- impacts on surface water and groundwater quality from oils, hydrocarbons and metals from the car parking area, new road access to the site and changes to the track bed. There is the potential for impact from the use of pesticides potentially used for landscaping and weed control on the track and station within the developed area; and
- a pathway between surface water runoff and the site (as indicated by the uFMfSW), if the site is not correctly drained.

A pathway between the site and the Stour Estuary (transitional waterbody), is unlikely to be present as the waterbody is located 1km from the site.

8.4 Assessment methodology

The detailed baseline conditions in relation to the water environment and flood risk will be established by a mixture of reviewing available information (including monitoring results) from relevant sources and information from related studies prepared for the planning application:

- Envirocheck Report;

\textsuperscript{19} Entec (2009) Thanet District Council Strategic Flood Risk Assessment
ground investigations (historic and for the development);

- BGS borehole data and mapping;
- Environment Agency data request for water quality, geology, hydrogeology, drainage, ecology and protected areas;
- water company asset details, water supply data and wastewater treatment data;
- a Flood Risk Assessment (FRA) will be undertaken to determine any flood risk associated with the development and mitigation required. A separate drainage strategy will be developed to support the FRA.

The determination of impacts and the significance of their effects will be undertaken using the Source-Pathway-Receptor model. This model identifies the potential sources or ‘causes’ of impact as well as the receptors (surface water resources) that could potentially be affected.

Once potential impacts on water resources have been identified, it is necessary to determine if the resultant effects are likely to be significant, to enable the identification of potential mitigation measures that can counteract significant adverse effects. The significance of the effect on the receptors depends largely on the sensitivity of the receptor and the magnitude of impact experienced.

An assessment of each potential effect’s significance will be undertaken using the methodology provided in the Web-based Transport Analysis Guidance (WebTAG); specifically the TAG Unit A320. The methodology set out in this WebTAG Unit provides an appraisal framework for taking the outputs of the EIA process and analysing the key information of relevance to the water environment. The guidance provides a method by which the significance of the identified potential effects can be appraised consistently by decision makers. It is based on guidance prepared by the Environment Agency and builds on the water assessment methodology in the DMRB 11:3:1021.

The sensitivity or importance of each water resource (the receptor) will be based on its considered value, for example as an ecological habitat, a source of drinking water or a recreational resource.

The magnitude of a potential impact will then be established based on the likely degree of impact relative to the nature and extent of the proposed development. It is important to consider at this stage that potential impacts can be beneficial as well as adverse. The derivation of magnitude will be carried out independently of the importance of the water resource.

Once the magnitude of an impact is understood, the scale of the potential effect can then be derived by combining the assessments of both the importance of the water resource and the magnitude of the impact in a simple matrix.

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20 Department for Transport (DfT), (2014); Tag Unit A3 Environmental Impact Assessment [link]

Table 8.1: Criteria for determining the sensitivity of resource/receptor for water resources and flood risk

<table>
<thead>
<tr>
<th>Sensitivity of resource / receptor</th>
<th>Criteria</th>
</tr>
</thead>
</table>
| Very High                         | Flood Zone 3b  
Drinking Water (DW) 1 or DW2 within critical travel time for pollution downstream  
Source Protection Status – Zone 1  
Designated salmon fishery          |
| High                              | WFD River Basin Management Plan (RBMP) Chemical Classification  
WFD RBMP Ecological Classification  
DW3 within critical travel time downstream  
Flood Zone 3a  
Source Protection Status – Zone 2  
Designated cyprinid fishery        |
| Medium                            | Not designated Drinking Water Supply  
Flood Zone 2  
Source Protection Status – Zone 3  
Undesignated fishery               |
| Low                               | No WFD River Basin Management Plan (RBMP) Chemical Classification  
No WFD RBMP Ecological Classification  
Flood Zone 1  
Not a fishery                       |

Table 8.2: Criteria for determining the magnitude of impact for water resources and flood risk

<table>
<thead>
<tr>
<th>Magnitude of impact</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Results in loss of attribute, e.g. change in Water Framework Directive classification of a waterbody, or any loss of flood storage/increase flood risk.</td>
</tr>
<tr>
<td>Medium</td>
<td>Results in an impact that changes the integrity of an attribute or loss of part of an attribute e.g. loss of productivity of a fishery or reduction in the economic value of the feature.</td>
</tr>
<tr>
<td>Low</td>
<td>Results in a minor impact on an attribute, e.g. measurable change in attribute, but of limited size and/or proportion.</td>
</tr>
<tr>
<td>Negligible</td>
<td>Results in an impact on attribute but of insufficient magnitude to affect the use/integrity, e.g. discharges to watercourse but no significant loss in quality, fishery productivity or biodiversity, or no increase in flood risk.</td>
</tr>
</tbody>
</table>

The matrix for the assessment of effects, as outlined in Table 8.3, will be adopted. This guidance differs from the generic approach set out in Section 4.3 and Table 4.2. However, the methodology proposed is based on the WebTAG Unit A3-Environment\(^{22}\) and builds on the water assessment.

\(^{22}\) Department for Transport (DIT), (2014); Tag Unit A3 Environmental Impact Assessment  
methodology in the DMRB 11:3:10\(^\text{23}\). It provides an appraisal framework for taking the outputs of the EIA process and analysing the key information of relevance to the water environment.

### Table 8.3: Classification of effects

<table>
<thead>
<tr>
<th>Magnitude of impact</th>
<th>Sensitivity of the resource/receptor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very High</td>
</tr>
<tr>
<td>High</td>
<td>Major</td>
</tr>
<tr>
<td>Medium</td>
<td>Major</td>
</tr>
<tr>
<td>Low</td>
<td>Moderate</td>
</tr>
<tr>
<td>Negligible</td>
<td>Negligible</td>
</tr>
</tbody>
</table>

Following the classification of an effect, a statement will then be made regarding whether the effect is significant or not. As a general rule, major and moderate effects will be considered to be significant and minor and negligible effects will be considered to be not significant. However, professional judgement can also be applied where necessary.

### 8.5 Flood Risk Assessment

As set out in the NPPF\(^\text{12}\), a FRA is required to accompany any planning application for a proposed development which is over 1ha in size. The proposed development is expected to be approximately 2ha in size and therefore a FRA is required. The FRA will be prepared as a separate standalone document to the EIA and referred to within the water resources and flood risk chapter.

The overall objective of the FRA is to meet with the requirements of NPPF and Thanet District Council’s Flood Risk Policies and which considers, with respect to surface water runoff management, the specific needs of the Environment Agency, Thanet District Council and Southern Water.

The FRA will consider flood risks from all sources and include a high level strategy for the management of surface water runoff. A review of flood risk from other sources, based on the most up-to-date information available from the Environment Agency, Thanet District Council’s SFRA and other relevant consultees will also be included.

The FRA will identify how, the risk of flooding will change as a result of the proposed development of the site (including taking climate change into account). The FRA will include recommendations for flood risk mitigation to manage flood risks to an acceptable level, considering the vulnerability of the proposed development to flooding, so that the development remains safe throughout its lifetime.

A conceptual surface water drainage strategy will be produced for the proposed development as part of the FRA, with a separate detailed drainage strategy used to inform the FRA. This conceptual drainage strategy will include a review of appropriate Sustainable Drainage Systems, using the guidance produced by Lead Local Flood Authorities of the South East of England ‘Water, People, Places – a guide for master planning sustainable drainage into developments’\(^\text{24}\). The proposals will commit to meeting the requirements of the NPPF and Thanet District Council, and will provide detail on how surface water runoff on site will be collected, managed and controlled prior to discharge, so as to minimise the potential risk of flooding. The residual risks that remain after implementation of the recommended mitigation measures will also be reported.

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9. TRAFFIC AND TRANSPORT

9.1 Introduction

This section sets out the proposed scope and methodology for the ES chapter of the traffic and transport impacts arising as a consequence of the proposed development. This scoping has been informed by an outline appraisal of the environmental baseline conditions and a preliminary assessment of the issues likely to be associated with the proposed development.

The assessment will be informed by the Strategic Case for the proposed development, the engineering design and the Transport Assessment.

The following policy documents are relevant:

- National Planning Policy Framework;25
- Growth without Gridlock: Transport Delivery Plan for Kent, December 2010;26
- Local Transport Plan 3 for Kent (2011-2016)27; and
- Rail Action Plan for Kent, April 201128.

The criteria used in this assessment have been based on information included in the following documents, and using professional judgement:

- Department for Communities & Local Government, March 2014, Guidance on Travel Plans, Transport Assessments and Statements in Decision-taking30;
- Department for Transport’s (DfT) Guidance on Transport Assessment31;
- DMRB Volume 11: Environmental Assessment (1993 and updates);
- DfT’s WebTAG;
- Guidelines for the Environmental Assessment of Road Traffic32;

9.2 Baseline

The site is bordered to the north by the A299 Hengist Way and to the west by the A256 Richborough Way. Cottington Road briefly borders the south-western most part of the site, from where it passes

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29 http://planningguidance.planningportal.gov.uk/
31 Department for Transport (DfT), 2007, Guidance on Transport Assessment, DfT
32 Institute of Environmental Assessment (IEA), 1993, Guidelines for the Environmental Assessment of Road Traffic, IEA
under the A256 Richborough Way and then heads in a south-easterly direction towards Cliffsend. A
vehicular access track runs off Cottington Road into the site.

There are a number of mainline railway stations within the vicinity of the site which provide services
to London Charing Cross, London Victoria and St Pancras International. These include:

- Minster Station - located approximately 2.7km to the west of the site;
- Ramsgate Station - located approximately 3km to the north-east of the site;
- Dumpton Park Station – located approximately 4.6km to the north-east of the site;
- Broadstairs Station – located approximately 6km to the north-east;
- Margate Station – located approximately 6.5km north of the site;
- Westgate-on-Sea Station – located approximately 6.1km north-west of the site;
- Birchington-on-Sea Station – located approximately 6.8km north-west of the site; and
- Sandwich Station - located approximately 7.3km to the south of the site.

There are 11 bus routes which serve the area. The closest bus stops are located south-east of the
site in the village of Cliffsend along Foads Lane, and to the north-east of the site along Cliff View
Road and Canterbury Road W. These bus stops provide services to Monkton and Ramsgate Town
Centre on the 42 and 42A routes.

A PRoW (TR32) runs along southern boundary of the site, initially to the south of, and parallel with,
the rail line and then crossing to run on the northern side. Regional Cycle Route (RCR) 15 runs
along Cottington Road at the south-western boundary of the site.

Information on baseline travel patterns will be derived from information and a range of transport
models that will be provided by KCC (including VISUM, Omnitrans and Arcady junction modelling),
the use of these will be described in the Transport Assessment. Following a detailed assessment of
the information available from these models, further baseline travel surveys will be undertaken if
required, following discussion and agreement on these with KCC.

9.3 Potential environmental impacts

The traffic and transport assessment will consider the impacts on pedestrians, cyclists, equestrians,
mobility impaired people, highways, public transport, stations and interchanges and depots. It will
cover the impacts that are likely to occur during both the construction and operational periods of the
proposed development.

The following key impacts will be assessed:

- changes in traffic, public transport, pedestrian and cyclist flows;
- alterations to road layout/closures/diversions/widening/alterations(including stopping and
  passing places)/junction improvements/diversions of PRoW;
- changed access to properties and agricultural fields;
- changes to journey times and journey distances for vehicle occupants and public transport
  passengers;
- changes in accessibility, journey times, distances or frequencies to/from stations, interchanges
  and by public transport;
- changes to bus routes and bus stop locations; and
- changes in journey times and distances, and amenity and ambience, for vulnerable road users.
With the exception of Accident & Safety risks that will be assessed irrespective of their duration, temporary impacts during construction must be of a duration that exceeds four consecutive weeks to be assessed as significant, this is consistent with recent similar EIAs.

9.4 Assessment methodology

9.4.1 Spatial scope

The spatial scope of the traffic and transport assessment will be defined within the Transport Assessment and agreed with Kent CC as local highway authority. This is anticipated to include the following that may be potentially affected by the proposed development:

- traffic flows on roads and junctions, as shown on Figure 3:
  - A256/A253 Cliffsend Roundabout;
  - A299/A256 Lord of the Manor Junction;
  - Sevenscore Roundabout at junction of Richborough Way/Hengist Way;
  - new junction(s) providing access/egress to/from the proposed Parkway Station;
  - sections of A253 Hengist Way in the vicinity of the proposed new development, A256 Ramsgate Road to/from Westwood Junction and A299 Canterbury Road East between Lord of the Manor Junction and Ramsgate Station;
  - Cottington Road (for any construction impacts only);
  - Foads Lane (for any construction impacts only);
  - Prospect Roundabout A253/Tothill Street/Minster Road;
  - Foxborough Lane/Tothill Street; and
  - Monkton Road/High Street/Tothill Street.
- rail passengers at Thanet Parkway Station as well as other key stations affected by the proposed development;
- rail passengers on services affected by the proposals e.g. to/from London;
- bus passengers on routes that will be changed as a result of the proposed development;
- users of the Sevenscore Level Crossing;
- users of existing PRoW, including Footpath TR32; and
- users of existing (including RCR15) and proposed local cycleways.
Figure 3 Roads and junctions surrounding the site
9.4.2 Construction

The assessment will focus on temporary traffic and transport issues resulting from land taken for worksites, the presence of construction heavy goods vehicles (HGV) traffic on the road network, and effects on routes crossing the construction areas (PRoWS, railway and highways). The extent of the assessment will include:

- the highway network (including routing, parking, loading and access arrangements) affected by construction worksites and on routes used by construction traffic, focusing on routes between worksites and the road network surrounding the proposed development;
- public transport networks directly affected by construction works including rail, bus and coach, including lines, routes and stations that may be indirectly affected by the proposed development;
- pedestrian, cyclist and equestrian routes in the vicinity of the proposed development; and
- railways used to transport materials and excavated materials.

9.4.3 Operation

The spatial scope will include the transport routes where there is a significant permanent change in the usage either through people accessing the proposed development or from the effects of modal shift. It will also include any roads and other rights of way that may be permanently diverted or stopped up.

The assessment will therefore include:

- the highway network where changes are likely to occur as a result of the proposed development;
- the public transport network where it is affected by the increased usage or changed journey patterns arising from the proposed development, including rail, bus and coach services; and
- pedestrian, cyclist and equestrian routes in the vicinity of the proposed development.

9.4.4 Temporal scope

Potential effects of the proposed development will be considered for the following:

- Construction period (2017-2018): impacts arising from construction;
- Operation (2019 and 2029): impacts associated with operation i.e. at year of opening and ten years after opening.

Construction impacts will be assessed using the worst case construction flows for the assessment of construction traffic impacts, irrespective of when these actually occur, in conjunction with the interpolated 2015 background traffic flows.

The future scenarios and travel forecasts will be based on and therefore consistent with the modelling and flows assessed in the Transport Assessment, taking account of committed development impacts.

9.4.5 Assessment methodology

The TA will be used as the basis for the identification of the likely changes on the road and public transport networks during construction and operation. These impacts will then be assessed using a set of criteria developed for the proposed development.

The significance of a traffic and transport effect will be considered as the combination of the magnitude of the impact and the number of people affected, the duration of the impact (temporal) or the extent of its locational effects. The number of travellers affected will be important, as may be the sensitivity and/or value of the population or receptor. These criteria and thresholds and their
measurement have been defined below based on professional judgement and existing industry accepted practice.

Further guidance on the criteria used to define this significance is given in the detailed tables in Sections 9.5 and 9.6.

9.5 **Significance criteria for construction assessment**

9.5.1 *Public transport delay*

Any significant effects resulting from increased passenger journey time and distance changes for journeys by bus or rail caused by the proposed development will be identified in the TA. The journey times to be considered are the typical journey times that would be expected over the additional distance introduced as a result of the intervention, rather than specifically those of individual passenger’s journeys.

The criteria shown in Table 9.1 will be applied. The bus and train profiles relating to low, medium and high frequencies are intended to reflect the numbers of people using the routes.

**Table 9.1:** Criteria for assessment - public transport delay

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Magnitude of impacts</th>
<th>Significance of effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage change in route end-to-end journey time</td>
<td>High</td>
<td>Major</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>Minor</td>
</tr>
<tr>
<td></td>
<td>Very Low</td>
<td>Minor</td>
</tr>
<tr>
<td>Distance change</td>
<td>4km or more</td>
<td>2-4km</td>
</tr>
<tr>
<td></td>
<td>1-2km</td>
<td>&lt;1km</td>
</tr>
<tr>
<td>No. of travellers affected/duration of impact</td>
<td>High</td>
<td>Major</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>Minor</td>
</tr>
<tr>
<td></td>
<td>Very Low</td>
<td>Negligible</td>
</tr>
<tr>
<td>Between 4-6 buses or trains/hr</td>
<td>Medium</td>
<td>Major</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>Minor</td>
</tr>
<tr>
<td></td>
<td>Negligible</td>
<td>Negligible</td>
</tr>
<tr>
<td>Between 3-4 buses or trains/hr</td>
<td>Low</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Minor</td>
<td>Negligible</td>
</tr>
<tr>
<td></td>
<td>Negligible</td>
<td>Negligible</td>
</tr>
<tr>
<td>&lt;2 buses or trains/hr</td>
<td>Very Low</td>
<td>Minor</td>
</tr>
<tr>
<td></td>
<td>Negligible</td>
<td>Negligible</td>
</tr>
<tr>
<td></td>
<td>Negligible</td>
<td>Negligible</td>
</tr>
</tbody>
</table>

9.5.2 *Traffic flows and delays to vehicle occupants*

Guidance for the assessment of the environmental effects of traffic is provided in the Institute of Environmental Assessment’s (IEA) ‘Guidelines for the Environmental Assessment of Road Traffic’ (1993)\(^{34}\). This indicates that from a quantitative perspective, highway links subject to traffic flow increases of more than 30%, or 10% if affecting a sensitive area, need to be assessed.

\(^{34}\) See above.
With respect to the environmental impacts of traffic, the IEA guidance indicates that increases in traffic flow of less than 30% generally result in imperceptible changes in the environmental impacts of traffic and traffic flow changes of less than 10% create no discernible effect.

For the roads affected by the proposed development (see Section 9.4), the magnitude of impacts and effects will therefore be assessed on the following basis of the changes in flows for each of the identified highway links:

- High – considerable deterioration / improvement in the local conditions (>120%);
- Medium – readily apparent change in conditions (60% – 120%);
- Low – perceptible change in conditions (30% – 60%); and
- Very Low – no discernible change in conditions (0 – 30%).

Consideration has been given to the perceived sensitivity level of likely receptors. Whilst it is necessary to employ professional judgement when determining receptor sensitivity, it is possible to also develop and utilise threshold criteria which can be adapted depending on the particular assessment and receptor.

For the quantitative assessment being undertaken for this proposed development, numerical measures have therefore been judged along with the adoption of a graduated approach to the definition of the degree of sensitivity.

In terms of highway links, the main effects of changes in traffic flows on the link will arise upon those using the link (i.e. road users) and those who live, work or study in the immediate vicinity of the link (i.e. houses / places of work / schools). As such, a matrix has been prepared to allow these two parameters to be cross-referenced, to determine the overall sensitivity of the highway links forming the quantitative assessment (see Table 9.2).

Table 9.2: Sensitivity of receptors

<table>
<thead>
<tr>
<th>Daily Traffic Flow (24 hour two-way): 24 hour 2-way AADT flow (vehicles)</th>
<th>Population:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None Present (e.g. agricultural)</td>
</tr>
<tr>
<td>&lt; 1,000 vehicles</td>
<td>Very Low</td>
</tr>
<tr>
<td>1,001 – 5,000 vehicles</td>
<td>Very Low</td>
</tr>
<tr>
<td>5,001 – 10,000 vehicles</td>
<td>Low</td>
</tr>
<tr>
<td>&gt;10,000</td>
<td>Medium</td>
</tr>
</tbody>
</table>

It is recognised that the population criteria are subjective, however, as this varies for each location both professional judgement, together with existing published guidance, has been used in the assessment of the significance of an effect. Predicted changes in traffic within the study area have therefore been assessed against the identified criteria to determine their significance.

Table 9.3 shows how the sensitivity of the receptor and the magnitude of the impact are then considered together to define the classification of the significance of the effect.
Table 9.3: Classification of effects arising from changes in traffic flows

<table>
<thead>
<tr>
<th>Sensitivity of receptor</th>
<th>Magnitude of impacts</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
<th>Very Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Major</td>
<td>Major</td>
<td>Moderate</td>
<td>Minor</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>Major</td>
<td>Moderate</td>
<td>Minor</td>
<td>Negligible</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>Moderate</td>
<td>Minor</td>
<td>Negligible</td>
<td>Negligible</td>
<td></td>
</tr>
<tr>
<td>Very Low</td>
<td>Minor</td>
<td>Negligible</td>
<td>Negligible</td>
<td>Negligible</td>
<td></td>
</tr>
</tbody>
</table>

As well as considering overall changes in flows on highway links, junction related congestion indicators will be measured based on the forecast ratio of flow to capacity (RFC), degree of saturation (DoS) or the practical reserve capacity (PRC).

Table 9.4 shows the criteria that will be used to assess the impacts that increased traffic flows will cause in terms of increased congestion, which is assumed to reflect delays. This table relates to the changes associated with the proposed development, over and above those without it.

Table 9.4: Criteria for assessment – traffic flows causing increased delays and congestion

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Magnitude of impacts</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
<th>Very Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future with-scheme Congestion Indicator</td>
<td>98% or more</td>
<td>92 - 98%</td>
<td>87 - 92%</td>
<td>&lt;87%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Significance of effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;10% change in congestion indicator</td>
<td>High</td>
</tr>
<tr>
<td>Between 5-10% change in congestion indicator</td>
<td>Medium</td>
</tr>
<tr>
<td>2-5% change in congestion indicator</td>
<td>Low</td>
</tr>
<tr>
<td>&lt;2% change in congestion indicator</td>
<td>Very Low</td>
</tr>
</tbody>
</table>
Any increases in typical average additional journey time and delays passing through the Sevenscore Level Crossing will be assessed against the criteria shown in Table 9.5.

**Table 9.5:** Criteria for assessment – additional average delays to vehicle occupants at Sevenscore Level Crossing

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Magnitude of impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Additional journey time delay (minutes)</td>
<td>&gt; 10</td>
</tr>
<tr>
<td>No. of travellers affected</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Significance of effect</td>
</tr>
<tr>
<td>&gt;5,000 /day</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Major</td>
</tr>
<tr>
<td>Between 2000-5,000 /day</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Major</td>
</tr>
<tr>
<td>Between 1000-2000 /day</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
</tr>
<tr>
<td>&lt;1000 /day</td>
<td>Very Low</td>
</tr>
<tr>
<td></td>
<td>Minor</td>
</tr>
</tbody>
</table>

**9.5.3 Vulnerable road user delay, amenity and ambience**

This section relates to all pedestrian, cyclists and equestrians and those with mobility impairment. The criteria described below will be used in the assessment of any journey time changes on PRoW.

Where there are impacts in delays to pedestrians, cyclists, equestrians and other vulnerable road users they will be assessed based on changes in the ‘person-minutes’ of the journey times of pedestrians and other non-motorised travellers. These changes in journey times will be determined from consideration of measured changes in the distances travelled (e.g. walked) on the PRoW and an estimated average travel speed that will be based on professional experience and judgement.

Against this topic, any changes in journey time due to delays arising from, for example, increased crowding and congestion or new traffic signal controls that affect PRoW will be reported.

To avoid double counting, increased journey times arising from, for example, diversion of footpaths or cycle routes, will be reported only once and this will be undertaken against the severance topic discussed below.

The criteria shown in Table 9.6 will be applied as appropriate.
Table 9.6: Criteria for assessment – vulnerable road user delay

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Magnitude of impacts</th>
<th>Significance of Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional journey time delay (minutes)</td>
<td>High</td>
<td>&gt;1,000 /day</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Very Low</td>
<td>Very Low</td>
</tr>
<tr>
<td></td>
<td>3 or more</td>
<td>Major</td>
</tr>
<tr>
<td></td>
<td>2-3</td>
<td>Major</td>
</tr>
<tr>
<td></td>
<td>1-2</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>&lt; 1</td>
<td>Minor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. travellers affected/</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Between 200-1,000 /day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Major</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Minor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negligible</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Between 100-200 /day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Minor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negligible</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negligible</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;100 /day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Very Low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Minor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negligible</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negligible</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negligible</td>
</tr>
</tbody>
</table>

WebTAG Unit A4.1\(^{35}\) describes the assessment of ambience, which includes traveller’s amenity. Traveller’s journey ambience can be affected by:

- traveller care;
- travellers’ views; and
- traveller stress.

A qualitative assessment will be made of the traveller care, travellers’ views and traveller stress ambience factors in relation to the proposed development.

### 9.5.4 Accidents and safety

The TA will undertake an assessment of any likely increased risk of accidents and to safety arising from the proposed development. This will include consideration of any impacts at Sevenscore Level Crossing arising from increased traffic flows generated by the development proposals.

Significant impacts on accidents and safety risks will be defined to occur on links and junctions, where data is available, that have experienced on average more than nine personal injury accidents (PIA) in total, in a three-year period ending in 2013-14 and which will be subject to an increase of 30% or more in total traffic flow during construction for a period of more than four consecutive weeks in any 12 month period.

Where accident data has been collected for a period greater than three years, the number of accidents should be pro-rata to represent three years’ worth of data. Thus, for example, if five years’ worth of data were available, the number of accidents being considered would be multiplied by 3/5 (i.e. 0.6) and then the resultant number would be compared to the threshold of nine accidents in total in the desired three year period.

The criteria shown in Table 9.7 have been derived from WebTAG guidance and professional experience and will be applied.

**Table 9.7: Criteria for assessment – accidents and safety**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Magnitude of impacts</th>
<th>Significance of effect</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Change in Annual Average Daily Traffic (AADT) flow</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>120% or more</td>
<td>60-120%</td>
<td>30-60%</td>
</tr>
<tr>
<td><strong>Number of PIAs within 20m of any impacted junctions</strong></td>
<td>9 or more</td>
<td>9 or more</td>
</tr>
<tr>
<td><strong>Number of PIAs within any 150m section of impacted road links</strong></td>
<td>9 or more</td>
<td>9 or more</td>
</tr>
<tr>
<td><strong>Sensitivity of travellers affected</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10% or more above average benchmark national accident rate for category of road</td>
<td>High</td>
<td>Major*</td>
</tr>
<tr>
<td>Within +/- 10% of the average benchmark national accident rate for category of road</td>
<td>Medium</td>
<td>Major*</td>
</tr>
<tr>
<td>10 - 20% below average benchmark national accident rate for category of road</td>
<td>Low</td>
<td>Moderate*</td>
</tr>
<tr>
<td>&gt;20% below average benchmark national accident rate for category of road</td>
<td>Very Low</td>
<td>Minor</td>
</tr>
</tbody>
</table>

Note - * will be assessed further in the TA to investigate further mitigation measures.

Professional judgement will also be used in considering whether or not the future flows are likely to increase the risks of accidents. This will include consideration of the local conditions on the highways.
and junctions and the factors causing the accidents. Sections of roads or junctions that have an identifiable cluster or gathering of accidents will be identified and addressed as necessary. Consideration will be given to the expected typical national average accident rate on this category of road, and whether or not this is being exceeded.

The grouping of accidents to establish whether the criteria of nine or more recorded PIA in total over a three year period is exceeded, will be based upon the following definition of clusters of accidents:

- nine or more recorded PIA in total over a three year period within about 20m of any road junction; or
- nine or more recorded PIA in total over a three year period within about 150m along any road link.

9.5.5 Severance

Severance can affect travellers using non-motorised modes, especially pedestrians. Cyclists and equestrians are less susceptible to severance because they can travel more quickly than people on foot, although there may still be significant impacts on these groups. Severance is assessed in terms of increased difficulty, for example, to cross an at-grade crossing, or in terms of any additional distance that is caused due to a change/diversion in a PRoW alignment, due to the proposed development. To ensure a consistent approach, the classification and assessment will be based only on the characteristics that would exist assuming the movement was made by a pedestrian. The criteria shown in Table 9.8 have been derived from WebTAG guidance and professional experience and will be applied.
### Table 9.8: Criteria for assessment – severance

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Magnitude of impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Veh/day for additional at grade crossings to be traversed</td>
<td>16,000 or more</td>
</tr>
<tr>
<td>Change in journey length</td>
<td>1,500m or more</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. travellers affected/ Duration of impact</th>
<th>Significance of Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;1,000 people/day</td>
<td>High</td>
</tr>
<tr>
<td>Between 200-1000 people/day</td>
<td>Medium</td>
</tr>
<tr>
<td>Between 100-200 people/day</td>
<td>Low</td>
</tr>
<tr>
<td>&lt;100 people/day</td>
<td>Very Low</td>
</tr>
</tbody>
</table>

### 9.6 Significance criteria for operational assessment

The same criteria as used in Section 9.5 to assess any changes in transport impacts and effects during the temporary construction phase will be used to assess any permanent transport impacts and effects arising during the operational phase. By definition all impacts that arise during operations will be considered as permanent.
10. NOISE AND VIBRATION

10.1 Introduction

This section sets out the proposed scope and methodology for the noise and vibration assessment of the proposed development.

This has been informed by an outline description of the environmental baseline conditions and a preliminary view of the issues likely to be associated with the proposed development. The assessment will be undertaken with reference to the following policy and guidance:

- Crossrail Information Paper D25 (IP D25);
- British Standard 4142: 1997;
- British Standard 5228: 2009 +A1:2014; and
- Design Manual for Road and Bridges (DMRB).

10.2 Baseline

There are a number of noise sensitive receptors located in close proximity to the site, including residential areas to the south, south east and east of the site, and a commercial scheme to the south west. To define the noise environment at nearby sensitive receptors, a baseline noise survey will be undertaken in line with British Standard (BS) 7445:1991 (Parts 2-3) and 2003 (Part 1) and the requirements set out in IP D25.

Baseline noise surveys at the proposed monitoring locations shown in Figure 4 will be used to characterise representative daytime and night-time noise levels at existing sensitive receptors for subsequent use in setting appropriate operational and construction noise emission criteria. Noise monitoring will be unattended and continuous if secure locations are available to leave equipment. If secure locations are not available, noise monitoring will be a series of short-term attended noise measurements during day and night periods.

**Figure 4:** Site plan and proposed monitoring positions

10.3 Potential environmental impacts

Potential noise and vibration effects may occur at existing residential receptors due to the proposed development as a result of:

- construction activities;
- changes in road traffic flows; and
10.4 Assessment methodology

Construction noise levels at nearby sensitive receptors will be calculated using BS 5228-1:2009 (and update A1 2014 Part 1 Noise) data and procedures. Vibration risks will be assessed based on the types of plant used and their proximity to receptors, using guidance in BS 5228-2:2009 and BS 7385:1990 (Part 1) and 1993 (Part 2). From the results of the construction noise and vibration assessment, preliminary mitigation measures will be advised in line with BS 5228.

As part of the Crossrail scheme, information papers were developed to account for potential noise impacts due to fixed plant/PA systems. As Crossrail IP D25 has a full assessment methodology set out for this kind of noise and is a major scheme that has undergone significant scrutiny, the methodology is considered to be robust. Consequently, this assessment methodology makes reference to Crossrail guidance provided in IP D25, which makes reference to BS 4142 guidance, for the assessment of fixed plant and PA noise.

Noise associated with the operation of the completed development (fixed plant and PA) will be assessed in line with IP D25 and BS 4142:1997. Noise limits will be recommended such that the noise due to building services does not exceed the typical LA90 background noise by more than +5 dB at noise sensitive receptor locations.

Noise levels associated with construction traffic and future operational traffic flows will be calculated in line with Calculation of Road Traffic Noise (CRTN) issued by the Department of Transport in 1988. Changes in road traffic noise will be assessed with reference to the DMRB and mitigation measures will be detailed as necessary.

Cumulative effects of combined construction works and operational traffic from nearby consented schemes will be assessed.

The ES chapter will be supported by a technical appendix which will contain reference material and tabulated noise survey results.

Criteria for determining sensitivity of receptor, magnitude of impact and significance of effect for the purposes of the noise and vibration are defined in Tables 10.1 to 10.3.

**Table 10.1**: Criteria for determining the sensitivity of resource/receptor for *noise and vibration*

<table>
<thead>
<tr>
<th>Sensitivity of resource / receptor</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Receptors where noise will significantly affect the function of a receptor</td>
</tr>
<tr>
<td>Medium</td>
<td>Receptors where people or operations are particularly susceptible to noise</td>
</tr>
<tr>
<td>Low</td>
<td>Receptors where noise may cause some distraction or disturbance</td>
</tr>
<tr>
<td>Very low</td>
<td>Receptors where distraction or disturbance from noise is minimal</td>
</tr>
</tbody>
</table>

**Table 10.2**: Criteria for determining the magnitude of impact for *noise and vibration*

<table>
<thead>
<tr>
<th>Magnitude of impact</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Fixed plant/PA noise exceeding Background Noise Level (BGNL) by +10 dB or more</td>
</tr>
<tr>
<td></td>
<td>Construction noise exceeding limit by 5 dB or more</td>
</tr>
<tr>
<td></td>
<td>Road traffic noise increase by 5 dB or greater</td>
</tr>
<tr>
<td>Magnitude of impact</td>
<td>Criteria</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Medium</strong></td>
<td>Fixed plant/PA noise exceeding BGNL by between +5 to +10 dB</td>
</tr>
<tr>
<td></td>
<td>Construction noise exceeding limit by no more than 5 dB</td>
</tr>
<tr>
<td></td>
<td>Road traffic noise increase by between 3 dB and 4.9 dB</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>Difference of fixed plant/PA noise and BGNL between -10 to +5 dB</td>
</tr>
<tr>
<td></td>
<td>Construction noise exceeding ambient noise levels but not exceeding the noise limit</td>
</tr>
<tr>
<td></td>
<td>Road traffic noise increase by between 1 dB and 2.9 dB</td>
</tr>
<tr>
<td><strong>Very low</strong></td>
<td>Difference of fixed plant/PA noise and BGNL of -10 dB or less</td>
</tr>
<tr>
<td></td>
<td>Construction noise below ambient noise levels</td>
</tr>
<tr>
<td></td>
<td>Road traffic noise increase by between 0.1 dB and 0.9 dB</td>
</tr>
</tbody>
</table>

**Table 10.3**: Criteria for determining the effect for noise and vibration

<table>
<thead>
<tr>
<th>Effect</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Major</strong></td>
<td>Considerable impact (by extent, duration or magnitude) that significantly breaches recognised acceptability, legislation, policy or standards</td>
</tr>
<tr>
<td><strong>Moderate</strong></td>
<td>Impact (by extent, duration or magnitude) in breach of recognised acceptability, legislation, policy or standards</td>
</tr>
<tr>
<td><strong>Minor</strong></td>
<td>Slight, very short or highly localised impact of no notable consequence</td>
</tr>
<tr>
<td><strong>Negligible</strong></td>
<td>Imperceptible impacts to an environmental resource or receptor</td>
</tr>
</tbody>
</table>

The matrix for the assessment of effects, as outlined in Section 4.3 and Table 4.2, will be adopted. Following the classification of an effect, a statement will then be made regarding whether the effect is significant or not. As a general rule, major and moderate effects will be considered to be significant and minor and negligible effects will be considered to be not significant. However, professional judgement can also be applied where necessary.
11. AIR QUALITY

11.1 Introduction

This section sets out the proposed scope and methodology for the air quality assessment of the proposed development. This has been informed by an outline description of the environmental baseline conditions and a preliminary view of the issues likely to be associated with the proposed development. The assessment will be undertaken with reference to the following key policy and guidance:

- Department for Communities and Local Government (2012), National Planning Policy Framework, the National Archives;
- Department for Communities and Local Government (2014), Technical Guidance to the National Planning Policy Framework, the National Archives;
- Department for Environment Food and Rural Affairs (Defra) (2009), Air Quality Management Technical Guidance 2009 LAQM, TG(09);
- Environmental Protection UK (2010), Development Control: Planning for Air Quality (2010 Update): Update guidance from Environmental Protection UK on dealing with air quality concerns within the development control process;
- Institute of Air Quality Management (IAQM) (2009), Position on the description of air quality impacts on their significance. Institute of Air Quality Management; and

The air quality assessment will also be informed by a review of relevant local air quality planning policy (e.g. Kent and Medway Air Quality Partnership and Planning Technical Guidance and Thanet District Council Action Plan 2013).

11.2 Baseline

The key pollutants of concern for this type of development are nitrogen dioxide (NO$_2$) and particulates (PM$_{10}$ and PM$_{2.5}$) associated with vehicle emissions and also PM$_{10}$ and dust from construction activities. There may also be emissions of PM$_{10}$, NO$_2$ and sulphur dioxide (SO$_2$) from locomotives.

The application site is located in the TDC Administrative area. TDC have declared three Air Quality Management Areas (AQMAs). The nearest AQMA is Thanet Urban AQMA which has been declared due to concern that annual average concentrations of NO$_2$ will not meet the annual average Air Quality Objective of 40 µg/m$^3$. This AQMA is located directly adjacent to the north-eastern corner of the application site and is described as ‘An area encompassing a number of urban areas within Thanet’, which includes Ramsgate, Broadstairs, Margate, Westgate on Sea and Birchington. The two other AQMAs declared by TDC are approximately 2.5km east (Thanet AQMA High St, St Lawrence) and approximately 5.5km north (Birchington AQMA).

The closest monitoring data to the site is located 300m to the east (TH16) which in 2013 recorded an annual average NO$_2$ concentration of 20.3 µg/m$^3$. Other locations further from the site within urban areas along main transport routes e.g. the A255 and monitoring locations TH54/64/65 exceeded the air quality objective value for NO$_2$.

Monitoring is undertaken with the TDC administrative area for PM$_{10}$ at two continuous monitoring sites:
• ZH4 Boundary Road / Hereson Road: a busy traffic light junction which experiences congestion at peak times; and
• ZH5 Birchington: a monitor positioned near to the roundabout within The Square, a busy narrow section of road which experiences congestion at peak times.

Monitoring data for PM$_{2.5}$ and SO$_2$ is not currently collected within the TDC administrative area.

The closest locations of residential exposure are located to the west at the village of Cliffsend. The following closest designated ecosystem sites are located approximately 700m to the south-east of the site:
• Sandwich Bay to Hacklinge Marshes SSSI;
• Thanet Coast and Sandwich Bay Ramsar Site;
• Sandwich Bay SAC;
• Thanet Coast and Sandwich Bay SPA; and
• Sandwich Bay and Pegwell Bay National Nature Reserve.

11.3 Potential environmental impacts
The potential air quality impacts of the proposed development are considered to be:
• Impacts of dust during the construction phase of the development;
• Impacts of vehicle and plant emissions during the construction phases of the development;
• Impacts of road traffic emissions from traffic generated by the operational phase of the proposed development; and
• Impacts from stationary rail sources.

11.4 Assessment methodology
This section outlines the proposed construction and operational assessment methodology for the proposed development.

11.4.1 Construction methodology
During the construction phase of the proposed development, there is the potential for activities to generate fugitive emissions of particulate matter (dust and PM$_{10}$). The potential impacts and nuisance from dust emissions generated during the construction phase will be considered using an approach based on the Institute of Air Quality Management (IAQM) Guidance for assessing impacts from construction activities (IAQM, 2014) (i.e. screening assessment and risk based qualitative assessment approach).

The potential impacts from dust and PM$_{10}$ will be assessed using a risk based approach. The scale of the risk of adverse effects occurring due to each group of activities, with mitigation in place, is described using the terms high, medium and low risk. Experience in the UK (IAQM, 2012) is that good site practice is capable of mitigating the impact of fugitive emissions of particulate matter effectively. So that in all but the most exceptional circumstances, effects at receptors can be controlled to ensure effects are of negligible or slight adverse significance at worse (see significance of effects descriptors proposed for construction dust are presented in Table 11.1). The assessment will confirm what level of mitigation will be appropriate to avoid significant effects.
Table 11.1: Descriptors applied to the predicted adverse effects of fugitive emission particulate matter

<table>
<thead>
<tr>
<th>Significance of effect at single receptor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantial</td>
<td>A significant effect that is likely to be a material consideration in its own right</td>
</tr>
<tr>
<td>Moderate</td>
<td>An significant effect that may be a material consideration in combination with other significant effects, but is unlikely to be a material consideration in its own right</td>
</tr>
<tr>
<td>Slight</td>
<td>An effect that is not significant but that may be of local concern</td>
</tr>
<tr>
<td>Negligible</td>
<td>An effect that is not significant change</td>
</tr>
</tbody>
</table>

Demolition and construction plant emissions (e.g. dump trucks) will not be explicitly modelled, as these are considered to be a small temporary emission sources. However, suitable mitigation measures for site plant will be presented in the working method statement to minimise these emissions.

The number of construction vehicles that will be in operation during the construction phase of the Proposed Development will be considered in the context of the Environmental Protection UK (EPUK, 2010) and Design Manual for Roads and Bridges (DMRB) screening criteria (HA, 2007). Based upon professional experience, it is considered unlikely that a quantitative assessment of the impact on air quality will be considered to be necessary as fewer than 200 heavy duty vehicles (HDV) per day are expected to be forecast, and therefore it is unlikely that a significant effect would occur.

11.4.2 **Operational methodology**

The detailed ADMS-Roads (CERC, 2014) air dispersion model will be used to assess existing baseline air quality to allow for the verification of modelling outputs. It will also be used to predict future air quality to assess the impacts on local air quality at nearby sensitive receptors.

The road traffic scenarios that will be considered as part the assessment will include:

- Baseline scenario;
- Opening Year – without development scenario, including committed developments; and
- Opening Year – with development scenario, including committed developments.

The opening year ‘without development’ and ‘with development’ scenarios will both include vehicle trips associated with general growth from the baseline situation and also relevant committed developments. The opening year ‘with development’ scenarios will also include additional traffic associated with the proposed development. The inclusion of relevant committed developments in the traffic data utilised in the assessment will allow an inherently cumulative assessment of the proposed development to be undertaken.

The year of meteorological data utilised will be selected with the aim of aligning as many input parameters as possible (monitoring data, traffic data) to limit the numbers of parameters which could adversely affect model performance. Qualitative reference would be made to any potential variations in impacts that could be expected from differing years of meteorological data.

Depending upon the size of the traffic study area it may be possible to use existing TDC monitoring data to verify road traffic modelling outputs. However, if not, there may be a need to collect project specific data for NO\textsubscript{2} or alternately agree a verification approach based on professional judgement with TDC.
Emissions from rail locomotives (stationary and mobile) will be considered using the criteria listed in Defra Guidance (Defra, 2009). For example how far from a sensitive receptor a locomotive will be located and how long a locomotive may be idling will be utilised to establish if further detailed assessment is required or if no further assessment is required.

With regard to road traffic, the change in pollutant concentrations with respect to without development concentrations will be quantified at receptors that are representative of exposure to impacts on local air quality within the study area. The absolute magnitude of pollutant concentrations in the with and without development scenario will also be quantified and this will be used to consider the risk of the air quality limit values being exceeded in each scenario.

For a change of a given magnitude, the Institute of Air Quality Management have published recommendations for describing the magnitude of impacts at individual receptors (Table 11.2) and describing the significance (Table 11.3) of such impacts. The magnitude of change is divided into four classes as defined in Table 11.2.

**Table 11.2: Magnitude of Changes in Ambient Pollutant Concentrations of NO$_2$, PM$_{10}$, and PM$_{2.5}$**

<table>
<thead>
<tr>
<th>Magnitude of change</th>
<th>Annual mean concentrations of NO$_2$ ($\mu$g/m$^3$)</th>
<th>Annual mean concentrations of PM$_{10}$ ($\mu$g/m$^3$)</th>
<th>Annual mean concentrations of PM$_{2.5}$ ($\mu$g/m$^3$)</th>
<th>Exceedances of the 24-hour mean objective for PM$_{10}$ (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>Increase/decrease &gt;4</td>
<td>Increase/decrease &gt;4</td>
<td>Increase/decrease &gt;2.5</td>
<td>Increase/decrease &gt; 4</td>
</tr>
<tr>
<td>Medium</td>
<td>Increase/decrease 2-4</td>
<td>Increase/decrease 2-4</td>
<td>Increase/decrease 1.25 – 2.5</td>
<td>Increase/decrease 2 to 4</td>
</tr>
<tr>
<td>Small</td>
<td>Increase/decrease 0.4 - 2</td>
<td>Increase/decrease 0.4 - 2</td>
<td>Increase/decrease 0.25 – 1.25</td>
<td>Increase/decrease 1 to 2</td>
</tr>
<tr>
<td>Imperceptible</td>
<td>Increase/decrease &lt; 0.4</td>
<td>Increase/decrease &lt; 0.4</td>
<td>Increase/decrease &lt; 0.25</td>
<td>Increase/decrease &lt; 1</td>
</tr>
</tbody>
</table>

The magnitude of the change in the predicted number of exceedances of the 24-hour objective is directly derived from the predicted annual mean value using the relationship defined in Defra Guidance. The magnitude descriptors for 24-hour mean PM10 in the table above are as proposed by Environmental Protection UK (EPUK).

All relevant receptors that will be selected to represent locations where people are likely to be present are based on impacts on human health. The air quality objective values have been set at concentrations that provide protection to all members of society, including more vulnerable groups such as the very young, elderly or unwell. As such the sensitivity of receptors was considered in the definition of the air quality objective values and therefore no additional subdivision of human health receptors on the basis of building or location type is necessary.

For receptors that are predicted to experience a perceptible change, the effect of the change on local air quality and the risk of exceeding the air quality objective value is summarised in Table 11.3 for annual mean concentrations of NO$_2$, PM$_{10}$ and PM$_{2.5}$.
Table 11.3: Air quality impact descriptors for changes to annual mean NO\textsubscript{2}, PM\textsubscript{10}, and PM\textsubscript{2.5} concentrations at a receptor

<table>
<thead>
<tr>
<th>Absolute concentration in relation to objective/limit value</th>
<th>Changes in concentration</th>
<th>Increase with proposed development</th>
<th>Decrease with proposed development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Small</td>
<td>Medium</td>
<td>Large</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Above objective/limit value without scheme</td>
<td>Minor beneficial</td>
<td>Moderate beneficial</td>
</tr>
<tr>
<td></td>
<td>Just below objective/limit value without scheme (90 – 100 %)</td>
<td>Minor beneficial</td>
<td>Moderate beneficial</td>
</tr>
<tr>
<td></td>
<td>Below objective/limit value without scheme (90 – 75 %)</td>
<td>Negligible</td>
<td>Minor beneficial</td>
</tr>
<tr>
<td></td>
<td>Well below objective/limit value without scheme (&lt;75 %)</td>
<td>Negligible</td>
<td>Negligible</td>
</tr>
</tbody>
</table>

A small increase in annual mean concentrations of NO\textsubscript{2} and PM\textsubscript{10}, at receptors exposed to baseline concentrations that are just below the objective value (36 µg/m\textsuperscript{3} to 40 µg/m\textsuperscript{3}) is considered to have a slight adverse effect as the slight increase in the risk of exceeding the objective value is significant. However, a small increase in annual mean concentration of NO\textsubscript{2} and PM\textsubscript{10} at receptors exposed to baseline concentrations that are below or well below (< 36 µg/m\textsuperscript{3}) is not likely to affect the achievement of the objective value and is therefore not a significant effect (negligible).

The significance of all of the reported impacts is then considered for the development in overall terms. The potential for the scheme to contribute to or interfere with the successful implementation of policies and strategies for the management of local air quality are considered if relevant, but the principle focus is any change to the likelihood of future achievement of the air quality objective values for the following pollutants:

- Annual mean NO\textsubscript{2} concentration of 40 µg/m\textsuperscript{3};
- Annual mean PM\textsubscript{10} concentration of 40 µg/m\textsuperscript{3};
- Annual mean fine PM\textsubscript{2.5} concentrations of 25 µg/m\textsuperscript{3}; and
- 24-hour mean PM\textsubscript{10} concentration of 50 µg/m\textsuperscript{3} not to be exceeded on more than 35 days per year.

The achievement of local authority goals for local air quality management are directly linked to the achievement of the air quality objective values described above and as such this assessment focuses on the likelihood of future achievement of the air quality objective values.
In terms of the significance of the consequences of any adverse impacts, an effect is reported as being either ‘not significant’ or as being ‘significant’. If the overall effect of the development on local air quality or on amenity is found to be ‘moderate’ or ‘major’ this is deemed to be ‘significant’. Effects found to be ‘minor’ are considered to be ‘not significant’, although they may be a matter of local concern.
12. LAND USE

12.1 Introduction

The predominant land use of the proposed site is agriculture. The other notable land use is the railway and its associated land.

This assessment will consider the potential for impacts upon the agricultural land use and agricultural interests and identify any environmental effects that may result. The railway land use is not considered further given the nature of the proposal.

In particular the assessment will consider the potential impacts of the loss of land in terms of agricultural land quality, soil resources, local farm businesses and on-farm enterprises, and agri-environment schemes.

The approach to assessment will be based on the requirements of national planning policy and will accord with the advice given in various good practice guides for the preparation of EIAs, including the Highways Agency’s Design Manual for Roads and Bridges (DMRB), Volume 11 Environmental Assessment, Section 3, Part 6 – Land Use (2001).

The principal feature of national policy concerning agricultural land use is the emphasis on safeguarding scarce natural resources in the long-term national interest. Policies for development in the countryside give a measure of protection to the “best and most versatile” agricultural land (defined as Grades 1, 2 and 3a in the Agricultural Land Classification (ALC) system).

Policy advises that the economic and other benefits of the best and most versatile agricultural land should be taken into account in decisions on development, and that where significant development of agricultural land is shown to be necessary, it should be directed to lower quality land in preference to that of a higher quality.

12.2 Baseline

The baseline environment for the purposes of the agricultural land use assessment consists of approximately 12 hectares of land in agricultural use.

There is a well-established methodology for classifying the quality of agricultural land, contained within guidance issued by the Ministry of Agriculture, Fisheries and Food (MAFF) in 1988. Agricultural land is graded between 1 and 5, depending on the extent to which physical or chemical characteristics impose long-term limitations on agricultural use. Grade 1 land is ‘excellent quality’ agricultural land with very minor or no limitations to agricultural use, and Grade 5 is ‘very poor quality’ land, with severe limitations due to adverse soil, relief, climate of a combination of these. Grade 3 land is subdivided into Subgrade 3a (‘good quality’ land) and Subgrade 3a (‘moderate quality’ land).

General strategic guidance on agricultural land quality is shown in the form of MAFF’s Provisional ALC of England and Wales produced in the 1960s/early 1970s (available on magic.gov.uk). It is not, however, sufficiently accurate for use in the assessment of individual developments and should not be used other than as general guidance.

It is understood that the agricultural land on the proposed site is likely to fall within the “best and most versatile” agricultural land category. The western edge of the triangular field to the north was sampled (5-6 samples were taken) for the EIA for the Margate UWTW pipeline project. These samples were all classified as Grade 2. Other land in the vicinity to the immediate south-west has also been surveyed in detail by MAFF and classified as Grades 2 and 3a. Land required for the East Kent Access road was reported as largely Grade 2 land with patches of Grade 1 and Grade 3a. The expectation is that most/all of the land is likely to be classified as best and most versatile land.

It will however be necessary to undertake further survey work to obtain further data and confirm the quality of agricultural land across the proposed site. The survey will involve a surveyor examining soil profiles to a depth of 1.2m using a soil auger and spade. The auger is hand-held and operated, and
has a diameter of about 5cms. Soil cores will be replaced after the profile characteristics have been observed and recorded. The characteristics observed and recorded will include soil texture; significant stoniness; colour (including local gley and mottle colours); consistency; structural condition; free carbonate; and depth. Other key physical characteristics, including subsoil structure, stone content and rooting depth, will be examined in more detail in small pits dug by hand at representative locations for each main soil type identified. These pits will not be left unattended and the soil will be replaced within them in the correct order. There is no requirement therefore to take any vehicles or machinery onto the site.

Topsoil samples would be subject to laboratory determination of particle-size analysis, pH, organic matter content and major nutrients. The recorded observations would be analysed according to the MAFF 1988 revised ALC guidelines and criteria which would classify each observed soil profile, and a baseline report and map would be prepared to show the ALC grade distributions on the site.

Information on the existing agricultural use and circumstances of all land to be acquired or used will be obtained primarily from the owners and occupiers of the land. Where land is within a written tenancy, this information will be obtained mostly from the tenant. This will involve face to face interviews based on a standard set of questions which will cover:

- A description of the existing size, location and use of farm holdings;
- A description of the existing scale and nature of agricultural and non-agricultural enterprises based on farm holdings and their associated capital and labour inputs;
- A discussion of the physical impacts on the structure and operation of the farm holding; and
- A discussion about potential options to mitigate such impacts.

Information on the presence of any agri-environment schemes (such as Environmental Stewardship) will be obtained from magic.gov.uk, the Natural England website and from individual land owners and occupiers, who will also be asked for details of the nature, requirements and duration of such schemes on the whole farm.

12.3 Potential environmental impacts

The key aspects of the Proposed Scheme that will affect agricultural interests and have potential to give rise to environmental impacts and effects include:

- Permanent and temporary land-take of agricultural land (potentially ‘best and most versatile land’);
- Permanent and temporary severance of agricultural land and loss of agricultural access (the severance of land may affect the continued ability to farm or otherwise use the land to its potential);
- Loss of farm dwellings, farm buildings and other on-farm infrastructure; farm capital may support significant areas of land and the loss of this capital may affect the continued ability to farm or otherwise use this land to its potential;
- Permanent and temporary disruption to drainage, irrigation and water supplies (such disruption will affect land quality (if permanent) and hence land use; or lead to short-term land use change); and
- Construction effects (e.g. dust and pollution) on adjacent agricultural land which may affect the ability of that land to continue in its present land use; the likelihood of such effects will be assessed, in the first instance, under the relevant topics (e.g. the Air Quality chapter of the ES).“

12.4 Assessment methodology

12.4.1 Scope of the Assessment

National planning policy will form the basis of the assessment of effects of the Proposed Scheme on agriculture, and will define the scope of the assessment, namely:
• The quantity and quality of agricultural land that would be affected, both temporarily and permanently;
• The nature and use of the agricultural and non-agricultural soil resource that would be affected (and displaced) by the Proposed Scheme;
• The physical impact of land loss and severance and other impacts on agricultural enterprises and farm-based non-agricultural enterprises; and
• The loss or degradation of features within agri-environment schemes.

12.4.2 Legislation, Policy and Guidance

The EIA will have regard to relevant legislation, planning policy and guidance when undertaking the assessment of the scheme’s impact and effects on agricultural land use. It is expected that the relevant publications will include:

Legislation

• European Commission (EC), 2006, Soil Thematic Strategy
• Defra, 2009, Safeguarding our Soils: A Strategy for England
• HM Government, 2011, the Natural Environment White Paper, the Natural Choice: securing the value of nature.

Planning Policy

• Department for Communities and Local Government (DCLG), 2012, National Planning Policy Framework
• Department for Communities and Local Government (DCLG), 2014, National Planning Practice Guidance suite
• Kent County Council and Thanet District Council planning policy as applicable

Guidance

• Natural England, 2012, Technical Information Note (TIN) 049, Agricultural Land Classification: protecting the best and most versatile agricultural land
• Ministry of Agriculture, Fisheries and Food (MAFF), 2000, Good Practice Guide for Handling Soils
• Defra, 2009, Construction Code of Practice for the Sustainable Use of Soils on Construction Sites
• MAFF, 1988, Agricultural Land Classification of England and Wales: Revised Guidelines and Criteria for Grading the Quality of Agricultural Land

12.4.3 Significance Criteria

In order to assess the effects of the Proposed Scheme on agricultural resources, significance criteria need to be adopted relating to the effects on agricultural land and soils, on farming and other farm-based enterprises, and on agri-environment schemes.

The significance level attributed to each effect will be assessed based on the magnitude of change due to the Proposed Scheme, the sensitivity of the affected receptor/receiving environment to change, and the relative scarcity or abundance of the resource/receptor in the locality, as well as in a wider context, given that some receptors or features may group or converge in a particular locality.

The significance criteria will be based on interpretation of best practice guidance, and will be developed in consultation with relevant consultees.
The ALC survey will provide a statement of the amount and quality of agricultural land within the land to be acquired or used for the construction and operation of the proposed scheme. The magnitude of change will be reflected in the land required permanently and temporarily for the proposed scheme and the sensitivity of the agricultural land resource will be reflected in its grading.

The assessment will set out the predicted physical impacts on individual farm holdings, including the land lost by each holding during the construction phase, the area of land severed, any land to be restored to agriculture and the resulting residual permanent land loss to each holding.

The effects identified will be assessed in accordance with the established significance criteria, which will be expressed primarily in physical terms and will reflect the degree of change required to the farm operations following construction of the proposed scheme.

12.4.4 Construction effects

Construction effects on agricultural land and farm based enterprises may include temporary land-take and the use of the soil resource displaced by the construction of the proposed scheme.

Other construction effects may include the deposition of dust on sensitive crops, land uses or buildings; disruption to drainage, irrigation and water supply systems; unintentional pollution of soil and watercourses or bodies (used for crop irrigation or livestock drinking water supplies); spread of injurious weeds to adjacent agricultural land from soil and material stockpiles; and construction noise on farm and farm-based enterprises.

12.4.5 Operational effects

Operational effects on agricultural land and farm and farm-based enterprises will include permanent land-take, the loss and severance of land to farm and farm-based businesses, and the loss of agricultural capital.

Other potential operational effects may include noise on farm and farm-based enterprises, such as on housed livestock and on farm-based tourist or visitor attractions.

12.4.6 Cumulative effects

The construction of the proposed scheme, combined with developments that are already taking place or anticipated within the vicinity of the proposed scheme, may result in increased pressure on agricultural land and farm businesses. Cumulative effects will be assessed in relation to other projects that have received consent at the time of the assessment.
13. GROUND CONDITIONS

13.1 Introduction

This section sets out the proposed scope and methodology for the ground conditions assessment of the proposed development.

This has been informed by an outline description of the environmental baseline conditions and a preliminary view of the issues likely to be associated with the proposed development. The assessment will be undertaken with reference to the following policy and guidance:

- Part 2A of the Environmental Protection Act (EPA) 1990 (the Contaminated Land Regime);
- The Water Act 2003;
- The Building Act 1984; and
- The Building Regulations 2010.

13.2 Baseline

Baseline information for the scoping assessment has been obtained from the Environment Agency on-line mapping service, the British Geological Survey (BGS) on-line mapping service, old-maps.co.uk online historic mapping service and existing published ESs of projects local to the proposed development.

A review of available historic mapping shows that the site has comprised agricultural fields from at least 1872 to the present day. The site is bound to the south-east by a railway line (present on 1872 mapping) and A-roads to the north and west. Surrounding land-use comprises agricultural and residential.

Review of publicly available information suggests that ground conditions will not pose a significant constraint to development, for the reasons described in the paragraphs that follow.

A review of the BGS mapping data and BGS borehole logs for historic exploratory holes off-site (c. 750m south-east) indicate the geology as likely comprising Head deposits, directly overlying Thanet Sand. Head deposits are described as compact friable silt between 1.2 and 3.0m thick (boreholes TR36SW114 and TR36SW42). The Thanet Sand is described as compact sand and was proven to a depth of 19.2m in borehole TR36SW42.

The Head deposits are listed as a Secondary Undifferentiated aquifer whilst the Thanet Sands are classed as a Secondary A aquifer. The site is not located within a groundwater Source Protection Zone (SPZ) and there are no active groundwater abstractions within 500m of the site according to the Environment Agency website. Consequently, groundwater beneath the site, although potentially present, is not expected to constitute a significant resource.

According to the Environment Agency website three historic landfill sites are located within 1 km of the site. These are:

- Cliffsend Crossing located approximately 50m north-east of the site and received inert waste between 1976 and 1988;
- Cliffsend located approximately 750m south-west of the site and received inert and household waste between 1960 and 1972; and
• Thorne Farm located approximately 600m north-west of the site and received inert waste (deposition dates are not provided).

The Margate Urban Wastewater ES Contaminated Land Chapter (MWH, June 2004) identified a fuel transfer/treatment facility approximately 500m east of the site (current operational status is unknown).

Based on the site's current and former use as agricultural land, it is likely that potential contamination would be restricted to herbicides and pesticides in shallow soils associated with arable farming and localised hydrocarbon impacts associated with the railway bordering the site. Consequently, it is expected that any unacceptable risks to development receptors (e.g. future site users) could be mitigated using standard remediation techniques typical for this type of development.

Based on Environment Agency mapping, the closest surface water feature is a reservoir located approximately 300m north of the site. A further water feature is shown in some maps to be 60m to the west of the site. (although it is unclear at the time of writing whether this is still present, or is now potentially an underground water body). Several small drainage ditch streams are present on St Augustine’s Golf Course (the closest being approximately 50m to the south of the site). The potential contamination impacts on these water bodies will be assessed as part of the EIA.

13.3 Potential environmental impacts

Potential impacts to future site users and neighbours could arise as a result of dermal contact, ingestion, and dust inhalation. The presence of any ground-gas or solvent vapours, may also pose a risk to future site occupants through either inhalation or explosion.

Construction workers could be exposed to any contamination present through direct contact, ingestion or inhalation. The risk of exposure would likely be short-term in nature, and could be mitigated through appropriate personal protective equipment (PPE) and environmental controls.

Given the distance of the reservoir from the site, the likelihood of effects from any site derived contamination is likely to be very low.

Sulphates in soils have the potential to degrade below ground concrete structures, potentially necessitating the need for uprated concrete design in accordance with Building Research Establishment (BRE) Special Digest 1: Concrete in Aggressive Ground.

13.4 Assessment methodology

The ground conditions ES chapter will assess the effect of soil, groundwater and ground-gas on development receptors (e.g. future site occupants), as well as the effects the proposed development will have on resources and off-site receptors (e.g. controlled waters and human health). The final extent of off-site assessment will be driven by a source-pathway-receptor assessment methodology.

The ES will include information on all phases of the proposed development from construction through to completion and operation. A desk based assessment will be undertaken in order to ascertain the potential for historic contamination and any potential risks to receptors and resources, both arising from and acting on the proposed development.

The ES will include the following scope of works:

• a review of pertinent requirements placed upon the proposed development under national legislation and implemented policy at all levels of Government (i.e. national, regional and local);
• an explanation of the assessment methodology and significance criteria adopted as part of the assessment process;
• review of third party information (if available);
• purchase of the third party information (e.g. a current Landmark Envirocheck™ report and relevant BGS borehole logs);
• site visit to determine the environmental sensitivity and current potential for contamination across the site and the immediate surrounds;

• an evaluation of the potential for the historical use of the site to represent a potentially contaminative use and the likelihood of residual contamination being present in the ground or groundwater;

• a description of the baseline conditions including geological conditions, Made Ground, ground conditions, hydrogeology, contamination potential, presence of any underground structure, unexploded ordnance (UXO) and asbestos;

• the potential for source-pathway-receptor pollutant linkages to exist;

• assessment of the potential impacts (both construction phase and operational phase of the proposed development) and recommendations of further mitigation measures (e.g. a Phase 2 Site Investigation (SI) prior to construction, soil classification testing, verification testing etc.);

and

• an assessment of any significant cumulative impacts to ground conditions due to the proposed development in conjunction with other potential developments in the area.

The source-pathway-receptor methodology which is used to identify significant pollutant linkages is described as follows:

• source: contamination source (such as a spill, or historical deposition of contaminated material);

• pathway: the means by which the contamination can come into contact with the receptor; and

• receptor: the entity which is vulnerable to harm from the source.

Without a significant pollutant linkage the contamination may pose a hazard but does not constitute a risk to human health or the environment.

Therefore, in assessing the potential for contamination to cause a significant effect, the extent and nature of the potential source or sources of contamination must be assessed, pathways identified, and sensitive receptors or resources identified and appraised, to determine their value and sensitivity to contamination related impacts.

13.4.1 Sensitivity of receptors and magnitude of impact

The presence and sensitivity of receptors at risk from potential land contamination can be assessed by consideration of the following:

• surrounding land uses, based on mapping and site visits and existing planning designations;

• proposed end-use, based on the nature of the proposed development;

• type of construction operations that will be necessary as part of the site development; and

• geology, hydrogeology and hydrology of the site and its surrounding area.

The criteria for assessing receptor sensitivity is defined in Table 13.1.
Table 13.1: Criteria for determining the sensitivity of resource/receptor for ground conditions

<table>
<thead>
<tr>
<th>Sensitivity of resource / receptor</th>
<th>Criteria</th>
</tr>
</thead>
</table>
| **High**                          | Principal Chalk Aquifer – layers of rock or drift deposits that have high intergranular and / or fracture permeability – meaning they usually provide a high level of water storage. They may support water supply (portable resources) and / or river based flow, and are important in terms of water quantity and quality.  
Demolition and construction site workers – in relation to human exposure through direct contact, inhalation / dermal uptake of contaminated soils, dusts, gases and particulates, exposure to UXO / flammables, fire and blast damage. Workers are assumed to be ‘fit and healthy for the job’.  
Neighbouring uses, occupiers, and the general public immediately adjacent to or in proximity (i.e. within 100m) of active construction compound / site – high sensitivity due to proximity to demolition and construction works, in addition to the presence of potentially sensitive groups of people i.e. the elderly, disabled and children.  
Proposed development end users – residents, visitors, shoppers and on-site employees for example.  
Nationally designated/protected area – e.g. Site of Special Scientific Importance (SSSI), Special Protection Area, National Nature Reserve. |
| **Medium**                        | Secondary Aquifers – sub-divided as:  
• Secondary A – permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers;  
• Secondary B – predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering; and  
• Secondary Undifferentiated Aquifers – assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.  
Existing and proposed development introduced materials, structures and services – e.g. foundations based on current understanding / knowledge of local ground conditions e.g. aggressive ground and local geotechnics.  
Regionally designated habitats or local amenity areas – e.g. Sites of Importance for Nature Conservation (SINCs), the Rivers and local nature reserves, parks, playing fields. |
| **Low**                           | Unproductive Strata - rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow  
Land stability – low sensitivity due to regional geographical conditions.  
Neighbouring uses, occupiers, and the general public > 100m from the site boundary of active construction compound – low sensitivity as located at a distance from the site. |

The magnitude of change, or how considerable the change to the ground conditions are from the baseline conditions as a result of an activity or action resultant from the construction and operational phases of the proposed development, has been classified as either being: high, medium, low or very low. The criteria and their respective magnitude of change classification are detailed further within Table 13.2.
### Table 13.2: Criteria for determining the magnitude of change from baseline conditions

<table>
<thead>
<tr>
<th>Magnitude of impact</th>
<th>Criteria</th>
</tr>
</thead>
</table>
| **High**            | Demolition and construction works: Activities result in a major pollution release\(^1\) or create/remove a pollutant linkage with a substantial pollutant source.  
                      | Serious risk / improvement to human health / life.  
                      | Completed and occupied development: The development introduces or removes a large-scale source of potential contamination or pollutant linkage.                                      |
| **Medium**          | Demolition and construction works: Activities result in a moderate pollution release\(^2\) or create/remove a pollutant linkage with moderate pollutant source.  
                      | Moderate risk / improvement to human health / life.  
                      | Completed and occupied development: The development introduces or removes a relatively small-scale source of potential contamination or pollutant linkage.               |
| **Low**             | Demolition and construction works: Construction activities result in a minor pollution release\(^3\) or create/remove a pollutant linkage with a minor pollutant source. Temporary pathway or receptor is introduced or removed during demolition or construction.  
                      | Minor risk / improvement to human health.  
                      | Completed and occupied development: The development introduces or removes a minor source of potential contamination or pollutant linkage.                        |
| **Very low**        | An insignificant pollution release or creation/removal of a pathway with an insignificant pollutant source.  
                      | No / reversible affect to human health.  
                      | No foreseeable measurable change to the existing conditions. No appreciable impacts/ reversible impacts.                                                  |

**Footnotes**

1. A major pollution release corresponds to a Category 1 pollution incident, which is defined by the Environment Agency as having persistent and extensive impacts on water, land and air quality, major damage to all ecosystems, closure of a potable abstraction, major impact on land, property, major impact on amenity value, major damage to agriculture and/ or commerce and serious impact upon man.

2. A moderate pollution release corresponds to a Category 2 pollution incident, which is defined by the Environment Agency as having a significant impact on water, land and air quality, significant damage to all ecosystems, non-routine notification of abstractors, significant impact on land, property, reduction in amenity value, significant damage to agriculture and/ or commerce and impact on man.

3. A minor pollution release corresponds to a Category 3 pollution incident, which is defined by the Environment Agency as having a minimal impact on water, land and air quality, minor damage to local ecosystems, marginal impact on amenity value and minimal impact to agriculture and/ or commerce.

### 13.4.2 Assessment of effects

A level of significance will be assigned to both potential effects (pre-mitigation) and residual effects (post-mitigation). Essentially, the combination of the sensitivity of the receptor and the magnitude of the impact provide a qualitative definition of the significance of the effects. Table 13.3 presents the matrix for defining the effect significance.
Table 13.3: Classification of effects

<table>
<thead>
<tr>
<th>Sensitivity of resource / receptor</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
<th>Very low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Major</td>
<td>Major</td>
<td>Moderate</td>
<td>Minor</td>
</tr>
<tr>
<td>Medium</td>
<td>Major</td>
<td>Moderate</td>
<td>Minor</td>
<td>Negligible</td>
</tr>
<tr>
<td>Low</td>
<td>Moderate</td>
<td>Minor</td>
<td>Negligible</td>
<td>Negligible</td>
</tr>
</tbody>
</table>

Following the classification of an effect, a statement will then be made regarding whether the effect is significant or not. As a general rule, major and moderate effects will be considered to be significant and minor and negligible effects will be considered to be not significant. However, professional judgement can also be applied where necessary.
14. COMMUNITY AND SOCIO-ECONOMICS

14.1 Introduction

This section sets out the proposed scope and methodology for the community and socio-economic assessment of the proposed development.

This has been informed by an outline description of the environmental baseline conditions and a preliminary view of the issues likely to be associated with the proposed development. The assessment will be undertaken with reference to the following policy and guidance:

- local (e.g. Thanet District Adopted Local Plan 2006);
- sub-regional (e.g. KCC’s Unlocking Kent’s Potential); and
- national (e.g. National Planning Policy Framework 2012).

14.2 Baseline

The district of Thanet covers the extreme north-east of Kent. Its major settlements are located along the coastline, and include Birchington, Margate, Broadstairs and Ramsgate. It is an area traditionally associated with tourism, but also has light industry and a channel port at Ramsgate. Despite being a gateway to Europe it is relatively isolated from the rest of the county and has fewer business opportunities and lower prosperity than surrounding districts.

The site is located within the administrative area of KCC; adjacent to the north-eastern edge of the village of Cliffsend and approximately 1.5km west of the outskirts of the town of Ramsgate. The site currently comprises an area of flat agricultural land, of Grade 1 quality on the Agricultural Land Classification (ALC), and there is a PRoW which splits the site from north to south towards the eastern extremity.

The majority of the baseline will be analysed at local authority level and compared to the region (south-east to include the Dover District) and nationally, as deemed appropriate. The key issues associated with the proposed development include the following and will therefore be provided as part of the baseline review:

- population and labour force;
- skills and employment (for example, including extent of existing retail employment);
- crime levels;
- deprivation; and
- local economy.


14.3 Potential environmental impacts

Potential environmental impacts and effects are likely to include the following:

- direct employment opportunities generated by the construction phase;
- indirect employment opportunities generated by the construction phase;
- direct employment opportunities generated by the operational phase;
- indirect employment opportunities generated by the operational phase;
- wider economic effects (operational phase) (for example, the potential impact on the nearby railway stations and towns/ villages from the shift in trips away from these locations); and
• Amenity effects on local communities (for example, creation of new cycle routes).

The assessment will identify the key significant residual effects of the scheme once mitigation has been taken into account.

The assessment will also take account of cumulative impacts, including a review of the surrounding developments.

14.4 **Assessment methodology**

The study area includes the area of land required for the construction and operation of the proposed scheme, together with a wider corridor (the dispersed nature of socio-economic employment effects means that they could occur at the district, county and UK level) within which receptors could be affected either adversely or beneficially.

The assessment will aim to be objective and quantify impacts and their effects as far as possible; however some impacts and effects can only be evaluated on a qualitative basis (for example, wider economic effects).

14.4.1 **Impact Magnitude**

Impacts are assessed on the basis of:

• Magnitude of change - this entails consideration of the absolute number of people affected and the size of area in which impacts will be experienced;

• Scale of the impact - this entails consideration of the relative magnitude of each impact in its relevant market context (for example, the impacts on local employment will be considered in the context of the overall size of the local labour market);

• Duration of impact - more weight is given to long-term, permanent changes than to short-term, temporary ones; and

• Scope for adjustment or mitigation - the assessment will be concerned in part with economies. These adjust themselves continually to changes in supply and demand, and the scope for the changes brought about by the Proposed Development to be accommodated by market adjustment will therefore be a criterion in assessing significance.

14.4.2 **Receptor Sensitivity**

A receptor can experience a socio-economic or community impact in several different ways:

• as an economic/financial gain or loss;

• as a gain or loss of a resource or access to a resource; and

• as a gain or loss of amenity, including that which is derived from, or experienced while using, a resource such as a place of worship, community resource, public right of way or public open space.

The sensitivity of receptors will be identified on a case by case basis with reference made to relevant guidance where applicable and/or employing professional judgement. Determination will vary depending on the type of receptor.

The assessment will take account of policy and baseline conditions relating to receptors or resources which would influence the degree to which they might be susceptible to experiencing impacts, i.e. their sensitivity.

14.4.3 **Classification of Effects**

Following analysis of the magnitude of impact and sensitivity of receptors affected, effects (whether beneficial or adverse) are classified using the scale below:
• Negligible;
• Minor;
• Moderate; and
• Major.

Effects are defined as follows:

• Beneficial or advantageous effects on an impact area, which may be minor, moderate, or major in effect;
• Negligible or imperceptible effects on an impact area; and
• Adverse or disadvantageous effects on an impact area, which may be minor, moderate or major in effect.

Following the classification of an effect, a statement will then be made regarding whether the effect is significant or not. As a general rule, major and moderate effects will be considered to be significant and minor and negligible effects will be considered to be not significant. However, professional judgement can also be applied where necessary.

If mitigation is proposed, the residual effect following mitigation will be categorised using the same system above to consider whether residual significant effects are likely.
15. **INDICATIVE STRUCTURE OF THE ES**

The ES will include all required information as defined by Schedule 4 of the EIA Regulations. The structure of the ES is anticipated to be as follows (the structure of the assessment chapters is provided in section 4.8):

**Context**
- Introduction
- EIA legislation
- Planning policy context
- Site and surrounding area

**Project Description**
- The proposed development
- Need for the development
- Consideration of alternatives

**Assessment**
- Method of assessment
- Landscape and visual assessment
- Ecology
- Cultural heritage
- Water resources and flooding
- Traffic and transport
- Noise and vibration
- Air quality
- Land use
- Ground conditions
- Community and socio-economics
- Inter-relationships and cumulative effects

**Conclusions**
- Summary of residual environmental effects, mitigation and opportunities for enhancement, and monitoring.

The ES will, where required, also include drawings, illustrative material and technical appendices in support of the above key chapters and topics. Of note, an Arboricultural Impact Assessment will be produced which considers any potential impacts on those trees which fall within or immediately adjacent to the proposed site boundary.

A separate Non-Technical Summary will be produced.
16. SCOPING SUMMARY

This informal EIA Scoping Report suggests a comprehensive scope of work based on previous experience of the assembled team of specialists and existing knowledge of the site.

This informal EIA Scoping Report has been submitted on an informal basis to begin discussions with KCC and TDC about the topics to be assessed within the EIA. Subsequently, a formal Scoping request will be made pursuant to Regulation 13 of the EIA Regulations.

In order to take the proposed development forward KCC intends to submit a planning application in summer 2016. An EIA will be carried out and an ES submitted with the application.
APPENDIX A – Extended Phase 1 Habitat Report
Thanet Parkway Railway Station – Extended Phase 1 Habitat Report

Client : Kent County Council
<table>
<thead>
<tr>
<th>Rev No</th>
<th>Comments</th>
<th>Checked by</th>
<th>Approved by</th>
<th>Date</th>
</tr>
</thead>
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<tr>
<td>01</td>
<td>Final</td>
<td>JS</td>
<td>SM</td>
<td>March 2015</td>
</tr>
</tbody>
</table>

Scott House, Alençon Link, Basingstoke, Hampshire, RG21 7PP, United Kingdom
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The conclusions and recommendations contained in this Report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by URS has not been independently verified by URS, unless otherwise stated in the Report.

The methodology adopted and the sources of information used by URS in providing its services are outlined in this Report. The work described in this Report was undertaken between January 2015 and February 2015 and is based on the conditions encountered and the information available during the said period of time. The scope of this Report and the services are accordingly factually limited by these circumstances.

Where assessments of works or costs identified in this Report are made, such assessments are based upon the information available at the time and where appropriate are subject to further investigations or information which may become available.

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Executive Summary

Kent County Council (KCC) proposes to build a new, two-platform station, car park and associated infrastructure (the ‘proposed development’) on the existing rail line between Ashford and Ramsgate, within the administrative area of Thanet District Council (TDC).

This report presents the findings of an extended Phase 1 habitat survey and desk study undertaken by AECOM in January 2015 at the proposed location of Thanet Parkway Railway Station near Cliffsend, Kent, hereafter referred to as the ‘Site’.

The survey and associated desk study aimed to identify broad habitats and any potential constraints with regards to protected and/or otherwise notable species associated with the current proposals for development. In particular, consideration was given to the potential requirement for further ecological surveys.

The Site is located approximately 700m to the north of a network of statutory designates sites that includes both the Thanet Coast and Sandwich Bay Special Protection Area (SPA) and Ramsar site, and the Sandwich Bay Special Area of Conservation (SAC). It is unlikely that the proposed development would result in adverse effects on these European sites. However, once more details of the proposed development are available it will be necessary to prepare a Habitat Regulations Assessment (HRA) screening report considering the potential for significant effects on the ecological structure and function of the sites concerned.

Habits present within the site include an arable field with associated field margins and small areas of tall ruderal habitat and grassland. Thin strips of broad-leaved woodland adjoin the existing railway line.

The areas of woodland are considered likely to be of Parish value and may represent a habitat of principal importance under the Natural Environment and Rural Communities Act (2006). However, it was not possible to access the land controlled by Network Rail which immediately adjoins the railway during the current survey. Therefore, an update of the Phase 1 habitat survey is required to these areas in spring 2015 to confirm the value of the habitats present within the Network Rail estate. Remaining habitats within the site are of limited ecological value and are of relevance at the site level only.

The January 2015 extended Phase 1 habitat survey confirmed the requirement for wintering bird surveys to confirm if the site is utilised by any of the species for which the nearby statutory designates sites are designated. In addition, the following further surveys may be required depending on the evolving design and the habitats found to be present within the existing Network Rail boundaries:

- Initial bat roosting potential assessment of trees within the Network Rail estate that would be cleared to enable the construction of the proposed development;
- Bat activity survey to determine use of the existing railway corridor by foraging and/or commuting bats; and
- Presence/absence survey for reptiles within potentially suitable habitat adjoining the existing railway.
1 Introduction

1.1 Scope of work

AECOM was commissioned by Kent County Council (KCC) in January 2015 to undertake an extended Phase 1 habitat survey of all areas with the boundary of the proposed Thanet Parkway Railway Station located to the east of Cliffsend, Thanet, Kent (hereafter referred to as the 'proposed development'). The proposed site (hereafter the ‘Site’) is located approximately 2km to the east of Ramsgate, Kent (see Figure 1) and is approximately 14ha in size. The approximate Ordnance Survey grid reference for the centre of the Site is TR341645.

The aim of the survey and associated desk study was to identify habitats present within the Site and the potential for these habitats to support protected and/or otherwise notable species that could be adversely affected by the proposed works.

This report presents the findings of the desk study and extended Phase 1 habitat survey and also provides recommendations for further survey work and ecological enhancement.

1.2 Details of the proposed development

KCC proposes to build a new two-platform station and associated infrastructure on the existing rail line between Ashford and Ramsgate, within the administrative area of Thanet District Council (TDC). It is understood that the proposed development would consist of two platforms, a footbridge, a car park and forecourt, cycle storage and landscaping.

In order to take the proposed development forward, KCC intends to submit a planning application in early-mid 2016.
2 Methodology

2.1 Desk study

The location of statutory designated sites for nature conservation located within a 5km radius of the Site was determined using the Multi Agency Geographical Information for the Countryside (MAGIC) website1.

Records of both non-statutory designated sites and protected and or otherwise notable species within 2km of the Site were obtained from the Kent and Medway Biological Records Centre (KMBRC) in January 2015.

2.2 Extended Phase 1 habitat survey

An extended Phase 1 habitat survey was undertaken on the 28th January 2015 by an ecologist from AECOM. The aim of the survey was to identify the type, quality and extent of habitats present within the Site and to identify the potential for these habitats to support protected or otherwise notable species.

The survey was conducted according to the standard Phase 1 survey methodology (JNCC 20102) and was extended to include targeted searches for signs of protected species such as bats, great crested newt (*Triturus cristatus*), reptiles and badger (*Meles meles*). The survey included a search for invasive species listed under Schedule 9 of the Wildlife and Countryside Act, such as Japanese knotweed (*Fallopia japonica*) and giant hogweed (*Heracleum mantegazzianum*).

Target notes (TN) were made to provide supplementary information on species composition, features of interest, topography, location of habitats within the boundary of the Site and evidence of management. Notes were also taken of any evidence of the presence of protected or notable fauna. Botanical nomenclature follows Stace (2010)3.

2.3 Constraints

The extended Phase 1 habitat survey was undertaken outside of the optimum survey season, regarded as May to September, and therefore certain ephemeral components of vegetation, such as annual plant species, may have been absent at the time of the survey. However, given the nature of the habitats present (predominantly arable fields and narrow field margins) this is not considered a significant constraint to the survey.

The existing railway and the land immediately adjoining it which lies within the existing Network Rail estate could not be accessed at time of survey. Views of land within the Network Rail estate were possible from the boundary with the fields adjoining and to the north. Only broad habitat types within this section of the Site could be identified, and no views were possible from the fields that adjoin the southern boundary of the Site (i.e. those to the south of the railway).

The inability to access the land within the Network Rail Estate is considered a constraint to the survey. As detailed in Section 4.2, further survey is recommended in spring 2015 in order to address this constraint.

---

1 MAGIC [http://magic.defra.gov.uk/] Accessed 30/01/2015
3 Results

3.1 Designated sites

There are no statutory or non-statutory designated sites within the boundary of the Site.

There are seven statutory designated sites within 5km of the Site, as summarised in Table 1. The location of these sites in relation to the Site is shown in Figure 2. The boundaries of the sites overlap and the closest sections are located approximately 0.7km to the southeast of the Site.

Table 1 Statutory designated sites within 5km of the Site

<table>
<thead>
<tr>
<th>Site</th>
<th>Status</th>
<th>Reason for Designation</th>
<th>Distance from Site boundary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thanet Coast</td>
<td>Special Area of Conservation (SAC)</td>
<td>Thanet Coast SAC contains an example of reefs on soft chalk along the shore. The site has sublitoral chalk platforms that form chalk cliffs. The reefs are an unusual feature because of the scarcity of hard substrates in the area. The site also provides the second most extensive representation of chalk sea caves in the UK. The site is bordered by 23km of chalk cliffs with many caves, stack and arch formations. These caves support specialised algal and lichen communities, some of which were first described from Thanet and have never been recorded elsewhere.</td>
<td>0.7 km SE</td>
</tr>
<tr>
<td>Thanet Coast &amp; Sandwich Bay</td>
<td>Special Protection Area (SPA)</td>
<td>Thanet Coast and Sandwich Bay SPA is located at the north-eastern tip of Kent in southern England. It is a coastal site consisting of a long stretch of rocky shore, adjoining areas of estuary, sand dune, maritime grassland, saltmarsh and grazing marsh. The site holds important numbers of turnstone (Arenaria interpres) and golden plover (Pluvialis apricaria), and is also used by large numbers of migratory birds as they make landfall in Britain in spring or depart for continental Europe in autumn.</td>
<td>0.7 km SE</td>
</tr>
<tr>
<td>Thanet Coast &amp; Sandwich Bay</td>
<td>Ramsar</td>
<td>A coastal site, consisting of a long stretch of rocky shore, adjoining areas of estuary, sand dune, maritime grassland, saltmarsh and grazing marsh. The wetland habitats support 15 British Red Data Book invertebrates, as well as a large number of nationally scarce species. The site attracts internationally important numbers of turnstone, and nationally important numbers of wintering populations of four wader species: ringed plover (Charadrius hiaticula), golden plover, grey plover (Pluvialis squatarola) and sanderling (Calidris alba), as well as Lapland bunting (Calcarius lapponicus). The site is used by large numbers of migratory birds.</td>
<td>0.7 km SE</td>
</tr>
<tr>
<td>Sandwich &amp; Pegwell Bay</td>
<td>National Nature Reserve (NNR)</td>
<td>Sandwich and Pegwell Bay National Nature Reserve has habitats including chalk cliffs, mud flats, saltmarsh and sand dunes, is internationally important for waders and wildfowl both on migration and over-winter.</td>
<td>0.7 km SE</td>
</tr>
</tbody>
</table>
Sandwich Bay to Hacklinge Marshes

**Status:** Site of Special Scientific Interest (SSSI)

Sandwich Bay to Hacklinge Marshes contains the most important sand dune system and sandy coastal grassland in South East England and also includes a wide range of other habitats such as mudflats, saltmarsh, chalk cliffs, freshwater grazing marsh, scrub and woodland. Associated with the various constituent habitats of the site are outstanding assemblages of both terrestrial and marine plants with over 30 nationally rare and nationally scarce species, having been recorded. Invertebrates are also of interest with recent records including 19 nationally rare and 149 nationally scarce species. These areas provide an important landfall for migrating birds and also support large wintering populations of waders, some of which regularly reach levels of national importance.

**Distance from Site boundary:** 0.7 km SE

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Prince’s Beachland’s

**Status:** LNR

A complex mosaic of habitats of international importance for its bird population. Part of the Sandwich and Pegwell Bay complex of sites.

**Distance from Site boundary:** 3.1 km S

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Thanet Coast

**Status:** Marine Conservation Zone (MCZ)

This MCZ contains the best examples of a variety of features found within the south-east region, including an area of subtidal chalk that extends seawards from the chalk reefs, cliffs and coves already afforded protection by the Thanet Coast SAC. The chalk seabed within the area is the longest continuous stretch of coastal chalk in the UK. This is the only designated MCZ to protect one species of stalked jellyfish (*Lucernaria cruxmelitensis*).

**Distance from Site boundary:** 4.3 km W

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There is one non-statutory designated site within 2km of the Site boundary; namely Sandwich and Pegwell Bay Local Nature Reserve (LNR). The reason for its designation and location in relation to the site is detailed in Table 2.

**Table 2 Non-Statutory designated sites within 2km of the Site**

<table>
<thead>
<tr>
<th>Site</th>
<th>Status</th>
<th>Reason for Designation</th>
<th>Distance from Site boundary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandwich &amp; Pegwell Bay</td>
<td>Kent Wildlife Trust Reserve (LNR)</td>
<td>The Trust's largest and one of its most important nature reserves, with the only ancient dune pasture in Kent. The reserve is made up of a complex mosaic of habitats: inter-tidal mudflats, saltmarsh, shingle beach, sand dunes, ancient dune pastures, and chalk cliffs, wave cut platform and coastal scrubland. The reserve is of international importance for its waders and wildfowl, best seen over winter or during the spring and autumn migration.</td>
<td>0.7 km SE</td>
</tr>
</tbody>
</table>
3.2 Pre-existing records of protected species

Desk study data provided by KMBRC is summarised in Appendix B. Many of the records supplied by KMBRC, date from pre-2000. As biological data can rapidly become out of date due to changes in habitat management and land use only records post 2000 are summarized in Appendix B.

Eight red-listed bird species of conservation concern have been recorded within 0.5km of the boundary of the Site including field fare (Turdus pilaris), redwing (Turdus iliacus), grey partridge (Perdix perdix), lapwing (Vanellus vanellus), lesser redpoll (Carduelis cabaret), linnet (Carduelis cannabina), tree pipit (Anthus trivialis) and tree sparrow (Passer montanus). The desk study also produced records for the amber-listed golden plover within 0.7km of the Site, a species for which the Thanet Coast and Sandwich Bay SPA and Ramsar site is designated.

Data provided by KMBRC produced records of serotine bat (Eptesicus serotinus) and common pipistrelle (Pipistrellus pipistrellus) within 0.7km of the Site boundary. Records also indicate that common lizard (Zootoca vivipara) have been recorded within 0.6km of the Site boundary.

There are no previous records of great crested newt (Triturus cristatus) within the search area.

3.3 Extended Phase 1 habitat survey

The Phase 1 habitat map is presented as Figure 3. The supporting target notes are listed in Appendix A.

3.3.1 Habitats

The majority of the Site consists of a single large triangular arable field. The field is surrounded by narrow field margins, small areas of ruderal habitat, neutral semi-improved grassland associated with the adjacent road networks and thin strips of semi-mature broadleaved woodland that adjoin the existing railway. The site is is bound by the A299 Hengist Way to the north and the A256 Richborough Way to the west. To the south-east the site is partly bound by the existing rail line between Ashford and Ramsgate and partly by agricultural fields.

3.3.1.1 Arable field

The triangular arable field within the Site is split into four distinct areas. To the west and south (TN3 and TN6) an area measuring approximately 3ha has been recently tilled leaving bare earth and is becoming colonized by common arable weeds including frequent germander speedwell (Veronica chamaedrys), groundsel (Senecio vulgaris) and teasel (Dipsacus fullonum) with occasional annual meadow grass (Poa annua), scentless mayweed (Tripleurospermum inodorum) and common ragwort (Senecio jacobaea).
In the south of the Site a section of the field approximately 4ha in size has been sown with a legume cover crop that has been left in-situ over winter (TN7, plate 2). Deep furrows approximately 30cm deep are present within this section of the field. Herbaceous species present within the cover crop include frequent annual mercury (*Mercurialis annua*), common nettle (*Urtica dioica*), scentless mayweed, and bristly ox-tongue (*Picris echioides*) together with frequent annual meadow grass and Yorkshire fog (*Holcus lanatus*). Common species of mossed are located along the top of the furrows.

The eastern section of the Site is approximately 1ha in size and has recently been tilled leaving bare soil and shows signs of recent treatment by herbicide. Vegetation present within this section of the field is confined to the eastern corner and consists of occasional annual meadow grass and common nettle.
Plate 3. Eastern section of the Site: recently tilled and showing signs of recent treatment by herbicide

To the north a large section of the field (approximately 4ha) is covered with a dense crop of cauliflower (*Brassica oleracea*) sown in rows (TN14, Plate 4).

Plate 4. Section of arable field in the north of the Site sown with dense crop of cauliflower (TN14)

3.3.1.2 Field margins

The field margins in the north, east and west (TN5 and TN15) are generally between 0.5m and 1m wide and consist of frequent perennial rye-grass (*Lolium perenne*), Yorkshire fog and annual meadow-grass with occasional spear thistle (*Cirsium vulgare*), creeping thistle (*Cirsium arvense*), annual mercury, bristly ox-tongue, red fescue (*Festuca rubra*), common ragwort and common mallow (*Malva sylvestris*).
Plate 5. Field margin in the north of the Site approximately 1m wide (TN15)

The majority of the field margin to the south is less than 0.5m wide and is becoming colonized by frequent bramble (*Rubus fruticosus*) and ivy (*Hedera helix*) that is invading from the adjacent railway embankment. A 200m section of the southern field margin adjacent to the cover crop is 5m wide and shows signs of being treated with herbicide, however here floral species are beginning to regrow and include frequent broad-leaved willowherb (*Epilobium montanum*), common ragwort, common nettle and cleavers (*Galium aparine*) together with perennial rye-grass and Yorkshire fog (TN8, Plate 6).

Plate 6. 5m wide field margin (TN8) along southern boundary.

3.3.1.3 Semi-mature broadleaved woodland

A thin strip of semi-mature broadleaved woodland (TN4, Plate 7) is located within the fenced area of Network Rail land adjoining the railway. It consists of frequent sycamore (*Acer pseudoplatanus*) and ash (*Fraxinus excelsior*) with occasional pedunculate oak (*Quercus robur*). The understorey consists of frequent elder (*Sambucus nigra*), hawthorn (*Crataegus*...
monogyna) and bramble scrub. The ground flora is sparse and consists of abundant ivy with occasional lord and ladies (Arum maculatum). Occasional trees within the woodland are covered in dense ivy.

Plate 7. Semi-mature broadleaved woodland along the southern boundary of the Site (TN4).

3.3.1.4 Tall ruderal

Within the southeast corner of the Site is a small section of tall ruderal habitat (TN1) consisting of frequent teasel, bristly ox-tongue and broad-leaved dock with occasional hedge mustard (Sisymbrium officinale), ribwort plantain (Plantago lanceolata) together with frequent perennial rye-grass and occasional Yorkshire fog and red fescue.

To the northeast is another small area of tall ruderal habitat consisting of frequent creeping thistle, bristly ox-tongue and teasel with occasional spear thistle (TN10, Plate 8).

Plate 8. Area of tall ruderal habitat to the northeast (TN10)
3.3.1.5 Grassland

Along the north and western boundaries of the Site (TN12 and TN16) are areas of neutral semi-improved grassland found in association with the embankments and cuttings adjoining the A299 and A256. Species present here include frequent cock’s-foot (*Dactylis glomerata*), red fescue and Yorkshire fog with occasional teasel, bristly ox-tongue, broad-leaved dock and dove’s-foot cranesbill (*Geranium molle*). Planted within the grassland are immature trees consisting of hawthorn, dog rose (*Rosa canina*) and pedunculate oak.

The embankment on the western boundary is particularly steep and includes a section containing stepped gabion baskets colonized by rough grasses consisting of abundant cock’s-foot and Yorkshire fog and occasional broad-leaved dock, common ragwort and teasel (TN16, Plate 9).

![Plate 9. Steep motorway embankment with stepped gabion basket colonized by rough grassland (TN16)](image)

The eastern corner of the Site is characterized by a small area of rank grassland consisting of frequent cock’s-foot, red fescue and Yorkshire fog with occasional bramble, red dead-nettle (*Lamium purpureum*), lesser burdock (*Arctium minus*), teasel and hedge mustard (TN11, Plate 10).
Along the northeastern boundary is a thin strip of improved grassland (TN9) approximately 0.5m wide and consisting of frequent perennial rye-grass and red fescue (*Festuca rubra*) with occasional teasel, creeping buttercup and common mouse-ear (*Cerastium fontanum*).

### 3.3.1.6 Ephemeral/short perennial vegetation

Running north to south through the centre of the field, and separating the cauliflower crop and the cover crop, is a farm access track (TN13, Plate 11), approximately 3m wide and colonized by frequent ephemeral/short perennial species including scentless mayweed, groundsel, annual meadow grass, shepherds purse (*Capsella bursa-pastoris*), red dead-nettle and common nettle.

Plate 10. Small corner of rank grassland with occasional patches of bramble scrub to northeast (TN11)

Plate 11. Farm access track running north to south through the centre of the Site and colonized by ephemeral vegetation (TN13)
3.3.1.7 **Hard standing**
A concrete access track along the northern perimeter of the Site for approximately 600m and then passes south through the arable field (Plate 12, TN17).

![Concrete access track](image)

**Plate 12.** Concrete access track running along northern boundary before heading south through the arable field (TN17)

3.3.2 **Protected and/or notable species**

3.3.2.1 **Bats**
The semi-mature trees within the woodland strips located along the embankment of the railway are covered in dense ivy and may also contain other features considered suitable to support roosting bats.

The linear strip of woodland that runs along the railway embankment may also offer a linear feature suitable to support foraging and commuting bats passing through the wider landscape.

3.3.2.2 **Great crested newt**
No ponds are located within the Site. The closest pond is located approximately 0.1km to the west. However, the Site is separated from the pond by the A299 and A256 roads (both dual carriageways).

The desk study produced no records of great crested newt within 2km of the Site.

3.3.2.3 **Badgers**
No signs of badger were observed during the survey. However, the arable fields and the associated field margins have potential to support foraging activity by badger. Additionally the thin strip of broadleaved woodland found in association with the rail line supports habitat potentially suitable to support badger setts.

3.3.2.4 **Wintering and nesting birds**
The areas of tilled arable field and the area of cover crop have potential to support wintering bird species such as lapwing and golden plover together, along with providing a feeding resource for farmland bird species such as yellowhammer (*Emberiza citronella*), skylark (*Alauda arvensis*) and grey partridge.

The open fields have limited potential to support ground nesting birds such as skylark. However, the woodland habitat located along the railway embankment represents suitable nesting habitat for a range of common bird species.
3.3.2.5 **Reptiles**

The areas of neutral semi-improved grassland adjoining the A299 and A256 (northern and western boundaries respectively) contain habitat potentially suitable to support common species of reptile such as common lizard (*Zootoca viviparia*) and slow worm (*Anguis fragilis*).

While areas within the active railway estate were not fully visible, the interface between the woodland areas adjoining the existing railway and the trackside ballast should at this stage be considered as being potentially suitable to support common reptiles.
4 Discussion and Recommendations

4.1 Designated sites

No statutory or non-statutory sites would be subject to habitat loss as a consequence of the proposed development.

A range of statutory protected sites including the Thanet Coast and Sandwich Bay SPA and Ramsar site, the Sandwich Bay SAC and the Thanet Coast MCZ are located approximately 0.7km to the south of the Site. These sites are of up to International value for nature conservation based on the shifting sand dune systems present and the associated overwintering bird populations these areas support.

The statutory designated sites including the SPA, SAC and Ramsar are separated from the proposed development by the St Augustine’s Golf Course and the A256 Sandwich Road. It is therefore considered unlikely that the proposed development would result in any impacts on these sites.

However, it is recommended that a Habitats Regulations Assessment (HRA) screening exercise is undertaken to confirm that there is no likely significant effect on a European designated site. This document would need to be submitted to the appropriate competent authority in advance of, or in parallel with the proposed planning application. The scope of the HRA screening report should include consideration of the following:

- potential for the habitats present within the Site to be utilised by the overwintering bird population for which the Thanet Coast and Sandwich Bay SPA and Ramsar site are designated;
- potential for impacts on the SPA/Ramsar, SAC and MCZ due to noise and changes in air pollution and dust deposition as a consequence of changes in pattern of train movements; and
- potential for increased recreational pressures on nearby statutory designated sites for nature conservation due to the introduction of new station.

4.2 Habitats

The majority of the land within the Site boundary is arable field with narrow field margins. These areas are regularly disturbed and are considered unlikely to support any protected and/or notable arable weed species. These habitats are considered to be of negligible botanical value.

The narrow strips of woodland habitat that adjoin the existing railway are likely to qualify as semi-natural broadleaved woodland and therefore represent a habitat of principle importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). They are likely to be of at least Parish value. However, as these areas could not be accessed during the current survey it will be necessary to undertake an update to the Phase 1 habitat survey during the period April to September to confirm the exact nature of the habitats present.

The remaining habitats within the Site are of limited ecological value and are of relevance at the site level only.

4.3 Species

4.3.1 Bats - Roosting

All UK native bat species and their roosts (whether bats are present or not) are protected under the Conservation of Habitats and Species Regulations (2010 as amended) and under the Wildlife and Countryside Act 1981 (as amended). Taken together under this legislation, it is an offence to:

- Deliberately, intentionally or recklessly capture, injure or kill a bat;
• Damage/destroy a breeding site or resting place of a bat (N.B. this is an offence whether the act is deliberate or not);

• Deliberately, intentionally or recklessly disturb a bat; or

• Intentionally or recklessly disturb access to any structure which a bat uses for shelter or protection.

A bat roost is defined as “any structure or place, which is used for shelter or protection” or a “breeding site or resting place”. Because bats commonly use the same roosts at particular times of the year after periods of absence, the roost is protected whether or not bats are resident.

The proposals will require the clearance of trees adjoining the existing railway in and around the proposed platform locations (exact position yet to be confirmed). The semi-mature trees present adjoining the existing railway are considered potentially suitable to support roosting bats, and it will be necessary to undertake an initial bat roosting potential assessment of all trees in the vicinity of works when further detail on the proposed design is available.

All trees above 0.25m Diameter at Breast Height (DBH) that will be subject to works or are located adjacent to works that have the potential to result in disturbance will require initial roost bat roost potential assessment.

Individual trees should be inspected from the ground, using close focusing binoculars to identify any features including cracks, crevices, loose bark and splits that could support roosting bats. Features present would be examined using a torch where necessary, to ascertain (where possible) the depth, height and internal conditions. Some cavities at lower heights should be examined using an endoscope to ascertain the internal characteristics. Special consideration will be given to any evidence found that bats may be using a particular feature, such as staining or bat droppings below or within the hole. On the basis of this assessment, features will be classified according to whether they have negligible, low, moderate or high potential to support roosting bats.

The initial bat roosting assessment survey is ideally conducted during the winter months when foliage is not present to obscure views. However such surveys can be undertaken outside of this period where necessary, as long as a precautionary approach is taken where views are obscured.

In the event that features potentially suitable to support roosting bats are located within trees scheduled to be subject to works then further detailed survey work may be required to confirm the presence/absence of bats. These follow on surveys can only be conducted during the period May to September when bats are active.

4.3.2 Bats - Foraging and commuting

The narrow strips of woodland adjoining the existing railway represent linear features that may be of value to foraging and/or commuting bats. As these features will be disrupted by the construction of the proposed development it is recommended that further survey is undertaken to confirm the value of these features to local bat populations.

It is recommended that a bat activity survey is undertaken according to the Bat Conservation Trust’s guidelines to incorporate three visits during the period April to September. It is unlikely to be possible to gain night time access to Network Rail land and therefore the survey should focus on a transect route following the boundary between the arable fields and the existing rail estate.

The remainder of the Site is open and exposed and is devoid of features that are likely to be of importance for foraging and/or commuting bats.

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4.3.3 Wintering and nesting birds

The open arable fields contain habitat that is potentially suitable for use by lapwing (*Vanellus vanellus*) and golden plover (*Pluvialis apricaria*). The Thanet Coast and Sandwich Bay SPA that lies 750m southeast is designated in part for its over-wintering golden plover.

On this basis it is recommended that surveys are undertaken to confirm usage of the on-site habitats by over-wintering birds. Based on the current timetable for submitting a planning application it is recommended that three survey visits are made during the period February to mid-March 2015. If further survey visits are required then these may be undertaken during winter 2015/2016.

Surveys should follow an adaptation of the Pilot British Trust for Ornithology method, and involve walking transects across the site, stopping to look and listen for birds periodically. All bird activity would be recorded following the standard BTO species codes.

Under current conditions the Site is considered to have limited potential to support ground nesting birds such as skylark. While some habitat suitable for common nesting species is present it is considered unlikely that further survey for breeding birds will be required. However, it will be necessary to ensure that the removal of habitats suitable for nesting birds is undertaken during the peak September to February inclusive in order to avoid impacts on nesting birds.

All native birds and regularly visiting species are protected by the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is an offence to intentionally kill, injure or take birds or their eggs or to intentionally destroy or disturb a nest when it is in use or being built.

The proposed development will potentially result in land take of habitat value to nesting and wintering bird species. However, based on current data it is considered unlikely that these losses would result in any meaningful negative impact on local bird populations.

4.3.4 Common reptiles

All of the four widespread species of reptile are protected under the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is an offence to intentionally kill or injure these species. It should be noted that, where it is predictable that reptiles are likely to be killed or injured by an activity (such as site clearance), this could legally constitute “intentional killing or injury”, even if that was not the intention of the activity.

Common lizard has been recorded with 0.6km of the Site. Habitats considered suitable to support reptile species are limited to the perimeter of the Site, namely the grassland verges of the adjacent road schemes to the north and west and the railway embankment to the south. However, it is currently assumed that there will be no works or very limited works along the grassland verges of the A299 and A256. As a consequence no reptile survey of these locations is proposed.

The mosaic of habitats that typically develops adjacent to railways normally provides habitat suitable to support common reptile species. It is likely that suitable habitat is present within the rail estate and the requirement for reptile survey of this area should be confirmed when access to the existing rail estate is gained.

If suitable habitat to support reptiles is present within the Network Rail estate then assuming railway safety constraints allow a survey should be undertaken to confirm the presence/absence of these species.

If presence/absence survey for reptile is required this should be undertaken either during April/May and/or September and would consist of seven survey visits. Artificial refugia (corrugated metal sheets and felt mats which reptiles will use for basking and shelter) would be distributed and subsequently checked during each survey visit.
The wider areas of habitat within the Site namely the arable fields and field margins are intensively managed and lack the range of habitat types required to support common reptiles and are considered to have negligible potential to support these species.
Appendix A. Target Notes

1. Bare earth with tall ruderals beginning to colonise. Species present include frequent perennial rye-grass (*Lolium perenne*), cock’s-foot (*Dactylis glomerata*) with occasional Yorkshire fog (*Holcus lanatus*), red fescue (*Festuca rubra*), hedge mustard (*Sisymbrium officinale*), teasel (*Dipsacus fullonum*), ribwort plantain (*Plantago lanceolata*), bristly ox-tongue (*Picris echioides*) and broad-leaved dock (*Rumex obtusifolius*).

2. Grass verge 1-2m wide consisting of frequent cock’s-foot with occasional teasel, hedge mustard, hedge mustard and dove’s-foot cranesbill (*Geranium molle*) with locally rare black knapweed (*Centaurea nigra*).

3. Triangular arable field recently tilled. No crops emerging. Species present includes frequent germander speedwell (*Veronica chamaedrys*), groundsel (*Senecio vulgaris*) and teasel.

4. Railway embankment with semi-mature woodland. The upper storey consists of frequent sycamore (*Acer pseudoplatanus*) and ash (*Fraxinus excelsior*) with occasional pedunculate oak (*Quercus robur*). The understorey consists of frequent elder (*Sambucus nigra*), hawthorn (*Crataegus monogyna*) and bramble (*Rubus fruticosus*) scrub. The ground flora is sparse and consists of abundant ivy (*Hedera helix*) with occasional lords-and-ladies (*Arum maculatum*).

5. Field margin approximately 0.5m wide and becoming colonised by frequent bramble and ivy invading from the adjacent embankment together with frequent common nettle (*Urtica dioica*), cleavers (*Galium aparine*), Yorkshire fog, annual meadow grass (*Poa annua*) and creeping buttercup (*Ranunculus repens*).

6. A triangular field recently tilled with no crop emerging. Becoming colonised by similar species to TN3 but also with occasional annual meadow grass, scentless mayweed (*Tripleurospermum inodorum*) and common ragwort (*Senecio jacobaea*).

7. A square section of the arable field sown with a legume cover crop that is beginning to rot down. Deep furrows approximately 30cm deep are present within this section of the field. Herbaceous species present within this area includes frequent annual mercury (*Mercurialis annua*), common nettle, annual meadow grass, scentless mayweed, bristly ox-tongue, Yorkshire fog and common moses.

8. Field margin approximately 5m wide adjacent to TN7 and recently sprayed with herbicide. Species regrowing includes occasional perennial rye-grass, broad-leaved willow-herb (*Epilobium montanum*), common ragwort, common nettle, cleavers and Yorkshire fog.

9. Thin strip of improved grassland approximately 0.5m wide. Species present includes frequent perennial rye-grass and red fescue (*Festuca rubra*) with occasional teasel and common mouse-ear (*Cerastium fontanum*).

10. A small area of tall ruderal habitat consisting of frequent creeping thistle (*Cirsium arvense*), bristly ox-tongue and teasel with occasional spear thistle (*Cirsium vulgare*).

11. Tall rank grassland consists of frequent cock’s-foot, red fescue and Yorkshire fog with occasional bramble, red dead-nettle (*Lamium purpureum*), lesser burdock (*Arctium minus*), teasel and hedge mustard.

12. Top of motorway embankment consisting of neutral semi-improved grassland consisting of frequent cock’s-foot, red fescue and Yorkshire fog with occasional teasel, bristly ox-tongue, broad-leaved dock
and dove’s-foot cranesbill. Interspersed within the grassland are immature tree consisting of hawthorn, dog rose (*Rosa canina*) and pedunculate oak.

13. A thin strip of ephemeral vegetation running through the centre of the field consisting of frequent scentless mayweed, groundsel, annual meadow grass, shepherds purse (*Capsella bursa-pastoris*), red dead-nettle and common nettle.

14. A square section of arable field containing a crop of cauliflower.

15. A 1m wide verge adjacent to TN14 consisting of frequent perennial rye-grass, Yorkshire fog and annual meadow grass with occasional spear thistle, creeping thistle, annual mercury, bristly oxtongue, red fescue, common ragwort and common mallow (*Malva sylvestris*).

16. Steep motorway embankment similar to TN12. A section of the embankment consists of stepped gabion baskets that is colonised with rank grasses including cock’s-foot and Yorkshire fog.

17. Farm access track that east to west along the northern boundary of the Site for approximately 600m and then heads south through the arable field.
### Appendix B. Ecological Desk Study Records

#### Protected or notable species within 2km of the Site boundary

Findings of the desk study data provided by KMBRC January 2015. Many of the records supplied date from pre-2000. As biological data can rapidly become out of date due to changes in habitat management and land use only records post 2000 are summarised below.

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Number of Records</th>
<th>Distance of Nearest Record</th>
<th>Date of Nearest Record</th>
<th>Legal Status &amp; Conservation Aims</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mammals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serotine bat</td>
<td>Eptesicus serotinus</td>
<td>4</td>
<td>0.5 km E</td>
<td>2001</td>
<td>Hab Regs; W&amp;CA</td>
</tr>
<tr>
<td>Common pipistrelle bat</td>
<td>Pipistrellus pipistrellus</td>
<td>35</td>
<td>0.7 km W</td>
<td>2001</td>
<td>Hab Regs; W&amp;CA</td>
</tr>
<tr>
<td>Soprano pipistrelle bat</td>
<td>Pipistrellus pygmaeus</td>
<td>15</td>
<td>1.7 km SW</td>
<td>2003</td>
<td>Hab Regs; W&amp;CA; NERCS41</td>
</tr>
<tr>
<td>European water vole</td>
<td>Arvica amphibius</td>
<td>6</td>
<td>1.2 km SW</td>
<td>2011</td>
<td>W&amp;CA; NERCS41</td>
</tr>
<tr>
<td>West European hedgehog</td>
<td>Erinaceus europaeus</td>
<td>16</td>
<td>1.7 km NE</td>
<td>2011</td>
<td>W&amp;CA; NERCS41</td>
</tr>
<tr>
<td><strong>Reptiles and Amphibians</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viviparous lizard</td>
<td>Zootoca vivipara</td>
<td>18</td>
<td>0.6 km S</td>
<td>2003</td>
<td>W&amp;CA; NERCS41</td>
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<tr>
<td>Slow worm</td>
<td>Anguis fragilis</td>
<td>2</td>
<td>1.9 km S</td>
<td>2004</td>
<td>W&amp;CA; NERCS41</td>
</tr>
<tr>
<td>Common frog</td>
<td>Rana temporaria</td>
<td>1</td>
<td>1.8 km S</td>
<td>2000</td>
<td>W&amp;CA</td>
</tr>
<tr>
<td>Smooth newt</td>
<td>Lissotriton vulgaris</td>
<td>6</td>
<td>1.9 km S</td>
<td>2004</td>
<td>W&amp;CA</td>
</tr>
<tr>
<td><strong>Birds</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hen harrier</td>
<td>Circus cyaneus</td>
<td>276</td>
<td>1.2 km SE</td>
<td>2012</td>
<td>Birds Dir; W&amp;CA; NERCS41; Red listed</td>
</tr>
<tr>
<td>Marsh harrier</td>
<td>Circus aeruginosus</td>
<td>230</td>
<td>0.5 km E</td>
<td>2000</td>
<td>Birds Dir; W&amp;CA; Amber listed</td>
</tr>
<tr>
<td>Merlin</td>
<td>Falco columbarius</td>
<td>262</td>
<td>0.5 km E</td>
<td>2008</td>
<td>Birds Dir; W&amp;CA; Amber listed</td>
</tr>
<tr>
<td>Dartford warbler</td>
<td>Sylvia undata</td>
<td>14</td>
<td>1.2 km SE</td>
<td>2011</td>
<td>Birds Dir; W&amp;CA; Amber listed</td>
</tr>
<tr>
<td>Honey buzzard</td>
<td>Peris apivorus</td>
<td>30</td>
<td>1.2 km SE</td>
<td>2012</td>
<td>Birds Dir; W&amp;CA; Amber listed</td>
</tr>
<tr>
<td>Montagu’s harrier</td>
<td>Circus pygargus</td>
<td>16</td>
<td>1.2 km SE</td>
<td>2011</td>
<td>Birds Dir; W&amp;CA; Amber listed</td>
</tr>
<tr>
<td>Red kite</td>
<td>Milvus milvus</td>
<td>34</td>
<td>1.2 km SE</td>
<td>2012</td>
<td>Birds Dir; W&amp;CA; Amber listed</td>
</tr>
<tr>
<td>Bewick’s swan</td>
<td>Cygnus columbianus</td>
<td>4</td>
<td>0.5 km E</td>
<td>2007</td>
<td>Birds Dir; W&amp;CA; NERCS41; Amber</td>
</tr>
<tr>
<td>Woodlark</td>
<td>Lullula arborea</td>
<td>26</td>
<td>1.2 km SE</td>
<td>2012</td>
<td>Birds Dir; W&amp;CA; NERCS41; Amber</td>
</tr>
</tbody>
</table>
### Extended Phase 1 Habitat Survey

#### Thanet Parkway Railway Station

Kent County Council

<table>
<thead>
<tr>
<th>Species</th>
<th>Scientific Name</th>
<th>Count</th>
<th>Distance</th>
<th>Date</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peregrine</td>
<td><em>Falco peregrinus</em></td>
<td>629</td>
<td>1.2 km SE</td>
<td>2012</td>
<td>Birds Dir; W&amp;CA</td>
</tr>
<tr>
<td>Nightjar</td>
<td><em>Caprimulgus europaeus</em></td>
<td>1</td>
<td>1.2 km SE</td>
<td>2004</td>
<td>Birds Dir; NERCS41; Red listed</td>
</tr>
<tr>
<td>Golden plover</td>
<td><em>Pluvialis apricaria</em></td>
<td>762</td>
<td>0.7 km NW</td>
<td>1996(^5)</td>
<td>Birds Dir; Amber listed</td>
</tr>
<tr>
<td>Short-eared owl</td>
<td><em>Asio flammeus</em></td>
<td>245</td>
<td>1.2 km SE</td>
<td>2012</td>
<td>Birds Dir; Amber listed</td>
</tr>
<tr>
<td>Fieldfare</td>
<td><em>Turdus pilaris</em></td>
<td>128</td>
<td>0.5 km E</td>
<td>2006</td>
<td>W&amp;CA; Red listed</td>
</tr>
<tr>
<td>Redwing</td>
<td><em>Turdus iliacus</em></td>
<td>194</td>
<td>0.5 km NW</td>
<td>2012</td>
<td>W&amp;CA; Red listed</td>
</tr>
<tr>
<td>Barn owl</td>
<td><em>Tyto alba</em></td>
<td>67</td>
<td>1.2 km SE</td>
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<td>W&amp;CA; Amber listed</td>
</tr>
<tr>
<td>Black redstart</td>
<td><em>Phoenicurus ochrurus</em></td>
<td>52</td>
<td>1.2 km SE</td>
<td>2012</td>
<td>W&amp;CA; Amber listed</td>
</tr>
<tr>
<td>Serin</td>
<td><em>Serinus serinus</em></td>
<td>15</td>
<td>1.2 km SE</td>
<td>2012</td>
<td>W&amp;CA; Amber listed</td>
</tr>
<tr>
<td>Brambling</td>
<td><em>Fringilla montifringilla</em></td>
<td>106</td>
<td>0.5 km E</td>
<td>2006</td>
<td>W&amp;CA</td>
</tr>
<tr>
<td>Cetti's warbler</td>
<td><em>Cettia cetti</em></td>
<td>100</td>
<td>1.2 km SE</td>
<td>2012</td>
<td>W&amp;CA</td>
</tr>
<tr>
<td>Common crossbill</td>
<td><em>Locxia curvirostra</em></td>
<td>81</td>
<td>1.2 km SE</td>
<td>2009</td>
<td>W&amp;CA</td>
</tr>
<tr>
<td>Goshawk</td>
<td><em>Accipiter gentilis</em></td>
<td>1</td>
<td>1.2 km SE</td>
<td>2002</td>
<td>W&amp;CA</td>
</tr>
<tr>
<td>Hobby</td>
<td><em>Falco subbuteo</em></td>
<td>205</td>
<td>1.2 km SE</td>
<td>2012</td>
<td>W&amp;CA</td>
</tr>
<tr>
<td>Grey partridge</td>
<td><em>Perdix perdix</em></td>
<td>77</td>
<td>0.5 km E</td>
<td>2011</td>
<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>Lapwing</td>
<td><em>Vanellus vanellus</em></td>
<td>776</td>
<td>0.5 km E</td>
<td>2005</td>
<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>Lesser redpoll</td>
<td><em>Carduelis cabaret</em></td>
<td>105</td>
<td>0.5 km E</td>
<td>2009</td>
<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>Linnet</td>
<td><em>Carduelis cannabina</em></td>
<td>234</td>
<td>0.5 km E</td>
<td>2004</td>
<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>Tree pipit</td>
<td><em>Anthus trivialis</em></td>
<td>83</td>
<td>0.5 km E</td>
<td>2009</td>
<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>Tree sparrow</td>
<td><em>Passer montanus</em></td>
<td>65</td>
<td>0.5 km E</td>
<td>2009</td>
<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>House sparrow</td>
<td><em>Passer domesticus</em></td>
<td>48</td>
<td>0.7 km NW</td>
<td>2012</td>
<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>Skylark</td>
<td><em>Alauda arvensis</em></td>
<td>178</td>
<td>0.7 km NW</td>
<td>2012</td>
<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>Song thrush</td>
<td><em>Turdus philomelos</em></td>
<td>129</td>
<td>0.7 km NW</td>
<td>2012</td>
<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>Starling</td>
<td><em>Sturnus vulgaris</em></td>
<td>157</td>
<td>0.7 km NW</td>
<td>2012</td>
<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>Grasshopper warbler</td>
<td><em>Locustella naevia</em></td>
<td>33</td>
<td>1.2 km SE</td>
<td>2012</td>
<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>Hawfinch</td>
<td><em>Coccothraustes coccothraustes</em></td>
<td>6</td>
<td>1.2 km SE</td>
<td>2010</td>
<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>Ring ouzel</td>
<td><em>Turdus torquatus</em></td>
<td>125</td>
<td>1.2 km SE</td>
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<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>Twite</td>
<td><em>Carduelis flavirostris</em></td>
<td>148</td>
<td>1.2 km SE</td>
<td>2012</td>
<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>Wood warbler</td>
<td><em>Phyllocoptus sibilatrix</em></td>
<td>5</td>
<td>1.2 km SE</td>
<td>2003</td>
<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>Yellow wagtail</td>
<td><em>Motacilla flavia</em></td>
<td>220</td>
<td>1.2 km SE</td>
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<td>NERCS41; Red listed</td>
</tr>
<tr>
<td>Dunnock</td>
<td><em>Prunella modularis</em></td>
<td>113</td>
<td>0.7 km NW</td>
<td>2012</td>
<td>NERCS41; Amber listed</td>
</tr>
<tr>
<td>Reed bunting</td>
<td><em>Emberiza schoeniclus</em></td>
<td>166</td>
<td>0.7 km NW</td>
<td>2012</td>
<td>NERCS41; Amber listed</td>
</tr>
<tr>
<td>Yellowhammer</td>
<td><em>Emberiza citrinella</em></td>
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<td>2012</td>
<td>NERCS41; Amber listed</td>
</tr>
<tr>
<td>Grey wagtail</td>
<td><em>Motacilla cinerea</em></td>
<td>184</td>
<td>0.5 km E</td>
<td>2009</td>
<td>Amber listed</td>
</tr>
</tbody>
</table>

\(^5\) Although the closest record to the Site was in 1996, golden plover have been recorded within 2 km of the Site as recently as 2012. Thanet Coast and Sandwich Bay SPA (0.7 km SE) is designated for golden plover which can regularly be found in large numbers on arable land, such as the site provides, during the winter months.
<table>
<thead>
<tr>
<th>Bird Species</th>
<th>Scientific Name</th>
<th>Population</th>
<th>Distance</th>
<th>Year</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kestrel</td>
<td>Falco tinnunculus</td>
<td>228</td>
<td>0.5 km E</td>
<td>2011</td>
<td>Amber listed</td>
</tr>
<tr>
<td>Redstart</td>
<td>Phoenicurus Phoenicurus</td>
<td>92</td>
<td>0.5 km E</td>
<td>2009</td>
<td>Amber listed</td>
</tr>
<tr>
<td>Stock dove</td>
<td>Columba oenas</td>
<td>77</td>
<td>0.5 km E</td>
<td>2012</td>
<td>Amber listed</td>
</tr>
<tr>
<td>Wheatear</td>
<td>Oenanthe oenanthe</td>
<td>259</td>
<td>0.5 km E</td>
<td>2010</td>
<td>Amber listed</td>
</tr>
<tr>
<td>Whinchat</td>
<td>Saxicola rubetra</td>
<td>205</td>
<td>0.5 km E</td>
<td>2010</td>
<td>Amber listed</td>
</tr>
<tr>
<td>Black-headed gull</td>
<td>Larus ridibundus</td>
<td>422</td>
<td>0.7 km NW</td>
<td>2012</td>
<td>Amber listed</td>
</tr>
<tr>
<td>Common gull</td>
<td>Larus canus</td>
<td>355</td>
<td>0.7 km NW</td>
<td>2012</td>
<td>Amber listed</td>
</tr>
<tr>
<td>Green woodpecker</td>
<td>Picus viridis</td>
<td>145</td>
<td>0.7 km NW</td>
<td>2012</td>
<td>Amber listed</td>
</tr>
<tr>
<td>Lesser black-backed gull</td>
<td>Larus fuscus</td>
<td>394</td>
<td>0.7 km NW</td>
<td>2012</td>
<td>Amber listed</td>
</tr>
<tr>
<td>Meadow pipit</td>
<td>Anthus pratensis</td>
<td>272</td>
<td>0.7 km NW</td>
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<td>Amber listed</td>
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<tr>
<td>Swallow</td>
<td>Hirundo rustica</td>
<td>514</td>
<td>0.7 km NW</td>
<td>2012</td>
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<tr>
<td>Great black-backed gull</td>
<td>Larus marinus</td>
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<td>1.2 km SE</td>
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<td>Amber listed</td>
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<tr>
<td>Grey plover</td>
<td>Pluvialis squatarola</td>
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<td>1.2 km SE</td>
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<td>Amber listed</td>
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<tr>
<td>Jack Snipe</td>
<td>Lymnocryptes minimus</td>
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<td>Amber listed</td>
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<tr>
<td>Nightingale</td>
<td>Luscinia megarhynchos</td>
<td>78</td>
<td>1.2 km SE</td>
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<td>Amber listed</td>
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<tr>
<td>Pied flycatcher</td>
<td>Ficedula hypoleuca</td>
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<td>Amber listed</td>
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<tr>
<td>Willow warbler</td>
<td>Phyllocopus trochilus</td>
<td>174</td>
<td>1.2 km SE</td>
<td>2012</td>
<td>Amber listed</td>
</tr>
</tbody>
</table>

**Plants**

<table>
<thead>
<tr>
<th>Plant Species</th>
<th>Scientific Name</th>
<th>Population</th>
<th>Distance</th>
<th>Year</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lizard orchid</td>
<td>Himantoglossum hircinum</td>
<td>7</td>
<td>1.5 km S</td>
<td>2009</td>
<td>W&amp;CA; NS; Kent RDB; IUCN NT</td>
</tr>
<tr>
<td>Sea buckthorn</td>
<td>Hippophae rhamnoides</td>
<td>11</td>
<td>0.5 km E</td>
<td>2011</td>
<td>NS</td>
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<tr>
<td>Dittander</td>
<td>Lepidium latifolium</td>
<td>6</td>
<td>1.0 km E</td>
<td>2011</td>
<td>NS</td>
</tr>
<tr>
<td>Early meadow grass</td>
<td>Poa infirma</td>
<td>2</td>
<td>1.9 km E</td>
<td>2011</td>
<td>NS</td>
</tr>
<tr>
<td>Sainfoin</td>
<td>Onobrychis vicifolia</td>
<td>2</td>
<td>1.5 km N</td>
<td>2004</td>
<td>IUCN NT</td>
</tr>
<tr>
<td>Corn cockle</td>
<td>Agrostemma githago</td>
<td>1</td>
<td>1.4 km E</td>
<td>2014</td>
<td>Kent RDB</td>
</tr>
</tbody>
</table>

**Invertebrates**

Protected and notable species records exist within 2km; however it is considered that the habitats on Site do not provide suitable conditions for these species.

**Key**

- **Hab Regs** – The Conservation of Habitats and Species Regulations 2010
- **Birds Dir** – The European Birds Directive 2009
- **W&CA** – Wildlife and Countryside Act 1981 (as amended)
- **NERCS41** – The Natural Environment and Rural Communities Act (Section 41) 2006
- **Red Listed** – Birds of Conservation Concern Red List 2009
- **Amber listed** – Birds of Conservation Concern Amber List 2009
- **NS** – Nationally Scarce
- **Kent RDB** – Kent Red Data Book
- **IUCN NT** - International Union for Conservation of Nature – Near Threatened
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URS Internal Project No.

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25/02/2015

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Figures

LEGEND

Indicative Site boundary

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