



The Sizewell C Project

6.8 Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 6 Landscape and Visual

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6. Landscape and Visual

6.1 Introduction

6.1.1 This chapter of **Volume 7** of the **Environmental Statement (ES)** (Doc Ref. 6.8) presents an assessment of the potential landscape and visual effects arising from the construction and operation of the proposed Yoxford roundabout and other highway improvements (referred to throughout this volume as the ‘proposed development’). This includes an assessment of potential impacts, the significance of effects, the requirements for mitigation and the residual effects.

6.1.2 The proposed improvement works are as follows:

- A roundabout at the junction between the A12 and B1122 in Yoxford (referred to throughout as ‘Yoxford roundabout’).
- Improvements at the A1094 and B1069 junction south of Knodishall.
- Improvements at the A12 and A144 junction south of Bramfield.
- Improvements at the A12 and B1119 junction at Saxmundham.

6.1.3 Road safety analysis has also identified potential highway safety issues at two sites (the B1078 and B1079 junction east of Easton and Otley College and the A140 and B1078 junction west of Coddendam). Highway safety measures at these sites will be secured by an obligation in the Section 106 Agreement (see the **Section 106 Heads of Terms** appended to the **Planning Statement** (Doc. Ref. 8.4). This chapter includes an assessment of these highway safety measures.

6.1.4 Detailed descriptions of the proposed development sites (referred to throughout this volume as the ‘site’ as relevant to the location of the works), the proposed development, safety measures and different construction and operation phases are provided in **Chapters 1** and **2** of this volume of the **ES**. A glossary of terms and list of abbreviations used in this chapter is provided in **Volume 1, Appendix 1A** of the **ES** (Doc Ref. 6.2).

6.1.5 The assessment has been informed by data from other assessments including ecology and heritage assets identified in **Chapter 7** of this volume Terrestrial Ecology and Ornithology and **Chapter 9** of this volume Terrestrial Historic Environment, in how they contribute to landscape character and value, whilst impacts on views are taken into account in the consideration of amenity and recreation receptors in **Chapter 8** of this volume of the **ES**.

6.1.6 This assessment has been informed by data presented in the following technical appendices:

- **Appendix 6A** of this volume: Illustrative Viewpoints.
- **Appendix 6B** of this volume: Night-time Appraisal.

6.2 Legislation, policy and guidance

6.2.1 **Volume 1, Appendix 6I** of the **ES** identifies and describes legislation, policy and guidance of relevance to the assessment of the potential landscape and visual impacts associated with the Sizewell C Project across all **ES** volumes.

6.2.2 This section provides an overview of the specific legislation, policy and guidance of relevance to the landscape and visual assessment of the proposed development.

6.2.3 There are no additional policy considerations which relate to this assessment which are not already described in the appendix to **Volume 1, Appendix 6I** of the **ES**. Policies relating to local landscape designations and parks and gardens of historic or landscape interest are set out below as they have specific relevance given the special landscape area (SLA) and parks and gardens that cover parts of the study area for the proposed Yoxford roundabout. The proposed Yoxford roundabout does not fall within any SLA or park or garden of historic or landscape interest. The response to policy requirements relating to ‘good design’ is also described in **Section 6.4** of this chapter.

a) International

6.2.4 International legislation and policies relating to the landscape and visual assessment include the European Landscape Convention 2000.

6.2.5 The requirements of these, as relevant to the landscape and visual assessment, are set out in **Volume 1, Appendix 6I** of the **ES**.

b) National

6.2.6 National legislation and policies relating to landscape and visual assessment include:

- The Countryside and Rights of Way Act 2000.
- National Planning Policy Statements (Ref. 6.1 and 6.2).
- National Planning Policy Framework (NPPF) (Ref. 6.3).

- The Planning Practice Guidance for the Natural Environment (Ref. 6.4), Design: process and tools (Ref. 6.5) and Light Pollution (Ref. 6.6).
- Government’s 25 Year Environment Plan 2018 (Ref. 6.7).

i. **Overarching National Policy Statement for Energy**

6.2.7 The National Policy Statement (NPS) 2011 sets out the national policy for energy infrastructure. The Overarching NPS for Energy (EN-1) (Ref. 6.1) and NPS for Nuclear Power Generation (EN-6) (Ref. 6.2) provide the primary policy framework within which the development will be considered.

6.2.8 **Table 6.1** below summarises the topic-specific study and/or assessment requirements in the Overarching NPS EN-1 and explains how these have been addressed within this chapter.

Table 6.1: Requirements of the NPS for EN-1.

Ref.	NPS topic requirement.	How the requirement has been addressed.
EN-1 5.9.14	<i>“Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England... has policies based on landscape character assessment, these should be paid particular attention. However, local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.”</i>	Effects on locally designated landscapes SLAs arising from the proposed Yoxford roundabout are considered within this chapter, as well as effects on landscape character based on consideration of local landscape character.
EN-1 5.9.17	<i>“The IPC should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by reasonable mitigation.”</i>	Effects on landscape character arising from the proposed development are considered within this chapter.

ii. **National Planning Policy Framework, February 2019**

6.2.9 The NPPF (Ref. 6.3) sets out the Government's planning policies for England.

6.2.10 In particular relation to landscape, paragraph 171 states that:

“Plans should: distinguish between the hierarchy of international, national and locally designated sites”.

6.2.11 The hierarchy of landscape designations has informed the criteria for assessing landscape value, a component of landscape sensitivity within the

landscape and visual impact assessment, and effects on all hierarchies of landscape designation are considered within this chapter.

c) Regional

6.2.12 There is no regional legislation or policy that is relevant to the landscape and visual assessment of the proposed development.

d) Local

6.2.13 Local policies relating to the landscape and visual assessment include:

- Suffolk Coastal District Council Local Plan Core Strategy and Development Management Policies 2013 (Ref. 6.8), including Strategic Policy SP1, Strategic Policy SP13, Strategic Policy SP14, Strategic Policy SP15, Development Management Policy DM21, Development Management Policy DM23 and Development Management Policy DM26.
- Suffolk Coastal District Council Site Allocations and Area Specific Policies – Development Plan Document 2017 (Ref. 6.9), including Policy SSP37 and Policy SSP38.
- Suffolk Coastal District Council Final Draft Local Plan 2019 (Ref. 6.10), including Draft policy SCLP3.4, Draft policy SCLP10.3, Draft policy SCLP10.4, Draft policy SCLP11.1 and Draft policy SCLP11.2.

6.2.14 The requirements of these, as relevant to the terrestrial historic environment assessment, are set out in **Volume 1, Appendix 6I** of the **ES**. At a local level, policies relating to East Suffolk (formerly Suffolk Coastal and Waveney Districts) are considered.

i. Suffolk Coastal District Local Plan

6.2.15 The Site Allocations and Area Specific Policies Development Plan document (Ref 6.9) adopted in January 2017 includes policy SSP38 – SLAs. As noted in the supporting text, this policy identifies “*areas within Suffolk with special landscape attributes which are particularly vulnerable to change. They include some river valleys which still possess traditional grazing meadows and marshes with their hedgerows, dykes and associated flora and fauna and Historic Parklands.*” The policy includes control of development within the SLAs, which the proposed development is not, and seeks to prevent “*material adverse impact on the qualities of the landscape that make it special*”.

6.2.16 The Final Draft Local Plan (January 2019) (Ref 6.10) is not currently adopted, but within this the SLAs are no longer maintained and are

replaced by a “*landscape character assessment approach ... taken to inform policy making and planning decisions*” (paragraph 10.30). Draft policy SCLP10.4: landscape character will provide the policy basis for this landscape character assessment approach.

6.2.17 Within this assessment, effects on the qualities of the SLA are considered; and the designation is also taken as an indicator of value (contributing to sensitivity) in considering impacts on landscape character.

6.2.18 In addition, policy SSP37 – parks and gardens of historic or landscape interest, of the Site Allocations and the Area Specific Policies Development Plan document, identifies a number of historic parklands in addition to the six in the district that are included in the national register of parks and gardens of special historic interest. The policy encourages:

“...the preservation and or enhancement of these parks and gardens of historic interest and their surroundings.”

6.2.19 Whilst the policy is a heritage designation, effects on parks and gardens of historic or landscape interest, where relevant from a landscape and visual perspective, are considered within this assessment, as well as taken as an indicator of value (contributing to sensitivity) in considering impacts on landscape character.

e) **Guidance**

6.2.20 Guidance relating to the landscape and visual assessment include:

- National Character Area Profiles (NCA Profile 82 Suffolk Coast and Heaths 2015 (Ref. 6.11) and NCA Profile 83 South Norfolk and High Suffolk Claylands 2014 (Ref. 6.12).
- East of England Regional Landscape Typology 2011 (Ref. 6.13).
- Suffolk Landscape Character Assessment 2008, revised 2011 (Ref. 6.14).
- Suffolk Coastal Landscape Character Assessment 2018 (Ref. 6.15).
- Suffolk Historic Landscape Characterisation 2012 (Ref. 6.16).
- Special Landscape Areas Paper 2016 (Ref. 6.17).

6.2.21 Further detail on this guidance is set out in **Volume 1, Appendix 6I** of the **ES**.

6.3 Methodology

a) Scope of the assessment

6.3.1 The generic Environmental Impact Assessment (EIA) methodology is detailed in **Volume 1, Chapter 6** of the **ES**.

6.3.2 The full method of assessment for landscape and visual impact assessments that has been applied for the Sizewell C Project is included as an appendix to **Volume 1, Appendix 6I** of the **ES**.

6.3.3 This section provides specific details of the landscape and visual screening exercise, as detailed below, and methodology applied to the assessment of the proposed development.

6.3.4 The scope of assessment considers the impacts of the construction and operation of the proposed development and safety measures. Where the highway improvement works or safety measures proposed have the potential for likely significant effects to arise, these have been assessed in further detail.

6.3.5 The assessment methodology is based primarily upon the Guidelines for Landscape and Visual Impact Assessment (Ref 6.18) which is considered to be best practice guidance for undertaking landscape and visual impact assessments.

6.3.6 The scope of this assessment has been established through a formal EIA scoping process undertaken with the planning inspectorate. A request for an EIA Scoping Opinion was initially issued to the planning inspectorate in 2014, with an updated request issued in 2019, as provided in **Volume 1, Appendix 6A** of the **ES**.

6.3.7 Comments raised in the EIA Scoping Opinion received in 2014 and 2019 have been taken into account in the development of the assessment methodology. These are detailed in **Volume 1, Appendices 6A to 6C** of the **ES** (Doc Ref. 6.2).

b) Consultation

6.3.8 The scope of the assessment has also been informed by ongoing consultation and engagement with statutory consultees throughout the design and assessment process. Full details of the consultation undertaken in relation to landscape and visual matters is provided at **Volume 1, Appendix 6I** of the **ES**. A summary of the general comments raised during the most recent meeting with consultees, and SZC Co.'s responses, are detailed in **Table 6.2**.

Table 6.2: Summary of consultation responses that have informed the scope and methodology of the landscape and visual impact assessment.

Consultee	Date	Summary of discussion/comments.
Natural England. Suffolk County Council. Suffolk Coastal and Waveney District Councils (now East Suffolk Council). Suffolk Coast and Heaths Area of Outstanding Natural Beauty.	Meeting: 7 February 2019.	The purpose of the meeting was to confirm several matters regarding the scope and approach to the landscape and visual impact assessment, which had previously been discussed during several meetings, the first of which was in March 2014.
		The following points were agreed at the meeting:
		<ul style="list-style-type: none"> The landscape and visual impact assessment methodology to be used as the basis of the landscape and visual assessment chapters as set out in Volume 1, Appendix 6I of the ES.
		<ul style="list-style-type: none"> The Suffolk County Council LCA (Ref 6.14) is to be used as the basis for the assessment of effects on landscape character, informed by other studies, including the recently published Suffolk Coastal LCA. The landscape and visual impact assessment identifies the likely effects of the proposed development on landscape character types (LCTs) presented in the Suffolk County Council LCA. Where appropriate, reference is made to several other published LCAs.
		<ul style="list-style-type: none"> The SLA Paper (November 2016, Ref 6.17) is to be used as the basis of the assessment of effects on the SLA designation as recorded in the SLA Paper (November 2016).
		<ul style="list-style-type: none"> Agreement was reached on the location of representative viewpoints, illustrative viewpoints and the location of viewpoints to be used to generate photowire visualisations. The landscape and visual assessment identifies the likely effects of the proposed development on visual receptors. Reference is made to agreed representative and illustrative viewpoint photographs. Visualisations have been prepared for agreed viewpoint locations.

6.3.9 Further detail on consultation undertaken in relation to landscape and visual matters is provided in **Volume 2, Appendix 13H** of the **ES**.

c) Environmental screening

6.3.10 An environmental screening exercise has been undertaken to identify which of the four highway improvement works and two highway safety measures proposed may give rise to environmental effects that have the potential to be significant. The outcome of this environmental screening exercise concludes that the proposed Yoxford roundabout should be taken forward to the assessment of likely landscape and visual effects.

6.3.11 The remaining three highway improvement works and two highway safety measures have been screened out of the landscape and visual assessment as they are not likely to give rise to significant environmental effects.

6.3.12 **Table 6.3** provides a summary of the environmental screening exercise.

Table 6.3: Summary of environmental screening exercise.

Proposed Highways Improvement / safety measures.	Summary of potential effects.	Screened in or out of the assessment.
The A12/B1122 Yoxford roundabout.	Construction of the new roundabout would result in the loss of grazing land, hedgerow to the north of the B1122 and east of the A12 and some loss of trees. It would also introduce new lighting into the area.	Screened in.
A1094/B1069 junction south of Knodishall.	The proposed improvement works comprise maintenance of vegetation along the highway boundary and introduction of revised signage and road markings. Works would be typical of the features of the existing road corridor. No landscape or visual effects anticipated.	Screened out.
A12/A144 junction south of Bramfield.	The proposed improvement works would result in the loss of highway verge through the widening of the A12. There would be some loss of hedgerow and trees, especially to the south of the A12 and A144 junction. Works would be typical of the features of the existing road corridor. As a result, any landscape or visual effects would not be significant due to the nature of the works.	Screened out.
A12/B1119 junction at Saxmundham.	The proposed improvement works comprise maintenance of vegetation along the highway boundary, slight widening of lanes at approaches to the junction and introduction of additional or amended signage and road markings. Works would be typical of the features of the existing road corridor. As a result, any landscape or visual effects would not be significant due to the nature of the works.	Screened out.
B1078/B1079 junction east of Easton and Otley College.	The proposed improvement works comprise maintenance of vegetation along the highway boundary and introduction of new signage and road markings. Works would be typical of the features of the existing road corridor. No landscape or visual effects anticipated.	Screened out.
A140/B1078 junction west of Coddendam.	The proposed improvement works comprise maintenance of vegetation along the highway boundary and introduction of new signage. Works would be typical of the features of the existing road corridor. No landscape or visual effects anticipated.	Screened out.

d) Study area

- 6.3.13 The study area for the proposed Yoxford roundabout includes the land within the site boundary and land immediately beyond it to a distance of 0.5 kilometres (km) (refer to **Figure 6.1**) and has been informed by the theoretical extent of visibility and likely significant effects.
- 6.3.14 **Section 6.4** of this chapter describes the extent of visibility, based on desk and field study.

e) Assessment scenarios

- 6.3.15 The landscape and visual assessment comprises the assessment of the construction phase of the proposed Yoxford roundabout. For the construction assessment, this considered the entire construction period rather than specific assessment years. For the assessment of the operational phase, the assessment considers the first year the proposed Yoxford roundabout would be opened, and Year 15 of operation, when any proposed planting has matured.

f) Assessment criteria

- 6.3.16 As described in **Volume 1, Chapter 6** of the **ES**, the EIA methodology considers whether impacts of the proposed Yoxford roundabout would have an effect on any resources or receptors. Assessments broadly consider the magnitude of impacts and value/sensitivity of resources/receptors that could be affected in order to classify effects.
- 6.3.17 As set out within **Volume 1, Appendix 6I** of the **ES**, there are some minor differences between the landscape and visual assessment method and the generic method, or additions to it, to ensure that the method is suitable for the assessment of landscape and visual impacts of the proposed Yoxford roundabout. The assessment criteria include consideration of value and susceptibility in determining receptor sensitivity; and consideration of the scale, extent and duration of the effect in determining magnitude. These criteria are briefly outlined below and further detail on how these criteria are applied and combined to form judgements of sensitivity, magnitude and significance is provided within **Volume 1, Appendix 6I** of the **ES**.

i. Sensitivity

- 6.3.18 Sensitivity is assessed by combining the considerations of susceptibility and value. The criteria used in the landscape and visual assessment for determining the sensitivity of receptors are set out below.

Susceptibility

6.3.19 Susceptibility (**Table 6.4**) indicates the ability of a landscape or visual receptor to accommodate the proposed development “*without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies.*” (Ref. 6.18, para. 5.40).

Table 6.4: Susceptibility of landscape and visual receptors.

Susceptibility	Description
High	Undue consequences are likely to arise from the proposed development.
Medium	Undue consequences may arise from the proposed development.
Low	Undue consequences are unlikely to arise from the proposed development.

6.3.20 Susceptibility of landscape character areas or types is influenced by their characteristics and is frequently considered (though often recorded as ‘sensitivity’ rather than susceptibility) within documented landscape character assessments and capacity studies.

6.3.21 The susceptibility of designated landscapes is influenced by the nature of the special qualities and purposes of designation and/or the valued elements, qualities or characteristics, indicating the degree to which these may be unduly affected by the development proposed.

6.3.22 Susceptibility of accessible or recreational landscapes is influenced by the nature of the landscape involved; the likely activities and expectations of people within that landscape and the degree to which those activities and expectations may be unduly affected by the development proposed.

6.3.23 Susceptibility of visual receptors is primarily a function of the expectations and occupation or activity of the receptors (Ref 6.18, para 6.32).

Landscape Value

6.3.24 Landscape value (**Table 6.5**) is the relative value that is attached to different landscapes by society (Ref 6.18, page 157).

Table 6.5: Landscape value.

Landscape value.	Description
National/international	Designated landscapes which are nationally or internationally designated for their landscape value.
Local/district	Locally or regionally designated landscapes; also areas which documentary evidence and/or site observation indicates as being more valued than the surrounding area.

Landscape value.	Description
Community	'Everyday' landscape which is appreciated by the local community but has little or no wider recognition of its value.
Limited	Despoiled or degraded landscape with little or no evidence of being valued by the community.

6.3.25 Areas of landscape of greater than 'community' value may be considered to be 'valued landscapes' in the context of NPPF paragraph 170.

6.3.26 For visual receptors, susceptibility and value are closely linked – the most valued views are also likely to be those where viewer's expectations will be highest. Visual receptor value relates to the value of the view, e.g. a National Trail is nationally valued for access, not necessarily for the available views. It is therefore not possible to separate out visual receptor value from susceptibility. Typical examples of visual receptor sensitivity are plotted in a diagram in **Volume 1, Annex 6I** of the **ES**.

Sensitivity

6.3.27 Sensitivity is assessed by combining the considerations of susceptibility and value described above as shown in **Table 6.6**. The differences in the tables below reflect a slightly greater emphasis on value in considering landscape receptors, and a greater emphasis on susceptibility in considering visual receptors.

Table 6.6: Assessment of sensitivity of receptors for landscape and visual assessments.

Landscape sensitivity.				
		Susceptibility		
		High	Medium	Low
Value	National/international	High	High-medium	Medium
	Local/district	High-medium	Medium	Medium-low
	Community	Medium	Medium-low	Low
	Limited	Low	Low-negligible	Negligible

Visual Receptor Sensitivity.				
		Susceptibility		
		High	Medium	Low
Value	National/international	High	High-medium	Medium
	Local/district	High-medium	High-medium	Medium
	Community	High-medium	Medium	Medium-low
	Limited	Medium	Medium-low	Low

ii. Magnitude

6.3.28 The magnitude of effect is informed by combining the scale, duration and extent of an effect as set out in the Guidelines for Visual Impact Assessment (Ref 6.18, para. 3.26). The criteria for the assessment of magnitude are set out below.

Scale

6.3.29 The scale of effect is assessed for all landscape and visual receptors and identifies the degree of change which would arise from the proposed development. The criteria for the assessment of scale of effect are set out in **Table 6.7**.

Table 6.7: Scale of effect.

Scale	Description
Large	Total or major alteration to key elements, features, qualities or characteristics, such that post development the baseline will be fundamentally changed.
Medium	Partial alteration to key elements, features, qualities or characteristics, such that post development the baseline will be noticeably changed.
Small	Minor alteration to key elements, features, qualities or characteristics, such that post development the baseline will be largely unchanged despite discernible differences.
Negligible	Very minor alteration to key elements, features, qualities or characteristics, such that post development the baseline will be fundamentally unchanged with barely perceptible differences.

Duration

6.3.30 Duration of effect is assessed for all landscape and visual receptors and identifies the time period over which the change to the receptor as a result of the development would arise.

6.3.31 The criteria for the assessment of duration of effect, relevant to this assessment, are set out in **Table 6.8**.

Table 6.8: Duration of effect.

Duration	Description
Permanent	The change is expected to be permanent and there is no intention for it to be reversed. Or occurring for a period longer than 25 years.
Long-term	The change is expected to be in place for 10–25 years and will be reversed, fully mitigated or no longer occurring beyond that timeframe.
Medium-term	The change is expected to be in place for 2–10 years and will be reversed, fully mitigated or no longer occurring beyond that timeframe.
Short-term	The change is expected to be in place for 0–2 years and will be reversed, fully mitigated or no longer occurring beyond that timeframe.

6.3.32 The proposed Yoxford roundabout is set to be permanent and consequently the majority of effects would also be permanent. Medium or short-term effects may be identified where mitigation planting is proposed or local factors will result in a reduced duration of effect (for example where maturing woodland will screen views in future).

Extent

6.3.33 Extent of effects is assessed for all receptors and indicates the geographic area over which the effects will be felt. The criteria for determining the extent of effect are set in **Table 6.9**.

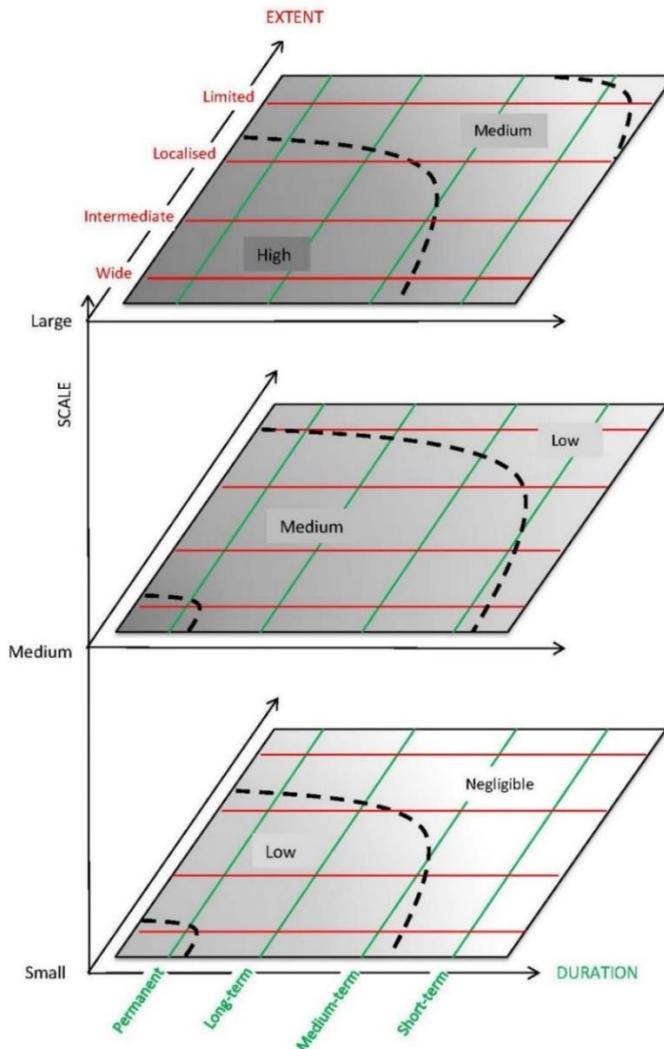
Table 6.9: Extent of effect.

Extent	Description
Wide	Beyond 4km, or more than half of receptor area.
Intermediate	Up to approximately 2-4km, or around half of receptor area.
Localised	Site and surroundings up to 2km, or part of receptor area (up to approximately 25%).
Limited	Site, or part of site, or small part of a receptor area (less than approximately 10%).

Magnitude

6.3.34 The magnitude of effect is informed by combining the scale, duration and extent of effect. **Plate 6.1** below illustrates the judgement process:

Plate 6.1: Magnitude of effect.



6.3.35 As can be seen in **Plate 6.1**, scale (shown as the layers of the diagram) is the primary factor in determining magnitude; most of each layer indicates that magnitude is typically judged to be the same as scale, but may be higher if the effect is more widespread and longer term, or lower if it is constrained in geographic extent or timescale.

6.3.36 Where the scale of effect is judged to be negligible, the magnitude is also assumed to be negligible and no further judgement is required.

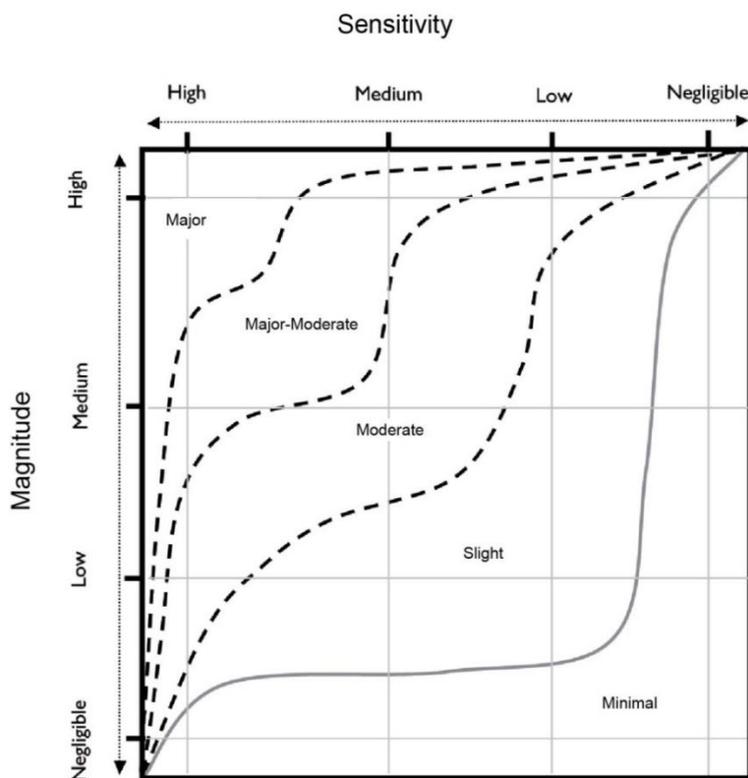
6.3.37 Intermediate judgements may be used for judgements of magnitude. Where intermediate ratings are given, e.g. medium-low, this indicates an effect that is both less than medium and more than low, rather than one which varies across the range. In such cases, the higher rating will always be given first.

iii. Significance of effects

6.3.38 The definitions of the significance of effect for the landscape and visual assessments are explained below.

6.3.39 Significance indicates the importance or gravity of the effect. The process of forming a judgement as to the degree of significance of the effect is based upon the assessments of magnitude of effects and sensitivity of the receptor to come to a professional judgement of how important the effect is. This judgement is illustrated by **Plate 6.2**:

Plate 6.2: Significance.



6.3.40 The significance ratings indicate a ‘sliding scale’ of the relative importance of the effect, with major being the most important and minimal being the least.

6.3.41 Following the classification of an effect as presented above, a clear statement is made as to whether the effect is 'significant' or 'not significant'. Within this assessment, major-moderate or major effects are considered to be significant and effects of moderate significance or less are “*of lesser concern*” (Ref 6.18, para 3.35) and considered to be not significant. However, professional judgement is also applied where appropriate. It should also be noted that whilst an effect may be significant, that does not necessarily mean that such an impact would be unacceptable, or should necessarily be regarded as an “*undue consequence*” (Ref 6.18, para 5.40).

6.3.42 Where intermediate ratings are given, for example moderate-slight, this indicates an effect that is both less than moderate and more than slight, rather than one which varies across the range. In such cases, the higher rating will always be given first. This does not mean that the impact is closer to that higher rating but is described in such a way to facilitate the identification of the more significant effects within tables.

6.3.43 Effects are defined as adverse, neutral or beneficial. Neutral effects are those which overall are neither adverse nor beneficial but may incorporate a combination of both. Further detail is provided in **Appendix 6I** of **Volume 1** of the **ES**.

g) **Assessment methodology**

6.3.44 The methodology has the following key stages, which are described in more detail in **Volume 1, Appendix 6I** of the **ES**:

- Baseline – includes the gathering of documented information; development of the scope of the assessment in consultation with the relevant local planning authorities and other relevant landscape and visual consultees; site visits and early input into the initial stages of design. Baseline site visits were undertaken during June and December 2018 and February to March 2019.
- Design – input into further stages of design including mitigation options to avoid or minimise landscape and visual impacts where possible.
- Assessment – includes an assessment of the landscape and visual effects of the design of the proposed development, including the proposed construction works and operation. This required site survey work to assess likely landscape and visual effects. Assessment site visits were undertaken during June and July 2019.
- Cumulative assessment – assesses the effects of the proposed development in combination with other developments, where required (refer to **Volume 10** (Doc Ref. 6.11) of the **ES** for more detail).

h) Assumptions and limitations

6.3.45 The following assumptions have been made in this assessment:

- The assessment and visualisations are based on the site parameters as set out in the description of development in **Chapter 2** of this volume of the **ES** and as illustrated in the **Work Plans** at **Appendix 2B** of this volume.
- Photography utilised in the assessment has been undertaken during the winter months as requested by landscape and visual consultees, to represent a worst-case scenario.
- It is assumed that existing vegetation will remain in place during the construction and operation phases, unless the proposed development requires it to be removed or other circumstances indicate its likely removal.
- The following estimated growth rates have been applied when considering the screening effect of any proposed planting (appropriate for the type of planting proposed, location and suitable management regime):
 - Proposed screen planting at year 1 is assumed to be 800mm high.
 - Proposed screen planting by year 15 is assumed to be 6m, assuming approximate growth rates of approximately 400mm per annum.
 - Proposed hedgerow planting at year 1 is assumed to be 450mm high.
 - Proposed hedgerow planting by year 15 is assumed to be 3m, assuming approximate growth rates of approximately 400mm per annum and maintenance at an appropriate height for the locality.

6.3.46 No limitations have been identified respective to the assessment of the proposed Yoxford roundabout.

6.4 Yoxford roundabout

a) Baseline environment

6.4.1 This section presents a description of the baseline environmental characteristics within the site of the proposed Yoxford roundabout and in the surrounding area, with the full baseline description of the individual

landscape and visual receptors being provided alongside the assessment in **Section 6.4 c)** of this chapter for ease of reference.

6.4.2 This section provides a review of the key local guidance documents and identifies those landscape and visual receptors which merit detailed consideration in the assessment of effects, and those which are 'scoped out' from further assessment as the effects *“have been judged unlikely to occur or so insignificant that it is not essential to consider them further.”* (Ref 6.18, Para 3.196).

6.4.3 Both this baseline section and the assessment of effects section (**Section 6.4 c)** of this chapter describe landscape character and visual receptors, before considering designated landscape. A number of representative and illustrative viewpoints are utilised to inform the baseline section, further detail of which is provided later in the section. Representative viewpoints represent the experience of different types of visual receptors and form the basis of assessment, whilst illustrative viewpoints demonstrate a particular effect or specific issue, which might, for example, be the restricted visibility at certain locations.

i. **Current baseline**

Key local guidance documents

6.4.4 The documents listed below are relevant to this assessment, further information about each of these can be found within **Volume 1, Appendix 6I** of the **ES**.

- Suffolk County Landscape Character Assessment– this document presents the landscape character baseline for the assessment of effects on landscape character.
- Sizewell C Design Principles: The Local Perspective (Ref. 6.19) – this document informs the approach to landscape and visual mitigation in relation to the proposed development.

Site and context

6.4.5 The land use within the 0.5km study area for the site is comprised of a mixture of agricultural land and residential development. The village of Yoxford is located to the west of the site. Within the study area there are also a number of main roads, including the A12, B1122 (Middleton Road) and the A1120. The East Suffolk line runs through the east of the study, from south to north, and connects Ipswich to Lowestoft. The River Yox flows from north-west through the study area, passing under the A12 along the northern boundary of the site where it joins the Minsmere Old River and flows east towards the sea.

- 6.4.6 Historic parklands are a feature of the study area, including Cockfield Hall to the north-east, Rookery Park to the south and Grove Park to the west but largely outside the study area. All of these contain designed landscapes with avenues and belts of trees, as well as larger woodland areas such as Pins Wood to the south of the site.
- 6.4.7 Beyond the parklands and Yoxford there are further individual and clustered groups of private properties, including along on Westleton Road approximately 225 to 315m north-east of the site and individual properties along Middleton Road to the east. To the east of the site there is also a collection of large farm buildings and a sewage works.
- 6.4.8 The site itself is comprised of agricultural and highway land. The western boundary of the site follows the boundary between the A12 and the grounds of the Satis House Hotel, whilst the southern boundary broadly follows the edge of the B1122 and the boundary of Rookery Park. The remainder of the site, to the north-east and east, is comprised of agricultural land abutting these two roads, with a combination of hedgerow and tree planting currently forming the boundary between the fields and the highway. The field boundary along the northern edge of the B1122 (Middleton Road) is currently an unplanted fence line. In the south-west of the site, a small grassed area with a large mature tree creates separation between the B1122 and a local access road into Rookery Park and adjacent properties.
- 6.4.9 With the exception of the trees and hedgerows along the field and highway boundaries and the single mature tree in the grassed area between the B1122 and the local access road, there are no other landscape features within the site.
- 6.4.10 Reference should also be made to **Figure 6.1** and **Figure 8.1**, which identifies key roads and settlements within the study area.
- 6.4.11 As shown on **Figure 6.2**, the topography of the site gently slopes down towards the valley of the River Yox to the north, as well as to the north east and north west. The farmland in the east of the site is located at the end of a minor ridgeline, which becomes more pronounced to the south west, beyond the study area. The landscape character types are shown on **Figure 6.3**.

Zone of Theoretical Visibility Study

- 6.4.12 A zone of theoretical visibility (ZTV) study was generated, based on the site layout and limits of deviation of the proposed Yoxford roundabout as described in **Chapter 2** of this volume. This is shown on **Figure 6.4** and indicates areas of potential visibility.

- 6.4.13 The analysis was carried out using a topographic model and including settlements and woodlands (with heights derived from light detection and ranging with a 2m resolution for both surface mapping and terrain data) as visual barriers in order to provide a more realistic indication of potential visibility.
- 6.4.14 The ZTV study was used in the identification of those receptors that are likely to be most affected by the proposed development and those that may be scoped out. However, areas shown as having potential visibility may have visibility of the development screened by local features such as trees, hedgerows, embankments or buildings.

Extent of Theoretical Visibility

- 6.4.15 **Figure 6.4** shows the ZTV and shows that theoretical visibility covers the majority of the study area for the proposed Yoxford roundabout and extending beyond in several directions.
- 6.4.16 Directly to the north of the site, theoretical visibility is shown to extend to the higher ground on the northern side of the River Yox valley, approximately 200m beyond the edge of the study area. To the east theoretical visibility is shown to extend along the valley of Minsmere Old River, terminating at localised ridgelines to the north and south of the river, 500–600m east of the study area.
- 6.4.17 To the south the ZTV is shown to extend approximately 200m beyond the study area, as far as the higher ground around Rookery Farm. Elsewhere within Rookery Park existing vegetation and buildings reduce the extent of theoretical visibility.
- 6.4.18 To the south west and north west, theoretical visibility is shown to extend on to higher ground west and north west of Yoxford, particularly on east facing slopes. Theoretical visibility is shown to be much more fragmented along the River Yox valley, within Yoxford and from west-facing slopes.

Zone of Visual Influence

- 6.4.19 As noted above, areas shown as having theoretical visibility may have visibility of the proposed Yoxford roundabout screened by existing features such as trees, hedgerows, embankments or buildings.
- 6.4.20 Site observations confirm that that vegetation and buildings would noticeably reduce the extent of visibility towards the site from that illustrated by the ZTV. The anticipated main area of visibility, based on site observations, is annotated on the ZTV study as the 'Zone of Visual Influence' (ZVI). Field boundaries are typically formed from established hedgerows, often with frequent hedgerow trees, and roads and footpaths

are also typically bordered by hedgerows and hedgerow trees. There are also substantial woodland blocks, tree belts and avenues within the parklands north and south of Yoxford, which reduce visibility towards the proposed Yoxford roundabout.

6.4.21 Views of the proposed Yoxford roundabout would generally be limited to within 300 to 400m of the site. In detail:

- To the north and north-west of the site the ZVI would extend up to a maximum of approximately 50m beyond the 500m study area to the substantial tree belt and woodland along the northern boundary of Cockfield Hall.
- To the north-east of the site, the ZVI be limited by existing vegetation around properties along Westleton Road and field boundaries between these properties and the East Suffolk line, approximately 150 to 350m from the site boundary.
- To the east, existing vegetation and farm buildings would limit visibility of the proposed Yoxford roundabout to just beyond the eastern extent of the site boundary.
- To the south the ZVI would extend approximately 350m into Rookery Park, between the woodlands of Pins Wood to the west and around Rookery Cottage to the east.
- To the west the ZVI would extend along the A12 (Brook Street) into Yoxford. This would be channelled visibility along the road, restricted by buildings and vegetation either side of the road. The tree belt around Satis House Hotel would prevent visibility from other areas to the west of the site.

6.4.22 Beyond these areas, although some glimpsed views would arise, visibility would be minimal or very infrequent and effects on landscape and visual receptors beyond the ZVI are not assessed further.

Landscape character

6.4.23 Paragraphs 5.13–5.15 of Guidelines for Visual Impact Assessment (Ref 6.18) indicate that landscape character studies at the national or regional level are best used to ‘set the scene’ and understand the landscape context of a proposed development. It also indicates that assessments undertaken by or for local authorities provide more detail and that these should be used to form the basis of the assessment of effects on landscape character, albeit with (appropriately justified) adaptation, refinement and interpretation, where required. The relevant assessments are:

- NCA Profiles (East of England) (Ref 6.11 and 6.12).
- East of England Regional Landscape Typology (Ref 6.13).
- Suffolk Landscape Character Assessment (Ref 6.14).
- Suffolk Coastal Landscape Character Assessment (Ref 6.15).
- Suffolk Historic Landscape Characterisation (Ref 6.16).

6.4.24 LCTs are illustrated on **Figure 6.3**.

National character area profiles

6.4.25 At a national level, the site and the majority of the study area are situated within NCA 82: Suffolk Coast and Heaths (Ref 6.11). NCA82 shows characteristics of gently undulating farmland with areas of woodland and forest plantation in the surrounding area. This NCA is described within the NCA summary as sparsely settled and “...*mainly flat or gently rolling, often open but with few commanding viewpoints*”. More than half of the NCA is utilised for arable and pig farming. The remainder of the NCA (beyond the study area) is coast, lowland heaths (Sandlings) and forest plantations. Close to the boundary between NCA82 and the adjacent NCA83, the landscape is described as:

“The boundary between the Suffolk Coast and Heaths and the more wooded boulder clay plateau of central East Anglia (South Norfolk and High Suffolk Claylands and South Suffolk and North Essex Claylands) is incised by several small east–west river valley corridors.”

6.4.26 The western extent of the study area lies within NCA83: South Norfolk and High Suffolk Claylands (Ref 6.12). This NCA covers a large area of central East Anglia and is a predominantly flat clay plateau incised by numerous small-scale wooded river valleys. Large areas of woodland are noted as being scarce within this LCA, with views frequently open and occasionally exposed “*although within the valleys it is possible to find quite confined landscapes with intimate views*”. NCA83 is also “*an area of mixed settlement patterns with nucleated villages found in the west and along the river valleys, intermixed with dispersed hamlets and moated farmsteads. Large, often interconnected village greens or commons are a key feature of the area*”. The description also notes that: “*Public rights of way, including the Boudicca Way and Angles Way long-distance footpaths, and country estates and parklands continue to provide recreational opportunities.*”

6.4.27 The site and the surrounding area is characteristic of NCA82 and the transition to NCA83. The small incised river valley corridor of the River Yox and Minsmere Old River, lie within a gently rolling landscape of arable and

pig farming with multiple areas of small woodland. Elements of NCA83 can be found in the lack of large areas of woodland and the settlement of Yoxford located along the river valley.

East of England regional landscape typology

6.4.28 At the regional level, the site lies predominantly within the Valley Settled Farmlands LCT (Ref 6.13). The description for this character type indicates that it is a:

“Settled, often busy landscapes which occur along the sides of the sinuous valley corridors that cut through the East Anglian clay plateau.”

6.4.29 This and the other LCTs identified within the study area broadly correspond with those identified in the Suffolk Landscape Character Assessment, but with greater subdivision in the County assessment. Given the greater detail in the County assessment, effects on regional LCTs are not assessed in detail.

Suffolk landscape character assessment (2008, revised 2011)

6.4.30 Local LCTs within the study area, as identified in the Suffolk Landscape Character Assessment (Ref 6.14), include:

- Ancient Estate Claylands.
- Rolling Estate Claylands.
- Valley Meadows and Fens.

6.4.31 Effects on the Rolling Estate Claylands, which include the site, and on the adjacent Valley Meadows and Fens which runs from north-west to east through the northern tip of the site, are assessed in **Section 6.4 c)** of this chapter.

6.4.32 The remaining LCT is excluded from more detailed assessment. As indicated by the ZVI and field study, there would be little to no potential visibility of the proposed Yoxford roundabout within the Ancient Estate Claylands LCT, largely due to the effects of landform and the local vegetation pattern.

Suffolk coastal landscape character assessment (July 2018)

6.4.33 The Suffolk Coastal Landscape Character Assessment (Ref. 6.15) forms part of the evidence base for the draft Suffolk Coastal District Council Local Plan (January 2019). As noted at **Section 6.3** of this chapter, it has been agreed with landscape and visual assessment consultees that the Suffolk

County assessment will be used as the basis for assessment, as it is in the public domain and has been subject to consultation. Reference is therefore made below to the Suffolk Coastal LCA where relevant.

[Suffolk historic landscape characterisation \(version 3, 2008\)](#)

6.4.34 This study identifies the different types of historic landscape within the county and identifies the site as predominantly ‘pre-18th century enclosure – random fields’. The historic land characterisation has informed the Suffolk LCA which forms the main basis of the assessment and is not considered further.

Visual environment

Visual receptors

6.4.35 Visual receptors are “the different groups of people who may experience views of the development” (Ref 6.18, Para 6.3). The ZTV study and baseline desk study and site visits have been used to identify those groups that may be significantly affected by the proposed Yoxford roundabout and receptors are grouped into areas where effects might be expected to be broadly similar, or areas which share particular factors in common (for example routes within an area of designated landscape). Baseline site visits were undertaken during June and December 2018 and February to March 2019, with assessment site visits undertaken during June and July 2019.

6.4.36 As described in relation to the ZVI and site context above, there are views across the site from local roads and footpaths, as well as from a small number of locations within the village of Yoxford. However, views of the site from the wider landscape are relatively contained by woodland and the vegetation along field boundaries and roads.

6.4.37 Four representative viewpoints have been selected to inform the assessment of the effects on visual receptors. These are identified in **Table 6.10**, with locations shown on **Figure 6.4** and illustrated by photopanel at **Figures 6.5 to 6.8**. Both the baseline and the assessment are further informed by three illustrative viewpoints (I1 to I3) which are illustrated by photographs in **Appendix 6A** of this volume.

Table 6.10: Representative viewpoints.

VP No.	Location	Receptors	Approx. distance/direction from nearest site boundary.
R1	A12 north of roundabout.	Motorists, cyclists and pedestrians along the A12.	Adjacent to west of site.
R2	Middleton Road,	Motorists, cyclists and	Within east of site.

VP No.	Location	Receptors	Approx. distance/direction from nearest site boundary.
	east of roundabout.	pedestrians along Middleton Road.	
R3	Footpath E-584/020/0, south of roundabout.	Users of this and local footpath.	West of site.
R4	Junction at High Street and A12, Yoxford.	Motorists, cyclists, pedestrians and residents along these roads.	85m, west.

Receptor groups

6.4.38 The main settlement within the study area is Yoxford, which lies directly west of the site. Field study and the ZVI confirm that the proposed works would be visible from Yoxford and effects on the residents of and visitors to the settlement are considered further in the assessment of effects.

6.4.39 There are also a number of individual properties within the study area. The closest individual private residential properties are located adjacent to the southern site boundary along Middleton Road, with more properties located along Middleton Road to the east. Several dwellings are located 225–315m to the north-east of the site along Westleton Road, with Rookery Park and Cockfield Hall located 300m to the south and 390m to the north-west of the site respectively.

6.4.40 As outlined above, desk and field study has confirmed the ZVI within which there may be visual effects arising from the proposed development would be contained. Only the following visual receptor groups are likely to experience effects which would be greater than negligible and are considered further within the assessment of effects:

- Group 1 – users of footpaths through Cockfield Hall (E-584/013/0 and E-584/010/0) and residents of properties within Cockfield Hall in the areas around their homes.
- Group 2 – users of the B1122 as a local road, residents of properties north east and south the site, in the areas around their homes, and users of Footpath E-584/020/0 to the south of the site.
- Group 3 – residents and visitors to Yoxford along Brook Street.

Long distance routes

6.4.41 The A12 is the main road through the area, passing through the western part of the site boundary. It runs from north-east to south-west between

London and Great Yarmouth. Connected to the A12 in the west of the study area is the A1120 which runs from south-west to north-east between Stowmarket and Yoxford. The East Suffolk line runs within the west of the study area from south to north and connects Ipswich to Lowestoft.

6.4.42 As indicated above, desk and field study has confirmed that the ZVI would extend to cover users of the A12 and effects on these motorists are considered in the assessment of effects.

6.4.43 The ZVI does not extend to cover the A1120 or the East Suffolk line, effects on these routes are not considered further.

Specific viewpoints

6.4.44 There are no panoramic viewpoints within the 0.5km study area (based on ordnance survey mapping) and no promoted or designated viewpoints have been identified.

Landscape designations and value

Local landscape designations

6.4.45 The site is not covered by any statutory landscape designations.

6.4.46 As shown on **Figure 6.1**, a SLA covers the majority of the study area including the site. The SLA includes the River Yox and Minsmere Old River Valley, as well as the historic parklands around Yoxford (Cockfield Hall, Rookery Park and Grove Park). Effects on the SLA are considered within the assessment of effects.

6.4.47 Cockfield Hall to the north of the site, Rookery Park to the south and Grove park to the west of Yoxford are all identified as parks and gardens of historic or landscape interest under policy SSP37 of the Site Allocations and Area Specific Policies document (Ref 6.9). This designation is a heritage designation and given that none of these parklands are publicly accessible, with the exception of where Public Rights of Way (PRoW) pass through them, effects on these parklands are assessed in **Chapter 9** of this volume.

Local landscape value

6.4.48 Within the 500m study area there are a number of features that contribute to the value of the local landscape. These include historic parklands, a network of footpaths, small areas of woodland and the valley of the River Yox and Minsmere Old River. As indicated above in relation to landscape designations, most of the study area is covered by an SLA. Within the SLA, the landscape is considered to be of local value. Beyond this designated

area, none of these features are considered sufficiently valued to increase the landscape value above community value.

ii. **Future baseline**

6.4.49 There are no committed developments that would materially alter the baseline conditions during the construction and operation phases of the proposed Yoxford roundabout.

6.4.50 In a rural landscape, various factors may result in changing land use patterns within the study area. For example, agricultural practices may change in response to markets and the effects of a changing climate (such as increased mean annual air temperatures, hotter summers, altered seasonal rainfall patterns, drier summers, wetter winters and the increased frequency of extreme rainfall events and the intensity of storms). There may also be an influence on types of agricultural infrastructure. For example, larger farm buildings either for animals or farming equipment may be required and decreases in summer precipitation may require the construction of farm reservoirs.

6.4.51 In addition to influencing the type of agriculture undertaken, various climate related factors may affect the survival and long-term health of native trees, perhaps through the introduction of invasive species, pathogens and viruses. The lack of long-term management/stocking of commercial forestry and native woodlands and copses may also influence the survival of these landscape features. Conversely, new areas of commercial forestry or woodland could be planted in areas of former farmland.

6.4.52 Whilst the potential exists to alter the character of the local landscape, such changes would be localised and therefore would not affect the findings of the assessment in general but could alter outcomes in some locations.

b) **Environmental design and mitigation**

6.4.53 As detailed in **Volume 1, Chapter 6** of the **ES**, a number of primary mitigation measures have been identified through the iterative EIA process and have been incorporated into the design and construction planning of the proposed Yoxford roundabout. Tertiary mitigation measures are legal requirements or are standard practices that would be implemented as part of the proposed Yoxford roundabout.

6.4.54 The assessment of likely significant effects of the proposed Yoxford roundabout assumes that primary and tertiary mitigation measures are in place. For landscape and visual, these measures are identified below, with a summary provided on how the measures contribute to the mitigation and management of potentially significant environmental effects.

i. Primary mitigation

6.4.55 Primary mitigation is often referred to as ‘embedded mitigation’ and includes modifications to the location or design to mitigate impacts; these measures become an inherent part of the proposed development.

6.4.56 **Chapter 2** of this volume and the **Associated Development Design Principles** (Doc Ref. 8.3) document detail a number of primary mitigation measures that seek to mitigate the potential impacts of the proposed Yoxford roundabout. Those of direct relevance in the landscape and visual context include:

- The retention of existing trees and hedgerow adjoining the proposed Yoxford roundabout site where possible. Including the tree belt to the north-west of the site, along the boundary of Satis House Hotel, as well as the hedgerow along the southern side of the B1122 (Middleton Road).
- New tree and hedgerow planting along the eastern edge of the realigned roads and around the proposed infiltration basin south of the A12.

6.4.57 These measures aim to minimise the amount of vegetation lost which helps to control and limit views of the proposed development from neighbouring receptors, including local residential properties and local PRoW.

6.4.58 In addition, during the operational phase lighting would be designed to achieve a balance between providing lighting appropriate for all road users whilst applying suitable mitigation measures in keeping with the local environment. Lighting columns will be up to 10m in height.

i. Tertiary Mitigation

6.4.59 Tertiary mitigation will be required regardless of any EIA assessment, as it is imposed, for example, as a result of legislative requirements and/or standard sectoral practices.

6.4.60 The following tertiary mitigation measures have been included within the **Code of Construction Practice (CoCP)** (Doc Ref. 8.11) to minimise landscape and visual effects during the construction phase:

- Minimum light levels for safe working and the minimum number of lighting elements to illuminate the work area safely will be used.
- Lighting will be directed away from site boundaries to minimise nuisance from light spill. If lights cannot be positioned in such way because of physical constraints or for safety reasons, then local

screening of the lights, including shielding of luminaires, where appropriate, will be used to reduce disturbance.

- Task-specific lighting will be turned off on completion of the task, or at the end of the working day by the contractor.
- Contractors will consider the use of sensors or timing devices to automatically switch off lighting, where appropriate.

c) Assessment

i. Introduction

6.4.61 This section presents the findings of the landscape and visual impact assessment for the construction and operation of the proposed Yoxford roundabout.

6.4.62 This section identifies any likely significant effects that are predicted to occur and **Section 6.4 d)** of this chapter then identifies any secondary mitigation and monitoring measures that are proposed to minimise any adverse significant effects (if required).

6.4.63 Effects are assessed covering both stages, including the approximately six to nine months of construction and the permanent operation stage. For the operational assessment, a distinction is made between the period following completion, when construction is complete but before mitigation planting is fully mature (Year 1) and following establishment and initial maturation (Year 15) to capture the effects of proposed planting on views.

ii. Construction

6.4.64 As described in **chapter 2** of this volume, the construction of the site will involve ground works to set-up and clear the site; creation of a temporary contractor compound; earthworks and the construction of a retaining wall; surfacing works; signs and lighting; fencing; and the planting of trees and hedgerows. The construction works are expected to take six to nine months in total and the proposed roundabout would be largely constructed offline, avoiding the need for long-term temporary road closures or diversions. The works would involve the movement of construction vehicles, storage of materials, task lighting and the gradual construction of a new three-armed roundabout with realigned roads.

Landscape Fabric

6.4.65 A number of landscape features, comprising the physical fabric of the site would be modified or removed as follows:

- Replacement of farmland with a new junction and realigned road network.
- The loss of approximately 220m of trees and hedgerow along the eastern boundary of the A12/north of the B1122.
- The loss of approximately 20m of hedgerow along the southern edge of the B1122, near the entrance to Rookery Park.
- Removal of small individual trees on the northern side of the B1122, near The Piggeries.
- Removal of a mature tree between the B1122 (Middleton Road) and the local access road to Rookery Park and adjacent properties.

Landscape character

6.4.66 The scale of effects on landscape character are illustrated on **Figure 6.3**.

6.4.67 Large scale effects would arise within the site, in areas directly affected by the construction of the proposed Yoxford roundabout. In these areas the character would change from being relatively minor road infrastructure and open fields to a construction site with moving construction vehicles and small cranes, to become a new roundabout, sunk into the landscape and with new associated lighting.

6.4.68 Medium scale effects would arise in the adjacent fields to the north-east, between the site boundary, vegetation along the River Yox and the large farm buildings immediately to the east of the site. In this area, the construction works would alter the character of the open fields due to the proximity of the earthworks and new road infrastructure.

6.4.69 Small scale effects would arise in the fields immediately to the south of the site, within Rookery Park, and to the north of the site as far as Footpath E-584/013/0 through Cockfield Hall and the vegetation around the sewage works north east of the site. In these areas, the likely visibility of large construction machinery would influence the rural character.

6.4.70 Beyond the above areas, occasional glimpsed views of the proposed Yoxford roundabout development would not alter the character of the landscape.

6.4.71 For a development of this nature it is to be expected that there will be large scale effects on the character of the site itself, given that areas of the site are changing from grazing land or roadside verge to a developed area and a more substantive road junction than is currently present. How rapidly effects diminish beyond the site depends on the scale of development, the

context and visibility of the proposed development. In this instance effects would diminish rapidly in many areas due to the limited vertical scale of the proposed Yoxford roundabout and anticipated construction machinery, the embedded primary mitigation provided by retaining existing and providing proposed vegetation; and the context in terms of terrain and vegetation within the wider landscape.

6.4.72 In **Section 6.4 a)** of this chapter, the Rolling Estate Claylands LCT and Valley Meadows and Fens LCT were identified as requiring more detailed assessment, based on the ZVI for the proposed development. Effects on these LCTs are considered below.

Rolling Estate Claylands

6.4.73 As identified within the Suffolk Landscape Character Assessment (2008, revised 2011 (Ref 6.16)), the proposed Yoxford roundabout is located in the Rolling Estate Claylands LCT. The key characteristics are described as:

- *“Rolling valley-side landscape;*
- *Medium clay and loamy soils;*
- *Organic pattern of fields;*
- *Occasional areas of more rational planned fields;*
- *Numerous landscape parks;*
- *Substantial villages; and*
- *Fragmented woodland cover, both ancient and plantation; and*
- *Winding hedged and occasionally sunken lanes.”*

6.4.74 The Guidance Note supporting the Suffolk Landscape Character Assessment (Ref 6.14) describes the forces of change acting upon this landscape, and the likely impacts on the landscape. This primarily advises the effect this character area can have on the adjoining valley floor, notably through the expansion of settlements, change in land use and the management and use of parkland. It notes: *“In these valley side landscapes, the visual impact of new vertical elements is increased by the landform. Therefore, new buildings are likely to have a significant impact on both the character and visual amenity of valley floor and valley side landscape types”*. Adding that: *“In this location the landscape and visual impact can be more easily mitigated with effective planting and design.”* Given these indications, the character type is judged to be of medium-low susceptibility.

- 6.4.75 The Guidance Note (Ref 6.14) prescribes landscape management guidelines, which should inform any development proposals and mitigation measures and have been taken into account in the site selection and design of the proposed development. These are:
- *“Support the continuation of traditional economic activities;*
 - *Restore and retain the pattern of drainage;*
 - *Maintain levels of grassland; and*
 - *Encourage and support appropriate planting and management of woodlands.”*
- 6.4.76 The site and surroundings lie fully within the SLA, as shown by **Figure 6.1** and **Figure 6.3**. The character type is of local value as defined by the criteria in **Section 6.3** of this chapter. Considering the susceptibility and value together, the character area is judged to be of medium sensitivity.
- 6.4.77 The site and surroundings are generally typical of the character type. The characteristic pattern of field boundaries in the vicinity of the site and parklands with associated tree planting would partially screen and filter views towards the site.
- 6.4.78 As described above, the short-term effects during construction would be large scale within the limited extent of the site and medium scale in the fields immediately north east of the site; effecting a limited extent of the LCT. These effects would be of medium-low magnitude, which is assessed to result in a moderate adverse effect, which is considered to be **not significant**.
- 6.4.79 As noted above, there would also be small scale effects in the fields to the south of the B1122 (Middleton Road), within Rookery Park; in very small areas around the sewage treatment works north-east of the site and an additional area to the north-west of the site within the parkland at Cockfield Hall. These effects would be short-term and would occur for a localised extent of the LCT. These effects would be of negligible magnitude and are assessed to be minimal adverse, which is considered to be **not significant**.

Valley Meadows and Fens

- 6.4.80 As identified within the Suffolk Landscape Character Assessment (2008, revised 2011 (Ref 6.14)), the area to the north of the site is located in the Valley Meadows and Fens LCT. The key characteristics are described as:
- *“Flat, narrow, river valley bottoms;*

- *Deep peat or mixtures of peat and sandy deposits;*
- *Ancient meres within the valley bottoms & important fen sites;*
- *Small grassland fields, bounded by dykes running at right angles to the main river;*
- *Sparse scattering of small alder carr & plantation woodlands;*
- *Part of a wider estate type landscape;*
- *Largely unsettled, except for the occasional farmstead;*
- *Drier fields turned over to the production of arable crops;*
- *Cattle grazing now often peripheral to commercial agriculture; and*
- *Loss to scrub encroachment, tree planting and horse paddocks”.*

6.4.81 The Guidance Note supporting the Suffolk Landscape Character Assessment (Ref 6.14) describes the forces of change acting upon this landscape, and the likely impacts on the landscape. This primarily indicates the effect that development and land use change adjacent to this landscape type can have on the character of the LCT itself. It notes: *“The Valley Meadowlands and Fens are mostly narrow and enclosed by the valley sides. They can be profoundly affected by changes to the management of land and the construction buildings on the valley sides.”* Adding that: *“Changes in land use, the loss of grassland and the creation of small horse paddocks and associated structures, can significantly degrade the quality and condition of this landscape.”* Given these indications, the character type is judged to be of medium susceptibility.

6.4.82 The Guidance Note (Ref 6.14) prescribes landscape management guidelines, which should inform any development proposals and mitigation measures and have been taken into account in the site selection and design of the proposed development. These are:

- *“Support the continuation of traditional economic activities;*
- *Restore and retain the pattern of drainage;*
- *Maintain levels of grassland; and*
- *Encourage and support appropriate planting and management of woodlands.”*

6.4.83 The site and surroundings lie fully within the SLA, as shown by **Figure 6.1** and **Figure 6.3**. The character type is of local value as defined by the

criteria in **Section 6.3** of this chapter. Considering the susceptibility and value together, the character area is judged to be of medium sensitivity.

- 6.4.84 The area to the north of the site, along the valley of the River Yox and Minsmere Old River, is generally typical of the character type. The area is a flat narrow valley, with small grassland fields and is generally unsettled.
- 6.4.85 As noted above, there would also be small scale effects on the character of the valley during construction, as a result of the visibility of construction machinery on the higher ground. These effects would occur in a limited area to the north and north-east of the site and would be short-term. These effects would be of negligible magnitude and are assessed to be minimal adverse, which is considered to be **not significant**.

Visual Receptors

- 6.4.86 Annotated photographs and visualisations are shown on **Figures 6.5 to 6.12** of this landscape and visual assessment. The method of visualisation selected for each viewpoint has been informed by Landscape Institute Technical Guidance Note 06/19 Visual representation. Representative viewpoints 1 and 2 have been produced as photowire visualisations (see **Figures 6.9–6.12**), in agreement with landscape and visual assessment consultees. Further detail about the visualisation methodology is provided in **Volume 1, Appendix 6I** of the **ES**.
- 6.4.87 The viewpoint description, description of effects and scale of effect for each viewpoint (see **Figure 6.4** for locations) is set out on the relevant photograph (see **Figures 6.5–6.8**). The scale of effect at each viewpoint is summarised in **Table 6.11**.

Table 6.11: Summary of scale of effects on representative viewpoints.

Viewpoint number.	Location	Approximate distance/direction from site.	Scale of effect beneficial, neutral, adverse.
R1	A12 north of roundabout.	Adjacent to west of site.	Large, adverse.
R2	Middleton Road, east of roundabout.	Within east of site.	Large-medium, adverse.
R3	Footpath E-584/020/0, south of roundabout.	West of site.	Medium, adverse.
R4	Junction at High Street and A12, Yoxford.	85m, west.	Small-negligible, adverse.

- 6.4.88 Each of the viewpoints is a ‘sample’ of the potential effects, representing a wide range of receptors, including not only those actually at the viewpoint, but also those nearby, at a similar distance and/or direction. In addition, the three illustrative viewpoints (I1–I3) help to confirm the extents of likely

visibility. Illustrative viewpoints are provided purely for reference to further ‘illustrate’ observations and judgements made within this landscape and visual impact assessment. Illustrative viewpoints, which do not contain a description of visual effects, are included within **Appendix 6A** of this volume.

6.4.89 From these viewpoints it can be seen that:

- Large scale visual effects, where the construction of the proposed Yoxford roundabout would form a major alteration to key elements features, qualities and characteristics of the view such that the baseline would be fundamentally changed, would be limited to locations immediately adjacent to the site, where there would be views of much of the construction or the construction activity would be in very close proximity.
- Medium scale effects during construction would occur in locations where there would be some separation from the construction, either as a result of distance or due to intervening road infrastructure or vegetation visually reducing the effects of construction. Medium scale effects would occur in some locations within the site boundary.
- Beyond the extent of large and medium scale visual effects described above, effects would transition rapidly to small scale, due to the effects of landform and the presence of existing vegetation (woodland belts and hedgerows) that would soften and/or screen the presence of the construction phase, and eventually the proposed roundabout and associated lighting.
- Beyond the immediate vicinity of the site, the scale of effects reduces to negligible. This is due to the combination of topography, increasing distance from the site and layers of vegetation within the landscape combining to limit views to occasional glimpses of taller elements of construction machinery and eventually the proposed lighting columns.

Receptor groups

6.4.90 Local residents and users of recreational routes and roads are judged to have high-medium sensitivity, using the methodology as set out above and within **Volume 1, Appendix 6I** of the **ES**.

6.4.91 Group 1 – users of footpaths through Cockfield Hall (E-584/013/0 and E-584/010/0) and residents of properties within the parkland at Cockfield Hall in the areas around their homes: This group of receptors includes users of the PRow network through the parkland at Cockfield Hall, as well as the residents of properties within the parkland. Illustrative viewpoints 1 and 2 as provided in **Appendix 6A** of this volume illustrate views from within the

parkland and indicate that any views towards the proposed Yoxford roundabout would be heavily filtered by existing vegetation, even during the winter months. During construction, there would be occasional glimpsed views of construction activity through the existing vegetation. Effects during construction would be of small-negligible scale. These short-term effects would be of localised extent and would be of negligible magnitude. They are assessed to be minimal neutral, which is considered to be **not significant**.

6.4.92 Group 2 – users of the B1122 as a local road, residents of properties north east and south the site, in the areas around their homes, and users of Footpath E-584/020/0 to the south of the site: This group of receptors covers a relatively large proportion of the study area for the proposed Yoxford roundabout, east of the existing A12. However, much of this area is not publicly accessible and therefore views towards the proposed Yoxford roundabout from within this area would be relatively limited. Viewpoints 2 and 3 (see **Figures 6.6** and **6.7**) represent views from this receptor group and indicate that users of the B1122 travelling towards the site from the east would experience large-medium scale effects during construction when they encounter the eastern edge of the site and the associated construction compound. At the western edge of the site, in the vicinity of the northern end of Footpath E-584/020/0, viewpoint 3 demonstrates that construction effects would be slightly less as the main area of construction would be set back from the viewpoint and set into the existing landform. These effects would be of medium scale. Further south along Footpath E-584/020/0, existing woodland at Pins Wood would screen views towards the site. These short-term effects would be of localised extent and would be of medium-low magnitude. They are assessed to be moderate adverse, which is considered to be **not significant**.

6.4.93 Group 3 – residents and visitors to Yoxford along Brook Street: This group of receptors covers residents of and visitors to Yoxford within the publicly accessible areas of the village, which is also a conservation area. Effects on the conservation area are considered in **Chapter 9** of this volume. Viewpoint 4 (**Figure 6.8**) demonstrates the channelled views towards the proposed Yoxford roundabout from within Yoxford. Closer to the site, viewpoint 3 (**Figure 6.7**) demonstrates views from residential properties on the eastern edge of Yoxford and residents or visitors in that vicinity. Viewpoint 3 demonstrates that construction effects would be of medium scale at the closest areas of Yoxford to the proposed Yoxford roundabout. These short-term effects would be of limited extent and would be of low magnitude. They are assessed to be slight adverse, which is considered to be **not significant**.

Long distance routes

6.4.94 The A12 is the main road through the area, passing through the western part of the proposed Yoxford roundabout site. Users of the A12 are of low sensitivity, as indicated by the methodology set out above and in **Volume 1, Appendix 6I** of the **ES**. As indicated by viewpoint 1 (**Figure 6.5**), where the A12 currently passes through the site road users would experience large scale effects during the construction phase, when earthworks and construction activity would be visible during the early stages of construction, followed by roadworks, changes to the road alignment and introduction of the proposed roundabout and associated lighting later in the construction phase. As indicated by viewpoint 4 (**Figure 6.8**), further from the site boundary the scale of effect would rapidly reduce to small-negligible and negligible due to the screening effect of existing vegetation, built form and landform. The stretch of the A12 where large scale effects would be experienced would be a very brief part of a longer journey and the short-term effects would be of limited extent. The effects would be of medium magnitude, and would be slight adverse, which is considered to be **not significant**.

Specific viewpoints

6.4.95 No specific viewpoints have been identified within the study area as requiring assessment.

Landscape designations

6.4.96 As shown on **Figure 6.1**, an SLA covers the majority of the study area for the proposed Yoxford roundabout. It covers the valley of the River Yox and Minsmere Old River, as well as the historic parklands to the north, south and west of Yoxford. As noted within **Table 6.2**, it is agreed with consultees that the Special Landscape Areas Paper (Ref 6.17) is to be used as the basis of the assessment of effects on the SLA designation. This indicates that the purpose of the designation is to preserve the following special qualities within the designated areas:

- *“Traditionally grazed river valley meadows and marshes with intact hedgerows and dykes and associated flora and fauna.*
- *18th and 19th century designed parks and gardens, and occasionally areas of farmland in their surroundings that contribute to their setting.”*

6.4.97 The SLA covers parts of both of the LCTs assessed above, relating predominantly to the river valley and also covering the parklands. The SLA is considered to be of local value, as indicated by the methodology set out in **Volume 1, Appendix 6I** of the **ES** and, in line with the LCTs that the SLA

covers, of medium to medium-low susceptibility. Sensitivity is considered to be medium.

- 6.4.98 As illustrated in **Figure 6.3**, effects on the character of the area covered by the SLA designation would be large scale in those areas directly affected by the construction of the proposed Yoxford roundabout, reducing to medium to the north-east of the site and then small for a small stretch of the river valley and areas of parkland at Cockfield Hall and Rookery Park. During construction, the large and medium scale, short-term effects would cover a localised extent of the SLA. The effects on the designated SLA would be of medium-low magnitude, and would be moderate adverse, which is considered to be **not significant**.

Inter-relationship effects

- 6.4.99 This section provides a description of the identified inter-relationship effects that are anticipated to occur on landscape and visual receptors between the individual environmental effects arising from construction of the proposed Yoxford roundabout.
- 6.4.100 Inter-relationships would arise from the proposed Yoxford roundabout on the landscape features, which also represent habitats that are evaluated in **Chapter 7** (terrestrial ecology and ornithology) of this volume. **Chapter 7** has been referenced in order to inform some judgements concerning the impact to landscape fabric and features.
- 6.4.101 Cultural and historic designations/attributes have been considered as one of the contributory factors towards overall landscape value and susceptibility. However, the effects of the proposed Yoxford roundabout on the historic/cultural receptors are considered within **Chapter 9** of this volume Terrestrial Historic Environment.
- 6.4.102 In some cases, visual receptors are also recreational receptors assessed as part of the Amenity and Recreation Assessment within **Chapter 8** of this volume.

iii. Operation

Landscape Character

- 6.4.103 The scale of effects on landscape character remain as described in relation to the construction phase and as illustrated on **Figure 6.3**.

Rolling Estate Claylands

- 6.4.104 The key characteristics and landscape management guidelines for the Rolling Estate Claylands LCT remain as reported in the construction section

above. The medium-low susceptibility and local value of the LCT are judged to result in medium sensitivity.

- 6.4.105 The effects of the proposed Yoxford roundabout would continue be large-scale within the site and medium scale in the fields immediately north-east during the operation stage. The proposed Yoxford roundabout would result in a change of character within parts of the site from grazing land or roadside verge to a developed area and a more substantive road junction than is currently present, affecting a limited extent of the LCT. However, during the operation phase of the proposed Yoxford roundabout, these effects would become permanent. These effects would be of medium-low magnitude, which is assessed to result in a moderate adverse effect, which is considered to be **not significant**.
- 6.4.106 There would also be small scale effects on landscape character in the fields to the south of the B1122 (Middleton Road), within Rookery Park; in small areas around the sewage treatment works north-east of the site and an additional area to the north-west of the site within the parkland at Cockfield Hall. During the operational phase, these effects would result from the introduction of lighting columns into views from these areas, as well as occasional views of the wider road infrastructure. These effects would be permanent and would occur for a localised extent of the LCT. These effects would be of low magnitude and are assessed to be slight adverse, which is considered to be **not significant**.
- 6.4.107 **Appendix 6B** of this volume considers the effects of the lighting elements of the proposed Yoxford roundabout on the Rolling Estate Claylands. The assessment indicates that the effects of lighting on this LCT would be of medium-low magnitude and are assessed to be slight adverse, given the presence of lighting at the existing junction, which is considered to be **not significant**.

Valley Meadows and Fens

- 6.4.108 The key characteristics and landscape management guidelines for the Valley Meadows and Fens LCT remain as reported in the construction section above. The medium susceptibility and local value of the LCT are judged to result in medium sensitivity.
- 6.4.109 There would be small-scale effects on the character of the valley of the River Yox and Minsmere Old River. During the operational phase, these effects would result from the introduction of lighting columns on the higher ground into views from these areas, as well as occasional views of the wider road infrastructure. These effects would occur in a limited area to the north and north-east of the site and would be permanent during operation.

These effects would be of negligible magnitude and are assessed to be minimal neutral, which is considered to be **not significant**.

- 6.4.110 **Appendix 6B** of this volume considers the effects of the lighting elements of the proposed development on the Valley Meadows and Fens. The assessment indicates that the effects of lighting on this LCT would be of negligible magnitude and are assessed to be minimal adverse, given the presence of lighting at the existing junction, which is considered to be **not significant**.

Visual receptors

- 6.4.111 The general bandings of the scale of visual effects remain as described in relation to the construction phase. Local residents and users of recreational routes and roads remain high-medium sensitivity.

Receptor groups

- 6.4.112 Group 1 – users of footpaths through Cockfield Hall (E-584/013/0 and E-584/010/0) and residents of properties within the parkland at Cockfield Hall in the areas around their homes: illustrative viewpoints 1 and 2 as provided in **Appendix 6A** of this volume represents views from within the parkland and indicate that during operation of the proposed Yoxford roundabout any views towards the site would remain heavily filtered by existing vegetation, even during the winter months. The tops of the proposed lighting columns are likely to remain visible, along with occasional glimpses of other road infrastructure. Effects throughout the operational period of the site would continue to be small-negligible scale. These would become permanent effects, as it would not be possible to implement any planting within the roadside verge, would be of localised extent and would be of low magnitude. They are assessed to be slight adverse, which is considered to be **not significant**.
- 6.4.113 Group 2 – users of the B1122 as a local road, residents of properties north-east and south the site, in the areas around their homes, and users of Footpath E-584/020/0 to the south of the site: viewpoints 2 and 3 represents views from users of the B1122 and Footpath E-584/020/0 to the south of the site. Effects at year 1 of the operation of the site would reduce from those assessed during the construction phase, as the proposed road alignment would return to being similar in appearance to existing road infrastructure through this receptor group. Effects in the vicinity of viewpoint 2 would reduce to medium scale and medium-term once construction is completed and the road is operational, with effects in the vicinity of viewpoint 3 reducing to medium-small scale but permanent. These effects would remain of localised extent and would be of medium-low

magnitude. They are assessed to be moderate adverse, which is considered to be **not significant**.

6.4.114 However, by year 15, as the proposed tree and hedgerow planting along the north eastern edge of the realigned B1122 begins to mature, assumed to be 3m high for the hedgerow by year 15 of operation, this would reduce visual effects for road users in the vicinity of viewpoint 2 from medium to medium-small scale. These permanent effects would remain of localised extent but would not alter the magnitude or significance of effect from that assessed above.

6.4.115 Group 3 – residents and visitors to Yoxford along Brook Street: This group of receptors covers residents of and visitors to Yoxford within the publicly accessible areas of the village. Viewpoints 3 and 4 represent views from within the village. Effects during the operation of the proposed Yoxford roundabout would reduce to medium-small at the eastern edge of the village, in the vicinity of viewpoint 3, as the site returns to being road infrastructure rather than a construction site. It would return to being relatively similar in visual character to the existing A12. From closer to the vicinity of viewpoint 4, effects would reduce to negligible as the realigned junction would not be notably different to the existing junction from the extent that would be visible. These effects would not change during the operation of the proposed Yoxford roundabout as it would not be possible to screen the proposed roundabout from view. These permanent effects would be of limited extent and would be of low-negligible magnitude. They are assessed to be slight adverse, which is considered to be **not significant**.

6.4.116 **Appendix 6B** of this volume considers the visual effects of the lighting elements of the proposed Yoxford roundabout on the visual receptor groups. For receptor groups 1 and 2 (users of footpaths through Cockfield Hall (E-584/013/0 and E-584/010/0) and residents of properties within the parkland; and users of the B1122 as a local road, local residents and users of Footpath E-584/020/0 respectively), the assessment of night time effects identifies effects would be of low-negligible or low magnitude throughout the operational period of the proposed Yoxford roundabout, resulting in effects assessed to be slight adverse, which is considered to be **not significant**. For receptor group 3, night time effects would be of negligible magnitude throughout the operational period, resulting in effects assessed to be minimal neutral, which is considered to be **not significant**.

Long distance routes

6.4.117 The A12 would remain the main road through the study area, passing around the proposed Yoxford roundabout. Users of the A12 are of low sensitivity, as indicated by the methodology set out in **Volume 1**,

Appendix 6I of the **ES**. As indicated by viewpoint 1, road users on the A12 would experience large scale effects as they pass through the Yoxford roundabout site, as the road would be realigned and would utilise the proposed roundabout. As indicated by viewpoint 4, further from the site the scale of effect would rapidly reduce to small-negligible and negligible due to the screening effect of existing vegetation, built form and landform. The stretch of the A12 where large scale effects would be experienced would be a very brief part of a longer journey and would not alter during the operational period. These permanent effects would be of limited extent, of medium magnitude and are assessed to be slight adverse, which is considered to be **not significant**.

- 6.4.118 **Appendix 6B** of this volume considers the visual effects of the lighting elements of the proposed development on users of the A12. The assessment indicates that the effects of lighting on road users would be of negligible magnitude throughout the operational period and are assessed to be minimal neutral, which is considered to be **not significant**.

Specific viewpoints

- 6.4.119 No specific viewpoints have been identified within the study area as requiring assessment.

Landscape designations and value

- 6.4.120 As covered above and shown on **Figure 6.1**, a SLA covers the majority of the study area and all of the site. The SLA is considered to be of local value, as indicated by the methodology set out in **Volume 1, Appendix 6I** of the **ES** and, in line with the LCTs that the SLA covers, of high-medium susceptibility. Sensitivity is considered to be medium.
- 6.4.121 Effects on the character of the area covered by the SLA designation would remain large scale in those areas directly affected by the proposed road alignment, reducing to medium to the north-east of the site and then small for a small stretch of the river valley and areas of parkland at Cockfield Hall and Rookery Park. The large and medium scale effects would continue to cover a localised extent of the SLA throughout the operational period. The permanent effects on the designated SLA would be of high-medium magnitude and are assessed to be moderate adverse, which is considered to be **not significant**.

- 6.4.122 **Appendix 6B** of this volume considers the visual effects of the lighting elements of the proposed development on the SLA. The assessment indicates that the effects of the SLA would be of low-negligible magnitude throughout the operational period and are assessed to be slight adverse, which is considered to be **not significant**.

Inter-relationship effects

- 6.4.123 This section provides a description of the identified inter-relationship effects that are anticipated to occur on landscape and visual receptors between the individual environmental effects arising from operation of the proposed Yoxford roundabout.
- 6.4.124 Inter-relationships would arise from the proposed Yoxford roundabout on the landscape features, which also represent habitats that are evaluated in **Chapter 7** (terrestrial ecology and ornithology). **Chapter 7** has been referenced in order to inform some judgements concerning the impact to landscape fabric and features.
- 6.4.125 Cultural and historic designations/attributes have been considered as one of the contributory factors towards overall landscape value and susceptibility. However, the effects of the proposed Yoxford roundabout on the historic/cultural receptors are considered within **Chapter 9** of this volume.
- 6.4.126 In some cases, visual receptors are also recreational receptors assessed as part of the Amenity and Recreation Assessment within **Chapter 8** of this volume.

d) Mitigation and monitoring

- 6.4.127 Where possible, mitigation measures have been proposed where a significant effect is predicted to occur. Primary and tertiary mitigation measures which have been accounted for as part of the assessment are summarised in **Section 6.4 b)** of this chapter. Where other mitigation is required to reduce or avoid an adverse significant effect, this is referred to as secondary mitigation, and where reasonably practicable, secondary mitigation measures have been proposed.
- 6.4.128 No secondary mitigation measures are proposed for the landscape and visual assessment. However, the proposed planting would require maintenance and management during the lifetime of the proposed Yoxford roundabout, with replacement of plant failures during the first few years of establishment (usually 5 years) as required.

6.5 Other highway improvements

6.5.1 As identified in **Section 6.3** of this chapter, the three other highway improvements and two safety measures are not considered to have the potential to result in significant environmental effects during their construction or operation and therefore none have been assessed in further detail.

6.6 Residual effects

6.6.1 The following tables (**Table 6.12** and **Table 6.13**) present a summary of the landscape and visual impact assessment during the construction phase and during operation. The tables identify the receptor/s likely to be impacted, the level of effect at Year 15 (in respect of operation), which is considered to be the permanent residual effect once mitigation planting has become established. Effects assessed at year 1 are not included in **Table 6.13** as these are not considered to be the residual effects of the proposed development.

Table 6.12: Summary of effects for the construction phase.

Receptor	Impact	Primary or tertiary mitigation.	Assessment of effects.	Additional mitigation.	Residual effects.
Landscape character.					
Rolling Estate Claylands.	Effects on the character type within the site.	Retention of existing vegetation where possible and proposed planting to integrate and screen.	Moderate, adverse.	None	Moderate, adverse (not significant).
	Effects on remainder of character type.	Retention of existing vegetation where possible and proposed planting to integrate and screen.	Minimal, adverse.	None	Minimal, adverse (not significant).
Valley Meadows and Fens.	Indirect effects on landscape character.	Retention of existing vegetation where possible and proposed planting to integrate and screen.	Minimal, adverse.	None	Minimal, adverse (not significant).

Visual receptors.					
Receptor group 1: users of footpaths through Cockfield Hall and residents of properties within the parkland at Cockfield Hall in the areas around their homes.	Glimpsed views of construction activity through existing vegetation.	Retention of existing vegetation where possible and proposed planting to integrate and screen.	Minimal, neutral.	None	Minimal, neutral (not significant).
Receptor group 2: users of the B1122, residents of properties north-east and south the site, in the areas around their homes, and users of Footpath E-584/020/0.	Views of construction activity, progressing towards views of proposed roundabout, with light columns and taller vehicles seen above any retained vegetation.	Retention of existing vegetation where possible and proposed planting to screen and filter views.	Moderate, adverse.	None	Moderate, adverse (not significant).
Receptor group 3: residents and visitors to Yoxford along Brook Street.	Minor change to channelled view towards existing A12/B1122 junction.	Proposed planting to screen and filter views.	Slight, adverse.	None	Slight, adverse (not significant).
Motorists using the A12.	Brief views of construction activity, progressing to views of the proposed roundabout and associated lighting.	Retention of existing vegetation where possible and proposed planting to screen and filter views.	Slight, adverse.	None	Slight, adverse (not significant).
Landscape designations.					
SLA	Effects on special qualities.	Retention of existing vegetation where possible and proposed planting to screen and filter views.	Moderate, adverse.	None	Moderate, adverse (not significant).

Table 6.13: Summary of permanent effects for the operational phase.

Receptor	Impact	Primary or tertiary mitigation.	Assessment of effects.	Additional mitigation.	Residual effects.
Landscape character.					
Rolling Estate Claylands.	Effects on the character type within the site.	Retention of existing vegetation where possible and proposed planting to screen and filter views.	Moderate, adverse.	None	Moderate, adverse (not significant).
	Effects on remainder of character type.	Retention of existing vegetation where possible and proposed planting to screen and filter views.	Slight, adverse.	None	Slight, adverse (not significant).
	Night-time effects on character type.	Retention of existing vegetation where possible and proposed planting to screen and filter views. Best practice approach to lighting design.	Slight, adverse.	None	Slight, adverse (not significant).
Valley Meadows and Fens.	Indirect effects on character type.	Retention of existing vegetation where possible and proposed planting to screen and filter views.	Minimal, adverse.	None	Minimal, adverse (not significant).
	Night-time effects on character type.	Retention of existing vegetation where possible and proposed planting to screen and filter views. Best practice	Minimal, adverse.	None	Minimal, adverse (not significant).

Receptor	Impact	Primary or tertiary mitigation.	Assessment of effects.	Additional mitigation.	Residual effects.
		approach to lighting design.			
Visual receptors.					
Receptor group 1: users of footpaths through Cockfield Hall and residents of properties within the parkland at Cockfield Hall in the areas around their homes.	Visibility of tops of proposed lighting columns and glimpses of road infrastructure.	Retention of existing vegetation where possible and proposed planting to screen and filter views.	Slight, adverse.	None	Slight, adverse (not significant).
	Visibility of proposed lighting at night.	Best practice approach to lighting design.	Slight, adverse.	None	Slight, adverse (not significant).
Receptor group 2: users of the B1122, residents of properties north east and south the site, in the areas around their homes, and users of Footpath E-584/020/0.	Visibility of proposed Yoxford roundabout and associated infrastructure.	Retention of existing vegetation where possible and proposed planting to screen and filter views.	Moderate, adverse.	None	Moderate, adverse (not significant).
	Visibility of proposed lighting at night.	Best practice approach to lighting design.	Slight, adverse.	None	Slight, adverse (not significant).
Receptor group 3: residents and visitors to Yoxford along Brook Street.	Minor change to channelled view towards existing A12/B1122 junction.	Proposed planting to screen and filter views.	Slight, adverse.	None	Slight, adverse (not significant).
	Visibility of proposed lighting at night.	Best practice approach to lighting design.	Minimal, neutral.	None	Minimal, neutral (not significant).
Motorists using the A12.	Brief views of proposed Yoxford roundabout and associated infrastructure.	Retention of existing vegetation where possible and proposed planting to screen and filter views.	Slight, adverse.	None	Slight, adverse (not significant).
	Visibility of	Best practice	Minimal,	None	Minimal,

Receptor	Impact	Primary or tertiary mitigation.	Assessment of effects.	Additional mitigation.	Residual effects.
	proposed lighting at night.	approach to lighting design.	neutral.		neutral (not significant)
Landscape designations.					
SLA	Effects on special qualities.	Retention of existing vegetation where possible and proposed planting to screen and filter views.	Moderate, adverse.	None	Moderate, adverse (not significant).
	Effects on special qualities at night.	Best practice approach to lighting design.	Slight, adverse.	None	Slight, adverse (not significant).

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