

A47/A11 Thickthorn Junction

Scheme Number: TR010037

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Forms and Procedure) Regulations 2009

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**The Infrastructure Planning
(Applications: Prescribed Forms and
Procedure) Regulations 2009**

The A47/A11 Thickthorn Junction
Development Consent Order 202[x]

**ENVIRONMENTAL STATEMENT
6.6 EIA Scoping Opinion**

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SCOPING OPINION:

Proposed A47/A11 Thickthorn Junction

Case Reference: TR010037

Adopted by the Planning Inspectorate (on behalf of the Secretary of State for Communities and Local Government) pursuant to Regulation 10 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

March 2018

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1. INTRODUCTION

1.1 Background

- 1.1.1 On 8 February 2018, the Planning Inspectorate (the Inspectorate) on behalf of the Secretary of State (SoS) received a scoping request from Highways England (the Applicant) under Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) for the proposed A47/A11 Thickthorn Junction (the Proposed Development).
- 1.1.2 In accordance with Regulation 10 of the EIA Regulations, an Applicant may ask the SoS to state in writing its opinion *'as to the scope, and level of detail, of the information to be provided in the environmental statement'*.
- 1.1.3 This document is the Scoping Opinion (the Opinion) provided by the Inspectorate on behalf of the SoS in respect of the Proposed Development. It is made on the basis of the information provided in the Applicant's report entitled A47/A11 Thickthorn Junction EIA Scoping Report (the Scoping Report). This Opinion can only reflect the proposals as currently described by the Applicant. The Scoping Opinion should be read in conjunction with the Applicant's Scoping Report.
- 1.1.4 The Applicant has notified the SoS under Regulation 8(1)(b) of the EIA Regulations that they propose to provide an Environmental Statement (ES) in respect of the Proposed Development. Therefore, in accordance with Regulation 6(2)(a) of the EIA Regulations, the Proposed Development is EIA development.
- 1.1.5 Regulation 10(9) of the EIA Regulations requires that before adopting a scoping opinion the Inspectorate must take into account:
- (a) *any information provided about the proposed development;*
 - (b) *the specific characteristics of the development;*
 - (c) *the likely significant effects of the development on the environment; and*
 - (d) *in the case of a subsequent application, the environmental statement submitted with the original application.*
- 1.1.6 This Opinion has taken into account the requirements of the EIA Regulations as well as current best practice towards preparation of an ES.
- 1.1.7 The Inspectorate has consulted on the Applicant's Scoping Report and the responses received from the consultation bodies have been taken into account in adopting this Opinion (see Appendix 2).
- 1.1.8 The points addressed by the Applicant in the Scoping Report have been carefully considered and use has been made of professional judgement and experience in order to adopt this Opinion. It should be noted that

when it comes to consider the ES, the Inspectorate will take account of relevant legislation and guidelines. The Inspectorate will not be precluded from requiring additional information if it is considered necessary in connection with the ES submitted with the application for a Development Consent Order (DCO).

- 1.1.9 This Opinion should not be construed as implying that the Inspectorate agrees with the information or comments provided by the Applicant in their request for an opinion from the Inspectorate. In particular, comments from the Inspectorate in this Opinion are without prejudice to any later decisions taken (eg on submission of the application) that any development identified by the Applicant is necessarily to be treated as part of a Nationally Significant Infrastructure Project (NSIP) or associated development or development that does not require development consent.
- 1.1.10 Regulation 10(3) of the EIA Regulations states that a request for a scoping opinion must include:
- (a) a plan sufficient to identify the land;
 - (b) a description of the proposed development, including its location and technical capacity;
 - (c) an explanation of the likely significant effects of the development on the environment; and
 - (d) such other information or representations as the person making the request may wish to provide or make.
- 1.1.11 The Inspectorate considers that this has been provided in the Applicant's Scoping Report. The Inspectorate is satisfied that the Scoping Report encompasses the relevant aspects identified in the EIA Regulations.
- 1.1.12 In accordance with Regulation 14(3)(a), where a scoping opinion has been issued in accordance with Regulation 10 an ES accompanying an application for an order granting development consent should be based on *'the most recent scoping opinion adopted (so far as the proposed development remains materially the same as the proposed development which was subject to that opinion)'*.
- 1.1.13 The Inspectorate notes the potential need to carry out an assessment under The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations). This assessment must be co-ordinated with the EIA.

1.2 The Planning Inspectorate's Consultation

- 1.2.1 In accordance with Regulation 10(6) of the EIA Regulations the Inspectorate has consulted the prescribed consultation bodies before adopting this scoping opinion. A list of the bodies formally consulted by the Inspectorate is provided at Appendix 1. The consultation bodies have been notified under Regulation 11(1)(a) of the duty imposed on them by Regulation 11(3) of the EIA Regulations to make information available to

the Applicant relevant to the preparation of the ES. The Applicant should note that whilst the list can inform their consultation, it should not be relied upon for that purpose.

- 1.2.2 The list of respondents who replied within the statutory timeframe and whose comments have been taken into account in the preparation of this Opinion is provided, along with copies of their comments, at Appendix 2, to which the Applicant should refer in undertaking the EIA.
- 1.2.3 The ES submitted by the Applicant should demonstrate consideration of the points raised by the consultation bodies. It is recommended that a table is provided in the ES summarising the scoping responses from the consultation bodies and how they are, or are not, addressed in the ES.
- 1.2.4 Any consultation responses received after the statutory deadline for receipt of comments will not be taken into account within this Opinion. Late responses will be forwarded to the Applicant and will be made available on the Inspectorate's website. The Applicant should also give due consideration to those comments in carrying out the EIA.

1.3 Article 50 of the Treaty on European Union

- 1.3.1 On 23 June 2016, the United Kingdom (UK) held a referendum and voted to leave the European Union (EU). On 29 March 2017 the Prime Minister triggered Article 50 of the Treaty on European Union, which commenced a two year period of negotiations regarding the UK's exit from the EU. There is no immediate change to legislation or policy affecting national infrastructure. Relevant EU Directives have been transposed into UK law and those are unchanged until amended by Parliament.

2. THE PROPOSED DEVELOPMENT

2.1 Introduction

2.1.1 The following is a summary of the information on the Proposed Development and its site and surroundings prepared by the Applicant and included in their Scoping Report. The information has not been verified and it has been assumed that the information provided reflects the existing knowledge of the Proposed Development and the potential receptors/resources.

2.2 Description of the Proposed Development

2.2.1 The Applicant's description of the Proposed Development and its location is provided in Scoping Report Sections 2.3 and 2.4. Figure 1.1 depicts the location of the Proposed Development.

2.2.2 The Proposed Development comprises changes to and between the A47 Thickthorn Junction, the A11 Round House Roundabout and Newmarket Road. It includes new interchange link roads to link the A11 and the A47. In addition, two alternative options (A and B) are proposed for reconnecting Cantley Lane South, a side road to the south of the A11 and to the west of the A47, to the proposed new road layout. These options are shown on Figure 3.1.

2.2.3 The proposed application site is located where the A47 Norwich Southern Bypass meets the A11 (connecting Norwich to Cambridge and London). It lies on the south western edge of the suburban extent of Norwich. The Breckland railway line passes 700m to the south of the junction.

2.2.4 The area surrounding the Proposed Development is predominantly rural, comprising arable and pastoral agriculture and woodland, bound with an extensive network of hedgerows. On the northern side of the Proposed Development lie Thickthorn Park and Ride, a hotel, an electricity substation, a service station, and two restaurants.

2.3 The Planning Inspectorate's Comments

Description of the Proposed Development

2.3.1 The Scoping Report contains only limited detail, with the main characteristics of the Proposed Development explained in high-level terms. The description of the Proposed Development is unclear and not consistent with what is shown on Figure 1.1 of the Scoping Report. For example, the description provides for two options for the side road strategy (to reconnect Cantley Lane South) and states that these options are collectively referred to as the 'Proposed Scheme', however neither option is presented on Figure 1.1. The description provided omits the other elements of the Proposed Development, such as, for example, the interchange link roads. The information provided on the link roads lacks detail and is confusing.

- 2.3.2 In addition, the description of the Proposed Development provided in the noise and vibration chapter is confusing as it refers to 'Option A' and 'Option B' in relation to the entire Proposed Development, rather than only in respect of Cantley Lane South, as described in Chapter 2, Section 2.4 and shown on Figure 3.1 of the Scoping Report, and no differentiation is made between Cantley Lane and Cantley Lane South. The description of development provided in the ES must be consistently applied throughout.
- 2.3.3 Section 2.4 of the Scoping Report is focussed on the side road options, and the other elements of the Proposed Development are presented in terms of the overarching objectives rather than information about what it will specifically comprise. Particular elements are then mentioned in subsequent chapters in the absence of context, such as the 'in-channel works' required for the 'culvert extension and stream diversion, between the A11 and Cantley Lane South' (paragraph 8.4.3). The Applicant should ensure that the description of the Proposed Development in the ES is sufficiently detailed to ensure a robust assessment.
- 2.3.4 The legend in Figures 1.1 and 3.1 refer to 'Highways England led improvements' (shown in orange) and 'Proposed developer funded improvements' (shown in blue). A footnote included in Figure 3.1, but not in Figure 1.1, states that the development marked in blue is 'a local scheme progressed by developers with South Norfolk District Council'. This suggests that these elements are not included in the DCO application. However the land required for their construction is clearly included in the DCO site boundary (Figure A.1, Appendix A). This further confuses the understanding of what constitutes the Proposed Development.
- 2.3.5 The Inspectorate expects that at the point of application the ES should include a detailed description of the Proposed Development which includes all of the works for which development consent is sought, supported by clear figures. Details of components such as underpass structures, signage, gantries, lighting, drainage features, landscaping and environmental mitigation features have not been provided in the Scoping Report and this information should be provided in the ES.
- 2.3.6 The length of the scheme (in km) and the size of the application site (in hectares) must be specified in the ES. The Inspectorate notes that such information is provided in paragraph 2.4.1 of the Scoping Report; however, given that there are two options for the side road strategy, it is not clear if the dimensions provided include Option A, Option B, both or neither.
- 2.3.7 The Inspectorate notes that the DCO site boundary shown on Figure A.1 (Appendix A) includes parcels of land at Intwood and Station Farm, but it is not clear from the description in the Scoping Report what permanent and/or temporary works are proposed within these areas. No information is provided in the Scoping Report relating to the physical characteristics of the Proposed Development in terms of demolition works, construction

land-take, and the use and removal of soils and other materials. The ES should identify any demolition works, construction facilities and accesses, site clearance activities, ground and excavation works, works to services and utilities, and construction emissions that form part of the Proposed Development (and therefore have the potential to cause environmental impacts). The ES should take these activities into account within the various aspect assessments where relevant.

- 2.3.8 The ES should clearly identify and differentiate between the land that would be required temporarily during construction (eg the location of construction compounds, access routes) and the land that would be required for the operational phase. The DCO application site boundary must allow for the land-take associated with all works and project elements proposed as part of the application, including requisite demolition works, drainage features, and areas of land used for mitigation purposes.
- 2.3.9 Throughout the Scoping Report, reference is made variously to 'the Proposed Scheme', 'the project', 'the site footprint', 'the construction footprint', 'the construction site', 'the red line boundary', and 'the scheme area'. Some of these terms appear to be used interchangeably. This is of particular relevance to understanding the study areas applied and how the relevant baseline information has been captured, and therefore understanding the basis of the assessments of the effects of the Proposed Development. The terminology used in the ES should be clearly explained and consistently applied throughout so that the likely significant effects of the Proposed Development can be fully understood.
- 2.3.10 Paragraph 2.4.4 of the Scoping Report describes a proposed new overbridge over the A11. It states that it would be a 3-span structure comprising one 50m span and two 30m spans, and would be 100m long in total. These dimensions do not equate and are therefore at odds. The Applicant should ensure that the parameters specified in the ES are consistent with the draft DCO (dDCO) and are applied consistently throughout the assessment.

Alternatives

- 2.3.11 The Scoping Report includes a discrete section (Section 3) that describes the alternative route alignments that were considered and consulted upon, and provides information on the reasoning for the selection of the preferred option(s). Scoping Report paragraph 3.1.1 makes reference to the consideration of environmental (and other) criteria but no further details have been provided.
- 2.3.12 The EIA Regulations require that the Applicant provide 'A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects'.

Flexibility

- 2.3.13 The Applicant's attention is drawn to the Inspectorate's Advice Note Nine 'Using the 'Rochdale Envelope'¹, which provides additional details on the recommended approach.
- 2.3.14 The Applicant should make every attempt to narrow the range of options and explain clearly in the ES which elements of the Proposed Development have yet to be finalised and provide the reasons. At the time of application, any Proposed Development parameters should not be so wide-ranging as to represent effectively different developments. The development parameters will need to be clearly defined in the dDCO and in the accompanying ES. It is a matter for the Applicant, in preparing an ES, to consider whether it is possible to robustly assess a range of impacts resulting from a large number of undecided parameters. The description of the Proposed Development in the ES must not be so wide that it is insufficiently certain to comply with the requirements of Regulation 14 of the EIA Regulations. Where flexibility is sought for any elements of the Proposed Development the ES should set out the parameters that would apply, clearly setting out any proposed limits of deviation.
- 2.3.15 It should be noted that if the Proposed Development changes materially during the EIA process and prior to submission of the DCO application the Applicant may wish to consider requesting a new scoping opinion.

¹ Advice Note nine: Using the Rochdale Envelope. 2012. Available at:
<https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

3. EIA APPROACH

3.1 Introduction

- 3.1.1 This section contains the Inspectorate's specific comments on the scope and level of detail of information to be provided in the Applicant's ES. General advice on the presentation of an ES is provided in the Inspectorate's Advice Note Seven 'Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements'² and associated appendices.
- 3.1.2 Aspects/matters are not scoped out unless specifically addressed and justified by the Applicant, and confirmed as being scoped out by the Inspectorate. The ES should be based on the Scoping Opinion in so far as the Proposed Development remains materially the same as the Proposed Development described in the Applicant's Scoping Report. The Inspectorate has set out in this Opinion where it has/has not agreed to scope out certain aspects/matters on the basis of the information available at this time. The Inspectorate is content that this should not prevent the Applicant from subsequently agreeing with the relevant consultees to scope such aspects/matters out of the ES, where further evidence has been provided to justify this approach. However, in order to demonstrate that the aspects/matters have been appropriately addressed, the ES should explain the reasoning for scoping them out and justify the approach taken.
- 3.1.3 Where relevant, the ES should provide reference to how the delivery of measures proposed to prevent/minimise adverse effects is secured through DCO requirements (or other suitably robust methods) and whether relevant consultees agree on the adequacy of the measures proposed.

3.2 Relevant National Policy Statements (NPSs)

- 3.2.1 Sector-specific NPSs are produced by the relevant Government Departments and set out national policy for NSIPs. They provide the framework within which the Examining Authority (ExA) will make their recommendation to the SoS and include the Government's objectives for the development of NSIPs. The NPSs may include environmental requirements for NSIPs, which Applicants should address within their ES.
- 3.2.2 The designated NPS relevant to the Proposed Development is the National Policy Statement for National Networks (NPSNN).

² Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements and annex. Available from: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

3.3 Scope of Assessment

General

- 3.3.1 The Inspectorate recommends that in order to assist the decision-making process, the Applicant uses tables:
- to demonstrate how the assessment has taken account of this Opinion;
 - to identify and collate the residual effects after mitigation for each of the aspect chapters, including the relevant interrelationships and cumulative effects;
 - to set out the proposed mitigation and/or monitoring measures including cross-reference to the means of securing such measures (eg a dDCO requirement);
 - to describe any remedial measures that are identified as being necessary following monitoring; and
 - to identify where details contained in the Habitats Regulations Assessment (HRA report) (where relevant), such as descriptions of European sites and their locations, together with any mitigation or compensation measures, are to be found in the ES.
- 3.3.2 The Inspectorate considers that where a DCO application includes works described as 'associated development', that could themselves be defined as an improvement of a highway, the Applicant should ensure that the ES accompanying that application distinguishes between effects that primarily derive from the integral works which form the proposed (or part of the proposed) NSIP, and those that primarily derive from the works described as associated development. This could be presented in a suitably compiled summary table. This will have the benefit of giving greater confidence to the Inspectorate that what is proposed is not in fact an additional NSIP as defined in s22 of the PA2008.
- 3.3.3 It is noted that paragraph 1.1.3 of the Scoping Report states that a 'final version' of the Scoping Report will be appended to the ES. The Inspectorate advises that there is no requirement for a Scoping Report to be submitted with the DCO application. The Applicant is referred to the Annex to the Planning Inspectorate's Advice Note Seven, which provides advice about the presentation of an Environmental Statement.

Baseline scenario

- 3.3.4 The ES should include a description of the baseline scenario with and without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.

Forecasting methods or evidence

- 3.3.5 The ES should contain the timescales upon which the surveys which underpin the technical assessments have been based. For clarity, this information should be provided either in the introductory chapters of the ES (with confirmation that these timescales apply to all chapters), or in each aspect chapter.
- 3.3.6 The Inspectorate expects the ES to include a chapter setting out the overarching methodology for the assessment, which clearly states which effects are 'significant' and 'non-significant' for the purposes of the EIA Regulations. It is noted that descriptions of the levels of significance used are provided in Table 1.1 of the Scoping Report, under 'Approach to Assessment', and that the subsequent table combines receptor sensitivity and impact magnitude values to determine the level of significance of an effect. However, the criteria used to define sensitivity and magnitude values have not been provided. The Inspectorate expects these criteria to be described in the ES in the overarching methodology chapter or in individual aspect chapters where there is any departure from that.
- 3.3.7 The Inspectorate notes that within Table 1.2 of the Scoping Report 'slight or moderate' levels of significance are shown for some of the combinations of magnitude and sensitivity values, for example, where there is a minor impact on a receptor with high sensitivity. As it is indicated that an effect that is determined to be of a moderate level or above is considered to constitute a significant effect, the Applicant must explain and justify this approach in the ES.
- 3.3.8 The ES should include details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.

Residues and emissions

- 3.3.9 The EIA Regulations require an estimate, by type and quantity, of expected residues and emissions. Specific reference should be made to water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases, where relevant. This information should be provided in a clear and consistent fashion and may be integrated into the relevant aspect assessments.
- 3.3.10 The Inspectorate notes that heat and radiation effects have been scoped out for assessment on the basis that they are unlikely to arise due to the nature of the Proposed Development. The Inspectorate agrees that significant heat and radiation effects are unlikely and that this matter may be scoped out of the ES.

Mitigation

- 3.3.11 The Inspectorate notes that the Scoping Report states a number of times that mitigation measures will be set out in a Construction Environmental

Management Plan (CEMP). Any mitigation relied upon for the purposes of the assessment should be described in detail within the ES, and the likely efficacy of the mitigation proposed should be explained with reference to residual effects. The ES should also address how any mitigation proposed is secured, with cross-reference made to specific DCO requirements or other legally binding agreements submitted with the DCO application.

Vulnerability of the development to risks of major accidents and/or disasters

- 3.3.12 The ES should include a description of the potential vulnerability of the Proposed Development to risks of major accidents and/or disasters, including vulnerability to climate change, which are relevant to the Proposed Development. Relevant information available and obtained through risk assessments pursuant to European Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.
- 3.3.13 Having had regard to the particular nature of the Proposed Development and the justification provided in the Scoping Report, the Inspectorate agrees that the Proposed Development is unlikely to require a standalone assessment regarding the Proposed Development's vulnerability to risks of, or its potential to cause, major accidents and/or disasters, on the basis that this will be covered in the ES technical chapters. The Inspectorate notes and welcomes the statement in the Scoping Report confirming that the ES will include a table which identifies where this has been considered in the relevant technical chapters, such as, for example, road drainage and the water environment in respect of flood risk and culvert design. The Applicant should liaise with the relevant statutory consultees to better understand the likelihood of an occurrence and the Proposed Development's susceptibility to potential major accidents and disasters.

Transboundary effects

- 3.3.14 Schedule 4 Part 5 of the EIA Regulations requires a description of the likely significant transboundary effects to be provided in an ES. The Inspectorate notes that the Applicant has indicated in the Scoping Report whether the Proposed Development is likely to have significant impacts on another European Economic Area (EEA) State.
- 3.3.15 Regulation 32 of the EIA Regulations inter alia requires the Inspectorate to publicise a DCO application on behalf of the SoS if it is of the view that the proposal is likely to have significant effects on the environment of another EEA State, and where relevant, to consult with the EEA state affected. The Inspectorate considers that where Regulation 32 applies,

this is likely to have implications for the examination of a DCO application.

A reference list

- 3.3.16 A reference list detailing the sources used for the descriptions and assessments must be included in the ES.

3.4 Confidential Information

- 3.4.1 In some circumstances it will be appropriate for information to be kept confidential. In particular, this may relate to information about the presence and locations of rare or sensitive species such as badgers, rare birds and plants where disturbance, damage, persecution or commercial exploitation may result from publication of the information. Where documents are intended to remain confidential the Applicant should provide these as separate paper and electronic documents with their confidential nature clearly indicated in the title, and watermarked as such on each page. The information should not be incorporated within other documents that are intended for publication or which the Inspectorate would be required to disclose under the Environmental Information Regulations 2014.

4. ASPECT BASED SCOPING TABLES

4.1 Air Quality

(Scoping Report Section 5)

The study area for the local air quality assessment is described as covering human health receptors and ecologically designated sites within 200m of roads which it is anticipated would be affected by the Proposed Development, according to the definition of 'affected roads' in the DMRB. The study area for the regional air quality assessment is not defined. It is stated that the affected roads have not been identified as the scheme-specific traffic data is not yet available.

The closest Air Quality Management Area (AQMA) to the Proposed Development is the Central Norwich AQMA, located approximately 5km to the north east.

The air quality assessment will have regard to the DMRB Volume 11, Section 3, Part 1 (HA 207/07) and related HE Interim Advice Note (IANs), and Defra's Local Air Quality Management Technical Guidance (LAQM.TG(16)).

The Applicant intends to undertake a 'qualitative' assessment of construction phase impacts and a 'detailed assessment' (according to the DMRB) of the operational phase impacts.

The Applicant considers that the main risks to sensitive receptors during the construction phase would include on-site dust emissions arising from construction activities and vehicle movements, but that significant effects are unlikely with mitigation measures in place.

The Applicant identifies potential operational air quality effects resulting from changes in emissions associated with changes in traffic flows on the local road network, and changes in road layout which may bring road traffic emission sources closer to, or further away from, sensitive receptors, and notes that these effects will be dependent on traffic impacts yet to be determined.

No matters have been proposed to be scoped out of the assessment.

| ID | Para | Applicant's proposed matters to scope out | Inspectorate's comments |
|-----------|---------------------|--|--|
| | N/A | None identified. | N/A |
| ID | Para/Section | Other points | Inspectorate's comments |
| 1 | 5.2.2 | Study area | It is not clear whether the reference to the local air quality assessment study area relates to all phases of the Proposed Development, or operation only. Paragraph 5.2.1 of the Scoping Report cross-refers to environmental constraints depicted in Figures B.1 and B.2 but these identify what |

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| | | | appear to be generic buffer zones around the Proposed Development of 500m and 5km, respectively. The Inspectorate expects the study area(s) to be clearly described in the ES and delineated on related plans. |
| 2 | 5.3.4 | Baseline data | Table 3.1 of the Scoping Report provides the monitoring data for three diffusion tube roadside sites that are located 'in close proximity' to the Proposed Development, although the distance from the Proposed Development site is not specified. The relevance of the monitoring data relied upon for the assessment must be clearly explained in the ES. |
| 3 | 5.3.7 and 5.9.3 | Modelling | Very limited information is provided on the Defra Pollution Climate Mapping (PCM) model referenced in relation to European Union (EU) limit values compliance. It is noted that 'ADMS-Roads' will be used to model the operational phase impacts. Details of all models used for the purposes of the assessment and the data on which the assessment relies should be provided in the ES. The existing baseline and the future baseline data should be clearly differentiated. |
| 4 | Section 5.3 | Baseline information | The Scoping Report states that the Proposed Development is unlikely to result in non-compliance with the Air Quality Directive. However, the 2016 monitoring data presented for one of the three closest South Norfolk District Council (SNDC) diffusion tube locations to the site shows an annual concentration close to the relevant annual mean objective for NO ₂ , and Chapter 15 of the Scoping Report notes that there is potential for cumulative air quality effects. Paragraph 5.3.11 notes that there are no AQMAs 'within the vicinity' of the Proposed Development although the study area has not yet been defined and it is previously indicated that there is an AQMA approximately 5km away. The Applicant should ensure that the conclusions reported in the ES are fully justified and supported by the evidence. |

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| 5 | 5.3.5 – 5.3.6 | Baseline - projected background concentrations | The Defra projected background concentrations are no longer current and have been updated. The projections used for the assessment in the ES must be up to date. |
| 6 | Section 5.4 | Assumptions and limitations | A number of uncertainties are identified in relation to modelling. The assumptions used to inform the modelling should reflect the worst case scenario. |
| 7 | 5.5.3 | Assessment | The Scoping Report does not proposed to include fine particulate matter (PM _{2.5}) in the assessment in the ES, although a projected background concentration is shown in Table 5.2, along with projections for NO _x , NO ₂ and PM ₁₀ . The Inspectorate considers that the ES should include an assessment of PM _{2.5} emissions and that significance should be determined taking into account performance against relevant target/limit values. |
| 8 | 5.7.1 | Construction impacts | It is noted that the main impacts on sensitive receptors during construction are anticipated to occur from on-site dust emissions associated with construction activities and vehicle movements. Potential off-site construction impacts which may result in a significant effect, such as for example, from construction traffic on local roads, should be assessed. |
| 9 | Section 5.7 | Mitigation | The Inspectorate notes that it is anticipated that construction impacts would be mitigated through measures included within a CEMP. No reference is made to mitigation of operational impacts, or to potential residual effects. The potential impacts during all phases of the Proposed Development and the mitigation measures proposed to address them should be described in the ES and clear cross-reference made to the location of the proposed mitigation measures within other application documents such as, for example, the CEMP, and to where they are secured in the dDCO. Any residual effects should be identified. |

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| 10 | 5.9.3 & 5.9.4 | Methodology | <p>The proposed scope of the assessments, both in terms of the pollutants that will be included, and the temporal scope, is unclear, and also appears inconsistent between the local and regional assessments. For example, only NO_x and PM₁₀ are mentioned; reference is made to an opening year 'Do-Minimum' and 'Do-Something' scenarios (which are not explained) in respect of local impacts, and it is indicated that a 'design year' assessment will be made in relation to regional impacts. The ES should clearly set out the scope of each assessment and explain the relationship between the local and regional assessments, including any differences in approach.</p> |
| 11 | Section 5.9 | Methodology | <p>The approach to determining at which receptors there is '...a reasonable risk of exceeding an air quality threshold...' should be clearly explained in the ES.</p> <p>The approach that will be applied to determining a significant effect is unclear. Only magnitude criteria are defined, and sensitivity criteria have not been provided. Table 5.3 of the Scoping Report refers only to 'properties', and no reference is made to ecological receptors. It is therefore, unclear what is proposed to constitute a significant effect. Information on the methodological approach applied to the assessments must be set out in the ES and encompass impacts on both human and ecological receptors.</p> |
| 12 | N/A | Ecological receptors | <p>The ES should assess, as appropriate, impacts to non-designated sites and species that could be significantly affected by the Proposed Development. The Inspectorate recommends that the relevant ecological receptors for the assessment are agreed with Natural England (NE) and SNDC. The assessment should be informed by the ecological assessment and cross-reference made to relevant information in the ES ecology chapter.</p> |

4.2 Cultural Heritage

(Scoping Report Section 6)

The study area is described as an area within 1km of the 'Proposed Scheme'. In addition, a Zone of Visual Influence (ZVI) produced as part of the landscape and visual impact assessment (LVIA) will be used to identify designated assets beyond 1km which may be affected. Designated and non-designated heritage assets are presented in Table 6.1 of the Scoping Report.

The Scoping Report makes reference to desk study data being obtained from Historic England and local authority records. The assessment would follow various guidance and standards including the DMRB HA 208/07³, Historic England guidance on historic environment and the setting of heritage assets⁴, and "Standard and Guidance from the Chartered Institute for Archaeologists" although the specific standards/guidance are not stated (paragraph 6.5.1 of the Scoping Report).

The Scoping Report identifies potential adverse effects from construction excavation on a scheduled monument comprising two Bronze Age Round barrows. It also identifies potential adverse effects on the setting of heritage assets through the operational changes in noise levels, visual impacts and traffic movements.

No matters are proposed to be scoped out of the assessment.

| ID | Para | Applicant's proposed matters to scope out | Inspectorate's comments |
|-----------|-------------|--|---|
| | N/A | None identified. | N/A |
| ID | Para | Other points | Inspectorate's comments |
| 13 | 6.2.1 | Study area | The ES should provide a robust justification as to why the 1km study area is appropriate and sufficient to capture all heritage assets which could experience impacts to their setting taking into account, for example, visual intrusion or increased noise emissions. Paragraph 6.2.2 of the Scoping Report states that a ZVI (assumed to refer to the |

³ DMRB Volume 11, Section 3, Part 2 'Cultural Heritage' (HA 208/07)

⁴ Historic England (2008) conservation Principles: Policies and Guidance; Historic England (2015) Historic Environment Good Practice Advice in Planning Note 2 (GPA2) – Managing Significance in Decision-taking in the Historic Environment; Historic England (2015) Historic Environment Good Practice Advice in Planning Note 3 (GPA3) – The Setting of Heritage Assets.

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| | | | <p>ZTV) will be used to identify any heritage assets that would be affected by the construction of the Proposed Development. The Inspectorate also considers that the ZTV (or equivalent) should also be used to identify heritage assets affected during operation of the Proposed Development.</p> <p>Effort should be made to seek agreement with relevant consultees regarding the appropriate study area.</p> |
| 14 | 6.5.1 | Guidance | <p>The Inspectorate notes the potential for impacts on buried archaeological resource. Where relevant the ES should take into account guidance contained in Historic England's guidance document 'Preserving Archaeological Remains'⁵.</p> <p>The ES should explain which of the Chartered Institute for Archaeologists standards and guidance have been used to inform the ES.</p> <p>The Inspectorate draws the Applicant's attention to the revised Historic England Good Practice Advice note 3, which was updated December 2017⁶.</p> |
| 15 | 6.8.1 – 6.9.6 | Proposed methodology | <p>The Scoping Report states that a detailed assessment will be undertaken. However, the description of the detailed assessment in DMRB HA208/07 includes a variety of options applicable to the detailed assessment approach. Consequently it is unclear what the precise scope of the assessment will be.</p> <p>The ES should include both a desk-based assessment and an archaeological field evaluation (where relevant). The scope of the field evaluation (where relevant) should be discussed and ideally agreed with South Norfolk District Council Conservation Officer and archaeological staff at Norfolk County Council as appropriate.</p> |

⁵ Preserving Archaeological Remains: Decision taking for sites under development (Historic England, 2016)

⁶ [Good Practice Advice on Planning Note 3 - The Setting of Heritage Assets](#) (Historic England, 2017)

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| | | | <p>The Inspectorate notes that the Applicant has defined an approach to the assessment according to the criteria set out in Section 6.9. The Applicant should also have regard to the recommendations made by Historic England (contained in Appendix 2 of this Scoping Opinion) in this respect and ideally agree the approach.</p> |
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4.3 Landscape

(Scoping Report Section 7)

The study area is described as 1km 'from the Proposed Scheme limits', extended to encompass any receptors beyond 1km which have the potential to experience significant effects.

The assessment will follow the DMRB Part 5 on Landscape Effects⁷ in addition to guidance for a detailed assessment in IAN 135/10⁸, the Guidelines for Landscape and Visual Impact Assessment (GLVIA)⁹, and NE guidance on landscape character assessments¹⁰. A detailed Level of assessment is proposed.

Potentially significant effects on landscape elements and character and visual amenity are identified during construction and the operation of the development in Year 1. By Year 15 of operation these effects are expected to be mitigated for the majority of receptors to a large degree by the establishment of mitigation planting.

No matters have been proposed to be scoped out.

| ID | Para | Applicant's proposed matters to scope out | Inspectorate's comments |
|-----------|-------------|--|--|
| | N/A | None identified. | N/A |
| ID | Para | Other points | Inspectorate's comments |
| 16 | 7.2.1 | Study area | The study areas used for the landscape assessment and the visual assessments in the ES should be justified and efforts made to agree these with the relevant consultees. The ES should explain how consultation has influenced the approach taken to the assessment. |
| 17 | 7.9.3 | ZTV | The Scoping Report states that the ZTV will be established assuming a viewer height of 1.6m above ground level. However, the Inspectorate notes that DMRB recommends that the observer height is 1.8m above ground level. The ES should clearly explain |

⁷ DMRB Volume 11, Section 3, Part 5 Landscape Effects

⁸ IAN 135/10 Landscape and Visual Effects Assessment

⁹ GLVIA, 3rd Edition: Landscape Institute of Environmental Management and Assessment (2013)

¹⁰ Natural England (2014) An Approach to Landscape Character Assessments

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| | | | the approach taken to the assessment and any assumptions made or deviation from recognised guidance should be identified and justified. |
| 18 | 7.7.1 – 7.7.16 | Potential effects | To support a robust assessment of likely significant effects, the ES should include plans and visualisations of the Proposed Development which highlight the specific elements that would impact on landscape character and be visually prominent to visual and amenity receptors (for example the new link roads, bridges, cuttings and embankments). Cross-sections and photomontages should be included for this purpose. |
| 19 | 7.7.1 – 7.7.16 | Mitigation | Mitigation planting and landscape mitigation are referred to in order to reduce the operational effects of the Proposed Development. The Applicant should discuss and make effort to agree the planting specification/species mix with the relevant local planning authorities. An appropriate aftercare period for the proposed landscaping should also be discussed and ideally agreed. It should be clear how the proposed landscaping would mitigate the effects to landscape and visual receptors, and how these effects would change as the proposed planting matures. Interactions with other ES aspects, for example beneficial impacts on local ecology, should be assessed and explained. |
| 20 | Appendix C | Lighting methodology | Appendix C to the Scoping Report does not explain the methodology proposed for determining the significance of effects from obtrusive light but does provide the framework for establishing a baseline. The ES should specify the assessment methodology to be applied and the criteria used to determine the significance of effects. |

4.4 Biodiversity

(Scoping Report Section 8)

Table 8.1 of the Scoping Report sets out the study areas applied to assess the potential effects on various ecological receptors. The study areas vary in spatial extent depending on the ecological receptor. They include study areas of 2km for European sites (except SACs designated for bat populations, where 30km is applied) and nationally and locally designated sites.

Baseline conditions were identified using a combination of desk study and field survey, including an Extended Phase 1 Habitat Survey of publicly accessible land. Phase 2 surveys have also been carried out for some species. The Applicant intends to rely on DMRB Volume 11, Section 3, Part 4 Ecology and Nature Conservation guidance, IAN 130/10¹¹, and CIEEM guidance¹² to assess the potential for significant adverse effects that may arise from the Proposed Development. Species specific guidance for survey methodology is also referenced in Table 8.3.

The Scoping Report identifies impacts during construction and operation in section 8.7 which includes:

- loss, fragmentation and degradation of habitats;
- mortality/injury of protected and/or priority species;
- disturbance from noise, vibration, and light; and
- changes in hydrology and pollution of habitats.

No matters have been explicitly proposed to be scoped out. However, the Inspectorate has assumed that to be the intention in respect of the matters identified below.

| ID | Para | Applicant's proposed matters to scope out | Inspectorate's comments |
|-----------|-------------|---|---|
| 21 | 8.8.11 | No further surveys are proposed for aquatic invertebrates, hedgerows, reptiles, great crested newts, terrestrial invertebrates and polecat. | The information provided in the Scoping Report to support this decision lacks detail and fails to explain the extent of data collection carried out to-date. In the absence of this detail and sufficient justification to demonstrate no likely significant effects, the Inspectorate is unable to confirm that no further assessment is required of these features. |

¹¹ HA (2010) IAN 130/10 Ecology and Nature Conservation: Criteria for Impact Assessment

¹² Chartered Institute of Ecology and Environmental Management (CIEEM) (2016) Guidelines for Ecological Impact Assessment in the UK

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| | | | The extent to which further survey effort is required should be discussed and ideally agreed with relevant statutory consultees. The ES should either include such assessments, or the evidence that supports the conclusion that no further assessment is required, together with any evidence of agreement with the relevant consultees that significant effects are not likely to occur. |
| 22 | 8.3.19 & 8.1.1 | Assessment – Phase 2 botanical surveys | Paragraph 8.3.19 of the Scoping Report confirms the likely presence of scarce flora and the potential for rare/scarce flora to be present in suitable woodland, grassland and wetland habitats. However, paragraph 8.8.11 of the Scoping Report contradicts this finding by proposing to scope out further botanical surveys on the basis of 'limited flora communities, of low to moderate ecological value only'. The extent to which further survey effort is required should be discussed and ideally agreed with relevant statutory consultees. The ES should either include such assessments, or the evidence that supports the conclusion that no further assessment is required, together with any evidence of agreement with the relevant consultees that significant effects are not likely to occur. |
| ID | Para | Other points | Inspectorate's comments |
| 23 | Table 8.3 | Location of breeding bird surveys | Table 8.3 states that breeding bird surveys will be carried out "within the footprint of the Proposed Scheme, plus a 100m buffer". However, the Inspectorate notes that barn owl populations within 1.5km of road boundaries are at risk of collision mortality. If barn owls are likely to be present, within a 1.5km study area then the assessment should include consideration of impacts to this species. The Applicant should liaise with NE to ensure the assessment appropriately addresses the collision risk to barn owls. |
| 24 | 8.4.2 | Field surveys - Access | The Scoping Report states that ecological surveys undertaken to date were confined to locations where landowner permission was obtained. The Applicant should ensure |

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| | | | that the ES is accompanied by an appropriate and comprehensive set of ecological surveys sufficient to inform the assessment of likely significant effects. |
| 25 | 8.7.1 – 8.7.30 | Potential effects – mortality/ injury & pollution | <p>The Scoping Report does not identify mortality/ injury of protected and/ or priority species as a potential impact arising from the construction and operation of the project. It does not identify impacts from air pollution or operational impacts arising from noise and vibration and lighting.</p> <p>The Inspectorate considers that these should all be assessed in the ES, during both the construction and operational phases of the Proposed Development. These assessments should be informed by the findings reported in other relevant ES aspect chapters, for example, air quality, noise and vibration.</p> |
| 26 | 8.8.11 | Assessment – aquatic invertebrates, hedgerows, reptiles, great crested newts, terrestrial invertebrates, polecat | |
| 27 | 8.7.1 – 8.7.30 | Potential mitigation measures and enhancement | The Inspectorate recommends that any proposed mitigation and monitoring measures are agreed where possible with relevant consultees including NE and the local planning authorities. The ES should detail all proposed mitigation measures and demonstrate how they will be secured. |
| 28 | 8.7.1 – 8.7.30 | Significance of effects | Significance is described in terms of 'medium minor negative, or 'high intermediate negative', etc. This does not reflect the categorisation of effects as set out in Table 8.6 of the Scoping Report. The Applicant should ensure that the methodology is applied and described consistently throughout the ES and each aspect chapter (where relevant), so that the significance of the potential effects can be clearly understood. |
| 29 | N/A | Ecological receptors | The Inspectorate notes that a number of ecological receptors are shown on Figure B.2, the environmental constraints plan to the Scoping Report yet are not identified in |

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| | | | <p>the baseline information in the aspect chapter. It is also apparent that other features, such as locally designated nature conservation sites are not shown on the constraints plans within the Scoping Report. The Applicant should ensure that all ecological receptors that could be significantly affected by the Proposed Development are considered in the assessment and identified on corresponding plans in the ES. The Applicant is also referred to NE's consultation comments in this regard, contained in Appendix 2 of this Opinion.</p> |
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4.5 Geology and Soils

(Scoping Report Section 9)

The study area is described as 'initially' an area within 100m of the Proposed Development for the purpose of identifying the 'baseline geo-environmental conditions', that may be extended depending on the results of the ground investigations.

A simple level assessment will be undertaken utilising guidance from the DMRB Volume 11 Section 3 Part 11. The assessment criteria used to determine the sensitivity of receptors, magnitude of impact, and significance of effects is set out in Tables 9.3, 9.4 and 9.5, respectively.

The potential impacts identified during the construction stage include directly damaging the underlying geological features and the potential to create contamination pathways which may spread leachate and gas from the Cantley Lane landfill site. No potential impacts during operation have been identified.

The Scoping Report includes an assessment of potential effects on agricultural land within Chapter 12 People and Communities.

The Inspectorate has provided comments below on matters that the Applicant has proposed to scope out of the ES.

| ID | Para | Applicant's proposed matters to scope out | Inspectorate's comments |
|-----------|-------------|---|--|
| 30 | 9.10.2 | Impacts on geology and soils during the operational phase | The Applicant has not provided any information to justify scoping out an assessment of effects on geology and soils during operation. For example, no reference is made to a soil assessment. The ES should provide an assessment of all relevant likely significant effects. If evidence becomes available that justifies scoping this matter out from the ES, for example, following detailed drainage design, this should be explained in the ES. |
| | Para | Other points | Inspectorate's comments |
| 31 | 9.2.1 | Study Area | Although the Scoping Report states that the study area will include a 1km boundary from the Proposed Development this has not yet been clearly defined because areas 'where physical works and ground disturbances would take place' are not explicitly stated or precisely defined. The study area makes no reference to soils |

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| | | | <p>or hydrogeology and has not included a justification for this omission.</p> <p>Within the ES the study area should be clearly defined, justified and reflect the anticipated extent of all potential impacts that may affect geology, soils and hydrogeology.</p> |
| 32 | Table 9.1 | Baseline Data | Table 9.1 of the Scoping Report uses chainages to located and identify where changes in superficial deposits along the route occur. No chainage sections or plans are provided within the Scoping Report. The ES should clearly describe the locations where changes in superficial deposits occur and make reference to clearly labelled plans as necessary. |
| 33 | 9.6.1 | Receptors - minerals | The Inspectorate has had regard to the consultation response from Norfolk County Council that the Proposed Development is situated within a mineral safeguarding area. The extent to which the Proposed Development would impact mineral reserves should be assessed in the ES. The Applicant should seek to agree the approach to the assessment with relevant consultees including Norfolk County Council. |
| 34 | 9.7.5 | Potential effects | The ES should include the findings of the environmental risk assessment along with any required remediation strategy options to manage, remove/dispose of or treat contaminated material. The remediation strategy should address the regulatory requirements for managing previously unknown contamination which may be encountered during the construction of the Proposed Development. |
| 35 | Table 9.1 and Section 9.7 | Potential effects | The Scoping Report suggests that only potential impacts that could arise from the interaction of the Proposed Development with the Cantley Lane landfill site are to be considered. All potential impacts that could result in a significant effect on a receptor should be assessed. |

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| 36 | Table 9.4 | Magnitude of impact | The Inspectorate considers that changes in groundwater flow should also be considered when determining magnitude of impacts, as recommended by the EA in their scoping consultation response (contained in Appendix 2 of this Opinion), in addition to the criteria presented in Table 9.4. |
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4.6 Materials

(Scoping Report Section 10)

The study area is not defined. It is stated that it has been 'determined through professional judgement by the influence of the Proposed Scheme, rather than through a set geographical location'.

A simple assessment will be undertaken utilising guidance contained in DMRB Volume 11, Section 2, Part 4 and other guidance, including the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites, 2009. It is stated that professional judgement will be used to assess the effects.

Potential impacts identified during construction include depletion of natural resources, impacts associated with transporting materials and waste, and the depletion of waste infrastructure capacities. No potential impacts have been identified for the operational phase.

The Inspectorate has provided comments below on matters that the Applicant proposes to scope out of the ES.

| ID | Para | Applicant's proposed matters to scope out | Inspectorate's comments |
|-----------|-------------|---|---|
| 37 | 10.8.2 | Operational effects from material resource use and waste generation | The Inspectorate agrees that the Proposed Development will generate only minimal requirements for materials and generation of waste during operation and that significant effects are unlikely and therefore that this matter can be scoped out of the ES. |
| | Para | Other points | Inspectorate's comments |
| 38 | 10.2.1 | Study area | The Scoping Report has not defined the study area. It is noted that the Applicant states that the study area will be determined by 'the influence of the Proposed Scheme' but no information is provided on the methodology that will be applied to determine this. The Applicant should ensure that the study area is clearly defined and justified within the ES and encompasses the anticipated extent of potential impacts. |
| 39 | 10.3 | Baseline | Assessment should additionally be made against a future baseline from the first year of construction and should be reported in |

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| 40 | | | the ES. |
| 41 | 10.3.1 | Baseline | Estimates of material resources required for and waste arising from the construction and operation of the Proposed Development should be included within the ES. |
| 42 | 10.3.3 | Baseline | According to HA Interim Advice Note 153/11 the ES should contain a list of the locations and spare capacity of each waste infrastructure receptor in order to comprehensively assess the effects the generation of waste may have on the environment. |

4.7 Noise and Vibration

(Scoping Report Section 11)

The study area for both the construction and operational phases is identified as that within 1km of the physical works associated with the Proposed Development. It is noted that it may be extended to assess the impacts from construction traffic on the existing road network and from potential diversion routes, and during operation to assess potential impacts on sensitive receptors outside the 1km study area which are adjacent to roads where the change in road traffic noise would increase or decrease by at least 1dB $L_{A10,18hr}$ on opening, or by 3dB in the 'long term' (not defined). Two Noise Sensitive Areas (NSAs) are located within the study area.

The methodology for the assessment will be based on that contained in the DMRB Volume 11 Section 3 Part 7 HD213/11 Noise and Vibration (2011). The Applicant proposes to undertake a 'detailed' assessment for both the construction and the operational phases of the Proposed Development.

The Applicant identifies the potential for significant residual adverse effects to noise-sensitive receptors during operation as a result of changes to traffic flows and road alignments.

No matters have been proposed to be scoped out of the assessment.

| ID | Para | Applicant's proposed matters to scope out | Inspectorate's comments |
|-----------|----------------------|--|---|
| | N/A | None identified. | N/A |
| ID | Para/ Section | Other points | Inspectorate's comments |
| 43 | Table 11.1 | Receptors | Only designated sites are identified as sensitive receptors within the Scoping Report. The Applicant should additionally consider and assess, as required, non-designated sites and species that could be significantly affected by the Proposed Development. The Inspectorate recommends that the relevant ecological receptors to be included in the assessment are agreed with NE and SNDC. The assessment should be informed by the ecological assessment and cross-reference made to relevant information in the ES ecology chapter. |
| 44 | 11.3.10 | Surveys | The Scoping Report states that noise surveys to be undertaken will be 'broadly in accordance with' 'The Calculation of Road Traffic Noise' (CRTN) (HMSO, 1988) |

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| | | | methodology. The methodology that is applied should be clearly described in the ES, including where there is any departure from standard methodologies. |
| 45 | 11.7.1 | Mitigation | <p>It is anticipated that construction impacts would be mitigated through measures included within a CEMP. The potential impacts during all phases of the Proposed Development and the mitigation measures proposed to address them should be described in the ES. A clear cross-reference should be made to such measures within other application documents and to where they are secured. Any residual effects should be identified.</p> <p>The Inspectorate notes that it is stated that no significant direct effects are predicted. The Applicant is reminded that the potential for significant indirect effects must also be considered.</p> |
| 46 | Section 11.9 | Methodology | The methodologies applied to the assessment must be fully explained in the ES, rather than simply providing references to where they may be found in documents that are outside of the ES. |
| 47 | 11.9.9 | Methodology | The Scoping Report does not explain what is meant by the 'future assessment year' in relation to the assessment of operational noise. This should be defined in the overarching ES methodology chapter. |
| 48 | 11.9.14 and Table 11.2 | Assessment criteria | The Inspectorate expects the ES to set out the criteria used to determine the magnitude of an impact, sensitivity of a receptor, and the significance levels. The 'Lowest Observed Adverse Effect Level' (LOAEL) and 'Significant Observed Adverse Effect Level' (SOAEL) values applied to the assessment must be fully justified. |
| 49 | N/A | Plans | The figures contained in the Scoping Report that depict the Proposed Development do not identify all the roads and other infrastructure, such as the Round House roundabout, that are referenced in the Report. The Inspectorate expects plans contained in the ES to clearly identify |

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| | | | features discussed within it. |
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4.8 People and Communities

(Scoping Report Section 12)

A Local Impact Area (LIA) comprising 250m from the scheme boundary is proposed for the assessment of impacts on non-motorised users; amenity; motorised travellers driver stress; community severance; community land and community facilities; demolition of private property and associated land take; development land; and agricultural land and businesses. A wider impact area comprising the district of South Norfolk is proposed for the assessment of effects on the local economy.

The assessment methodology will follow IAN 125/15 and DMRB Volume 11 Section 3 to consider the impacts of the Proposed Development on people and communities. It will combine the Non-Motorised User and Community Effects components of Parts 8 and 9 for assessing impacts on Vehicular Travellers, and Part 6 for assessing Land Use impacts.

The predicted impacts of the Proposed Development are the severance of several Public Rights of Way (PRoW), resulting in the reduction of their amenity value, and temporary severance for users of Thickthorn Park and Ride. It is anticipated that the Proposed Development could also result in agricultural land take of Grade 3 land, and will affect the availability of land for recreation in the context of a future housing development planned for adjacent land.

No matters have been proposed to be scoped out of the assessment.

| ID | Para | Applicant's proposed matters to scope out | Inspectorate's comments |
|-----------|---------------|--|---|
| | N/A | None identified | N/A |
| ID | Para | Other points | Inspectorate's comments |
| 50 | 12.2.1-12.2.4 | Study area | <p>The ES should include a clear justification in support of the study areas especially given that they are to be established using professional judgement. The ES should also ensure they are depicted on corresponding figures to aid understanding. The Inspectorate considers that the Wider Impact Area for assessing effects on the local economy should be broadened to include Norwich City, and given that the Proposed Development is one of several along the A47, the cumulative impacts of these developments on the local economy should be assessed at the County level.</p> <p>The Inspectorate notes that DMRB Volume 11, Section 3, Part 8, Para 2.2, states that community facilities "and their catchment</p> |

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| | | | areas" should be addressed by the assessment. The ES should clearly explain how this requirement has been taken into account in the selection of appropriate study areas. |
| 51 | Table 12.1 | Baseline information | Descriptions of the baseline environment and receptors such as PROW are unclear in the absence of corresponding figures. These should be included in the ES, with footpaths labelled to allow for cross-reference to the main body of the ES. |
| 52 | Table 12.1 | Baseline information | No baseline information is provided for the assessment of community severance. The ES must include a description of the baseline conditions, against which impacts of the Proposed Development are to be assessed. |
| 53 | 12.9.12 | Baseline information – agricultural land | <p>Agricultural land classification (ALC) surveys are proposed, which would follow the Ministry of Agriculture, Fisheries and Food (MAFF) guidelines. The Inspectorate advises that the guidance within NE's TIN049¹³ should also be followed.</p> <p>The ES should quantify the temporary and permanent agricultural land-take by ALC grade and assess any likely significant effects.</p> |
| 54 | 12.7.1-12.7.25 | Construction impacts | Adverse impacts from construction (eg on community severance, land-take, etc) have been identified as temporary. The ES should explain the duration of impacts and what constitutes a temporary impact. |
| 55 | 12.9.27 | Methodology – view from the road | <p>The Report states that only views from the new road in operation will be assessed, and "therefore, value, magnitude and significance of effects" will not be taken into account.</p> <p>The Inspectorate does not agree with this</p> |

¹³ Natural England Technical Information Note TIN049: Agricultural Land Classification: protecting the best and most versatile agricultural land (2012)

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| | | | approach, and requires that the ES must consider the baseline conditions, and assess the impacts of the Proposed Development against this baseline for all phases of development (including construction). |
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4.9 Road Drainage and the Water Environment

(Scoping Report Section 13)

The study area is described as encompassing a number of water features within a 1km area around the Proposed Development, which will extend where there are features that may be affected by pollutants which are transported downstream.

The Applicant has utilised the DMRB Volume 11 Section 3 Part 10, and had regard to other guidance, including the National Planning Policy Framework.

Tables 13.3, 13.4 and 13.5 set out the criteria for determining the value of receptors, magnitude of impact and significance of effects, respectively.

The potential impacts during the construction and operation phases of the Proposed Development include adversely affecting the quality of the water environment due to contaminated surface run off and spillages impacting surface water and groundwater. The Proposed Development may increase flood risk due to reduced floodplain storage in conjunction with increase surface runoff.

No matters have been proposed to be scoped out of the assessment.

| ID | Para | Applicant's proposed matters to scope out | Inspectorate's comments |
|-----------|-----------------------|--|--|
| | N/A | None identified. | N/A |
| | Para / Section | Other points | Inspectorate's comments |
| 56 | 13.2.1 | Study Area | <p>The Applicant states that a 'number of water features within 1km' and features that may be impacted downstream will be included within the assessment 'as appropriate'; but has not stated which water features will be included or defined which features are 'appropriate'.</p> <p>Within the ES the study area should be clearly defined, justified and reflect the anticipated extent of potential impacts.</p> |
| 57 | 13.2.1 | Study Area | <p>The Inspectorate notes that the Applicant has not stated a study area for the assessment of groundwater. This should be clearly set out in the ES and reflect the anticipated extent of potential impacts.</p> |

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| 58 | 13.4.3, 13.4.4, 13.4.5 | Assumptions and Limitations | The Inspectorate notes that there are currently no details of the drainage design for the Proposed Development. This information is required to inform the assessment of effects on water features, soils and ecological receptors. |
| 59 | Section 13.7 | Mitigation | The Inspectorate notes that the Scoping Report refers to 'appropriate mitigation' and states that 'mitigation measures will be set out in the CEMP'. Required mitigation measures must be described in the ES and an assessment of their efficacy included, and cross-reference made to where they are secured. |
| 60 | 13.7.2 | Potential impacts during construction | The ES should provide the information used to establish the baseline for groundwater receptors to ensure that groundwater quality can be remediated to pre-construction levels if contamination occurs during the construction phase. |
| 61 | 13.8.2 | Scope of assessment | The Applicant may wish to consider whether it would be more appropriate for the assessment of aquatic ecology to be undertaken within the Biodiversity aspect chapter rather than this aspect chapter. |

4.10 Climate

(Scoping Report Section 14)

A study area for the purposes of this assessment has not been identified.

The EIA will consider both the effects on climate change of greenhouse gas (GHG) emissions generated by the Proposed Development, and its resilience to climate change.

A qualitative methodology will be applied to the assessments according to the DMRB Volume 11 Section 2 Part 5 and other relevant guidance, including HE 2016, IEMA 2015 and 2017, and DfT TAG Unit A3 2015 guidance.

Potential impacts of the Proposed Development during construction are identified as from embodied carbon emissions from construction material, and from greenhouse gas emissions arising from the use of plant and transport of materials. Potential impacts during operation are identified as an increase in local CO₂ emissions due to changes in traffic flow and speed limits.

Potential impacts on the Proposed Development from climate change are identified as deterioration of the road surface as a result of a temperature increase, and precipitation changes affecting the foundation strength of the road surface, potentially leading to an increased flood risk.

No matters have been proposed to be scoped out of the assessment.

| ID | Para | Applicant's proposed matters to scope out | Inspectorate's comments |
|-----------|-----------------------|--|---|
| | N/A | None identified. | N/A |
| ID | Para / Section | Other points | Inspectorate's comments |
| 62 | Section 14.2 | Study area | The extent of the study area for this aspect assessment is not included in the Scoping Report. It should be described and justified in the ES. |
| 63 | 14.2.3 | Inter-relationships with other aspects | The Scoping Report states that there may be inter-relationships between this aspect and other aspects to be assessed. The ES should describe the nature of the inter-relationships and make clear cross-reference to the location of the information in the relevant aspect chapters. |
| 64 | 14.3.1 | Baseline data | Norwich City Council (Norwich CC) and Norfolk County Council (Norfolk CC) are identified as sources of information on existing carbon emissions in the Local |

| | | | |
|----|---------------|---------------------|---|
| | | | Authority area considered relevant to the Proposed Development. However, Chapter 5, paragraphs 5.3.3 – 5.3.4 of the Scoping Report states that automatic air quality monitors operated by Norwich CC are not considered representative of air quality at the Proposed Development site as they are located in urban areas approximately 5km to the north east and refer to air quality monitoring data provided by SNDC. The Applicant should ensure that the baseline information relied upon for the purpose of the assessments is consistently reflected in the aspect chapters. |
| 65 | 14.5.1 | Climate projections | As set out in the NPSNN, the Applicant should take into account the potential impacts of climate change using the latest UK climate projections. This should include the anticipated UKCP18 projections where appropriate. |
| 66 | 14.8.1 | Mitigation | The Inspectorate notes that mitigation intended to address the effects of the Proposed Development during construction including its vulnerability to climate change would be contained in a CEMP. The Inspectorate expects the ES to identify the potential impacts and the specific mitigation measures, and to provide clear cross-reference to their location in the CEMP and where they are secured. |
| 67 | 14.10.2 | Modelling | The Inspectorate notes that the Applicant intends to use the 'Mott MacDonald Carbon Portal' to predict the CO2 and greenhouse gases emissions of the Proposed Development. The methodology applied to the assessment should be clearly set out in the ES and include details of any models used to inform the assessment and how they relate to relevant national policy, guidance and standards. |
| 68 | Section 14.10 | Methodology | It is not explained in the Scoping Report how the significance of effects resulting from the Proposed Development will be determined and what would constitute a significant effect. This should be included in the description of the methodology in the ES. |

4.11 Combined and Cumulative Effects

(Scoping Report Section 15)

The study area for the assessment of combined effects during both the construction and operational phases will be defined by the study areas identified for the relevant aspects.

The cumulative effects assessment (CEA) study area is defined as a 2km Zone of Influence (ZOI) around the boundary of the Proposed Scheme for both construction and operation.

The assessment will apply the methodology set out in DMRB Volume 11 Section 2 Part 5 'Assessment and Management of Environmental Effects', and take account of the advice contained in the Planning Inspectorate's 'Advice Note Seventeen: Cumulative Effects Assessment'.

The Scoping Report identifies potential combined and cumulative impacts on all receptors during construction, and cumulative impacts on habitats, protected species, agricultural land, noise, and air quality during operation.

No matters have been proposed to be scoped out of the assessment.

| ID | Para | Applicant's proposed matters to scope out | Inspectorate's comments |
|-----------|-----------------------|--|--|
| | N/A | None identified. | N/A |
| ID | Para / Section | Other points | Inspectorate's comments |
| 69 | 15.2.2 | Study area | The rationale for selecting a 2km ZOI for the CEA is unclear, as it is stated that this is considered large enough 'to cover the proposed developments likely to contribute to cumulative effects', although it is subsequently indicated under 'Assumptions and Limitations' that the other developments to be included in the CEA have not yet been identified. The Applicant should ensure that the study area is sufficient to encompass all developments that together with the Proposed Development could generate significant cumulative effects, and must justify the approach in the ES. The study area and the list of developments to be included in the CEA should be discussed and ideally agreed with SNDC, Norwich City Council and Norfolk County Council. |

| | | | |
|----|--------------|-------------|---|
| 70 | Section 15.7 | Mitigation | <p>In addition to identifying the combined and cumulative residual effects following the implementation of any required mitigation, the ES should identify the potential effects prior to mitigation and the measures proposed to address them, together with cross-reference to their location and where they are secured.</p> |
| 71 | Section 15.9 | Methodology | <p>It is unclear what is meant by the reference to determining the significance of combined effects upon environmental receptors based upon 'the balance of scores'.</p> <p>Reference is made to the information on significance criteria contained in Section 1.6 of the Scoping Report. The Applicant is referred to the Inspectorate's comments on this point in Section 3.2 of this Opinion.</p> <p>The methodology used for the assessment should be comprehensive, clearly explained and justified in the ES.</p> |

5. INFORMATION SOURCES

5.0.1 The Inspectorate's National Infrastructure Planning website includes links to a range of advice regarding the making of applications and environmental procedures, these include:

- Pre-application prospectus¹⁴
- Planning Inspectorate advice notes¹⁵:
 - Advice Note Three: EIA Notification and Consultation;
 - Advice Note Four: Section 52: Obtaining information about interests in land (Planning Act 2008);
 - Advice Note Five: Section 53: Rights of Entry (Planning Act 2008);
 - Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements;
 - Advice Note Nine: Using the 'Rochdale Envelope';
 - Advice Note Ten: Habitats Regulations Assessment relevant to nationally significant infrastructure projects (includes discussion of Evidence Plan process);
 - Advice Note Twelve: Transboundary Impacts
 - Advice Note Seventeen: Cumulative Effects Assessment; and
 - Advice Note Eighteen: The Water Framework Directive.

5.0.2 Applicants are also advised to review the list of information required to be submitted within an application for Development as set out in The Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009 (as amended).

¹⁴ The Planning Inspectorate's pre-application services for applicants. Available from: <https://infrastructure.planninginspectorate.gov.uk/application-process/pre-application-service-for-applicants/>

¹⁵ The Planning Inspectorate's series of advice notes in relation to the Planning Act 2008 process. Available from: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

APPENDIX 1: CONSULTATION BODIES FORMALLY CONSULTED

TABLE A1: PRESCRIBED CONSULTATION BODIES¹⁶

| SCHEDULE 1 DESCRIPTION | ORGANISATION |
|---|--|
| The Health and Safety Executive | Health and Safety Executive |
| The National Health Service Commissioning Board | NHS England |
| The relevant Clinical Commissioning Group | South Norfolk Clinical Commissioning Group |
| Natural England | Natural England |
| The Historic Buildings and Monuments Commission for England | Historic England - East of England |
| The relevant fire and rescue authority | Norfolk Fire and Rescue Service |
| The relevant police and crime commissioner | Norfolk Police and Crime Commissioner |
| The relevant parish council(s) or, where the application relates to land [in] Wales or Scotland, the relevant community council | Ketteringham Parish Council |
| | Keswick and Intwood Parish Council |
| | Hethersett Parish Council |
| | Cringleford Parish Council |
| The Environment Agency | Environment Agency - East Anglia |
| The Civil Aviation Authority | Civil Aviation Authority |
| The Relevant Highways Authority | Norfolk County Council |
| The relevant strategic highways company | Highways England - East |
| The relevant internal drainage board | Norfolk Rivers Internal Drainage Board |

¹⁶ Schedule 1 of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) (the 'APFP Regulations')

| SCHEDULE 1 DESCRIPTION | ORGANISATION |
|--|--|
| Public Health England, an executive agency of the Department of Health | Public Health England |
| Relevant statutory undertakers | See Table 2 below |
| The Crown Estate Commissioners | The Crown Estate |
| The Forestry Commission | Forestry Commission - East and East Midlands |
| The Secretary of State for Defence | Ministry of Defence |

TABLE A2: RELEVANT STATUTORY UNDERTAKERS¹⁷

| STATUTORY UNDERTAKER | ORGANISATION |
|--|---|
| The relevant Clinical Commissioning Group | South Norfolk Clinical Commissioning Group |
| The National Health Service Commissioning Board | NHS England |
| The relevant NHS Trust | East of England Ambulance Service NHS Trust |
| Railways | Network Rail Infrastructure Ltd |
| Railways | Highways England Historical Railways Estate |
| Civil Aviation Authority | Civil Aviation Authority |
| Licence Holder (Chapter 1 Of Part 1 Of Transport Act 2000) | NATS En-Route Safeguarding |
| Universal Service Provider | Royal Mail Group |
| Homes and Communities Agency | Homes and Communities Agency |
| The relevant Environment Agency | Environment Agency - East Anglia |

¹⁷ 'Statutory Undertaker' is defined in the APFP Regulations as having the same meaning as in Section 127 of the Planning Act 2008 (as amended)

| STATUTORY UNDERTAKER | ORGANISATION |
|--|------------------------------------|
| The relevant water and sewage undertaker | Anglian Water |
| The relevant public gas transporter | Cadent Gas Limited |
| | Energetics Gas Limited |
| | Energy Assets Pipelines Limited |
| | ES Pipelines Ltd |
| | ESP Connections Ltd |
| | ESP Networks Ltd |
| | ESP Pipelines Ltd |
| | Fulcrum Pipelines Limited |
| | GTC Pipelines Limited |
| | Independent Pipelines Limited |
| | Indigo Pipelines Limited |
| | Quadrant Pipelines Limited |
| | National Grid Gas Plc |
| | National Grid Gas Plc |
| | Scotland Gas Networks Plc |
| Southern Gas Networks Plc | |
| The relevant electricity distributor with CPO Powers | Energetics Electricity Limited |
| | Energy Assets Power Networks |
| | ESP Electricity Limited |
| | G2 Energy IDNO Limited |
| | Harlaxton Energy Networks Limited |
| | Independent Power Networks Limited |
| | Leep Electricity Networks Limited |
| | The Electricity Network Company |

| STATUTORY UNDERTAKER | ORGANISATION |
|-----------------------------|--|
| | Limited |
| | UK Power Distribution Limited |
| | Utility Assets Limited |
| | Utility Distribution Networks Limited |
| | Eastern Power Networks Plc |
| | South Eastern Power Networks Plc |
| | UK Power Networks Limited |
| | National Grid Electricity Transmission Plc |
| | National Grid Electricity Transmission Plc |

TABLE A3: SECTION 43 CONSULTEES (FOR THE PURPOSES OF SECTION 42(1)(B))¹⁸

| LOCAL AUTHORITY¹⁹ |
|-------------------------------------|
| South Norfolk District Council |
| Breckland District Council |
| Broadland District Council |
| Norwich City Council |
| Great Yarmouth Borough Council |
| Waveney District Council |
| Mid Suffolk District Council |
| The Broads Authority |

¹⁸ Sections 43 and 42(B) of the PA2008

¹⁹ As defined in Section 43(3) of the PA2008

| LOCAL AUTHORITY¹⁹ |
|-------------------------------------|
| Norfolk County Council |
| Suffolk County Council |
| Cambridgeshire County Council |
| Lincolnshire County Council |

APPENDIX 2: RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES

Consultation bodies who replied by the statutory deadline:

| |
|---|
| Anglian Water |
| Broads Authority |
| Cringleford Parish Council |
| East Carleton & Ketteringham Parish Council |
| Environment Agency |
| ESP Gas Group Ltd |
| Health and Safety Executive |
| Hethersett Parish Council |
| Historic England |
| Keswick and Intwood Parish Council |
| NATS (En Route) Public Limited Company |
| National Grid |
| Natural England |
| Norfolk County Council |
| Norwich City Council |
| Public Health England |
| Royal Mail |



Alison Down
Senior EIA and Land Rights Advisor
The Planning Inspectorate
3D Eagle Wing
Temple Quay House
2 The Square
Bristol, BS1 6PN

Strategic Planning Team
Water Resources
Anglian Water Services Ltd
Thorpe Wood House,
Thorpe Wood,
Peterborough
PE3 6WT

Tel (0345) 0265 458
www.anglianwater.co.uk
Our ref 00026337

Your ref TR010037-000006

2 March 2018

Dear Alison,

A47/A11 Thickthorn Junction: Environmental Statement Scoping Report

Thank you for the opportunity to comment on the scoping report for the above project. Anglian Water is the water and sewerage undertaker for the above site. The following response is submitted on behalf of Anglian Water.

General comments

Anglian Water would welcome further discussions with Highways England prior to the submission of the Draft DCO for examination.

In particular it would be helpful if we could discuss the following issues:

- Wording of the Draft DCO including protective provisions specifically for the benefit of Anglian Water.
- Requirement for water and wastewater services.
- Impact of development on Anglian Water's assets and the need for mitigation.
- Pre-construction surveys.

13 Road Drainage and water environment

Reference is made to principal risks of flooding from the above project being fluvial, surface water and groundwater flooding as set out in Table 13.1 of the report.



Registered Office
Anglian Water Services Ltd
Lancaster House, Lancaster Way,
Ermine Business Park, Huntingdon,
Cambridgeshire. PE29 6YJ
Registered in England
No. 2366656.

an AWG Company

Anglian Water is responsible for managing the risks of flooding from surface water, foul water or combined water sewer systems. At this stage it is unclear whether there is a requirement for a connection(s) to the public sewerage network for the above site or as part of the construction phase. Consideration should be given to all potential sources of flooding including sewer flooding (where relevant) as part of the Environmental Statement and related Flood Risk Assessment.

We welcome the intention to have further discussions with Anglian Water throughout the EIA process.

As set out in the EIA Scoping Report there are existing sewers within the boundary of the site. There are existing water mains and fould sewers in Anglian Water's ownership which potentially could be affected by the development. It is therefore suggested that the Environmental Statement should include reference to existing water mains and foul sewers in Anglian Water's ownership.

Maps of Anglian Water's assets are available to view at the following address:

<http://www.digdat.co.uk/>

Should you have any queries relating to this response please let me know.

Yours sincerely

A solid black rectangular box used to redact the signature of Stewart Patience.

Stewart Patience

Spatial Planning Manager

Ms Alison Down
The Planning Inspectorate
3D Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

Ms Cally Smith
Head of Planning

██████████@broads-authority.gov.uk

Date 16 February 2018

Our ref BA/2018/0061/SCOCON Your ref TR010037-000006

Dear Ms Alison Down

Application No : BA/2018/0061/SCOCON
Proposal : EIA Scoping Notification and Consultation - A47A11 Thickthorn redesign.
Address : Street Record, Round House Way, Cringleford, Norfolk
Applicant : Highways England

I write further to the above proposal. I can confirm that the Broads Authority does not have any comments to make regarding this consultation.

Yours sincerely

██████████

Cally Smith
Head of Planning

From: [REDACTED]
To: [REDACTED]; [A47/A11 Thickthorn](#)
Subject: RE: A47/A11 Thickthorn Junction - EIA Scoping Notification and Consultation
Date: 08 March 2018 09:42:00

Good morning,

Thank you for consulting with Cringleford Parish Council on this proposal.

We would strongly recommend that more detailed surveys are carried out in regards to both cultural historical and wildlife areas in the vicinity of the proposed scheme, detailed in section 16.2 of the report.

Kind regards,
Sonya

Sonya Blythe
Parish Clerk
Cringleford Parish Council
The Willow Centre
1-13 Willowcroft Way
Cringleford
Norwich
NR4 7JJ

Tel 01603 250198
clerk@cringlefordpc.org.uk

Parish Council Office 10.00-14.00 Monday to Thursday; Friday by appointment.

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East Carleton & Ketteringham Parish Council

29 Churchfields
Hethersett, Norwich
Phone: [REDACTED]
Mobile: [REDACTED]

[REDACTED]@btinternet.com
Web: <http://www.parishcouncilinvolve.net/east-carleton-and-ketteringham-parish-council/>

The Planning Inspectorate

By email

7th March 2018

Application by Highways England (the Applicant) for an Order granting Development Consent for the A47/A11 Thickthorn Junction Project (the Proposed Development)

East Carleton and Ketteringham Parish Council has reviewed the EIA scoping document and would like to register the following comments: -

The Highways Agency (HA) consulted with Hethersett and Cringleford parish council's about the plans to change the Thickthorn Interchange. The agency failed to consult with East Carleton & Ketteringham, which has one third of the Thickthorn Interchange within its boundaries. Furthermore the residents in Cantley Lane South most affected by these plans were not made aware of this consultation either. East Carleton An Ketteringham Parish Council heard about the consultation as it was nearing conclusion through the local press. Therefore there little chance to have any input to the options being considered for Cantley Lane South, which are included now as option A or B. Neither of these options are fit for purposes for environmental reasons.

The HA did agree to attend an urgently called meeting to go through the plans and local people put forward an alternative plan to deal with traffic from Cantley Lane. This was to take traffic back in to Station Lane and across the A11 to enable traffic to travel north to Norwich and the A47.

The A11 Station Lane junction has been closed for approximately 5 years and this closure has left businesses in Ketteringham with increased journeys and has significantly increase their operating costs. This is because Cantley Lane South has a 7.5 tonnes weight restriction and is the only route to the Thickthorn Interchange from Station Lane. HGVs from the industrial estate at Ketteringham now have go southbound to Wymondham around 2 roundabouts to come back north to access the A47 and Norwich. This is costing the businesses collectively an additional £200k per annum but also increases the drive time and of course addtioanl emissions from these diesel engines.

Whilst the HA did consider the option it was discounted due to technical issues. The parish council still believes that a solution to reconnect Station Lane should be the option pursued rather than planning to reconnect Cantley Lane South to Cringleford or Hethersett using option A or B.

Cantley Lane is totally unsuitable and any increase in traffic that would undoubtedly follow from either of the 2 options currently under consultation. It is a poor quality road; single track for most of its length from the Hethersett/Station Lane junction and there is a railway bridge on a blind bend that cannot be altered due to its geography. The lane also suffers from repeated flooding causing the carriageway to break up. It is believed that the HA has not done a traffic survey on this road.

The HA had no knowledge of Cantley Lane South and its unsuitability to carry additional traffic that would almost certainly result from the rejoining to Cringleford on the opposite side of the A47.

The information in the EIA pays little attention to the effect on houses in the immediate area. The houses at the top of Cantley Lane will be subject to significant traffic pollution (noise, light and air quality) due to the new connecting carriageway from the A47/A11, which will run close to their back gardens. A new thoroughfare at the front of the houses would also increase traffic and the associated issues leaving an extremely negative impact on resident's lives.

East Carleton and Ketteringham Parish Council objects most strongly to both options A and B in the scoping document and believes a much better solution can be found. This would have significant environmental benefits by reducing the emissions of HGVs having to travel unnecessary miles to access the road network and this should be vigorously pursued by the HA. The economic benefits to businesses in this area would be significant.

The parish council would not want to see these businesses having to relocate because of the inaccessibility of their sites. The current Greater Norwich Local Plan currently under consultation includes more space around the existing businesses for commercial development as it is ideally placed adjacent to the A11 and A47. With the main access restricted the way it is currently makes it far less attractive.

The estimated costs to the public authorities in this location due to the closure of the A11 is in excess of £85k and to commercial businesses over £170k.

The main recycling facility serving a wide area (there are only 3 for the entire district) is accessed by c.95000 vehicles per year, many of these are having to make longer journeys due to its inaccessibility, the local villages which are country lanes provide the main access causing deterioration of local lanes and verge erosion.

The Parish council accepts that the resolution of the A11 closure was not in the remit of this specific project. However, the ability to address this problem whilst also resolving the Cantley Lane South issues for the thickthorn Interchange. This would be an economic success as it removes the requirement to provide road access for Cantley Lane South and solves the issues with the closure of the gap in the A11.

Yours faithfully,

Carole Jowett
Clerk to East Carleton & Ketteringham Parish Council

Ms. Alison Down
EIA and Land Rights Advisor
The Planning Inspectorate

Our ref: AE/2018/122558/01-L01
Your ref: TR010037-000006

Date: 08 March 2018

Via email only:

A47A11Thickthorn@pins.gsi.gov.uk

Dear Ms. Down

PLANNING ACT 2008 (AS AMENDED) AND THE INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017 (THE EIA REGULATIONS) – REGULATIONS 10 AND 11

APPLICATION BY HIGHWAYS ENGLAND (THE APPLICANT) FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR THE A47/A11 THICKTHORN JUNCTION PROJECT (THE PROPOSED DEVELOPMENT)

SCOPING CONSULTATION AND NOTIFICATION OF THE APPLICANT'S CONTACT DETAILS AND DUTY TO MAKE AVAILABLE INFORMATION TO THE APPLICANT IF REQUESTED

Thank you for consulting us on the A47/A11 Thickthorn Junction EIA Scoping Report, dated February 2018. We have reviewed the submitted document and have the following comments:

Chapter 8 Biodiversity

We are satisfied at this stage that all species and habitat types of primary concern for us have been identified, and appropriate mitigation and enhancements will be informed by the result of the surveys which are due to be completed later this year.

The Water Framework Directive (WFD) status of affected water bodies has been identified. WFD mitigation measures for each water body should be used to provide guidance for potential enhancements to the water courses.

Chapter 9 Geology and Soils

A full assessment of the variation in groundwater levels and the degree of hydraulic continuity between superficial deposits and the chalk should be submitted for review, and used in risk assessment decision making.

9.4.6

We agree a ground investigation will be required to determine the nature and extent of any contamination. Prior to the investigation works, a preliminary risk assessment (PRA) for the area of interest will need to be undertaken to identify any other

East Anglia area (East) - Icen House

Cobham Road, Ipswich, Suffolk, IP3 9JD

General Enquiries: 08708 506506 Fax: 01473 724205

Weekday Daytime calls cost 8p plus up to 6p per minute from BT Weekend Unlimited.

Mobile and other providers' charges may vary

Email: enquiries@environment-agency.gov.uk

Website: www.environment-agency.gov.uk

previous land uses, other than the former landfills, which may have resulted in land contamination.

9.7.3

We agree with the scope of works identified to investigate the Cantley Lane landfill (Option A).

Table 9.4

Significant changes to groundwater flow should be explicitly included.

Chapter 13 Road Drainage and the Water Environment

An assessment of surface water features must include Local Wildlife Sites along the Yare.

Table 13.1 Summary of Existing Baseline

Flood risk is considered as part of the baseline data. The scoping report does not refer to the recently published Greater Norwich Area Strategic Flood Risk Assessment; Final Report: Level 1; November 2017. This provides information on all sources of flooding and is available from both the Greater Norwich website.

With regards to Water quality; the potential pollution impact needs to be assessed along with any changes to flow which may alter the dilution of discharges. Groundwater is of poor WFD status due to diffuse pollution.

We concur that in respect of Groundwater, ground investigations are needed to determine the local geology in detail.

We would seek clarification on what is meant by “four private water supply points”? Are these unlicensed abstractions?

Once information hydraulic continuity has been collated it will be possible to assess whether or not any significant groundwater flow barriers may be created and, if necessary, any changes to the operation of local soakaways can be assessed.

In respect of Groundwater flood risk, a full assessment of risk is needed. There should be no significant change in drainage outfalls without full assessment.

13.4.2

We agree a drainage survey of the existing arrangements is needed to confirm outfall locations and sizes, receptors and the presence of any water pollution control systems.

13.4.3

Full details of the proposed drainage design should be submitted for review when available.

13.7

We agree with the potential effects identified for the construction and demolition phases.

Groundwater monitoring may be required before work starts to determine baseline conditions.

A full assessment of the potential to change Lowland Fen habitat is required.

Any realignment of the Thickthorn Stream will require a full hydrogeological assessment as will any cuttings in aquifers to determine whether they have the potential to change seepage regimes and flow to surface water features.

We would also advise that it should be considered whether any required dewatering is an exempt activity in terms of environmental permitting. Further information can be found at: <https://www.gov.uk/government/publications/temporary-dewatering-from-excavations-to-surface-water>

13.8.2

Detailed assessment of groundwater level and quality will need to be undertaken **prior to**, as well as during any construction activities.

13.8.3

We request to be consulted on any proposals to discharge groundwater to soakaway during dewatering. Discharge to ground may constitute a groundwater activity and require an environmental permit.

13.8.13

The drainage strategy developed must include sufficient pollution control measures to ensure protection of the water environment.

13.9.5

We note the scope of work proposed in relation to the Flood Risk Assessment for the proposed scheme. We can confirm that we do not hold any detailed hydraulic modelling for the Thickthorn Stream.

13.9.6

The use of SuDS is referred to in this paragraph and throughout this section, to manage run-off flows and quality, which we broadly welcome. Our general requirements with respect to SuDS drainage are as follows:

1. Infiltration sustainable drainage systems (SuDS) such as soakaways, unsealed porous pavement systems or infiltration basins shall only be used where it can be demonstrated that they will not pose a risk to the water environment.
2. Infiltration SuDS have the potential to provide a pathway for pollutants and must not be constructed in contaminated ground. They would only be acceptable if a phased site investigation showed the presence of no significant contamination.
3. Only clean water from roofs can be directly discharged to any soakaway or watercourse. Systems for the discharge of surface water from associated hard-standing, roads and impermeable vehicle parking areas shall incorporate appropriate pollution prevention measures and a suitable number of SuDS treatment train components appropriate to the environmental sensitivity of the receiving waters.
4. The maximum acceptable depth for infiltration SuDS is 2.0 m below ground level, with a minimum of 1.2 m clearance between the base of infiltration SuDS and peak seasonal groundwater levels.
5. Deep bore and other deep soakaway systems are not appropriate in areas where groundwater constitutes a significant resource (that is where aquifer yield may support or already supports abstraction).

6. SuDS should be constructed in line with good practice and guidance documents which include the SuDS Manual ([CIRIA C753](#), 2015 – the current reference in the report is to the 2007 document) and the [Susdrain website](#).

For further information on our requirements with regard to SuDS see our Groundwater protection position statements (2017), in particular Position Statements G1 and G9 – G13 available

at: <https://www.gov.uk/government/publications/groundwater-protection-position-statements>

Assessment of magnitude of impacts and significance of effects

Table 13.2 Criteria for estimating the importance of water environment attributes

Table 13.3 Estimating the magnitude of an impact on an attribute

Table 13.4 Definitions of overall significance of effect

These tables all appear to relate the value/importance of waterbodies to WFD status alone, which in our view is not appropriate. It is important that Water Framework Directive Classification is not used as a proxy for ecological value or sensitivity to impacts. The basic overarching requirements of the Directive are that there will be no deterioration from the class status as defined in the River Basin Management Plan, whatever that status is; and that there should be improvement where required to 'Good' ecological status or potential by 2027.

Given that those requirements apply to all water bodies, it is not appropriate to suggest that magnitude of impacts will vary with status. Additionally, status classification is defined by the lowest of up to 37 elements, meaning that sensitivity to particular impacts and the resulting effect on status can vary between water bodies depending on their particular characteristics, irrespective of status.

However, we do welcome the statement at 13.8.7 & 13.9.3, and at 13.10.3, confirming that a preliminary WFD compliance assessment will be carried out and that opportunities for enhancement will be considered.

We would also add that Table 13.3 should explicitly include potential changes to groundwater flow.

13.10.1

Potential receptors need to also include the Happisburgh Glacigenic Formation, a secondary A aquifer.

We trust this advice is helpful.

Yours sincerely



MR MARTIN BARRELL
Sustainable Places - Planning Specialist

Direct dial 

Direct e-mail @environment-agency.gov.uk

From: [ESP Utilities Group Ltd](#)
To: [A47/A11 Thickthorn](#)
Subject: Your Reference: TR010037-000006. Our Reference: PE134452. Plant Not Affected Notice from ES Pipelines
Date: 12 February 2018 14:16:09

A47/A11 Thickthorn Junction
The Planning Inspectorate

12 February 2018

Reference: TR010037-000006

Dear Sir/Madam,

Thank you for your recent plant enquiry at (TR010037-000006).

I can confirm that ESP Gas Group Ltd has no gas or electricity apparatus in the vicinity of this site address and will not be affected by your proposed works.

ESP are continually laying new gas and electricity networks and this notification is valid for 90 days from the date of this letter. If your proposed works start after this period of time, please re-submit your enquiry.

Important Notice

Please be advised that any enquiries for ESP Connections Ltd, formerly known as British Gas Connections Ltd, should be sent directly to us at the address shown above or alternatively you can email us at: PlantResponses@espipelines.com

Yours faithfully,

Alan Slee
Operations Manager



Bluebird House
Mole Business Park
Leatherhead
KT22 7BA



[REDACTED]



[REDACTED]

<http://www.espug.com>

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CEMHD Policy - Land Use Planning
NSIP Consultations
Building 2.2, Redgrave Court
Merton Road, Bootle
Merseyside, L20 7HS

Your ref: TR010037
Our ref: 4.2.1.6284
HSE email: NSIP.applications@hse.gov.uk

FAO Alison Down
The Planning Inspectorate
Bristol
BS1 6PN
By e-mail

20/02/18

Dear Ms Down

**PROPOSED A47/A11 THICKTHORN JUNCTION (the project)
PROPOSAL BY HIGHWAYS ENGLAND (the applicant)
INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017 (as amended) – Regulations 10 and 11**

Thank you for your letter of 8th February 2018 regarding the information to be provided in an environmental statement relating to the above project.

HSE does not comment on EIA Scoping Reports but the following information is likely to be useful to the applicant.

HSE's land use planning advice

Will the proposed development fall within any of HSE's consultation distances?

According to HSE's records there are no major accident hazard installations or pipelines in the vicinity of the infrastructure project, including the 500m buffer area and, therefore, we would not wish to comment on its siting.

Hazardous Substance Consent

The presence of hazardous substances on, over or under land at or above set threshold quantities (Controlled Quantities) may require Hazardous Substances Consent (HSC) under the Planning (Hazardous Substances) Act 1990 as amended. The substances, alone or when aggregated with others, for which HSC is required, and the associated Controlled Quantities, are set out in The Planning (Hazardous Substances) Regulations 2015.

Hazardous Substances Consent would be required if the site is intending to store or use any of the Named Hazardous Substances or Categories of Substances and Preparations at or above the controlled quantities set out in schedule 1 of these Regulations.

Explosives sites

HSE has no comment to make, in this regard, as there are no licensed explosive sites in the vicinity of the proposed project.

Waste

In respect of waste management the applicant should take account of and adhere to relevant health and safety requirements. Particular attention should be paid in respect of risks created from historical landfill sites. More details can be found on HSE's website at: <http://www.hse.gov.uk/waste/index.htm>

Electrical Safety

No comment from a planning perspective

Please send any further electronic communication on this project directly to the HSE's designated e-mail account for NSIP applications. Alternatively any hard copy correspondence should be sent to:

Mr Dave Adams (MHPD)
NSIP Consultations
2.2 Redgrave Court
Merton Road, Bootle,
Merseyside L20 7HS

Yours sincerely,

A solid black rectangular box used to redact the signature of Dave Adams.

Dave Adams
(CEMHD4 Policy)

From: [Hethersett PC](#)
To: [A47/A11 Thickthorn](#)
Cc: [REDACTED]
Subject: Comments re A47/A11 Thickthorn Junction - EIA Scoping Notification and Consultation
Date: 06 March 2018 10:12:35

The Parish Council would like to make a few general comments regarding the proposed scheme:-

The Parish Council would, once again, like to stress the importance of providing safe access and crossing points for pedestrians and cyclists as part of the design.

The Parish Council would like more information regarding access to the Park and Ride site from the A11 and the potential impact of on the proposed extension to the Park and Ride site.

The Parish Council is concerned that only 2 options, A & B, have been brought forward to potentially resolve the issues arising from the scheme in Cantley Lane, Ketteringham. The Parish Council does not support either option for a number of reasons, and requests a prompt meeting with Highways England, Norfolk County Council and local Parish Councils affected by the scheme in order that a more acceptable solution can be found.

Regards

Ian Weetman
Parish Clerk

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Ms Alison Down
Environmental Services Team, The Planning
Inspectorate
3D Eagle, Temple Quay House
Temple Quay
Bristol
BS1 6PN

Direct Dial: [REDACTED]

Our ref: PL00332122

6 March 2018

Dear Ms Down

Scoping Opinion for EIA for DCO for the A47/A11 Thickthorn Junction

Thank you for your letter of 8th February 2018 notifying Historic England of the Environmental Impact Assessment (EIA) Scoping Opinion for the proposed development at the A47/A11 Thickthorn Junction.

The historic environment is a finite and non-renewable environmental resource which includes designated heritage assets, non-designated archaeology and built heritage, historic landscapes and unidentified sites of historic and/or archaeological interest. It is a rich and diverse part of England's cultural heritage and makes a valuable contribution to our cultural, social and economic life.

This development could, potentially, have an impact upon a number of designated heritage assets and their settings in the area around the site. In line with the advice in the National Planning Policy Framework (NPPF), we would expect the Environmental Statement to contain a thorough assessment of the likely effects which the proposed development might have upon those elements which contribute to the significance of these assets.

The Scoping document acknowledges that the proposed development has the potential for impacts on cultural heritage. We are pleased this will be dealt with in a specific chapter within the Environmental Statement. We advise that all supporting technical information (desk-based assessments, evaluation and post-excavation reports etc.) are included as appendices. Where relevant, the cultural heritage should be cross-referenced to other chapters or technical appendices; for example noise, light, traffic and landscape.

The EIA should consider the impact upon both designated and non-designated heritage assets. This should include the impact upon the setting of the heritage assets within the surrounding area.

This development could, potentially, have a significant impact upon a number of



24 BROOKLANDS AVENUE, CAMBRIDGE, CB2 8BU

Telephone 01223 582749
HistoricEngland.org.uk



EAST OF ENGLAND OFFICE

designated heritage assets and their settings in the area around the site. In line with the advice in the National Planning Policy Framework (NPPF), we would expect the Environmental Statement to contain a thorough assessment of the likely effects which the proposed development might have upon those elements which contribute to the significance of these assets.

Designated assets within 1km of the site include two scheduled monuments, one grade II* listed building and 15 grade II listed buildings. Cringleford Conservation Area lies to the north east of the proposed scheme and a grade II* registered park and garden, Intwood Hall lies to the south.

We would also expect the Environmental Statement to consider the potential impacts on non-designated features of historic, architectural, archaeological or artistic interest, since these can also be of national importance and make an important contribution to the character and local distinctiveness of an area and its sense of place. This information is available via the local authority Historic Environment Record (www.heritagegateway.org.uk <<http://www.heritagegateway.org.uk>>) and relevant local authority staff.

We would strongly recommend that the applicant involves the Conservation Officer of South Norfolk District Council and the archaeological staff at Norfolk in the development of this assessment. They are best placed to advise on: local historic environment issues and priorities; how the proposal can be tailored to avoid and minimise potential adverse impacts on the historic environment; the nature and design of any required mitigation measures; and opportunities for securing wider benefits for the future conservation and management of heritage assets.

There is also potential for undesignated buried archaeological remains within the proposed development site. The EIA should define (where possible) the nature, extent and significance of these assets in order to assess the impact from the proposed development. We welcome continued discussion as the project moves forward.

Historic England has had early pre-application discussions regarding the significance of the assets and the degree to which they might be impacted by the proposed development. In particular, discussion has focussed upon the impact on setting of the scheduled monuments as well as the non-designated park.

Assessment of setting should not be restricted to visual impact, but should also consider other environmental factors such as noise, traffic and lighting, where relevant. The assessment should be carried out in accordance with established policy and guidance, including the National Planning Policy Framework. The Planning Practice Guidance contains guidance on setting, amplified by the Historic England document Historic Environment Good Practice Advice in Planning Note 3 *The Setting of Heritage Assets*, which provides a thorough discussion of setting and methods for



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considering the impact of development on setting, such as the use of matrices. Whilst standardised EIA matrices or are useful tools, we consider the analysis of setting (and the impact upon it) as a matter of qualitative and expert judgement which cannot be achieved solely by use of systematic matrices or scoring systems. Historic England therefore recommends that these should be seen primarily as material supporting a clearly expressed and non-technical narrative argument within the cultural heritage chapter. The EIA should use the ideas of benefit, harm and loss (as described in NPPF) to set out 'what matters and why' in terms of the heritage assets' significance and setting, together with the effects of the development upon them.

It is important that the assessment is designed to ensure that all impacts are fully understood. Section drawings and techniques such as photomontages are a useful part of this. Given the number of designated heritage assets within the area, we would welcome continued discussions with the applicant in order to agree the key sites and setting issues which will need to be addressed within the EIA. In particular any heritage specific viewpoints should be identified by the heritage consultant and should be included in the LVIA.

The assessment should also take account of the potential impact which associated activities (such as construction, servicing and maintenance, and associated traffic) might have upon perceptions, understanding and appreciation of the heritage assets in the area. The assessment should also consider, where appropriate, the likelihood of alterations to drainage patterns that might lead to *in situ* decomposition or destruction of below ground archaeological remains and deposits, and can also lead to subsidence of buildings and monuments.

We have the following specific comments to make regarding the content of the Scoping Report:

There would appear to be some mis-numbering of options. Figure 3.4 (page 24) and Figure 3.1 (page 25) are both labelled Option 22. This could lead to some confusion and should be addressed. It is our understanding that the figure on p25 is the preferred option for the applicant. Historic England are pleased to note that this option does not split to two round barrows. It is our view that the barrows should not be severed by the road and to that end Historic England prefers the option on p25 to the options on p22 and 24. We also consider that the option presented in page 23 would have less of an impact on the historic environment. We would however suggest that opportunities are explored to align the Cantley Lane access road further south or to the north in order to minimise the impact on the setting of the barrows.

We note the proposed assessment methodology is broadly in accordance with the requirements of the DMRB. We would suggest that in addition to the matrix assessment approach, some commentary is provided relating to heritage and impact on significance and setting.



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Table 6.1 sets out the existing baseline in terms of designated and non-designated assets which is helpful. However, we would comment that there would appear to be greater focus on non-designated than designated assets. We would suggest that greater emphasis needs to be given to designated assets. In the maps in Appendix B it would be helpful to show conservation areas.

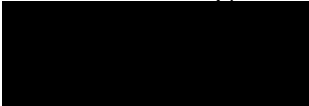
At paragraph 6.5.1 we would refer the applicants to the revised version of the Good Practice Advice on Planning Note 3 - The Setting of Heritage Assets that was published in December 2017. <https://content.historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/heag180-gpa3-setting-heritage-assets.pdf/>


There would appear to be some confusion regarding the level of engagement with Historic England to date on this project. Highways England and their consultants have held two meetings with Historic England on 31.8.16 and 10.5.17 during which the potential impacts on the historic environment of the A47 proposals were considered.

Finally, we should like to stress that this response is based on the information provided in this consultation. To avoid any doubt, this does not affect our obligation to provide further advice and, potentially, object to specific proposals, which may subsequently arise, where we consider that these would have an adverse effect upon the historic environment.

If you have any queries about any of the above, or would like to discuss anything further, please contact me.

Yours sincerely,



Debbie Mack
Historic Environment Planning Adviser, Planning Group
@HistoricEngland.org.uk

From: [Keswick & Intwood Parish Council](#)
To: [A47/A11 Thickethorn](#)
Subject: A47/A11 Thickethorn Junction - EIA Scoping Notification and Consultation
Date: 05 March 2018 15:14:03

For the attention of Alison Down.

Please take this e-mail as confirmation that Keswick and Intwood Parish Council has no comments to make regarding the A47/A11 Thickethorn Junction - EIA Scoping Notification and Consultation.

Phillip Brooks

Clerk

Keswick and Intwood Parish Council.



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From: [NATS Safeguarding](#)
To: [REDACTED]
Cc: [A47/A11 Thickthorn](#)
Subject: RE: A47/A11 Thickthorn Junction - EIA Scoping Notification and Consultation (Our Ref: SG25843)
Date: 08 February 2018 15:08:22
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)

The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.

However, please be aware that this response applies specifically to the above consultation and only reflects the position of NATS (that is responsible for the management of en route air traffic) based on the information supplied at the time of this application. This letter does not provide any indication of the position of any other party, whether they be an airport, airspace user or otherwise. It remains your responsibility to ensure that all the appropriate consultees are properly consulted.

If any changes are proposed to the information supplied to NATS in regard to this application which become the basis of a revised, amended or further application for approval, then as a statutory consultee NERL requires that it be further consulted on any such changes prior to any planning permission or any consent being granted.

Yours Faithfully

NATS

NATS Safeguarding

D: 01489 444687

E: natssafeguarding@nats.co.uk

4000 Parkway, Whiteley,
Fareham, Hants PO15 7FL
www.nats.co.uk



From: [REDACTED]@pins.gsi.gov.uk]
Sent: 08 February 2018 14:07
Subject: A47/A11 Thickthorn Junction - EIA Scoping Notification and Consultation

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Dear Sir/Madam

Please see attached correspondence on the proposed **A47/A11 Thickthorn Junction**.

Please note the deadline for consultation responses is **8 March 2018**, and is a statutory requirement that cannot be extended.

Kind regards,

Stephanie Newman

EIA and Land Rights Advisor
Major Applications & Plans

The Planning Inspectorate, Temple Quay House, Temple Quay, Bristol, BS1
6PN

Direct line: [REDACTED]

Helpline: 0303 444 5000

Email: [REDACTED]@pins.gsi.gov.uk

Web: infrastructure.planninginspectorate.gov.uk (National Infrastructure
Planning)

Web: www.gov.uk/government/organisations/planning-inspectorate (The
Planning Inspectorate)

Twitter: @PINSgov

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Sent electronically to:

A47A11Thickthorn@pins.gsi.gov.uk

Nick Dexter
DCO Liaison Officer
Land & Business Support

██████████@nationalgrid.com

Tel: ██████████

www.nationalgrid.com

6th March 2018

Dear Sir / Madam,

Ref: TR010037 - A47/A11 Thickthorn Junction Project - EIA Scoping Notification and Consultation

I refer to your letter dated 8th February 2018 in relation to the above proposed application for a Development Consent Order for the proposed A47/A11 Thickthorn Junction Project. Having reviewed the Scoping Report, I would like to make the following comments:

National Grid infrastructure within / in close proximity to the order boundary

Electricity Transmission

National Grid Electricity Transmission has a high voltage electricity overhead transmission line within or in close proximity to the proposed order limits. The overhead line forms an essential part of the electricity transmission network in England and Wales. The details of the overhead line are shown below:

- 4VV (400kV) overhead line route

I enclose a plan showing the route of National Grid's overhead line.

Gas Transmission

National Grid Gas has no gas transmission assets located within or in close proximity to the proposed order limits.

Electricity Infrastructure:

- National Grid's Overhead Line/s is protected by a Deed of Easement/Wayleave Agreement which provides full right of access to retain, maintain, repair and inspect our asset
- Statutory electrical safety clearances must be maintained at all times. Any proposed buildings must not be closer than 5.3m to the lowest conductor. National Grid recommends that no permanent structures are built directly beneath overhead lines. These distances are set out in EN 43 – 8 Technical Specification for "overhead line clearances Issue 3 (2004).

- If any changes in ground levels are proposed either beneath or in close proximity to our existing overhead lines then this would serve to reduce the safety clearances for such overhead lines. Safe clearances for existing overhead lines must be maintained in all circumstances.
- The relevant guidance in relation to working safely near to existing overhead lines is contained within the Health and Safety Executive's (www.hse.gov.uk) Guidance Note GS 6 "Avoidance of Danger from Overhead Electric Lines" and all relevant site staff should make sure that they are both aware of and understand this guidance.
- Plant, machinery, equipment, buildings or scaffolding should not encroach within 5.3 metres of any of our high voltage conductors when those conductors are under their worse conditions of maximum "sag" and "swing" and overhead line profile (maximum "sag" and "swing") drawings should be obtained using the contact details above.
- If a landscaping scheme is proposed as part of the proposal, we request that only slow and low growing species of trees and shrubs are planted beneath and adjacent to the existing overhead line to reduce the risk of growth to a height which compromises statutory safety clearances.
- Drilling or excavation works should not be undertaken if they have the potential to disturb or adversely affect the foundations or "pillars of support" of any existing tower. These foundations always extend beyond the base area of the existing tower and foundation ("pillar of support") drawings can be obtained using the contact details above
- National Grid Electricity Transmission high voltage underground cables are protected by a Deed of Grant; Easement; Wayleave Agreement or the provisions of the New Roads and Street Works Act. These provisions provide National Grid full right of access to retain, maintain, repair and inspect our assets. Hence we require that no permanent / temporary structures are to be built over our cables or within the easement strip. Any such proposals should be discussed and agreed with National Grid prior to any works taking place.
- Ground levels above our cables must not be altered in any way. Any alterations to the depth of our cables will subsequently alter the rating of the circuit and can compromise the reliability, efficiency and safety of our electricity network and requires consultation with National Grid prior to any such changes in both level and construction being implemented.

Further Advice

We would request that the potential impact of the proposed scheme on National Grid's existing assets as set out above and including any proposed diversions is considered in any subsequent reports, including in the Environmental Statement, and as part of any subsequent application.

Where any diversion of apparatus may be required to facilitate a scheme, National Grid is unable to give any certainty with the regard to diversions until such time as adequate conceptual design studies have been undertaken by National Grid. Further information relating to this can be obtained by contacting the email address below.

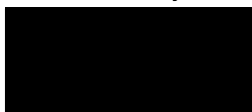
Where the promoter intends to acquire land, extinguish rights, or interfere with any of National Grid apparatus protective provisions will be required in a form acceptable to it to be included within the DCO.

National Grid requests to be consulted at the earliest stages to ensure that the most appropriate protective provisions are included within the DCO application to safeguard the integrity of our apparatus and to remove the requirement for objection. All consultations should be sent to the following email address: **box.landandacquisitions@nationalgrid.com**

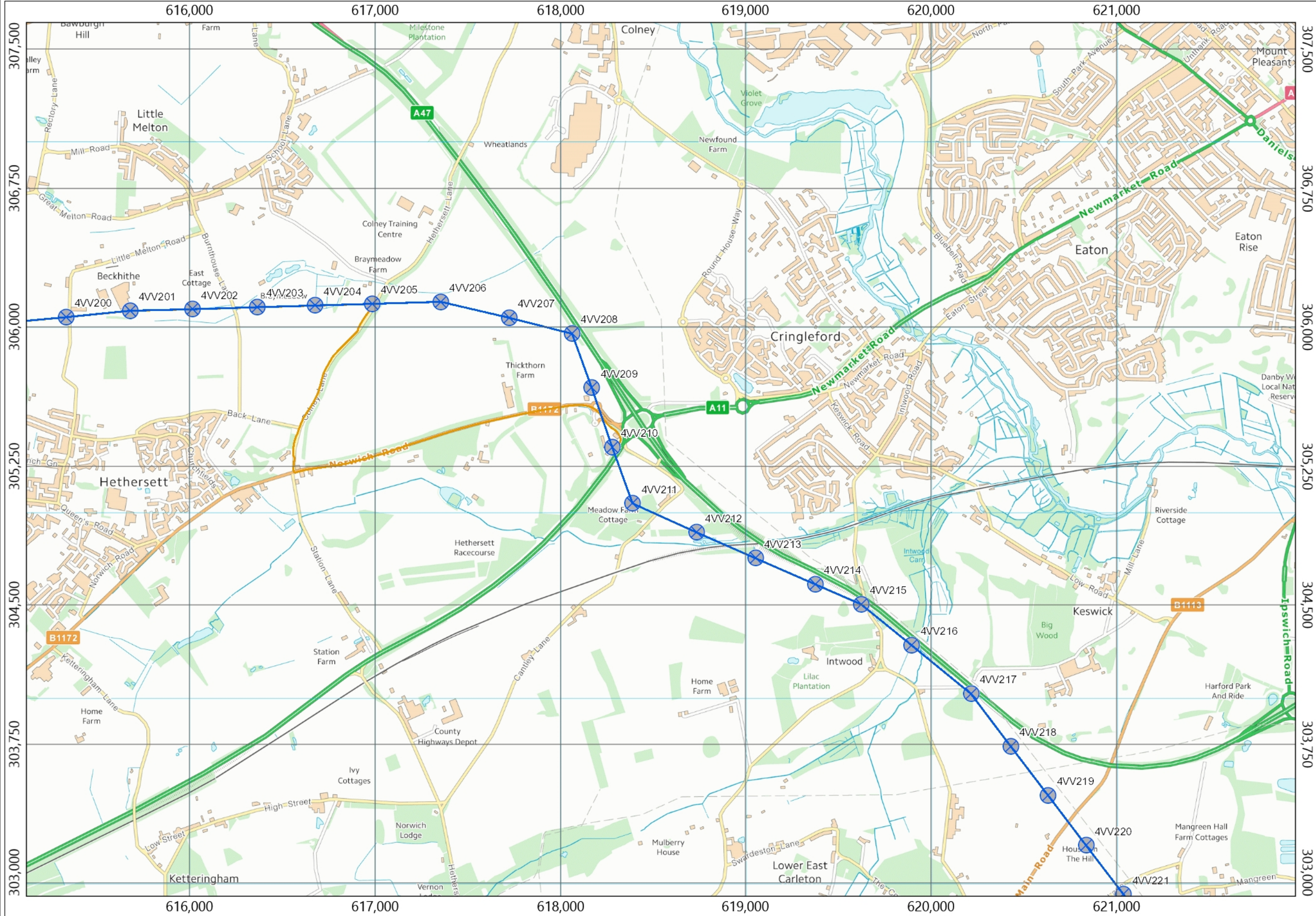
I hope the above information is useful. If you require any further information please do not hesitate to contact me.

The information in this letter is provided notwithstanding any discussions taking place in relation to connections with electricity or gas customer services.

Yours Faithfully



Nick Dexter.



Legend:

- Substations Commissioned
- Circuits
 - Commissioned
 - - - Decommissioned Group
 - Planned and Spares
- OHL 400kV Commissioned
- OHL 275kV Commissioned
- OHL 132kV & Below Commissioned
- Towers Commissioned
- Buried Cable Commissioned
- Fibre Cable Commissioned
- Pilot Cable
- Oil Pipe
- Cooling Pipe
- Cooling Station
- RAMM
- Gas Operational Boundary
- Gas Site Boundary
- Block Valve
- Compressor
- LNG Site
- Multijunction
- Minimum Offtake
- Future Minimum Offtake
- Offtake
- Pressure Reduction Installation
- Pig Trap
- Terminal
- Transferred Offtake
- Transformer Rectifier
- Gas Pipe Feeder
 - Commissioned
 - - - Decommissioned Group
 - Planned and Spares
- CP Protected Section
- Range

Notes:

A47/A11 Thickthorn Junction - NG Assets



Date: 8 March 2018
Our ref: 13111/238589
Your ref: TR010037-000006



The Planning Inspectorate
3D Eagle Wing
Temple Quay House
2 The Square
Bristol, BS1 6PN

Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 6GJ

T 0300 060 3900

BY EMAIL ONLY

Dear Sir/Madam

Environmental Impact Assessment Scoping consultation (Regulation 15 (3) (i) of the EIA Regulations 2011):

Proposal: Application by Highways England (the Applicant) for an Order granting Development Consent for the A47/A11 Thickthorn Junction (the Proposed Development)
Location: A47/A11 Thickthorn Junction, Norfolk

Thank you for seeking our advice on the scope of the Environmental Statement (ES) in your consultation dated 8 February 2018 which we received on the same date.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

Case law¹ and guidance² has stressed the need for a full set of environmental information to be available for consideration prior to a decision being taken on whether or not to grant planning permission. Annex A to this letter provides Natural England's advice on the scope of the Environmental Impact Assessment (EIA) for this development.

Should the proposal be amended in a way which significantly affects its impact on the natural environment then, in accordance with Section 4 of the Natural Environment and Rural Communities Act 2006, Natural England should be consulted again.

We would be happy to comment further should the need arise but if in the meantime you have any queries please do not hesitate to contact us. For any queries relating to the specific advice in this letter only please contact Louise Oliver on [REDACTED]. For any new consultations, or to provide further information on this consultation please send your correspondences to consultations@naturalengland.org.uk.

Yours faithfully

Louise Oliver
Norfolk and Suffolk Area Team

¹ Harrison, J in *R. v. Cornwall County Council ex parte Hardy* (2001)

² *Note on Environmental Impact Assessment Directive for Local Planning Authorities* Office of the Deputy Prime Minister (April 2004) available from

<http://webarchive.nationalarchives.gov.uk/http://www.communities.gov.uk/planningandbuilding/planning/sustainability/environmental/environmentalimpactassessment/noteenvironmental/>

Annex A – Advice related to EIA Scoping Requirements

1. General Principles

Schedule 4 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2011, sets out the necessary information to assess impacts on the natural environment to be included in an ES, specifically:

- A description of the development – including physical characteristics and the full land use requirements of the site during construction and operational phases.
- Expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the operation of the proposed development.
- An assessment of alternatives and clear reasoning as to why the preferred option has been chosen.
- A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the interrelationship between the above factors.
- A description of the likely significant effects of the development on the environment – this should cover direct effects but also any indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative effects. Effects should relate to the existence of the development, the use of natural resources and the emissions from pollutants. This should also include a description of the forecasting methods to predict the likely effects on the environment.
- A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.
- A non-technical summary of the information.
- An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information.

It will be important for any assessment to consider the potential cumulative effects of this proposal, including all supporting infrastructure, with other similar proposals and a thorough assessment of the 'in combination' effects of the proposed development with any existing developments and current applications. A full consideration of the implications of the whole scheme should be included in the ES. All supporting infrastructure should be included within the assessment.

2. Biodiversity and Geology

2.1 Ecological Aspects of an Environmental Statement

Natural England advises that the potential impact of the proposal upon features of nature conservation interest and opportunities for habitat creation/enhancement should be included within this assessment in accordance with appropriate guidance on such matters. Guidelines for Ecological Impact Assessment (EclA) have been developed by the Chartered Institute of Ecology and Environmental Management (CIEEM) and are available on their website.

EclA is the process of identifying, quantifying and evaluating the potential impacts of defined actions on ecosystems or their components. EclA may be carried out as part of the EIA process or to support other forms of environmental assessment or appraisal.

The National Planning Policy Framework sets out guidance in S.118 on how to take account of biodiversity interests in planning decisions and the framework that local authorities should provide to assist developers.

2.2 Internationally and Nationally Designated Sites

The ES should thoroughly assess the potential for the proposal to affect designated sites. European sites (e.g. designated Special Areas of Conservation and Special Protection Areas) fall within the scope of the Conservation of Habitats and Species Regulations 2017. In addition paragraph 118 of the National Planning Policy Framework requires that potential Special Protection

Areas, possible Special Areas of Conservation, listed or proposed Ramsar sites, and any site identified as being necessary to compensate for adverse impacts on classified, potential or possible SPAs, SACs and Ramsar sites be treated in the same way as classified sites.

Under Regulation 63 of the Conservation of Habitats and Species Regulations 2017 an appropriate assessment needs to be undertaken in respect of any plan or project which is (a) likely to have a significant effect on a European site (either alone or in combination with other plans or projects) and (b) not directly connected with or necessary to the management of the site.

Should a Likely Significant Effect on a European/Internationally designated site be identified or be uncertain, the competent authority (in this case the Local Planning Authority) may need to prepare an Appropriate Assessment, in addition to consideration of impacts through the EIA process.

Sites of Special Scientific Interest (SSSIs) and sites of European or international importance (Special Areas of Conservation, Special Protection Areas and Ramsar sites)

The following designated nature conservation sites lie within 5 km of the proposal:

- Eaton Chalk Pit Site of Special Scientific Interest (SSSI)
- Sweetbriar Road Meadows, Norwich SSSI
- Caistor St Edmund Chalk Pit SSSI
- Further information on the SSSIs and their special interest features can be found at www.magic.gov. The Environmental Statement should include a full assessment of the direct and indirect effects of the development on the features of special interest within these sites and should identify such mitigation measures as may be required in order to avoid, minimise or reduce any adverse significant effects.

2.3 Regionally and Locally Important Sites

The EIA will need to consider any impacts upon local wildlife and geological sites. Local Sites are identified by the local wildlife trust, geoconservation group or a local forum established for the purposes of identifying and selecting local sites. They are of county importance for wildlife or geodiversity. The Environmental Statement should therefore include an assessment of the likely impacts on the wildlife and geodiversity interests of such sites. The assessment should include proposals for mitigation of any impacts and if appropriate, compensation measures. Contact the local wildlife trust, geoconservation group or local sites body in this area for further information.

*At the pre-submission stage, Natural England made several requests, to the applicant, to ensure that County or Local Wildlife Sites were depicted on all relevant plans. It is disappointing to note that within the submitted EIA scoping document, these sites have not been included on either *Figure B1 Environmental Constraints Site Level* or on *Figure B.2 Environmental Constraints Wider Context*. We trust this omission will be rectified on all future relevant plans as a number of Local Wildlife Sites will be affected or destroyed by the proposal.*

2.4 Protected Species - Species protected by the Wildlife and Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2017

The ES should assess the impact of all phases of the proposal on protected species (including, for example, great crested newts, reptiles, birds, water voles, badgers and bats). Natural England does not hold comprehensive information regarding the locations of species protected by law, but advises on the procedures and legislation relevant to such species. Records of protected species should be sought from appropriate local biological record centres, nature conservation organisations, groups and individuals; and consideration should be given to the wider context of the site for example in terms of habitat linkages and protected species populations in the wider area, to assist in the impact assessment.

The conservation of species protected by law is explained in Part IV and Annex A of Government Circular 06/2005 *Biodiversity and Geological Conservation: Statutory Obligations and their Impact*

within the Planning System. The area likely to be affected by the proposal should be thoroughly surveyed by competent ecologists at appropriate times of year for relevant species and the survey results, impact assessments and appropriate accompanying mitigation strategies included as part of the ES.

In order to provide this information there may be a requirement for a survey at a particular time of year. Surveys should always be carried out in optimal survey time periods and to current guidance by suitably qualified and where necessary, licensed, consultants. Natural England has adopted [standing advice](#) for protected species which includes links to guidance on survey and mitigation.

2.5 Habitats and Species of Principal Importance

The ES should thoroughly assess the impact of the proposals on habitats and/or species listed as 'Habitats and Species of Principal Importance' within the England Biodiversity List, published under the requirements of S41 of the Natural Environment and Rural Communities (NERC) Act 2006. Section 40 of the NERC Act 2006 places a general duty on all public authorities, including local planning authorities, to conserve and enhance biodiversity. Further information on this duty is available here <https://www.gov.uk/guidance/biodiversity-duty-public-authority-duty-to-have-regard-to-conserving-biodiversity>.

Government Circular 06/2005 states that Biodiversity Action Plan (BAP) species and habitats, 'are capable of being a material consideration...in the making of planning decisions'. Natural England therefore advises that survey, impact assessment and mitigation proposals for Habitats and Species of Principal Importance should be included in the ES. Consideration should also be given to those species and habitats included in the relevant Local BAP.

Natural England advises that a habitat survey (equivalent to Phase 2) is carried out on the site, in order to identify any important habitats present. In addition, ornithological, botanical and invertebrate surveys should be carried out at appropriate times in the year, to establish whether any scarce or priority species are present. The Environmental Statement should include details of:

- Any historical data for the site affected by the proposal (e.g. from previous surveys);
- Additional surveys carried out as part of this proposal;
- The habitats and species present;
- The status of these habitats and species (e.g. whether priority species or habitat);
- The direct and indirect effects of the development upon those habitats and species;
- Full details of any mitigation or compensation that might be required.

The development should seek if possible to avoid adverse impact on sensitive areas for wildlife within the site, and if possible provide opportunities for overall wildlife gain.

The record centre for the relevant Local Authorities should be able to provide the relevant information on the location and type of priority habitat for the area under consideration.

2.6 Contacts for Local Records

Natural England does not hold local information on local sites, local landscape character and local or national biodiversity priority habitats and species. We recommend that you seek further information from the appropriate bodies (which may include the local records centre, the local wildlife trust, local geoconservation group or other recording society and a local landscape characterisation document).

Local Record Centre (LRC) in Norfolk please contact:

Norfolk Biodiversity Information Service (NBIS), (hosted by Norfolk County Council)
Community and Environmental Services
6th Floor, County Hall
Martineau Lane

NORWICH, NR1 2DH

Telephone: [REDACTED] Email: nbis@norfolk.gov.uk

3. Designated Landscapes and Landscape Character

Landscape and visual impacts

Natural England would wish to see details of local landscape character areas mapped at a scale appropriate to the development site as well as any relevant management plans or strategies pertaining to the area. The EIA should include assessments of visual effects on the surrounding area and landscape together with any physical effects of the development, such as changes in topography. The European Landscape Convention places a duty on Local Planning Authorities to consider the impacts of landscape when exercising their functions.

The EIA should include a full assessment of the potential impacts of the development on local landscape character using [landscape assessment methodologies](#). We encourage the use of Landscape Character Assessment (LCA), based on the good practice guidelines produced jointly by the Landscape Institute and Institute of Environmental Assessment in 2013. LCA provides a sound basis for guiding, informing and understanding the ability of any location to accommodate change and to make positive proposals for conserving, enhancing or regenerating character, as detailed proposals are developed.

Natural England supports the publication *Guidelines for Landscape and Visual Impact Assessment*, produced by the Landscape Institute and the Institute of Environmental Assessment and Management in 2013 (3rd edition). The methodology set out is almost universally used for landscape and visual impact assessment.

In order to foster high quality development that respects, maintains, or enhances, local landscape character and distinctiveness, Natural England encourages all new development to consider the character and distinctiveness of the area, with the siting and design of the proposed development reflecting local design characteristics and, wherever possible, using local materials. The Environmental Impact Assessment process should detail the measures to be taken to ensure the building design will be of a high standard, as well as detail of layout alternatives together with justification of the selected option in terms of landscape impact and benefit.

The assessment should also include the cumulative effect of the development with other relevant existing or proposed developments in the area. In this context Natural England advises that the cumulative impact assessment should include other proposals currently at Scoping stage. Due to the overlapping timescale of their progress through the planning system, cumulative impact of the proposed development with those proposals currently at Scoping stage would be likely to be a material consideration at the time of determination of the planning application.

The assessment should refer to the relevant [National Character Areas](#) which can be found on our website. Links for Landscape Character Assessment at a local level are also available on the same page.

Heritage Landscapes

You should consider whether there is land in the area affected by the development which qualifies for conditional exemption from capital taxes on the grounds of outstanding scenic, scientific or historic interest. An up-to-date list may be obtained at www.hmrc.gov.uk/heritage/lbsearch.htm.

4. Access and Recreation

Natural England encourages any proposal to incorporate measures to help encourage people to access the countryside for quiet enjoyment. Measures such as reinstating existing footpaths together with the creation of new footpaths and bridleways are to be encouraged. Links to other green networks and, where appropriate, urban fringe areas should also be explored to help promote

the creation of wider green infrastructure. Relevant aspects of local authority green infrastructure strategies should be incorporated where appropriate.

Rights of Way, Access Land, and National Trails

The EIA should consider potential impacts on access land, public open land and rights of way routes in the vicinity of the development. Appropriate mitigation measures should be incorporated for any adverse impacts. We also recommend reference to the relevant Right of Way Improvement Plans (ROWIP) to identify public rights of way within or adjacent to the proposed site that should be maintained or enhanced.

5. Soil and Agricultural Land Quality

Impacts from the development should be considered in light of the Government's policy for the protection of the best and most versatile (BMV) agricultural land as set out in paragraph 112 of the NPPF. We also recommend that soils should be considered under a more general heading of sustainable use of land and the ecosystem services they provide as a natural resource in line with paragraph 109 of the NPPF.

Soil and Agricultural Land Quality

Soil is a finite resource that fulfils many important functions and services (ecosystem services) for society, for example as a growing medium for food, timber and other crops, as a store for carbon and water, as a reservoir of biodiversity and as a buffer against pollution. It is therefore important that the soil resources are protected and used sustainably.

The applicant should consider the following issues as part of the Environmental Statement:

1. The degree to which soils are going to be disturbed/harmed as part of this development and whether 'best and most versatile' agricultural land is involved.

This may require a detailed survey if one is not already available. For further information on the availability of existing agricultural land classification (ALC) information see www.magic.gov.uk. Natural England Technical Information Note 049 - [*Agricultural Land Classification: protecting the best and most versatile agricultural land*](#) also contains useful background information.

2. If required, an agricultural land classification and soil survey of the land should be undertaken. This should normally be at a detailed level, eg one auger boring per hectare, (or more detailed for a small site) supported by pits dug in each main soil type to confirm the physical characteristics of the full depth of the soil resource, ie 1.2 metres.
3. The Environmental Statement should provided details of how any adverse impacts on soils can be minimised. Further guidance is contained in the [*Defra Construction Code of Practice for the Sustainable Use of Soil on Development Sites*](#).

As identified in the NPPF new sites or extensions to new sites for peat extraction should not be granted permission by Local Planning Authorities or proposed in development plans.

6. Air Quality

Air quality in the UK has improved over recent decades but air pollution remains a significant issue; for example over 97% of sensitive habitat area in England is predicted to exceed the critical loads for ecosystem protection from atmospheric nitrogen deposition ([*England Biodiversity Strategy*](#), Defra 2011). A priority action in the England Biodiversity Strategy is to reduce air pollution impacts on biodiversity. The planning system plays a key role in determining the location of developments which may give rise to pollution, either directly or from traffic generation, and hence planning decisions can have a significant impact on the quality of air, water and land. The assessment should take account of the risks of air pollution and how these can be managed or reduced. Further information on air pollution impacts and the sensitivity of different habitats/designated sites can be found on the Air Pollution Information System (www.apis.ac.uk). Further information on air pollution

modelling and assessment can be found on the Environment Agency website.

7. Climate Change Adaptation

The [England Biodiversity Strategy](#) published by Defra establishes principles for the consideration of biodiversity and the effects of climate change. The ES should reflect these principles and identify how the development's effects on the natural environment will be influenced by climate change, and how ecological networks will be maintained. The NPPF requires that the planning system should contribute to the enhancement of the natural environment 'by establishing coherent ecological networks that are more resilient to current and future pressures' ([NPPF](#) Para 109), which should be demonstrated through the ES.

8. Cumulative and in-combination effects

A full consideration of the implications of the whole scheme should be included in the ES. All supporting infrastructure should be included within the assessment.

The ES should include an impact assessment to identify, describe and evaluate the effects that are likely to result from the project in combination with other projects and activities that are being, have been or will be carried out. The following types of projects should be included in such an assessment, (subject to available information):

- a. existing completed projects;
- b. approved but uncompleted projects;
- c. ongoing activities;
- d. plans or projects for which an application has been made and which are under consideration by the consenting authorities; and
- e. plans and projects which are reasonably foreseeable, i.e. projects for which an application has not yet been submitted, but which are likely to progress before completion of the development and for which sufficient information is available to assess the likelihood of cumulative and in-combination effects.

via e-mail

The Planning Inspectorate
Temple Quay House
Temple Quay
Bristol
BS1 6PN

NCC contact number: 0344 800 8020
Textphone: 0344 800 8011

Your Ref: NA
Date: 26 February 2018

My Ref: FWS/18/7/6087-PINS
Tel No.: 0344 800 8020
Email: llfa@norfolk.gov.uk

Dear Sirs,

A47 Thickthorn Junction Upgrade at A11 – A47 Junction – Development Consent Order

Thank you for your consultation on the above site, received on 8 February 2018. We have reviewed the request as submitted and wish to make the following comments.

For information we are aware of historical flooding off Cantley Lane, north of the A47 around Cringleford including Langley Close and Brettingham Avenue. This flooding occurred on the 23 June 2016 where we received 19 reports of flooding. We have identified 8 properties that flooded internally from these reports. We, as the LLFA, are in the process of issuing a formal flood investigation report into this flood incident. The draft report has identified that significant runoff from adjacent fields and the highway affected properties on Cantley Lane. There is an unknown impact from the Roundhouse Way roundabout and it has been suggested by local residents that raising of this feature may have altered natural drainage patterns. It should also be noted that many properties thresholds are lower than the highways in this area. Any improvements to the Cantley Lane or connection to Roundhouse Roundabout must consider the recent flooding and improvements to highways drainage proposed where possible. We note that the proposed DCO boundary shown in the EIA scoping report includes this area.

We are aware from media reports that Thickthorn Roundabout flooded under the flyover in June 2017 but this has not formally been investigated by the LLFA. The Highways Local Area office at Ketteringham may have further information (0344 800 8020) on highways flooding incidences on surrounding minor roads.

The Surface Water Management Strategy for Norfolk and the Surface Water Management Plan for Norwich urban area can be found on our website at <https://www.norfolk.gov.uk/what-we-do-and-how-we-work/policy-performance-and-partnerships/policies-and-strategies/flood-and-water-management-policies>

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Whether or not an EIA/ES is required we consider that the following issues should be considered and addressed as part of the development and mitigation agreed in conjunction with the LLFA and other appropriate authorities prior to commencement of the scheme;

We strongly recommend that any EIA/ES includes or planning application for development is accompanied by a flood risk assessment (FRA) / surface water drainage strategy to address

- local sources of flood risk, including those from ordinary watercourses, surface water flow and groundwater
- how surface water drainage will be managed on site and show compliance with the written Ministerial Statement HCWS 161 by ensuring that Sustainable Drainage Systems for the management of run-off are put in place.

This supporting information would assess the potential for the development to increase the risk of flooding from the proposal or how surface water runoff through the addition of hard surfaces. It will show how this will be managed to ensure that the development does not increase flood risk on the site or elsewhere, in line with National Planning Policy Framework (paragraph 103).

In this particular case this would include appropriate information on;

- Sustainable Drainage Systems (SuDS) proposals in accordance with appropriate guidance including “Non-statutory technical standards for sustainable drainage systems” March 2015 by Department for Environment, Food and Rural Affairs.
- Appropriate assessment and mitigation of sources of fluvial (ordinary watercourse) flooding, surface water flooding originating from offsite that may affect the development and any potential for groundwater flooding.
- Where any SuDS are proposed it is important to demonstrate that the SuDS hierarchy has been followed both in terms of:
 - surface water disposal location, prioritised in the following order: disposal of water to shallow infiltration, to a watercourse, to a surface water sewer, combined sewer / deep infiltration (generally greater than 2m below ground level),
 - the SuDS components used within the management train (source, site and regional control) to address flood risk and water quality mitigation required from the new development

At least one feasible proposal for the disposal of surface water drainage should be demonstrated and should be supported by the inclusion of appropriate supporting information. Onsite, infiltration testing, in accordance with BRE365 or equivalent should be undertaken to find out if infiltration is viable across the site and at the depth and location of any infiltration drainage feature. Infiltration testing should be undertaken 3 times in quick succession at each location. Any drainage mitigation for the site should attenuate the post development runoff rate and volume to the equivalent pre development greenfield rate and volume up to the 1 in 100 plus climate change allowance.

We welcome that the applicant indicates that a Flood Risk Assessment (FRA) will be undertaken based on the requirements of National Planning Policy Framework (NPPF), Planning Practice Guidance (PPG), Design Manual for Roads and Bridges (DMRB) and

Continued.../

the CIRIA SuDS Manual (Section 13 of the EIA Scoping Report (A47/A11 Thickthorn Junction by Highways England, dated February 2018 version P02 PINS project reference number: TR010037 Highways England document reference: HETTNJCT-MMSJV-EGN-000-RP-LX-00001.) It is noted that this report indicates some historical flooding experienced on the highway previously and that there is an outline of the modelling work that will be undertaken to show flood risk will not be increased.

We note that Thickthorn/Cantley Stream is within the Environment Agency Fluvial Flood Map and so, they are likely to comment on the appropriateness of any modelling at this point. However, there may be smaller tributaries (smaller than 3km²) in the area that have not been modelled by the national flood map due to the size but the flood risk has not been considered. We expect that all watercourses, including tributaries, be included within any hydraulic model, to ensure that flood risk is not increased. We would work with the Environment Agency to ensure that the information they review will also be appropriate to support any Ordinary Watercourse Consent applications that Norfolk County Council will consider.

We also expect that surface overland flow routes to be considered (highlighted by the EA Surface Water Flood Map), investigated and modelled to ensure that mitigation is proposed which may take the form of dry culverts.

We suggest the following with regard to information requirements for all sources of flooding:

- If you intend to carry out a river survey to inform the hydraulic modelling of Cantley Stream, any collected data and model produced should include all tributaries. We have included provided information on the flowlines of surface water which may help identify these on the ground if not shown on the Ordnance Survey or Environment Agency Fluvial Flood Map.
- Any collected topographic survey data should extend across the watercourse and any likely flood plain to enable modelling to accurately represent pre and post development scenarios.
- New culverts across the tributaries should be designed to an appropriate size to pass the 100 year plus climate change allowance.
- Any upgrades of culverts should aim to allow the flow of 1 in 100 year plus climate change design event but must also include an assessment to show how passing any additional flow downstream will not increase the current flood risk scenario.
- If there are any surface water flow paths identified crossing the development area, dry culverts may need to be provide up to the 1 in 100 year plus climate change design event. This would prevent ponding against infrastructure and prevent an increase of flood risk elsewhere.
- Any new drainage infrastructure should include appropriate sustainable drainage design to address the appropriate flood risk and water quality mitigation requirements.
- New drainage infrastructure that is designed to attenuate any additional surface water runoff should remain outside the 1 in100 year plus climate change flood areas for any source of flooding. This is to prevent the drainage becoming overwhelmed by flood water prior to being available for the runoff from the development.
- Upgrade of any small link roads or existing roadabouts e.g. Cantley Lane or Roundhouse Way roundabout should consider upgrading the existing drainage

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infrastructure. It is particularly important at the north of Cantley Lane close to the recent flooding, that the flood risk associated with overland flow paths is not made any worse, the highways drainage scheme is not overwhelmed by overland flow paths and opportunities to improve existing flooding problems are considered.

Any Ordinary Watercourse consent application would need to show how the flow in the watercourse will be maintained and how flood risk will not be increased elsewhere. It would be supported by the relevant documents and technical drawings. We do not have detailed guidance on information required for consenting, however, the LLFA guidance on development (as a statutory consultee) with regard to the prevention of the increase in flood risk can be used as a general guide. This can be found on our website <https://www.norfolk.gov.uk/rubbish-recycling-and-planning/flood-and-water-management/information-for-developers>

We advise that any formal or informal drainage associated with existing developments or farmland should be maintained or diverted by the scheme to avoid future ponding against any embankments that may be created.

We also welcome that the applicant indicates that an FRA will include a drainage strategy and design appropriate SUDS features including the must up to date climate change allowances in accordance with current policy guidelines. The proposed drainage scheme should be tested with an addition of 20% and 40% climate change to consider if additional mitigation is required. We note that the scoping report highlights that construction of large development schemes can cause additional runoff through the nature of removing topsoil and having temporary works. We would like to see that adequate measures are put in place to minimise temporary additional runoff and that this is diverted away from any final drainage scheme. This would be to minimise siltation and blockage of newly created drainage infrastructure.

We would like to highlight that; the drainage strategy should also contain a maintenance and management plan detailing the activities required and details of who will adopt and maintain the all the surface water drainage features for the lifetime of the development.

Please note, as there are works proposed as part of this application that are likely to affect flows in an ordinary watercourse, then the applicant is likely to need the approval of LLFA as Norfolk County Council. It should be noted that this approval is separate from planning approval. We would expect to be consulted on both the temporary works and permanent works required.

Yours sincerely

Elaine

Elaine Simpson
Lead Local Flood Authority

Disclaimer

We have relied on the accuracy and completeness of the information supplied to us in providing the above advice and can take no responsibility for incorrect data or interpretation, or omissions, in such information. If we have not referred to a particular issue in our response, it should not be assumed that there is no impact associated with that issue.

Norfolk County Council Comments on the: A11/A47 Thickthorn Junction Project - Scoping Report

7th March 2018

1. Preface

- 1.1. The officer-level comments below are made on a without prejudice basis and the County Council reserves the right to make further comments on the emerging A47 Thickthorn Project.

2. General Comments

- 2.1. The County Council (CC) welcomes the objectives of the proposed scheme as set out in paragraph 2.2.1, particularly in respect of economic growth and improving road safety;

2.2. People and Communities section

- The CC welcomes the reference to community severance needing to be considered as part of the EIA process (para 12.2.2 and 12.7.5 – 12.7.10); It is unclear whether the proposed solutions for community severance as outlined in paragraphs 12.7.32 – 35 (i.e. including a proposed footbridge or underpass for NMU) form part of the NSIP scheme. The EIA will need to make this clear.
- While supporting references to assessing the Local Impact Area and Wider Impact Areas as part of the overall assessment of the scheme (paragraph 12.2.4 and 12.7.17 onwards) - it is felt that a County-wide assessment of the likely economic implications needs to be considered through the EIA process. This assessment needs to be undertaken in relation to the scheme coming forward either on its own or in combination with other proposed trunk road improvements. The wider strategic / County-wide issues are in part picked-up in paragraph 12.7.42, but will need to be expanded through the EIA process.
- Paragraph 12.2.4 – reference to the Wider Impact Area covering just South Norfolk District should be extended to cover the Norwich City administrative area also, particularly the southern parts of the City and its employment areas.
- Page 106 – welcome reference to community facilities as part of the baseline assessment, which includes primary and secondary schools as well as GP practices.
- Paragraph 12.9.6 – the receptors identified including health and education are welcomed.

- 2.3. Should you have any queries with the above comments please call or email Stephen Faulkner on [REDACTED] email [REDACTED] [@norfolk.gov.uk](mailto:[REDACTED]@norfolk.gov.uk).

3. **Transport**

- 3.1. The CC supports the scheme objectives set out in Section 2.2
- 3.2. Section 2.3 describes the scheme location. It makes no reference to the development proposals in this area (largely housebuilding) that will significantly affect the location. It is unclear how the impacts of the proposal on sites that will be built over should be assessed. They probably should be looking at in-combination effects
- 3.3. Paragraph 2.3.8 glosses over the railway: this is an important connection linking Norwich with Cambridge, the Midlands, and the north of England and Scotland. The proposed scheme will also directly affect the railway because it will involve, at least, widening of an existing bridge across it. In this respect, it cannot simply be described as being '700m away.' Impacts on the railway, particularly during the construction phase, will need to be taken into account, probably under climate change and people and communities
- 3.4. There is no reference in the report to the assessment of impact on public transport facilities, particularly the adjacent park and ride site, and the impact that the scheme might have on improving access to this park and ride site. We have a proposal for a slip road directly from the A11 into an expanded park and ride site. The proposed scheme might mean that this direct access can no longer be provided. Highways England is still assessing the implications of their scheme.
- 3.5. Paragraph 2.4.1 includes a description of the scheme that, at least in my understanding, is no longer correct. It is understood that HE is now looking at an option that does not 'reconnect Cantley Lane' but instead provides a realigned foot / cycle bridge and a new road from Cantley Lane South across the A11 to the B1172 (this is referenced in paragraph 2.4.2 (Option A)).
- 3.6. Although it probably doesn't affect this scheme as much as the Blofield to Burlingham dualling scheme, it is worth noting that the Scoping Report and emerging documents need to clearly set out the scope of the project, and clarify the exact nature of the project. Because the exact nature of the project is not known, it is difficult to assess proposals to deal with impacts, such as those caused by diversions of traffic, not necessarily in the immediate vicinity of the proposed dualling scheme. Some of these impacts might affect areas outside of the DCO area set out in Appendix A.
- 3.7. Without knowing the broader likely impacts of the proposal, it is difficult to know whether the proposed areas to be assessed are correct. This comment applies to most if not all of the things they are proposing to assess. Air quality is ok as it gives some criteria to judge whether an assessment is appropriate. Landscape for example doesn't. For People and Communities it is probably quite important to set some criteria about impacts because, if there is significant diversion of traffic during either operation or construction it could affect people and communities living some distance from the proposal and therefore outside of the areas proposed to be assessed.

- 3.8. Should you have any queries with the above comments please call or email David Cumming on [REDACTED] [@norfolk.gov.uk](mailto:[REDACTED]@norfolk.gov.uk).

4. **Environment**

4.1. **Ecology**

The CC is satisfied that the Biodiversity Section (Section 8.) of the EIA Scoping Report includes sufficient information to inform the Environmental Statement (ES) part of the EIA. All surveys and mitigation references the accepted industry standard methodologies and will need to be outlined fully in the ES, with further surveys to be carried out in the first half of 2018. Monitoring will be proposed where required and will continue after construction of the scheme to monitor impacts. Mitigation will be proposed and replacement habitat or habitat improvements will be proposed within the ES.

A Habitat Regulations Assessment Screening Report (HRA) was undertaken to determine whether any adverse impacts on Natura 2000 sites. The Stage 2 Habitats Regulations Assessment (HRA) concluded that there were no likely significant effects upon International and European designated sites (Norfolk Valley Fens SAC).

Detailed consultations will be undertaken with various statutory and non-statutory bodies including Natural England, Environment Agency, Norfolk County Council, Norfolk Wildlife Trust and the RSPB. These organisations will need to be consulted fully during the EIA process and their responses will need to be included in the associated reporting.

There is potential for the scheme to have a direct impact on priority habitats and protected species. These impacts have been identified and will be assessed appropriately in conversation with the appropriate responsible organisations.

For the record, Option A appears to have more potential for loss of habitat and adverse effects on protected species, therefore in terms of Ecology, Option B would be preferred.

- 4.2. The CC agree with the conclusion of Section 8 of the Scoping report that;

Paragraph 8.10.1 There is potential for significant direct and indirect effects to protected species, designated sites, and sensitive habitats as a result of the Proposed Scheme.

Subsequently, this warrants assessment to a Detailed level, in accordance with IAN 130/10.

Paragraph 8.10.2 This assessment will be presented within the ES.

4.2. **Landscape**

The existing and baseline knowledge seems accurate and considers the varying landscape characters across the extent of the proposals including the consideration

of visual amenity of both Option A and Option B.

The assessment of Landscape and Visual affects seems thorough and the CC is satisfied that the conclusion of requiring a 'Detailed' level of assessment was reached correctly due to the potential significant effects on both landscape character and visual amenity. The proposals for this further assessment (a Detailed LVIA within the ES) including site visit appear suitable. This will allow a further understanding of the local landscape character to better assess the landscape value and sensitivity to change.

- 4.3. Should you have any queries with the above comments please call or email Ed Stocker on [REDACTED] [@norfolk.gov.uk](mailto:[REDACTED]@norfolk.gov.uk).

5. **Historic Environment**

- 5.1. The CC welcomes the report, however, additional information could have been included about the scope of the archaeological fieldwork that may need to be carried out for inclusion in the Environmental Statement.
- 5.2. Should you have any queries with the above comments please call or email Dr James Albone on [REDACTED] [@norfolk.gov.uk](mailto:[REDACTED]@norfolk.gov.uk).

6. **Lead Local Flood Authority (LLFA)**

- 6.1. Detailed LLFA comments are attached, see the documents titled '*FWS_18_7_6087 LLFA Response Thickthorn*' and '*NCC Flow Paths Map – Thickthorn*'.

The Thickthorn Flow Map has been provided for information and should not be reproduced without the express permission of Norfolk County Council.

Catchment and flowpath caveats:

- Catchments and flowpaths have been created using a bare earth DTM derived from a LIDAR / NextMap composite at a horizontal grid resolution of 2m.
- The "bare earth" model means that most elevated features such as buildings and trees are ignored. Ground levels within these features are interpolated from the surrounding ground levels.
- In some cases the top of features may be represented rather than the opening through it.
- These features include road and railway embankments, bridges, subways and tunnels
- Other real world features such as walls, drop kerbs and speed bumps are not represented.

Catchments and flow paths were created which do not take into consideration these real world features

- 6.2. Should you have any queries with the above comments please email the LLFA at lifa@norfolk.gov.uk.

7. Minerals and Waste

- 7.1. The Planning Policy context in the Scoping report only details the national planning policy context. Therefore the Scoping Report has not referred to Policy CS16 of the adopted Norfolk Core Strategy and Minerals and Waste Development Management Policies DPD (the 'Norfolk Minerals and Waste Core Strategy'). Policy CS16 is applicable to this proposal because the majority of the DCO site area is underlain by a mineral resource (sand and gravel) which is safeguarded as part of the Norfolk Minerals and Waste Core Strategy. Safeguarded mineral resources are derived primarily from the BGS mineral resources map (2004) as amended by the DiGMapGB-50 dataset. A duty is placed upon planning authorities to ensure that mineral resources are not needlessly sterilised, as indicated in National Planning Policy Framework paragraph 143, and 'A guide to mineral safeguarding in England' published jointly by DCLG and the BGS. Chapter 9 of the Scoping Report provides information on the geology of the DCO site. Paragraph 9.7.7 states "*Where practicable, material should be re-used on site provided performance criteria are met with respect to chemical composition and geotechnical parameters. This may be managed under a Materials Management Plan prepared in accordance with the CL: AIRE Code of Practice.*" Therefore, it is considered that the re-use of materials on site should include the use of sand and gravel mineral resources in the construction of the scheme, if the material meets the required specifications for highway construction and that this should be managed under a Materials Management Plan.

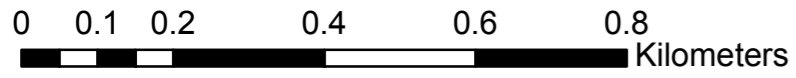
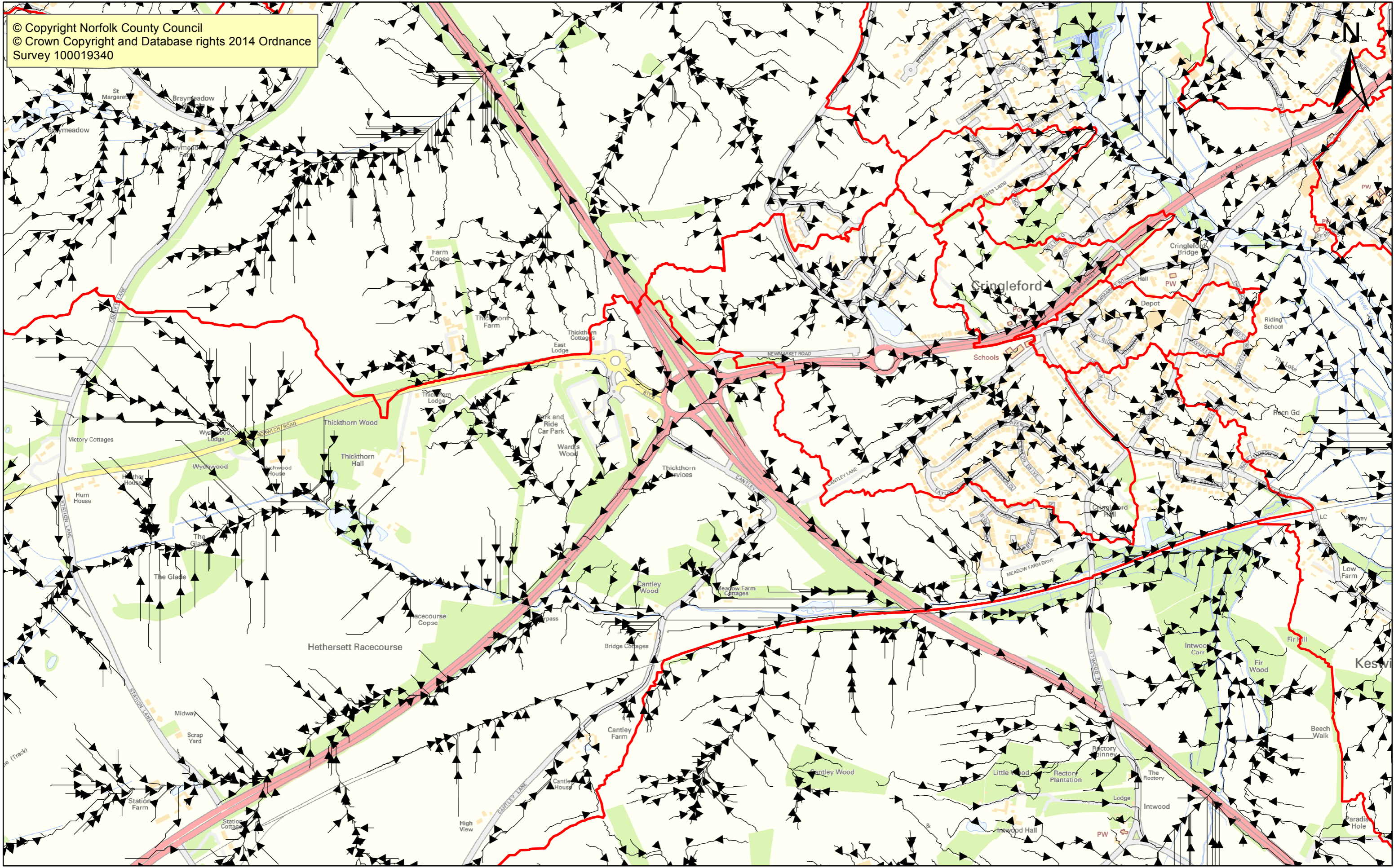
Norfolk County Council's Norfolk Core Strategy and Minerals and Waste Development Management Policies DPD is available on our website here: <https://www.norfolk.gov.uk/what-we-do-and-how-we-work/policy-performance-and-partnerships/policies-and-strategies/minerals-and-waste-planning-policies/adopted-policy-documents>

A map of the Mineral Safeguarding Areas is available on our website here: <https://norfolk.jdi-consult.net/localplan/mapping2.php?mapid=201>

Norfolk County Council's safeguarding guidance is available on our website here: <https://www.norfolk.gov.uk/-/media/norfolk/downloads/what-we-do-and-how-we-work/policy-performance-and-partnerships/policies-and-strategies/minerals-and-waste-planning/aggregates-sand-gravel-and-carstone.pdf?la=en>

- 7.2. Should you have any queries with the above comments please call or email Caroline Jeffery on [REDACTED] [@norfolk.gov.uk](mailto:[REDACTED]@norfolk.gov.uk).

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Survey 100019340



Site Name: Thickthorn Junction
Reference: FWS/18/7/6087
Date Created: 27 Feb 2018

Legend
→ Flow Paths
□ Catchments



 **Norfolk** County Council

1:10,000

From: [REDACTED]
To: [A47/A11 Thickthorn](#)
Subject: DCO A47-A11 Thickthorn Junction EIA Scoping Consultation
Date: 20 February 2018 12:45:13

Dear Sir/Madam,

**Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017(the EIA Regulations) – Regulations 10 and 11 Application by Highways England (the Applicant) for an Order granting Development Consent for the A47/A11 Thickthorn Junction Project (the Proposed Development)
Scoping consultation and notification of the Applicant’s contact details and duty to make available information to the Applicant if requested**

Thank you for consulting Norwich City Council on the above. Our administrative boundary is located approximately 1km northeast of the proposed DCO area. Our only comment at this stage is that the Landscape section (chapter 7) details a study area of 1km from the site (section 7.2) but goes onto state that the methodology will include an assessment of the Zone of Theoretical Influence assessment (section 7.9), we would suggest that if the ZTI assessment identifies areas affected beyond 1km they should not be scoped out of the EIA simply due to the restricted study area. We would suggest that either all areas identified within the ZTI assessment should be scoped in or the study area extended to 2km.

The above is an officer level response.

Kind regards

Mark Brown
Development Manager
Planning Services
Norwich City Council
t | [REDACTED]
m | [REDACTED]
e | [REDACTED]@[norwich.gov.uk](mailto:[REDACTED]@norwich.gov.uk)

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Ms Alison Down
EIA and Land Rights Advisor
The Planning Inspectorate
3D Eagle Wing
Temple Quay House
2 The Square
Bristol, BS1 6PN

Your Ref : TR010037-000006

Our Ref: 43146

6th March 2018

Dear Alison

**Re: Scoping Consultation
A47/A11 Thickthorn Junction, Norfolk**

Thank you for including Public Health England (PHE) in the scoping consultation phase of the above application. Our response focuses on health protection issues relating to chemicals and radiation. Advice offered by PHE is impartial and independent.

We understand that the promoter will wish to avoid unnecessary duplication and that many issues including air quality, emissions to water, waste, contaminated land etc. will be covered elsewhere in the Environmental Statement (ES). We believe the summation of relevant issues into a specific section of the report provides a focus which ensures that public health is given adequate consideration. The section should summarise key information, risk assessments, proposed mitigation measures, conclusions and residual impacts, relating to human health. Compliance with the requirements of National Policy Statements and relevant guidance and standards should also be highlighted.

In terms of the level of detail to be included in an ES, we recognise that the differing nature of projects is such that their impacts will vary. Any assessments undertaken to inform the ES should be proportionate to the potential impacts of the proposal, therefore we accept that, in some circumstances particular assessments may not be relevant to an application, or that an assessment may be adequately completed using a qualitative rather than quantitative methodology. In cases where this decision is made the promoters should fully explain and justify their rationale in the submitted documentation.

It is noted that the current proposal do not appear to consider possible health impacts of Electric and Magnetic Fields (EMF). The proposer should confirm either

that the proposed development does include or impact upon any potential sources of EMF; or ensure that an adequate assessment of the possible impacts is undertaken and included in the ES.

The attached appendix outlines generic areas that should be addressed by all promoters when preparing ES for inclusion with an NSIP submission. We are happy to assist and discuss proposals further in the light of this advice.

Yours sincerely,

Environmental Public Health Scientist

nsipconsultations@phe.gov.uk

Please mark any correspondence for the attention of National Infrastructure Planning Administration.

Appendix: PHE recommendations regarding the scoping document

General approach

The EIA should give consideration to best practice guidance such as the Government's Good Practice Guide for EIA¹. It is important that the EIA identifies and assesses the potential public health impacts of the activities at, and emissions from, the installation. Assessment should consider the development, operational, and decommissioning phases.

It is not PHE's role to undertake these assessments on behalf of promoters as this would conflict with PHE's role as an impartial and independent body.

Consideration of alternatives (including alternative sites, choice of process, and the phasing of construction) is widely regarded as good practice. Ideally, EIA should start at the stage of site and process selection, so that the environmental merits of practicable alternatives can be properly considered. Where this is undertaken, the main alternatives considered should be outlined in the ES²

The following text covers a range of issues that PHE would expect to be addressed by the promoter. However this list is not exhaustive and the onus is on the promoter to ensure that the relevant public health issues are identified and addressed. PHE's advice and recommendations carry no statutory weight and constitute non-binding guidance.

Receptors

The ES should clearly identify the development's location and the location and distance from the development of off-site human receptors that may be affected by emissions from, or activities at, the development. Off-site human receptors may include people living in residential premises; people working in commercial, and industrial premises and people using transport infrastructure (such as roads and railways), recreational areas, and publicly-accessible land. Consideration should also be given to environmental receptors such as the surrounding land, watercourses, surface and groundwater, and drinking water supplies such as wells, boreholes and water abstraction points.

Impacts arising from construction and decommissioning

Any assessment of impacts arising from emissions due to construction and decommissioning should consider potential impacts on all receptors and describe monitoring and mitigation during these phases. Construction and decommissioning will be associated with vehicle movements and cumulative impacts should be accounted for.

¹ Environmental Impact Assessment: A guide to good practice and procedures - A consultation paper; 2006; Department for Communities and Local Government. Available from: <http://webarchive.nationalarchives.gov.uk/20100410180038/http://communities.gov.uk/planningandbuilding/planning/sustainability/environmental/environmentalimpactassessment/>

² DCLG guidance, 1999 <http://www.communities.gov.uk/documents/planningandbuilding/pdf/155958.pdf>

We would expect the promoter to follow best practice guidance during all phases from construction to decommissioning to ensure appropriate measures are in place to mitigate any potential impact on health from emissions (point source, fugitive and traffic-related). An effective Construction Environmental Management Plan (CEMP) (and Decommissioning Environmental Management Plan (DEMP)) will help provide reassurance that activities are well managed. The promoter should ensure that there are robust mechanisms in place to respond to any complaints of traffic-related pollution, during construction, operation, and decommissioning of the facility.

Emissions to air and water

Significant impacts are unlikely to arise from installations which employ Best Available Techniques (BAT) and which meet regulatory requirements concerning emission limits and design parameters. However, PHE has a number of comments regarding emissions in order that the EIA provides a comprehensive assessment of potential impacts.

When considering a baseline (of existing environmental quality) and in the assessment and future monitoring of impacts these:

- should include appropriate screening assessments and detailed dispersion modelling where this is screened as necessary
- should encompass all pollutants which may be emitted by the installation in combination with all pollutants arising from associated development and transport, ideally these should be considered in a single holistic assessment
- should consider the construction, operational, and decommissioning phases
- should consider the typical operational emissions and emissions from start-up, shut-down, abnormal operation and accidents when assessing potential impacts and include an assessment of worst-case impacts
- should fully account for fugitive emissions
- should include appropriate estimates of background levels
- should identify cumulative and incremental impacts (i.e. assess cumulative impacts from multiple sources), including those arising from associated development, other existing and proposed development in the local area, and new vehicle movements associated with the proposed development; associated transport emissions should include consideration of non-road impacts (i.e. rail, sea, and air)
- should include consideration of local authority, Environment Agency, Defra national network, and any other local site-specific sources of monitoring data
- should compare predicted environmental concentrations to the applicable standard or guideline value for the affected medium (such as UK Air Quality Standards and Objectives and Environmental Assessment Levels)
 - If no standard or guideline value exists, the predicted exposure to humans should be estimated and compared to an appropriate health-based value (a Tolerable Daily Intake or equivalent). Further guidance is provided in Annex 1
 - This should consider all applicable routes of exposure e.g. include consideration of aspects such as the deposition of chemicals emitted to air and their uptake via ingestion
- should identify and consider impacts on residential areas and sensitive receptors (such as schools, nursing homes and healthcare facilities) in the area(s) which

may be affected by emissions, this should include consideration of any new receptors arising from future development

Whilst screening of impacts using qualitative methodologies is common practice (e.g. for impacts arising from fugitive emissions such as dust), where it is possible to undertake a quantitative assessment of impacts then this should be undertaken.

PHE's view is that the EIA should appraise and describe the measures that will be used to control both point source and fugitive emissions and demonstrate that standards, guideline values or health-based values will not be exceeded due to emissions from the installation, as described above. This should include consideration of any emitted pollutants for which there are no set emission limits. When assessing the potential impact of a proposed installation on environmental quality, predicted environmental concentrations should be compared to the permitted concentrations in the affected media; this should include both standards for short and long-term exposure.

Additional points specific to emissions to air

When considering a baseline (of existing air quality) and in the assessment and future monitoring of impacts these:

- should include consideration of impacts on existing areas of poor air quality e.g. existing or proposed local authority Air Quality Management Areas (AQMAs)
- should include modelling using appropriate meteorological data (i.e. come from the nearest suitable meteorological station and include a range of years and worst case conditions)
- should include modelling taking into account local topography

Additional points specific to emissions to water

When considering a baseline (of existing water quality) and in the assessment and future monitoring of impacts these:

- should include assessment of potential impacts on human health and not focus solely on ecological impacts
- should identify and consider all routes by which emissions may lead to population exposure (e.g. surface watercourses; recreational waters; sewers; geological routes etc.)
- should assess the potential off-site effects of emissions to groundwater (e.g. on aquifers used for drinking water) and surface water (used for drinking water abstraction) in terms of the potential for population exposure
- should include consideration of potential impacts on recreational users (e.g. from fishing, canoeing etc) alongside assessment of potential exposure via drinking water

Land quality

We would expect the promoter to provide details of any hazardous contamination present on site (including ground gas) as part of the site condition report.

Emissions to and from the ground should be considered in terms of the previous history of the site and the potential of the site, once operational, to give rise to issues. Public health impacts associated with ground contamination and/or the

migration of material off-site should be assessed³ and the potential impact on nearby receptors and control and mitigation measures should be outlined.

Relevant areas outlined in the Government's Good Practice Guide for EIA include:

- effects associated with ground contamination that may already exist
- effects associated with the potential for polluting substances that are used (during construction / operation) to cause new ground contamination issues on a site, for example introducing / changing the source of contamination
- impacts associated with re-use of soils and waste soils, for example, re-use of site-sourced materials on-site or offsite, disposal of site-sourced materials offsite, importation of materials to the site, etc.

Waste

The EIA should demonstrate compliance with the waste hierarchy (e.g. with respect to re-use, recycling or recovery and disposal).

For wastes arising from the installation the EIA should consider:

- the implications and wider environmental and public health impacts of different waste disposal options
- disposal route(s) and transport method(s) and how potential impacts on public health will be mitigated

Other aspects

Within the EIA PHE would expect to see information about how the promoter would respond to accidents with potential off-site emissions e.g. flooding or fires, spills, leaks or releases off-site. Assessment of accidents should: identify all potential hazards in relation to construction, operation and decommissioning; include an assessment of the risks posed; and identify risk management measures and contingency actions that will be employed in the event of an accident in order to mitigate off-site effects.

The EIA should include consideration of the COMAH Regulations (Control of Major Accident Hazards) and the Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations 2009: both in terms of their applicability to the installation itself, and the installation's potential to impact on, or be impacted by, any nearby installations themselves subject to the these Regulations.

There is evidence that, in some cases, perception of risk may have a greater impact on health than the hazard itself. A 2009 report⁴, jointly published by Liverpool John Moores University and the HPA, examined health risk perception and environmental problems using a number of case studies. As a point to consider, the report suggested: "Estimation of community anxiety and stress should be included as part of every risk or impact assessment of proposed plans that involve a potential environmental hazard. This is true even when the physical health risks may be negligible." PHE supports the inclusion of this information within EIAs as good practice.

³ Following the approach outlined in the section above dealing with emissions to air and water i.e. comparing predicted environmental concentrations to the applicable standard or guideline value for the affected medium (such as Soil Guideline Values)

⁴ Available from: <http://www.cph.org.uk/wp-content/uploads/2012/08/health-risk-perception-and-environmental-problems--summary-report.pdf>

Electromagnetic fields (EMF)

This statement is intended to support planning proposals involving electrical installations such as substations and connecting underground cables or overhead lines. PHE advice on the health effects of power frequency electric and magnetic fields is available in the following link:

<https://www.gov.uk/government/collections/electromagnetic-fields#low-frequency-electric-and-magnetic-fields>

There is a potential health impact associated with the electric and magnetic fields around substations, and power lines and cables. The field strength tends to reduce with distance from such equipment.

The following information provides a framework for considering the health impact associated with the electric and magnetic fields produced by the proposed development, including the direct and indirect effects of the electric and magnetic fields as indicated above.

Policy Measures for the Electricity Industry

The Department of Energy and Climate Change has published a voluntary code of practice which sets out key principles for complying with the ICNIRP guidelines:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/37447/1256-code-practice-emf-public-exp-guidelines.pdf

Companion codes of practice dealing with optimum phasing of high voltage power lines and aspects of the guidelines that relate to indirect effects are also available:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48309/1255-code-practice-optimum-phasing-power-lines.pdf

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224766/powerlines_vcop_microshocks.pdf

Exposure Guidelines

PHE recommends the adoption in the UK of the EMF exposure guidelines published by the International Commission on Non-ionizing Radiation Protection (ICNIRP). Formal advice to this effect was published by one of PHE's predecessor organisations (NRPB) in 2004 based on an accompanying comprehensive review of the scientific evidence:-

<http://webarchive.nationalarchives.gov.uk/20140629102627/http://www.hpa.org.uk/Publications/Radiation/NPRBArchive/DocumentsOfTheNRPB/Abd1502/>

Updates to the ICNIRP guidelines for static fields have been issued in 2009 and for low frequency fields in 2010. However, Government policy is that the ICNIRP

guidelines are implemented in line with the terms of the 1999 EU Council Recommendation on limiting exposure of the general public (1999/519/EC):

http://webarchive.nationalarchives.gov.uk/+www.dh.gov.uk/en/PublicHealth/HealthProtection/DH_4089500

Static magnetic fields

For static magnetic fields, the ICNIRP guidelines published in 2009 recommend that acute exposure of the general public should not exceed 400 mT (millitesla), for any part of the body, although the previously recommended value of 40 mT is the value used in the Council Recommendation. However, because of potential indirect adverse effects, ICNIRP recognises that practical policies need to be implemented to prevent inadvertent harmful exposure of people with implanted electronic medical devices and implants containing ferromagnetic materials, and injuries due to flying ferromagnetic objects, and these considerations can lead to much lower restrictions, such as 0.5 mT.

Power frequency electric and magnetic fields

At 50 Hz, the known direct effects include those of induced currents in the body on the central nervous system (CNS) and indirect effects include the risk of painful spark discharge on contact with metal objects exposed to the field. The ICNIRP guidelines published in 1998 give reference levels for public exposure to 50 Hz electric and magnetic fields, and these are respectively 5 kV m⁻¹ (kilovolts per metre) and 100 µT (microtesla). The reference level for magnetic fields changes to 200 µT in the revised (ICNIRP 2010) guidelines because of new basic restrictions based on induced electric fields inside the body, rather than induced current density. If people are not exposed to field strengths above these levels, direct effects on the CNS should be avoided and indirect effects such as the risk of painful spark discharge will be small. The reference levels are not in themselves limits but provide guidance for assessing compliance with the basic restrictions and reducing the risk of indirect effects.

Long term effects

There is concern about the possible effects of long-term exposure to electromagnetic fields, including possible carcinogenic effects at levels much lower than those given in the ICNIRP guidelines. In the NRPB advice issued in 2004, it was concluded that the studies that suggest health effects, including those concerning childhood leukaemia, could not be used to derive quantitative guidance on restricting exposure. However, the results of these studies represented uncertainty in the underlying evidence base, and taken together with people's concerns, provided a basis for providing an additional recommendation for Government to consider the need for further precautionary measures, particularly with respect to the exposure of children to power frequency magnetic fields.

The Stakeholder Advisory Group on ELF EMFs (SAGE)

SAGE was set up to explore the implications for a precautionary approach to extremely low frequency electric and magnetic fields (ELF EMFs), and to make practical recommendations to Government:

<http://www.emfs.info/policy/sage/>

SAGE issued its First Interim Assessment in 2007, making several recommendations concerning high voltage power lines. Government supported the implantation of low cost options such as optimal phasing to reduce exposure; however it did not support the option of creating corridors around power lines on health grounds, which was considered to be a disproportionate measure given the evidence base on the potential long term health risks arising from exposure. The Government response to SAGE's First Interim Assessment is available here:

http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_107124

The Government also supported calls for providing more information on power frequency electric and magnetic fields, which is available on the PHE web pages (see first link above).

Annex 1

Human health risk assessment (chemical pollutants)

The points below are cross-cutting and should be considered when undertaking a human health risk assessment:

- The promoter should consider including Chemical Abstract Service (CAS) numbers alongside chemical names, where referenced in the ES
- Where available, the most recent United Kingdom standards for the appropriate media (e.g. air, water, and/or soil) and health-based guideline values should be used when quantifying the risk to human health from chemical pollutants. Where UK standards or guideline values are not available, those recommended by the European Union or World Health Organisation can be used
- When assessing the human health risk of a chemical emitted from a facility or operation, the background exposure to the chemical from other sources should be taken into account
- When quantitatively assessing the health risk of genotoxic and carcinogenic chemical pollutants PHE does not favour the use of mathematical models to extrapolate from high dose levels used in animal carcinogenicity studies to well below the observed region of a dose-response relationship. When only animal data are available, we recommend that the 'Margin of Exposure' (MOE) approach⁵ is used

⁵ Benford D et al. 2010. Application of the margin of exposure approach to substances in food that are genotoxic and carcinogenic. Food Chem Toxicol 48 Suppl 1: S2-24



A47 / A11 Thickthorn Junction

Royal Mail Group Limited comments on information to be provided in applicant's Environmental Statement

Introduction

Reference the letter from PINS to Royal Mail dated 8 February 2018 requesting Royal Mail's comments on the information that should be provided in Highways England's Environmental Statement for the proposed A47 / A11 Thickthorn Junction improvements.

Royal Mail's consultants BNP Paribas Real Estate have reviewed the applicant's Scoping Report as published on 8 February 2018.

Royal Mail– relevant information

Royal Mail is responsible for providing efficient mail sorting and delivery nationally. As the Universal Service Provider under the Postal Services Act 2011, Royal Mail has a statutory duty to deliver mail to every residential and business address in the country as well as collecting mail from all Post Offices and post boxes six days a week.

Royal Mail's postal sorting and delivery operations rely heavily on road communications. Royal Mail's ability to provide efficient mail collection, sorting and delivery to the public is sensitive to changes in the capacity of the highway network.

Royal Mail is a major road user nationally. Disruption to the highway network and traffic delays can have direct consequences on Royal Mail's operations, its ability to meet the Universal Service Obligation and comply with the regulatory regime for postal services thereby presenting a significant risk to Royal Mail's business.

Royal Mail therefore wishes to ensure the protection of its future ability to provide an efficient mail sorting and delivery service to the public in accordance with its statutory obligations which may potentially be adversely affected by the construction of this proposed road scheme.

Royal Mail has five operational facilities within 10 miles of the proposed scheme:

1. Norwich Parcellforce Depot, 112-118 Barker Street, Norwich NR2 4HJ
2. Bowthorpe Delivery Office, Unit 24 Jarrold Way, Norwich NR5 9PD
3. Norwich Mail Centre, 13/17 Thorpe Road, Norwich NR1 1AA
4. Wymondham Delivery Office, 18 Middleton Street, Wymondham NR18 0AA
5. Farmingham Earl Vehicle Park, Norwich Road, Norwich NR14 7AB

The A47 and the A11 are both important distribution routes for Royal Mail services. In exercising its statutory duties, Royal Mail vehicles from the above and other operational facilities use on a daily basis all of the local roads that may potentially be affected by additional traffic arising from the construction of the proposed scheme.

It is envisaged that the proposed scheme will, once constructed, have benefits for Royal Mail operational traffic movements. However, Royal Mail is concerned about the potential for disruption to its operations during the construction phase. In particular, Royal Mail requires more information and certainty from Highways England about traffic management measures that will be put in place to mitigate construction impacts on traffic flows on the surrounding local highway network.



Royal Mail's comments on information that should be provided in Highways England's Environmental Statement

In view of the above, Royal Mail has the following comments / requests:

1. The ES should include information on the needs of major road users (such as Royal Mail) and acknowledge the requirement to ensure that major road users are not disrupted through full advance consultation by the applicant at the appropriate time in the DCO and development process.
2. The ES and DCO application should include detailed information on the construction traffic mitigation measures that are proposed to be implemented by Highways England / its contractor, including a draft Construction Traffic Management Plan (CTMP).
3. Royal Mail is fully pre-consulted by Highways England / its contractor on any proposed road closures / diversions/ alternative access arrangements, hours of working and the content of the CTMP. The ES should acknowledge the need for this consultation with Royal Mail and other relevant major road users.

Royal Mail is able to supply Highways England with information on its road usage / trips if required.

Should PINS or Highways England have any queries in relation to the above then in the first instance please contact Joe Walsh [REDACTED] [@royalmail.com](mailto:[REDACTED]@royalmail.com)) of Royal Mail's Legal Services Team or Daniel Parry-Jones [REDACTED] [@bnpparibas.com](mailto:[REDACTED]@bnpparibas.com)) of BNP Paribas Real Estate.