NORTH LINCOLNSHIRE GREEN ENERGY PARK

Planning Act 2008

Infrastructure Planning (Applications Prescribed Forms and Procedure) Regulations 2009

Regulation 5(2)(a)

North Lincolnshire Green Energy Park

Volume 6

Environmental Statement
6.3.2 Annex 2 – PINS Scoping Opinion

PINS reference: EN010116

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The Planning Inspectorate
Yr Arolygiaeth Gynllunio

SCOPING OPINION:

Proposed North Lincolnshire Green Energy Park

Case Reference: EN010116

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

December 2020

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1. INTRODUCTION

1.1 Background

1.1.1 On 30 October 2020, the Planning Inspectorate (the Inspectorate) on behalf of the Secretary of State (SoS) received a scoping request from North Lincolnshire Green Energy Park Ltd (the Applicant) under Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) for the proposed Energy Recovery Facility (ERF) and Associated Development (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 *'North Lincolnshire Green Energy Park 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. This assessment must be co-ordinated with the EIA in accordance with Regulation 26 of the EIA Regulations. The Applicant's ES should therefore be co-ordinated with any assessment made under the Habitats Regulations.

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 consultation bodies before adopting a scoping opinion. A list of the consultation 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 preparing their ES.

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 preparing their ES.

1.3 The European Union (Withdrawal Agreement) Act 2020

1.3.1 The UK left the European Union as a member state on 31 January 2020. The European Union (Withdrawal Agreement) Act 2020 gives effect to transition arrangements that last until the 31 December 2020. This provides for EU law to be retained as UK law and also brings into effect obligations which may come in to force during the transition period.

1.3.2 This Scoping Opinion has been prepared on the basis of retained law and references within it to European terms have also been retained for consistency with other relevant documents including relevant legislation, guidance and advice notes.

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, its location and technical capacity is provided in Scoping Report Section 3.2.

2.2.2 The Proposed Development comprises an Energy Recovery Facility (ERF) and associated development which constitutes a thermal combustion combined heat and power plant with a potential power output capacity of up to 100 MWe from a total thermal capacity of 316 MWth together with associated developments. Scoping Report Paragraph 3.5.1.1 states that construction would commence in quarter one of 2023, operation would begin in 2025/26 and the Proposed Development is expected to operate for 25-40 years.

2.2.3 The main elements of the Proposed Development comprise the following key components, defined as the NSIP and Associated Development:

- NSIP
  - an up to 100 MWe ERF designed to convert up to 760,000 tonnes of refuse derived fuel (RDF) and non-hazardous household and commercial waste annually into energy in the form of power, heat, and steam;
  - a water treatment facility; and
  - feedstock storage for up to 13,000 tonnes of RDF and non-hazardous household and commercial waste.
- Associated Development
  - carbon dioxide capture facility;
  - offices, business centre and visitor centre for the ERF;
  - expansion of the existing riverside wharf to provide a total length of approximately 420m, capable of bulk handling;
  - renewable energy storage – including hydrogen, battery storage and steam storage;
  - a new railhead and reinstatement of an existing 6km railway line that links Flixborough Port to Dragonby Sidings;
  - an access road and upgraded road system to improve the flow of traffic between Flixborough Port and Ferry Road West;
  - polymer production facility;

- concrete block manufacturing facility producing up to 262,000 tonnes annually using reprocessed residues;
- A treatment facility for approximately 95,000 tonnes of Incinerator Bottom Ash (IBA) and 17,000 tonnes of Flue Gas Treatment residues (FGTr);
- a hydrogen production facility;
- back up heat and power generation to be fuelled by hydrogen;
- Natural gas, hydrogen, and bio methane Above Ground Installation (AGI) infrastructure (to connect to National Grid gas);
- electric vehicle (EV) and hydrogen (H_2) refuelling station for cars, buses and HGVs; and
- a heat, cooling, hydrogen gas, carbon dioxide and renewable power off take /export.

2.2.4 Scoping Report Table 3.2.23 provides a summary of the approximate footprints and heights of each component of the Proposed Development and associated developments.

2.2.5 Where associated developments are required for the successful operation of the Proposed Development, or relied upon for no significant effects to arise, the ES should explain why these components are stated as associated development.

2.2.6 The Proposed Development is located at Flixborough Port, adjacent to Flixborough Industrial Estate Within the administrative area of North Lincolnshire. The site is on the east bank of the tidal River Trent, immediately west of the village of Flixborough and 2km northwest of Scunthorpe. The location of the Proposed Development is shown in Figure 3.1 and Figure 3.2 of the Scoping Report. The Scoping Report Paragraph 3.2.3.1 states that Proposed Development boundary, shown in Figure 3.1 and Figure 3.2, has been defined for the purposes of the EIA scoping phase and may be refined as the design of the Proposed Development progresses.

2.2.7 The ERF, water treatment facility and feedstock storage, are to be located on brownfield and agricultural land to the south of Flixborough Wharf and south of the Flixborough Industrial Estate.

2.2.8 The Proposed Development includes land within and adjacent to Flixborough Port on the River Trent. Existing infrastructure at the Proposed Development site includes roads, a rail spur, a 155m long wharf, weigh bridge, cranes, warehousing and stock sheds, workshops and portable offices. Large industrial facilities within the wider Flixborough Industrial Estate and on adjacent land include a cement works, wind turbines, grain processing facilities, and a small power station that has a feedstock of chicken litter and bone meal.

2.2.9 The Proposed Development site has national and international transport connectivity by road, rail, and river to sea via the River Trent and River Humber.

2.2.10 The Proposed is located adjacent to the River Trent which is internationally designated as a Special Area of Conservation (SAC) and a Ramsar site, and nationally designated as a Site of Special Scientific Interest (SSSI). Scoping Report Tables 11-1, 11-2 and Figure 11.1 depicts the statutory and non-designated sites within 15km of the Proposed Development.

2.2.11 The Proposed Development is in proximity to three Grade I, two Grade II* and six Grade II Listed buildings, and one Schedule Monument as shown on Figure 13.1. Further Listed buildings and Scheduled Monuments are situated further from the main development site, and these are also presented on Figure 13.1.

2.3 The Planning Inspectorate's Comments

Description of the Proposed Development

2.3.1 The ES should include the following:

- a description of the Proposed Development comprising at least the information on the site, design, size and other relevant features of the development; and
- a description of the location of the development and description of the physical characteristics of the whole development, including any requisite demolition works and the land-use requirements during construction and operation phases

2.3.2 Scoping Report Paragraph 3.13.1.6 states that the DCO EIA has been scoped at a time when the Proposed Development is still evolving so a level of uncertainty is inherent. The Inspectorate acknowledges that the Scoping Report makes effort to be transparent about uncertainty. The description of the Proposed Development within the Scoping Report is at a high level with many details to be determined through technical and feasibility studies and consultation with other parties. The uncertainty and lack of detailed information provided in the Scoping Report has constrained the ability of the Inspectorate to provide meaningful comments on its content and in some cases has prevented the Inspectorate from being able to agree to scope matters out of the assessment at this time.

2.3.3 Due to the evolving design of the Proposed Development, the environmental considerations within the Scoping Report focus on a small section of the Proposed Development, mainly the area located south of the Flixborough Industrial estate adjacent to the River Trent and Port of Flixborough. Assessment of the rail spur has also been included. However, the Scoping Report provides limited consideration of the section of the Proposed Development to the north of the Flixborough Industrial Estate, the area between Scunthorpe and Flixborough, the area adjacent to the road network to the west of Scunthorpe, and the narrow section of the proposed order limits that follow the road network north and north east of Scunthorpe.

2.3.4 The description of the Proposed Development in the ES should explain any changes to the Proposed Development site boundary and design of the Proposed Development that have occurred since the time of scoping, and detail how such changes affect the baseline assessments, including aspect and

receptor-specific study areas, as previously set out and defined in the Scoping Report.

2.3.5 No plans have been provided within the Scoping Report that depict the layout of the Proposed Development. The ES should provide a plan(s) that depicts the layout of the Proposed Development, as well as the locations of the associated developments.

2.3.6 The Scoping Report does not provide information on the construction of the Water Treatment facility or the feedstock building. Considering these components constitute part of the NSIP, full details and assessments of the environmental impacts of constructing and operating these facilities should be included within the ES. The ES should also provide environmental and operating impacts of the associated developments, if available.

2.3.7 Paragraph 4.5.1.1 of the Scoping report states that the effects of decommissioning are considered likely to be similar to those encountered during the construction of the Proposed Development and therefore are not assessed separately. The Applicant states that the effects of any decommissioning activities will be assessed in detail closer to the time of decommissioning, through the production of a decommissioning plan, which will be approved by the local planning authority prior to commencement.

2.3.8 The ES should explain any assumptions applied in the assessment, including those that relate to the phasing of construction. The ES should (with reference to the draft DCO (dDCO)) explain how any such assumptions have been secured to ensure that the relevant likely significant effects have been assessed. The ES should provide a construction programme, that states when the specific works and phases will take place, what the resulting effects will be and how they will be managed. The ES should clearly state the assumptions made in respect to the phasing. If there is uncertainty or if flexibility is required with regards to phasing, the assessment should be based on a worst-case scenario.

2.3.9 The ES should provide a description of the land use requirements during both the construction and operational phases. It is also important that the ES clearly identifies and distinguishes areas of land within the order limits which are required either permanently or on a temporary basis, as well as their intended use and duration of use.

2.3.10 Paragraph 3.2.6.1 of the Scoping Report states that for the purpose of defining a worst-case scenario for the EIA, the ERF will have an emissions stack with a maximum height of 100m above ground level. The Scoping Report states that a worst-case scenario for the stack height has been determined using the outcome of atmospheric dispersion modelling, with the objective of defining a stack height that is sufficiently high to avoid potentially significant adverse effects on human and ecological receptors from stack emissions. If the stack height changes, for instance as a result of discussions with the Environment Agency (EA) on permitting matters, the assessments in the ES, particularly the air quality and landscape and visual impact assessments, should be updated.

2.3.11 Paragraph 3.2.20.1 of the Scoping Report states that the exact route alignment and entry points of the Proposed Development have yet to be agreed and the road entry and exit points designed. The ES should provide a description of the access arrangements for the Proposed Development including any works to the local road network. This should include information on construction access arrangements. The likely size and location of construction compound(s) should also be provided, and an explanation of how this information has been taken into account within relevant aspect assessment chapters to the ES.

2.3.12 The Applicant should ensure that the approach to the implementation of the transport strategy is agreed early in the process as this will form the basis of other assessments in the ES, especially with regards to the role of rail and marine vessels. The ES should describe the proposed works and explain how they form part of the chosen strategy, and any likely significant effects arising from the chosen strategy should be assessed in the ES.

2.3.13 The Applicant should describe any production processes, including energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used. The likely significant effects associated with any particular technologies or substances proposed to be used should be described and assessed.

2.3.14 The Scoping Report makes little reference to dredging and subsequent disposal of sediment, and it is difficult to ascertain whether any such activities are proposed. If dredging is required, a description of dredging activities should be described and assessed within the ES.

2.3.15 The Scoping Report does not reference any navigational risk assessment. Due to the construction activities associated with the extension of the wharf and increased quantum of river movements associated with the Proposed Development, and the potential impacts this could have on other River users, the ES should include a navigation risk assessment. The navigation risk assessment should be agreed upon with the relevant consultation bodies.

2.3.16 The Scoping Report aspect chapters provide a description of the methodologies and study areas to be used in the ES but the detail in this regard is limited. The Applicant should make effort to agree all methodologies and study areas with the relevant consultation bodies and include a detailed description of the methodology used in the ES. This should include the criteria for determining the sensitivity of receptor, magnitude of impact and how they are combined to establish significance.

2.3.17 The figures within the ES should be of greater definition, larger and provide a greater level of detail than those included within the Scoping Report. Figures should also be used for each ES chapter to depict the study area and the locations of all sensitive receptors.

Alternatives

2.3.18 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'.

2.3.19 The Inspectorate acknowledges the Applicant's intention to consider alternatives within the ES. The ES should include a discrete section that provides details of the reasonable alternatives studied and the reasoning for the selection of the chosen option(s), including a comparison of the environmental effects.

Flexibility

2.3.20 The Inspectorate notes the Applicant's desire to incorporate flexibility into their draft DCO (dDCO) and its intention to apply a Rochdale Envelope approach for this purpose. Where the details of the Proposed Development cannot be defined precisely, the Applicant will apply a worst case scenario. The Inspectorate welcomes the reference to Planning Inspectorate Advice Note nine 'Using the 'Rochdale Envelope'[1] in this regard.

2.3.21 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 should 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.

2.3.22 It should be noted that if the Proposed Development materially changes 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. Available at: https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/

3. ES 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 (as defined in Advice Note Seven) 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.

3.1.3 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 the receipt of a Scoping Opinion should not prevent the Applicant from subsequently agreeing with the relevant consultation bodies 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.

3.1.4 The Inspectorate has made effort to ensure that this Scoping Opinion is informed through effective consultation with the relevant consultation bodies. Unfortunately, at this time the Inspectorate is unable to receive hard copy consultation responses, and this may affect a consultation body's ability to engage with the scoping process. The Inspectorate also appreciates that strict compliance with COVID-19 advice may affect a consultation body's ability to provide their consultation response. The Inspectorate considers that Applicants should make effort to ensure that they engage effectively with consultation bodies and where necessary further develop the scope of the ES to address their concerns and advice. The ES should include information to demonstrate how such further engagement has been undertaken and how it has influenced the scope of the assessments reported in the ES.

3.1.5 Where relevant, the ES should provide reference to how the delivery of measures proposed to prevent/ minimise adverse effects is secured through dDCO requirements (or other suitably robust methods) and whether relevant consultation bodies agree on the adequacy of the measures proposed.

[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/

3.2 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 NPSs relevant to the Proposed Development are the:

- Overarching NPS For Energy (NPS EN-1);
- NPS on Renewable Energy Infrastructure (NPS EN-3);
- NPS for Electricity Networks Infrastructure (NPS EN-5); and
- NPS for Ports (NPSP).

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 are 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 recommends that the physical scope of the study areas should be identified under all the environmental aspects of the ES and should be sufficiently robust in order to undertake the assessment. The ES should justify the extent of the study areas on the basis of recognised professional guidance (whenever such guidance is available) and the extent of the likely impacts, with reference to relevant models or approaches. The study areas should also be agreed with the relevant consultation bodies and where this is not possible, this should be stated clearly in the ES and reasoned justification given. The scope should also cover the breadth of the topic area and the temporal scope, and these aspects should be described and justified.

3.3.3 The ES should justify the choice of receptor locations with reference to the extent of the likely impacts and seek to agree these with the relevant

consultation bodies. The aspect chapters should explain how the sensitivity of receptors and the magnitude of the impact have been determined.

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.

3.3.5 The Applicant should clearly state which developments within the vicinity of the Proposed Development application site will be assumed to be under construction or operational as part of the future baseline.

Forecasting Methods or Evidence

3.3.6 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.

3.3.7 The Inspectorate expects the ES to include a chapter setting out the overarching methodology for the assessment, which clearly distinguishes effects that are 'significant' from 'non-significant' effects. Any departure from that methodology should be described in individual aspect assessment chapters.

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 Commentary to be provided only if there is an issue or omission (where relevant) in relation 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. Specific areas to consider include impact on soil, farming production and field drainage.

3.3.11 The Inspectorate considers that of the above listed residues and emissions, those relevant to the Proposed Development which have not been addressed in the Scoping Report are heat, radiation and waste. See Table 4.12 for further information on these matters.

Mitigation and Monitoring

3.3.12 Any mitigation relied upon for the purposes of the assessment should be explained in detail within the ES. 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 reference to specific dDCO requirements or other legally binding agreements.

3.3.13 The ES should identify and describe any proposed monitoring of significant adverse effects and how the results of such monitoring would be utilised to inform any necessary remedial actions.

Risks of Major Accidents and/or Disasters

3.3.14 The Scoping Report states in Table 5-2 that Risks of Major Accidents/Disasters is to be scoped out of the ES. The Inspectorate advises that this section does not contain adequate information to allow agreement to scope this issue out at this stage.

3.3.15 The ES should include a description and assessment (where relevant) of the likely significant effects resulting from accidents and disasters applicable to the Proposed Development. The Applicant should make use of appropriate guidance (e.g. that referenced in the Health and Safety Executives (HSE) Annex to Advice Note 11) to better understand the likelihood of an occurrence and the Proposed Development's susceptibility to potential major accidents and hazards. The description and assessment should consider the vulnerability of the Proposed Development to a potential accident or disaster and also the Proposed Development's potential to cause an accident or disaster. The assessment should specifically assess significant effects resulting from the risks to human health, cultural heritage or the environment. Any measures that will be employed to prevent and control significant effects should be presented in the ES.

3.3.16 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.

Climate and Climate Change

3.3.17 The ES should include a description and assessment (where relevant) of the likely significant effects the Proposed Development has on climate (for example having regard to the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change. Where relevant, the ES should describe and assess the adaptive capacity that has been incorporated into the design of the Proposed Development. This may include, for example,

alternative measures such as changes in the use of materials or construction and design techniques that will be more resilient to risks from climate change.

Transboundary Effects

3.3.18 Schedule 4 Part 5 of the EIA Regulations requires a description of the likely significant transboundary effects to be provided in an ES. The Scoping Report has not indicated whether the Proposed Development is likely to have significant impacts on another European Economic Area (EEA) State.

3.3.19 The Inspectorate considers that where Regulation 32 applies, this is likely to have implications for the examination of a DCO application. The Inspectorate recommends that the ES should identify whether the Proposed Development has potential for significant transboundary impacts and if so, what these are which EEA States would be affected.

A Reference List

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

3.4 Coronavirus (COVID-19) Environmental Information and Data Collection

3.4.1 The Inspectorate understands government enforced measures in response to COVID-19 may have consequences for an Applicant's ability to obtain relevant environmental information for the purposes of their ES. The Inspectorate understands that conducting specific surveys and obtaining representative data may be difficult in the current circumstance.

3.4.2 The Inspectorate has a duty to ensure that the environmental assessments necessary to inform a robust DCO application are supported by relevant and up to date information. Working closely with consultation bodies, the Inspectorate will seek to adopt a flexible approach, balancing the requirement for suitable rigour and scientific certainty in assessments with pragmatism in order to support the preparation and determination of applications in a timely fashion.

3.4.3 Applicants should make effort to agree their approach to the collection and presentation of information with relevant consultation bodies. In turn the Inspectorate expects that consultation bodies will work with Applicants to find suitable approaches and points of reference to allow preparation of applications at this time. The Inspectorate is required to take into account the advice it receives from the consultation bodies and will continue to do so in this regard.

3.5 Confidential and Sensitive Information

3.5.1 In some circumstances it will be appropriate for information to be kept confidential. In particular, this may relate to personal information specifying the names and qualifications of those undertaking the assessments and / or 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.

3.5.2 Where documents are intended to remain confidential the Applicant should provide these as separate 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 2004.

3.5.3 The Inspectorate adheres to the data protection protocols set down by the Information Commissioners Office[3] . Please refer to the Inspectorate's National Infrastructure privacy notice[4] for further information on how personal data is managed during the Planning Act 2008 process.

[3] https://ico.org.uk

[4] https://infrastructure.planninginspectorate.gov.uk/help/privacy-notice/

4. ASPECT BASED SCOPING TABLES

4.1 Air Quality

(Scoping Report Section 6)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.1.1	6.7.1.13	Operational phase rail traffic beyond the site itself are scoped out.	Although the number of operational phase rail traffic movements during the operation of the Proposed Development have not been provided within the Scoping Report, the Inspectorate agrees in principle that rail traffic emissions during the operational phase are unlikely to result in significant effects to air quality beyond the site itself. However, the Applicant should include within the ES the number of operational phase rail traffic movements predicted during the operation and confirm that they are below the criteria for which an assessment would be required.
4.1.2	6.7.1.15	Shipping beyond the wharf	Although the number of shipping movements during the construction and operation of the Proposed Development have not been provided within the Scoping Report, the Inspectorate agrees in principle that shipping emissions during the operational phase are unlikely to result in significant effects to air quality beyond the site itself. However, the Applicant should include within the ES the number of shipping movements predicted during both the construction and operation of the Proposed Development and confirm that they are below the criteria for which as assessment would be required.
4.1.3	6.7.1.17	Back-up generators and cold start engines	Insufficient information has been provided regarding the type of generator to be used, or whether the generator will require testing, and if so, how often the generator would be tested. On this basis, the

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			Inspectorate does not agree that the impact to back-up generators and cold start engines can be scoped out of the ES.
4.1.4	6.7.1.18	Cumulative effects on human receptors	Insufficient evidence has been provided within the Scoping Report to support the assumption that no air quality cumulative effects on human receptors will arise due to the Proposed Development. Therefore, the Inspectorate does not agree that this matter can be scoped out of the ES.

ID	Ref	Other points	Inspectorate's comments
4.1.5	6.7.1.4	Assessment of ecological receptors	The assessment should assess potential impacts on ecological sites, including the adjacent Humber Estuary SSSI, SAC and Ramsar. Appropriate cross-reference should be made to the Ecology and Nature Conservation aspect chapter of the ES. The assessment of air quality on ecological receptors should take into account relevant technical standards, such as the Institute of Air Quality Management (IAQM) guide to the assessment of air quality impacts on designated nature conservation sites (IAQM, May 2020). Consideration should be given to all relevant pollutants including acid and nutrient nitrogen deposition.
4.1.6	6.5.1.1	Sensitive receptors	No receptors sensitive to air quality changes have been identified within the Scoping Report. The ES should clearly set out the type and quantity of both human and ecological receptors that could be affected and identify their locations by reference to a figure(s). The Applicant should make effort to agree the receptors to be included in the impact assessment with the relevant statutory consultation bodies.

ID	Ref	Other points	Inspectorate's comments
4.1.7	6.3	Baseline monitoring	No baseline air quality monitoring is stated to be undertaken prior to the construction of the Proposed Development. If this approach is to be followed, the ES should provide a robust baseline for the purposes of the assessment through the use of specific air quality monitoring to establish baseline conditions for all relevant air pollutants associated with the construction and operation of the Proposed Development. The air quality baseline within the ES should accurately represent the entirety of the study area and extend to cover the full extent of potential impacts. The baseline data relied upon in the ES and for the purposes of the assessment should be relevant, up-to date, and comprehensive. The ES should also detail the scope of the monitoring at the Proposed Development during construction and operation, together with any measures that will be in place to avoid or reduce adverse air quality effects.
4.1.8	6.5.1.1	Study Areas	The air quality assessment study area for the Proposed Development should include all receptors where significant effects are likely to occur. The ES should provide justification as to why the chosen study areas are appropriate, and the Applicant should make effort to agree the study areas with the relevant consultation bodies. The ES should also include a figure(s) that depict the study area, air quality monitoring sites used to inform the assessment and sensitive receptors considered.
4.1.9	6.7.1.3	Impacts from construction and operational traffic	When setting out the technical scope and approach for the air quality impact assessment in section 6.7 of the Scoping Report the Applicant states that 'Detailed modelling is not anticipated' for both impacts from construction and operational traffic. The Inspectorate considers that there is currently insufficient evidence provided within the

ID	Ref	Other points	Inspectorate's comments
			Scoping Report with regards to the likely vehicle movements associated with the Proposed Development to support this statement. The need for an air quality assessment should be informed by the Transport Assessment and the Transport and Traffic ES chapter, particularly with regards to the potential impact from vehicle movements during both construction and operation of the Proposed Development. An assessment of air quality impacts associated with traffic should be presented, which states where significant effects are likely to occur.
4.1.10	6.7.1.21	Odour	The Applicant states that odour impacts will be assessed on a semi-quantitative basis. However, the Applicant does not provide information on how odour impacts will be assessed. The Inspectorate would expect to see a robust and fully justified odour assessment that quantifies the odour impact from the operation of the Proposed Development. The odour assessment should take into account relevant industry standard guidance, such as IAQM - Guidance on the assessment of odour for planning (2018).
4.1.11	N/A	Combined emissions - emissions sources acting cumulatively	The ES should consider the cumulative effect of all emissions sources at sensitive human and ecological receptors. For example, predictions from the point / area/ volume source dispersion model should be combined with predictions from the road traffic dispersion model such that the total contribution from the Project can be understood.

4.2 Climate

(Scoping Report Section 7)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.2.1	Table 5-2	Climate Change Risk Assessment	The Inspectorate notes that the Applicant does not intend to provide a separate Climate Change Risk Assessment, as impacts on the Climate will be considered in a greenhouse gas (GHG) assessment and the effects of climate change on flooding will be included in the site-specific flood risk assessment The Inspectorate agrees that a standalone Climate Change Risk Assessment can be excluded from the ES, provided that an assessment of the likely significant effects on climate arising from the Proposed Development and the vulnerability of the Proposed Development to climate change is clearly described and identified in the relevant aspect chapters of the ES.
4.2.2	7.7	GHGA	The Scoping Report states that the GHGA will include assessment of direct emissions as a result of the Proposed Development and emissions associated with purchased electricity/ steam/ heat/ cooling. However, the following activities are proposed to be scoped out of the GHG assessment: • The heat and power distribution connection - because there are expected to be minimal operational emissions associated with this, except for maintenance activities which are not expected to occur annually; • Shipping - because the fuel used by vessels and therefore the associated GHG are not under the operational control of the Project;

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			• Use of rail spur - due to the minor emissions expected as a result of these activities in comparison to other modes of transport; and • All activities associated with the construction phase - because construction represents a relatively small proportion of total emissions during the lifecycle of an ERF, which are largely associated with the operational phase. The ES should quantify the GHG emissions relating to the Proposed Development. The calculation methods used should be explained. The ES should state any assumptions made in calculating the predicted GHG emissions, any limitations to the calculations and any uncertainties this presents for the assessment of GHG emissions.

4.2.3	Ref	Other points	Inspectorate's comments
4.2.4	7.3	GHG emissions	There are a number of gases that are considered Greenhouse Gas (GHG). The Scoping Report does not define which GHG emissions will be assessed in the ES Chapter. The ES should assess GHGs where they are likely to cause significant effects and these should be named in the ES to understand the extent of the assessment.
4.2.5	N/A	Cross-referencing	Impacts from the Flood Risk and Drainage, Ecology and Transport Chapters have potential to overlap with impacts identified in the Climate Change Chapter. It should be clear within the ES how the outcomes of any related assessments have informed the Chapter assessment and appropriate cross-referencing should be made to

4.2.3	Ref	Other points	Inspectorate's comments
			other relevant aspect Chapters explaining where potential impacts are assessed.
4.2.6	7.2	Guidance	Where relevant, the ES should take into account the following guidance: • IEMA (2017) Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance • IEMA (2020) Environmental Impact Assessment Guide to: Climate Change Resilience and Adaptation
4.2.7	N/A	Assumptions, limitations and constraints	The ES should state any assumptions made in calculating the predicted GHG emission; any limitations to the calculations; and any uncertainties this presents for the assessment of GHG emissions.
4.2.8	N/A	Climate/ GHG assessment	The climate/ GHG assessment should cover all components of the Proposed Development.

4.3 Noise and Vibration

(Scoping Report Section 8)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.3.1	8.7.1.2	Noise and vibrational impacts from operational railway usage	The Applicant proposes to scope out this matter on the basis that noise and vibration from railway usage is "expected to decay below appropriate threshold" over 30m from the railway line, and that no sensitive receptors are within 30m of the railway line. The Inspectorate does not consider sufficient evidence has been provided within the Scoping Report to support this assumption, and therefore does not agree that this matter can be scoped out of the ES.

ID	Ref	Other points	Inspectorate's comments
4.3.2	8.3	Baseline	Noise monitoring should be carried out to a recognised standard, such as BS7445-1:2003 with detailed survey and conditions data presented. Paragraphs 8.3.1.2 and 8.3.1.3 states that only the village of Amcotts, Neap House, and Flixborough will have noise surveys conducted, but the actual location of the noise monitoring has not been stated. The ES should include the grid references and a figure(s) depicting the noise monitoring locations. In addition, considering the extent of the Proposed Development's order limits, the ES should provide robust justification for how three locations accurately represent the baseline noise level across the entire study area, taking into account, the proposed order limits come into close proximity to human receptors in Scunthorpe, Dragonby and receptors close to the proposed road work activities on the M181 and A1077. Furthermore, noise impacts from the wharf and river activities may impact

ID	Ref	Other points	Inspectorate's comments
			settlements upstream of the Proposed Development such as Burton Upon Stather. Therefore, the noise impact from river traffic should also be considered when determining the noise monitoring locations. The baseline information regarding the number of river traffic, road and railway traffic should be provided within the ES.
4.3.3	8.4.2.1	Construction impacts	The ES should also assess the noise impacts associated with the construction of the wharf, increased river and rail traffic if applicable, earthworks, demolition where necessary, and any construction impacts associated with underground utility works including gas and electricity cables/ pipes and above ground installations. If generators are required to power construction compounds or similar construction sites, the generator noise should also be considered within the assessment.
4.3.4	8.4.2.2	Construction impacts	In addition to the receptors listed in Scoping Report Paragraph 8.4.2.2 the ES should assess the noise impact from construction activities on locally designated ecological sites and any Public Right of Ways (PRoWs) and bridleways that are situated in proximity to the Proposed Development.
4.3.5	8.4.3	Operational impacts	Noise impacts associated with increased Heavy Good Vehicles travelling to and from the Proposed Development should be considered within the ES.
4.3.6	8.5.1.1; and 8.5.1.2	Spatial scope of construction impacts	The ES should include the 'scoping calculation' and any assumptions/ limitations used in the calculation to conclude that construction noise is expected to fall below 65dB 600m from the construction site. If the railway is to be operating during the construction phase of the Proposed Development, noise and vibration associated with the increase in rail traffic should be assessed in the ES.

ID	Ref	Other points	Inspectorate's comments
			The spatial scope should incorporate any areas that are likely to be impacted by an increase in construction traffic. Vibrational impacts on archaeological assets within the construction area should be assessed and appropriate cross references in the ES between the Cultural Heritage and Noise and Vibration assessments should be made.
4.3.7	8.6	Temporal scope	The ES should provide clarity over the temporal nature of noise impacts will be assessed. The ES should consider defining short term, medium term, long term, and permanent noise impacts and effects.
4.3.8	N/A	Assessment methodology	The Scoping Report lists relevant noise assessment methodologies but omits a description of the actual assessment methodology to be applied. The ES should provide a detailed description of the assessment methodology which should include: • the criteria used to determine the sensitivity of receptor and the locations of all sensitive receptors (human and ecological); and • the criteria used to determine the magnitude of impact, including defined Significant Observed Adverse Effect Level (SOAEL) and the Lowest Observed Adverse Effect Level (LOAEL). To aid the readers understanding of the assessment, the ES should provide figure(s) presenting the locations of all ecological and human receptors impacted by construction and operation noise, and a figure(s) that shows which receptors are likely to be impacted by noise levels above the SOAEL value. The ES should also provide clarification on how the significance of effect will be determined.
4.3.9	N/A	Mitigation	The ES should provide a description of any mitigation measures required to minimise noise impacts on human and ecological

ID	Ref	Other points	Inspectorate's comments
			receptors. The efficacy of the measures should be stated as well as how the measures will be secured through the DCO or other legal mechanism.

4.4 Ground Conditions and Hydrogeology

(Scoping Report Section 9)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.4.1	9.5	Areas of land outside of the Proposed Development's order limits.	Section 9.5 of the Scoping Report defines the spatial scope of the ground conditions and hydrogeology assessment as "*land within the existing industrial estate, greenfield land, brownfield mixed-use land, the disused rail spur, an area operated by RMS Ports included use of an existing wharf*"; and continues by stating "*Areas outside of these are associated with the existing industrial estate and will not be included within this assessment*". The definition of the spatial scope of the assessment is insufficient and does not clearly allow for an understanding of the extent of the study area. Furthermore, insufficient evidence has been provided that supports the assumption that no area outside of the spatial scope of the study area would be impacted by the Proposed Development. As such, the Inspectorate does not agree that areas outside the stated spatial scope of the assessment to be scoped out of future assessments and the ES. See comments in ID 4.4.6 and 4.4.8 below for further details on the spatial extent of potential impacts and the spatial scope of the assessment.
4.4.2	9.6	Operational impacts	The Inspectorate does not consider sufficient information has been provided in the Scoping Report that demonstrates no significant effects on ground conditions and hydrogeology would arise during the operation of the Proposed Development. On this basis the Inspectorate does not agree that this matter can be scoped out of the ES.

ID	Ref	Other points	Inspectorate's comments
4.4.3	9.3.1.7	Geological data	Scoping Report Paragraph 9.3.1.7 states that detailed geological data has been provided within the Ian Farmer Associates (2018) report. If this report is to be used to underpin the ground conditions and hydrogeology assessment within the ES, then the report should be included within, or appended to, the ES.
4.4.4	9.3.1.3 to 9.3.1.8	Baseline	Section 9.3 of the Scoping Report states that the Proposed Development is situated on potentially contaminated land with a high ground water table adjacent to a river. On this basis, it may be prudent for the ES to include information on the groundwater table throughout the Proposed Development and ground water flow regime to aid to provide a description of potential pollution pathway locations. Furthermore, the ES should state the location of any ground investigation undertaken (or proposed), including the location of the boreholes.
4.4.5	9.4.1.2	Source of contamination	Considering the nature of the Proposed Development including associated development, the ES should make it clear how Refuse Derived Fuel (RDF), and the other potential contaminants to be used and/ or produced within the order limits will be transported, stored, handled, and disposed of, to ensure no potential on site contamination/ pollution event occurs.
4.4.6	9.5	Spatial scope of the ES	The ES should provide a concise definition of the spatial scope of the assessment which is supported by evidence that the spatial scope extends to cover all potential impacts likely to arise. Effort should be made to agree the spatial scope of the assessment with the relevant statutory bodies.

ID	Ref	Other points	Inspectorate's comments
4.4.7	9.7.1.6	Cumulative effects	Scoping Report Paragraph 9.7.1.6 states that as ground conditions and contamination are confined within the project footprint, no cumulative effects will occur. If this approach is to be followed, the ES must provide evidence that shows no pollution pathways, or contamination, will impact areas outside of the Proposed Development, and that other project would not result in pollution pathways or contamination impacts that have potential to combine with the those released from the Proposed Development. If this cannot be evidenced, then an assessment of cumulative effects should be included within the ES.
4.4.8	N/A	Soil	Information regarding the Agricultural Land Classification for land within the order limits should be provided within the ES. The ES should also state the area of Best and Most Versatile Land (BMVL) that is to be lost due to the Proposed Development and demonstrate how effects on BMVL have been minimised, including an assessment of likely significant effects on agricultural land, where relevant.

4.5 Hydrology, Flood Risk and Water Resources

(Scoping Report Section 10)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.5.1	10.4.1.4	Breach in, or reduction in the standard of flood defences	Sufficient information regarding the construction methods, design, or location of proposed quay extension has not been provided. Furthermore, the Scoping Report has not provided the location of the existing flood defences. Due to this lack of information, the Inspectorate does not agree that a potential breach, or reduction in the standard of flood defences can be scoped out of the ES.
4.5.2	10.7.1.8	Operational impact to water quality of the River Trent through operation of the proposed quay	Sufficient information pertaining to the operational activities, including number and type of vessel to use the proposed quay during operation of the Proposed Development is not provided. Furthermore, the Scoping Report has not provided evidence to support the assumption that the operation of proposed quay will not result in an increase in pollution to the River Trent. On this basis, the Inspectorate does not agree that this matter can be scoped out of the ES.
4.5.3	10.7.1.17	Re-opening and operation of the disused rail spur	Based on the implementation of the measures outlined within the Scoping Report Paragraphs 10.7.1.12 to 10.7.1.17, the Inspectorate agrees that no significant effects are likely to arise from the re-opening and operation of the disused rail spur, and this matter can be scoped out of the ES. However, an assessment of potential hydrology, flood risk and water resources impacts associated with construction or maintenance works required to enable the re-opening and operation of the disused rail spur should be included within the ES.

ID	Ref	Other points	Inspectorate's comments
4.5.4	10.3.1.1	Baseline data sources	Data from the Lead Local Flood Authority (LLFA) should also be sought and used to inform the assessment.
4.5.5	10.4	Construction compounds	The potential impact of construction compounds on hydrology, flood risk and water resources should be included within the ES.
4.5.6	10.5; and Figure 10.5	Spatial scope	The spatial scope of the assessment is to follow a proportionate approach that considers water receptors within hydraulic connection to the Proposed Development. If this approach is to be followed, the ES should provide evidence that the study area encompasses the full extent of potential impacts. In addition, the ES should provide a more detailed figure(s) of the study area than that depicted on Figure 10.1. The figure(s) within the ES should clearly show the surface waterbodies included within the assessment, as well as flood risk information such as surface water flooding, flood risk from sewers and groundwater. A figure(s) should also be provided depicting the area protected by flood defences.
4.5.7	10.7.1.1	Sustainable Drainage Systems (SuDS)	The ES should outline any SuDS measures to be included within the design of the Proposed Development, setting out the location and dimension of SuDS elements.
4.5.8	10.7.1.1	Flood plain	The ES should provide details of the size of the development to be construction within the River Trent flood plain, and explain how this loss of flood plain will be compensated.
4.5.9	N/A	Flood risk	The assessment within the ES should consider the flood risk from groundwater and sewers. To undertake the sewerage flood risk, the Applicant may find it prudent to consult with the relevant sewerage utility company.

ID	Ref	Other points	Inspectorate's comments
4.5.10	N/A	Methodology	The assessment methodology to be undertaken within the ES is not clearly set out within the Scoping Report. The ES should state the criteria used to set out the sensitivity of receptor, magnitude of impact and significance of effect. Effort should be made to consult on the assessment methodology with the relevant statutory consultation bodies.

4.6 Ecology and Nature Conservation

(Scoping Report Section 11)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.6.1	N/A	N/A	No matters have been proposed to be scoped out of the assessment.

ID	Ref	Other points	Inspectorate's comments
4.6.2	11.3.1.9	Invasive Non-Native Species (INSS)	An INNS management plan should be included within the ES that describes the removal, management and potential destruction of INNS, with regard to the relevant legislation.
4.6.3	11.4.1.1	Likely significant effects	In addition to the likely significant effects listed in Scoping Report paragraph 11.4.1.1, the potential for noise impacts associated with the construction of the wharf and additional movements within the River Trent should be included within the assessment. Cross references to the noise assessment should be made where relevant.
4.6.4	11.8	Scope of the Habitat Regulation Assessment (HRA)	The spatial scope of the HRA should also include a 30km radius for Special Area of Conservation (SAC) where bats are a qualifying feature, due to bat foraging distances.
4.6.5	N/A	Benthic ecology	An assessment of the impact that construction of the proposed wharf and of dredging activities (if required) on benthic ecology should be included within the ES.

4.7 Landscape and Visual Amenity

(Scoping Report Section 12)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.7.1	N/A	N/A	No matters have been proposed to be scoped out of the assessment.

ID	Ref	Other points	Inspectorate's comments
4.7.2	12.5.1.2	Visibility	As stated in Paragraph 12.5.1.2, actual visibility of the Proposed Development can only accurately be determined by site surveys and photomontages. These methods should be undertaken and the results of the survey and the photomontages should be included within the ES.
4.7.3	12.5.1.3	Study area	The study area utilises a 7.5km study area based on professional judgement. Effort should be made to agree the study area with the relevant statutory consultation bodies.
4.7.4	12.5.1.6 to 12.5.1.9	Viewpoints	The ES should provide the rationale behind choosing the viewpoint locations. The ES should also provide the actual location of the viewpoints and ensure that photomontages from these viewpoints depict the worst case scenario where vegetative screening is limited. Viewpoints should also depict the Proposed development during operation, the different stages of construction and with and without mitigation measures.
4.7.5	N/A	Lighting	Visual impacts and impacts on landscape character from the lighting associated with the Proposed Development should be considered and included within the assessment, with reference to relevant technical

ID	Ref	Other points	Inspectorate's comments
			guidance such as the Institute for Lighting Professionals Guidance Note 1 for the reduction of obtrusive light 2020.

4.8 Archaeology and Cultural Heritage

(Scoping Report Section 13)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.8.1	N/A	N/A	No matters have been proposed to be scoped out of the assessment.

ID	Ref	Other points	Inspectorate's comments
4.8.2	13.3.1.	Baseline	If the assessment within the ES is underpinned by previous studies/ surveys/ investigations, then they should be included within, or appended to, the ES. The ES should provide additional figures that depict all designated and non designated heritage and archaeological assets within the study area. Photomontage(s) of key heritage viewpoints should be included in the ES to enable an understanding of how the Proposed Development, in particular the stack, will impact the setting of heritage assets.
4.8.3	13.4.1.2	Construction impacts	The ES should assess the potential for damage to archaeological assets to arise during the construction phase, and not solely focus on the removal of archaeological assets. Archaeological assets could be damaged by the compaction of the land, vibrations from construction works including piling, and from changes to the ground conditions also has potential. These potential impacts should be assessed and included in the Es. Furthermore, impacts from noise, lighting and an increase in traffic can all effect heritage settings, and therefore these matters should be

ID	Ref	Other points	Inspectorate's comments
			assessed and included within the ES cultural heritage assessment, or appropriate cross reference should be made if these impacts are assessed in other ES chapters.
4.8.4	13.5.2	Spatial scope	Due to the proposed 100m height of the stack, the Zone of Theoretical Visibility (ZTV) should consider that the stack may be visible from viewpoints outside of the 2.5km radius ZTV. The ES should provide evidence that no heritage asset outside of this radius would be impacted by the stack or the Proposed Development. Effort should be made to agree that spatial scope and ZTV of the assessment with the relevant statutory bodies. Furthermore, the ES should justify the difference in the ZTV for landscape impacts and cultural heritage impacts.
4.8.5	13.7.1.9	Professional judgement	Where professional judgement is to be used within the assessment, an explanation setting out the rationale behind the professional judgement should be provided.

4.9 Traffic and Transport

(Scoping Report Section 14)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.9.1	14.4.1.3	Hazardous and Abnormal Indivisible Loads (AIL) effect on the road network	Insufficient information has been provided regarding the Proposed Development construction process including the transport of AIL for this matter to be scoped out of the ES. The Transport Assessment (TA) which is proposed to be appended to the ES should describe the anticipated number of hazardous loads and AIL associated with the Proposed Development and the relevant legislation which applies to such. The ES should include an assessment of the effect on the road network from hazardous and AILs where significant effects are likely to occur. The Applicant should make effort to agree the approach to the assessment with relevant consultation bodies. Insufficient information on the construction process including the and the transport of AIL for

ID	Ref	Other points	Inspectorate's comments
4.9.2	14.1.1.4	Strategic Road Network	The ES should assess impacts to the Strategic Road Network (SRN), including the M180 and M181, where significant effects could occur.
4.9.3	14.1.1.7	Traffic modelling	Limited information has been provided on the traffic modelling to be undertaken. The ES should describe the numbers and types of traffic movements associated with the construction and operation of the Proposed Development and set out and justify the assumptions made in calculating trip generation. The ES should also provide information

ID	Ref	Other points	Inspectorate's comments
			regarding the anticipated transport routes which will be used to transport materials to and from the Proposed Development during construction and operation. The ES should explain if road closures will be required during construction phase and assess the impacts where significant effects are likely to occur.
4.9.4	14.1.1.13; 14.4.1.8; and 14.6.1.2	Scope of the assessment	The Inspectorate notes that further discussions with the relevant highways authorities are proposed to confirm the scope of the traffic and transport assessment. The ES and accompanying appendices should clearly document any consultations undertaken with regards to the scope of the proposed assessment, including particular matters agreed/ not agreed. Where the scope differs from that requested by the relevant highways authority, the ES should provide justification for the alternative approach.
4.9.5	14.1.1.13; 14.4.1.8; and 14.6.1.2	Scope of the assessment	The Inspectorate notes that further discussions with the relevant highways authorities are proposed to confirm the scope of the traffic and transport assessment. The ES and accompanying appendices should clearly document any consultations undertaken with regards to the scope of the proposed assessment, including particular matters agreed/ not agreed. Where the scope differs from that requested by the relevant highways authority, the ES should provide justification for the alternative approach.
4.9.6	14.3.1.2	Traffic monitoring	The Scoping Report states that traffic counts at junctions and road links throughout the study area were commissioned in October 2020. The Inspectorate notes that COVID-19 disruption has potential to impact upon the traffic counts commissioned in October 2020, and as such, justification will need to be provide as to why these counts are valid for use within the TA.

ID	Ref	Other points	Inspectorate's comments
4.9.7	14.4.1.4	Shipping and navigation	The Traffic and Transport chapter of the ES should include an assessment of impacts resulting from transportation of materials/ abnormal loads to the site via water, if this option is pursued. This should include an assessment of any impacts to navigation which are likely to result in significant effects. Impacts from the Proposed Development alone and cumulatively with other developments should be considered. The assessment methodology and any necessary mitigation measures should be discussed and agreed with the relevant consultation bodies.
4.9.8	14.5.1.5	Study Area	The ES should state the study area used for the traffic and transport assessment and ensure the extent of the study area extends to cover all potential significant effects; and a figure(s) of the study area should be provided within the ES. The Applicant should make effort to agree the assessment study area with the relevant consultation bodies.
4.9.9	N/A	Cross-referencing	Impacts from transport and traffic overlap with impacts from other aspects such as air quality, noise, and ecology. It should be clear within the ES how the outcomes of the traffic modelling have informed other relevant assessments and appropriate cross-referencing should between relevant aspect chapters. The ES should explain the nature of the interaction and where potential impacts have been assessed.

4.10 Socio-Economic Characteristics

(Scoping Report Section 15)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.10.1	15.4.17; and Table 15-2	Operational impacts on property prices	Although information within the Scoping Report summaries studies that show Energy Recovery Facilities (a proxy for the Proposed Development) do not impact house prices, no evidence has been provided that shows the re-opening and use of a railway line and other development elements would not impact property prices. The ES should include evidence that demonstrates the re-opening and use of the railway line and other development elements would not impact property prices and/or result in consequential effects on other matters such as health care provision.
4.10.2	15.4.17; and Table 15-2	Operational impacts on Demographic effects and impacts on community infrastructure, housing, education, and other community facilities.	The Inspectorate notes that the scale and characteristics of the development are such that significant effects on such facilities may arise during operation and does not agree that this matter can be scoped out of consideration in the ES.

ID	Ref	Other points	Inspectorate's comments
4.10.3	Table 15-1	Potential impacts	The ES should ensure the assessment of severance and land take is incorporated into the wider assessment of economic impact that may arise from the Proposed Development. This should include information on any temporary, or permanent loss in farmland, or changes in access to businesses and the subsequent economic impacts that may arise.

ID	Ref	Other points	Inspectorate's comments
4.10.4	15.5	Spatial scope	Scoping Report section 15.5 does not definitely state the spatial scope of the study area, and instead states likely areas to be affected by the Proposed Development. The ES should clearly define the spatial scope of the assessment and effort should be made to agree the spatial scope of the assessment with the relevant statutory undertakers.

4.11 Cumulative Effects Assessment Approach

(Scoping Report Section 16)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.11.1	Table 16-1	Cumulative geology/ contamination effects	The Inspectorate agrees that geology and ground contamination related impacts are likely to be limited to the Proposed Development's order limits, and therefore this matter is unlikely to result in significant cumulative effects and can be scoped out of the ES.
4.11.2	Table 16-1	Cumulative landscape and visual impacts during construction	As the locations and dimensions of construction compounds are not yet known, the Inspectorate deems there to be insufficient evidence provided to support the conclusion that no construction cumulative landscape and visual impacts would occur. Therefore, this matter cannot be scoped out of the ES.

ID	Ref	Other points	Inspectorate's comments
4.11.3	Table 16-1	Cumulative effects	The assessment of cumulative surface water effects should assess the potential for surface waters outside of the Proposed Development's order limits to be impacted by changes in drainage regimes and the water table caused by the construction and/ or operation of the Proposed Development. The ecological cumulative assessment should also take into account the potential for cumulative noise impacts on ecological receptors.
4.11.4	Table 16-2	Zone of Influence (ZoI) for cumulative effects	Effort should be made to agree the ZoI for cumulative effects with the relevant statutory consultation bodies.

4.12 Other aspects to be scoped out

(Scoping Report Section 5.2)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.12.1	Table 5-2	Risks of major accidents and/or disasters	Insufficient information has been provided to evidence that there is no risk that major accidents and/ or disasters would arise. Therefore, the Inspectorate does not agree that this matter can be scoped out of the ES. The ES should include an assessment of risk of major accidents and disasters relevant to the project, which makes it clear which components of the Proposed Development and associated development have been included in the assessment.
4.12.2	Table 5-2	Climate change risk assessment	Please see Section 4.2 of this Scoping Opinion.
4.12.3	Table 5-2	Aviation	The Inspectorate agrees that it is unlikely for significant aviation effects to arise from the Propose Development and therefore this matter can be scoped out of the ES.
4.12.4	Table 5-2	Daylight and sunlight	The Inspectorate agrees that it is unlikely for significant daylight and sunlight effects to arise from the Propose Development and therefore this matter can be scoped out of the ES.
4.12.5	Table 5-2	Environmental wind	The Inspectorate agrees that it is unlikely for significant environmental effects to arise from the Propose Development and therefore this matter can be scoped out of the ES.
4.12.6	Table 5-2	Waste	The Inspectorate does not agree that an assessment of construction and operational waste can be scoped out of the ES. The ES should assess any impacts from waste produced from the construction and

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			operation of the Proposed Development which are likely to result in significant effects.

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 prospectus[5]
- Planning Inspectorate advice notes[6]:
  - 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.

[5] The Planning Inspectorate's pre-application services for applicants. Available from: https://infrastructure.planninginspectorate.gov.uk/application-process/pre-application-service-for-applicants/

[6] 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 BODIES[7]

SCHEDULE 1 DESCRIPTION	ORGANISATION
The Health and Safety Executive	Health and Safety Executive
The National Health Service Commissioning Board and the relevant clinical commissioning group (CCG)	NHS England
The relevant Clinical Commissioning Group	NHS North Lincolnshire Clinical Commissioning Group
Natural England	Natural England
The Historic Buildings and Monuments Commission for England	Historic England
The relevant fire and rescue authority	Humberside Fire and Rescue Service
The relevant police and crime commissioner	Humberside Police and Crime Commissioner
The relevant parish council, or, where the application relates to land [in] Wales or Scotland the relevant community council	Flixborough Parish Council
	Roxby cum Risby Parish Council
	Burringham Parish Council
	Ashby Parkland Parish Council
	Gunness Parish Council
	Burton upon Stather Parish Council
The Environment Agency	The Environment Agency
The Maritime and Coastguard Agency	Maritime & Coastguard Agency
The Marine Management Organisation (MMO)	Marine Management Organisation (MMO)

[7] Schedule 1 of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the 'APFP Regulations')

SCHEDULE 1 DESCRIPTION	ORGANISATION
The relevant Highways Authority	North Lincolnshire Council
The relevant strategic highways company	Highways England
The relevant internal drainage board	Isle of Axholme and North Nottinghamshire Water Level Manegement Board
	Scunthorpe and Gainsborough Water Management Board
The Canal and River Trust	The Canal and River Trust
Trinity House	Trinity House
Public Health England, an executive agency of the Department of Health	Public Health England
The Crown Estate Commissioners	The Crown Estate
The Forestry Commission	Forestry Commission
The Secretary of State for Defence	Ministry of Defence

TABLE A2: RELEVANT STATUTORY UNDERTAKERS[8]

STATUTORY UNDERTAKER	ORGANISATION
The relevant Clinical Commissioning Group	NHS North Lincolnshire Clinical Commissioning Group
The National Health Service Commissioning Board	NHS England
The relevant NHS Trust	Yorkshire Ambulance Service NHS Trust
Railways	Network Rail Infrastructure Ltd
Canal Or Inland Navigation Authorities	The Canal and River Trust
Dock and Harbour authority	Burton-upon-Stather
	Flixborough

[8] 'Statutory Undertaker' is defined in the APFP Regulations as having the same meaning as in Section 127 of the Planning Act 2008 (PA2008)

STATUTORY UNDERTAKER	ORGANISATION
	Gunness
	Keadby
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 England
The relevant Environment Agency	The Environment Agency
The relevant water and sewage undertaker	Anglian Water
	Severn Trent
The relevant public gas transporter	Cadent Gas Limited
	Energetics Gas Limited
	Energy Assets Pipelines Limited
	ES Pipelines Ltd
	ESP Networks Ltd
	ESP Pipelines Ltd
	ESP Connections Ltd
	Fulcrum Pipelines Limited
	Harlaxton Gas Networks Limited
	GTC Pipelines Limited
	Independent Pipelines Limited
	Indigo Pipelines Limited
	Murphy Gas Networks limited
	Quadrant Pipelines Limited
	National Grid Gas Plc
	Scotland Gas Networks Plc

STATUTORY UNDERTAKER	ORGANISATION
	Southern Gas Networks Plc
The relevant Electricity Generators With CPO Powers	Keadby Power Station
The relevant electricity distributor with CPO Powers	Eclipse Power Network Limited
	Last Mile Electricity Ltd
	Energy Assets Networks Limited
	ESP Electricity Limited
	Fulcrum Electricity Assets Limited
	Harlaxton Energy Networks Limited
	Independent Power Networks Limited
	Leep Electricity Networks Limited
	Murphy Power Distribution Limited
	The Electricity Network Company Limited
	UK Power Distribution Limited
	Utility Assets Limited
	Vattenfall Networks Limited
	Northern Powergrid (Yorkshire) plc
The relevant electricity transmitter with CPO Powers	National Grid Electricity Transmission Plc

TABLE A3: SECTION 43 LOCAL AUTHORITIES (FOR THE PURPOSES OF SECTION 42(1)(B))[9]

LOCAL AUTHORITY[10]
West Lindsey District Council
Bassetlaw District Council

[9] Sections 43 and 42(B) of the PA2008

[10] As defined in Section 43(3) of the PA2008

LOCAL AUTHORITY[10]
North East Lincolnshire Council
North Lincolnshire Council
Doncaster Council
East Riding of Yorkshire Council
Lincolnshire County Council
Nottinghamshire County Council

APPENDIX 2: RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES

CONSULTATION BODIES WHO REPLIED BY THE STATUTORY DEADLINE:
Anglian Water
Burringham Parish Council
Burton upon Stather Parish Council
Cadent Gas
Canal and River Trust
East Riding of Yorkshire Council
Environment Agency
Health and Safety Executive
Highways England
Historic England
Last Mile Electricity Ltd
Lincolnshire County Council
Marine Management Organisation
Maritime and Coastguard Agency
NATS
Natural England
North East Lincolnshire Council
North Lincolnshire Council
Public Health England
West Lindsey District Council

Anglian Water Services Ltd
Lancaster House
Lancaster Way
Ermine Business Park
Huntingdon
PE29 6XU

Tel 01480 323000
www.anglianwater.co.uk

Mr Michael Breslaw
EIA Advisor
Environmental Services
Central Operations
The Planning Inspectorate,
Temple Quay House,
2 Temple Quay,
Bristol,
BS1 6PN

Your ref EN010116-000011

27 November 2020

Dear Mr Breslaw,

North Lincolnshire Energy Park: EIA Scoping Report

Thank you for the opportunity to comment on the scoping report for the above project. Anglian Water is the water and/or 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 North Lincolnshire Green Energy Ltd prior to the submission of the Draft DCO for examination. In particular it would be helpful to discuss the following issues:

- Wording of the Draft DCO including protective provisions specifically for the benefit of Anglian Water.
- Requirement for water and/or wastewater services for both domestic flows and trade effluent.
- Impact of development on Anglian Water's existing assets and the need for mitigation if required.
- Pre-construction surveys.

3. The Project

Reference is made to potential water requirements from the water supply network both as part of the construction and operational phases. We would suggest that consideration should be also be given to any requirements for water to be supplied for those operating the site as well as in the air-cooling process and during the construction phase.

There are existing water mains located in the boundary of the site which potentially be affected by the above development. These assets are critical to enable us to carry out Anglian Water's duty as a statutory water undertaker.

It is therefore suggested that the Environmental Statement should include reference to the water supply network where relevant.

The location of our existing infrastructure and assets (including both underground infrastructure and aboveground assets such as pumping stations) are available to view at the following address:

http://www.digdat.co.uk/digdatUtilities

There is also reference made to liquid effluents being released to the public sewer subject to the agreement of the relevant sewerage company. Anglian Water is responsible for determining applications for consent to discharge trade effluent into the public foul sewerage network within our company area in accordance with the relevant provisions of the Water Industry Act 1991. Where this is for non-household premises the applicant would need to appoint a retailer in the first instance before an application for trade effluent consent is made by the retailer to Anglian Water.

9. Ground Conditions and Hydrology

Reference is made to potential for the permeation of water supply pipes from contaminants during the construction phase. It is important to ensure that adequate safeguards are put in place to ensure that the proposed energy park does not adversely affect the continued operation of Anglian Water's existing water supply infrastructure and assets. We would therefore advise that a specific risk assessment for the water mains supply network from contaminants should be undertaken by the applicant with the assistance of Anglian Water as water undertaker.

10. Hydrology, Flood Risk and Water Resources

Reference is made to the preparation of stand-alone Flood Risk Assessment which is focused on surface water flooding and the risk of flooding from the River Trent. Anglian Water is responsible for managing the risks of flooding from foul water, surface 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 managed by Anglian Water for the above site or as part of the construction phase.

Consideration should be given to all potential sources of flooding including sewer flooding for. In the event there is a requirement to make connection(s) to the public sewerage network managed by Anglian Water we would ask that this be considered as part of the Flood Risk Assessment.

In relation to surface water drainage strategy we note the intention to consider potential attenuation options and produced a SuDS feasibility matrix. Surface water connections

to the public sewerage network should be considered as last resort only having demonstrated that there are no technically feasible alternatives.

If surface water strategy where to interact with the public sewerage network we would ask that the relevant sewerage company be consulted as well as the Lead Local Flood Authority.

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

Yours sincerely

[redacted]

Stewart Patience
Spatial Planning Manager, MRTPI

From: [redacted]
To: North Lincolnshire Green Energy Project
Subject: RE: EN010116 - Proposed North Lincolnshire Green Energy Park - EIA Scoping Notification and Consultation
Date: 21 November 2020 15:13:08

Good Afternoon

Please see below comments from Burringham Parish Council.

The Parish Council support the proposal in principal. The location would have been more suited to an appropriate industrial site; such as the Steelworks. Concerns were raised that wen the prevailing westerly winds occur the communities such as Flixborough will be concerned of possible bad smells from store materials. The local road and rail infrastructure are very inadequate around Flixborough, so basic requirements are required for the proposed site in question. A community heating scheme should be considered as part of this scheme. It should be a condition that a fair percentage of local workers be employed on the construction and future operations.

Kind Regards

Claire
Clerk to Burringham Parish Council

BURTON UPON STATHER PARISH COUNCIL

The Parish Office, High Street, Burton upon Stather, DN15 9DE.

[redacted]

Parish Clerk: Candace Brent

12th November 2020

The Planning Inspectorate
Environmental Services
Central Operations
Temple Quay House
2 The Square
Bristol
BS1 6PN

Your Reference: EN010116-000011

Dear Sir/Madam

Application by North Lincolnshire Green Energy park Ltd requesting a Scoping Opinion as to information to be provided in an Environmental Statement (ES) for the proposed development for a Green Energy Park at Flixborough in North Lincolnshire.

On behalf of Burton upon Stather Parish Council, I have been asked to submit the Parish Council's comments to the Scoping Opinion Consultation as set out below:

'We have the following comments and request the inclusions listed at the end of this letter. Adopting the numbering as set out in the applicants scoping opinion we have the following requests:

Section 2.5.3 Waste Incineration Directive.
Section 2.5.3.1 "The WI Directive sets emission limit values for emissions to air","(particulates, Nitrogen oxides, sulphur dioxide, hydrogen chloride, hydrogen fluoride, heavy metals and dioxins and furans)", "which will be of relevance to Project Design and air quality assessment in the EIA"

Section 6 Air Quality
Section 6.7.1.4 refers to detailed dispersion modelling. "The modelling will consider a base-case stack height of 100m, with additional stack heights assessed in order to determine the appropriate stack height". "This will take into account impacts on both human and ecological receptors" **"The assessment will consider the existing baseline air quality, but will not make forward projections of the possible future air quality"**

Section 8 Noise and Vibration
Section 8.3.1.3 identifies noise sensitive receptors as Amcotts, Neap House Farm and Flixborough only. Properties in Burton upon Stather, particularly on the escarpment edge in the south west of the Parish and the low level area of the "Stather" on the Trent side regularly hear noise from the current Flixborough Wharf operations.

Section 10 Hydrology, Flood Risk and Water Resources
Figure 1. sets out the Flood Risk Zones, which appear to stop short of the Parish of Burton upon Stather, in particular the area known as "the Stather", which is on the Trent side at or below sea level, and has been subject to flooding

Section 16 Cumulative Effects Assessment Approach

The applicant considers that the Zone of Influence at Table 16-2 "**Assumed study area" for Air Quality and Noise should be limited to 2km for non-Statutory sites**

We consider the dispersion modelling to be a critical part of the ES, in particular given the relative position of our Parish, Burton upon Stather, located approximately 2.5km North East and some 70 meters elevated above the applicant site.

The prevailing winds across most of England are South Westerly and with the Parish of Burton upon Stather together with Normanby and Thealby being located to the north east of the applicants proposed site they are therefore in the area most likely to be effected by changes in Air Quality from the proposed Waste Incinerator.

The Parish is home to just below 3,000 residents, together with a Primary School with up to 250 children in attendance, we therefore consider that the site should be considered as an important receptor and included in the Zone of Influence. Our opposition to the project is well known to the applicant and perhaps that is the reason for the restricted Zone of Influence suggested.

We therefore request that:

1 The dispersion modelling should include modelling using the emission limits set out in the Waste Incineration Directive as being a more realistic case than the suggested existing base line air quality.

2 The Zone of Influence for Non-Statutory Sites, for all issues, in particular those listed above, is extended to include the Parish of Burton upon Stather together with Normanby and Thealby.

3 The suggested Flood Risk Zone is extended to include the Parish of Burton upon Stather together with Normanby and Thealby.'

Yours faithfully

C E Brent

Candace Brent
Parish Clerk
For and on behalf of Burton upon Stather Parish Council

Your Ref: EN010116-000011
Date: 23 November 2020

Cadent Gas Limited
Ashbrook Court, Prologis Park
Central Boulevard
Coventry CV7 8PE
cadentgas.com

Submitted via email to:
NorthLincolnshireGreenEnergyProject@planninginspectorate.gov.uk

Cadent
Your Gas Network

Scoping Consultation – North Lincolnshire Green Energy Park

I refer to your email dated 30th October 2020 regarding the above proposed Development Consent Order.

Cadent has reviewed the Scoping Report and has identified a number of assets located within the indicative Order boundary.

In respect of existing Cadent infrastructure, Cadent will require appropriate protection of retained apparatus including compliance with relevant standards for works which may be proposed within close proximity of its apparatus.

Cadent has identified the following apparatus within the vicinity of the proposed works:

- Intermediate pressure gas pipelines and associated above ground and below ground equipment
- Above Ground Installations – Flixborough AGI
- Low or Medium pressure (below 2 bar) gas pipelines and associated above and below ground equipment (as a result it is highly likely that there are also gas services and associated apparatus in the vicinity, these are not shown on plans but their presence should be anticipated and investigated further)

Note: No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any error or omission.

Diversions and Protection of Apparatus:

Where diversions of apparatus are required to facilitate the scheme, Cadent will require adequate notice and discussions should be started at the earliest opportunity. Please be aware that diversions for high or intermediate pressure apparatus can take in excess of two years to plan and procure materials.

Land & Consents Requirements

Where diversions are proposed, Cadent will require the Promoter to obtain all necessary land, planning permissions and other consents to enable the diversion works to be carried out. Details of these consents should be agreed in writing with Cadent before any applications are made to ensure that they are sufficient to deliver works within the proposed timescales. Cadent would ordinarily require a minimum of Conceptual Design study to have been carried out to establish appropriate diversion routes, land and consents requirements ahead of any application being made.

The Promoter will be responsible for obtaining at their cost and granting to Cadent the necessary land rights, on Cadent's standard terms, to allow the construction, maintenance, protection and access of the diverted apparatus. As such adequate land rights must be granted to Cadent (e.g. following the exercise of compulsory powers to acquire such rights included within the DCO) to enable works to proceed, to Cadent's satisfaction. Cadent's approval to the land rights powers included in the DCO prior to submission is strongly recommended to avoid later substantive objection to the DCO. Land rights will be required to be obtained prior to construction and commissioning of any diverted apparatus, to avoid any delays to the project's timescales.

Protection/Protective Provisions:

Where the Promoter intends to acquire land, extinguish rights, or interfere with any of Cadent's apparatus, Cadent will require appropriate protection for retained apparatus and further discussion on the impact to its apparatus and rights including adequate Protective Provisions. Operations within Cadent's existing easement strips are not permitted without approval and any proposals for work in the vicinity for Cadent's existing apparatus will require approval by Plant Protection under the Protective Provisions. Early discussions are advised.

Yours Faithfully

Vicky Cashman

Senior Consents Officer
Capital Delivery
[redacted]

PLANT PROTECTION – KEY CONSIDERATIONS

- Any works relating to the project that may have an impact on the Cadent Gas Network MUST be submitted to the Plant Protection team at Hinckley (plantprotection@cadentgas.com). Details can be found here https://cadentgas.com/Digging-safely/Work-safely-library, offering an on-line request, or details to contact Hinckley direct by email, post or telephone. This includes all prior Ground Investigation, pre-enabling works such as Archaeological excavations, and temporary and permanent crossings of buried pipelines.

- Written permission is required before any works commence within a Cadent easement strip and a Deed of Consent may be required if any apparatus needs to cross the Cadent easement strip

- The below guidance is not exhaustive and all works in the vicinity of Cadent's asset shall be subject to review and approval from Cadent's plant protection team in advance of commencement of works on site.

General Notes on Pipeline Safety:

- You should be aware of the Health and Safety Executives guidance document HS(G) 47 "Avoiding Danger from Underground Services", and Cadent's specification for Safe Working in the Vicinity of Cadent High Pressure gas pipelines and associated installations - requirements for third parties GD/SP/SSW22. Digsafe leaflet Excavating Safely - Avoiding injury when working near gas pipes. There will be additional requirements dictated by Cadent's plant protection team.

- Cadent will also need to ensure that all pipelines remain accessible throughout and after completion of the works

- The actual depth and position must be confirmed on site by trial hole investigation under the supervision of a Cadent representative. Ground cover above our pipelines should not be reduced or increased.

- If any excavations are planned within 3 metres of Cadent High Pressure Pipeline or, within 10 metres of an AGI (Above Ground Installation), or if any embankment or dredging works are proposed then the actual position and depth of the pipeline must be established on site in the presence of a Cadent representative. A safe working method agreed prior to any work taking place in order to minimise the risk of damage and ensure the final depth of cover does not affect the integrity of the pipeline.

- Below are some examples of work types that have specific restrictions when being undertaken in the vicinity of gas assets therefore consultation with Cadent's Plant Protection team is essential:

- Demolition
- Blasting
- Piling and boring
- Deep mining
- Surface mineral extraction
- Landfilling
- Trenchless Techniques (e.g. HDD, pipe splitting, tunnelling etc.)
- Wind turbine installation
- Solar farm installation
- Tree planting schemes

Pipeline Crossings:

- Where existing roads cannot be used, construction traffic should ONLY cross the pipeline at agreed locations.
- The pipeline shall be protected, at the crossing points, by temporary rafts constructed at ground level. The third party shall review ground conditions, vehicle types and crossing frequencies to determine the type and construction of the raft required.
- The type of raft shall be agreed with Cadent prior to installation.
- No protective measures including the installation of concrete slab protection shall be installed over or near to the Cadent pipeline without the prior permission of Cadent.
- Cadent will need to agree the material, the dimensions and method of installation of the proposed protective measure.
- The method of installation shall be confirmed through the submission of a formal written method statement from the contractor to Cadent.
- A Cadent representative shall monitor any works within close proximity to the pipeline.

New Service Crossing:

- New services may cross the pipeline at perpendicular angle to the pipeline i.e. 90 degrees.
- Where a new service is to cross over the pipeline a clearance distance of 0.6 metres between the crown of the pipeline and underside of the service should be maintained. If this cannot be achieved the service shall cross below the pipeline with a clearance distance of 0.6 metres.
- A new service should not be laid parallel within an easement strip
- A Cadent representative shall approve and supervise any new service crossing of a pipeline.
- An exposed pipeline should be suitable supported and removed prior to backfilling
- An exposed pipeline should be protected by matting and suitable timber cladding
- For pipe construction involving deep excavation (<1.5m) in the vicinity of grey iron mains, the model consultative procedure will apply therefore an integrity assessment must be conducted to confirm if diversion is required

Guidance

To download a copy of the HSE Guidance HS(G)47, please use the following link:

http://www.hse.gov.uk/pubns/books/hsg47.htm

Dial Before You Dig Pipelines Guidance:

https://cadentgas.com/Digging-safely/Dial-before-you-dig

Essential Guidance document:

https://cadentgas.com/getattachment/digging-safely/Promo-work-safely-library/Essential_Guidance.pdf

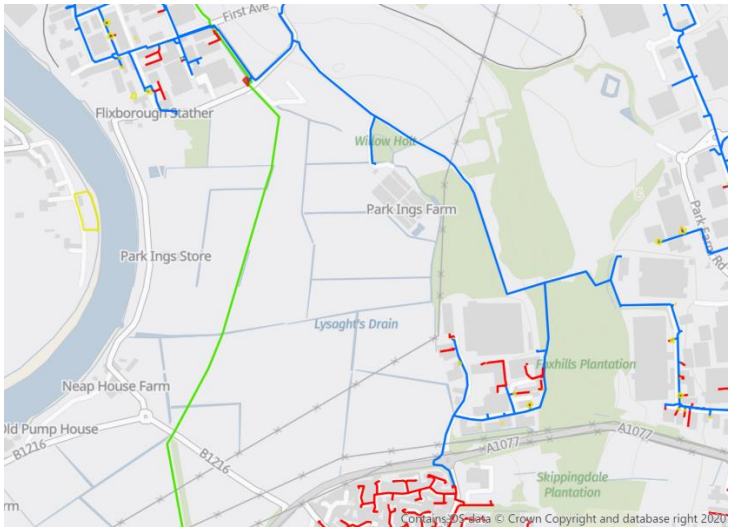
Excavating Safely in the vicinity of gas pipes guidance (Credit card):

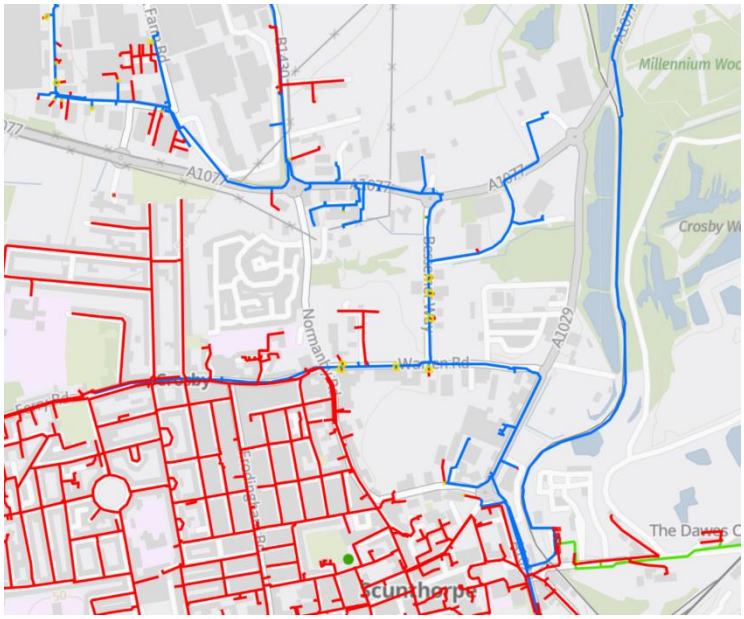
https://cadentgas.com/getattachment/digging-safely/Promo-work-safely-library/Excavating_Safely_Leaflet_Gas-1.pdf

Copies of all the Guidance Documents can also be downloaded from the Cadent website:

https://cadentgas.com/Digging-safely/Work-safely-library

Asset Plans

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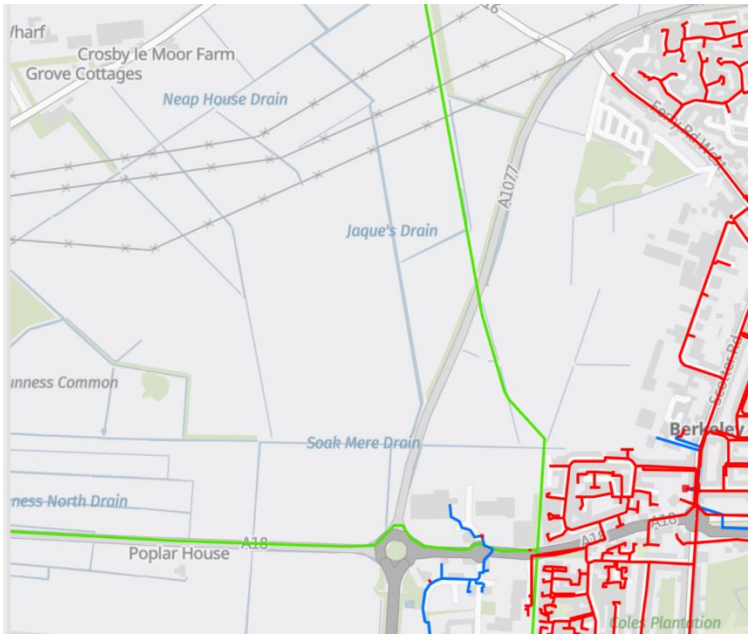
A1029
Normanby Rd
Scunthorpe


Crosby le Moor Farm
Grove Cottages
Neap House Drain
Jaque's Drain
A1077
Soak Mere Drain
Poplar House
A18

From:	Hollis, James
To:	Breslaw, Michael
Cc:	.box.emplantprotectionops
Subject:	EM_GE1A_3NWP_026391- your ref: EN010116-000011 (JM
Date:	05 November 2020 09:04:11
Attachments:	EM_GE1A_3NWP_026391 2 (1).pdf EM_GE1A_3NWP_026391 1 (2).pdf Dial Before You Dig Brochure - Copy.pdf 026391.pdf

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Good morning Michael,

Looking at the proposed planning application Cadent would not object but would be most grateful if an informative could be raised with the applicant for any future works.

Located within the proposed site boundary Cadent have a 125mm PE (plastic) Intermediate Pressure Gas Pipeline which operates at 7barg. The pipeline has a Legal Easement which prevents any building being erected, (permanent or temporary) materials stored within it, changes of cover over the pipeline or plant and equipment from crossing it without Cadents written permission.

Any of these stated works could compromise the integrity of the pipeline and plant protection measures may be required, such as concrete protection slabs being installed over the pipeline, temporary haul roads being constructed or worst case scenario the pipeline being diverted.- thanks.

Kind Regards,

James Hollis
Network technician
Plant Protection (East Midlands)

Cadent
Effingham Street
Sheffield
S4 7YP

[redacted]
Plantprotection@Cadentgas.com

Dail before you dig : 0800 688 588

From: Gatherum, David
To: Breslaw, Michael
Cc: .box.emplantprotectionops
Subject: EM_GE1A_3NWP_026391 ref EN010116-000011 (JM)
Date: 05 November 2020 09:05:15
Attachments: image001.png

Reference **EM_GE1A_3NWP_026391** EN010116-000011 (JM) **Date** 5th November 2020	**Cadent Gas Limited** Brick Kiln Street, Hinckley Leicestershire LE10 0NA cadentgas.com
	Cadent Your Gas Network

Dear Michael Breslaw

Planned work enquiry outcome: Proceed with caution

Thank you for letting us know of your plans to carry out work at DN15 9BE Normanby Road Flixborough Normanby North Lincolnshire. We've now completed our investigations and re-assessed the information you gave us.

The outcome of your enquiry

You can now proceed with your planned work with caution. This outcome is based on the information you gave us. If your plans change you must let us know so we can assess them.

Although there are Cadent gas pipes in the area you're planning to work, as long as you proceed with caution and in line with the attached guidance the pipes shouldn't be affected by the work you are doing. We've also attached a Risk Assessment form for your information.

This outcome is valid for 28 days from the date of this letter. If your work isn't completed within this time, or the location, date or nature of the work you're doing changes, you must submit another enquiry.

If you need any further information or have any questions about the outcome, please email us at [redacted]

Yours sincerely

Plant Protection Team

Page Break

Your Responsibilities and Obligations

It's your responsibility to ensure that the information you have given us is accurate. You must also share all relevant documents including the attached guidance notes with anyone carrying out the work for you.

This assessment solely relates to Cadent gas pipes. It doesn't include:

- Cadent's legal interest (easements or wayleaves) in the land which restricts activity near Cadent's pipes in private land. You must get details of any such restrictions from the landowner in the first instance and if

in doubt contact the Plant Protection team.
- Gas service pipes and related apparatus
- Recently installed apparatus
- Apparatus owned by other organisations such as other gas distribution operators, local electricity companies and other utilities

It's your responsibility to consider whether points above are relevant to you and whether they could be affected by your proposed work.

This letter does not constitute any formal agreement or consent for any proposed development work either generally or related to Cadent's easements or wayleaves, or any planning or building regulations applications.

Cadent Gas Ltd, NGG and NGET or their agents, servants or contractors do not accept any liability for any losses arising under or in connection with this information. This limit on liability applies to all and any claims in contract, tort (including negligence), misrepresentation (excluding fraudulent misrepresentation), breach of statutory duty or otherwise. This limit on liability does not exclude or restrict liability where prohibited by the law nor does it supersede the express terms of any related agreements.

GUIDANCE

High Pressure Gas Pipelines Guidance:

If you're working in the vicinity of a high pressure gas pipeline, you must following the guidance in the following document:
'Specification for Safe Working in the Vicinity of Cadent and/or National Grid High Pressure Gas Pipelines and Associated Installations - Requirements for Third Parties' (SSW22). You can get a copy of this from www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=33968
Other guidance we recommend you follow can be found on the digging safely pages of our website www.cadentgas.com/digging-safely in the Guidance section.

Page Break

ASSESSMENT

Affected Apparatus
The apparatus that has been identified as being in the vicinity of your proposed work is:
- High or Intermediate pressure (above 2 bar) Gas Pipelines and associated equipment
- Low or Medium pressure (below 2 bar) gas pipes and associated equipment. (As a result it is highly likely that there are gas services and associated apparatus in the vicinity)

Requirements
BEFORE carrying out any work you must:
- Carefully read these requirements including the attached guidance documents and maps showing the location of apparatus.
- Contact the landowner and ensure any proposed works in private land do not infringe Cadent and/or National Grid's legal rights (i.e. easements or wayleaves). If the works are in the road or footpath the relevant local authority should be contacted.
- Ensure that all persons, including direct labour and contractors, working for you on or near Cadent and/or National Grid's apparatus follow the requirements of the HSE Guidance Notes HSG47 'Avoiding Danger from Underground Services' and GS6 –'Avoidance of danger from overhead electric power lines'. This guidance can be downloaded free of charge at ww.hse.gov.uk
- In line with the above guidance, verify and establish the actual position of mains, pipes, cables, services and other apparatus on site before any activities are undertaken

DURING any work you must:

- Ensure that the Cadent and/or National Grid requirements are followed for work in the vicinity of High or Intermediate (above 2 bar) pressure pipelines including the supervision of the digging of trial holes.
- Ensure that no mechanical excavation takes place above or within 0.5m of the Cadent buried medium and low pressure gas pipes and associated equipment.
- Comply with all guidance relating to general activities and any specific guidance for each asset type as specified in the Guidance Section below.
- Ensure that access to Cadent and/or National Grid apparatus is maintained at all times.
- Prevent the placing of heavy construction plant, equipment, materials or the passage of heavy vehicles over Cadent and/or National Grid apparatus unless specifically agreed with Cadent and/or National Grid in advance.
- Exercise extreme caution if slab (mass) concrete is encountered during excavation works as this may be protecting or supporting Cadent and/or National Grid apparatus.
- Maintain appropriate clearances between gas apparatus and the position of other buried plant.

Please refer to the "General Guidance" or contact the Plant Protection Team for further information regarding the above.

Page Break

ENQUIRY SUMMARY

Plant Protection
Cadent
Block 1; Floor 1
Brick Kiln Street
Hinckley
LE10 0NA
E-mail: plantprotection@cadentgas.com
Telephone: +44 (0)800 688588

National Gas Emergency Number:
0800 111 999*

National Grid Electricity Emergency Number:
0800 40 40 90*
* Available 24 hours, 7 days/week.
Calls may be recorded and monitored.

www.cadentgas.com

Michael Breslaw
Environmental Services Design
Environmental Services
Central Operations
Temple Quay House
Temple Quay House
Bristol
BS1 6PN

Date: 03/11/2020
Our Ref: EM_GE1A_3NWP_026391
Your Ref: EN010116-000011 (JM)
RE: Formal Planning Application, DN15 9BE, Normanby Road, Flixborough, Normanby, North Lincolnshire

Thank you for your enquiry which was received on 30/10/2020.
Please note this response and any attached map(s) are valid for 28 days.

An assessment has been carried out with respect to Cadent Gas Limited, National Grid Electricity Transmission plc's and National Grid Gas Transmission plc's apparatus. Please note it does not cover the items listed in the section "Your Responsibilities and Obligations", including gas service pipes and related apparatus.
For details of Network areas please see the Cadent website (http://cadentgas.com/Digging-safely/Dial-before-you-dig) or the enclosed documentation.

Are My Works Affected?

Searches based on your enquiry have identified that there is apparatus in the vicinity of your enquiry which may be affected by the activities specified.
Can you please inform Plant Protection, as soon as possible, the decision your authority is likely to make regarding this application.
If the application is refused for any other reason than the presence of apparatus, we will not take any further action.
Please let us know whether Plant Protection can provide you with technical or other information that may be of assistance to you in the determination of the application.

Due to the presence of Cadent and/or National Grid apparatus in proximity to the specified area, the contractor should contact Plant Protection before any works are carried out to ensure the apparatus is not affected by any of the proposed works.

Your Responsibilities and Obligations

The "Assessment" Section below outlines the detailed requirements that must be followed when planning or undertaking your scheduled activities at this location.

It is your responsibility to ensure that the information you have submitted is accurate and that all relevant documents including links are provided to all persons (either direct labour or contractors) working for you near Cadent and/or National Grid's apparatus, e.g. as contained within the Construction (Design and Management) Regulations.

This assessment solely relates to Cadent Gas Limited, National Grid Electricity Transmission plc (NGET) and National Grid Gas Transmission plc (NGGT) and apparatus. This assessment does **NOT** include:

- Cadent and/or National Grid's legal interest (easements or wayleaves) in the land which restricts activity in proximity to Cadent and/or National Grid's assets in private land. You must obtain details of any such restrictions from the landowner in the first instance and if in doubt contact Plant Protection.
- Gas service pipes and related apparatus
- Recently installed apparatus
- Apparatus owned by other organisations, e.g. other gas distribution operators, local electricity companies, other utilities, etc.

It is **YOUR** responsibility to take into account whether the items listed above may be present and if they could be affected by your proposed activities. Further "Essential Guidance" in respect of these items can be found on either the National Grid or Cadent website.

This communication does not constitute any formal agreement or consent for any proposed development work; either generally or with regard to Cadent and/or National Grid's easements or wayleaves nor any planning or building regulations applications.

Cadent Gas Limited, NGGT and NGET or their agents, servants or contractors do not accept any liability for any losses arising under or in connection with this information. This limit on liability applies to all and any claims in contract, tort (including negligence), misrepresentation (excluding fraudulent misrepresentation), breach of statutory duty or otherwise. This limit on liability does not exclude or restrict liability where prohibited by the law nor does it supersede the express terms of any related agreements.

If you require further assistance please contact the Plant Protection team via e-mail (click here) or via the contact details at the top of this response.

Yours faithfully

Plant Protection Team

ASSESSMENT

Affected Apparatus
The apparatus that has been identified as being in the vicinity of your proposed works is:

- High or Intermediate pressure (above 2 bar) Gas Pipelines and associated equipment
- Low or Medium pressure (below 2 bar) gas pipes and associated equipment. (As a result it is highly likely that there are gas services and associated apparatus in the vicinity)

As your proposal is in proximity to apparatus, we have referred your enquiry / consultation to the following department(s) for further assessment:

- Cadent Pipelines Team

We request that you take no further action with regards to your proposal until you hear from the above. We will contact you within 28 working days from the date of this response. Please contact us if you have not had a response within this timeframe.

Requirements

BEFORE carrying out any work you must:

- **Ensure that no works are undertaken in the vicinity of our gas pipelines and that no heavy plant, machinery or vehicles cross the route of the pipeline until detailed consultation has taken place.**
- Carefully read these requirements including the attached guidance documents and maps showing the location of apparatus.
- Contact the landowner and ensure any proposed works in private land do not infringe Cadent and/or National Grid's legal rights (i.e. easements or wayleaves). If the works are in the road or footpath the relevant local authority should be contacted.
- Ensure that all persons, including direct labour and contractors, working for you on or near Cadent and/or National Grid's apparatus follow the requirements of the HSE Guidance Notes HSG47 - 'Avoiding Danger from Underground Services' and GS6 – 'Avoidance of danger from overhead electric power lines'. This guidance can be downloaded free of charge at http://www.hse.gov.uk
- In line with the above guidance, verify and establish the actual position of mains, pipes, cables, services and other apparatus on site before any activities are undertaken.

GUIDANCE

High Pressure Gas Pipelines Guidance:
If working in the vicinity of a high pressure gas pipeline the following document must be followed: 'Specification for Safe Working in the Vicinity of Cadent and/or National Grid High Pressure Gas Pipelines and Associated Installations - Requirements for Third Parties' (SSW22). This can be obtained from:
http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=33968

Dial Before You Dig Pipelines Guidance:
http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=33969

Excavating Safely - Avoiding injury when working near gas pipes:
http://www.nationalgrid.com/NR/rdonlyres/2D2EEA97-B213-459C-9A26-18361C6E0B0D/25249/Digsafe_leaflet3e2finalamends061207.pdf

Standard Guidance

Essential Guidance document:
http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=8589934982

General Guidance document:
http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=35103

Excavating Safely in the vicinity of gas pipes guidance (Credit card):
http://www.nationalgrid.com/NR/rdonlyres/A3D37677-6641-476C-9DDA-E89949052829/44257/ExcavatingSafelyCreditCard.pdf

Excavating Safely in the vicinity of electricity cables guidance (Credit card):
http://www.nationalgrid.com/NR/rdonlyres/35DDEC6D-D754-4BA5-AF3C-D607D05A25C2/44858/ExcavatingSafelyCreditCardelectricitycables.pdf

Copies of all the Guidance Documents can also be downloaded from the National Grid and Cadent websites.

ID: EM_GE1A_3NWP_026391	View extent: 2890m, 3670m	Do not proceed without further consultation	Map 1 of 1 (GAS)
USER: Jourdan.Mintus	LP MAINS MP MAINS IP MAINS LHP MAINS NHP MAINS	This plan shows those pipes owned by Cadent Gas Limited in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc., are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.	MAPS Plot Server Version 1.11.0
DATE: 03/11/2020	0m — 200m Approximate scale 1:10000 on A3 Colour Portrait		Cadent Your Gas Network
DATA DATE: 02/11/2020			Requested by: Environmental Services Design
REF: EN010116-000011 (JM)			
MAP REF: SE8615 CENTRE: 486586, 415442			

Some examples of Plant Items:

Valve | Depth of Cover | Syphon | Diameter Change | Material Change | Out of Standard Service

ENQUIRY SUMMARY

Received Date
30/10/2020

Your Reference
EN010116-000011 (JM)

Location
Centre Point: 486586, 415442
X Extent: 1145
Y Extent: 1425
Postcode: DN15 9BE
Location Description: DN15 9BE, Normanby Road, Flixborough, Normanby, North Lincolnshire

Map Options
Paper Size: A3
Orientation: PORTRAIT
Requested Scale: 10000
Actual Scale: 1:10000 (GAS)
Real World Extents: 2890m x 3670m (GAS)

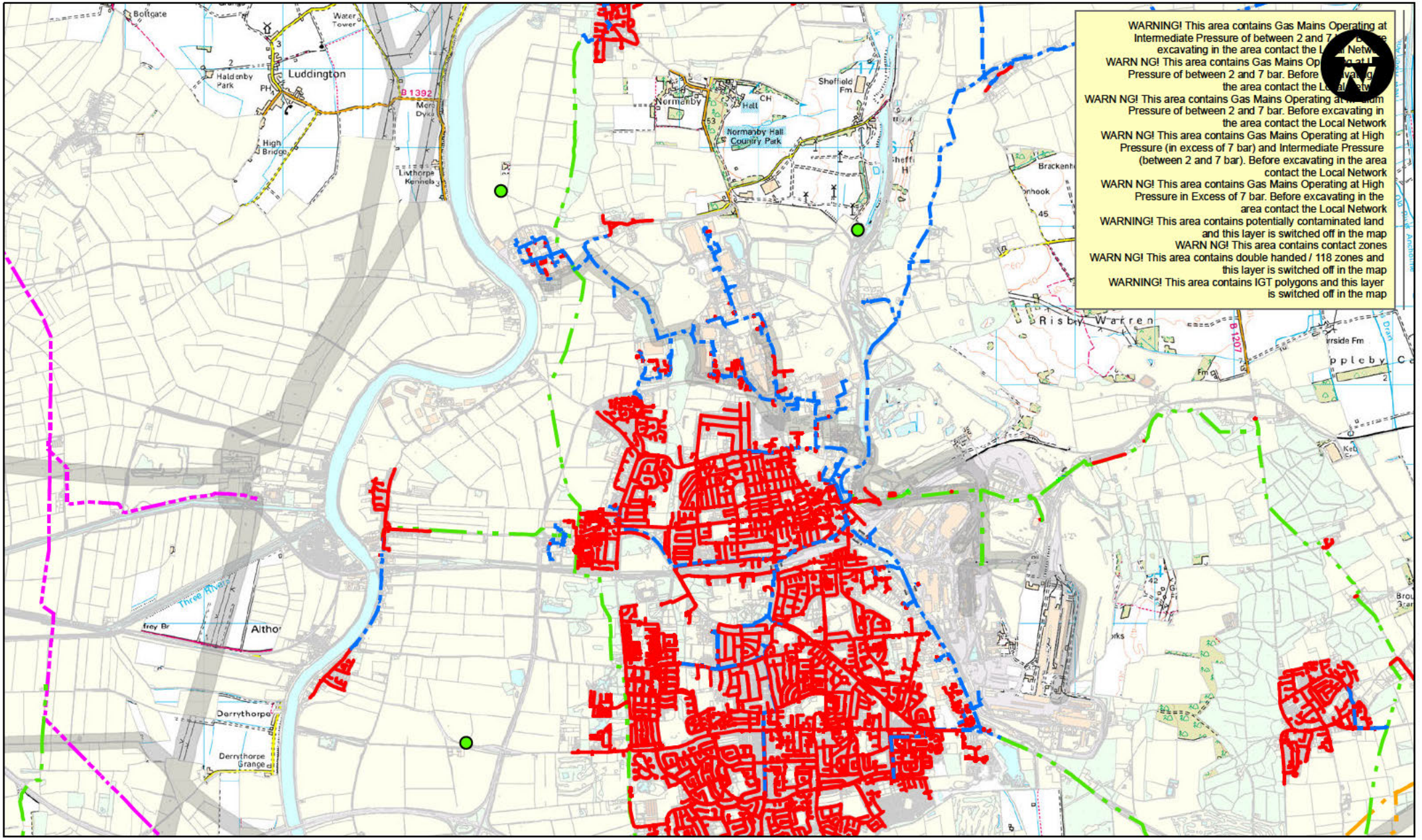
Recipients
pprsteam@cadentgas.com

Enquirer Details
Organisation Name: Environmental Services Design
Contact Name: Michael Breslaw
[redacted]
Address: Environmental Services, Central Operations , Temple Quay House, Temple Quay House, Bristol, BS1 6PN

Description of Works
p/a EN010116 - Proposed North Lincolnshire Green Energy Park - EIA Scoping Notification and Consultation s/p

Enquiry Type
Formal Planning Application

Development Types
Development Type: Development for use by General Public



SCALE: 1:1,250 @ A4	L/P GAS MAIN
USER ID:jourdan.mintus	M/P GAS MAIN
DATE:03-Nov-2020 10:50:23	I/P GAS MAIN
INTERNAL USE ONLY	H/P GAS MAIN
MAP REF:488377, 412556	N/H/P GAS MAIN
CENTRE:	PROPOSED PIPE - LP
	PROPOSED PIPE - MP
	PROPOSED PIPE - IP
	ABANDON - LP
	ABANDON - MP
	Out Of Standard Service

Some examples of Plant Items: Valve, Syphon, Depth of Cover, Change of Dia, Change of Material

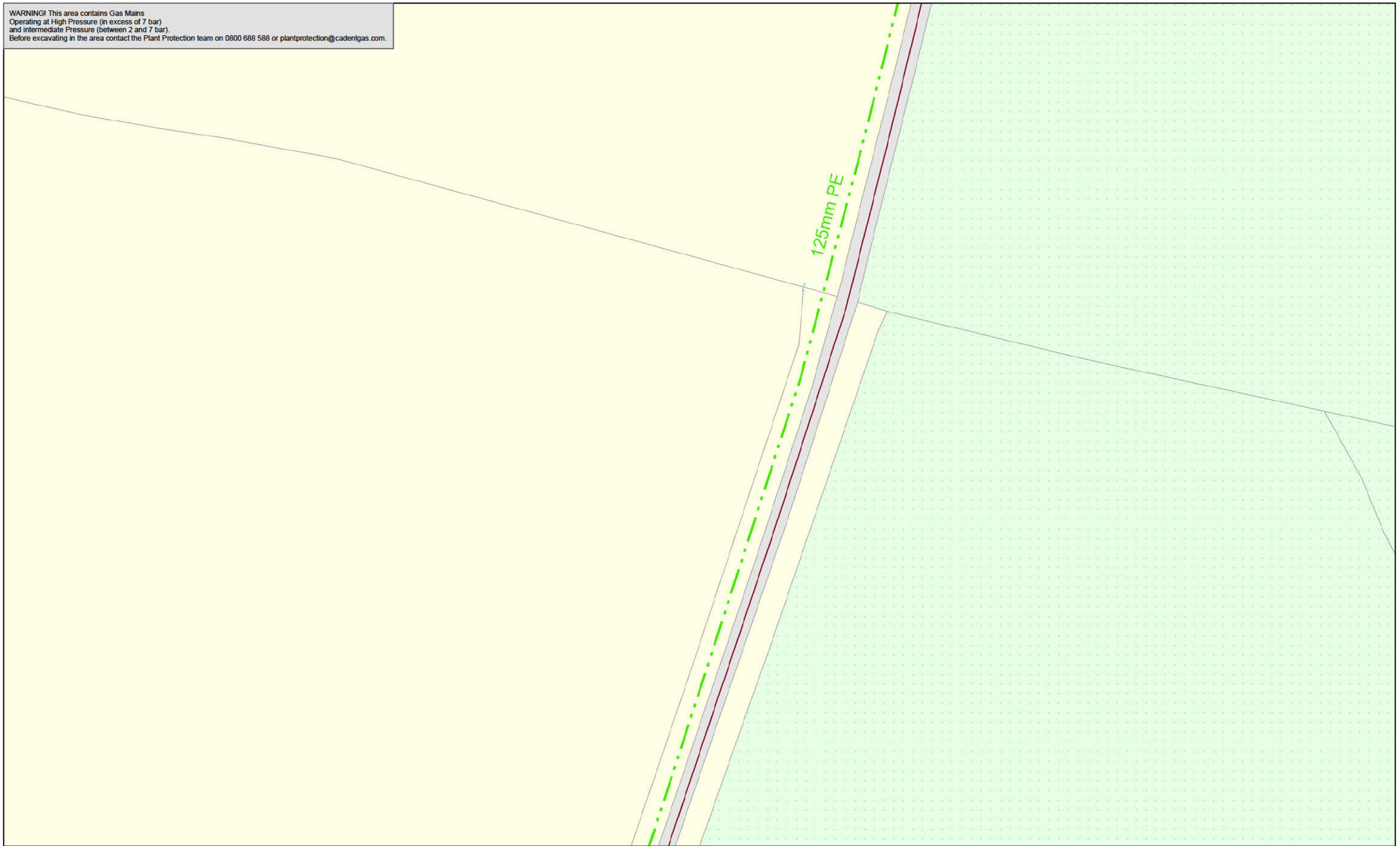
SCHEME: <NG GDFO Scheme Name>

DESIGN: <NG GDFO Design Number>

REVISION: <NG GDFO Revision>

This plan shows those pipes owned by Cadent in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners.The information shown on this plan is given without warranty, the accuracy thereof cannot be guranteed. Service pipes, valves, syphons, stub connections,etc., are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any error or omission. Safe digging practices, inaccordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and any other apparatus on site before any mechanical plant is used. t is your responsability to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus.The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

WARNING! This area contains Gas Mains
Operating at High Pressure (in excess of 7 bar)
and intermediate Pressure (between 2 and 7 bar).
Before excavating in the area contact the Plant Protection team on 0800 688 588 or plantprotection@cadentgas.com.



SCALE: 1 500
USER ID: JH331
DATE: 11/5/2020
EXTRACT DATE: 11/5/2020
MAP REF: SE8615
CENTRE: 486572,415448

LP MAINS
MP MAINS
IP MAINS
LHP MAINS
NHP MAINS
HISTORY MAINS
OUT OF STANDARD SERVICE
GTs
SSSIs

Some examples of plant items
Valve
Depth of Cover
Syphon
Diameter Change
Material Change

This plan shows those pipes owned by Cadent Gas Limited in their role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

Cadent

Cadent

Your Gas Network

Specification for safe working in the vicinity of Cadent assets - requirements for third parties

SSW22_v1

Cadent contact details

Disclaimer

This document is provided for use by third parties for safe working in the vicinity of Cadent assets. Where this document is used by any other party it is the responsibility of that party to ensure that this document is correctly applied.

Mandatory and non-mandatory requirements

In this document:

shall: indicates a mandatory requirement.

should: indicates best practice and is the preferred option.

If an alternative method is used then a suitable and sufficient risk assessment shall be completed to show that the alternative method delivers the same, or better, level of protection.

Contents

Smell gas? Call the free, 24 hour National Gas Emergency Service:

0800 111 999*

*All calls are recorded and may be monitored

Introduction

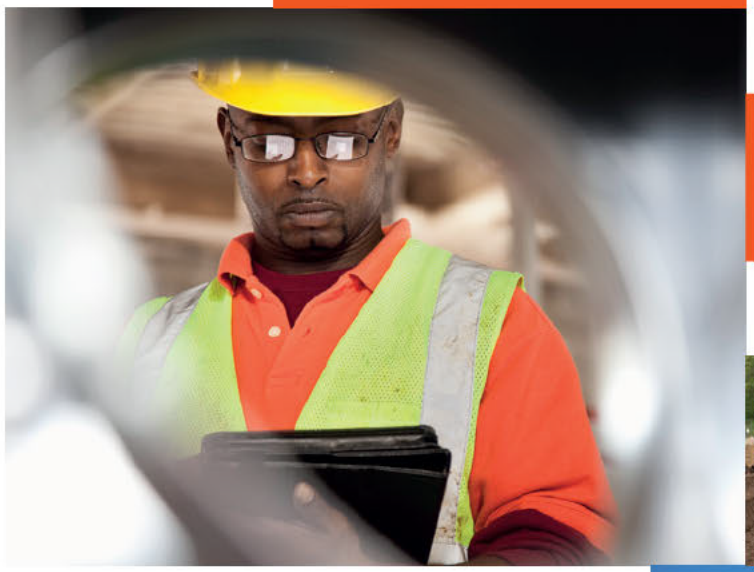
Specification for safe working in the vicinity of Cadent assets – requirements for third parties.

This specification is for issue to third parties carrying out work in the vicinity of Cadent gas assets and associated installations. It is provided to ensure that individuals planning and undertaking work take appropriate measures to prevent damage.

Any damage to a gas asset, or its coating can affect its integrity and can result in failure of the asset with potentially serious hazardous consequences for individuals located in the vicinity.

It is therefore essential that the saftey advice outlined in this document is complied with when working near to a Cadent asset. If Cadent consider any work to be in breach of the requirements stipulated in this document, then the Cadent responsible person will request that work is suspended until the non- compliances have been rectified.

Keeping you, your workers and the public safe when working near our pipelines.



The Pipelines Safety Regulations *1996* state that 'No person shall cause such damage to a pipeline as may give rise to a danger to persons' (Regulation 15). Failing to comply with these requirements could therefore result in prosecution by the Health and Safety Executive (HSE). The requirements in this document are in line with the requirements of the Institution of Gas Engineers and Managers (IGEM) recommendations *IGEM/SR/18 Edition 3 Safe Working Practices to Ensure the Integrity of Gas Assets and Associated Installations* and the HSE's guidance document *HS(G)47 Avoiding Danger from Underground Services*. It is the responsibility of the third party to ensure that any work carried out also conforms with the requirements of the Construction and Design Management (CDM) Regulations 2015 and all other relevant health and safety legislation.

Always contact Cadent prior to carrying out any work in the vicinity of Cadent assets

Contact Cadent

Contact Cadent on 0800 688588 to obtain formal consent at least 14 days before starting work. See Section 2 for more details.

Consider safety

Consider the safety requirements – Section 3 of this document.

Inform Cadent and request asset location

For asset location please contact Cadent at least 14 days before work starts to request formal asset location. See Section 4 of this document.

Observe restrictions

Observe Cadent restrictions on the allowed proximity of mechanical excavators and other power tools and the measures to protect the asset from construction vehicles when carrying out the work – Sections 5, 6.1, 6.2,7.1 and 7.2 of this document. Note: Cadent may wish to monitor the work, consult Cadent to confirm whether or not this is the case.

Specific activities

- No-dig techniques
- Change in cover
- Piling
- Seismic surveys
- Hot work
- Blasting
- Demolition
- Surface mineral extraction
- Landfilling
- Pressure testing
- Deep mining
- Wind and solar farms
- Crossing with plant and equipment

See Sections 6.3 & 7.3

Consult Cadent

Consult Cadent prior to any backfilling over, alongside or under the asset and obtain Cadent's agreement to proceed. Normally Cadent requires 48 hours' notice prior to backfilling. See Sections 6.4 & 7.4 of this document.

Important: This flowchart should be used in conjunction with the entire SSW22 document and not in isolation. If, at any time during the works, the asset is damaged even slightly then observe the precautions in Section 9 of this document.

If in doubt, contact Cadent.

1 Scope

This specification sets out the safety precautions and other conditions associated with working in the vicinity of all Cadent assets, located in both negotiated easements (see Section 11) and public highways.

2 Formal consent

Cadent assets are located either, within an easement agreed with the landowner (at the time of installation) or within the highway. As the required arrangements for working within an easement and working within the highway differ, this document highlights the specific requirements for these two types of area.

No work shall be undertaken in the vicinity of the asset without the formal written consent of Cadent.

Any documents handed to contractors, or other individuals undertaking work (e.g. farmer, local authority etc.), on site by Cadent, shall be signed for by the site manager (to be shared with all individuals on site).

2 Formal consent

2.1 Within an easement

The promoter of any works (see Section 11) within an easement (or within 3m of asset location) shall provide Cadent with details of the proposed works including a risk assessment and method statement of how the work is intended to be carried out. Work shall not go ahead until formal written consent has been given by Cadent. This will include details of Cadent's protection requirements, contact telephone numbers and the emergency telephone number. On acceptance of Cadent's requirements, the promoter of the works shall give Cadent at least 14 days' noticedays' notice before commencing work on site.

In addition to formal written consent, an easement crossing agreement (deed of indemnity) may be required. This shall be discussed with the Cadent responsible person prior to the commencement of the works.

2.2 Within a highway

Work shall be notified to Cadent in accordance with the requirements of The New Roads and Street Works Act (NRSWA) and HS(G)47. The promoter of any works within the highway should provide Cadent with details of the proposed works, including a risk assessment and method statement of how the work is intended to be carried out. This shall be submitted at least 14 days before the planned work is to be carried out. If similar works are being carried out at a number of locations in close proximity, a single risk assessment and method statement should be adequate depending on the nature of the works. Work should not go ahead until formal written consent has been given by Cadent. This will include details of Cadent's protection requirements, contact telephone numbers and the emergency telephone number.

3 Health, safety and environmental considerations

3.1 Safe control of operations

All working practices shall be agreed by Cadent prior to work commencing. All personnel working on site shall be made aware of the potential hazard of the asset and the actions they should follow in case of an emergency.

3.2 Deep excavations

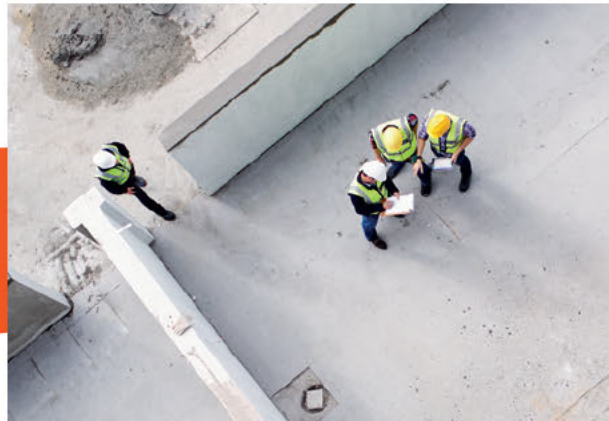
Special consideration should be given to the hazards associated with deep excavations when working within or at a close proximity to the asset.

3.3 Positioning of plant

Unless written authority has been given by Cadent, mechanical excavators and any other powered mechanical plant shall not be sited or moved over an asset location. Mechanical excavators and any other powered mechanical plant shall not dig on one side of the asset when the cab of the excavator positioned on the other side. Mechanical excavators, any other powered mechanical plant, and other traffic shall be positioned far enough away from the asset trench to prevent trench wall collapse.

3.4 Risk assessment

Works in the vicinity of gas assets may have an impact on the safety of the general public, site workers, Cadent staff and contractors, and may affect the local environment. Anyone (e.g. contractors, site workers, farmers, local authorities etc.) working close to the asset, shall carry out suitable and adequate risk assessments. The risk assessment must have acceptance from the Cadent responsible person prior to the commencement of work, to ensure that all such issues are properly considered and risks mitigated.



4 Location of gas assets

Cadent asset records shall be consulted to establish the indicative location of the gas assets in relation to the promoters work area.

Prior to site work commencing the gas assets should be located to verify the indicative location.

This should be carried out through non-intrusive methods utilising pipe locators. Once located the gas assets should be marked out at regular intervals using asset location markers with triangular flags (see Appendix A) or other suitable methods.

The requirements for trial holes to locate the asset or determine levels at crossing points shall be determined on site by the Cadent responsible person.

For assets exceeding 2 bar, the excavation of all trial holes shall be monitored by Cadent. For assets not exceeding 2 bar, this monitoring will be at the discretion of the Cadent responsible person. Any changes shall be agreed by Cadent.

Safe digging practices, in accordance with HSE publication HS(G)47 should be followed. Direct and consequential damage to gas plant can be dangerous both to employees and to the general public

5 Temporary and permanent protective measures

No temporary or permanent protective measures, including the installation of concrete slab protection, shall be installed over or near to the Cadent asset without the prior permission of Cadent. Cadent will need to approve the material, dimensions and method of installation of the proposed protective measure.

The method of installation shall be confirmed through the submission of a formal written method statement from the contractor to Cadent. Where permanent slab protection is to be applied over the asset, Cadent will normally carry out a coating survey of metallic assets to check that there is no existing damage to the coating prior to the slab protection being put in place.

Cadent shall therefore be given at least 14 days notice prior to the laying of any slab protection to arrange for this survey to be carried out.

Generally, due to the need for future access to below 2 bar gas assets, permanent slabs are not permitted but, can be approved at Cadent's discretion.

The safety precautions detailed in section 3 and either section 6 or 7 of this document should also be observed during the installation of the asset protection.

6 Working in the vicinity of a gas asset exceeding 2 bar

6.1 Excavation

6.1.1 In proximity to an asset in an easement

Following location and marking of the asset in agreement with the Cadent responsible person, powered mechanical excavation may be used no closer than 3 meters **(see Figure 1)**. The use of toothed excavator buckets vastly increases the potential for damage to assets, therefore only toothless buckets shall be used.

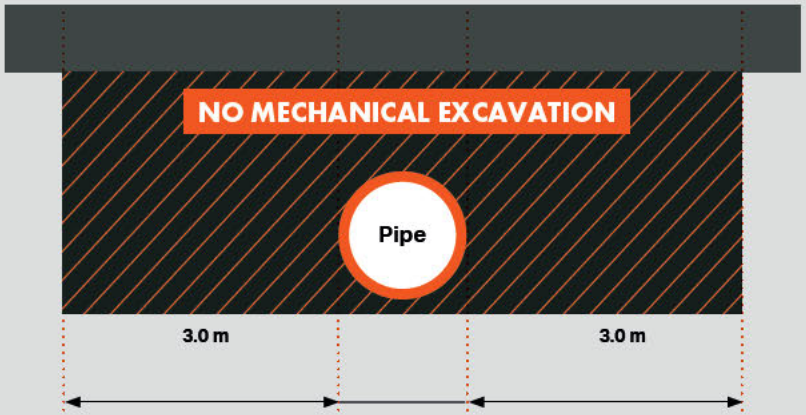
Any fitting, attachment or connecting pipework on the asset shall be exposed by hand. If third parties are using any form of trench support system they shall ensure that none of the components are in contact with the Cadent asset.

Consideration may be given to a relaxation of these limits or lower risk excavation methods by agreement with the Cadent responsible person on site.

Where sufficient depth of cover exists and the absence of attachments and projections has been confirmed (e.g. valve spindles, pressure points etc.) and following evidence from hand dug trial holes, light tracked vehicles may be permitted to strip topsoil to a depth of 0.25 metres, using a toothless bucket.

No topsoil or other materials shall be stored within the easement without the written permission of Cadent. No fires are allowed in the easement strip or close to above ground gas installations.

Figure 1. Excavation restrictions



After the completion of the work, the level of cover over the asset should be the same as that prior to work commencing, unless otherwise agreed by Cadent.

No new service shall be laid parallel to the asset within the easement. In special circumstances, and only with formal written agreement from Cadent, this may be relaxed for short excursions where the service shall be laid no closer than 0.6 metres.

Where work is being carried out parallel to the asset, within or just alongside the easement, suitable barriers shall be erected for protection between the works and the asset to prevent encroachment.

6.1.2 In proximity to an asset in the highway

Following location and marking of the asset in agreement with the Cadent responsible person, powered mechanical excavation may be used no closer than 3 meters **(see Figure 1)**.

The use of toothed excavator buckets vastly increases the potential for damage to assets, therefore only toothless buckets shall be used.

Any fitting, attachment or connecting pipework shall be exposed by hand. If third parties are using any form of trench support system they shall ensure that none of the components are in contact with the Cadent asset.

Removal of the bituminous or concrete highway surface layer by mechanical means is permitted to a depth of 0.3 metres, unless any attachments or projections are present on the asset (e.g. valve spindles, pressure points etc.). The use of chain trenchers is not permitted within 3 metres of the asset. The Cadent responsible person may need to be present to monitor this work. Where the bituminous or concrete highway surface layer extends below 0.3 metres deep, it shall only be removed by handheld power assisted tools under the observation of Cadent.

In special circumstances, consideration may be given to a relaxation of these rules by agreement with the Cadent responsible person and only whilst they remain on site.

6 Working in the vicinity of a gas asset exceeding 2 bar

6.1.3 Crossing over an asset (Open cut)

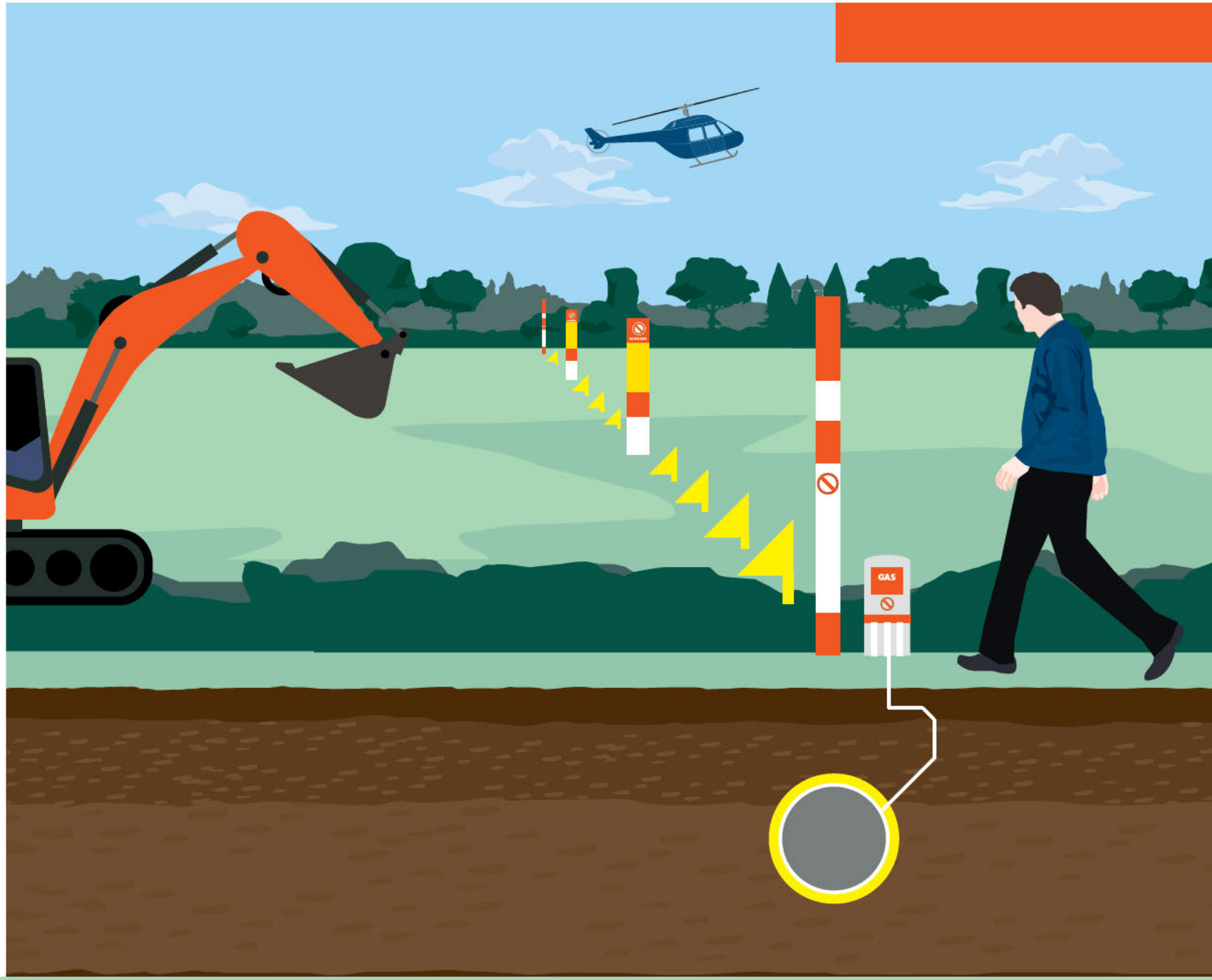
Where a new service is to cross over the asset, a clearance distance of 0.6 metres between the crown of the asset and underside of the service should be maintained. If this cannot be achieved, the service shall cross below the asset, **(see section 6.1.4).**

In special circumstances, this distance may be reduced at the discretion of the Cadent responsible person on site.

6.1.4 Crossing below an asset (Open cut)

Where a service is to cross below the asset, a clearance distance of 0.6 metres between the crown of the service and underside of the asset shall be maintained. Where lengths of pipe greater than one metre are to be exposed, the Cadent responsible person shall be consulted.
The exposed asset/s should be suitably supported and protected by matting and timber cladding.
Any supports shall be removed prior to backfilling.

In special circumstances, this clearance distance may be reduced at the discretion of the Cadent responsible person on site.



6 Working in the vicinity of a gas asset exceeding 2 bar

6.1.5 Cathodic protection

Cathodic protection (CP) is applied to Cadent's buried steel pipe and is a method of protecting assets from corrosion by maintaining an electrical potential between the pipe and anodes placed at strategic points along the asset.

Where a new service is to be laid and similarly protected, the party installing the CP system will undertake tests to determine whether the new service is interfering with the cathodic protection of the Cadent asset.

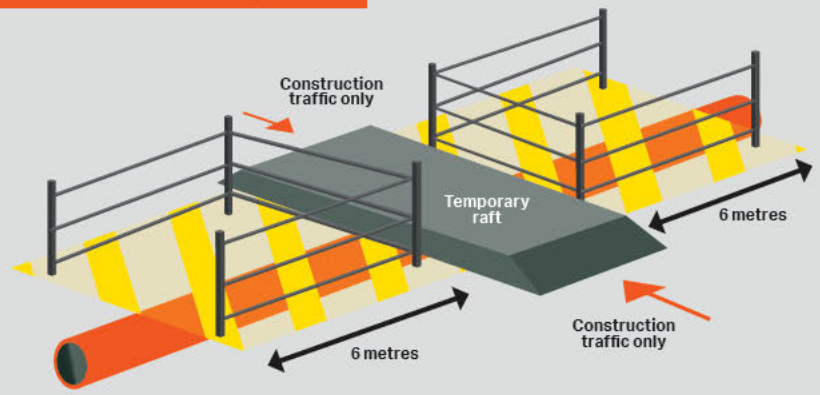
Should any cathodic protection posts or associated apparatus need to be moved to facilitate third party works, at least 14 days notice shall be given to Cadent. Cadent will undertake this work and any associated costs will be borne by the third party.

6.1.6 Installation of electrical equipment

Where electrical equipment is being installed close to Cadent's buried steel assets, the effects of a rise of earth potential under fault conditions shall be considered by the third party and a risk assessment and method statement shall be submitted to Cadent for approval, prior to the works.

The installation of electrical cables parallel to Cadent assets may induce currents into the asset. This may interfere with the effective operation of the cathodic protection system. In these instances, Cadent will require the promoter of the works to conduct pre and post energisation potential surveys of Cadent's asset. The costs for any stray current mitigation systems required will be borne by the third party promoter.

Figure 2. Construction traffic requirements



6.2 Construction traffic

Where existing roads cannot be used, construction traffic should ONLY cross the asset at agreed locations. Notices shall be placed directing traffic to the crossing points. Post and wire fencing shall be erected at all crossing points. The fence should cover the width of the easement and extend a further 6 metres along the length of the easement on both sides. **(See figure 2)**

The asset shall be protected, at the crossing points by a suitable method agreed with the Cadent responsible person prior to installation. The third party shall review ground conditions, vehicle types and crossing frequencies to determine the type and construction of the raft required.

For larger scale projects, or permanent solutions, a protection slab may be required.

6.3 Specific activities

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of the asset. The promoter of works is required to consult Cadent when intending to undertake one of the listed activities and/or further advice is required on whether the work has the potential to affect the asset. The table to the right shows, for some specific activities, the prescribed distances where the advice of Cadent shall be sought **(see sections 6.3.1 to 6.3.13 for further details)**

Activity	**Distance within which Cadent advice shall be sought**
Piling	**15 m**
Surface mineral extraction	**100m**
Landfilling	**100 m**
Demolition	**150 m or 400m for structure mass >10000 tonnes**
Blasting	**500 m if the MIC is greater than 200 kg** **250 m if the MIC is greater than 10 kg but less than 200 kg** **100 m if the MIC is 10 kg or less.**
Deep mining	**1000 m**
Wind turbine	**Not permitted within 1.5 times the turbine mast height from the nearest edge of a pipeline (please see www.ukopa.co.uk)**

6 Working in the vicinity of a gas asset exceeding 2 bar

6.3.1 Trenchless techniques

Where trenchless techniques are being considered, a formal risk assessment and method statement shall be produced. This risk assessment and method statement shall be formally agreed with Cadent prior to the commencement of the work. Please provide Cadent with at least 14 days notice as the Cadent responsible person may wish to be present to monitor this work.

6.3.2 Changes to depth of cover

The depth of cover over Cadent's asset shall not be altered. Cadent shall be consulted for any activity proposed that will lead to a change in cover over the asset. Expert advice may need to be sought, which will be determined by the Cadent responsible person.

6.3.3 Piling

No piling shall be allowed within 15 metres of an asset without an assessment of the vibration levels at the asset. The peak particle velocity at the asset shall be limited to a maximum level of 75 mm/ sec. The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

6.3.4 Demolition

No demolition should be allowed within 150 metres of an asset, or 400 metres for a structure mass greater than 10,000 tonnes, without an assessment of the vibration levels at the asset. The peak particle velocity at the asset shall be limited to a maximum level of 75 mm/sec.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

6.3.5 Blasting

The Maximum Instantaneous Charge (MIC) dictates the distance at which an assessment of the vibration levels (at the located asset) is required. The measured distances are as follows:

- 500 m if the MIC is greater than 200 kg
- 250 m if the MIC is greater than 10 kg but less than 200 kg
- 100 m if the MIC is 10 kg or less.

The peak particle velocity at the asset shall be limited to a maximum level of 75 mm/sec.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

6 Working in the vicinity of a gas asset exceeding 2 bar

6.3.6 Surface mineral extraction

An assessment shall be carried out on the effect of surface mineral extraction activity within 100 metres of an asset. Consideration should also be given to extraction around other plant and equipment associated with assets (e.g cathodic protection ground beds).

Where the mineral extraction extends up to the asset easement, a stable slope angle and stand-off distance between the asset and slope crest shall be determined by Cadent. The easement strip should be clearly marked by a suitable permanent boundary, such as a post and wire fence. Additionally, where appropriate, slope indicator markers shall be erected to facilitate the verification of the recommended slope angle as the slope is formed, by the third party. The asset easement and slope needs to be inspected periodically to identify any signs of developing instability. This may include any change of slope profile including:

- bulging,
- the development of tension cracks on the slope or easement,
- any changes in drainage around the slope.

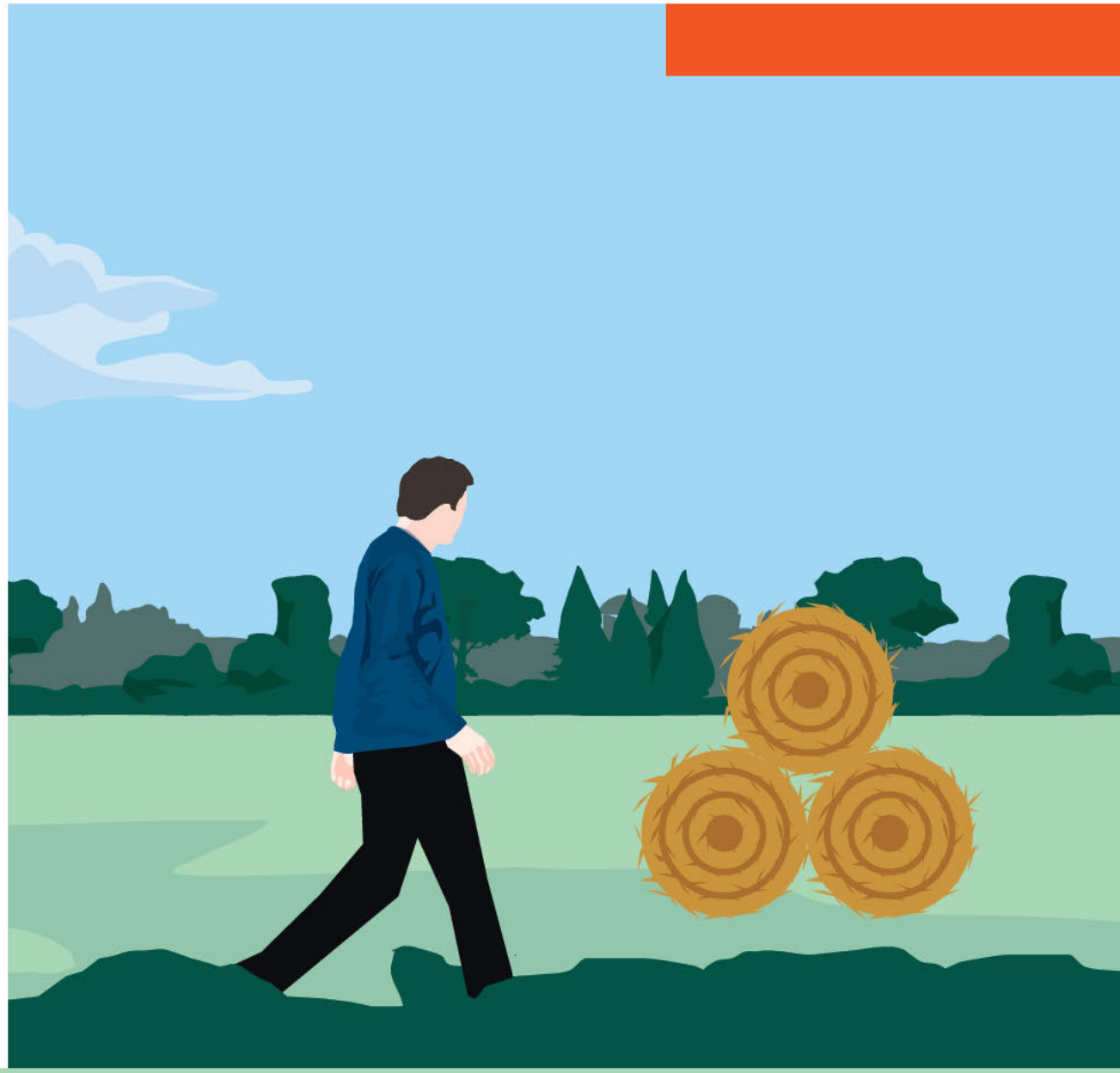
The results of each inspection should be recorded.

Where surface mineral extraction activities are planned within 100 metres of the asset but do not extend up to the asset easement boundary, Cadent shall assess whether this could promote instability in the vicinity of the asset. This may occur where the asset is routed across a natural slope or the excavation is deep. A significant cause of this problem is where the groundwater profile is affected by changes in drainage or the development of lagoons.

Where the extraction technique involves explosives, the provisions of **section 6.3.5 apply.**

6.3.7 Deep Mining

Assets routed within 1 km of active deep mining may be affected by subsidence resulting from mineral extraction. The determination of protective or remedial measures will normally require expert assistance, which can be arranged through Cadent.



6 Working in the vicinity of a gas asset exceeding 2 bar

6.3.8 Landfilling

The creation of slopes outside of the asset easements may promote instability within the vicinity of the asset. Cadent should carry out an assessment to determine the effect of any landfilling activity within 100 metres of an asset.
The assessment is particularly important if landfilling operations are taking place on a slope in which the asset is routed.

6.3.9 Pressure testing

Hydrostatic testing of a third party asset should not be permitted within 8 metres either side of a Cadent asset, to provide protection against the effects of a burst. Where this cannot be achieved, typically where the third party asset needs to cross a Cadent asset, one of the following precautions would need to be adopted:

a) limiting of the design factor of the third party pipeline to 0.3 at the asset's nominated maximum operating pressure (MOP), and the use of pre-tested pipe, or

b) the use of sleeving, or

c) Cadent conduct risk analysis of pipe failure

In either case, the third party shall submit their site specific risk assessment and safe system of works for consideration by Cadent.

6.3.10 Seismic surveys

The promoter of works shall advise Cadent of any seismic surveying work in the vicinity of an asset that will result in peak particle velocities in excess of 50 mm/ sec at the asset.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance.
The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

6.3.11 Hot work

Where the Cadent's metallic gas asset has been exposed, welding (or other hot works that may involve naked flames) should not be carried out in proximity of the gas asset. This may be reduced if suitable protection and precautions has been agreed with Cadent.

If the gas asset is PE (or a PE asset is contained within a metallic sleeve) welding, or other hot works that may involve naked flames, should not take place within 0.5 m of the gas asset. This may be reduced if suitable protection and precautions have been agreed with the Cadent responsible person to prevent against the effects of sparks, radiant heat transfer etc.

The Cadent responsible person will be present to monitor all welding, burning or other 'hot work' that takes place.

6.3.12 Wind turbines

Wind turbines shall not be sited any closer than 1.5 times the proposed height of the turbine mast away from the nearest edge of the asset.

6.3.13 Solar farms

Solar farms can be built adjacent to assets but never within the easement. Advice shall be sought from Cadent at the early stages of design to ensure that electrical interference, security, future access and construction methods can be mutually agreed.

6.4 Backfilling

No backfilling should be undertaken without Cadent's agreement to proceed. The Cadent responsible person will stipulate the necessary consolidation requirements. Some equipment may not be suitable for use over or around the asset due to the adverse effects of excessive compaction and vibration levels. The Cadent responsible person will be able to advise on suitable equipment. Third parties undertaking work shall provide Cadent with 48 hours notice, or shorter only if agreed with Cadent, of the intent to backfill over, under or alongside the asset.

This requirement should also apply to any backfilling operations that:

- are within 3 metres of the asset, or
- could influence the ground stability.

Any damage to the asset or coating shall be reported to Cadent in order that damage can be assessed and repairs can be carried out.

Minor damage to pipe coating and test leads will be repaired by Cadent free of charge. If the asset has been backfilled without the knowledge of the Cadent responsible person, the third party will need to re-excavate to enable the condition of the asset coating to be assessed.

7 Working in the vicinity of a gas asset not exceeding 2 bar

7.1 Excavation

7.1.1 Working in vicinity of iron pipework

Where excavation work this is deeper than 1.5 metres is within 8 metres of grey iron mains an integrity assessment will be required by the Cadent responsible person.

Care should be taken to ensure that any cast iron asset is suitably protected and supported during the works. This is due to the susceptibility of the pipe material to fracture and joint leakage.

Precautionary measures should be agreed with the Cadent responsible person before exposing an iron fitting, for example, bend, tee or cap, etc. This is to ensure that fittings that are not self-anchored are adequately protected against failure during excavation.

7.1.2 In proximity to an asset in an easement

Excavation with a powered mechanical excavator should not be carried out until the asset has been located using vacuum or hand excavation. All mechanical excavation should be undertaken whilst utilising a banksman and shall not be permitted within 0.5 metres of the asset.

The use of toothed excavator buckets vastly increases the potential for damage to assets, therefore only toothless buckets shall be used.

Any fitting, attachment or connecting pipework shall be exposed by hand. If third parties are using any form of trench support system they shall ensure that none of the components are in contact with the Cadent asset.

Consideration may be given to a relaxation of these limits or lower risk excavation methods by agreement with the Cadent responsible person on site.

Where sufficient depth of cover exists and the absence of attachment and projections has been confirmed (e.g. valve spindles, pressure points etc.) and following evidence from hand dug trial holes, light tracked vehicles may be permitted to strip topsoil to a depth of 0.25 metres, using a toothless bucket.

No topsoil or other materials shall be stored within the easement without the written permission of Cadent. No fires are allowed in the easement strip or close to above ground gas installations.

After the completion of the work, the level of cover over the asset should be the same as that prior to work commencing, unless otherwise agreed with by Cadent.

No new service shall be laid parallel to the asset within the easement. In special circumstances, and only with formal written agreement from Cadent, this may be relaxed for short excursions where the service shall be laid no closer than 0.6 metres.

Where work is being carried out parallel to the asset, within or just alongside the easement, suitable barriers shall be erected for protection between the works and the asset to prevent encroachment.

7.1.3 In proximity to an asset in the highway

Excavation with a powered mechanical excavator should not be carried out until the asset has been located using vacuum or hand excavation. All mechanical excavation should be undertaken while utilising a banksman and shall not be permitted within 0.5 metres of the asset.

The use of toothed excavator buckets vastly increases the potential for damage to assets, therefore only toothless buckets shall be used.

Any fitting, attachment or connecting pipework on the asset shall be exposed by hand. If third parties are using any form of trench support system they shall ensure that none of its components are in contact with the asset.

Removal of the bituminous or concrete highway surface layer by mechanical means is permitted to a depth of 0.3 metres, unless any attachments or projections are present on the asset (e.g. valve spindles, pressure points etc.). The use of chain trenchers to do this is not permitted within 3 metres of the asset. The Cadent responsible person may need to be present to monitor this work. Where the bituminous or concrete highway surface layer extends below 0.3 metres deep, it shall only be removed by handheld power assisted tools under the observation of Cadent.

In special circumstances, consideration may be given to a relaxation of these rules by agreement with the Cadent responsible person on site and only whilst they remain on site.

7 Working in the vicinity of a gas asset not exceeding 2 bar

7.1.4 Crossing over an asset (Open cut)

Where a new service is to cross over the asset, a minimum clearance distance of 1.5 times the diameter or 0.3 metres, whichever is greater should be maintained. If this cannot be achieved, the service shall cross below the asset, see **Section 7.1.4.**

In special circumstances, this distance may be reduced at the discretion of the Cadent responsible person on site.

7.1.5 Crossing below an asset (Open cut)

Where a service is to cross below the asset, a minimum clearance distance of 1.5 times the diameter or 0.3m, whichever is greater, between the crown of the new service and underside of the asset shall be maintained. The exposed asset/s should be suitably supported and protected by matting and timber cladding. Any supports shall be removed prior to backfilling.

7.1.6 Cathodic protection

Cathodic protection (CP) is applied to some buried steel pipes and is a method of protecting assets from corrosion by maintaining an electrical potential between the asset and anodes placed at strategic points along the asset. Where a new service is to be laid and similarly protected, the party installing the CP system will undertake tests to determine whether the new service is interfering with the cathodic protection of the Cadent asset.

Should any cathodic protection posts or associated apparatus need moving to facilitate third party works, appropriate notice, at least 14 days, shall be given to Cadent. Cadent will undertake this work and any associated costs will be borne by the third party.

7.1.7 Installation of electrical equipment

Where electrical equipment is being installed close to Cadent's buried steel asset, the effects of a rise of earth potential under fault conditions shall be considered by the third party and a risk assessment and method statement shall be submitted to Cadent for approval, prior to the works.

The installation of electrical cables parallel to Cadent assets may induce currents into the asset. This may interfere with the effective operation of the cathodic protection system. In these instances, Cadent will require the promoter of the works to conduct pre and post energisation potential surveys of Cadent's asset. The costs for any stray current mitigation systems required will be borne by the third party promoter.

7.2 Construction traffic

Where existing roads cannot be used, construction traffic should ONLY cross the asset at agreed locations. Notices shall be placed directing traffic to the crossing points. Post and wire fencing shall be erected at all crossing points. The fence should cover the width of the easement and extend a further 6 metres along the length of the easement on both sides. **(See figure 2)**

The asset shall be protected, at the crossing points, by a suitable method agreed with the Cadent responsible person prior to installation. The third party shall review ground conditions, vehicle types and crossing frequencies to determine the type and construction of the raft required.

For larger scale projects, or permanent solutions, a protection slab may be required.

7.3 Specific activities

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of the asset. The promoter of works is required to consult Cadent when intending to undertake one of the listed activities and/or further advice is required on whether the work has the potential to affect the asset. The table to the right shows, for some specific activities, the prescribed distances where the advice of Cadent shall be sought **(see Sections 6.3.1 to 6.3.13 for further details)**

Activity	**Distance within which Cadent advice shall be sought**
Piling	**15 m**
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Deep mining	**1000 m**
Wind turbine	**Not permitted within 1.5 times the turbine mast height from the nearest edge of a pipeline (please see www.ukopa.co.uk)**

7 Working in the vicinity of a gas asset not exceeding 2 bar

7.3.1 Trenchless techniques

Where trenchless techniques are being considered, a formal risk assessment and method statement shall be produced. This risk assessment and method statement shall be formally agreed with Cadent prior to the commencement of the work. Please provide Cadent with at least 14 days notice as the Cadent responsible person may wish to be present to monitor this work.

7.3.2 Changes to depth of cover

The depth of cover over Cadent's asset shall not be altered. Cadent shall be consulted for any activity proposed that will lead to a change in cover over the asset. Expert advice may need to be sought, which will be determined by the Cadent responsible person.

7.3.3 Piling

No piling shall be allowed within 15 metres of an asset without an assessment of the vibration levels at the asset.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75 mm/ sec.

For ductile or cast iron assets, the peak particle velocity shall be limited to a maximum level of 25 mm/sec.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

7.3.4 Demolition

No demolition should be allowed within 150 metres of an asset for 400m for a structure mass greater than 10000 tonnes without an assessment of the vibration levels at the asset.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75 mm/sec.

For cast iron or ductile iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25 mm/sec.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

7.3.5 Blasting

The Maximum Instantaneous Charge (MIC) dictates the distance at which an assessment of the vibration levels (at the located asset) is required. The measured distances are as follows:

- 500 m if the MIC is greater than 200 kg
- 250 m if the MIC is greater than 10 kg but less than 200 kg
- 100 m if the MIC is 10 kg or less.

For steel or PE assets, the peak particle velocity at the asset shall be limited to a maximum level of 75 mm/sec.

For ductile or cast iron assets, the peak particle velocity at the asset shall be limited to a maximum level of 25 mm/sec.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

Where ground conditions include silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the asset shall be made. Expert advice may need to be sought, which can be arranged through Cadent.

7 Working in the vicinity of a gas asset not exceeding 2 bar

7.3.6 Surface mineral extraction

An assessment shall be carried out on the effect of surface mineral extraction activity within 100 metres of an asset. Consideration should also be given to extraction around plant and equipment associated with assets (e.g cathodic protection ground beds).

Where the mineral extraction extends up to the asset easement, a stable slope angle and stand-off distance between the asset and slope crest shall be determined by Cadent. Where an easement exists, the easement strip should be clearly marked by a suitable permanent boundary, such as a post and wire fence. Additionally, where appropriate, slope indicator markers shall be erected to facilitate the verification of the recommended slope angle as the slope is formed, by the third party. The asset easement and slope needs to be inspected periodically to identify any signs of developing instability. This may include any change of slope profile including:

- bulging,
- the development of tension cracks on the slope or easement,
- any changes in drainage around the slope.

The results of each inspection should be recorded.

Where surface mineral extraction activities are planned within 100 metres of the asset but do not extend up to the asset easement boundary, Cadent shall assess whether this could promote instability in the vicinity of the asset.

This may occur where the asset is routed across a natural slope or the excavation is deep. A significant cause of this problem is where the groundwater profile is affected by changes in drainage or the development of lagoons.

Where the extraction technique involves explosives, the provisions of **Section 7.3.5** apply.

7.3.7 Deep mining

Assets routed within 1 km of active deep mining may be affected by subsidence resulting from mineral extraction. The determination of protective or remedial measures will normally require expert assistance, which can be arranged through Cadent.

7.3.8 Landfilling

The creation of slopes outside of the asset easements may promote instability within the vicinity of the asset. Cadent should carry out an assessment to determine the effect of any landfilling activity within 100 metres of an asset. The assessment is particularly important if landfilling operations are taking place on a slope in which the asset is routed.

7.3.9 Pressure testing

Pressure testing should not be permitted within 8 m of an asset unless suitable precautions have been taken against the effects of a pipe failure.

7.3.10 Seismic surveys

The promoter of works shall advise Cadent of any seismic surveying work in the vicinity of PE or steel assets that will result in peak particle velocities in excess of 50 mm/sec at the asset or for ductile or cast iron assets that will result in peak particle velocities in excess of 25 mm/ sec at the asset.

The promoter of the works should provide Cadent the anticipated vibration levels prior to the work commencing. The ground vibration should be monitored by the promoter to verify the anticipated levels and to ensure allowable peak particle velocity is not exceeded. Alarms should be set at suitable increments to provide a forewarning of limit exceedance. The promoter shall retain records of ground vibration levels for provision of the Cadent responsible person on request.

7.3.11 Hot work

Where the Cadent's metallic gas asset has been exposed, welding (or other hot works that may involve naked flames) should not be carried out in proximity of the gas asset. This may be reduced if suitable protection and precautions has been agreed with Cadent.

If the gas asset is PE (or a PE asset is contained within a metallic sleeve) welding, or other hot works that may involve naked flames, should not take place within 0.5 metres of the gas asset. This may be reduced if suitable protection and precautions have been agreed with the Cadent responsible person to prevent against the effects of sparks, radiant heat transfer etc.

The Cadent responsible person will determine the need to remain on site to monitor all welding, burning or other 'hot work' that takes place.

7.3.12 Wind turbines

Wind turbines shall not be sited any closer than 1.5 times the proposed height of the turbine mast away from the nearest edge of the asset.

7.3.13 Solar Farms

Solar Farms can be built adjacent to assets but never within the easement. Advice shall be sought from Cadent at the early stages of design to ensure that electrical interference, security, future access and construction methods can be mutually agreed.

7 Working in the vicinity of a gas asset not exceeding 2 bar

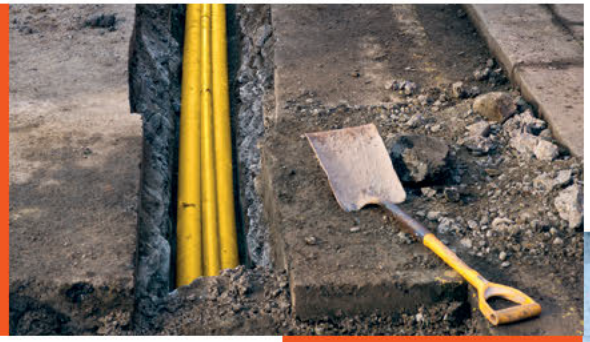
7.4 Backfilling

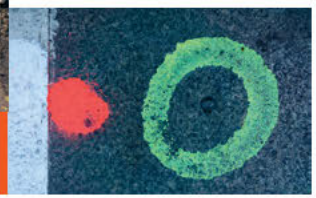
No backfilling should be undertaken without Cadent's agreement to proceed. The Cadent responsible person will stipulate the necessary consolidation requirements. Some equipment may not be suitable for use over or around the asset due to the adverse effects of excessive compaction and vibration levels. The Cadent responsible person will be able to advise on suitable equipment. Third parties undertaking work shall provide Cadent with 48 hours notice, or shorter notice only if agreed with Cadent, of the intent to backfill over, under or alongside the asset. This requirement should also apply to any backfilling operations that:

- are within 3 metres of the asset, or
- could influence the ground stability.

Any damage to the asset or coating shall be reported to the Cadent responsible person in order that damage can be assessed and repairs can be carried out.

Minor damage to pipe coating and test leads will be repaired by Cadent free of charge. If the asset has been backfilled without the knowledge of the Cadent responsible person, the third party will need to re-excavate to enable the condition of the asset coating to be assessed.





8 Working in the vicinity of an Above Ground Installation (AGI)

Where excavations are to be made within 10 metres of the perimeter of an associated gas installation, appropriate protection methods should be determined and recorded by the Cadent responsible person.

At least 14 days notice is required as Cadent may wish to be on site when specific activities are being undertaken.

In addition to this, the safety advice detailed in either section 6 or 7 shall be observed when working in the proximity of an AGI.

Access to the gas asset should be maintained at all times.

9 Action in the case of damage to the asset

If the Cadent asset is damaged, even slightly, and even if no gas leak has occurred, then the following precautions shall be taken immediately:

- Shut down all plant and machinery and extinguish any potential sources of ignition.
- Evacuate all personnel from the vicinity of the asset
- Notify Cadent using the free 24 hour emergency telephone number 0800 111999
- Notify the Cadent responsible person immediately using the contact telephone number provided.
- Ensure no one approaches the asset.
- Do not try to stop any leaking gas.
- Provide assistance as requested by Cadent, or emergency services to safeguard persons and property.

10 References

NRSWA	**New Roads & Street Works Act**
HS(G)47	**HSE Guidance 'Avoiding Danger from Underground Services'**
IGEM/SR/18	**Safe Working Practices to Ensure the Integrity of Gas Pipelines and Associated Installations (Institution of Gas Engineers)**

11 Glossary of Terms

Easement

Easements are negotiated legal entitlements between Cadent and landowners and allow Cadent to lay, operate and maintain assets within the easement strip. Easement strips may vary in width, typically between 6 and 25 metres depending on the diameter and pressure of the pipeline. Consult Cadent for details of the extent of the easement strip where work is intended.

Liquefaction

Liquefaction is a phenomenon in which the strength and stiffness of the soil is reduced by earthquake shaking or other rapid loading. Liquefaction occurs in saturated soils, that is, soils in which the space between individual particles is completely filled with water. When liquefaction occurs, the strength of the soil decreases and the ability of the soil to support assets are reduced.

Promoter of works

The person or persons, firm, company or authority for whom new services, structures or other works in the vicinity of existing Cadent assets are being undertaken.

Cadent responsible person

The person or persons appointed by Cadent with the competencies required to act as the Cadent representative for the purpose of monitoring the particular activity.

Banksman

Another person who assists the machine operator to drive from a position where they can safely see into the excavation and warn the driver of any services or other obstacles.

This person should remain outside of the operating radius of the excavator arm and bucket.

Appendix A

Asset location markers

Emergency

If you hit an asset, whether the damage is visible or not, or in the event of an emergency, call the National Gas Emergency Service immediately on

0800 111 999*

*All calls are recorded and may be monitored

If you are planning to do work near or in the vicinity of an asset, please contact the Plant Protection team for free on:

0800 688 588*
plantprotection@cadentgas.com

Cadent Plant Protection
Block 1
Brick Kiln Street
Hinckley
LE10 0NA

Self service for plant enquiries

beforeyoudig.nationalgrid.com

This is a free online enquiry service giving results within minutes from a grid reference, postcode or street name. This site allows you to submit enquiries about activities and work that you are planning, which may have an impact on the Cadent gas distribution and networks.

linesearchbeforeudig.co.uk

This is a free online enquiry service giving instant results from a grid reference, postcode or street name. If your result is within a zone of interest, you can click directly through to **cadentgas.com/digging-safely.**

Note
Linesearch service is not available for all Cadent assets. Therefore, please click on the Cadent link or call Plant Protection to ensure you have all the available information.

SSW22_v1

Canal & River Trust
Making life better by water

For the attention of Michael Breslaw
NorthLincolnshireGreenEnergyProject@plann
inginspectorate.gov.uk

Your Ref EN010116-000011

Our Ref IPP-123

Thursday 26 November 2020

Dear Michael Breslaw

Application by North Lincolnshire Green Energy Park Ltd (the Applicant) for an Order granting Development Consent for the North Lincolnshire Green Energy Park

Canal & River Trust (the "Trust") Comments on the Scoping Consultation and Notification

In respect of the scoping consultation and the Scoping Report submitted by the applicant, we wish to provide the following comments:

The application site is located to the east of the River Trent, and includes proposals to expand wharf facilities at Flixborough on the river. The Canal & River Trust is Navigation Authority for the Stainforth & Keadby Canal and for the River Trent upstream of Gainsborough. Our interest in this proposal is therefore to ensure that there are no adverse impacts on navigational safety upon our network.

We are not Navigation Authority or Harbour Authority for the stretch of waterspace alongside Flixborough. However, we do advise that changes to waterbourne transport to and from site could have indirect impacts upon the use of our network, should the wharf be designed to accommodate inland traffic.

We welcome confirmation in section 14 of the submitted EIA Scoping Report that a Transport Assessment will be carried out (prepared by Buro Happold). Whilst paragraph 14.1.1.12 identifies that the changes to the existing wharf facilities will be identified, **we do suggest that this should be expanded to provide information as to whether the proposals will impact any boat movements upon the inland waterway network, which may include our infrastructure.**

The use of inland waterways for the transportation of waterborne freight (especially bulk materials and abnormal loads) is a form of sustainable transport, which would help in reducing greenhouse gas emissions, reduce congestion on the local highway network and, in the case of abnormal indivisible loads, accord with guidance contained in the governments water preferred policy www.gov.uk/government/publications/movement-of-abnormal-loads-by-water. The developer is therefore encouraged to consider the use of inland waterways for transportation of goods for both export and import. Should the development proposals seek to utilise our network in association with the expanded wharf facilities, we advise that the applicant should contact our Freight Operations Planner, Stuart McKenzie, for further advice. He can be contacted at [redacted]

Canal & River Trust
Fradley Junction, Alrewas, Burton-upon-Trent, Staffordshire DE13 7DN
T 0303 040 4040 E canalrivertrust.org.uk/contact-us W canalrivertrust.org.uk

Please do not hesitate to contact me with any queries you may have.

Yours sincerely,

Simon Tucker MRTPI
Area Planner

[redacted]

https://canalrivertrust.org.uk/specialist-teams/planning-and-design

APPENDIX A – DRAFT PROTECTIVE PROVISIONS

DCO Draft W Burton

Interpretation

(1) For the protection of the Trust, the following provisions of this Part of this Schedule shall, unless otherwise agreed in writing between the undertaker and the Trust, have effect.

(2) In this Part of this Schedule—

"Code of Practice" means the Code of Practice for Works Affecting the Canal and River Trust (April 2018) or any updates or amendments thereto;
"construction", in relation to any specified work or protective work, includes—
(a) the execution and placing of that work; and
(b) any relaying, renewal, or maintenance of that work as may be carried out during the period of 24 months from the completion of that work; and "construct" and "constructed" have corresponding meanings;
"The Trust" means the Canal & River Trust;
"The Trust's network" means the Trust's network of waterways;
"detriment" means any damage to the waterway or any other property of the Trust caused by the presence of the authorised development and, without prejudice to the generality of that meaning, includes—

(a) any obstruction of, or interference with, or hindrance or danger to, navigation or to any use of the waterway (including towing paths);
(b) the erosion of the bed or banks of the waterway, or the impairment of the stability of any works, lands or premises forming part of the waterway;
(c) the deposit of materials or the siltation of the waterway so as to damage the waterway;
(d) the pollution of the waterway;
(e) any significant alteration in the water level of the waterway, or significant interference with the supply of water thereto, or drainage of water therefrom;
(f) any harm to the ecology of the waterway (including any adverse impact on any site of special scientific interest comprised in the network);
(g) any interference with the exercise by any person of rights over the Trust's network;

"the engineer" means an engineer appointed by the Trust for the purpose in question;
"plans" includes sections, designs, drawings, specifications, soil reports, calculations, descriptions (including descriptions of methods of construction) and programmes;
"practical completion" means practical completion of all of the specified work notwithstanding that items which would ordinarily be considered snagging items remain outstanding, and the expression "practically complete" and "practically completed" is to be construed accordingly;
"specified work" means any part of the authorised development that may in any way affect the waterway;
"the undertaker" means EDF Energy (Thermal Generation) Limited (company number 4267569) or the person who has the benefit of this Order in accordance with article 7 (benefit of order);
"the waterway" means the River Trent, and includes any works, lands or premises belonging to the Trust, or under its management or control, and held or used by the Trust in connection with that navigation.

(3) Where the Code of Practice applies to any works or matter that are part of the authorised development or that form part of the protective works and there is an inconsistency between these protective provisions and the Code of Practice, the part of the Code of Practice that is inconsistent with these protective provisions will not apply and these protective provisions shall take precedent.

Approval of plans, protective works etc.

(1) The undertaker shall:
(a) before commencing construction of any specified work relating to work no 5 (Surface Water Drainage System) (including any temporary works) supply to the Trust proper and sufficient plans of that work and such further particulars available to it as the Trust may within 14 days of the submission of the plans reasonably require for the approval of the engineer; and
(b) not commence such construction of a specified work until plans of that work have been approved in writing by the engineer or settled by arbitration.

(2) The approval of the engineer under sub-paragraph (1) shall not be unreasonably withheld or, and if within 56 days after such plans have been supplied to the Trust (including any other particulars reasonably required under sub-paragraph (1)) the engineer has not intimated their disapproval of those plans and the grounds of their disapproval, the engineer shall be deemed to have approved the plans as submitted.

(3) When signifying approval of the plans, the engineer may specify—
(a) any works (whether temporary or permanent) which in the reasonable opinion of the engineer should be carried out before the commencement of a specified work to prevent detriment; and
(b) such other requirements as may be reasonably necessary to prevent detriment;

and such protective works or requirements shall be constructed by the undertaker or by the Trust at the undertaker's request with all reasonable dispatch and the undertaker shall not commence the construction of a specified work until the engineer has notified the undertaker that the protective works have been completed to the engineer's reasonable satisfaction.

Alterations to the waterway

(1) If during the construction of a specified work or a protective work or during a period of twenty four (24) months after the completion of those works

(a) any alterations or additions, either permanent or temporary, to the waterway are reasonably necessary in consequence of the construction of the specified work or the protective work in order to avoid detriment; and

(b) the Trust gives to the undertaker reasonable notice of its intention to carry out such alterations or additions (which must be specified in the notice)

the undertaker must pay to the Trust the reasonable cost of those alterations or additions including, in respect of any such alterations or additions as are to be permanent, a capitalised sum representing the increase of the costs which may be expected to be reasonably incurred by the Trust in maintaining, working and, when necessary, renewing any such alterations or additions.

(2) If the cost of maintaining, working or renewing the waterway is reduced in consequence of any such alterations or additions a capitalised sum representing such saving is to be set off against any sum payable by the undertaker to the Trust under this paragraph

Making good of detriment; compensation and indemnity, etc.

(1) If any detriment is caused by the construction or failure of the specified works or the protective works carried out by the undertaker, the undertaker (if so required by the Trust) must make good such detriment and pay to the Trust all reasonable expenses to which the Trust may be put, and compensation for any loss which the Trust may sustain, in making good or otherwise by reason of the detriment.

(2) The undertaker shall be responsible for and must make good to the satisfaction of the Trust, all costs, charges, damages, expenses and losses not otherwise provided for in this part of this Schedule which may be occasioned to or reasonably incurred by the Trust—
(a) by reason of the construction of a specified work or a protective work or the failure of such a work; or
(b) by reason of any act or omission of the undertaker or of any person in its employ or of its contractors or others whilst engaged upon the construction of a specified work or a protective work;
and subject to sub-paragraph (4) the undertaker shall effectively indemnify and hold harmless, the Trust from and against all claims and demands arising out of or in connection with any of the matters referred to in paragraphs (a) and (b).

(3) The fact that any act or thing may have been done by the Trust on behalf of the undertaker or in accordance with plans approved by the engineer or in accordance with any requirement of the engineer or under the engineer's supervision or in accordance with any directions or awards of an arbitrator is not to (if it was done without negligence on the part of the Trust or of any person in its employ or of its contractors or agents) excuse the undertaker from any liability under the provisions of this paragraph.

(4) (4) The Trust shall give the undertaker reasonable notice of any such claim or demand as aforesaid and no settlement or compromise of such a claim or demand shall be made without the prior consent of the undertaker.

Costs of alterations, etc.

Any additional expenses which the Trust may reasonably incur through altering, reconstructing or maintaining the waterway under any powers existing at the date when this Order was made by reason of the existence of a specified work shall (provided that 56 days' notice of the commencement of such alteration, reconstruction or maintenance has been given to the undertaker) be repaid by the undertaker to the Trust.

Arbitration

Any difference arising between the undertaker and the Trust under this Schedule (other than a difference as to the meaning or construction of this Schedule) shall be referred to and settled by arbitration in accordance with article [X] (arbitration).

APPENDIX B - WORK NO 5, TECHNICAL DOCUMENTATION

Canal & River Trust
Fradley Junction, Alrewas, Burton-upon-Trent, Staffordshire DE13 7DN
T 0303 040 4040 E canalrivertrust.org.uk/contact-us W canalrivertrust.org.uk

From: Matthew Sunman
To: North Lincolnshire Green Energy Project
Cc: Victoria A Smith; Andy Wainwright
Subject: Re: Fw: EN010116 - Proposed North Lincolnshire Green Energy Park - EIA Scoping Notification and Consultation
Date: 03 November 2020 14:18:55

Good Afternoon

Thank you for your email.

I can confirm East Riding of Yorkshire Council has no comments to make.

Kind Regards

Matthew Sunman
Principal Development Management Officer - Minerals and Waste
[redacted]
MPhysGeog (Hons), MSc Urban and Regional Planning,
MRTPI

Web: www.eastriding.gov.uk

EAST RIDING
OF YORKSHIRE COUNCIL
Your East Riding... where everyone matters

Mr Michael Breslaw
EIA Advisor
The Planning Inspectorate
The Square Temple Quay
Bristol
Avon
BS1 6PN

Our ref: AN/2020/131115/01-L01
Your ref: EN010116-000011

Date: 26 November 2020

Dear Sir

North Lincolnshire Green Energy Park Ltd - Development Consent Order Flixborough Port, adjacent to Flixborough Industrial Estate, Stather Road/First Avenue, Flixborough, DN15 8SF

Thank you for referring the above consultation on 30 October 2020.

We have reviewed the Scoping Report undertaken by ERM (Project No. 0483091), dated October 2020 and have the following comments to make on it.

Chapter 3 The Project
We note that Paragrpah 3.2.9.1 states that "*the DCO will include an application for an abstraction licence to supply water for the Project from a dedicated groundwater abstraction borehole during operation to be installed as part of the Project*". If the applicant intends to abstract more than 20 cubic metres of water per day from a surface water source e.g. a stream or from underground strata (via borehole or well) for any particular purpose then they will need an abstraction licence from the Environment Agency. There is no guarantee that a licence will be granted as this is dependent on available water resources and existing protected rights – we would recommend the application undertakes early discussions with us in respect of this. It would also be helpful if the applicant could advise whether or not it is their intention to request disapplication of environmental legislation for this, under Section 150 of the Planning Act 2008.

Chapter 9 Ground Conditions and Hydrogeology
We have reviewed Chapter 9 in respect of the approach to land contamination and this is satisfactory.

Chapter 10 Hydrology, Flood Risk and Water Resources
We have reviewed Chapter 10 in respect of the approach that will be taken to assess the risk to the water environment and flood risk; this is also satisfactory. However, additional comments in respect of the Water Framework Directive assessment are included below under our Chapter 11 (Ecology and Nature Conservation) comments.

Paragraph 10.4.1.8 states that "*All process effluents will be suitably treated and discharged to the local foul sewer*". This is the preferred method of foul water disposal and we recommend that the applicant discusses this with Severn Trent Water to ensure it has capacity in its system, to accept the effluent. Any discharge of water to the environment would need to be discussed with us in advance. The following guidance may be useful:
https://www.gov.uk/guidance/discharges-to-surface-water-and-groundwater-environmental-permits

Paragraph 10.7.1.7 advises that the impact of flood risk from the River Trent will be addressed within a standalone flood risk assessment (FRA), which will be agreed in advance with the Environment Agency; this approach is welcomed. We are currently working with the applicant to determine the scope and scale of the assessment required. The Scoping Report notes that modelling will be undertaken to establish the impact of the development on the extent and depth of floodwater both on and off site in the event of a breach of defences and overtopping scenarios. This should also include an assessment of the impact on the flood hazard rating, resulting from any changes to flood depth and velocities.

We also note the presence of a number of Environment Agency maintained flood defences within close proximity to the development. The full extent of the interactions between the development and the existing flood defences is still being established. However, at this stage the applicant should note that we will require a buffer of 16m between our existing defences and any built development resulting from this application. This is to ensure our future access to those defences for inspection, maintenance and potential "topping up" improvements, which may be required in response to climate change.

Due to the proximity of the development to the River Trent and the existing flood defences, the construction works associated with the development will require our approval under under the Environmental Permitting Regulations 2016. We will need to discuss this in more detail as the application evolves to determine the most appropriate mechanism to safeguard flood defence assets. This is sometimes done through the inclusion of Protective Provisions within a Development Consent Order (if we agree to the disapplication of environmental legislation under Section 150 of the Planning Act 2008) or we may chose to retain the requirement for a separate Flood Risk Permit application. However, as works to the defences also appear to be being proposed, i.e. extending the wharf/quay, this may need to be captured within a separate Legal Agreement between the applicant and the Environment Agency.

Chapter 11 Ecology and Nature Conservation
We welcome the proposed detailed surveys for species highlighted as a result of the Extended Phase 1 Habitat Surveys completed to date. The applicant should note that due to the mobility of protected species, surveys should be updated every 3 years *as a minimum*.

For all species likely to be impacted by the proposal, an overarching mitigation plan should be produced that considers the cumulative impacts of the surrounding landscape and current and future developments.

In addition to the species highlighted thus far, we also recommend that badgers are given due consideration. Our records indicate their presence in the area.

Extension of the existing wharf from 155 m in length up to a maximum of 420 m represents an appreciable increase in the total length of artificial river bank. The location of the wharf extension on the outside of a meander bend, immediately downstream of the bend apex is typically the location of maximum potential erosion. As such, the proposed hydraulic modelling outlined in section 10.7.1.7 should consider changes in water velocity, shear stress and impacts on local sediment scour and deposition. Mapping shows there are several alternate bars downstream of the proposed wharf expansion and it should be established that these will not be adversely affected. Potential impacts on changes to floodplain deposition should also be investigated. Whilst the overall footprint of the development may be small in the context of the waterbody (as noted in section 2 of the WFD scoping assessment) there is the potential for significant local impacts. As such, impact assessment should be carried out for 'hydromorphological impacts of any water body' detailed in section 2 of the WFD scoping assessment.

The proposed wharf extension will see a worst case scenario of up to 50 extra vessels using the wharf in the first year and an extra 100 overall (doubling the current usage of 100 vessels). Some consideration should be given to the potential impact of increased wave activity from the extra vessels causing bank erosion and/or increased turbidity/lower water quality (section 4 of the WFD scoping report).

Potential geomorphic impacts on all of the minor watercourses listed in section 10.5.1.2 should be considered.

Environmental Permitting Regulations (England and Wales) 2016
The following comments, made in respect of incineration of waste will ensure that the environmental statement addresses the key environmental issues for this proposal. Our comments on proposed waste incinerators only cover the environmental issues that could influence our ability to grant an environmental permit (e.g. risk to ground water or the ability of the proposal to demonstrate best available techniques). We do not comment on the other environmental aspects, such as the effects of vehicle emissions, or whether incineration is the right environmental option compared to other waste disposal methods.

When we issue a permit we can only consider the environmental impacts that are relevant to the permitting process (and which will be considered by us in more detail when we receive a permit application).

Whilst we are the competent authority in England for determining R1 applications, we do not require incinerators to have R1 status in order for us to issue a permit. If a requirement for R1 exists, this will be driven by national or local planning policies in order to move the proposed development up the waste hierarchy (from a disposal to a recovery operation).

We require all new proposed incineration facilities to be built Combined Heat and Power (CHP)-ready by imposing specific permit conditions. Environmental permit applications for these types of plants will therefore need to include a Best Available Technique (BAT) assessment for CHP-readiness. Permits for these plants are also likely to contain conditions that state opportunities to realise CHP should be reviewed from time to time. These opportunities may be created by building new heat loads near the plant, or be

due to changes in policy and financial incentives that make it more economically viable for the plant to be CHP.

The proposed incinerator and ancillary equipment will require a permit under Section 5.1 Part A(1) of the Environmental Permitting Regulations (England and Wales) 2016. We will consider the following areas of potential harm when assessing the permit:

- Management - including accident management, energy efficiency, efficient use of raw materials and avoidance, recovery and disposal of wastes;
- Operations - including incoming waste and raw material management, waste charging, furnace types and requirements, validation of combustion conditions, combined incineration, flue gas recirculation, dump stacks and bypasses, cooling systems and boiler design;
- Emissions - to surface water, sewer and air, odour, noise and vibration, monitoring and reporting of emissions.

We expect new incineration developments to comply with the environmental performance standards in https://www.gov.uk///system/uploads/attachment_data//297004/geho0209bpio-e-e.pdf

We will need to justify any derogation we allow from these standards in our decisions. New development within 250 metres of an existing incinerator could be subject to exposure to odour, dust or noise emissions. The severity of these impacts will depend on the size of the facility, the way it is operated and managed, the nature of the waste accepted and prevailing weather conditions. If the operator can demonstrate that they have taken all reasonable precautions to mitigate these impacts, the facility and development should co-exist with minimal impacts on those living and working nearby. There are a number of permitted sites in close proximity to the proposed location including a large combustion plant and a feed mill.

The recovery of Incinerator Bottom Ash (IBA) for the production of cinder blocks or bricks would need the following considerations:

1. Incinerator Bottom Ash (IBA) will need characterising once produced and then a waste classification completed.
2. Due to the variability of input waste and therefore the likely composition of the IBA produced, the material will be classed as a waste and maybe as hazardous waste.
3. It will remain a waste and waste controls will apply (transfer / consignment notes, Duty of Care, requirements for permits or exemptions to store or process) until fully recovered.
4. The operator may apply for an end of waste position, or meet a quality protocol for IBA to cease to be a waste at point of production.
5. The manufacture of brick or blocks from IBA may in itself require an environmental permit.

The comments we set out above are without prejudice to future decisions we make regarding any applications subsequently made to us for permits for operations at the site.

The nature and fate of any air pollution control residues will need to be considered.

Pre-app permit advice

We strongly recommend that the applicant seeks pre-application advice from us with respect to obtaining an environmental permit - they will need to liaise with our National

Cont/d..

Permitting Service for this. This requires entering into a separate cost recovery agreement with them. Access to this service can only be made through the online portal and they will need to complete an enquiry form for this.

Should you require any additional information, or wish to discuss these matters further, please do not hesitate to contact me on the number below.

Yours faithfully

Annette Hewitson
Principal Planning Adviser

[redacted]

End

Health and Safety Executive

CEMHD Policy - Land Use Planning,
NSIP Consultations,
Building 1.2,
Redgrave Court,
Merton Road,
Bootle, Merseyside
L20 7HS.

HSE email: NSIP.applications@hse.gov.uk

FAO Michael Breslaw
The Planning Inspectorate
Temple Quay House
Temple Quay
Bristol
BS1 6PN
By email only

Dear Mr Breslaw, 18 November 2020

PROPOSED NORTH LINCOLNSHIRE GREEN ENERGY PARK (the project)
PROPOSAL BY NORTH LINCOLNSHIRE GREEN ENERGY PARK LIMITED (the applicant)
INFRASTRUCTURE PLANNING (ENVIROMENTAL IMPACT ASSESSMENT) REGULATIONS 2017 (as amended) REGULATIONS 10 and 11

Thank you for your letter of the 20 October 2020 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 four major accident hazard sites and no major accident hazard pipelines within the proposed DCO application boundary of the proposed North Lincolnshire Green Energy Park for this nationally significant infrastructure project.

This is based on the current configuration as illustrated in, for example, Figure 3.1: Project Site Location of the North Lincolnshire Green Energy Park EIA Scoping Report; October 2020; Project No.: 0483091

The major accident hazard sites are :

HSE reference H0220 operated by BOC limited
HSE reference H3032operated by ColepCCL UK Ltd
HSE reference H3293 operated by Groveport Logistics Ltd
HSE reference H3830operated by Koppers UK Ltd

HSE's Land Use Planning advice would be dependent on the location of areas where people may be present. When we are consulted by the Applicant with further information under Section 42 of the Planning Act 2008, we can provide full advice

Hazardous Substance Consent

The presence of hazardous substances on, over or under land at or above set threshold quantities (Controlled Quantities) will probably 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 as amended.

HSC would be required to store or use any of the Named Hazardous Substances or Categories of Substances at or above the controlled quantities set out in Schedule 1 of these Regulations.

Further information on HSC should be sought from the relevant Hazardous Substances Authority.

Consideration of risk assessments

Regulation 5(4) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 requires the assessment of significant effects to include, where relevant, the expected significant effects arising from the proposed development's vulnerability to major accidents. HSE's role on NSIPs is summarised in the following Advice Note 11 Annex on the Planning Inspectorate's website - Annex G – The Health and Safety Executive . This document includes consideration of risk assessments on page 3

Explosives sites

HSE has no comment to make as there are no licensed explosives sites in the vicinity.

Electrical Safety

No comment from a planning perspective.

During lockdown, please send any further communication on this project directly to the HSE's designated e-mail account for NSIP applications at nsip.applications@hse.gov.uk. We are currently unable to accept hard copies, as our offices have limited access.

Yours sincerely,

Monica

Monica Langton
CEMHD4 NSIP Consultation Team

North Lincolnshire Green Energy Park, Flixborough – EIA Scoping – CH2M Review

PREPARED FOR:	Simon Geoghegan (Highways England)
PREPARED BY:	Jonathan Parsons (CH2M)
DATE:	18th November 2020
PROJECT NUMBER:	679066.AA.20.13.26 DevHU0058
DOCUMENT REF:	TM001
REVIEWED / APPROVED BY:	Gavin Nicholson (CH2M)

Introduction

Highways England has requested CH2M review the EIA Scoping Report [the Report] produced by ERM in support of development proposals at the North Lincolnshire Green Energy Park [NLGEP] at Flixborough, North Lincolnshire. The development proposals are located on the east bank of the River Trent, immediately west of the village of Flixborough and within 2km north-west of Scunthorpe. In addition, the development proposals are located approximately 8km from M180 Junction 3, which forms part of the Strategic Road Network [SRN], hence the need for this review.

After being commissioned on this task, CH2M have been provided with a Transport Assessment [TA] Scoping document by Buro Happold for the development proposals. As such, a review of the TA Scoping will be subject to a review by CH2M, separate to this Technical Memorandum [TM].

ERM is promoting a new Energy Recovery Facility [ERF] and associated development which constitutes a thermal combustion combined heat and power plant with a potential power output capacity of up to 100 MWe from a total thermal capacity of 316 MWth together with associated developments.

In total, the development comprises of:

Nationally Significant Infrastructure Project

- An up to 100 MWe ERF designed to convert up to 760,000 tonnes of refuse derived fuel [RDF] and non-hazardous household and commercial waste annually into energy in the form of power, heat, and steam;
- A water treatment facility; and
- Feedstock storage for up to 13,000 tonnes of RDF and non-hazardous household and commercial waste.

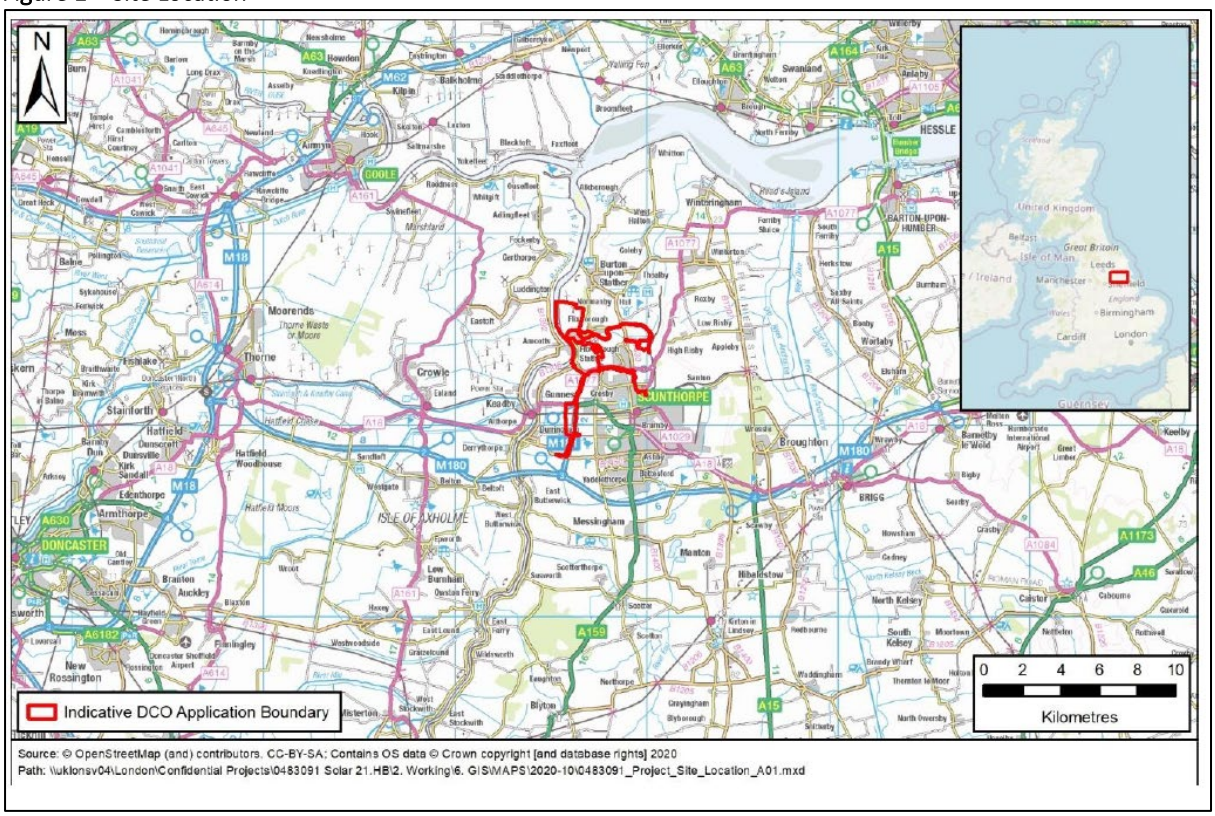
Associated Development

- Carbon dioxide capture facility;
- Offices, business centre and visitor centre for the ERF;
- Expansion of the existing riverside wharf to provide a total length of approximately 420m, capable of bulk handling;
- Renewable energy storage – including hydrogen, battery storage and steam storage;

- A new railhead and reinstatement of an existing 6km railway line that links Flixborough Port to Dragonby Sidings;
- An access road and upgraded road system to improve the flow of traffic between Flixborough Port and Ferry Road West;
- Polymer production facility;
- Concrete block manufacturing facility producing up to 262,000 tonnes annually using reprocessed residues;
- A treatment facility for approximately 95,000 tonnes of Incinerator Bottom Ash and 17,000 tonnes of Flue Gas Treatment residues;
- A hydrogen production facility;
- Back up heat and power generation to be fuelled by hydrogen;
- Natural gas, hydrogen, and bio methane Above Ground Installation infrastructure (to connect to National Grid gas);
- Electric vehicle and hydrogen refuelling station for cars, buses and HGVs; and
- A heat, cooling, hydrogen gas, carbon dioxide and renewable power off take / export.

A map of the development proposals can be seen at Figure 1.

Figure 1 – Site Location



(Source – Scoping Report)

For the purpose of this Task, CH2M has reviewed the Traffic and Transport chapter of the Report, in order to guide the scoping process which will shape the subsequent TA being prepared as part of a Development Consent Order [DCO] application in due course. A summary and conclusions are presented at the end of this TM.

Traffic and Transport Review

It is stated that a TA will be prepared by Buro Happold, which will include a multi-modal impact assessment of the proposed development on all transport infrastructure in the vicinity of the development proposals. Furthermore, it is stated that the TA would be submitted as a stand-alone document to accompany any forthcoming DCO Application.

In addition, it is stated that the Traffic and Transport Environmental Statement [ES] chapter will be prepared by Buro Happold on the basis of a transport strategy for the development proposals that will seek to utilise road, rail and marine connections to minimise environmental impacts whilst accounting for any practical constraints as well as commercial factors. It is stated in the Report that the balance between these three modes of transport is currently being assessed and will be discussed with both Highways England and North Lincolnshire Council [the Council] prior to commencement of modelling. This approach is welcomed by CH2M.

Furthermore, the Traffic and Transport ES chapter will be prepared by Buro Happold on the basis of the TA; this chapter will provide sufficient information to enable the reader to understand the likely significant effects in environmental terms of the proposed ERF in relation to traffic and transport. The methodology to be applied in the TA is subject to separate but parallel scoping discussions with the Council and Highways England. Again, this approach is welcomed by CH2M.

ERM states that the TA will describe and take into consideration the proposed changes to the highway network in discussion with the Council and Highways England; and these changes will include the construction of a new access road between Stather Road and the B1216 Ferry Road West. It is stated that the intention being that this new access road would serve the proposed ERF and the wider NLGEP site, as well as the existing Flixborough Industrial Estate and Port area; and seeks to provide improved road connectivity and removes the need for HGVs to use the existing section of Stather Road that runs parallel with the River Trent via Neap House, which is very narrow and generally unsuitable for two-way HGV movements. Whilst this information is welcomed at this stage, it is considered by CH2M that this issue will primarily be for the Council to address and comment upon.

It is also stated that the Traffic and Transport ES chapter will consider the effect of the proposed ERF during construction as well as once it is operational and will review this assessment with respect to mitigation measures proposed; and it will consider the existing baseline conditions and the future design year, which will form the future baseline scenario, will be agreed with the local planning and highway authority. In addition, it is stated that cumulative schemes and assessment time periods will also be agreed at this point and factored into the assessment accordingly. CH2M welcome this approach, and the consideration of construction and operational scenarios is welcomed.

Baseline Data

The Report states that the existing baseline year is 2021, which represents the submission date of the DCO application. Furthermore, it is stated that existing baseline conditions would be established with reference to the following sources:

- Published / web-based traffic data;
- Rail data provided by Network Rail;
- Shipping data provided by ABP Humber Ports;
- Traffic counts at junctions and road links throughout the study area (see later comment on study area) commissioned in October 2020;
- Council Road traffic Accident Statistics for the latest available five-year period; and
- Local, regional and national planning policy documents.

Furthermore, it is stated that the relevant baseline conditions within the study area will be described in detail in the TA and will be summarised in the ES Traffic and Transport chapter. It is considered by

CH2M that the broad approach to baseline data is acceptable, although it is noted that COVID-19 will impact upon the traffic counts commissioned in October 2020, and as such, justification will need to be provide as to why these counts are acceptable for use within the TA. In terms of Highways England's involvement, this pertains to the SRN and local road network elements that could influence the SRN.

In addition, details relating to committed developments in the area will be obtained from the Council and these will be included in the future baseline traffic flow calculations. This approach is accepted by CH2M.

Likely Significant Effects

In terms of hazardous and Abnormal Indivisible Loads [AIL], it is stated in the Report that it is anticipated that every effort will be made to minimise effects upon the local road network by using other transport modes (such as rail or river) for the transportation of hazardous and over-sized cargo, so the effect on the road network of such activities are likely to be scoped out. Such an approach is welcomed by CH2M, although due consideration of the SRN in regard to AILs should be made as it considered that the SRN will provide a key route for the development proposals in both the construction and operational phases.

The Report states that the key areas that will be assessed in the ES Traffic and Transport chapter are set out below:

- Potential effects on the existing rail network associated with increased rail traffic to and from the ERF;
- Potential effects on the existing port operations associated with increased shipping associated with the ERF;
- Potential effects on the community associated with severance caused by an increase in traffic levels during construction and occupation of the development proposals;
- Potential effects on drivers associated with driver delay caused by additional traffic generated by the development proposals;
- Potential effects on pedestrians associated with delays caused by changes in traffic volume or speed of traffic;
- Potential effects on pedestrian amenity caused by the increase in traffic flow, traffic composition and pavement width / separation from traffic;
- Potential effects on pedestrians associated with fear and intimidation caused by increase in volume of traffic and its HGV composition; and
- Potential effects of highway safety caused by the increase in traffic flow as a result of the approved development.

It is considered that the identified key areas are accepted for inclusion within the ES.

In addition, it is stated that the potential effects of operational traffic will be assessed by comparing the likely trip generation for the proposed development against future baseline traffic conditions when the development is expected to be completed (2026) and any other horizon years that may be agreed with the highway authority as part of the TA scoping discussions. It is considered by CH2M that the assessment years should be compliant with DfT Circular 02/2013.

Spatial Scope: Geographical Area

It is stated that a desktop exercise (together with a site visit) will be undertaken to identify the road links to be included in the study area. It is considered by CH2M that the desktop exercise should be undertaken alongside the trip generation and distribution elements of the TA, to ensure that the key

junctions are included within a study area. Comment on the elements of the SRN included in the study area will be provided at that point.

Temporal Scope: Assessment Years

It is stated in the Report that the assessment scenarios used to consider the effects of the proposed ERF will be agreed with the highway authority during this TA scoping process, and at this stage, it is envisaged by ERM that the following assessment scenarios will be considered:

- Baseline Year (2021) – the year during which the assessment is made;
- Future baseline year (s) without the development –referred to as 'Do Nothing' scenario; and
- Future baseline year (s) with the development - referred to as the 'Do Something' scenario.

As with CH2M's previous comments regarding assessment years, it is considered by CH2M that the assessment years should be compliant with DfT Circular 02/2013.

Technical Scope and Approach to the EIA

It is stated that in assessing the environmental effects of traffic and transport, two factors are considered. Firstly, the sensitivity of receptors within the study area and secondly the anticipated magnitude of change / impact. These two factors are then combined to give an effect significance that depends on the sensitivity of the receptor and the anticipated magnitude of change.

In addition, in terms of sensitive receptors, IEMA identifies groups, locations and areas which may be sensitive to changes in traffic conditions and which should be considered for assessment. These potentially affected parties include:

- People at home and in workplaces;
- Sensitive groups including children, the elderly and disabled;
- Sensitive locations, e.g. hospitals, churches, schools, historical buildings;
- People walking and cycling;
- Open spaces, recreational sites, shopping areas; and
- Sites of ecological / nature conservation value.

CH2M consider the proposed approach to be appropriate.

In addition, it is stated that against this background and the fact that the greatest impacts from the proposed development are likely to arise from operational activity, transport receptors are considered to fall into the following categories:

- Pedestrians and cyclists travelling within and through the area surrounding the site, with particular reference to sensitive pedestrian groups such as children, the elderly and those with mobility impairments;
- Private vehicle users travelling or parking on the local highway network;
- Emergency services requiring access within or passing through the area surrounding the site;
- Delivery and service vehicle operators using loading on street in the vicinity of the site; and,
- Public transport (bus and rail) users (passengers) travelling to, from and through the area surrounding the site.

CH2M consider the proposed approach to be appropriate.

Statutory Consultees

The Report states that the following key organisations will be consulted throughout the design and assessment of the development proposals with regards to Traffic and Transport:

- North Lincolnshire Council – as local Highways Authority;
- Network Rail;
- ABP Humber; and
- Highways England.

The identification of the above stakeholders is considered accepted by CH2M.

Summary and Conclusions

Highways England has requested CH2M review the EIA Scoping Report produced by ERM in support of development proposals at the North Lincolnshire Green Energy Park at Flixborough, North Lincolnshire. The development proposals are located on the east bank of the River Trent, immediately west of the village of Flixborough and within 2km north-west of Scunthorpe. In addition, the development proposals are located approximately 8km from M180 Junction 3, which forms part of the Strategic Road Network, hence the need for this review.

ERM is promoting a new Energy Recovery Facility and associated development which constitutes a thermal combustion combined heat and power plant with a potential power output capacity of up to 100 MWe from a total thermal capacity of 316 MWth together with associated developments.

For the purpose of this Task, CH2M has reviewed the Traffic and Transport chapter of the Report, in order to guide the scoping process which will shape the subsequent Transport Assessment being prepared as part of a Development Consent Order application in due course.

Having reviewed the Report, in broad terms, CH2M are content with the approach taken for both the Environmental Statement and Transport Assessment, paying due cognisance that CH2M will be preparing a separate review of the TA Scoping in due course. However, this TM has provided guidance and comments on a number of areas, and these should be taken into account in the Environmental Statement and Transport Assessment as the development proposals emerge.

Historic England

Mr Michael Breslaw
The Planning Inspectorate
Temple Quay House
Temple Quay
Bristol
BS1 6PN

Direct Dial: 0121 625 6888

Our ref: PL00723482

27 November 2020

Dear Mr Breslaw

Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) - Regulations 10 and 11

Application by North Lincolnshire Green Energy Park Ltd (the Applicant) for an Order granting Development Consent for the North Lincolnshire Green Energy Park (the Proposed Development)

Thank you for consulting us on the above Scoping Report, Historic England is the Government's advisor on Historic Environment and will engage positively with information requests received in connection with producing this Environmental Impact Assessment.

We note that Historic Environment matters are scoped into the proposed Environmental Statement. We refer the applicant to the expertise of the relevant local authority advisors in North Lincolnshire in respect of both built heritage and the archaeological assets and impacts there-on.

We caution against a fixed radius approach to the consideration of setting impacts in advance of more work to understand the specific setting sensitivity of assets in the area in relation to the height and massing of the proposed scheme in its cultural landscape context, the proposed scope may be unduly restrictive and should be reviewed in the context of initial results eg from Flixborough Nunnery (Scheduled Monument) and listed buildings on the west side of the river.

The proposal at 13.7.1.7 that; "For the purposes of assessment and to avoid confusion with 'significance of effect' the term 'value' will be used to describe the historic, archaeological, architectural or artistic merit (Historic England 2017b) of a heritage asset." This approach may be unlikely to make the relationship between EIA and National Policy language clearer. Value is best used in the sense of socially constructed values for aspects of the historic environment as articulated by individuals and groups. Significance is the more structured consideration of what makes an asset

special or interesting as one might find in a written assessment. Importance is the relative worth placed by society upon a specific asset (for instance through Designation). The best way to avoid confusion may be to use significance in the sense used in National Policy and significant in the sense used in the EIA regulation (to describe the degree of an impact).

Historic Environment matters should be addressed in detail both in respect of direct physical impacts upon buried remains and setting impacts upon the historic environment. In particular we draw your attention the historic ferry crossing between Amcotts and Flixborough Stather, the setting of the scheduled Saxon Nunnery at Flixborough and other designated heritage assets in views across and along the Trent Navigation. As explored in Historic environment Good Practice Guide 3 'Setting of heritage Assets' the impacts of works upon archaeological remains associated with designated assets may also represent setting impacts. Particular attention should be paid the potential for early medieval water frontage and inlet features and the adaptation of the Trent over the intervening centuries.

Yours sincerely,

Tim Allen

Tim Allen
Team Leader (Development Advice)
[redacted]

cc: Alison Williams, Historic Environment Officer, NLDC

From: Plant Enquiries
To: North Lincolnshire Green Energy Project
Subject: RE: EN010116 - Proposed North Lincolnshire Green Energy Park - EIA Scoping Notification and Consultation
Date: 30 October 2020 13:52:40
Attachments: image004.png
image005.png
image006.png
image007.png

Dear Sir/Madam,

Thank you for submitting your recent plant enquiry

Based on the information provided, I can confirm that Last Mile **does not** have any plant within the area(s) specified in your request

If you require further assistance with outstanding enquiries, please call [redacted]

Please ensure all plant enquiries are sent to plantenquiries@lastmile-uk com

Regards

From: Hello <hello@energetics-uk com>
Sent: 30 October 2020 11 54
To: Plant Enquiries <plantenquiries@lastmile-uk com>
Subject: FW: EN010116 - Proposed North Lincolnshire Green Energy Park - EIA Scoping Notification and Consultation

energetics

t: 03300 587 400
e: hello@energetics-uk com | w: www energetics-uk com
a: Fenick House, Lister Way, Hamilton International Technology Park, Glasgow, G72 0FT

From: John Clifton
To: Breslaw, Michael
Cc: Becky Melhuish
Subject: RE: EN010116 - Proposed North Lincolnshire Green Energy Park - EIA Scoping Notification and Consultation
Date: 06 November 2020 13:01:59

Hello Michael,

Thank you for your email and the opportunity to comment on the attached scoping opinion for the North Lincolnshire Green Energy Park I respond as Lincolnshire County Council Highway and Lead Local Flood Authority Consultee regarding highway impact and flood risk of the development site

The site is situated well outside Lincolnshire County Council's boundary and the 2 5 and 7 5km study areas do not encroach the into the County It is unlikely that construction and operational phase will have an impact on Lincolnshire's highway network considering the existing network surrounding the development site, however I do note the scoping opinion proposes the submission of full Transport Assessment, which is a requirement, and as such I would expect vehicle routing information to be contained within it I would recommend that we are consulted when this information is available to determine if the County is affected by any transportation impact

If you require anything further please do not hesitate to get back to me

Regards

John Clifton I Eng FIHE GMICE
Principal Development Management Officer
Development Management
Place Directorate
Second Floor, Lancaster House
36 Orchard Street
Lincoln
LN1 1XX
[redacted]
E-Mail: developmentmanagement@lincolnshire gov uk
http://www lincolnshire gov uk/

Marine Management Organisation

Marine Licensing
Lancaster House
Hampshire Court
Newcastle upon Tyne
NE4 7YH

T +44 (0)300 123 1032
F +44 (0)191 376 2681
www.gov.uk/mmo

Michael Breslaw
The Planning Inspectorate

By Email Only

Your reference: EN010116-000011
Our reference: DCO/2020/00005

25 November 2020

Dear Mr Breslaw,

Planning Act (2008) - Development Consent Order for the North Lincolnshire Green Energy Park - Scoping Opinion Consultation

MMO Scoping Response

On 30 October 2020, the Marine Management Organisation (the "MMO") received notice that North Lincolnshire Green Energy Park Ltd ("The Applicant") had asked The Planning Inspectorate ("PINS") for a scoping opinion for information to be provided in an Environmental Statement ("ES") for the proposed North Lincolnshire Green Energy Park ("the Project"). The MMO has prepared this response in consultation with our technical advisors at the Centre for Environment, Fisheries and Aquaculture Science ("Cefas").

This is without prejudice to any future representation the MMO may make about the Project. This is also without prejudice to any decision the MMO may make on any associated application for consent, permission, approval or any other type of authorisation submitted to the MMO either for the works in the marine area or for any other authorisation relevant to the proposed development. The MMO reserves the right to make further comments on this matter throughout the process and to modify its present advice.

If you require any further information, please do not hesitate to contact me using the details provided below.

Yours sincerely,

Hope Armstrong
Marine Licensing Case Officer
[redacted]

Contents

1. The Role of the MMO

The MMO was established by the Marine and Coastal Access Act, 2009 ("the 2009 Act") to contribute to sustainable development in the marine area and to promote clean, healthy, safe, productive and biologically diverse oceans and seas.

The responsibilities of the MMO include the licensing of construction works, deposits and removals in English inshore and offshore waters and for Northern Ireland offshore waters by way of a marine licence[1]. Inshore waters include any area which is submerged at mean high water spring ("MHWS") tide. They also include the waters of every estuary, river or channel where the tide flows at MHWS tide. Waters in areas which are closed permanently or intermittently by a lock or other artificial means against the regular action of the tide are included, where seawater flows into or out from the area. The MMO is an interested party for the examination of Development Consent Order (DCO) applications for Nationally Significant Infrastructure Projects ("NSIPs") in the marine area.

As a prescribed consultee under the Planning Act, 2008 ("the 2008 Act"), the MMO advises developers during pre-application on those aspects of a project that may have an impact on the marine area or those who use it. In addition to considering the impacts of any construction, deposit or removal within the marine area, this also includes assessing any risks to human health, other legitimate uses of the sea and any potential impacts on the marine environment from terrestrial works.

In the case of NSIPs, the 2008 Act enables DCO's for projects which affect the marine environment to include provisions which deem marine licences[2] ("DML"). Where a marine licence is deemed within a DCO, the MMO is the delivery body responsible for post-consent monitoring, variation, enforcement and revocation of provisions relating to the marine environment. As such, the MMO has a keen interest in ensuring that provisions drafted in a DML enable the MMO to fulfil these obligations.

Alternatively, developers can look to have the marine elements of NSIP's consented via a marine licence under Part 4 of the 2009 Act. The MMO is the Licensing Authority for the purpose of Part 4 of the 2009 Act, and is also responsible for post-consent monitoring, variation, enforcement and revocation of provisions relating to the marine environment. Where a marine licence is sought under Part 4 of the 2009 Act for an NSIP, the MMO will engage with PINS throughout the DCO process to ensure that NSIPs are considered in their entirety, and do not conflict with any licence issued under Part 4 of the 2009 Act.

The MMO is responsible for post-consent monitoring, variation, enforcement and revocation of provisions relating to the marine environment of consents issued under both Acts. Further information on licensable activities can be found on the MMO's website[3]. Further information on the interaction between the Planning Inspectorate and the MMO can be found in our joint advice note[4].

[1] Under Part 4 of the 2009 Act http://www.legislation.gov.uk/ukpga/2009/23/contents
[2] Section 149A of the 2008 Act
[3] https://www.gov.uk/topic/planning-development/marine-licences
[4] https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2013/04/Advice-note-11-v2.pdf

2. The Proposed Development

The proposed North Lincolnshire Green Energy Park, henceforth known as “the Project”, will be located within, and adjacent to, Flixborough Port on the River Trent, North Lincolnshire (Figure 1). The proposed development site is located on the east bank of the River Trent, on brownfield and agricultural land. The MMO understands that the Project will be comprised of an up to 1000 MWe Energy Recovery Facility (ERF), water treatment facility and feedstock storage, together with associated infrastructure and development required by the project.

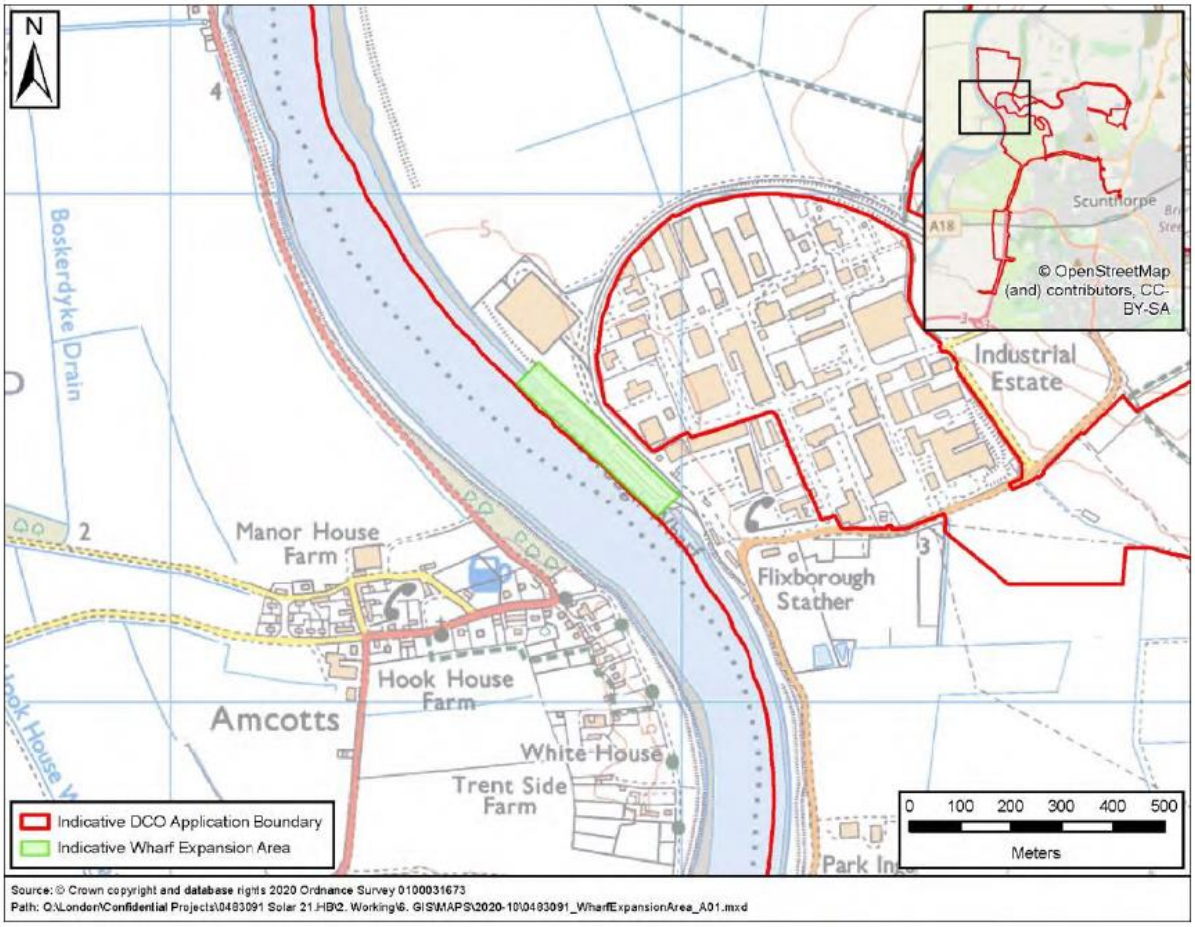


Figure 1. Site Location Plan of the North Lincolnshire Green Energy Park

Construction works are estimated to begin in Quarter 1 2023 with an expected duration of three years to complete. Operation is expected to begin in 2025/26 and the operational term of the project is 25 to 40 Years. The Project will operate 24 hours per day, all year around.

The MMO has an interest in the Project because the development will require construction activities within the River Trent below MHWS. The Project proposes to extend the length of the wharf at Flixborough Port from the current length of 155 metres (m) to approximately 420m in order to accommodate additional cargo required for operation. This will require a deemed marine licence (DML) as part of the DCO. Specific details of the nature and duration of the works expected to take place in the River have not yet been provided as the Project is still in the early stages of planning and

development. Design is at a preliminary level and no materials used for construction nor construction methods have been detailed within this report. In the absence of specific Project details, there necessarily needs to be an element of caution in scoping out potential impact pathways at this stage. In order for the MMO to provide more exhaustive advice, we recommend inclusion of a list of all licensable activities to be undertaken below MHWS with clear proposed methodologies.

3. Benthic Ecology

Observations:

3.1. The impacts that are scoped in for the ecology and nature conservation assessment are listed in Section 11.7.1.1. No impacts have been scoped out of this assessment. The MMO agree with these decisions and would expect effects on benthic ecology receptors (habitats, fauna, and flora) to be assessed in all cases that the footprint of a pressure overlaps the riverbed and/or riverbank.

3.2. The proposed spatial and temporal scope of the assessment is appropriate (Sections 11.5 & 11.6).

3.3. Based on the information provided in the project description (Section 3), no other impacts need to be scoped into the benthic ecology assessment.

3.4. The potential effects of temporary water abstraction from the River Trent during the construction phase (Section 3.2.9.1) on benthic invertebrate larvae (and possibly other taxonomic groups such as fish) should also be considered. However, it appears that such works would be the subject of a separate abstraction licence application (Section 3.12.1.1). The MMO defer to the Environment Agency (EA) for further comment.

3.5. The approach to the cumulative effects assessment (CEA) described in Section 5.4 is appropriate for benthic receptors.

3.6. The Zones of Influence (ZOI) proposed for ecology and nature conservation are appropriate (Table 16-2).

3.7. No specific mitigation measures are proposed at this stage regarding ecology and nature conservation, but the proposed approach to mitigation and environmental management is appropriate (Section 5.3).

Recommendations:

3.8. It is stated that information on aquatic invertebrates will be gathered from the EA (see Section 11.7.1.6). While this appropriate, it is not clear at this stage what information this will entail. Contemporary, site-specific information should be gathered for the area overlapped by the footprint of any pressure associated with the Project that has the potential to affect benthic ecology receptors.

3.9. Regarding Stage 1 of the CEA (Section 5.4.1.3), rather than identifying developments that lie within the ZOI of the Project, it would be more appropriate to identify developments whose ZOI overlaps the ZOI of the Project. In fact, what is written later in the Scoping Report suggests that this may be the intention of the Applicant (see Section 16.3.3.3). This should be clarified.

3.10. The main issue for benthic ecology receptors to be taken forward is likely to be the loss of habitat. The effect would be localised and, therefore, the significance of the impact will depend on the ecology of the affected area.

3.11. Consideration should also be given to whether habitat changes or other pressures associated with the Project would affect the conservation objectives of designated sites in the area. The MMO note that Table 11-1 indicates that designated sites of the Humber Estuary are adjacent to the Project site, but it appears in Figure 11.1 that the area of the River Trent where works would occur is part of the Special Area of Conservation (SAC), Site of Special Scientific Interest (SSSI), and Ramsar site. This should be clarified in future documentation.

4. Dredge and Disposal

Observations:

4.1. The Scoping Report makes little reference to any dredging or disposal of sediment, and it is difficult to ascertain whether any such activities are actually proposed, given the high-level nature of the report. This is understandable to an extent, as it is typically expected that work regimes are not finalised at the Environmental Impact Assessment (EIA) scoping stage.

Recommendations:

4.2. No impacts relevant to dredge and disposal are scoped in or out. If no dredging and disposal will take place, then this is considered appropriate. If dredging is proposed, however, then it should be identified as an impact pathway such that it can be appropriately considered throughout the EIA.

4.3. On first glance, the limited mention of dredging implies that little to no dredging will be required, however, various references throughout the report, such as Section 2.8.1.2, which states that: "*a licence from the MMO under the Marine and Coastal Access Act 2009 for the disposal of spoil dredge material from the bed of the river Trent*", will be sought as an additional consent, contradict this. Other reference to dredging includes: "*Potential sediment plumes, noise from piling and construction of quay extension (dredging though RMS responsibility)",* in the summary of the Water Framework Directive Assessment (WFD). It therefore appears that some dredging and disposal will be conducted to at least facilitate the construction of the quay extension. The MMO note that this quay extension does not appear to be discussed in any of the introductory sections of the main report. Further clarification on the requirement of dredging should be provided.

4.4. The MMO request clarification on Section 2.8.1.2 as to the intention seek a separate marine licence for disposal of spoil dredge. Justification should be provided for the reason not to include this under a DML.

4.5. The report implies that the dredging proposed will fall under statutory harbour authority jurisdiction (as RMS refers to RMS Trent Port, the harbour authority),

which would thus preclude it from requiring MMO consent. Statutory harbour authority exemptions apply only to necessary maintenance dredging, not, as in this case, capital dredging such as quay extensions and bed deepening. Greater detail on the anticipated dredging and disposal required would clarify these points.

4.6. As the applicant has indicated that they intend to seek a separate consent for the disposal of dredged material, the necessary sediment sampling for the proposed works may be conducted separately. However, it is recommended that the project should be assessed as a whole to understand the cumulative and in-combination impacts from the development. The MMO recommend that the applicant liaises with the MMO with regards to a sediment sample plan prior to conducting the analyses.

4.7. The WFD Screening exercise (Appendix A) refers to the need for chemical analysis of sediments. Further to comment 4.6 above, the MMO recommend engagement to obtain a sediment sample plan.

4.8. The MMO notes that cumulative effects are discussed, but no detail is given in relation to matters relevant to dredge and disposal. This raises no issues at this stage, however, please see comment 4.5 above.

4.9. If any dredging or disposal is to be part of the works, the EIA should consider these activities as part of the whole ZOI.

4.10. Various mitigation measures are discussed but given the lack of detail concerning dredging and disposal activity proposed the MMO cannot comment at this time on whether any mitigation measures are appropriate. Whether mitigation measures are required will depend on the results of any eventual sediment sampling, and in view of any modelling results.

4.11. As detailed in previous points, there is very little specific reference to dredging and disposal, however it is assumed from the available information that some such activity will take place. The lack of information concerning the works means that a number of potential impact pathways may not have been identified or considered. Specifically, the method of dredging the applicant chooses may require additional consideration by relevant ecological advisors from the perspective of impacts such as increased suspended sediment concentration.

4.12. Given the lack of information provided regarding dredging, there is no reference to the potential for any dredging to remobilise contaminants within the water column through resuspension. Typically, the hazard posed by this risk is higher when subsurface sediments are disturbed. The report does not indicate the potential depth of any dredging proposed. The MMO take this point to reiterate that the report's implication that the dredging will fall under statutory harbour authority jurisdiction, and therefore licence exemption, may not be accurate given the nature of the proposed works being capital rather than maintenance, and the requirement to acquire a marine licence for disposal operations. It is the responsibility of the applicant to satisfy themselves that the correct permissions are obtained.

4.13. There is no reference as to whether the applicant has conducted, or will conduct, an assessment of sediment management options. Pursuant to the Waste Framework Directive, disposal should only be selected once all other options have been exhausted. This applies to the management of dredged sediment, and the MMO would expect to see evidence that the applicant has considered other methods such as beneficial re-use.

5. Fish Ecology and Fisheries

Observations:

5.1. At this stage, detailed information concerning the marine construction works for the project is limited and consequently the potential impacts from cumulative effects, increased suspended sediment concentrations, noise generating activities and marine construction upon fish receptors are not fully known.

5.2. The project impacts to be scoped out and rationale for scoping out have been appropriately described in Table 5-2.

5.3. Impacts to fish ecology have been scoped into the EIA which is appropriate. The report recognises that the effects from piling, quay extension works and changes to water quality/turbidity have the potential to impede fish migrations (Section 11 and WFD in Appendix A). This is appropriate.

5.4. The proposed methodology for assessing cumulative effects (section 16) is appropriate.

5.5. The MMO note that the *Guidelines for Ecological Impact Assessment in UK and Ireland – Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018) will be considered when determining measures to avoid, minimise or reduce negative impacts on ecological receptors. The MMO agree that this is appropriate. However, at this stage, there is no information for fish on which we can provide comment. The need for additional project-specific mitigation should be determined by the findings of the EIA.

Recommendations:

5.6. An extended description of fish species inhabiting or using the Trent during migrations/spawning should be included within the ES to support the applicant's decision on potential impacts and potential mitigation measures proposed for fish receptors.

5.7. A description of the potential impacts to aquatic ecology from all phases of the proposed development has not been presented for further evaluation. At this stage, considering the unknown timing of works and uncertainty of construction activities, the MMO are content with the general information provided. However, the ES should provide an estimate of the timing and duration of piling and construction activities that will take place within the river Trent in order to identify any potential overlap with the spawning and migratory periods of sensitive and protected fish species.

5.8. Little information is presented on how the assessment of impacts to fish from underwater noise and vibration will be carried out, or what resources will be used to inform the assessment. If sub-tidal piling is required as part of the development the MMO would expect to see the following to be considered for the EIA:

- An accurate description of the physiological and behavioural impacts to fish caused by underwater noise and vibration should be presented.

- A detailed description of the intended methods of piling to be used, e.g. vibro or percussive piling, including the number and size of piles to be installed, and expected duration to install each pile (including a monthly estimated programme).

- An appropriate assessment of the physical and behavioural impacts of underwater noise and vibration for fish species relevant to the development. Fish should be assigned into one of the four hearing sensitivity categories described in Popper *et al.* (2014).

5.9. The cumulative impact assessment (section 16, document 4) approach proposed for this project would determine the establishment of a ZOI and identify a list of developments within it. To do so, a series of individual topics and associated area of influence will be determined based on the results of the screening exercise, taking into account factors such as the distance from the project site or current status of the development. This approach is appropriate, however the MMO add that the ZOI for impacts to fish arising from underwater noise and vibration should be based on the extent of noise propagation in the river, which may either be determined through underwater noise modelling, or be informed through a desk-based study of noise propagation for similar projects, in comparable locations, where similar noise-generating activities have been undertaken.

5.10. The ES would benefit from some signposting, specifically to those elements of the scheme that will be undertaken in the marine, intertidal or subtidal areas of the Trent.

6. Underwater Noise

Observations:

6.1. Impacts relevant to underwater noise have been scoped in. Some piling works will be required within the River Trent, although no further details of the piling works are given at this stage. The Scoping Report identifies that underwater noise during piling may have effects on aquatic species in the section of the River Trent, including river and sea lamprey, which are part of the designation of the SAC and SSSI (section 8.4.2.2).

6.2. Therefore, it is appropriate that the effects of underwater noise on sensitive receptors will be scoped into the EIA. Of relevance, paragraph 8.7.1.1 states that

"*the likely effects of underwater noise will be defined in the noise section of the ES, with associated effects on noise sensitive receptors in the River Trent from the construction of the extended quay reported upon in the ecology section*".

6.3. The MMO support that the effects of increased noise from vehicle movement including vessel movements on noise sensitive receptors will be scoped in for further assessment (section 8.7.1.1). Baseline information concerning the numbers of vessels using the river will be considered to ensure that the context of the increased traffic is considered (section 8.3.1.4). The ES will define the numbers and frequencies of daily/weekly vessel movements to and from Flixborough Wharf, as well as any potential effect on the operation of the port during construction and operation, if any (section 3.9.4.2).

6.4. In general, and based on the information provided, The MMO believe the approach of the scoping assessment and data gathering is appropriate. The Scoping Report identifies that the River Trent corridor, which lies in the Humber Estuary SAC, Ramsar site and SSSI borders the western edge of the site (section 11.3.1.5). Section 11.3.1.11 further identifies that "*the ecological site walkover near to the banks of the River Trent found estuarine habitats including marginal vegetation and reed beds, ditches and coastal saltmarsh (qualifying interest features of the Humber SAC) along the banks of the River Trent corridor, which are potentially suitable for protected species such as sea and river lamprey*…"

6.5. The MMO agree with section 11.5.1.2 that in terms of aquatic ecology, the areas of greatest ecological interest are likely to be the River Trent corridor within the Humber Estuary SAC, Ramsar and SSSI. Some parts of the Project may directly impinge on the river corridor.

6.6. The MMO support that information on aquatic ecology (e.g. fish) will be gathered from the EA (section 11.7.1.6) however please see comment 3.8 above. The MMO further support that information on the distribution of the qualifying interests of the Humber Estuary SAC and SSSI in the River Trent including sea and river lamprey will be sought through consultation with Natural England (NE). Once the available data have been reviewed, the approach to the assessment of these species will be discussed and agreed with the EA and NE (section11.7.1.7).

6.7. Table 16-2 proposes the following Zones of Influence for Ecology and Nature Conservation:

- 15 km for European sites
- 10 km for statutory sites and 5 km for non-statutory sites
- 5 km for flora and fauna species of note
- 500 m for habitats

6.8. In relation to underwater noise, the proposed works during construction will likely only affect a small section/ stretch of the River Trent. Provided that the assessment identifies all sensitive receptors, particularly migratory fish species that may be passing the site (and this will be covered under the proposed 5 km for flora and fauna), the MMO do not have any major concerns with this approach.

6.9. Once an assessment has been undertaken of the potential effects, The MMO will be able to further advise on mitigation. Specific mitigation measures will be considered and identified for each of the environmental topics (section 5.3.1.3).

Recommendations:

6.10. Section 8.5.1.5 states the following: "*underwater noise can propagate long distances, but the effects may vary considerably based on the acoustical properties of the river water column and the river bed. Consideration of underwater noise may be required to support the ecological assessment of the effects on river fauna if any noise sensitive species are identified as being likely to be present during piling activities in the river*". The MMO recommend that the ecological assessment identifies the sensitive receptors that are likely to be present in the River Trent, particularly migratory fish species and the timings of migration. Details of the piling works, and any other noise-generating activities taking place within the river, will also need to be provided, such as the pile installation method, proposed construction hours and months of the year when piling is likely to be taking place.

6.11. The potential impacts during the construction and operation phases on migratory fish species, including the potential impacts of underwater noise (particularly from the proposed piling activities and other noise-generating activities taking place within the river) should be taken through the Evidence Plan Process for further consideration.

7. Coastal Processes

Observations:

7.1. Section 10.7.1.7 acknowledges the project will alter the profile of the river and will therefore require the potential impact on flow, scour and sedimentation to be addressed in the ES. This scope is considered appropriate.

7.2. No coastal processes factors have been scoped out. The MMO agree with this decision.

Recommendations:

7.3. Little information is given about the precise approach to assessing impacts. While section 10.7.1.7 mentions hydraulic modelling, more information would be needed to assess the appropriateness of this approach.

7.4. There is no specific mention of any coastal process factors within the cumulative impact assessment. The MMO expect this to be included in the ES.

7.5. It is currently unclear how the ZoI in relation to coastal processes will be defined. The applicant is requested to clarify this in the ES.

7.6. It is vital that the applicant properly assesses the impact of any change to the morphology of the channel to the hydrodynamics and sedimentation regimes. This is mentioned, but not described in detail, within the Scoping Report. This will need

to be clearly addressed within ES.

8. Nature Conservation

8.1. The MMO advise any matters relating to Habitats Regulations Assessment (HRA) and/or Marine Conservation Zone (MCZ) assessment be robustly considered and that the ultimate output will be two separate assessments. On this point, further comment is deferred to Natural England (NE).

8.2. The MMO understand that at this stage little consideration has been given to the impacts of the proposal in combination with other plans and projects in the vicinity. The MMO expect to see a robust assessment of both in-combination and cumulative effects as the project progresses.

9. Archaeology / Cultural Heritage

Observations:

9.1. The MMO advise that the River Trent is a rich source of archaeology and objects of cultural importance. The MMO defer further comment on heritage matters to Historic England (HE).

10. Navigation / Other Users of the Sea

Observations:

10.1. The MMO seek demonstration of the impact of the project on the safety of navigation and of other users of the sea. The MMO defer comment on matters of navigational safety to the Maritime and Coastguard Agency (MCA) and Trinity House (TH).

10.2. The MMO further advise that Flixborough Port be consulted in their capacity as the local Port Authority.

11. Risk of Major Accidents and Disasters Relevant to the Project (including those caused by Climate Change)

Observations:

11.1. The MMO expect to see a robust and comprehensive assessment of risk of major accidents and disasters relevant to the project.

Conclusion

The topics highlighted in this scoping consultation response should be assessed during the EIA process and the outcome of these assessments should be documented by the Applicant in the ES in support of their application. Given the current level of uncertainty in relation to the scale, program and scope of the Project, this advice should not be viewed as a definitive list of all the information that needs to be considered within the ES.

Your feedback

We are committed to providing excellent customer service and continually improving our standards and we would be delighted to know what you thought of the service you have received from us. Please help us by taking a few minutes to complete the following short survey (https://www.surveymonkey.com/r/rMMOMLcustomer).

References

Popper, A.N., Hawkins, A.D., Fay, R.R., Mann, D.A., Bartol, S., Carlson, T.J., Coombs, S., Ellison, W.T., Gentry, R.L., Halvorsen, M.B., Løkkeborg, S., Rogers, P.H., Southall, B., Zeddies, D.G. & Tavolga, W.N. (2014). Asa S3/Sc1.4 Tr-(2014) Sound Exposure Guidelines for Fishes and Sea Turtles: A Technical Report Prepared by ANSI-Accredited Standards Committee S3/Sc1 a (Springerbriefs in Oceanography).

Maritime & Coastguard Agency

Bay 2/24
Spring Place
105 Commercial Road
Southampton
SO15 1EG
UK

Your ref: EN010116-000011
Our Ref: PINS Green Energy Park Scoping

Michael Breslaw
The Planning Inspectorate
Environmental Services
Central Operations
Temple Quay House
2 The Square
Bristol BS1 6PN

26th November 2020

Via email: NorthLincolnshireGreenEnergyProject@planninginspectorate.gov.uk

Dear Michael,

Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017(the EIA Regulations) – Regulations 10 and 11

Application by North Lincolnshire Green Energy Park Ltd (the Applicant) for an Order granting Development Consent for the North Lincolnshire Green Energy Park (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 your letter dated 30 October 2020 inviting the Maritime and Coastguard Agency (MCA) to comment on the Scoping Report consultation for the proposed Green Energy Park in North Lincolnshire.

The Scoping Report has been considered by representatives of UK Technical Services Navigation. We note that the proposed development includes construction works in the River Trent at Flixborough Port, including piling activities for the wharf extension, and that there will be changes in vessel traffic within the port. The MCA has an interest in the works associated with the marine environment, and the potential impact on the safety of navigation, access to ports, harbours and marinas and any impact on our search and rescue obligations. We would therefore like to comment as follows on the Scoping Report:

1) The MCA would expect any works in the marine environment to be subject to the appropriate consents under the Marine and Coastal Access Act (2009) before carrying out any marine licensable works. We note in section 2.8.1.2 the commitment to obtain

the appropriate consents, licences and permits including '*a deemed Marine Licence from the MMO under the Marine and Coastal Access Act 2009 for construction works in the River Trent"* and *'a licence from the MMO under the Marine and Coastal Access Act 2009 for the disposal of spoil dredged from the bed of the River Trent'.*

2) We note in section 14.1.1.6 that ABP Humber is the authority responsible for navigation and maritime safety for the existing port facility at Flixborough, where the wharf extension will take place. As part of this development, we would expect some sort of risk assessment to be carried out which considers the impact of the works on shipping and navigation, and we note that shipping data will be provided by ABP Humber Ports for this project.

3) Section 3.2.22 states that the proposal is for the current wharf to double in size in order to accommodate additional ships for the delivery of feedstock, whilst not interfering with the current port operations, and that the wharf will be developed to provide automated handling of feedstock, concrete products, and other cargo. As the site falls within the jurisdiction of ABP Humber, we would expect consideration to be given to the current powers held by ABP Humber under the Harbours Act 1964 to cover any changes to the current port operations (i.e. Harbour Revision Order if necessary).

4) To address the ongoing safe operation of the marine interface for this project, we would like to point the developers in the direction of the Port Marine Safety Code (PMSC) and its Guide to Good Practice. They will need to liaise and consult with ABP Humber as the Statutory Harbour Authority, and develop a robust Safety Management System (SMS) for the project under this code.

The sections that we feel cover navigational safety under the PMSC and its Guide to Good Practice are as follows:

> From the Guide to Good Practice, section 6 Conservancy, a Harbour Authority has a duty to conserve the harbour so that it is fit for use as a port, and a duty of reasonable care to see that the harbour is in a fit condition for a vessel to use it. Section 6.7 Regulating harbour works covers this in more detail and have copied the extract below from the Guide to Good Practice.
>
> 6.7 Regulating harbour works
>
> 6.7.1 Some harbour authorities have the powers to license works where they extend below the high watermark, and are thus liable to have an effect on navigation. Such powers do not, however, usually extend to developments on the foreshore.
>
> 6.7.2 Some harbour authorities are statutory consultees for planning applications, as a function of owning the seabed, and thus being the adjacent landowner. Where this is not the case, harbour authorities should be alert to developments on shore that could adversely affect the safety of navigation. Where necessary, consideration should be given to requiring the planning applicants to conduct a risk assessment in order to establish that the safety of navigation is not about to be put at risk. Examples of where navigation could be so affected include:

- high constructions, which inhibit line of sight of microwave transmissions, or the performance of port radar, or interfere with the line of sight of aids to navigation;
- high constructions, which potentially affect wind patterns; and
- lighting of a shore development in such a manner that the night vision of mariners is impeded, or that navigation lights, either ashore and onboard vessels are masked, or made less conspicuous.

There is a British Standards Institution publication on Road Lighting, BS5489. Part 8 relates to a code of practice for lighting which may affect the safe use of aerodromes, railways, harbours and navigable Inland waterways.

I hope you find this information useful at Scoping Stage.

Yours sincerely,

[redacted]

Helen Croxson
OREI Advisor
UK Technical Services – Navigation

From:	NATS Safeguarding
To:	North Lincolnshire Green Energy Project
Subject:	RE: EN010116 - Proposed North Lincolnshire Green Energy Park - EIA Scoping Notification and Consultation [SG30620]
Date:	13 November 2020 16:40:38
Attachments:	image003.png image004.png image005.png image006.png image007.png image008.png

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Our Ref SG30620

Dear Sir/Madam

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

E natssafeguarding@nats.co.uk

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

Date: 20 November 2020
Our ref: 332344
Your ref: EN010116

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

T 0300 060 3900

Mr. Michael Breslaw
Temple Quay House
2 The Square
Bristol
BS1 6PN
BY EMAIL ONLY

Dear Mr. Michael Breslaw

Environmental Impact Assessment Scoping consultation (Regulations 10 and 11 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations): North Lincolnshire Green Energy Park
Location: Land adjacent to Flixborough Industrial Estate, Stather Road, Flixborough, North Lincolnshire

Thank you for seeking our advice on the scope of the Environmental Statement (ES) in your consultation dated 30 October 2020**.**

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 law[1] and guidance[2] 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 Part 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 please contact Hannah Gooch at [redacted]
For any new consultations, or to provide further information on this consultation please send your correspondence to consultations@naturalengland.org.uk.

Yours sincerely

Hannah Gooch
Yorkshire and Northern Lincolnshire Area Team
Natural England

[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/sustainabilityenvironmental/environmentalimpactassessment/noteenvironmental/

Annex A – Advice related to EIA Scoping Requirements

1. General Principles

Schedule 4 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, 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 (EcIA) have been developed by the Chartered Institute of Ecology and Environmental Management (CIEEM) and are available on their website.

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

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 (as amended). In addition paragraph 176 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 (as amended) 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 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 development site is adjacent to and partially within the following designated nature conservation site(s):

- Humber Estuary Special Area of Conservation (SAC)
- Humber Estuary Ramsar
- Humber Estuary Site of Special Scientific Interest (SSSI)

The development site is also in close proximity to the following designated nature conservation site(s):

- Humber Estuary Special Protection Area (SPA)
- Thorne Moor SAC
- Thorne and Hatfield Moors SPA
- Hatfield Moor SAC
- Thorne, Crowle and Goole Moors SSSI
- Hatfield Chase Ditches SSSI
- Crowle Borrow Pits SSSI
- Eastoft Meadow SSSI
- Conesby (Yorkshire East) Quarry SSSI
- Risby Warren SSSI

Further information on the SSSIs and their special interest features can be found at www.magic.gov.uk. The Environmental Statement should include a full assessment of the direct and indirect effects of the development on the features of special interest within the Humber Estuary SPA, SAC, Ramsar and SSSI sites and should identify such mitigation measures as may be required in order to avoid, minimise or reduce any adverse significant effects.

European site conservation objectives are available at http://publications.naturalengland.org.uk/category/6490068894089216

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.

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 (as amended)
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 information on the location of significant populations of protected species, but advises on the procedures and legislation relevant to such species. You must provide sufficient information for the Examining authority/ Secretary of State to assess whether protected species are likely to be effected and, if so, whether appropriate avoidance, mitigation, avoidance or compensation measures can be put in place. Further information is included in Natural England's standing advice on protected species and in Advice Note 11 Annex C Natural England.

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.

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, 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 Ancient Woodland, ancient and veteran trees

The S41 list includes six priority woodland habitats, which will often be ancient woodland. Ancient woodland is an irreplaceable resource of great importance for its wildlife, its history and the contribution it makes to our diverse landscapes. The ES should have regard to the requirements under the National Planning Policy Framework (NPPF; para. 175).

Information about ancient woodland can be found in Natural England's standing advice.

3. 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 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.

4. Access and Recreation
Natural England encourages any proposal to incorporate measures to help encourage people to access greenspaces 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.

Development should consider potential impacts on access land, common land, rights of way, coastal access routes and coastal margin in the vicinity of the development and the scope to mitigate any adverse impacts.

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 170 of the NPPF. We also recommend that soils should be considered in the context of the sustainable use of land and the ecosystem services they provide as a natural resource, as also highlighted in paragraph 170 of the NPPF.

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 174), 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.

From:	Cheryl Jarv s (Engie)
To:	North Lincolnshire Green Energy Project
Subject:	RE: EN010116 - Proposed North Lincolnshire Green Energy Park - EIA Scoping Notification and Consultation
Date:	30 October 2020 15:48:58
Attachments:	image005.png image007.png

Dear Michael,

I can confirm we have no comments to make

Kind Regards

Cheryl Jarvis FD, MSc, MRTPI
Principal Town Planner
Places & Communities North – NEL
[redacted]

Please note I am due to start my maternity leave w/c 23rd November 2020

Working in Partnership

engie.co.uk

New Oxford House, George Street
Grimsby, North East Lincolnshire, DN31 1HB

INTER OFFICE	**MEMO**	**North Lincolnshire Council** www.northlincs.gov.uk

To: Development Management

From: Environmental Protection Team

Your Ref: SCO/2020/2

Our Ref PLU 05488

Subject: EIA Scoping Request relating to an application by North Lincolnshire Green Energy Park Ltd (the Applicant) for an Order granting Development Consent for the North Lincolnshire Green Energy Park (the Proposed Development)

Location: Land at Flixborough Port, adjacent to Flixborough Industrial Estate, Stather Road/First Avenue, Flixborough DN15 8SF

Date: 19 November 2020

Thank you for your memo requesting this departments comments on the above Scoping Report.

The main elements of the Project comprise the following key components:

- Up to 100 MWe Energy Recovery Facility (ERF) designed to convert up to 760,000 tonnes of refuse derived fuel (RDF) and non-hazardous household and commercial waste annually into energy in the form of power, heat, and steam;
- Water treatment facility
- Feedstock storage for up to 13,000 tonnes of RDF and non-hazardous household and commercial waste.
- And associated development

The proposed site boundary covers an area of 598.5ha and the proposed site ground development will occupy 120ha. The site is located at and around Flixborough Port, adjacent to Flixborough Industrial Estate, Stather Road/First Avenue, Flixborough. The proposed site is already a mixture of brownfield land, and areas used for arable agriculture. The site is connected by road, rail, and river.

Contaminated Land

The supporting EIA Scoping Report refers to a (Ground investigation report of the RMS Ports Site (Ian Farmer Associates, 2018)), which gives a baseline of the current conditions within and around the site.

The report concludes:

"This report also reveals that parts of the port site may have the potential for ground contamination, due to the findings of heavy metals, PAHs and elevated levels of ground gas (methane and carbon dioxide)".

A copy of this report has not been supplied, however the following statement has been provided that confirms further assessments will be conducted for this site:

"a desk-based study of the Project footprint, including a review of available historic maps will be completed and reported upon in the PEIR and ES. From this, a detailed site investigation and quantitative risk assessment will be completed, with an outline conceptual site model produced for the site. The information obtained from the desk based study and site investigation will allow a remediation and validation programme to be designed with the objective of achieving ground conditions suitable for commercial/industrial land use. This will include, if required, a remedial options appraisal report and a detailed strategy for remediation. If required, the investigation and remediation process for the Project footprint will be completed in line with CLR11, Model Procedures for the Management of Land Contamination prior to the construction phase of the Project."

I can confirm this department finds the approach acceptable and would advise that as a minimum a desk based preliminary risk assessment and proposals for intrusive ground investigation be submitted in support of any forthcoming application.

Noise

The EIA Scoping Report sets out the approach and scope of the Noise and Vibration Assessment that will be undertaken as part of the EIA for the Project. It considers all Project elements, their locations, and the wider environmental setting whilst setting out the noise and vibration impacts which could affect offsite receptors during construction and operation and how this will be considered in the assessment.

Provided all noise sensitive receptors (NSR) have been identified this department has no further comments to make at this stage.

Air Quality

The EIA Scoping Report sets out the approach and scope of the Air Quality Impact Assessment (AQIA) which will consider the wider environmental setting for the Project in terms of human and ecological receptors.

The AQIA will consider the following likely impacts associated with the development:

- Construction Phase
    - construction dust; and
    - construction traffic.

- Operational Phase
    - emissions from the stack;
    - operational traffic (road, rail and shipping);
    - dust from ash handling; and
    - odour

This department does not have any further comments to make at this stage and awaits the submission of the Air Quality Impact Assessment with any forthcoming application.

Odour

The feedstock for the ERF (RDF and non-hazardous household and commercial waste) will be transported to the facility via road, rail, river or combinations thereof. It will be stored in a designated on-site enclosed feedstock storage facility to facilitate the continuous supply to the ERF, operated under negative pressure to minimise odour, dust, and noise. A reserve feedstock requirement for five days of operation will be held on-site at all times, which equates to approximately 13,000 tonnes. The transport, storage and any other subsequent processing has a high potential to give rise to odour emissions.

The potential impact of odour has been discussed within the Air Quality Section of the Scoping Report.

The Report goes on to state at Section 6.7.1.21 the following:

> '*Odour impacts will be assessed on a semi-quantitative basis, noting that a well-run plant should have no issues with odour.*'

It is unclear exactly what is meant by this statement. This department would expect to see a robust and fully justified odour assessment included with any future application that quantifies the odour impact from the proposed development. The assessment should make reference to the IAQM - Guidance on the assessment of odour for planning (2018) document.

Light

It is unclear at this stage if the proposed development will include external lighting during the construction or operational phases. There is the potential for light from the proposed development to adversely impact upon nearby sensitive receptors. This department would therefore recommend the applicant submit a light impact assessment with any subsequent planning applications in accordance with the below advise:

> *The light impact assessment shall include:*
>
> - *Identification of sensitive receptors likely to be impacted upon by light nuisance, with a determination of the proposed scheme's compliance with the design guidance in the Institution of Lighting Professionals Document: Guidance Notes for the Reduction of Obtrusive Light. https://www.theilp.org.uk/documents/obtrusive-light/*

- *A lighting scheme which proposes methods of mitigation against potential light nuisance, including potential glare and light spill, on sensitive receptors.*

Public Health England

Environmental Hazards and Emergencies Department
Centre for Radiation, Chemical and Environmental Hazards (CRCE)
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www.gov.uk/phe

Your Ref: EN010116
Our Ref: CIRIS 55384

Mr Michael Breslaw
EIA Advisor
The Planning Inspectorate
Temple Quay House
2 The Square
Bristol BS1 6PN

27th November 2020

Dear Mr Breslaw

Nationally Significant Infrastructure Project
North Lincolnshire Green Energy Park
Scoping Consultation Stage

Thank you for including Public Health England (PHE) in the scoping consultation phase of the above application. Advice offered by PHE is impartial and independent.

PHE exists to protect and improve the nation's health and wellbeing and reduce health inequalities; these two organisational aims are reflected in the way we review and respond to Nationally Significant Infrastructure Project (NSIP) applications.

The health of an individual or a population is the result of a complex interaction of a wide range of different determinants of health, from an individual's genetic make-up, to lifestyles and behaviours, and the communities, local economy, built and natural environments to global ecosystem trends. All developments will have some effect on the determinants of health, which in turn will influence the health and wellbeing of the general population, vulnerable groups and individual people. Although assessing impacts on health beyond direct effects from for example emissions to air or road traffic is complex, there is a need to ensure a proportionate assessment focused on an application's significant effects.

Having considered the submitted scoping report, we wish to make the following specific comments and recommendations:

Environmental Public Health
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. The attached appendix summarises PHE's requirements and recommendations regarding the content of and methodology used in preparing the ES. Please note that where impacts relating to health and/or further assessments are scoped out, promoters should fully explain and justify this within the submitted documentation.

Recommendation

Our position is that pollutants associated with road traffic or combustion, particularly particulate matter and oxides of nitrogen are non-threshold; i.e., an exposed population is likely to be subject to potential harm at any level and that reducing public exposures of non-threshold pollutants (such as particulate matter and nitrogen dioxide) below air quality standards will have potential public health benefits. We support approaches which minimise or mitigate public exposure to non-threshold air pollutants, address inequalities (in exposure), maximise co-benefits (such as physical exercise). We encourage their consideration during development design, environmental and health impact assessment, and development consent.

Electric and Magnetic Fields

It is noted that the current proposals do not appear to consider possible health impacts of Electric and Magnetic Fields (EMF)

Recommendation

We request that the ES clarifies this and if necessary, the proposer should confirm either that the proposed development does not impact any receptors from potential sources of EMF; or ensure that an adequate assessment of the possible impacts is undertaken and included in the ES.

Human Health and Wellbeing

This section of PHE's scoping response, identifies the wider determinants of health and wellbeing we expect the Environmental Statement (ES) to address, to demonstrate whether they are likely to give rise to significant effects. PHE has focused its approach on scoping determinants of health and wellbeing under four themes, which have been derived from an analysis of the wider determinants of health mentioned in the National Policy Statements. The four themes are:

- Access
- Traffic and Transport
- Socioeconomic
- Land Use

Having considered the submitted scoping report PHE wish to make the following specific comments and recommendations:

Methodology

Population and Human Health

The scoping report does not identify a definition of health. The scoping report should accept the broad definition of health proposed by the World Health Organisation (WHO) and also include specific reference to mental health within the definition of health.

The scoping report identifies the intention to not have a separate health chapter within the Environmental Statement, but embed population and human health within other chapters. This will

require the separate assessment of sensitivity, magnitude and significance specific to population and human health within each relevant chapter.

This should be kept under review and a specific chapter may be required if significant negative effects are identified across the Environmental Statement.

It should be acknowledged that local communities will experience a number of environmental impacts, which in combination may be deemed significant. As such, we expect population and human health impacts to be considered within the cumulative effects assessment as a specific section.

Recommendation

The EIA should accept the broad definition of health proposed by the World Health Organisation (WHO) and also include specific reference to mental health within the definition of health.

The EIA must define the assessment of sensitivity, magnitude and significance specific to population and human health. This will require the separate assessment of significance specific to population and human health within each relevant chapter.

Population and human health impacts should be considered within the cumulative effects assessment in order to identify any in combination effects.

Vulnerable Populations

An approach to the identification of vulnerable populations, other than deprivation, has not been provided. The impacts on health and wellbeing and health inequalities of the scheme may have particular effect on vulnerable or disadvantaged populations (including those that fall within the list of protected characteristics).

Recommendation

The ES should clearly identify the range of vulnerable populations that have been considered within the assessment.

Mental Health

Mental well-being is fundamental to achieving a healthy, resilient and thriving population. It underpins healthy lifestyles, physical health, educational attainment, employment and productivity, relationships, community safety and cohesion and quality of life.

There is evidence that, in some cases, perception of risk may have a greater impact on health than the hazard itself. A 2009 report[1], jointly published by Liverpool John Moores University and the Health Protection Agency (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 an ES as good practice.

Recommendation

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

There should be parity between mental and physical health, and any assessment of health impact should include the appreciation of both.

An estimation of community anxiety and stress should be included as part of the assessment of the proposed plans.

Physical Activity and Active Travel / Access to Open Space
The scoping report identifies that a traffic assessment will be completed for the ES. This should include how non-motorised user (NMU) will be impacted from using the existing road network, including cumulative impacts.

Active travel forms an important part in helping to promote healthy weight environments and as such it is important that any changes have a positive long term impact where possible.

Recommendation
The overall risk to NMU and impact on active travel should be considered on a case-by-case basis, taking into account, the number and type of users identified within the traffic assessment.

The scheme should continue to identify any additional opportunities to contribute to improved infrastructure provision for active travel and physical activity.

The travel plan should identify opportunities to support active travel.

Employment and Education
We note the proposal to scope in employment and training to the ES, with the potential benefits for local employment. In order to accurately assess potential impacts the ES should have a sufficiently detailed assessment covering the local economy, travel to work area and the wider regional impacts from leakage and dispersion.

Recommendation
The ES should identify the opportunities to maximise social value from the development and opportunities for local training and education.

Yours sincerely,

For and on behalf of Public Health England
nsipconsultations@phe.gov.uk

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

Appendix: PHE recommendations regarding the scoping document

Introduction

The Planning Inspectorate's Advice Note 11: Working with Public Bodies covers many of the generic points of interaction relevant to the Planning Inspectorate and Public Health England (PHE). The purpose of this Annex is to help applicants understand the issues that PHE expect to see addressed by applicants preparing an Environmental Statement (ES) as part of their Nationally Significant Infrastructure Planning (NSIP) submission

We have included a comprehensive outline of the type of issues we would expect to be considered as part of an NSIP which falls under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations). PHE encourages applicants to contact us as early in the process as possible if they wish to discuss or clarify any matters relating to chemical, poison, radiation or wider public health.

General Information on Public Health England

PHE was established on 1 April 2013 to bring together public health specialists from more than 70 organisations into a single public health service. We are an executive agency of the Department of Health and are a distinct delivery organisation with operational autonomy to advise and support government, local authorities and the National Health Service (NHS) in a professionally independent manner.

We operate across 4 regions in England and work closely with public health professionals in Wales, Scotland and Northern Ireland, and internationally.[2] We have specialist teams advising on specific issues such as the potential impacts of chemicals, air quality, ionising and non-ionising radiation and other factors which may have an impact on public health, as well as on broader issues such as the wider determinants of health, health improvement and health inequalities.

PHE's NSIP related roles and responsibilities and geographical extent

PHE is a statutory consultee in the NSIP process for any *applications likely to involve chemicals, poisons or radiation which could potentially cause harm to people and are likely to affect significantly public health*.[3] PHE will consider the potential significant effects (direct and indirect) of a proposed development on population and human health and the impacts from chemicals, radiation and environmental hazards.

Under certain circumstances PHE may provide comments on ionising radiation to/on behalf of the Scottish Parliament. If a proposer is submitting a planning application in Scotland which may require advice on radiation you are recommended to contact the appropriate Scottish Planning Authority for advice on how to proceed.

In the case of applications in Wales, PHE remains a statutory consultee but the regime applies to a more limited range of development types. For NSIP applications likely to affect land in Wales, an applicant should still consult PHE but, additionally will be required to consult the Welsh Ministers.

Role of Public Health England and NSIP with respect to Environmental Impact Assessments

PHE has a statutory role as a consultation body under the EIA Regulations. Where an applicant has requested a scoping opinion from the Planning Inspectorate[4] in relation to a proposed NSIP, PHE will be consulted by the Planning Inspectorate about the scope, and level of detail, of the information to be provided in the ES and will be under a duty to make information available to the applicant. PHE's standard recommendations in response to EIA scoping consultations are below.

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[2] https://www.gov.uk/government/organisations/public-health-england/about#priorities

[3] The Infrastructure Planning (Interested Parties and Miscellaneous Prescribed Provisions) Regulations 2015

[4] The scoping process is administered and undertaken by the Planning Inspectorate on behalf of the Secretary of State

PHE also encourages applicants to discuss with them the scope of the ES at an early stage to explore, for example, whether careful site selection or other design issues could minimise or eliminate public health impacts or to outline the requirement for, scope and methodology of any assessments related to public health.

PHE's recommendations to applicants regarding Environmental Impact Assessments
General approach

Applicants are reminded that Section 5(2)(a) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 specifically includes a requirement that the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on population and human health.

PHE is of the opinion that this requirement encompasses the wider determinants of public health, as well as chemicals, poisons and radiation. Further information on PHE's recommendations and requirements is included below.

It is the role of the applicant to prepare the ES. PHE provides advice relating to EIA within this document and during the NSIP consultation stages.

When preparing an ES the applicant should give consideration to best practice guidance such as the Government's Handbook for scoping projects: environmental impact assessment[5] , IEMA Guide to Delivering Quality Developments[6], and Guidance: on Environmental Impact Assessment[7]

The Planning Inspectorate's Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements also provide guidance to applicants and other persons with interest in the EIA process as it relates to NSIPs.
It is important that the submitted ES identifies and assesses the potential public health impacts of the activities at, and emissions from, the development.

PHE understands that there may be separate sections of the ES covering the assessment of impacts on air, land, water and so on, but expects an ES to include a specific section summarising potential impacts on population and health. This section should bring together and interpret the information from other assessments as necessary. The health and population impacts section should address the following steps.

1. Screening: Identify and significant effects.
    a. Summarise the methodologies used to identify health impacts, assess significance and sources of information
    b. Evaluate any reference standards used in carrying out the assessment and in evaluating health impacts (e.g., environmental quality standards)
    c. Where the applicant proposes the 'scoping out' of any effects a clear rationale and justification should be provided along with any supporting evidence.

2. Baseline Survey :
    a. Identify information needed and available, Evaluate quality and applicability of available information
    b. Undertake assessment

[5] https://www.gov.uk/government/publications/handbook-for-scoping-projects-environmental-impact-assessment
[6] https://www.iema.net/assets/newbuild/documents/Delivering%20Quality%20Development.pdf
[7] https://www.gov.uk/guidance/environmental-impact-assessment#the-purpose-of-environmental-impact-assessment

3. Alternatives:
    a. Identify and evaluate any realistic alternative locations, routes, technology etc.

4. Design and assess possible mitigation
    a. Consider and propose suitable corrective actions should mitigation measures not perform as effectively predicted.

5. Impact Prediction: Quantify and Assess Impacts:
    a. Evaluate and assess the extent of any positive and negative effects of the development. Effects should be assessed in terms of likely health outcomes, including those relating to the wider determinants of health such as socio-economic outcomes, in addition to health outcomes resulting from exposure to environmental hazards. Mental health effects should be included and given equivalent weighting to physical effects.
    b. Clearly identify any omissions, uncertainties and dependencies (e.g., air quality assessments being dependant on the accuracy of traffic predictions)
    c. Evaluate short-term impacts associated with the construction and development phase
    d. Evaluate long-term impacts associated with the operation of the development
    e. Evaluate any impacts associated with decommissioning
    f. Evaluate any potential cumulative impacts as a result of the development, currently approved developments which have yet to be constructed, and proposed developments which do not currently have development consent

6. Monitoring and Audit (not a statutory requirement)
    a. Identify key modelling predictions and mitigation impacts and consider implementing monitoring and audit to assess their accuracy / effectiveness.

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 applicant should fully explain and justify their rationale in the submitted documentation.

Consideration of alternatives (including alternative sites, choice of process, and the phasing of construction) is widely regarded as good practice. Ideally, the EIA process should start at the stage of site 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 ES[8].

Human and environmental receptors

The applicant 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.

Identify and consider impacts on residential areas and sensitive receptors (such as schools, nursing homes and healthcare facilities, as well as other vulnerable population groups such as those who are young, older, with disabilities or long-term conditions, or on low incomes) in the area(s) which may be affected by emissions, this should include consideration of any new receptors arising from future development

[8] DCLG guidance, 1999 http://www.communities.gov.uk/documents/planningandbuilding/pdf/155958.pdf

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 or activities 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.

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

Emissions to air and water

Significant impacts are unlikely to arise from industrial 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 the assessment of emissions from any type of development in order that the ES 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
- encompass the combined impacts of all pollutants which may be emitted by the development with all pollutants arising from associated development and transport, considered in a single holistic assessment (ie, of overall impacts)
- include Chemical Abstract Service (CAS) numbers alongside chemical names, where referenced in the ES
- consider the construction, operational, and decommissioning phases
- 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
- fully account for fugitive emissions
- include appropriate estimates of background levels
    - when assessing the human health risk of a chemical emitted from a facility or operation, background exposure to the chemical from other sources should be taken into account
- identify cumulative and incremental impacts (ie, 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 (ie, rail, sea, and air)
- include consideration of local authority, Environment Agency, Natural Resources Wales, Defra national network, and any other local site-specific sources of monitoring data
- compare predicted environmental concentrations to the applicable standard or guideline value for the affected medium. Where available, the most recent UK standards for the appropriate media (ie, 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, use those recommended by the European Union or World Health Organization:

    - If no standard or guideline value exists, the predicted exposure to humans should be estimated and compared to an appropriate health-based value (eg, a Tolerable Daily Intake or equivalent)
    - This should consider all applicable routes of exposure (eg, include consideration of aspects such as the deposition of chemicals emitted to air and their uptake via ingestion)
- 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) approach[1] is used
- 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 (eg, 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 applicant 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. Further to assessments of compliance with limit values, for non-threshold pollutants (ie, those that have no threshold below which health effects do not occur) the **benefits** of development options which reduce population exposure should be evaluated.

Additional points specific to emissions to air
When considering baseline conditions (of existing air quality) and 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)
- modelling using appropriate meteorological data (i.e. come from the nearest suitable meteorological station and include a range of years and worst-case conditions)
- modelling taking into account local topography, congestion and acceleration
- evaluation of the public health **benefits** of development options which reduce air pollution – even below limit values – as pollutants such as nitrogen dioxide and particulate matter show no threshold below which health effects do not occur

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

Land quality

We would expect the applicant to provide details of any hazardous contamination present on site (including ground gas) as part of a 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 assessed[9] 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 applicant should demonstrate compliance with the waste hierarchy (e.g. with respect to re-use, recycling or recovery and disposal).
For wastes arising from the development the ES should assess:

- 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

If the development includes wastes delivered to the installation:

- Consider issues associated with waste delivery and acceptance procedures (including delivery of prohibited wastes) and should assess potential off-site impacts and describe their mitigation

Other aspects

Within the ES, PHE would expect to see information about how the applicant 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.

PHE would expect the applicant to consider 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: both in terms of their applicability to the development itself, and the development's potential to impact on, or be impacted by, any nearby installations themselves subject to 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 report[10], jointly published by Liverpool John Moores University and the Health Protection Agency (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*

[9] 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)
[10] Available from: http://www.cph.org.uk/wp-content/uploads/2012/08/health-risk-perception-and-environmental-problems--summary-report.pdf

health risks may be negligible." PHE supports the inclusion of this information within ES' as good practice.

Electromagnetic fields (EMF)

This advice relates to 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 on the Gov.UK website.[11]

There is a potential health impact associated with the electric and magnetic fields around substations, overhead power lines and underground cables. The field strengths tend 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

A voluntary code of practice is published which sets out key principles for complying with the ICNIRP guidelines.[12]
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.[13],[14]

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, based on an accompanying comprehensive review of the scientific evidence, was published in 2004 by the National Radiological Protection Board (NRPB), one of PHE's predecessor organisations[15]
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 as expressed in the 1999 EU Council Recommendation on limiting exposure of the general public (1999/519/EC):[16]

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

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[11] https://www.gov.uk/government/collections/electromagnetic-fields#low-frequency-electric-and-magnetic-fields
[12] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/37447/1256-code-practice-emf-public-exp-guidelines.pdf
[13] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48309/1255-code-practice-optimum-phasing-power-lines.pdf
[14] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224766/powerlines_vcop_microshocks.pdf
[15] http://webarchive.nationalarchives.gov.uk/20140629102627/http://www.hpa.org.uk/Publications/Radiation/NPRBArchive/DocumentsOfTheNRPB/Absd1502/
[16] http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/Publichealth/Healthprotection/DH_4089500

on contact with metal objects exposed to electric fields. 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 underlying 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)

The Stakeholders Advisory Group on ELF EMF's (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:[17]
Relevant here is SAGE's 2007 First Interim Assessment, which makes several recommendations concerning high voltage power lines. Government supported the implementation of low cost options such as optimal phasing to reduce exposure; however it did not support the option of creating corridors around power lines in which development would be restricted 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 on the national archive website.[18]
The Government also supported calls for providing more information on power frequency electric and magnetic fields, which is available on the PHE web pages.

Ionising radiation

Particular considerations apply when an application involves the possibility of exposure to ionising radiation. In such cases it is important that the basic principles of radiation protection recommended by the International Commission on Radiological Protection[19] (ICRP) are followed. PHE provides advice on the application of these recommendations in the UK. The ICRP recommendations are implemented in the Euratom Basic Safety Standards[20] (BSS) and these form the basis for UK legislation, including the Ionising Radiation Regulations 1999, the Radioactive Substances Act 1993, and the Environmental Permitting Regulations 2016.

As part of the EIA process PHE expects applicants to carry out the necessary radiological impact assessments to demonstrate compliance with UK legislation and the principles of radiation protection. This should be set out clearly in a separate section or report and should not require any

[17] http://www.emfs.info/policy/sage/

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

[19] These recommendations are given in publications of the ICRP notably publications 90 and 103 see the website at http://www.icrp.org/

[20] Council Directive 96/29/EURATOM laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation.

further analysis by PHE. In particular, the important principles of justification, optimisation and radiation dose limitation should be addressed. In addition compliance with the Euratom BSS and UK legislation should be clear.

When considering the radiological impact of routine discharges of radionuclides to the environment PHE would, as part of the EIA process, expect to see a full radiation dose assessment considering both individual and collective (population) doses for the public and, where necessary, workers. For individual doses, consideration should be given to those members of the public who are likely to receive the highest exposures (referred to as the representative person, which is equivalent to the previous term, critical group).

Different age groups should be considered as appropriate and should normally include adults, 1 year old and 10 year old children. In particular situations doses to the fetus should also be calculated[21].

The estimated doses to the representative person should be compared to the appropriate radiation dose criteria (dose constraints and dose limits), taking account of other releases of radionuclides from nearby locations as appropriate. Collective doses should also be considered for the UK, European and world populations where appropriate.

The methods for assessing individual and collective radiation doses should follow the guidance given in 'Principles for the Assessment of Prospective Public Doses arising from Authorised Discharges of Radioactive Waste to the Environment August 2012 [22]

It is important that the methods used in any radiological dose assessment are clear and that key parameter values and assumptions are given (for example, the location of the representative persons, habit data and models used in the assessment).

Any radiological impact assessment, undertaken as part of the EIA, should also consider the possibility of short-term planned releases and the potential for accidental releases of radionuclides to the environment. This can be done by referring to compliance with the Ionising Radiation Regulations and other relevant legislation and guidance.

The radiological impact of any solid waste storage and disposal should also be addressed in the assessment to ensure that this complies with UK practice and legislation; information should be provided on the category of waste involved (e.g. very low level waste, VLLW). It is also important that the radiological impact associated with the decommissioning of the site is addressed.

Of relevance here is PHE advice on radiological criteria and assessments for land-based solid waste disposal facilities[23]. PHE advises that assessments of radiological impact during the operational phase should be performed in the same way as for any site authorised to discharge radioactive waste. PHE also advises that assessments of radiological impact during the post operational phase of the facility should consider long timescales (possibly in excess of 10,000 years) that are appropriate to the long-lived nature of the radionuclides in the waste, some of which may have half-lives of millions of years.

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[21] HPA (2008) Guidance on the application of dose coefficients for the embryo, fetus and breastfed infant in dose assessments for members of the public. Doc HPA, RCE-5, 1-78, available at https://www.gov.uk/government/publications/embryo-fetus-and-breastfed-infant-application-of-dose-coefficients

[22] The Environment Agency (EA), Scottish Environment Protection Agency (SEPA), Northern Ireland Environment Agency, Health Protection Agency and the Food Standards Agency (FSA).
Principles for the Assessment of Prospective Public Doses arising from Authorised Discharges of Radioactive Waste to the Environment August 2012.
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/296390/geho1202bklh-e-e.pdf

[23] HPA RCE-8, Radiological Protection Objectives for the Land-based Disposal of Solid Radioactive Wastes, February 2009

The radiological assessment should consider exposure of members of hypothetical representative groups for a number of scenarios including the expected migration of radionuclides from the facility, and inadvertent intrusion into the facility once institutional control has ceased.

For scenarios where the probability of occurrence can be estimated, both doses and health risks should be presented, where the health risk is the product of the probability that the scenario occurs, the dose if the scenario occurs and the health risk corresponding to unit dose.

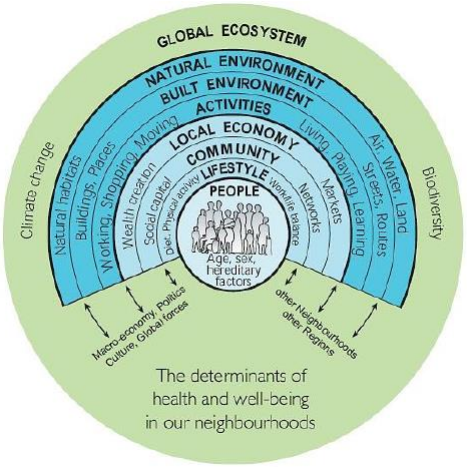
For inadvertent intrusion, the dose if the intrusion occurs should be presented. It is recommended that the post-closure phase be considered as a series of timescales, with the approach changing from more quantitative to more qualitative as times further in the future are considered.

The level of detail and sophistication in the modelling should also reflect the level of hazard presented by the waste. The uncertainty due to the long timescales means that the concept of collective dose has very limited use, although estimates of collective dose from the 'expected' migration scenario can be used to compare the relatively early impacts from some disposal options if required.

Wider Determinants of Health

World Health Organization (WHO's) defines health as "a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity" (WHO, 1948).

The health of an individual or a population is the result of a complex interaction of a wide range of different determinants of health, from an individual's genetic make-up, to lifestyles and behaviours, and the communities, local economy, built and natural environments to global ecosystem trends. All developments will have some effect on the determinants of health, which in turn will influence the health and wellbeing of the general population, vulnerable groups and individual people.



Barton and Grant[24]

PHE recognises that evaluating an NSIP's impacts on health through the wider determinants is more complex than assessing a project's direct impacts against clearly defined regulatory protections (e.g. protected species). However, this does not mean that their assessment should be side-lined; with the 2017 EIA Regulations clarifying that the likely significant effects of a development proposal on human health must be assessed.

We accept that the relevance of these topics and associated impacts will vary depending on the nature of the proposed development and in order to assist applicants PHE has focused its approach on scoping determinants of health and wellbeing under four themes, which have been derived from

[24] Barton H, Grant M. A health map for the local human habitat. The Journal of the Royal Society for the Promotion of Health 2006; 126(6): 252-3.

an analysis of the wider determinants of health mentioned in the National Policy Statements. PHE has developed a list of 21 determinants of health and wellbeing under four broad themes, which have been derived from an analysis of the wider determinants of health mentioned in the National Policy Statements (NPS). If the applicant proposes to scope any areas out of the assessment, they should provide clear reasoning and justification.

The four themes are:
- Access
- Traffic and Transport
- Socioeconomic
- Land Use

Methodology

PHE will expect assessments to set out the methodology used to assess each determinant included in the scope of the assessment. In some instances, the methodologies described may be established and refer to existing standards and/or guidance. In other instances, there may be no pre-defined methodology, which can often be the case for the wider determinants of health; as such there should be an application of a logical impact assessment method that:

- identifies effected populations vulnerable to impacts from the relevant determinant
- establishes the current baseline situation
- identifies the NSIP's potential direct and indirect impacts on each population
- if impacts are identified, evaluates whether the potential impact is significant in relation to the affected population
- identifies appropriate mitigation to minimise impacts or the subsequent effects on health
- identifies opportunities to achieve benefits from the scheme
- identifies appropriate monitoring programmes

Currently there is no standard methodology for assessing the population and human health effects of infrastructure projects, but a number of guides exist, including:

- Institute of Environmental Management and Assessment, 2017: Health in Environmental Assessment, a primer for a proportionate approach;
- NHS London Healthy Urban Development Unit (HUDU), 2015. Healthy Urban Planning Checklist and Rapid Health Impact Assessment Tool;
- Wales Health Impact Assessment Unit, 2012: HIA a practical guide;
- National Mental Wellbeing Impact Assessment Development Unit 2011: Mental Wellbeing Impact Assessment Toolkit;

Determining significant effects

Neither the EIA regulations nor the National Policy Statements provide a definition of what constitutes a 'significant' effect, and so PHE have derived a list of factors which it will take into consideration in the assessment of significance of effects, as outlined below. these list of factors should be read in conjunction with guidance from the above guides.

1. Sensitivity:

Is the population exposed to the NSIP at particular risk from effects on this determinant due to pre-existing vulnerabilities or inequalities (for example, are there high numbers in the local population of people who are young, older, with disabilities or long-term conditions, or on a low income)? Will the NSIP widen existing inequalities or introduce new inequalities in relation to this determinant?

2. Magnitude:

How likely is the impact on this determinant to occur? If likely, will the impact affect a large number of people / Will the impact affect a large geographic extent? Will the effects be frequent or continuous? Will the effects be temporary or permanent and irreversible?

3. Cumulative effects:

Will the NSIP's impacts on this determinant combine with effects from other existing or proposed NSIPs or large-scale developments in the area, resulting in an overall cumulative effect different to that of the project alone?
What are the cumulative effects of the impacts of the scheme on communities or populations. Individual impacts individually may not be significant but in combination may produce an overall significant effect.

4. Importance:
Is there evidence for the NSIP's effect on this determinant on health? Is the impact on this determinant important in the context of national, regional or local policy?

5. Acceptability:
What is the local community's level of acceptance of the NSIP in relation to this determinant? Do the local community have confidence that the applicants will promote positive health impacts and mitigate against negative health effects?

6. Opportunity for mitigation:
If this determinant is included in the scope for the EIA is there an opportunity to enhance any positive health impacts and/or mitigate any negative health impacts?

Scoping

The scoping report may determine that some of the wider determinants considered under human and population health can be scoped out of the EIA. If that, should be the case, detailed rationale and supporting evidence for any such exclusions must be provided. PHE will expect an assessment to have considered all of the determinants listed in Table1 of Appendix 1 as a minimum.

Vulnerable groups

Certain parts of the population may experience disproportionate negative health effects as a result of a development. Vulnerable populations can be identified through research literature, local population health data or from the identification of pre-existing health conditions that increase vulnerability.

The on health and wellbeing and health inequalities of the scheme will have particular effect on vulnerable or disadvantaged populations, including those that fall within the list of protected characteristics. Some protected groups are more likely to have elevated vulnerability associated with social and economic disadvantages. Consideration should be given to language or lifestyles that influence how certain populations are affected by impacts of the proposal, for example non-English speakers may face barriers to accessing information about the works or expressing their concerns.

Equality Impact Assessments (EqIA) are used to identify disproportionate effects on Protected Groups (defined by the Equality Act, 2010), including health effects. The assessments and findings of the Environmental Statement and the EqIA should be crossed reference between the two documents, particularly to ensure the assessment of potential impacts for health and inequalities and that resulting mitigation measures are mutually supportive.

The Wales Health Impact Assessment Support Unit (WHIASU), provides a suggested list of vulnerable groups

Age related groups
• Children and young people
• Older people
Income related groups
• People on low income
• Economically inactive

• Unemployed/workless
• People who are unable to work due to ill health

Groups who suffer discrimination or other social disadvantage
• People with physical or learning disabilities/difficulties
• Refugee groups
• People seeking asylum
• Travellers
• Single parent families
• Lesbian and gay and transgender people
• Black and minority ethnic groups
• Religious groups

Geographical groups
• People living in areas known to exhibit poor economic and/or health indicators
• People living in isolated/over-populated areas
• People unable to access services and facilities

Mental health

PHE supports the use of the broad definition of health proposed by the World Health Organisation (WHO). Mental well-being is fundamental to achieving a healthy, resilient and thriving population. It und4erpins healthy lifestyles, physical health, educational attainment, employment and productivity, relationships, community safety and cohesion and quality of life. NSIP schemes can be of such scale and nature that will impact on the over-arching protective factors, which are:
• Enhancing control
• Increasing resilience and community assets
• Facilitating participation and promoting inclusion.

There should be parity between mental and physical health, and any assessment of health impact should include the appreciation of both. A systematic approach to the assessment of the impacts on mental health, including suicide, is required. The **Mental Well-being Impact Assessment (MWIA)** could be used as a methodology. The assessment should identify vulnerable populations and provide clear mitigation strategies that are adequately linked to any local services or assets

Perceptions about the proposed scheme may increase the risk of anxiety or health effects by perceived effects. “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.

Evidence base and baseline data

An assessment should be evidence based, using published literature to identify determinants and likely health effects. The strength of evidence identifying health effects can vary, but where the evidence for an association is weak it should not automatically be discounted.

There will be a range of publicly available health data including:

- National datasets such as those from the Office of National Statistics,
- Public Health England (PHE), including the fingertips data sets,
- Non-governmental organisations,
- Local public health reports, such as the Joint Strategic Needs Assessment, Health and Wellbeing Strategies;
- Consultation with local authorities, including local authority public health teams;
- Information received through public consultations

Mitigation

If the assessment has identified that significant negative effects are likely to occur with respect to the wider determinants of health, the assessment should include a description of planned mitigation measures the applicant will implement to avoid or prevent effects on the population.

Mitigation and/or monitoring proposals should be logical, feasible and have a clear governance and accountability framework indicating who will be responsible for implementation and how this will be secured during the construction and/or operation of the NSIP.

Positive benefits from the scheme

The scale of many NSIP developments will generate the potential for positive impacts on health and wellbeing; however, delivering such positive health outcomes often requires specific enabling or enhancement measures. For example, the construction of a new road network to access an NSIP site may provide an opportunity to improve the active transport infrastructure for the local community. PHE expects developments to consider and report on the opportunity and feasibility of positive impacts. These may be stand alone or be considered as part of the mitigation measures.

Monitoring

PHE expects an assessment to include consideration of the need for monitoring. It may be appropriate to undertake monitoring where:

- Critical assumptions have been made
- There is uncertainty about whether negative impacts are likely to occur as it may be appropriate to include planned monitoring measures to track whether impacts do occur.
- There is uncertainty about the potential success of mitigation measures
- It is necessary to track the nature of the impact and provide useful and timely feedback that would allow action to be taken should negative impacts occur

How to contact PHE

If you wish to contact us regarding an existing or potential NSIP application please email: nsipconsultations@phe.gov.uk

Appendix 1

Table 1 – Wider determinants of health and wellbeing

Health and wellbeing themes			
Access	Traffic and Transport	Socioeconomic	Land Use
Wider determinants of health and wellbeing			
Access to : • local public and key services and facilities. • Good quality affordable housing. • Healthy affordable food. • The natural environment. • The natural environment within the urban environment. • Leisure, recreation and physical activities within the urban and natural environments.	• Accessibility. • Access to/by public transport. • Opportunities for access by cycling and walking. • Links between communities. • Community severance. • Connections to jobs. • Connections to services, facilities and leisure opportunities.	• Employment opportunities, including training opportunities. • Local business activity. • Regeneration. • Tourism and leisure industries. • Community/social cohesions and access to social networks. • Community engagement.	• Land use in urban and/or /rural settings. • Quality of Urban and natural environments

1) **Access**

a. Access to local, public and key services and facilities

Access to local facilities can increase mobility and social participation. Body mass index is significantly associated with access to facilities, including factors such as the mix and density of facilities in the area. The distance to facilities has no or only a small effect on walking and other physical activities. Access to recreational facilities can increase physical activity, especially walking for recreation, reduce body weight, reduce the risk of high blood pressure, and reduce the number of vehicle trips, the distances travelled and greenhouse gas emissions.

Local services include health and social care, education, employment, and leisure and recreation. Local facilities include community centres, shops, banks/credit unions and Post Offices. Services and facilities can be operated by the public, private and/or voluntary sectors. Access to services and facilities is important to both physical and mental health and wellbeing. Access is affected by factors such as availability,

proximity to people's place of residence, existence of transport services or active travel infrastructure to the location of services and facilities, and the quality of services and facilities.

The construction or operation of an NSIP can affect access adversely: it may increase demand and therefore reduce availability for the existing community; during construction, physical accessibility may be reduced due to increased traffic and/or the blockage of or changes to certain travel routes. It is also possible that some local services and facilities are lost due to the land-take needed for the NSIP.

Conversely if new routes are built or new services or facilities provided the NSIP may increase access. NSIPs relating to utilities such as energy and water can maintain, secure or increase access to those utilities, and thereby support health and wellbeing.

b. Access to good-quality affordable housing

Housing refurbishment can lead to an improvement in general health and reduce health inequalities. Housing improvements may also benefit mental health. The provision of diverse forms and types of housing is associated with increased physical activity. The provision of affordable housing is strongly associated with improved safety perceptions in the neighbourhood, particularly among people from low-income groups. For vulnerable groups, the provision of affordable housing can lead to improvements in social, behavioural and health related outcomes. For some people with long term conditions, the provision of secure and affordable housing can increase engagement with healthcare services, which can lead to improved health-related outcomes. The provision of secure and affordable housing can also reduce engagement in risky health-related behaviours. For people who are homeless, the provision of affordable housing increases engagement with healthcare services, improves quality of life and increases employment, and contributes to improving mental health.

Access to housing meets a basic human need, although housing of itself is not necessarily sufficient to support health and wellbeing: it is also important that the housing is of good quality and affordable. Factors affecting the quality of housing include energy efficiency (eg effective heating, insulation), sanitation and hygiene (eg toilet and bathroom), indoor air quality including ventilation and the presence of damp and/or mould, resilience to climate change, and overcrowding. The affordability of housing is important because for many people, especially people on a low income, housing will be the largest monthly expense; if the cost of housing is high, people may not be able to meet other needs such as the need for heating in winter or food. Some proposals for NSIPs include the provision of housing, which could be beneficial for the health and wellbeing of the local population. It is also possible that some housing will be subject to a compulsory purchase order due to the land-take needed for an NSIP.

c. Access to affordable healthy food

Access to healthy food is related to the provision of public and active transport infrastructure and the location and proximity of outlets selling healthier food such as fruit and vegetables. For the general population, increased access to healthy, affordable food through a variety of outlets (shops, supermarkets, farmers' markets and community gardens) is associated with improved dietary behaviours, including attitudes towards healthy eating and food purchasing behaviour, and improved adult weight. Increased access to unhealthier food retail outlets is associated with increased weight in the general population and increased obesity and unhealthy eating behaviours among children living in low-income areas. Urban agriculture can improve attitudes towards healthier food and increase fruit and vegetable consumption.

Factors affecting access to healthy affordable food include whether it is readily available from local shops, supermarkets, markets or delivery schemes and/or there are opportunities to grow food in local allotments or community gardens. People in environments where there is a high proportion of fast food outlets may not have easy access to healthy affordable food.

d. Access to the natural environment

Availability of and access to safe open green space is associated with increased physical activity across a variety of behaviours, social connectedness, childhood development, reduced risk of overweight and obesity and improved physical and mental health outcomes. While the quantity of green space in a neighbourhood helps to promote physical activity and is beneficial to physical health, eg lower rates of mortality from cardiovascular disease and respiratory disease in men, the availability of green environments is likely to contribute more to mental health than to physical health: the prevalence of some disease clusters, particularly anxiety and depression, is lower in living environments which have more green space within a 1-km radius.

The proximity, size, type, quality, distribution, density and context of green space are also important factors. Quality of green space may be a better predictor of health than quantity, and any type of green space in a neighbourhood does not necessarily act as a venue for, or will encourage, physical activity. 'Walkable' green environments are important for better health, and streetscape greenery is as strongly related to self-reported health as green areas. Residents in deprived areas are more likely to perceive access to green space as difficult, to report poorer safety, to visit the green space less frequently and to have lower levels of physical activity. The benefits to health and wellbeing of blue space include lower psychological distress.

The natural environment includes the landscape, waterscape and seascape. Factors affecting access include the proximity of the natural environment to people’s place of residence, the existence of public transport services or active travel infrastructure to the natural environment, the quality of the natural environment and feelings of safety in the natural environment. The construction of an NSIP may be an opportunity to provide green and/or blue infrastructure in the local area. It is also possible that green or blue infrastructure will be lost due to the land-take needed for the NSIP.

e. Access to the natural environment within the urban environment

Public open spaces are key elements of the built environment. Ecosystem services through the provision of green infrastructure are as important as other types of urban infrastructure, supporting physical, psychological and social health, although the quality and accessibility of green space affects its use, C19, ethnicity and perceptions of safety. Safe parks may be particularly important for promoting physical activity among urban adolescents. Proximity to urban green space and an increased proportion of green space are associated with decreased treatment of anxiety/mood disorders, the benefits deriving from both participation in usable green space near to home and observable green space in the neighbourhood. Urban agriculture may increase opportunities for physical activity and social connections.

A view of 'greenery' or of the sea moderates the annoyance response to noise. Water is associated with positive perceptive experiences in urban environments, with benefits for health such as enhanced contemplation, emotional bonding, participation and physical activity. Increasing biodiversity in urban environments, however, may promote the introduction of vector or host organisms for infectious pathogens, eg green connectivity may potentiate the role of rats and ticks in the spread of disease, and bodies of water may provide habitats for mosquitoes. Owing to economic growth,

population size and urban and industrial expansion in the EU, to maintain ecosystem services at 2010 levels, for every additional percentage increase in the proportion of 'artificial' land, there needs to be a 2.2% increase in green infrastructure.

The natural environment within the urban environment includes the provision of green space and blue space in towns and cities. Factors involved in access include the proximity of the green and/or blue space to people's place of residence, the existence of transport services or active travel infrastructure to the green and/or blue space, the quality of the green and/or blue space and feelings of safety when using the green and/or blue space. The construction of an NSIP may be an opportunity to provide green and/or blue infrastructure in the local urban environment. It is also possible that green or blue infrastructure in the urban environment will be lost due to the land-take needed for the NSIP.

f. Access to leisure, recreation and physical activity opportunities within the urban and natural environments.

Access to recreational opportunities, facilities and services is associated with risk factors for long-term disease; it can increase physical activity, especially walking for recreation, reduce body mass index and overweight and obesity, reduce the risk of high blood pressure, and reduce the number of vehicle trips, the distances travelled and greenhouse gas emissions. It can also enhance social connectedness. Children tend to play on light-traffic streets, whereas outdoor activities are less common on high-traffic streets. A perception of air pollution can be a barrier to participating in outdoor physical activity. There is a positive association between urban agriculture and increased opportunities for physical activity and social connectivity. Gardening in an allotment setting can result in many positive physical and mental health-related outcomes. Exercising in the natural environment can have a positive effect on mental wellbeing when compared with exercising indoors.

Leisure and recreation opportunities include opportunities that are both formal, such as belonging to a sports club, and informal, such as walking in the local park or wood. Physical activity opportunities include routine activity as part of daily life, such as walking or cycling to work, and activity as part of leisure or recreation, such as playing football. The construction of an NSIP may enhance the opportunities available for leisure and recreation and physical activity through the provision of new or improved travel routes, community infrastructure and/or green or blue space. Conversely, construction may reduce access through the disruption of travel routes to leisure, recreation and physical activity opportunities.

2) **Traffic and Transport**

a. Accessibility

Walkability, regional accessibility, pavements and bike facilities are positively associated with physical activity and negatively related to body weight and high blood pressure, and reduce the number of vehicle trips, the distances travelled and greenhouse gas emissions. Body mass index is associated with street network accessibility and slope variability.

Accessibility in relation to transport and travel has several aspects including whether potential users can gain physical access to the infrastructure and access to the services the infrastructure provides. The design and operation of transport infrastructure and the associated services should take account of the travel needs of all potential users including people with limited mobility. People whose specific needs should be considered include pregnant women, older people, children and young

people and people with a disability. Other aspects of transport infrastructure affecting accessibility include safety and affordability, both of which will affect people's ability to travel to places of employment and/or key local services and facilities and/or access their social networks.

b. Access to / by public transport

Provision of high-quality public transport is associated with higher levels of active travel among children and among people commuting to work, with a decrease in the use of private cars. Combining public transport with other forms of active travel can improve cardiovascular fitness. Innovative or new public transport interventions may need to be marketed and promoted differently to different groups of transport users, eg by emphasising novelty to car users while ensuring that the new system is seen by existing users as coherently integrated with existing services.

Transport facilitates access to other services, facilities and amenities important to health and wellbeing. Public transport is any transport open to members of the public including bus, rail and taxi services operated by the public, private or community sectors. For people who do not have access to private transport, access to public transport is important as the main agency of travel especially for journeys >1 mile. Access to public transport is not sufficient, however, and access by public transport needs to be taken into account: public transport services should link places where people live with the destinations they need or want to visit such as places of employment, education and healthcare, shops, banks and leisure facilities. Other aspects of access to public transport include affordability, safety, frequency and reliability of services.

c. Opportunities for / access by cycling & walking

Walking and cycling infrastructure can enhance street connectivity, helping to reduce perceptions of long-distance trips and providing alternative routes for active travel. Prioritising pedestrians and cyclists through changes in physical infrastructure can have positive behavioural and health outcomes, such as physical activity, mobility and cardiovascular outcomes. The provision and proximity of active transport infrastructure is also related to other long-term disease risk factors, such as access to healthy food, social connectedness and air quality. The perception of air pollution, however, appears to be a barrier to participating in active travel.

Perceived or objective danger may also have an adverse effect on cycling and walking, both of which activities decrease with increasing traffic volume and speed, and cycling for leisure decreases as local traffic density increases. Health gains from active travel policies outweigh the adverse effects of road traffic incidents. New infrastructure to promote cycling, walking and the use of public transport can increase the time spent cycling on the commute to work, and the overall time spent commuting among the least-active people. Active travel to work or school can be associated with body mass index and weight, and may reduce cardiovascular risk factors and improve cardiovascular outcomes. The distance of services from cycle paths can have an adverse effect on cycling behaviour, whereas mixed land use, higher densities and reduced distances to non-residential destinations promote transportation walking.

d. Links between communities

Social connectedness can be enhanced by the provision of public and active transport infrastructure and the location of employment, amenities, facilities and services.

e. Community severance

In neighbourhoods with high volumes of traffic, the likelihood of people knowing and trusting neighbours is reduced.

f. Connections to jobs

The location of employment opportunities and the provision of public and active transportation infrastructure are associated with risk factors for long-term disease such as physical activity. Good pedestrian and cycling infrastructure can promote commuting physical activity. Improved transport infrastructure has the potential to shift the population distribution of physical activity in relation to commuting, although a prerequisite may be a supportive social environment. Mixed land use, higher densities and reduced distances to non-residential destinations promote transportation walking.

The ease of access to employment, shops and services including the provision of public and active transport are important considerations and schemes should take any opportunity to improve infrastructure to promote cycling, walking and the use of public transport

g. Connections to services, facilities and leisure opportunities

Mixed land use, higher densities and reduced distances to non-residential destinations promote transportation walking. Access to recreational opportunities and the location of shops and services are associated with risk factors for long-term disease such as physical activity, access to healthy food and social connectedness. Increased distance of services from cycle paths can have an adverse effect on cycling behaviour.

3) **Socio Economic**

a. Employment opportunities including training opportunities

Employment is generally good for physical and mental health and well-being, and worklessness is associated with poorer physical and mental health and well-being. Work can be therapeutic and can reverse the adverse health effects of unemployment for healthy people of working age, many disabled people, most people with common health problems and social security beneficiaries. Account must be taken of the nature and quality of work and its social context and jobs should be safe and accommodating. Overall, the beneficial effects of work outweigh the risks of work and are greater than the harmful effects of long-term unemployment or prolonged sickness absence. Employment has a protective effect on depression and general mental health.

Transitions from unemployment to paid employment can reduce the risk of distress and improve mental health, whereas transitions into unemployment are psychologically distressing and detrimental to mental health. The mental health benefits of becoming employed are also dependent on the psychosocial quality of the job, including level of control, demands, complexity, job insecurity and level of pay: transition from unemployment to a high-quality job is good for mental health, whereas transition from unemployment to a low-quality job is worse for mental health than being unemployed. For people receiving social benefits, entry into paid employment can improve quality of life and self-rated health (physical, mental, social) within a short time-frame. For people receiving disability benefits, transition into employment can improve mental and physical health. For people with mental health needs, entry into employment reduces the use of mental health services.

For vocational rehabilitation of people with severe mental illness (SMI), Supported Employment is more effective than Pre-vocational Training in helping clients obtain

competitive employment; moreover, clients in Supported Employment earn more and work more hours per month than those in Pre-vocational Training.

b. Local Business Activity

It is important to demonstrate how a proposed development will contribute to ensuring the vitality of town centres. Schemes should consider the impact on local employment, promote beneficial competition within and between town centres, and create attractive, diverse places where people want to live, visit and work

In rural areas the applicant should assess the impact of the proposals on a prosperous rural economy, demonstrate how they will support the sustainable growth and expansion of all types of business and enterprise in rural areas, promoting the development and diversification of agricultural and other land based rural businesses.

c. Regeneration

Following rebuilding and housing improvements in deprived neighbourhoods, better housing conditions are associated with better health behaviours; allowing people to remain in their neighbourhood during demolition and rebuilding is more likely to stimulate life-changing improvements in health behaviour than in people who are relocated. The partial demolition of neighbourhoods does not appear to affect residents' physical or mental health. Mega-events, such as the Olympic Games, often promoted on the basis of their potential legacy for regeneration, appear to have only a short-term impact on mental health.

d. Tourism and Leisure Industries

The applicant should assess the impact of the proposed development on retail, leisure, commercial, office, tourism, cultural, community and residential development needed in town centres. In rural locations assessment and evaluation of potential impacts on sustainable rural tourism and leisure developments that benefit businesses in rural areas, communities and visitors should be undertaken.

e. Community / social cohesion and access to social networks

The location of employment, shops and services, provision of public and active transport infrastructure and access to open space and recreational opportunities are associated with social connectedness. Access to local amenities can increase social participation. Neighbourhoods that are more walkable can increase social capital. Urban agriculture can increase opportunities for social connectivity. Infrastructure developments, however, can affect the quality of life of communities living in the vicinity, mediated by substantial community change, including feelings of threat and anxiety, which can lead to psychosocial stress and intra-community conflict.

f. Community engagement

Public participation can improve environmental impact assessments, thereby increasing the total welfare of different interest groups in the community. Infrastructure development may be more acceptable to communities if it involves substantial public participation.

4) **Land Use**

a. Land use in urban and / or rural settings

Land-use mix including infrastructure:

Land use affects health not only by shaping the built environment, but also through the balance of various types of infrastructure including transport. Vulnerable groups in the population are disproportionately affected by decisions about land use, transport and the built environment. Land use and transport policies can result in negative health impacts due to low physical activity levels, sedentary behaviours, road traffic incidents, social isolation, air pollution, noise and heat. Mixed land use can increase both active travel and physical activity. Transportation walking is related to land-use mix, density and distance to non-residential destinations; recreational walking is related to density and mixed use. Using modelling, if land-use density and diversity are increased, there is a shift from motorised transport to cycling, walking and the use of public transport with consequent health gain from a reduction in long-term conditions including diabetes, cardiovascular disease and respiratory disease.

Proximity to infrastructure:
Energy resource activities relating to oil, gas and coal production and nuclear power can have a range of negative effects on children and young people. Residing in proximity to motorway infrastructure can reduce physical activity. For residents in proximity to rail infrastructure, annoyance is mediated by concern about damage to their property and future levels of vibration. Rural communities have concerns about competing with unconventional gas mining for land and water for both the local population and their livestock."

b. Quality of urban and natural environments

Long-term conditions such as cardiovascular disease, diabetes, obesity, asthma and depression can be moderated by the built environment. People in neighbourhoods characterised by high ‘walkability’ walk more than people in neighbourhoods with low ‘walkability’ irrespective of the land-use mix. In neighbourhoods associated with high ‘walkability’ there is an increase in physical activity and social capital, a reduction in overweight and blood pressure, and fewer reports of depression and of alcohol abuse. The presence of walkable land uses, rather than their equal mixture, relates to a healthy weight. Transportation walking is at its highest levels in neighbourhoods where the land-use mix includes residential, retail, office, health, welfare and community, and entertainment, culture and recreation land uses; recreational walking is at its highest levels when the land-use mix includes public open space, sporting infrastructure and primary and rural land uses. Reduced levels of pollution and street connectivity increase participation in physical activity.

Good-quality street lighting and traffic calming can increase pedestrian activity, while traffic calming reduces the risk of pedestrian injury. 20-mph zones and limits are effective at reducing the incidence of road traffic incidents and injuries, while good-quality street lighting may prevent them. Public open spaces within neighbourhoods encourage physical activity, although the physical activity is dependent on different aspects of open space, such as proximity, size and quality. Improving the quality of urban green spaces and parks can increase visitation and physical activity levels.

Living in a neighbourhood overlooking public areas can improve mental health, and residential greenness can reduce the risk of cardiovascular mortality. Crime and safety issues in a neighbourhood affect both health status and mental health. Despite the complexity of the relationship, the presence of green space has a positive effect on crime, and general environmental improvements may reduce the fear of crime. Trees can have a cooling effect on the environment – an urban park is cooler than a non-green site. Linking road infrastructure planning and green infrastructure planning can produce improved outcomes for both, including meeting local communities' landscape sustainability objectives.

From:	Martin Evans
To:	North Lincolnshire Green Energy Project
Subject:	Your ref EN010116-000011 - Proposed North Lincolnshire Green Energy Park - EIA Scoping Notification and Consultation (WLDC Ref 141938)
Date:	25 November 2020 14:39:50
Attachments:	image003.png image004.png image005.png image006.png image007.png Letter to stat cons_Scoping & Reg 11 notification.docx

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Dear Michael Breslaw,

Thank you for the attached. The LPA has no comments to make.

Regards
Martin Evans
Senior Development Management Officer

[redacted]
Guildhall | Marshall's Yard | Gainsborough | Lincolnshire | DN21 2NA

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