

## North Killingholme Power Project, North Killingholme Relevant Representations made by the Environment Agency

### 1.0 Introduction

1.1 The Environment Agency is an executive non-departmental public body established under the Environment Act 1995. It is an adviser to Government with principal aims to protect and improve the environment, and to promote sustainable development. It plays a central role in delivering the environmental priorities of central government through its functions and roles. It is also an adviser to local decision makers in its role as a statutory consultee in respect of particular types of development, as listed in Schedule 5 of the Development Management Procedure Order 2010. For the purposes of this Development Consent Order (DCO) application, we are a statutory interested party.

1.2 The Environment Agency takes action to conserve and secure proper use of water resources, preserve and improve the quality of rivers, estuaries and coastal waters and groundwaters through pollution control powers and regulating discharge consents. We have a duty to implement the Water Framework Directive.

1.3 We have regulatory powers in respect of waste management and remediation of contaminated land designated as special sites. We also encourage remediation of land contamination through the planning process.

1.4 The Environment Agency is the principal flood risk management operating authority. It has the power (but not the legal obligation) to manage flood risk from designated main rivers and the sea. The Environment Agency is also responsible for increasing public awareness of flood risk, flood forecasting and warning and has a general supervisory duty for flood risk management. We also have a strategic overview role for all flood and coastal erosion risk management.

1.5 The Environment Agency also has statutory duties under the Environment Act 1995 to maintain, improve and develop salmon fisheries, trout fisheries, freshwater fisheries and eel fisheries.

### 2.0 Scope of these representations

2.1 These Relevant Representations contain an overview of the project issues, which fall within our remit. They are given without prejudice to any future detailed representations that we may make throughout the examination process. We may also have further representations to make when supplementary information becomes available in relation to the project.

2.2 We have reviewed the DCO application, Environmental Statement (ES) and supporting documents submitted as part of the above mentioned application, which were received on 10 May 2013. The comments are presented under topic headings.

### 3.0 Environmental Permit

3.1 This project is for a new 470 megawatt electrical generating plant, operating as either a Combined Cycle Gas Turbine (CCGT) power station or an Integrated Gasification Combined Cycle (IGCC) power station. The proposed development

would provide electricity to the national grid, steam to local industry and liquid carbon dioxide for sequestration.

3.2 A permit is required from us before the commencement of operations, under the Environmental Permitting (England and Wales) Regulations 2010 as a Section 1.1 Combustion activity.

3.3 We have met with the applicant on relatively few occasions during the pre-application period. On each occasion we have promoted the benefits of parallel tracking the planning and permit applications to give us the opportunity of identifying any key issues of concern and to enable these to be resolved. Unfortunately, to date, no application has been submitted for a permit under the Environmental Permitting Regulations, which would allow us to carry out a full technical assessment of this proposal. The Environment Agency is a competent authority under the Habitats Directive for the purpose of the environmental permit application but as there is no application before us we have to date been unable to carry out an appropriate assessment under the Conservation and Habitats Regulations 2010. Such an assessment would be likely to be of considerable assistance to the Examining Authority and to the Secretary of State in carrying out his own appropriate assessment for the purposes of the DCO application.

3.4 Consequently, these comments are provided in response to the application for a DCO only and do not constitute an assessment for the purpose of determining a permit.

3.5 The application includes five operating scenarios:

Scenario A – Construction of Power Island and Common Facilities only;

Scenario B – Operation of Generating Station as a CCGT plant;

Scenario C – Construction of Power Island with the Gasification Plant and Common Facilities;

Scenario D – Operation of Generating Station as a CCGT plant with subsequent construction of the Gasification Plant;

Scenario E – Operation of Generating Station as an IGCC plant.

3.6 Our determination of an application for a permit will address the following key areas:

Management – including general management, accident management, energy efficiency, efficient use of raw materials and waste recovery;

Operating activities and techniques - including the use of Best Available Techniques for process design and management;

Combined Heat and Power;

Carbon capture and Sequestration;

Emissions to air and discharges to water, land and groundwater along with odour, noise and vibration;

Information – monitoring, records, reporting and notifications.

3.7 All of the above are assessed within the requirements of Best Available Techniques. Best Available Techniques (BAT) are required to be considered in order to avoid or reduce emissions resulting from certain installations and to reduce the impact on the environment as a whole. Use of BAT is required by us when licensing

the major potentially polluting industries under the Environmental Permitting Regulations 2010.

3.8 When assessing the application for a permit to operate we will set conditions to ensure the emissions and discharges are at a level that will not result in significant impact on people and the environment, reflecting current statutory requirements and to ensure compliance with European Directive 2010/75/EU on Industrial Emissions. We cannot grant a permit until we are satisfied that the operation of the process will not cause significant pollution to the environment or harm to human health.

3.9 If the applicant does not demonstrate an ability to comply with such conditions, the permit will be refused.

3.10 The operation of the power station will result in the emission of oxides of nitrogen, oxides of carbon and for the IGCC project oxides of sulphur, in close proximity to the Humber Estuary Special Area of Conservation / Special Protection Area and the North Killingholme Haven Pits Site of Special Scientific Interest (designations made in respect of estuarine habitats and birds).

3.11 Under environmental permitting we are particularly concerned about the operational scenarios B, D and E. During operation, impacts to ecology and nature conservation receptors may arise due to:

- (i) Emissions of pollutants to the air from the Generating Station (all Scenarios);
- (ii) Emissions of solid fuel handling operations (Scenarios D and E);
- (iii) Emissions of pollutants to water from the Cooling Water Connection (which will include the cooling tower discharge and possibly effluent from the waste water treatment plant) (Scenarios B, D and E);
- (iv) Emissions of noise from the fuel unloading / conveying systems, the Generating Station and Gasification Plant (Scenarios D and E);

3.12 As mentioned above, we strongly advised the operator to parallel track the planning and permit applications to facilitate a resolution of these concerns. To date they have still not submitted a permit application, and we have outstanding concerns regarding how the project can be operated to protect people and the environment.

3.13 The applicant has stated that the impact of the emissions from the proposal (Main Stack and the Flare Stack) has been quantitatively assessed using industry standard air dispersion modelling techniques in accordance with our latest guidance. The assessment of the worst case emissions from the Main Stack (80m) and Flare Stacks (135m) (excluding emissions during emergencies) shows that the associated emissions do not exceed maximum allowable levels for the protection of human health and the environment.

3.14 However, the applicant has not included an assessment of the impact on air quality of their emissions in combination with those of adjacent industry, namely, Centrica and E.ON Killingholme power stations and Total UK and Philips 66 oil refineries. The applicant may consider those emissions are already caught within the background data, against which the assessment has been made. If this is the explanation, we would advise that this will not be acceptable for the purposes of the

environmental permit application. We would require the applicant to include the power stations' and oil refineries' emissions in the in-combination assessment for the purposes of the Habitats Directive and to assess compliance with National Air Quality Standards and Objectives. The interpretation of modelling data will be subject to further scrutiny during any environmental permit determination.

3.15 Nature conservation sites should be screened against the relevant standards if they occur within specified distance criteria, as detailed below.

- Special Protection Areas (SPAs), Special Areas of Conservation (SACs) or Ramsar sites within 10km of the installation (or 15km coal- or oil-fired power station)
- Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs), Local Nature Reserves (LNRs), local wildlife sites and ancient woodland within 2km of the location of the installation.

3.16 During operation the emissions to air could impact on the air quality of ecologically sensitive sites via an increase in the ground level concentrations of certain pollutants and the associated nutrient and acid deposition. In addition, noise generated by the project and the associated increases in movement, vibration and light could cause disturbance to local species, including the designated bird species protected by the Humber Estuary SAC / SPA and Ramsar site. The deposition of sulphur and nitrogen at these sites has been assessed against the relevant critical load for acidification and nutrient enrichment, as identified using the Air Pollution Information System (APIS provides a comprehensive source of information on air pollution and the effects on habitats and species. APIS is a support tool for staff in the UK conservation and regulatory agencies, industry and local authorities for assessing the potential effects of air pollutants on habitats and species).

3.17 From these assessments, the applicant has concluded that these impacts; nitrogen deposition and the increase in released NO<sub>x</sub> into the atmosphere, for the scenario operating as a CCGT plant (scenario B), will result in impacts of minor magnitude that will be not significant. Similar conclusions are given for operating as an IGCC plant scenario E with the impact of SO<sub>2</sub> remaining of minor magnitude and not significant. These conclusions are based on the interpretation of modelling data, which will be subject to further scrutiny during any environmental permit determination.

4.0 Combined Heat and Power (CHP) ready requirements.

4.1 We will, as a minimum, require facilities to be built CHP ready by imposing specific permit conditions. For example, conditions requiring the provision and maintenance of steam and or hot water pass-outs such that opportunities for the further use of waste heat may be capitalised upon should they become practicable, and a condition that requires a review and a report on the practicability of CHP. The applicant has committed within the ES to undertake further assessment of the CHP-ready scenarios at the environmental permitting stage; ultimately to ensure that the project is designed and built with the appropriate provisions which will allow for the future implementation of CHP (i.e. is built to be CHP-ready for the selected heat load(s)).

5.0 Carbon Capture Ready requirements

5.1 New combustion plant with a capacity of 300 MWe is assessed to determine the technical and economic feasibility of capturing, transporting and storing its emissions of carbon dioxide (CO<sub>2</sub>). These assessments are designed to determine whether it is reasonable to expect that a proposed power station will be fitted with carbon capture and storage (CCS) in the future.

5.2 The applicant has proposed that IGCC operation of the Generating Station with carbon capture and storage would take place when a solution for transporting and storing the captured CO<sub>2</sub> from the Generating Station is in place. Currently, a viable transport and storage system is not available. It is anticipated that, in due course, CO<sub>2</sub> transport infrastructure will become available through which captured CO<sub>2</sub> could be transported for storage in empty gas / oil fields or deep saline formations under the North Sea bed. A small proportion of the captured CO<sub>2</sub> could possibly be supplied to industry or other users, but the majority of the captured CO<sub>2</sub> would require transport and storage.

6.0 Pollution control outside Environmental Permitting regime

6.1 Emissions to air and discharges to land and water, as well as including odour and noise that are generated outside of the installation boundary will not be addressed by any environmental permit granted to the process operator.

6.2 This includes the following activities:

1. Emissions from the storage of biomass, coke and coal outside the installation boundary.
2. The transport of biomass, coke and coal from offsite storage to the installation using a road or rail haulage;
3. The provision of office and toilet facilities.

6.3 We expect the environmental permit application to take into consideration only the activities within the installation boundary. To clarify this in terms of modelling, we take into consideration any emissions, for example NO<sub>x</sub>, SO<sub>x</sub>, CO, PM<sub>10</sub> emitted from the process from within the installation boundary. However, we do not require applicants to consider emissions from transport on or off site.

7.0 Water quality

7.1 The North Killingholme Drain is linked to the Killingholme Haven Pits which is a SSSI. The ES reports of potential impacts of site drainage during clearance of site and construction. There are currently operations involving oil on this site, and it is essential that there is no major pollution in the North Killingholme Drain and subsequently the North Killingholme Haven Pits.

7.2 The Water Framework Directive (WFD) status of the North Killingholme Drain according to monitoring point NKILLMD2 between 2011 and early 2013 is as follows:

- Ammonia (N) (mg/l): Moderate (marginal failure of good status)
- Dissolved reactive phosphate (mg/l): Good
- BOD (mg/l): no data
- DO (% saturation): Good

7.3 The current WFD status of this drain cannot be allowed to deteriorate as a result of the construction of this project.

## 8.0 Water resources

8.1 The project will require a licence under either the Water Resources Act 1991 and/or the Water Act 2003 for the abstraction of water for cooling purposes. The applicant should submit a Water abstraction or impoundment, preliminary enquiry form (WR48) to the Environment Agency in respect of water abstraction requirements from the Humber estuary. This will allow us to assess the viability of water abstraction for the project.

## 9.0 Flood risk (Document 5.1 Flood Risk Assessment)

9.1 The Flood Risk Assessment (FRA) has not clearly evidenced that the critical equipment within the proposed power station will be located above the extreme tide (that has a 0.1% chance of occurring in any one year) following a breach in the sea defences over the lifetime of the development (2046).

9.2 However, the submission does include an assurance that the mitigation in response to the 0.1% 2046 flood depths on the site should ensure that any critical infrastructure that is sited within areas at risk are raised above the expected extreme flood depths and can remain operational during a failure of the flood defences. It would be prudent to clarify the exact levels at which the power island and the critical infrastructure will be set. These levels will need to be secured in a DCO Requirement (we will be pleased to suggest further wording on receipt of the levels).

9.3 We support the recommendation of the FRA that a Flood Warning and Evacuation Plan is developed to ensure the future safety of the development and its users from the harmful effects of flooding. No mitigation is evident for the administration building or warehouse aspects of the application. It is usual to confirm that a safe place of refuge will be provided above the expected flood depth (and this is usually provided within a second storey of the development) or that the risks can be managed through a suitable flood warning and evacuation plan. The FRA has not specifically identified that an area of safe refuge will be provided in the occupied parts of the development, therefore the Local Planning Authority (North Lincolnshire Council) will need to be satisfied that the proposed Flood Warning and Evacuation Plan can be developed that will ensure the safety of the future users of this development. We will not comment on the suitability of the Plan, but suggest that this important aspect of safety is captured through a suitably worded Requirement.

9.4 I can confirm that the Environment Agency will also require the inclusion of Protective Provisions in respect of flood defences, which lie within the DCO boundary. We will liaise with the applicant in respect of these during the course of the Examination.

9.5 We would point out that the risks to this development will increase as sea levels rise. It would be desirable to secure future funding for the continued maintenance and future improvements to the sea defences through this permission.

9.6 We understand the acknowledgement of the current uncertainty surrounding overtopping Section 21 (Section 21 is the area of coastal defence stretching between

the East Halton Skitter and extending approximately 575m into the (red line) northern boundary of the application site). We are currently working with Able Humber Ports Ltd (AHPL) to resolve this matter. In addition we are currently updating the Humber Flood Risk Management Strategy (which is our long-term plan for managing flood defences along the Humber estuary into the future) and works to improve the flood defences in this location will be explored as a matter of course via this update process. However, should we be unable to reach a resolution with AHPL, or should the Strategy Update reveal other works are required to the defences that protect this development, we wish to draw to the applicant's attention to the changes to the funding of improvements to flood defences. A full explanation of this is, therefore, provided at Appendix 1 for information.

9.7 We would also highlight to the Examining Authority that Article 14 (footnote 1) of the draft DCO has the potential to increase flood risk. It is our opinion that the relevant undertakers will need to be content that the wording of this Article is sufficient to empower them, where the developer may need to discharge, with sufficient control to resist acceptance without the burden of dispute resolution costs. This could include organisations such as Anglian Water Services, relevant Drainage Boards and private undertakers. We would also note that the reference to the Water Resources Act 1991 needs to be updated to refer to the Environmental Permitting Regulations 2010.

#### 10.0 Land contamination

10.1 Further details are required in order to ensure that the risks to controlled waters are appropriately addressed prior to development commencing. However, should this application be approved, we are satisfied that land contamination issues can be dealt with by appropriate Requirements. In Part 3 of the Draft DCO, Requirement 12 covers much of our concerns. However, we would request that two additional sub paragraphs are added to this to read:

#### Requirement 12

(4) No occupation of any part of the permitted development shall take place until a verification report demonstrating completion of works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to and approved, in writing, by the local planning authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. It shall also include any plan (a "long-term monitoring and maintenance plan") for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification plan. The long-term monitoring and maintenance plan shall be implemented as approved.

(5) If, during development, contamination not previously identified is found to be present at the site then no further development shall be carried out until the developer has submitted a remediation strategy to the local planning authority detailing how this unsuspected contamination shall be dealt with and obtained written approval from the local planning authority. The remediation strategy shall be implemented as approved.

10.2 Further information with respect to discharging this Requirement is provided in Appendix 2 for the applicant's information.

## 11.0 The Water Framework Directive

11.1 The Environment Agency has a duty to implement the Water Framework Directive.

11.2 The site is on the bank of the Humber Lower WFD surveillance waterbody and is in close proximity to the North Killingholme Haven Pitts WFD artificial water body, which is a saline lagoon.

11.3 It is appropriate for WFD assessment to be integrated into the ES. However, the assessment of potential impacts on WFD water quality and ecology in this ES are not sufficient to allow us to determine if any deterioration in environmental quality (which is non-temporary in nature) will occur in WFD waterbodies as a result of the construction and operation of the project. In particular:

11.4 No WFD waterbodies are identified in this document. Relevant WFD waterbodies (included in the Humber River Basin Management Plan) include the Humber Lower and North Killingholme Haven Pitts (NKHP).

11.5 In section 7, Ecology and Biodiversity, whilst the Humber estuary SAC/SPA is identified in terms of potential receptors to impacts, no WFD waterbodies or ecological receptors are identified.

11.6 WFD is not identified in section 7.2 Legislation and Policy.

11.7 Consideration of WFD ecological receptors was requested at the scoping stage of this document (28 January 2013) and this was re-iterated in a telecom with the applicant (27 July 2013). Potential WFD ecological receptors must be considered to allow us to make a judgement as to whether the development will cause a non-temporary deterioration in WFD ecological status. Biological quality element, which are monitored to assess the ecological status of waterbodies include (but are not limited to) benthic invertebrates, saltmarsh (angiosperms), fish. Changes to hydromorphological processes which could lead to indirect impacts (e.g. loss of intertidal area) on biological quality element monitored for WFD should also be considered.

11.8 Section 13 Water Quality and Resources considers the WFD in respect to contaminants and they may impact Environmental Quality Standards (EQS) and thermal discharges. Information was requested at the scoping stage to ascertain the distance of the proposed thermal discharge from the existing E.ON and Centrica discharges to indicate where any interactions may occur. This information has been provided in the ES. The proposed discharge will be 500m from the existing discharges and we are satisfied the proposed thermal discharge zone of effect will not interact with existing thermal discharges.

11.9 Section 13 of the ES does not identify the Humber Lower and North Killingholme Haven Pitts as WFD waterbodies. These waterbodies will be potentially impacted by the development, and subsequently specific potential effects on WFD water quality and environmental objectives resulting from discharges are required (see Table 13.1 and sections 13.2.3; River Humber 13.4.4 -13.4.6).

Corrections/amendments to identify potential impacts relevant to WFD are required throughout this section and the document as a whole.

11.10 It is unclear if there will be discharges to the North Killingholme Haven Pitts (NKHP) WFD waterbody (13.4.8) and direction to section 13.1 is not helpful in this instance. If discharges to NKHP are predicted an assessment of their potential effects on this waterbody, and on the Humber Lower to which it is reportedly hydrologically linked is required.

## 12.0 Fisheries

12.1 The Environment Agency has a statutory duty under the Environment Act 1995 (section 6) to maintain, improve and develop salmon, freshwater and eel fisheries.

12.2 The Environment Agency is concerned that the noise and vibration caused by percussive piling during the construction period has the potential to damage migratory fish populations within the Humber system. The Humber estuary acts as the sole gateway for migratory fish into the Humber system, allowing fish to travel upstream from the sea, to spawn in rivers such as the Don, Aire, Ouse, Trent, Wharfe and Derwent; the last of which has SSSI and SAC status. The success of these populations relies wholly on their ability to gain safe passage through the Humber in order for them to complete their life-cycle. As such, any activity taking place in the Humber that hinders the ability of fish to make this journey has the potential to threaten populations throughout the river catchment.

12.3 In addition to the above, many fish populations, particularly Atlantic Salmon, are in a fragile, recovering state, following the almost total annihilation of the species within the Humber as a result of the poor water quality and physical barriers introduced by the industrial revolution. Recent work to address some of these issues has seen Salmon returning to upstream rivers for the first time in decades. Whilst the current number of fish within the system is not well known, a device to count the number of juvenile salmon on the River Ure was operated up until about 6 years ago, with its most recent measurements suggesting around 20,000 juveniles moving downstream. This would usually result in a yield of around 2,000 adults returning upstream to spawn. These numbers are from just one of a number of tributaries, which drain into the Humber, so are likely to represent a fraction of the overall population present within the system.

12.4 Fish can be disturbed by noise and vibration in a similar way to humans or birds. The main difference is that water is much denser than air, so the noise travels much more efficiently and can therefore cover larger distances. The loudest noises may cause physiological damage to the extent that fish may be fatally injured. As noise levels decrease with distance from the source of noise, a sliding scale of behavioural responses can be expected, with higher proportions of fish close to the source noise likely to be diverted from their usual course, and lower proportions at larger distances.

12.5 Chapter 7, Ecology and Biodiversity - Paragraphs 7.5.19 to 7.5.21 of the ES discusses the impact of proposed piling works for the installation of the cooling water connection intake and outfall pumps within the Humber Estuary SPA. This

recognises potential impacts on breeding and wintering birds present but there is no acknowledgement of the impact that piling noise may have on the marine environment, and specifically migratory fish. Footnote 37 on page 264 references an assessment using a 2.1m diameter pile, which we presume is that undertaken for the adjacent Able Marine Energy Park (AMEP) proposal.

12.6 The draft DCO contains various conditions within the marine licence (conditions 22 – 29), which are acceptable in terms of mitigation against the impacts of piling noise on migratory fish. These are consistent with those requested by Natural England, the Marine Management Organisation and the Environment Agency for the adjacent AMEP site for the protection of fish species and interest features of the Humber Estuary SPA/Ramsar site.

12.7 With these mitigation measures in place, we are able to estimate the overall proportion of fish likely to be disturbed or diverted, on a daily or annual basis, taking into account factors such as hours of working and the distribution of fish presence in the estuary. We estimate that there will still be an annual risk of exposure of 14.86%, which takes account of the seasonality and amount of piling hours available. With other schemes around the country that have had a similar potential impact on the marine environment, we have advised that any exposure greater than 10% warrants the need for compensation. We believe this threshold should apply for this proposed scheme.

12.8 In particular, any piling carried out between 2 June and 10 September carries a residual risk, as this is the time when we would expect the adult salmon to be migrating upstream. In line with the adjacent AMEP proposal, we would request that the applicant enters into an obligation to provide £290.14 per hour for any piling undertaken within this period. The payment would go to the Trent Rivers Trust to be spent on projects that improves the chances of migrating salmon completing its lifecycle.

### 13.0 Indirect / Secondary and Cumulative Impacts

13.1 This section does not include an assessment of in combination /cumulative impacts on piling should this project occur at the same time as the Able Marine Energy Park. We have particular concerns in this respect in connection with our duties under the Environment Act 1995. Due to the proximity of the two projects in the marine environment, we would request that further discussion of the cumulative impacts of these two projects is included, and consideration of whether any additional mitigation may be required.

13.2 Please also see comments in paragraph 3.14 above, in relation to air quality and emissions from adjacent power stations and oil refineries.

### 14.0 Outline Construction Environmental Management Plan (CEMP) (Appendix 3.1)

14.1 We have considered the detail of this document and request that the applicant provides further information within the plan as follows:

14.2 2.7.1 – We request that this includes detail of the hazardous activities that are likely to take place.

14.3 3.3.3c Wheel washing activities – to reduce the pollution risk we request the following is included:

- Plant and wheel washing is carried out in a designated area of hard standing at least 10m from a watercourse or surface water drain;
- Run-off is collected in a sump - recycle and reuse water wherever possible;
- Settled solids are removed regularly;
- Discharge of contained water goes to foul sewer with prior permission of the local sewerage provider;
- Tanker off site for authorised disposal.

14.4 3.3.8 No burning should take place on site.

14.5 3.4.7 Contaminated material will be removed from site – the applicant should state where this will be disposed of.

14.6 3.4.8 De-watering activities – the applicant should refer to Regulatory Position Statement - Temporary water discharges from excavations. If the balancing pond is emptied of water it will be removed by tanker from the site – the applicant should state where this will be disposed of.

14.7 3.4.11 Silt laden run-off, arisings or chemicals shall not be allowed to enter drains, channels, gullies, watercourses and unmade ground.

14.8 3.5 Emergency spill response procedures – the applicant should refer to our Pollution Prevention Guidance note 21: Pollution Incident Response Planning for further information on our requirements.

14.9 3.6.1a Oil storage tanks – the applicant should refer to our Pollution Prevention Guidance note 2: Above ground oil storage tanks for further information on our requirements.

14.10 3.6.1b Surface water contaminated with hydrocarbons to be passed through an oil interceptor – the applicant should refer to our Pollution Prevention Guidance note 3: Use and design of oil separators in surface water drainage systems for further information on our requirements.

14.11 3.6.1e The applicant should specify what aspects of the construction work will impact on ground and surface waters.

14.12 The applicant will be able to access the Pollution Prevention Guidance notes mentioned above from our website.

15.0 Protection of Environment Agency interests

15.1 During the coming weeks we will be working with CGen on these outstanding issues and giving further consideration to the draft DCO, in particular the Requirements and Protective Provisions. We note that Environment Agency land interests have been included in the order, and we have several sea defence structures (outfall pipes/sluices and channel, protection works etc) that may be affected by the proposed works. These structures are sited on third party land and the Environment

Agency has long term leases (999 year) with the landowner for each of these sea defences structures. The applicant has requested discussions commence with our Estates Surveyor in respect of these and his details have been passed to the applicant.

15.2 Whilst we hope that we will be able to resolve issues in relation to our land interests by agreement, for the present this Relevant Representation should be taken as an objection to the compulsory purchase of any part of land in which we have an interest.

#### 16.0 Further Representations

16.1 We will submit further detailed written representations on these issues in due course and we will also be working with CGen and other Defra bodies in respect of a Statement of Common Ground. We reserve the right to add or amend these representations during the course of the examination, including requests for further DCO Requirements and Protective Provisions.

#### Footnote 1:

##### Discharge of water

14.—(1) The undertaker may use any watercourse or any public sewer or drain for the drainage of water in connection with the carrying out or maintenance of the authorised development and for that purpose may lay down, take up and alter pipes and may, on any land within the Order limits, make openings into, and connections with, the watercourse, public sewer or drain.

(2) Any dispute arising from the making of connections to or the use of a public sewer or drain by the undertaker pursuant to paragraph (1) shall be determined as if it were a dispute under section 106 of the Water Industry Act 1991(a) (right to communicate with public sewers).

(3) The undertaker shall not discharge any water into any watercourse, public sewer or drain except with the consent of the person to whom it belongs; and such consent may be given subject to such terms and conditions as that person may reasonably impose, but shall not be unreasonably withheld.

(4) The undertaker shall not make any opening into any public sewer or drain except—

(a) in accordance with plans approved by the person to whom the sewer or drain belongs, but such approval shall not be unreasonably withheld; and

(b) where that person has been given the opportunity to supervise the making of the opening.

(5) The undertaker shall not, in carrying out or maintaining works pursuant to this article, damage or interfere with the bed or banks of any watercourse forming part of a main river.

(6) The undertaker shall take such steps as are reasonably practicable to secure that any water discharged into a watercourse or public sewer or drain pursuant to this article is as free as may be practicable from gravel, soil or other solid substance, oil or matter in suspension.

(7) This article does not authorise the entry into controlled waters of any matter whose entry or discharge into controlled waters is prohibited by section 85(1), (2) or (3) of the Water Resources Act 1991(a) (offences of polluting water).

(8) In this article—

(a) “public sewer or drain” means a sewer or drain which belongs to the Environment Agency, an internal drainage board, a local authority or a sewerage undertaker; and  
(b) other expressions, excluding watercourse, used both in this article and in the Water Resources Act 1991 have the same meaning as in that Act.

#### Appendix 1 – Future funding of flood defence works

The current DEFRA “flood and coastal resilience partnership” funding process establishes a methodology for how central government Flood Defence Grant in Aid (FDGiA) can be bid for to help pay for flood alleviation schemes. The methodology sets out a value for each £1 of “benefit” a flood alleviation scheme would bring, placing significantly greater value on protecting homes than it does on protecting industry or agricultural land. The methodology does not allow consideration of any “benefits” brought to new development constructed after January 2012, nor does it allow “benefits” to be counted more than once for different flood alleviation schemes. In this area, schemes will also need to be brought forward for other stretches of flood defence and for other sources of flooding such as fluvial or surface water flooding. It should therefore not be assumed that all the “benefits” will be available to help bid for FDGiA funding, or that it will always be desirable to draw from all the “benefits” if it would jeopardise other important schemes receiving funding.

The DEFRA methodology means that, in virtually every instance, there will be a gap between the amount of FDGiA funding which may be provided from central government, and that which is actually needed to undertake the works. In order for any new defence works to go forward, this gap will need to be plugged by other sources of funding. Sources could include the Lead Local Flood Authority (North Lincolnshire Council), the Local Enterprise Partnership and any other parties who are beneficiaries of the defence, including businesses.

Should at any point the developer seek to extend the lifetime of the development beyond that applied for within the DCO, an important consideration would be that the principle of Partnership Funding is to give affected communities much more involvement in managing flood risk in their area. The approach means flood alleviation schemes may provide differing standards of protection based on how far funding can stretch. For planning purposes this means it becomes very difficult with a site like this to attach any certainty to whether the flood defences will provide an appropriate standard into the future, unless one of the potential contributors can carry out the works themselves or underwrite the funding required to secure the necessary works. Given that the DCO does not seek to secure any future upgrade to the flood defence and that there is no proposal to underwrite any future funding, there is no guarantee that any funding shortfall can be made up, and no legal obligation requiring any party to contribute to a potential scheme. In addition, the Environment Agency has no statutory duty to provide flood defences, nor any finance of its own to fund flood defence works - we must bid for FDGiA funding in the same way as any other party.

Given the current DEFRA methodology and the uncertainties associated with raising funds from other sources, we would caution against making any assumptions about our collective future ability to deliver new defences for the DCO site.

## Appendix 2 – Further site investigation works

Further detailed site investigation is to be undertaken at the site prior to development, in order to provide an up to date assessment of the risks posed by the previously identified contamination. This is detailed in the ES in sections 14.6.28 - 14.6.31 (and also referenced in 14.4.38, 14.6.3 and 14.6.25). Any further work at the site should be done in accordance with the risk management framework provided in CLR11 - Model Procedures for the Management of Land Contamination.

The controlled waters risk assessment should provide a robust conceptual site model that should consider the potential hydraulic connectivity between the shallow perched groundwater within the made ground/drift deposits and the nearby surface water drain. In order to fully assess the sensitivity of this receptor, clarification should be provided on the connectivity of the drain to the North Killingholme Haven Pits SSSI, as this is questioned in Section 14.4.53.

Section 14.6.29 states that the distribution and depth of investigation boreholes will be agreed at a later date with North Lincolnshire Council. We consider that sampling should be targeted in relation to the previously identified contamination, which should include the area of the apparent oil spill (Section 14.4.56). Where groundwater is encountered, this should be sampled for all contaminants of concern on a minimum of two occasions from permanently installed monitoring wells. We would be happy to review the future site investigation proposals to provide advice on the risks to controlled waters.

Section 14.6.5 (b) considers excavation and off-site disposal as a potential remedial measure.

Contaminated soil that is, or must be disposed of, is waste. Therefore, its handling, transport, treatment and disposal is subject to waste management legislation, which includes:

- Duty of Care Regulations 1991
- Hazardous Waste (England and Wales) Regulations 2005
- Environmental Permitting (England and Wales) Regulations 2010
- The Waste (England and Wales) Regulations 2011

Developers should ensure that all contaminated materials are adequately characterised both chemically and physically in line with British Standards BS EN 14899:2005 'Characterisation of Waste - Sampling of Waste Materials - Framework for the Preparation and Application of a Sampling Plan' and that the permitting status of any proposed treatment or disposal activity is clear. If in doubt, the Environment Agency should be contacted for advice at an early stage to avoid any delays.

If the total quantity of waste material to be produced at or taken off site is hazardous waste and is 500kg or greater in any 12 month period the developer will need to register with us as a hazardous waste producer.

Section 14.6.9 suggests that contaminated spoil excavated from the site could be treated and re-used at the site.

The CL:AIRE Definition of Waste: Development Industry Code of Practice (version 2) provides operators with a framework for determining whether or not excavated material arising from site during remediation and/or land development works are waste or have ceased to be waste. Under the Code of Practice:

- excavated materials that are recovered via a treatment operation can be re-used on-site providing they are treated to a standard such that they are fit for purpose and unlikely to cause pollution
- treated materials can be transferred between sites as part of a hub and cluster project
- some naturally occurring clean material can be transferred directly between sites.

Developers should ensure that all contaminated materials are adequately characterised both chemically and physically, and that the permitting status of any proposed on site operations are clear. If in doubt, the Environment Agency should be contacted for advice at an early stage to avoid any delays.

The Environment Agency recommends that developers should refer to our Position statement on the Definition of Waste: Development Industry Code of Practice and; our website for further guidance.

It is considered that the use of soakaways at the site will not be feasible as using soakaways or other infiltration methods on contaminated land carries groundwater pollution risks and may not work in areas with a high water table. Should there be any intention to dispose to soakaway, this should be shown to work through an appropriate assessment carried out under Building Research Establishment (BRE) Digest 365.