

# Cottam Solar Project

## Preliminary Environmental Information Report: Chapter 20: Other Environmental Matters

Prepared by: Lanpro  
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## Issue Sheet

**Report Prepared for: Cottam Solar Project Ltd.**

### **Preliminary Environmental Information Report: Chapter 20: Other Environmental Matters**

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## 20 Other Environmental Matters

### 20.1 Introduction

20.1.1 This chapter addresses other environmental topics that do not require individual chapters on the basis that they have either been scoped out of the ES or do not warrant a full assessment. This chapter addresses:

- Human health;
- Electromagnetic fields;
- Major accidents and disasters;
- Telecommunications, utilities, and television; and
- Light pollution.

20.1.2 In accordance with the scoping opinion, the following are addressed within this chapter:

- Impacts on **human health** during construction. This will be informed by assessments in other chapters of the ES and will consider issues including construction activity / compounds, construction traffic, light pollution, noise, vibration and dust. Impacts considered for the operational stage are limited to the potential risk of fires associated with technology such as batteries as a form of energy storage, and inverters which, although rare have the potential to cause safety concerns to human health.
- Impacts of **electromagnetic fields**. These have been scoped out subject to provision of technical reporting to demonstrate relevant design standards and mitigation measures have been met.
- Impacts of **major accidents and disasters** during construction, operation and decommissioning. This will be informed by assessments in other chapters of the ES and will consider issues including flooding, fire and explosions, road accidents, hazardous substances, rail accidents, aviation accidents, damage to utilities, disturbance of unexploded ordnance, unstable ground conditions, and vegetation pests and diseases.
- Impacts on **telecommunications, utilities, and television** receptors. These have been scoped out subject to inclusion of details to demonstrate how direct

impacts from the Scheme’s construction, operation, and decommissioning are to be avoided.

- Impacts on ecology and human health from **light pollution** during construction. This will be informed by assessments in the landscape and visual, and ecology, chapters of the ES, and summarised in this chapter.

## 20.2 Human Health

20.2.1 Baseline conditions and potential impacts on human health receptors, as far as can be determined at the PEIR stage, are addressed in the chapters as set out in Table 20.1 below:

**Table 20.1: Signposting to Human Health effects**

Human Health Receptor	Addressed within PEIR / ES
Risk from flooding	Chapter 10 (Flood / Hydrology)
Risk from groundwater contamination	Chapter 11 (Ground Conditions)
Noise and vibration	Chapter 15 (Noise and Vibration)
Risk from glint and glare	Chapter 16 (Glint and Glare)
Air quality (emissions and dust)	Chapter 17 (Air Quality)
Population health and wellbeing	Chapter 18 (Socio-Economics)
Waste	Chapter 19 (Waste)
Risk from major accidents and disasters	Chapter 20.4 (Major Accidents and Disasters)

20.2.2 Based on the work undertaken to date the following potential effects have been identified in PEIR. The baseline data and sensitivity to change, along with the preliminary assessment of level of impact has been detailed in each of the respective PEIR chapters identified above.

**Table 20.2: Sensitivity of Human Health effects**

Receptor	Identified Potential Key Effects
<b>Flooding</b>	Mud and debris blockages Temporary increase in impermeable area Compaction of soils Increase in permanent impermeable area Increase in discharge to local watercourses. Blockage of drainage networks
<b>Groundwater</b>	Leaching of existing contamination into groundwater Groundwater contamination from container failure/ leak of battery fire and associate fire waters
<b>Noise and Vibration</b>	Noise and vibration for construction traffic

	Vibration from on-site construction activities on residential properties Vibration from on-site construction activities on residential properties Noise from construction activities on residential properties Noise from operational activities
<b>Air Quality</b>	Generation of construction dust Increase in traffic emissions from construction traffic
<b>Glint and Glare</b>	Residential amenity impact from glint and glare towards dwellings
<b>Population Health and Wellbeing</b>	Uplift in population looking to access primary healthcare facilities during construction
<b>Waste</b>	Removal of contaminated soil, toxic and hazardous waste materials
<b>Major Accidents and Disasters</b>	Human health risks from fires and explosions Human health risks from increased risk of road accidents Human health risks from increased risk of rail accidents Human health risks from increased risk of aviation accidents Human health risks from severance of utilities Human health risks from ground instability Human health risks from pests and disease spread

20.2.3 An assessment of human health effects will be undertaken for the ES ahead of the DCO submission. Preliminary assessments to date at PEIR stage can be summarised as:

- The anticipated residual effects to human health receptors from flooding are assessed to be negligible, as a result of on-site mitigation strategies as set out in **Chapter 10: Hydrology** and the draft Outline Construction Environmental Management Plan (CEMP). These measures, along with embedded design for contamination containment from on-site sources, as set out in **Chapter 11: Ground Conditions and Contamination**, will also help to ensure residual effects related to human health from groundwater contamination are also negligible.
- As noise and vibration effects have not been fully assessed at this stage, the residual effects on human health receptors cannot be determined in detail, although are anticipated not to be significant, subject to embedded mitigatory design and construction in accordance with best industry practice. These residual effects will be assessed in the ES, in accordance with the methodology, baseline conditions, and preliminary effects set out in **Chapter 15: Noise and Vibration**.

- Glint and glare is expected to have no more than a negligible residual effect on human health due to the availability of on-site screening mitigation and panel back-tracking to be implemented to minimise direct impacts on residential dwellings as addressed in **Chapter 16** of the PEIR.
- As assessed in **Chapter 18: Socio Economics, Agriculture, and Tourism and Recreation**, the expected residual effects of the Scheme on human health, specifically in regard to access to healthcare, is deemed to be minor adverse. This is as a result of cumulative effects from multiple developments known to have a similar construction period. Some mitigation measures including Scheme coordination with nearby DCO developments can be implemented to limit these impacts where practicable.
- Residual effects to human health from waste are not anticipated to be significant post-mitigation, subject to the Scheme being constructed to appropriate control measures and best industry practice. These will be assessed in full in **Chapter 19: Waste** of the ES, and in the draft CEMP.
- Residual effects to human health from major accidents and disasters are to be assessed in full in the ES. Where known and assessed at this stage, the residual effects can be found at **Section 20.4** below.

### 20.3 Electromagnetic Fields

- 20.3.1 Electromagnetic fields have been scoped out of the ES assessment. The DCO application will include a technical report that demonstrates that relevant design standards have been met for all cabling.

### 20.4 Major Accidents and Disasters

#### Introduction

- 20.4.1 This section of the PEIR provides an overview of the potential significant adverse effects of the development in respect of major accidents and/or disasters, which are relevant to the project.
- 20.4.2 The EIA Regulations require consideration to be given to the risks of major accidents and disasters. The new IEMA guidance document 'Major Accidents and Disasters in EIA' has been taken into account in the assessment of major accidents or disasters.
- 20.4.3 'Accidents' are considered to be an event arising during the course of construction, operation and decommissioning (e.g. major emission, fire or explosion). 'Disasters'

are naturally occurring events such as extreme weather ground related hazard events (e.g. subsidence, landslide, earthquake).

- 20.4.4 The EIA scoping report identifies a range of factors relevant to the assessment of major accidents and disasters. These will be addressed in the relevant chapters of the ES as set out in Table 20.3 below:

**Table 20.3: Signposting to Major Accidents and Disasters effects**

Effect	Addressed within PEIR / ES
Risk from flooding	Chapter 7 (Climate Change) Chapter 10 (Flood / Hydrology)
Fires and explosion	Chapter 11 (Ground Conditions) Chapter 17 (Air Quality)
Road Accidents	Chapter 14 (Transport and Access) Chapter 16 (Glint and Glare)
Hazardous substances	Chapter 14 (Transport and Access)
Rail accidents	Chapter 14
Aviation accidents	Chapter 16
Damaged or severed utilities	Chapter 20.5 Telecommunications, Utilities, and Television
Disturbance of Unexploded Ordnance	Chapter 11
Unstable ground conditions	Chapter 11
Vegetation pests and diseases	Chapter 9 (Ecology)

### Consultation

- 20.4.5 The consultation responses from the EIA scoping opinion are set out in the table below. In addition, ongoing consultation is being undertaken with a range of consultees relevant to this subject including environmental health officers, highways officers, the Environment Agency and local aviation establishments, in respect of this topic.

**Table 20.4: EIA Scoping Responses re. Major Accidents and Disasters**

Consultee	Comment	Response Addressed in PEIR/ES
Planning Inspectorate	Scoping Report paragraph 19.2.1 sets out a list of potential impacts from major accidents and disasters to/from the Proposed Development and where these will be assessed in other Chapters in the ES. Impacts include: • Flooding; • Fires and explosion; • Road Accidents; • Hazardous substances; • Rail Accidents; • Aviation accidents;	Human Health assessment summary provided at dedicated section 20.2 in Other Environmental Matters chapter. Signposting to human health assessment in other PEIR and ES chapters



	<ul style="list-style-type: none"> <li>• Damage or cut-off of utilities;</li> <li>• Disturbance of Unexploded Ordnance;</li> <li>• Unstable ground conditions; and</li> <li>• Vegetation pests and diseases.</li> </ul> <p>The above impacts are proposed to be assessed in other chapters such as Human Health (Scoping Report paragraph 19.3.1), however, Human Health is also proposed to be assessed in other chapters, rather than a stand-alone chapter.</p> <p>The ES should not be a 'paperchase' and should clearly signpost where these impacts are assessed in other relevant chapters and where any relevant mitigation measures are secured.</p>	
Bassetlaw District Council	Agreed to the approach set out in the scoping report.	No specific response required
Health and Safety Executive	<p>According to HSE's records the proposed DCO application boundary for this Nationally Significant Infrastructure Project is within multiple consultation zones of major accident hazard sites and major accident hazard pipelines.</p> <p>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.</p> <p>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</p>	<p>Major accident hazard sites and major accident hazard pipelines have been identified and preliminary offsets as required by easements and operator safety distances have been embedded in the Scheme design.</p> <p>Preliminary assessment of the impact of severance of gas and fuel pipelines, and risks from fire and explosions have been set out in Chapter 20 of the PEIR.</p> <p>Construction work will be undertaken under the highest safety standards as set out in the Outline CEMP to avoid major accidents.</p>

	<p>document includes consideration of risk assessments on page 3.</p> <p>Explosives sites - HSE has no comment to make as there are no licensed explosives sites in the vicinity.</p> <p>Electrical Safety - No comment from a planning perspective.</p>	
Lincolnshire County Council	<p>Include details of crime prevention and in respect of major accidents to include [sic] sabotage criminal activity is assessed as pre-planned damage to the scheme could leave it vulnerable to a major accident.</p>	<p>Security measures have been embedded in the Scheme design, including internal-facing perimeter CCTV, palisade fencing around energy storage compounds and substations.</p> <p>A full security strategy will be provided in the DCO application.</p>
West Lindsey District Council	<p>Whilst it is proposed not to have a standalone chapter, the risk of battery fire / explosion should be clearly addressed with (sic) the ES. It is noted that this is picked up in the Air Quality and Socio-Economic chapters.</p>	<p>Baseline conditions for air quality are assessed in Chapter 17 of the PEIR. Preliminary identified impacts from fire and explosions, and impacts therefore on human health, are explored in Chapter 20 of the PEIR. These will be addressed in full in the ES.</p>

### Initial Baseline Findings

#### **Flooding**

- 20.4.6 Baseline data with regard to flooding risk both to on-site and off-site receptors has been considered in **Chapter 10** of this PEIR. Furthermore, baseline data related to the potential impacts of increased surface water flooding as a result of increased precipitation due to climate change have been explored in **Section 7.5**. Together, these conclude the Scheme's development area and areas downstream of it are of a medium sensitivity to impacts from the Scheme.

### **Fire and Explosions**

- 20.4.7 Impacts from fires and explosions related to the scheme will impact on air quality and human health receptors. Baseline conditions for air quality have been explored in **Section 17.5** of this document, which indicate residential receptors are of a high sensitivity to air quality changes. The potential for the disturbance of unexploded ordnance have been explored in **Appendices 11.1-11.4**. The baseline risk from unexploded ordnance is deemed to be low across all parts of the Scheme, and thus is of low sensitivity.
- 20.4.8 Impacts from on-site equipment explosions are likely to impact human health directly based on proximity to equipment or infrastructure most vulnerable to explosion (lithium-ion batteries and substations), and from projected debris. The risk zones for fires and explosions are to be fully defined in the ES to determine the number of residential dwellings, and number of publicly accessible highways or rights of way that are of high or medium sensitivity to impacts from the Scheme.

### **Road Accidents**

- 20.4.9 Baseline data for road accidents has been identified in **Section 14.5** to determine impacts from construction and operational traffic on the road network. Additionally, the Scheme may impact on road users as a result of glint and glare, which has been explored in **Section 16.4**. Due to the potential for hazardous materials – including lithium-ion batteries, transformer oil, and substation insulation gas – to be transported to and from the Site by road during construction and decommissioning, there may be impacts as a result of contamination from hazardous materials as a result of road accidents. These impacts will be assessed in the ES.

### **Rail Accidents**

- 20.4.10 Baseline data for rail accidents will be addressed in the ES. Construction traffic from the Scheme, which includes oversized loads may have the potential to impact the rail network where railway crossings are required to transport equipment. Abnormal load analysis is being undertaken concurrently with the production of the ES and will include a scheme of dialog with Network Rail, including during statutory consultation. The result of this dialog will drive the preferred oversized load vehicle routing. Resultant impacts on the safety of the rail network will be assessed in the ES.
- 20.4.11 Additionally, the Scheme may impact on rail operators as a result of glint and glare, which has been explored in **Section 16.4**. Due to the requirement of the cable routes to cross rail infrastructure at multiple points, there is potential for railways to be undermined during construction as a result of directional drilling. Baseline conditions with regards to ground stability in the locations proposed for directional drilling under railways will be explored in the ES.

### **Aviation Accidents**

- 20.4.12 Baseline data for civil and military aviation accidents are to be determined ahead of the full ES submission. The Scheme could give rise to impacts on civil and military aviation throughout its operational life as a result of glint and glare, which has been explored in **Section 16.4**. Consultation with key stakeholders has identified potential glint and glare conflicts with military aviation associated with RAF Scampton. Mitigation for these conflicts has been identified.

### **Damage or Severance of Utilities**

- 20.4.13 Early consultation with the Health and Safety Executive (HSE), through the EIA Scoping process, has identified that the Scheme falls within the consultation zones of multiple major accident hazard sites and major accident hazard pipelines. HSE have advised that further information will be provided during the statutory consultation period.
- 20.4.14 The cable routes cross or falls near to four National Grid strategic overhead electricity transmission lines, including line 4ZM near the River Trent southwest of Marton, and lines 4VE, 4VK, and ZDA at and around the connection point at Cottam Power Station National Grid Substation.
- 20.4.15 A more expanded list of baseline conditions has been explored in **Section 20.5** of PEIR with regard to other telecommunications and utilities that have been identified as at risk of impact from the Scheme.

### **Unstable Ground Conditions**

- 20.4.16 There is potential for unstable ground conditions within the Sites as a result of current and past mineral mining and extraction activity (as identified in **Appendices 11.1-11.4**). A full planning history search of the Site including a mining history survey and geophysical stability study have been undertaken. The ground conditions survey will inform any required mitigation in developing the design of the proposals.

### **Vegetation, Pests, and Diseases**

- 20.4.17 The new planting proposed can be susceptible to disease and pests. Changing conditions due to climate change may exacerbate this. The failure of planting presents a risk to the natural environment. The existing baseline conditions within the local area with regard to susceptibility to impacts as a result of disease and pests will be explored in **Chapter 9: Ecology** in the ES. Mitigation of impacts, through a landscape planting strategy will take account of the need to plant a diverse range of species that will be tolerant to climate change.

Identification of Potential Impacts and Methods of Mitigation

- 20.4.18 A tabulated list of the potential impacts of the Scheme, and the type of mitigation that can be applied where effects are identified, can be found in Table 20.5 below. These potential impacts will be taken forward for assessment in the ES.

**Table 20.5: Summary of Mitigation Measures and Residual Effects**

Description of Potential Impact	Mitigation/ Enhancement Measures and Residual Effects
<b>FLOODING</b>	
Increased risk of on-site surface water flooding due to increased precipitation due to climate change	The preliminary anticipated cumulative effect across the Scheme area is moderate long-term adverse. Water management measures embedded in the CEMP, and the use of permeable hardstanding, planting of grass and wildflower mix under the PV panel arrays should ensure residual effects are minor, and therefore not significant.
Increased risk of off-site surface water flooding due to increased precipitation due to climate change	The cumulative effect on areas downstream of the Scheme and nearby DCOs is that there could be a moderate long-term adverse impact. Water management measures embedded in the CEMP, alongside the inclusion of embedded mitigation measures in the Scheme design such as vegetated landscape and ecology buffers to watercourses will aim to increase on-site water retention, thus reducing the residual effect to being negligible.
Increased off-site flooding due to increased water discharge to local watercourses	The cumulative effect on areas downstream of the Scheme and nearby DCOs is that there could be a moderate long-term adverse impact. Water management measures embedded in the CEMP, alongside the inclusion of embedded mitigation measures in the Scheme design such as vegetated landscape and ecology buffers to watercourses will aim to increase on-site water retention, thus reducing the residual effect to being negligible.
<b>FIRE AND EXPLOSIONS</b>	
Emission of smoke and particulate matter from major on-site fires	The impacts from major on-site fires on air quality, human health, and ecology are anticipated to be short-term adverse, with the scale of impact to be assessed in the ES. The inclusion of an Outline Battery Fire Safety Management Plan to accompany the ES will ensure that the risks of fire, and thus the residual environmental impacts can be minimised.
Disturbance of unexploded ordnance (UXO)	As a result of potential explosions from UXO, the estimated impacts are moderate short-term adverse. This is to be mitigated through site geophysical surveys to identify potential UXO. Construction workers will be held to strict health and safety standards, and a 'discovery strategy' protocol to be embedded in the CEMP to ensure UXO can be avoided or safely cleared if practicable. The residual effects are therefore expected to be negligible, subject to full assessment in the ES.

Description of Potential Impact	Mitigation/ Enhancement Measures and Residual Effects
Injury and death from explosions	<p>The impacts from on-site explosions are anticipated to be short-term adverse, with the scale of impact to be assessed in the ES. This is to be mitigated through site geophysical surveys to identify potential UXO and gas, fuel, and power utilities. Construction workers will be held to strict health and safety standards, and a 'discovery strategy' protocol to be embedded in the CEMP to ensure UXO can be avoided or safely cleared if practicable and utilities can be avoided. The residual effects are therefore expected to be negligible, subject to full assessment in the ES.</p> <p>The inclusion of an Outline Battery Fire Safety Management Plan to accompany the ES will ensure that the risks of fire, and thus the residual environmental impacts can be minimised.</p>
<b>ROAD ACCIDENTS</b>	
Increased risk of accidents from increased HGV use of local highways	The preliminary assessment of road safety anticipates there is a negligible effect on road safety from the Scheme's construction, operation, and decommissioning. The implementation of a Construction Traffic Management Plan (CTMP) will ensure that the residual cumulative effects of the construction of the Scheme and any other concurrent DCO projects and other developments remains negligible.
Glint and glare to vehicle drivers on national and regional roads	Preliminary assessment indicated there is potential for glint and glare to have up to a moderate long-term adverse impact on road safety. This will be clarified through full assessment in the ES. On-site screening to obstruct views of solar panels, and backtracking of tracking panels to limit long-term glare to road users should provide sufficient mitigation that the residual impacts are negligible.
Contamination from hazardous material being transported to site falling into watercourses and groundwater	Direct impacts to watercourses and groundwater as a result of road accidents have not been assessed at PEIR. The likely effects can be estimated as being moderate short-term adverse from the initial assessment of contamination to these receptors from on-site hazardous material storage. A CTMP will be implemented to manage and control traffic movements in coordination with other developments. This will ensure that the residual cumulative effects of the construction of the Scheme and any other concurrent DCO projects and other developments is minimised.
<b>RAIL ACCIDENTS</b>	
Increase risk of rail/road accidents due to abnormal loads crossing railways	Abnormal load analysis is being undertaken concurrently with the production of the ES and will include a scheme of dialog with Network Rail, including during statutory consultation. The result

Description of Potential Impact	Mitigation/ Enhancement Measures and Residual Effects
	of this dialog will drive the preferred oversized load vehicle routing. Any resultant impacts on the safety of the rail network will be assessed in the ES. The implementation of the CTMP will be in consultation with Network Rail to ensure residual effects are minimised.
Glint and glare to rail operators	Preliminary assessment indicated there is potential for glint and glare to have up to a minor long-term adverse impact on rail safety. This will be clarified through full assessment in the ES. On-site screening to obstruct views of solar panels, and backtracking of tracking panels to limit long-term glare to rail operators should provide sufficient mitigation that the residual impacts are negligible.
Risk of railway undermining due to directional drilling for cable route	Where required, directional drilling under railways is to be undertaken in consultation with Network Rail and in coordination with other developments. Initial impacts are anticipated to be short-term adverse and will be assessed in full in the ES. Best industry practice will be adhered to, and the discussions with Network Rail will be fed into the CEMP ahead of DCO submission to minimise the scale and severity on any anticipated impacts.
<b>AVIATION</b>	
Glint and glare to civilian pilots and air traffic controllers	Preliminary assessment indicated there is potential for glint and glare to have up to a minor long-term adverse impact on civilian aviation safety. This will be clarified through full assessment in the ES. On-site screening to obstruct views of solar panels, and backtracking of tracking panels to limit long-term glare to pilots and air traffic controllers should provide sufficient mitigation that the residual impacts are negligible.
Glint and glare to military pilots and air traffic controllers	Preliminary assessment indicated there is potential for glint and glare to have up to a moderate long-term adverse impact on military aviation safety. This will be clarified through full assessment in the ES. On-site screening to obstruct views of solar panels, and backtracking of tracking panels to limit long-term glare to pilots and air traffic controllers should provide sufficient mitigation that the residual impacts are negligible.
<b>UNSTABLE GROUND CONDITIONS</b>	
Risk of ground collapse due to construction activities over previous mining activity areas	Initial surveys have been undertaken to establish the baseline ground stability across the Scheme sites. Whilst a full assessment on the risks of ground collapse to on-site and off-site receptors, this will be assessed in full in the ES. Any initial survey findings are to be fed into the CEMP to ensure risks to on-site safety and the Scheme's integrity are minimised.
<b>VEGETATION PESTS AND DISEASES</b>	



Description of Potential Impact	Mitigation/ Enhancement Measures and Residual Effects
New planting susceptible to diseases and pests	Assessment of the impacts of pests and diseases on the proposed planting on the Scheme have not been assessed at PEIR and will be completed for the ES. Identified risks are to be addressed in the Landscape and Ecological Management Plan, which is to be produced to accompany the ES. This will provide a mitigation strategy to ensure the environmental effects of pests and diseases on vegetation are minimised.

## 20.5 Telecommunications, Utilities, and Television

20.5.1 Telecommunications, utilities, and television receptors have been scoped out of the ES assessment. Effects relating to existing infrastructure are not environmental effects and there is no requirement to include an assessment of these effects under the EIA Regulations. However, given the nature of solar park developments, they have the potential to affect existing utility infrastructure above and below ground.

### Baseline

20.5.2 As is to be expected due to the geographical extent of the Scheme, there are a significant number of telecoms and utility services crossing the Sites and cable routes. These provide a large number of properties including residences, business and schools within the local area, which also benefit from access to television connections.

20.5.3 The telecommunications and utilities providers identified across the Scheme Sites are listed below:

- Openreach (telecoms);
- Virgin Media (telecoms);
- West Burton Energy (gas);
- Uniper (gas);
- Cadent (gas);
- Severn Trent Water (water);
- Anglian Water (water);
- Northern Powergrid (electricity);
- Western Power Distribution (electricity); and
- DIO (abandoned fuel pipelines).

20.5.4 Initial discussions have been undertaken with many of the utilities, telecommunications and television providers listed above, to identify potential assets across the Sites. A schedule of the discussions undertaken to date is included in Table 20.6 below.

**Table 20.6: Schedule of Discussion with Providers to Date**

Type of Provider	Provider	Discussions to date
Telecommunications	Openreach	Assets identified on the edges of CO1 and CO2 and across CO3a. Openreach will come out and mark up assets before construction. Safe dig procedure requires that mechanical borers and/or excavators shall not be used within 1 metre of apparatus or 2 metres of any pole without the supervisory presence of a Company Representative. And if for completion of the works the Contractor intends using pile driving equipment within 10 metres of Apparatus the Contractor shall advise the Company Representative, in writing, in order that any special protective measures for the Apparatus affected may be arranged.
Telecommunications	Virgin Media	Assets in the roads next to CO3a. Ongoing communication.
Utilities – Gas	West Burton Energy	Gas pipeline running through CO2. Easement within the 25m maintenance strip currently being discussed with operator's consultants. No pipelines running through CO3a. Gas pipeline identified within cable route search area.
Utilities – Water	Severn Water	No assets identified within CO2. Or CO3.
Utilities – Water	Anglian Water	Assets at the edges in surrounding roads and verges of CO3a. 3.5 metre maximum offset requested. Anglia Water scoping response identifies a range of pipelines within the search area with offset requirements ranging between 2.25m and 6m.
Utilities – Electricity	Northern Powergrid	11kV powerlines running across CO2. 11kV and 132kV overhead cables on CO3a. Standard 6 metre set back from these assets requested.
Utilities – Electricity	Western Power Distribution	11kV overhead lines require a 6.6m easement either side, and underground cables require 2m easement either side. All apparatus is required to be accessible.
Utilities – Fuel	DIO (MoD Abandoned Pipelines)	Oil pipeline identified within the cable route search area. Confirmation received from the operator that pipeline is disused and no separation distances are required.

Television	Television Providers	Given the low height of the proposed development this is not considered to be an issue. If during consultation with telecommunication providers, it is raised as a concern it will be considered through the design process.
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### Identification and Evaluation of Key Effects

- 20.5.5 The proposed Scheme consists of three solar power electricity generation stations, each with associated on-site infrastructure including inverters, cabling, energy storage and substations, connected by underground cable routes to the Point of Connection at Cottam Power Station National Grid Substation.
- 20.5.6 Underground and overhead telecommunication and utility services have been identified across all Site areas and the cable routes through a desk-based mapping exercise drawing on information provided by all relevant utility providers. Continued discussions with these providers through the design stages of this project has helped to ensure legal, safe, and practical off-set distances to utilities have been actively integrated into the Scheme design. Locations of utilities have furthermore been confirmed on Site through topographical and geophysical surveys.
- 20.5.7 The survey and agreed off-set distance information will be fed into the Construction Environment Management Plan to ensure construction work is carried out such that impacts on services are minimised. Where direct conflict is anticipated, such as is of greater likelihood along the Scheme’s cable routes, the crossing of utilities will be carried out in direct collaboration with the relevant utilities provider. The Scheme is therefore anticipated not to have any significant effects on telecommunications services and utilities.
- 20.5.8 The Scheme design is of a generally low height across the development area, with the tallest elements (up to a maximum 13m in height) likely to be found at the 400kV substation. As a result, the Scheme is not anticipated to impact on the reception of radio and television in residences, business, and other users.

### Mitigation Measures

- 20.5.9 The design of the Scheme layout has utilised topographical and geophysical survey data, alongside mapping provided by telecommunication and utilities providers to ensure underground and overground utilities are adequately offset from. This will ensure safe working procedures can be maintained, access can be provided for utility maintenance, and crucially, construction impacts can be mitigated against. The measures set out in the final CEMP, to be submitted in support of the DCO application, will aim to ensure impacts on telecommunication and utilities can be

minimised. In addition, protective provisions for the benefit of statutory undertakers and electronic communications network code operators will be included in the DCO.

- 20.5.10 Furthermore, where the proposed cable routes cross telecommunication and utilities, the cables will be laid so that utilities are crossed at 90° where possible and will be suitably offset where running parallel. This will ensure construction impacts will be kept to a minimum.

#### Residual Effects

- 20.5.11 The Scheme is to be designed so that sufficient off-set distances are provided between on-site infrastructure associated with the development and underground and overground services. As such, no residual effects to telecommunications, utilities, and television are anticipated.

## **20.6 Light Pollution**

- 20.6.1 The EIA scoping response states:

*Impacts of lighting on ecological receptors and glint and glare impacts are proposed to be included in the Landscape and Visual and Ecology assessment Chapters of the ES respectively rather than being assessed in a separate Chapter.*

*The Inspectorate is content with this approach. As highlighted above, the ES should include a detailed description of the lighting philosophy and the measures taken to avoid or minimise lighting impacts on human and ecological receptors.*

- 20.6.2 The ES will signpost where light pollution has been addressed in the Landscape and Visual and Ecology chapters. Preliminary effects from light on ecology receptors have been identified in **Section 9.6 of Chapter 9: Ecology**. Impacts on landscape and visual receptors will be assessed in the LVIA, and in the ES at **Chapter 8: Landscape and Visual**.

- 20.6.3 The ES will clearly explain the construction, operational and decommissioning lighting strategy on Site including details of directionality, intermittent lighting, and an assessment of associated effects. It will also describe any measures necessary to avoid or mitigate lighting effects.

- 20.6.4 Impacts from construction are already due to be mitigated against through the strategy set out in the draft Outline CEMP. For light pollution, the Outline CEMP and lighting strategy will together help to ensure lighting requirements for construction are temporary in nature and in operation during normal working hours only, except in specified circumstances. The direction, duration, and orientation of lighting will be controlled, ensuring that impacts are reduced on sensitive receptors.