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Outline Decommissioning Environmental Management Plan

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The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(a)

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (SI 2017/572) – Regulation 14

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# 1. Introduction

## 1.1 Purpose of Report

- 1.1.1 This document is an outline Decommissioning Environmental Management Plan (ODEMP) relevant to the decommissioning phase of Beacon Fen Energy Park (hereafter referred to as the 'Proposed Development') which has been prepared by Wardell Armstrong (part of SLR) (WA) on behalf of Beacon Fen Energy Park Ltd (the Applicant). This ODEMP supports the **Environmental Statement (ES) (Document Ref: 6.2, ES Vol.1)** for the Proposed Development.

## 1.2 Proposed Development

- 1.2.1 The Proposed Development comprises a solar photovoltaic (PV) electricity generating facility and battery energy storage system (BESS), with associated export and connection infrastructure to the existing National Grid Energy Transmission (NGET or 'National Grid') Bicker Fen Substation.
- 1.2.2 The Proposed Development consists of a ground-mounted PV electricity generation and BESS, together with associated grid connection infrastructure, at an area sited approximately 6.5 km northeast of the village of Sleaford and 2.5 km north of Heckington.
- 1.2.3 The Proposed Development comprises a combined area of approximately 757.6 hectares (ha) of land, which is inclusive of the Solar Array Area (529.2ha), the Cable Route Corridor (183.1ha) and the Bespoke Access Corridor (45.4ha), along with associated infrastructure, landscaping and biodiversity measures.
- 1.2.4 The Site consists of three key sections, summarised below and described further in **Chapter 2: The Proposed Development (Document Ref: 6.2, ES Vol.1, 6.2.2)** of the ES:
- The Solar Array Area (comprising the solar PV and BESS infrastructure);
  - The Cable Route Corridor (connecting the Solar Array Area to the Bicker Fen National Grid 400kV substation); and
  - The Bespoke Access Corridor (for a bespoke site access).

## 1.3 The Order Limits

- 1.3.1 The Order Limits (i.e. 'the Site') of the Proposed Development have an approximate area of 757.6 ha, comprising three key sections: the Solar Array Area, the Cable Route Corridor and the Bespoke Access Corridor, listed above.
- 1.3.2 The Solar Array Area is located to the north of Heckington and adjacent to Ewerby Thorpe. The Cable Route Corridor is elongated in shape and covers an area southeast of the Solar Array Area, extending from the south of the Solar Array Area to the existing Bicker Fen Substation. The primary means of access to the Site will be via the Bespoke Access Road from the A17 and will

facilitate all phases of the Proposed Development (i.e. construction, operation/maintenance and decommissioning) of the Solar Array Area.

1.3.3 The principal operational components of the Proposed Development are:

- Solar Arrays;
- Power Conversion Units;
  - Inverters;
  - Transformers;
- Battery Energy Storage System (BESS);
- Onsite Substation;
- Onsite Cabling;
- Fencing;
- Water supply and drainage infrastructure;
- Cable Route; and
- Bespoke Access Road.

1.3.4 The parameters that have been set for each of the above components and other relevant matters are set out in Table 1.1, below.

**Table 1.1 Design Parameters**

COMPONENT	PARAMETER
<b>SOLAR ARRAY AREA PARAMETERS</b>	
<b>Solar Arrays</b>	<b>Maximum height of arrays will be:</b> <ul style="list-style-type: none"> <li>• 3.9m above ground level in fields in the east; and</li> <li>• 3.5m above ground level in fields towards the west, south and an isolated field in the north.</li> </ul> See <b>Figure 2.4 Panel Heights (Document Ref: 6.4 ES Vol.3, 6.4.5)</b> for distribution across the Solar Array Area.
	<b>Maximum panel dimensions:</b> 2.5m long and 1.5m wide
	<b>Panel orientation:</b> Fixed / static, facing due south and tilt angled 10° to 45° from horizontal.
	Module frame to be built from anodised aluminium or steel.
	Tables will be supported by galvanized steel poles, driven approximately 1.0m to 2.5m into the ground.
<b>Inverters</b>	Type: String <b>or</b> Central, dependent on worst case for the relevant environmental assessment.
	<b>String</b> A single string inverter unit could be utilised for up to every 32 (array) strings, with the string inverters small enough to be mounted underneath the modules.
	<b>Central</b> <ul style="list-style-type: none"> <li>• The central inverters are larger and require their own electrical cabinet enclosures, but there would be fewer required.</li> <li>• Central inverters would be located at regular intervals amongst the PV arrays, occupying an area (anticipated to be approximately 12m x 3m and up to 3.5m in height) that would be reliant upon the intervals.</li> </ul> Two options for the central inverters, if they are to be used, are currently being considered:

COMPONENT	PARAMETER
	<ul style="list-style-type: none"> <li>• <b>Outdoor equipment:</b> Placing the equipment (i.e., inverter, transformer and switchgear) outdoors and independent from each other, with an approximate footprint of up to 40m<sup>2</sup> and a height of up to 3.5m.</li> <li>• <b>Indoor (i.e. enclosed) equipment:</b> Placing the equipment within a purpose-built enclosure similar to a 40-foot ISO High Cube Container, with an approximate footprint of up to 40m<sup>2</sup> and a maximum height of up to 3.5m.</li> </ul>
Transformers	<b>MV Transformer (800V up to 33kV)</b> <ul style="list-style-type: none"> <li>• <b>Weight:</b> c. 18 tonnes per unit (central inverter plus the transformer).</li> <li>• <b>Footprint:</b> <ul style="list-style-type: none"> <li>○ <b>Outdoor:</b> transformer footprint of up to 6m x 3.5m and height of up to 3.5m; or</li> <li>○ <b>Indoor (i.e. enclosed):</b> installed within a container with a footprint of up to 7m x 3.5m and height of up to 3.5m.</li> </ul> </li> </ul>
	<b>4x High Voltage (HV) Transformers (33kv up to 400kv)</b> <ul style="list-style-type: none"> <li>• <b>Weight:</b> 160 tonnes per unit.</li> <li>• <b>Footprint:</b> up to 15m x 9.5m and height of up to 10.5m.</li> </ul>
	<b>Main Unit transport size:</b> L x W x H: 8.35m x 3.885m x 4.625m.
Switchgear	<p>The switchgear may be an individual standalone unit within its own enclosure or may be pre-assembled with transformers and inverters to form a single contained unit.</p> <p>Maximum footprint of 3m x 3.5m and up to 3.5m in height.</p>
Power Conversion Units	<p>A Power Conversion Unit (PCU) comprises an inverter, a transformer, and switchgear, which can be grouped together or distributed throughout the Solar Array Area.</p> <p>If grouped together: maximum dimensions 16m x 3.5m and up to 3.5m.</p> <p>The different types of inverters and transformers considered for the Proposed Development are outlined above and whether indoor or outdoor equipment is utilised can be termed an 'Indoor Solar Station' or an 'Outdoor Solar Station'.</p>
Battery Energy Storage System (BESS)	<p>Batteries to be placed within individual enclosures, arranged regularly within a compound with vehicular access available to each unit. Final number dependent upon power capacity and duration of energy storage.</p> <p><b>BESS container dimensions:</b> up to 8m x 3m, with a height of up to 4.5m.</p> <p>Total size and distribution of BESS across Site will be reliant on grid conditions at the time of construction design.</p> <p>AC coupled single compound.</p>
Firewater Storage Tank(s)	<p>The number of aerial rigid tanks are to be determined as part of detailed design; however, this is likely to either be two 120m<sup>3</sup> tanks or four 60m<sup>3</sup> tanks with a total capacity of</p>



COMPONENT	PARAMETER
	240m <sup>3</sup> .
	<b>Maximum dimensions:</b> L x Diameter x H: 18m x 3m x 3.5m
<b>Rainwater Harvesting Tank(s)</b>	Rainwater harvesting will be used where feasible. This will be confirmed as part of detailed design.
<b>Reservoir</b>	The reservoir located at National Grid Reference: TF 14404 47190 will be retained for irrigation of onsite habitats and will be available to first responders. The reservoir has a volume of approximately 27,276 cubic metres.
<b>Onsite Substation</b>	<p>The shape of the Onsite Substation will be defined as part of detailed design and will not exceed an area of <b>40,000m<sup>2</sup></b>. The footprint of the single onsite substation compound is likely to take the form of either a rectangle <b>or</b> a square with the following dimensions:</p> <ul style="list-style-type: none"> <li>• <b>Rectangle:</b> up to 250m x 160m and a height of up to 13m; or</li> <li>• <b>Square:</b> up to 200m x 200m and a height of up to 13m.</li> </ul> <p>The Onsite Substation would have up to 4 HV transformers and is expected to include a control building, office space, welfare facilities, a 33kV switchroom as well as operational monitoring and maintenance equipment and equipment for reactive compensation and/or harmonic filtering. The design control building and office/welfare will be defined as part of detailed design.</p>
<b>Onsite Cabling (within Solar Array Area)</b>	<p>Low voltage electrical cabling required to connect PV modules and BESS to inverters (typically via 1.0/1.5kV DC cables), and inverters to the onsite transformers (typically via 0.4/1kV AC cables).</p> <ul style="list-style-type: none"> <li>• <b>Indicative dimension of cable trenches:</b> up to 1.2m in width and between 0.8m and 1.6m in depth (in limited locations, the depths can be increased to 2.5m or over to account for local anomalies).</li> </ul> <p>Higher voltage cables (typically 33kV) required between transformers and switchgear and from switchgear to the substations.</p> <ul style="list-style-type: none"> <li>• <b>Indicative dimension of cable trenches:</b> up to 1.2m in width and up to 1.6m in depth (in limited locations, the depths can be increased to 2.5m or over to account for local anomalies).</li> </ul> <p>Higher voltage cables to share trenches with lower voltage cables on the same route, where possible.</p> <p>Onsite cabling between PV modules and inverters anticipated to be above ground level, placed along row of racks fixed to mounting structure, placed underground, between racks and inverter. All other onsite cabling to be underground wherever possible.</p> <p>Data cables to be installed to allow monitoring during operation.</p>
	<b>Perimeter fence:</b> up to 3m high consisting of post and wire

COMPONENT	PARAMETER
Fencing and Security	deer fencing.
	Pole mounted internal-facing closed circuit television (CCTV) systems to be deployed around perimeter of the operational Solar Array Area of the Site; anticipated to be 5m high.
	<p><b>Acoustic fence:</b> If required around the BESS infrastructure this would be up to 4m high.</p> <p><b>Security fence:</b> This would be installed around substation compounds and other electrical infrastructure / compounds.</p> <ul style="list-style-type: none"> <li>Security fence to be up to 3.4m high.</li> <li>0.35m concrete beam below ground.</li> </ul>
Lighting	Motion detection security lighting will be used along with infrared lighting provided by the CCTV security system. Lighting at the BESS and Onsite Substation will be passive infrared (PIR) operated, calibrated to detect vehicles and personnel. All visible lighting will be 50W, installed at a maximum height of 4m with downward light fittings to prevent light spillage.
<b>CABLE ROUTE CORRIDOR PARAMETERS</b>	
Cable Route	<ul style="list-style-type: none"> <li>Underground cabling is the adopted standard and proposed option.</li> <li>Standard trenching will be primarily utilised for crossings including methods such as open-cut, and cofferdam.</li> <li>Trenchless techniques, such as auger boring, horizontal directional drilling (HDD), or micro-tunnelling will be undertaken where environmental assessment determines that mitigation for an environmental impact is required or design constraints concludes the need for an alternative to open trenching.</li> </ul>
	<b>Length:</b> Approximately 13km (from Site to Bicker Fen)
	<b>Working width during construction:</b> 30m
	<ul style="list-style-type: none"> <li><b>Open trench excavation dimensions:</b> Approximately 2m wide x 2.5m depth excavated for each cable subject to design and ground conditions.</li> <li><b>Trenchless techniques maximum depth:</b> Up to 25m depth subject to design and ground conditions.</li> </ul>
<b>BESPOKE ACCESS ROAD PARAMETERS</b>	
Bespoke Access Road	<p>A Bespoke Access Road from the A17 to the Solar Array Area, comprising a 6m wide carriageway, will be provided to facilitate the construction, operation/maintenance and decommissioning phases of the Proposed Development. The carriageway will be widened on some bends to a width of 8m, to allow for the passage of abnormal loads, and for two way Heavy Goods Vehicle (HGV) traffic. Additionally, overrun areas will be provided where necessary for abnormal loads.</p> <p>The soil associated with the reprofiling required to construct the road will be stored as required in accordance with good</p>



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COMPONENT	PARAMETER																																										
	<p>practice guidance alongside the Bespoke Access Road.</p> <p><b>Length:</b> Approximately 3.2km (from A17 to the Site)</p> <p><b>Working width during construction:</b> 50m</p>																																										
Fencing and Security	<p>Fencing will be required along the boundary of the working area during construction and gates will be installed at the entry points to prevent unauthorised access. However, this is subject to detailed design. Gates will also be present where the road crosses Asgarby Road and Heckington Road.</p>																																										
GENERAL PROPOSED DEVELOPMENT PARAMETERS																																											
Construction Traffic	<p>The Annual Average Daily Traffic (AADT) and the Annual Average Weekly Traffic (AAWT) for the full and peak construction periods are presented below and there will be material daily variation over that period. Construction traffic predictions and routing are discussed further in <b>Chapter 9: Access and Traffic (Document Ref: 6.2 ES Vol.1, 6.2.9).</b></p> <table> <tr> <th></th> <th colspan="2">Full Construction Period</th> <th colspan="2">Peak Construction (12months: Aug 2027 to Jul 2028)</th> <th>Peak Month (October 2027)</th> </tr> <tr> <th></th> <th>AADT</th> <th>AAWT</th> <th>AADT</th> <th>AAWT</th> <th>Average Daily Flow (two-way)</th> </tr> <tr> <td>Car</td> <td>116</td> <td>163</td> <td>219</td> <td>307</td> <td>332</td> </tr> <tr> <td>Minibus</td> <td>11</td> <td>16</td> <td>21</td> <td>30</td> <td>32</td> </tr> <tr> <td>LGV</td> <td>5</td> <td>7</td> <td>3</td> <td>5</td> <td>15</td> </tr> <tr> <td>HGV</td> <td>36</td> <td>51</td> <td>58</td> <td>82</td> <td>130</td> </tr> <tr> <td>Total</td> <td>168</td> <td>236</td> <td>302</td> <td>424</td> <td>509</td> </tr> </table>		Full Construction Period		Peak Construction (12months: Aug 2027 to Jul 2028)		Peak Month (October 2027)		AADT	AAWT	AADT	AAWT	Average Daily Flow (two-way)	Car	116	163	219	307	332	Minibus	11	16	21	30	32	LGV	5	7	3	5	15	HGV	36	51	58	82	130	Total	168	236	302	424	509
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Phasing	<p><b>Construction:</b></p> <p>The rate of construction will be dependent on environmental and market factors. However, construction is anticipated to commence in 2027 and last for 2.5 to 5 years in total. The Bespoke Access Road and Cable Route can commence construction at the same time and are anticipated to last between:</p> <ul style="list-style-type: none"> <li>Bespoke Access Road: 6 to 12 months</li> <li>Cable Route: 12 to 24 months</li> </ul> <p>All material construction on the Solar Array Area will follow the completion of the Bespoke Access Road and last between 24 to 36 months. Some limited preparatory works may be carried out on the Solar Array Area simultaneously to the construction of the Bespoke Access Road.</p> <p>Construction of the Bicker Fen substation extension will be undertaken separately by National Grid and is anticipated to last 60 weeks.</p>																																										
	<p><b>Operation:</b></p> <p>The Bespoke Access Road will become operational during the construction phase of the Solar Array Area and Cable Route and will remain in operation through the decommissioning phase.</p> <ul style="list-style-type: none"> <li>Bespoke Access Road: ~45 years</li> <li>Solar Array Area and Cable Route: ~40 years</li> </ul>																																										
	<p><b>Decommissioning:</b></p> <p>The decommissioning phase of the Proposed Development</p>																																										

COMPONENT	PARAMETER
	<p>is anticipated to last between 12 to 36 months. This is variable depending on landowner requirements.</p> <ul style="list-style-type: none"> <li>• <b>Solar Array Area:</b> <ul style="list-style-type: none"> <li>○ All relevant principal equipment located within the Proposed Development will be removed and recycled or disposed of in accordance with good practice and market conditions at the time.</li> <li>○ This includes removing all solar PV array infrastructure including modules, mounting structures, inverters, transformers, switchgear, the Onsite Substation, BESS, fencing and ancillary infrastructure. All waste will be disposed of in accordance with the legislation at the time of decommissioning.</li> <li>○ Foundations and other below ground infrastructure, which are not practicable to remove, will be cut below the surface to enable future ploughing. Any piles would be removed.</li> <li>○ Buried medium voltage cables would either be removed and land restored or remain in situ. Each environmental assessment considers the option which represents the worst-case scenario, relevant to the topic under consideration.</li> </ul> </li> <li>• <b>Cable Connection:</b> <ul style="list-style-type: none"> <li>○ The 400kv cable will remain in situ.</li> </ul> </li> <li>• <b>Bespoke Access Road:</b> <ul style="list-style-type: none"> <li>○ The Bespoke Access Road is presently assumed to be removed during decommissioning. The road will likely be the last aspect to be removed as it will be used to facilitate decommissioning of the Solar Array Area. Whilst it is assumed that the road will be removed, it is possible that engagement with the landowners at that time will establish a preference for it to be retained. Optionality has been deliberately retained in the Application to facilitate such a scenario. For the purposes of the ES, each topic has assumed the removal of the road on the basis that this will, at the time of decommissioning, have a greater potential impact than retention, so allowing for a conservative assessment of the potential significant effects. <u>If the Bespoke Access Road is to be removed, the detailed approach will be set out in the detailed DEMP. Waste materials will be managed in line with the waste hierarchy and best practices, as outlined in <b>Appendix 17.2 Waste and</b></u></li> </ul> </li> </ul>

COMPONENT	PARAMETER
	<p><u>Recycling Strategy (Document Ref: 6.3 ES Vol.2, 6.3.103). It is anticipated that material from the Bespoke Access Road, if removed, will be treated locally or reused where possible. This is not expected to result in any significant impact on local waste management facilities or overall waste capacity.</u></p> <ul style="list-style-type: none"> <li>• <b>Bicker Fen Substation:</b> <ul style="list-style-type: none"> <li>○ The works undertaken at the Bicker Fen substation will remain in situ.</li> </ul> </li> </ul>

## 1.4 Decommissioning Assessment and Considerations

- 1.4.1 This ODEMP has been produced for the purposes of the DCO application. Provision and approval of a final detailed DEMP (or multiple DEMPs, should decommissioning be undertaken in phases), which must be substantially in accordance with this ODEMP, is secured through Requirement 18 in Schedule 2 to the **Draft Development Consent Order (DCO) (Document Ref: 3.1)**.
- 1.4.2 The purpose of this document is to detail and define the principles and measures for successfully managing and, where deemed necessary, mitigating the environmental effects anticipated in relation to activities progressed during the decommissioning phase of the Proposed Development.
- 1.4.3 Specifically, this document details and secures how the relevant mitigation measures and monitoring requirements presented within the Chapters 6 to 16 of the **Environmental Statement (Document Ref: 6.2, ES Vol.1)** will be implemented during decommissioning.
- 1.4.4 This ODEMP has been prepared with the objective of compliance with the relevant legislation and to secure the necessary mitigation measures identified through the Environmental Impact Assessment (EIA) process. Any additional licences, permits or approvals that are required for the decommissioning phase of the Proposed Development (where the requirement to seek a licence or permit has not been disapplied by the DCO) will be set out in the detailed DEMP(s), including any environmental information submitted in respect of them.
- 1.4.5 A Principal Decommissioning Contractor will be appointed prior to the start of decommissioning stage. The Principal Decommissioning Contractor will be responsible for following the environmental controls documented in this ODEMP and the implementation of the detailed DEMP(s). This will be a contractual responsibility to the Applicant, as the Applicant is ultimately responsible for compliance with the DCO.
- 1.4.6 Prior to the commencement of the decommissioning phase, the detailed DEMP(s) will be produced by the Principal Decommissioning Contractor for the Proposed Development for either the part of the Proposed Development that is being decommissioned or the Proposed Development in its entirety. Before decommissioning can commence, detailed DEMP(s) must be

submitted to the relevant planning authority for approval and must be substantially in accordance with this ODEMP.

1.4.7 In-line with the requirements of Schedule 2, Part 1, Requirement 18, Decommissioning and Restoration of the **Draft DCO (Document Ref: 3.1)**, the detail DEMP(s) should be adhered to following:

- 1) Decommissioning of the authorised development must commence no later than 40 years following the date of final commissioning of the authorised development.
- 2) Unless otherwise agreed with the relevant planning authority, no later than 12 months prior to the date the undertaker intends to decommission any part of the authorised development, the undertaker must notify the relevant planning authority of the intended date of decommissioning.
- 3) Within 12 months of the date notified pursuant to sub-paragraph (2), the undertaker must submit to the relevant planning authority for that part a decommissioning environmental management plan for approval which must include a decommissioning traffic management plan and site waste management plan, in consultation with the Environment Agency.
- 4) Where the undertaker decides to decommission a part of the authorised development that falls within the administrative areas of multiple planning authorities, the decommissioning environmental management plan must be submitted to each relevant planning authority and the approval of all relevant planning authorities is required for the purposes of this paragraph.
- 5) The decommissioning environmental management plan must be substantially in accordance with this ODEMP.
- 6) No decommissioning works must be carried out until the relevant planning authority has approved the decommissioning environmental management plan submitted in relation to those works.
- 7) The decommissioning environmental management plan must be implemented as approved.
- 8) This requirement is without prejudice to any other consents or permissions that may be required to decommission any part of the authorised development.

1.4.8 Prior to any dismantling of solar panels during the decommissioning phase, the Proposed Development will be de-energized and isolated from all external electrical lines for safety purposes.

1.4.9 All the solar infrastructure, including PV modules, Onsite Substation, mounting structures, inverters, transformers, switchgear, battery energy storage system (BESS), fencing and ancillary infrastructure will be removed and recycled or disposed of in accordance with good practice following the waste hierarchy as mentioned in Section 1.12 of this ODEMP, with materials being reused or recycled wherever possible. All waste will be disposed of in accordance with relevant legislation in force at the time of decommissioning.

1.4.10 Any damage to agricultural drains will be fixed as and when they are (if they are) damaged. Thus, any damage that may have occurred during the construction and operational phases will be fixed during construction and operation, respectively. Any damage that may occur during the

decommissioning phase will likewise be fixed during decommissioning of the Proposed Development.

- 1.4.11 Foundations and other below ground infrastructure, which are not practicable to remove, will be cut below the surface to enable future ploughing. Any piles will be removed.
- 1.4.12 The decommissioning of the Solar Array Area will include the removal of the paths and potential reversion of grassland underneath the arrays to arable status. Any preference of the landowner for the internal access tracks to be left *in situ* would be discussed and agreed with the landowners at the time of decommissioning, and would be subject to local planning authority (LPA) approval.
- 1.4.13 Any landscape planting, such as planting of trees, hedgerows and scrub created to deliver biodiversity mitigation and enhancement associated with the Proposed Development that has potential to contain protected species would be left *in situ* (where possible) when the land comprising the Site is handed back to landowners. After this point, the landowners will have the ability to manage their land as they wish (within the restrictions of the governing legislation and planning system), and the involvement of the Applicant would cease.

## 1.5 Decommissioning Programme

- 1.5.1 The decommissioning phase of the Proposed Development is anticipated to last between approximately 12 and 36 months and is estimated to begin around 2070. This is based on the assumptions that the Proposed Development would commence construction in 2027 and last between 2.5 to 5 years. The overall lifespan of the entire Proposed Development, encompassing construction and decommissioning, is expected to be approximately 45 years. However, the decommissioning must start no later than 40 years following the date of final commissioning of the authorised development, as required by Schedule 2, Part 1 of the **Draft DCO (Document Ref: 3.1)**.
- 1.5.2 The Bespoke Access Road will be constructed in advance of material construction commencing on the Solar Array Area (2.5 to 5 years) and will facilitate construction in that area. The Bespoke Access Road is likely to remain in operation during the decommissioning phase (1 to 3 years).
- 1.5.3 At the time of writing this ODMEP, the proposed decommissioning programme for each component of the Proposed Development is anticipated to be as follows:
- **Bespoke Access Road:** The Bespoke Access Road will likely be the last aspect to be removed as it will be used to facilitate decommissioning of the Solar Array Area. Whilst it is assumed that the Bespoke Access Road will be removed, it is possible that through engagement with the landowners at that time of decommissioning, it may be established that there is a preference for it to be retained. Optionality has been deliberately retained in the Application to facilitate such a scenario. For the purposes of the **Environmental Statement (Document Ref: 6.2, ES Vol.1)**, each environmental topic has assumed the removal of the road (unless otherwise stated in the

relevant chapter) on the basis that this will, at the time of decommissioning, have a greater potential impact than retention, so allowing for a conservative assessment of the potential significant effects.

- **Solar Array Area:** As part of the decommissioning phase, all PV modules, mounting structure, inverters, transformers, switchgear, BESS, fencing, ancillary infrastructure and Onsite Substation would be removed from Site and recycled or disposed of in accordance with good practice and market conditions at that time. Foundations and other below ground infrastructure that are not practicable to remove, will be cut below the surface to enable future ploughing. Any piles will be removed. Buried medium voltage cables would either be removed and the land restored or would be left *in situ*. For the purposes of the **Environmental Statement (Document Ref: 6.2, ES Vol.1)**, each environmental topic has considered the option of removal or remaining *in situ* that represents the worst-case scenario relevant to the respective topic under consideration.
- **Cable Route:** The 400kV cable will not be removed as part of the decommissioning phase and will, instead be made safe and remain *in situ*.
- **Bicker Fen Substation:** It is anticipated that the works undertaken as part of the extension at the Bicker Fen substation will also remain *in situ* (and under National Grid's control).

- 1.5.4 The detailed DEMP(s) will be prepared having regard to any legislation, guidance and / or permitting regimes that are in force and applicable to the decommissioning works that need to be undertaken at the point at which the detailed DEMP(s) are prepared.

## 1.6 Roles and Responsibilities

- 1.6.1 Key roles and responsibilities during the decommissioning phase in managing environmental impacts are anticipated to include, but are not limited to:

- **Site Manager (SM)** - Responsible for all onsite activity and will be based onsite full-time.
- **Principal Decommissioning Contractor / Project Manager** - Responsible for ensuring all elements within the detailed DEMP(s) are adhered to. Also responsible for managing onsite security, as well as ensuring that all environmental, legal and any other requirements are implemented (plus appropriately resourced, managed, reviewed and reported).
- **Project Environmental Manager (PEM)** - Responsible for the overall management of environmental aspects onsite. Responsible for ensuring environmental legislation and best practices are complied with, and environmental mitigation and monitoring measures identified are implemented. The Project Environmental Manager will oversee environmental monitoring onsite and carry out regular environmental site inspections, reporting and responding to any incidents or non-compliance. The Project Environmental Manager will liaise with the local planning authorities and other relevant bodies (e.g. the Environment Agency) to the extent that this is required. The Project Environmental Manager will also be responsible for managing

responses to flood incidents in-line with the Emergency Response Plan;

- **Ecological Clerk of Works (ECoW)** – Responsible for the management of risks to ecological features / receptors during the decommissioning of the Site, providing advice on protecting valued ecological features / receptors and providing practical solutions in accordance with the detailed DEMP(s).
- **Health and Safety Manager** - Responsible for the monitoring and control of health and safety compliance and related rules and regulations onsite.
- **Community Liaison Officer (CLO)** - Responsible for engaging with local communities and authorities and establishing an appropriate and accessible method for recording and managing any complaints from the public.

1.6.2 The above roles and responsibilities are indicative, only, and will be confirmed within the detailed DEMP(s).

## 1.7 Working Hours

- 1.7.1 Core decommissioning working hours will run from 07:00 to 19:00 Monday to Saturday, with no working on Sundays or Bank Holidays.
- 1.7.2 Heavy Goods Vehicle (HGV) deliveries to the Site and any works likely to generate substantial levels of noise would be limited to daytime hours of 07:00 to 19:00 during weekdays or Saturday mornings (until 13:00 hours), unless otherwise agreed (in advance) with the relevant local planning authority.
- 1.7.3 Working days will be one 12-hour shift, with employees travelling to and from the Order Limits an hour either side of these times (i.e. between 06:00 and 07:00, and between 19:00 and 20:00). Where onsite works are to be conducted outside the core working hours, these will be agreed (in advance) with the relevant local planning authority.

## 1.8 Control of Noise

- 1.8.1 All decommissioning works will be carried out within the working hours as detailed in Section 2.14.9 of **Chapter 2 Proposed Development (Document Ref: 6.2 ES Vol.1, 6.2.2)** of the ES. An assessment of the noise associated with the decommissioning phase of the Proposed Development is detailed within **Chapter 10 Noise & Vibration, (Document Ref: 6.2 ES Vol.1, 6.2.10)** of the ES.
- 1.8.2 A Section 61 application under the Control of Pollution Act 1974 (or equivalent at the time of decommissioning) will be submitted to the relevant local planning authority prior to any decommissioning activities (if required). An outline of mitigation measures and monitoring requirements that will be implemented during the decommissioning stage is detailed within Section 2.6 Noise & Vibration of this ODEMP.

## 1.9 Control of Light

- 1.9.1 Temporary lighting in the form of mobile lighting towers will be required in areas that natural lighting is unable to reach (e.g. sheltered / confined areas)



and during core working hours within winter months. Artificial lighting will be provided to maintain sufficient security and health and safety within the Order Limits, whilst adopting mitigation principles to avoid excessive glare, and minimise spill of light to nearby receptors (including ecological receptors and residents) as far as reasonably practicable.

## 1.10 Traffic Management

- 1.10.1 The Principal Decommissioning Contractor will ensure that the impacts from the decommissioning traffic on the local community during the decommissioning phase are minimised wherever feasible. Potential receptors of the impact of decommissioning traffic include local residents, businesses and users of the surrounding transport network. Mitigation measures are discussed in Section 2.5 Access and Traffic of this ODEMP and **Chapter 9 Access & Traffic (Document Ref: 6.2 ES Vol.1, 6.2.9)** of the ES.

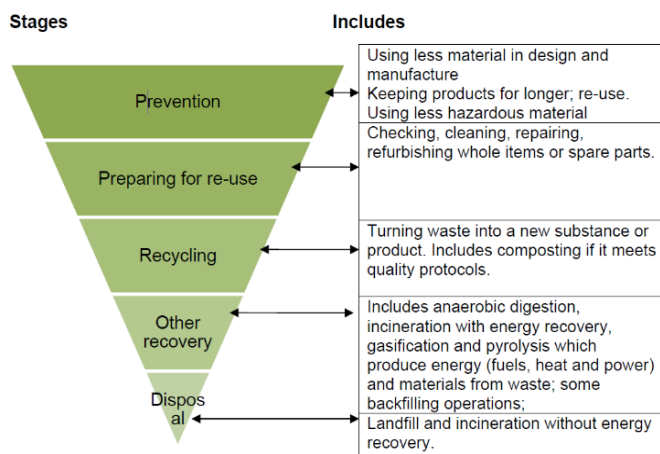
## 1.11 Site Security

- 1.11.1 The appointed Principal Decommissioning Contractor will be responsible for managing the Site security during the decommissioning phase. Temporary perimeter fencing will be established at the start and throughout the duration of the decommissioning phase, where required. Any storage of materials and chemicals will be kept secure to ensure safety and prevent theft or vandalism. The Principal Decommissioning Contractor will be responsible for establishing a safe system for accessing the material storage areas.
- 1.11.2 Where relevant, compounds will be secured with appropriate CCTV coverage and other temporary security measures, and staff will be trained on relevant security and compliance measures.

## 1.12 Waste Recycling and Disposal

- 1.12.1 A Site Waste Management Plan will be developed as a part of detailed DEMP(s) for the Proposed Development, which will outline best methods of managing waste considering national and local policy. The Site Waste Management Plan will be in-line with the principles contained within the **Appendix 17.2 Waste and Recycling Strategy (Document Ref. 6.3 ES Vol.1, 6.3.103)**.
- 1.12.2 The Waste (England & Wales) Regulations 2011 place a duty on all persons who produce, keep or manage waste to apply the 'Waste Hierarchy' in order to minimise waste production at every stage of a development. The Waste Hierarchy requires anyone managing waste to consider, firstly, waste prevention, preparing for reuse and recycling, followed by waste recovery methods (e.g. energy recovery and, lastly, waste disposal).
- 1.12.3 The Waste Hierarchy is presented, below.

**Figure 1.1 Waste Hierarchy (Waste Regulations 2011)**



- 1.12.4 In order to control the waste generated onsite during the decommissioning phase, the Principal Decommissioning Contractor will separate the main waste streams onsite prior to transport to an approved, licensed third party waste facility for recycling and disposal.
- 1.12.5 The relevant sub-contractors removing wastes from the Order Limits will have a valid Waste Carriers Licence (if transporting waste) and will ensure that an appropriate duty of care process is followed and waste managed in-line with the requirements of the Hazardous Waste Regulations (2005) and the Waste (England & Wales) Regulations 2011 (or equivalent relevant legislation and guidance applicable at the time of decommissioning).
- 1.12.6 All practicable actions will be taken by the Principal Decommissioning Contractor to minimise the volume of waste produced from the decommissioning of the Proposed Development. This is anticipated to be through reducing consumption, reuse, using resources efficiently and designing for longevity.
- 1.12.7 Waste segregation will be undertaken where possible to maximise the opportunities for reuse and recycling. All major pieces of equipment and infrastructure (such as the solar panels, concrete foundations, mounting racks and granular material) may be recycled or reused.
- 1.12.8 The waste disposal methods will be reviewed and updated in the detailed DEMP(s) to ensure compliance with any future changes in the governing legislation.
- 1.12.9 It is not possible at this stage to identify either the waste management routes or specific waste facilities that will be used during the decommissioning of the Proposed Development as its lifespan will be up to 40 years. Capacity does not currently exist, locally, to treat solar panel and BESS waste and, as such, it is anticipated that these waste products will need to be transported to specialist facilities (via a waste transfer station, if required, and via a phased removal to ensure manageable throughput). Alternatively, they may be reused or recycled, if / where possible. It is considered probable that as a result of market growth in the solar sector, there may be facilities able to treat and

recycle solar panel and BESS waste from the Site within the UK at the time of decommissioning. Otherwise, they will be treated abroad in an appropriate waste management or recycling facility.

- 1.12.10 It is expected that other structures erected onsite, such as the Onsite Substation, transformers and inverters (predominantly constructed from composite, metal and concrete) will be treated locally or will be reused during decommissioning. It is not expected that they will have a significant impact on local waste management facilities or waste capacity due to the negligible amount of waste that will be generated during the decommissioning process.

## 1.13 Fire Control

- 1.13.1 The Principal Decommissioning Contractor and all sub-contractors will ensure that all activities progressed during the decommissioning phase are progressed in compliance with the Regulatory Reform (Fire Safety) Order 2005 (or any equivalent relevant legislation / guidance in force at the time of decommissioning). All necessary measures will be taken to minimise the risk of fire.
- 1.13.2 Fire prevention facilities will be present, signposted and accessible at all compound areas and storage facilities. Firefighting equipment will be present onsite at all times in accordance with any relevant Health and Safety legislation / guidance in force at the time of decommissioning. Furthermore, the following additional measures will be implemented in order to minimise the risk of fire at the Site:
- All designated work areas will be non-smoking;
  - Designated safe smoking areas will be provided at all decommissioning compound areas and will be equipped with containers for smoking waste. These will be located away from the Site boundary and so will not be adjacent to neighbouring land (i.e. the woodland areas); and
  - Open fires will be prohibited onsite at all times.

## 1.14 Utilities

- 1.14.1 There are currently a number of utility operators at the Site, with infrastructure present either within or adjacent to the Order Limits. These include (not exhaustive) the following:
- National Grid Electricity Transmission (NGET):
    - Overhead cabling (400kV);
    - Overhead cabling (132HV);
    - Overhead cabling (33kV);
    - Overhead cabling (11kV);
    - Underground cabling (132HV);
    - Underground cabling (33 kV); and
    - Underground cabling (11kV).
  - Anglian Water:
    - Main water; and
    - Water decommissioned.

- Cadent Gas Ltd:
  - Medium pressure; and
  - Low pressure.
- BT Limited:
  - BT Tel. aerial; and
  - BT Tel. duct.

1.14.2 The Principal Decommissioning Contractor will maintain up-to-date records from all relevant utility providers and ensure awareness of the precise locations of existing utilities across the Site. Where construction works may potentially affect utility providers, the Principal Decommissioning Contractor is responsible for contacting those providers prior to the commencement of works and preparing detailed method statements for progressing the works, as well as ensuring compliance with the protective provisions for the protection of statutory undertakers set out in Schedule 11 to the **Draft DCO (Document Ref: 3.1)**.

1.14.3 Some of the existing infrastructure assets present within the Order Limits that are held by National Grid Electricity Transmission (NGET) include the following:

- Substation: Bicker Fen 400kV Substation, and associated overhead-underground apparatus including cables;
- Overhead lines: 4ZM 400kV Bicker Fen – Spalding – Northwest Burton; and
- Overhead line: 4ZM 400kV Bicker Fen-Walpole-West Burton.

1.14.4 Updated utility searches will be undertaken prior to commencement of decommissioning works to reassess what assets are present within the Order Limits.

1.14.5 Any below-ground works will not be undertaken if they have the potential to adversely affect the foundations of any NGET asset(s) or other buried elements associated with any other utility infrastructure. All decommissioning works must be undertaken in-line with National Grid's *Technical Guidance Note 287 Third-party guidance for working near National Grid Electricity Transmission equipment*<sup>1</sup>, which includes specific information for solar farm developments, or the relevant guidance that is in place at the time of decommissioning.

1.14.6 During decommissioning, the land would be reinstated to arable land use and, as such, where located beneath (or in close proximity to) any NGET overhead assets, existing vegetation and the mitigation planting from the construction and operational phases of the Proposed Development will be retained and managed in such a way as to ensure statutory safety clearances.

1.14.7 The Proposed Development is situated within the consultation zones of a major accident hazard pipeline ('MAHP') asset as determined by the Health and Safety Executive ('HSE'). Following consultation with the HSE in December 2024, the MAHP asset was identified as National Gas Transmission plc (7 feeder Hatton / Gosberton) ref no. 6910. It is expected that the access route from the A17 to the South Forty Foot Drain (i.e. the Triton

<sup>1</sup> Technical Guidance Note 287 Third-party guidance for working near National Grid Electricity Transmission equipment  
<https://www.nationalgrid.com/electricity-transmission/document/156721/download>

Knoll access track) will cross the MAHP asset. Emergency procedures would be established through consultation with the pipeline operator, HSE and relevant authorities. Prior to commencement of the decommissioning phase, the Principal Decommissioning Contractor will liaise with HSE to ensure that the MAHP asset is sufficiently protected, and to agree any further mitigation measures that may be required to ensure there are no residual health and safety concerns.

- 1.14.8 Risk assessments to ensure onsite safety during decommissioning will be carried out by the Principal Decommissioning Contractor prior to works commencing. These will be implemented to minimise the risk of accidents and disasters onsite.

## 1.15 Best Practice Measures

- 1.15.1 The Principal Decommissioning Contractor will look to adopt the principles within the Considerate Constructors Scheme (CCS) (or equivalent scheme in place at the point of decommissioning) to assist in reducing potential pollution and nuisance during the decommissioning of the Proposed Development by employing best practice measures that go beyond statutory compliance.

## 1.16 Environmental Incidents and Emergencies

- 1.16.1 As part of the detailed DEMP(s), the appointed Principal Decommissioning Contractor will prepare an Emergency Response Plan (ERP) that will detail the procedures for responding to incidents and emergencies onsite. The ERP will be developed in consultation with the relevant local authority's Emergency Planning Officers and emergency services, and the Environment Agency in relation to responding to flood warnings and events. The emergency contact details for the works will be clearly displayed as necessary at the Site where all staff can see them.

A list of all nearby residential properties, downstream abstractors and other sensitive receptors that could be affected by an environmental incident will be compiled, regularly reviewed and maintained by the Principal Decommissioning Contractor as part of an ERP. The Applicant will ensure that any environmental impacts are communicated to the Principal Decommissioning Contractor. It is the Principal Decommissioning Contractor's responsibility to report any environmental concerns and respond appropriately to incidents.

- 1.16.2 The following information relating to environmental incidents will be recorded by the Principal Decommissioning Contractor (not exhaustive):
- Nature of spill / leak / incident;
  - Time / date;
  - Exact location;
  - Type of material released (if applicable);
  - Approximate volume released (if applicable);
  - Actions taken to prevent contamination (if applicable);
  - Individuals reported to; and
  - Lessons learnt.

- 1.16.3 Lessons learnt will be fed back to Site staff through safety and environment briefings and used by the Project Environmental Manager to amend procedures and update the detailed DEMP(s) and emergency response plan, accordingly.

## 2. Mitigation Measures and Monitoring

### 2.1 Introduction

- 2.1.1 This section of the ODEMP sets out a range of best practice mitigation measures that will be implemented during the decommissioning phase, secured through the preparation and approval of detailed DEMP(s) in accordance with Requirement 18 in Schedule 2 to the **Draft DCO (Document Ref: 3.1)**.
- 2.1.2 The impacts of the decommissioning phase have been assessed within Chapters 6 to 16 of the **Environmental Statement (Document Ref: 6.2 ES Vol.1, 6.2)** and include the following:
- Landscape and visual within **Chapter 6 Landscape & Visual (Document Ref: 6.2 ES Vol.1, 6.2.6)**;
  - Ecology within **Chapter 7 Ecology (Document Ref: 6.2 ES Vol.1, 6.2.7)**;
  - Cultural heritage within **Chapter 8 Cultural Heritage (Document Ref: 6.2 ES Vol.1, 6.2.8)**;
  - Access and traffic within **Chapter 9 Access & Traffic (Document Ref: 6.2 ES Vol.1, 6.2.9)**;
  - Noise and vibration within **Chapter 10 Noise & Vibration, (Document Ref: 6.2 ES Vol.1, 6.2.10)**;
  - Water resources and flood risk within **Chapter 11 Water Resources & Flood Risk (Document Ref: 6.2 ES Vol.1, 6.2.11)**;
  - Climate change within **Chapter 12 Climate Change (Document Ref: 6.2 ES Vol.1, 6.2.12)**;
  - Glint and glare within **Chapter 13 Glint and Glare (Document Ref: 6.2 ES Vol.1, 6.2.13)**;
  - Soils and agricultural Land within **Chapter 14 Soils and Agricultural Land (Document Ref: 6.2 ES Vol.1, 6.2.14)**;
  - Socio-economic within **Chapter 15 Socio-economics (Document Ref: 6.2 ES Vol. 1, 6.2.15)** and
  - Air quality within **Chapter 16 Air Quality (Document Ref: 6.2 ES Vol.1, 6.2.16)**.
- 2.1.3 The DEMP(s) will set out detailed information regarding how the mitigation measures will be implemented during the decommissioning of the Proposed Development, as well as the relevant monitoring activities.

### 2.2 Landscape and Visual

- 2.2.1 As detailed within Section 6.6 Assessment of Effects within **Chapter 6 Landscape & Visual (Document Ref: 6.2 ES Vol.1, 6.2.6)**, the decommissioning phase will likely have a visual impact on the landscape as a result of the direct loss and change to the landscape as part of the decommissioning activities (i.e. removal of PV modules, mounting structures, inverters and transformers) and landscape elements (i.e. the component parts of the landscape that contribute to landscape fabric, such as, for example, trees, hedges and buildings).



- 2.2.2 During decommissioning, the Site will be returned to arable use. Whilst works associated with the decommissioning phase will not require the removal of trees and hedgerows at the Solar Array Area, the grass mixes (typically proposed under the PV panels) (see **Figure 6.31: Landscape Strategy Plan (Document Ref: 6.4 ES Vol.3, 6.4.42)** and **Appendix 6.7 Outline Landscape and Ecological Management Plan (OLEMP) (Document Ref: 6.3 ES Vol.2, 6.3.19)** for details) are likely to be replaced by arable use, although grassland and / or wildflower meadows may potentially remain in areas where arable planting is not undertaken. As per paragraph 1.4.13, at the point that the Site is handed back to landowners, the landowners will have the ability to manage their land as they wish (within the restrictions of the governing legislation and planning system). Otherwise, the Proposed Development will introduce a range of habitats and planting that will be retained during decommissioning, such as perimeter planting and this green infrastructure will continue to contribute towards landscape structure.
- 2.2.3 The cable within the Cable Route Corridor will be made safe and retained *in situ* and, as such, no further disturbance to soils (within the Cable Route Corridor) is anticipated during decommissioning (see **Chapter 14 Soils and Agricultural Land (Document Ref: 6.2 ES Vol.1, 6.2.14)** and **Appendix 14.4 Outline Soil Management Plan (OSMP) (Document Ref: 6.3 ES Vol.2, 6.3.95)**).
- 2.2.4 **Appendix 6.7 Outline Landscape and Ecological Management Plan (OLEMP) (Document Ref: 6.3 ES Vol.2, 6.3.19)** sets out the measures that will be implemented and monitored throughout construction, operation and decommissioning of the Proposed Development. This includes the protection, retainment and enhancement of existing vegetation cover. **Appendix 6.6 Arboricultural Impact Assessment (Document Ref: 6.3, ES Vol.2, 6.3.18)** has been prepared to accompany the DCO Application and will be used to inform the Arboricultural Method Statement (AMS) and Tree Protection Plans (TPP) that will be prepared during the detailed design stage of the Proposed Development. The decommissioning works will be undertaken in accordance with the AMS and TPPs, which will be updated (at that time) based upon updated tree and hedgerow survey works to be undertaken within two years prior to the decommissioning works commencing. This to ensure trees and hedgerows are adequately protected during the decommissioning works and any subsequent landscaping to be undertaken.
- 2.2.5 The effects of decommissioning will be temporary and short-term. The level of effect for each of the individual landscape receptors are assessed to be mostly the same as at the construction phase, albeit the Cable Route will remain *in situ*, meaning that the effects on the Fenland Sub Area and the Holland Reclaimed Fen will be reduced to Not Significant levels. Overall, effects will be negligible to minor and Not Significant. For full details, reference should be made to **Chapter 6 Landscape & Visual (Document Ref: 6.2 ES Vol.1, 6.2.6)** of the ES.

#### Mitigation Measures

- 2.2.6 As per Table 6.6 Mitigation Measures and Securing Mechanism within **Chapter 6 Landscape & Visual (Document Ref: 6.2 ES Vol.1, 6.2.6)**, the mitigation measures during the decommissioning phase entail the following:

- Retention of existing planting including areas of landscape and habitat creation (see **Figure 6.31 – Landscape Strategy Plan (Document Ref: 6.4, ES Vol.3, 6.4.42)**) to provide landscape and visual assimilation and biodiversity enhancements during decommissioning works.
- Return of land to arable use.

### Monitoring

2.2.7 No monitoring is required for the decommissioning phase.

## 2.3 Ecology

2.3.1 The decommissioning phase may result in the following impacts that could result in significant effects upon ecological features / receptors:

- Land take / land use change;
- Increased disturbance (e.g. from machinery, personnel, increased light, noise and vibration levels);
- Temporary loss of habitats;
- Risk of mortality or injury of animals; and
- Exposure to contamination (i.e. via direct contact, air or water).

2.3.2 It is assumed that the Cable Route within the Cable Route Corridor will remain *in situ* during the decommissioning phase and, as such, no impacts are expected. Within the Solar Array Area, buried medium and higher voltage cables will either remain *in situ* or be removed. Should they be removed, the cables may be pulled-up, which for the purposes of ecological impact assessment, presents the worst-case scenario.

### Mitigation Measures

2.3.3 It is anticipated that equivalent mitigation measures to those used during the construction phase would be adopted and followed during the decommissioning phase, subject to the relevant regulatory controls and processes that exist at the time of decommissioning. Mitigation measures will also be advised by updated surveys to be undertaken prior to decommissioning.

2.3.4 As it is assumed that the decommissioning phase of the Proposed Development will take place circa 40 years after the date of final commissioning of the Proposed Development and any changes to the relevant governing legislation and protected species licencing requirements (compared to the assumptions included within the **Environmental Statement (Document Ref: 6.2 ES Vol.1)** and this ODEMP will be considered and confirmed within the detailed DEMP(s).

2.3.5 Below, **Chapter 7 Ecology (Document Ref: 6.2 ES Vol.1, 6.2.7)** of the ES.

2.3.52.3.6 **Table Error! No text of specified style in document.2 Summary of the ecological receptor specific mitigation measures that will be implemented during the decommissioning phase** summarises the mitigation measures to the site-specific ecological receptors identified in **Chapter 7 Ecology (Document Ref: 6.2 ES Vol.1, 6.2.7)** of the ES.

**Table Error! No text of specified style in document.2 Summary of the ecological receptor specific mitigation measures that will be implemented during the decommissioning phase.**

ECOLOGICAL RECEPTOR	MITIGATION MEASURES
The Wash Ramsar and Special Protection Area (SPA)	Where works take place over winter (i.e. November to February) which could affect gadwall a qualifying feature of the Ramsar and SPA <u>and lapwing (not a qualify feature but listed in the citation of the Ramsar and SPA)</u> , a no works buffer will be put in place around the reservoir where gadwall have been seen <u>and areas where lapwing have been recorded</u> .
The Wash and North Norfolk Coast Special Area of Conservation (SAC)	None required; areas where otter (a qualifying feature of the SAC) were seen will not be impacted as the 400 kV Cable will be left in situ.
Great Hale Eau Local Wildlife Sites (LWS), South Forty Foot Drain LWS	None required, 400 kV cable will be left in situ and no works will occur around these LWS.
All LWS within 2 km	None required.
Coastal and floodplain grazing marsh / semi-improved grassland	Where grassland habitats are affected the seed bank in the topsoil / turfs will be kept separate from the subsoil. Once works are completed the subsoil will be replaced before the topsoil/turfs to allow grassland to quickly re-establish.
Standing water	Follow standard pollution avoidance (as per <b>Section 2.7.4</b> ) during decommissioning of the Bespoke Access Road
Other habitats	None required.
Invertebrates	Where grassland habitats (which support invertebrates) are affected the seed bank in the topsoil / turfs will be kept separate from the subsoil. Once works are completed the subsoil will be replaced before the topsoil/turfs to allow grassland to quickly re-establish and maintain the local populations of invertebrates.
Great Crested Newt (GCN)	Update surveys will be required to determine the current populations of GCN. A licence will be required from Natural England and options for the mitigation agreed. GCN will be temporarily excluded from areas to be impacted via translocation and fencing during decommissioning activities.
Reptiles	Any reptiles will be excluded from working areas via translocation and fencing during decommissioning activities. Whilst much of the Solar array area will revert to working arable land, it is assumed the majority of the enhanced hedgerows and field margins will be Retention of commuting and foraging habitats within the Site.
Wintering Birds	Where works take place over winter (i.e. November to February) a no works buffer will be put in place around the reservoir where gadwall have been seen <u>and areas where lapwing were noted</u> . No other significant populations of overwintering birds have been recorded.
Breeding Birds	Nesting and foraging habitats will be retained where possible. Where habitats are removed and within the nesting season a check of habitats will be made for birds nests by and Ecological Clerk of Works. If found an appropriate buffer will be set up which will be a minimum of 5m, and up to 200m for barn owls.
Bats	Retention of foraging and commuting routes. A sensitive lighting scheme will be maintained to prevent / minimise light disturbance during decommissioning in sensitive areas.

ECOLOGICAL RECEPTOR	MITIGATION MEASURES
Badger	Buffer zones have been incorporated in the design around known badger setts (see <b>Appendix 6.7 Outline Landscape and Ecological Mitigation Plan (OLEMP) (Document Ref: 6.3, ES Vol.2, 6.3.19)</b> ). Mitigation to adhere to relevant legislation.
Otters	None required; areas where otter were seen will not be impacted as the 400 kV Cable will be left in situ.
Water Vole	Where possible known water vole habitats will be retained with suitable buffers. Where water voles have moved into the works area, or known habitats cannot be avoided there will be temporary displacement of water voles under protected species licence, if required.
Fish and Eels	All watercourses will be retained and suitable buffers from any affecting decommissioning activities will be set up. Standard pollution avoidance will be followed (as per <b>Section 2.7.4</b> ) during decommissioning of the Bespoke Access Road
Other mammals including deer, brown hares and hedgehogs	Good practice measures, such as fencing, sensitive vegetation clearance, correct storage of materials and backfilling any excavations.

### Monitoring

**2.3.62.3.7** Pre-decommissioning ecological surveys will be undertaken in advance of the decommissioning works to inform any updates to the ecological baseline and to reassess the potential for impacts to any new ecological receptors. The ecological surveys will be undertaken sufficiently far in advance of the decommissioning works to account for seasonality constraints and to inform the detailed DEMP(s).

**2.3.72.3.8** The DEMP(s) will include the results of the pre-decommissioning ecological surveys to reflect any additional survey requirements and / or mitigation measures that may be required prior to any decommissioning work. Monitoring of habitats and species will be undertaken in accordance with any required protected species licences and / or precautionary method statements, following the relevant guidance and governing legislation in place at that time.

## 2.4 Cultural Heritage

- 2.4.1 The historic landscape character will be temporarily impacted during the decommissioning stage through the presence of construction activity. Upon the removal of the Proposed Development elements, the land will be restored to agricultural land, resulting in impacts upon the existing historic landscape character being removed.
- 2.4.2 During decommissioning, there is the potential for impacts to the below ground archaeological resource (not previously disturbed) as a result of the removal of panels, tracks, foundations and landscaping. It is understood that the circuit within the Cable Route will be made safe and remain *in situ* within the ground in order to reduce disturbance.
- 2.4.3 Within **Chapter 8 Cultural Heritage (Document Ref: 6.2 ES Vol.1, 6.2.8)**, an assessment has been undertaken on the following archaeological elements:
- **Archaeological assets** - the decommissioning programme would not have any impact on archaeological assets beyond the already

disturbed footprint of the Proposed Development and will take into account areas of archaeological assets that have been preserved *in situ*. It is, therefore, anticipated that decommissioning activities would not have a direct physical impact upon archaeological asset remains.

- **Historical landscape** - The landscape within the Order Limits will be largely restored to its pre-development state, with no impacts to the historic landscape during this phase.
- **Built heritage assets** - any impacts arising from decommissioning activities would be temporary, with the duration shorter than during construction. Once (removed during the decommissioning phase), the impact of the solar arrays will be reversed and the significance of effect lowered / removed completely.

#### Mitigation Measures

2.4.4 Wherever possible, previously used access routes would be utilised during the decommissioning stage.

2.4.5 **Appendix 6.11 Archaeological Mitigation Strategy (AMS) (Document Ref: 6.3, ES Vol.2, 6.3.74)** has been prepared to accompany the DCO Application. This will be live document and will include the mitigation measures in relation to potential impacts to the below ground archaeological resource during decommissioning.

#### Monitoring

2.4.6 No additional monitoring during the decommissioning phase is required.

## 2.5 Access & Traffic

2.5.1 The decommissioning activities undertaken during the decommissioning phase are likely to have an impact on access to the Site, as well as traffic both on the Site and within the surrounding area. **Chapter 9 Access & Traffic (Document Ref: 6.2 ES Vol.1, 6.2.9)** notes that, by 2028, the baseline traffic flows are estimated to grow marginally to an Average Annual Daily Traffic (AADT) flow of 19,402 vehicles (see Table 9.9 within **Chapter 9 Access & Traffic (Document Ref: 6.2 ES Vol.1, 6.2.9)**). Background traffic conditions during the decommissioning phase, however, are uncertain owing to how far into the future the decommissioning of the Proposed Development will take place. It is assumed, though, that the effects are unlikely to exceed the effects during the construction phase.

#### Mitigation Measures

2.5.2 The following traffic management measures would be in place prior to the decommissioning works:

- A Decommissioning Traffic Management Plan (DTMP) will be developed and adhered to during the decommissioning works. In accordance with Requirement 18 in Schedule 2 to the **draft DCO (Document Ref: 3.1)**, the DTMP must be agreed with the relevant local planning authorities prior to the commencement of the decommissioning works;
- The DTMP will set out the methods by which materials, equipment and workers will arrive at and depart from the Site during the decommissioning phase;

- Parking provisions for the decommissioning works will be set out within the DTMP;
- The DTMP will include a Decommissioning Worker Travel Plan (DWTP) to utilise sustainable modes of transport for journeys to and from the Site where possible (i.e. maximise the use of collective transport); and
- All deliveries to Site will be subject to a Delivery Management Plan (DMP) that will set out suitable measures to safely manage and monitor deliveries to and from the Site.

2.5.3 It is currently not clear whether there will need to be any deliveries / movements of Abnormal Indivisible Loads (AIL) during decommissioning, but to the extent there are any, these movements will be considered through an Abnormal Loads DMP that will be subject to agreement with the relevant highway authorities and police through the Electronic Service Delivery for Abnormal Loads (ESDAL) system. The Abnormal Loads DMP will outline the traffic management and mitigation measures required to ensure safe and efficient transport of these loads, inclusive of such aspects as (not exhaustive) rail crossings, bridges and underpasses.

2.5.4 As mentioned above, the background traffic conditions during the decommissioning phase are uncertain given the operational life of the Proposed Development and how far into the future the decommissioning will take place. Therefore, prior to the decommissioning stage, an accurate baseline traffic flow would be established so that the detailed DEMP(s) take account of accurate baseline traffic flows. Assumptions on traffic management and access routes will be confirmed in the detailed DEMP(s).

#### Monitoring

2.5.5 The management and monitoring of decommissioning traffic will be undertaken via the DTMP, incorporating a DMP, Abnormal Load DMP and DWTP. These plans will include mechanisms for local residents to raise any issues on the decommissioning phase.

## 2.6 Noise & Vibration

2.6.1 The impacts to Existing Sensitive Receptors (ESRs) during the decommissioning phase include increased noise levels and increased vibration levels. During the decommissioning phase, noise and vibration is likely to be generated by equipment, heavy plant and vibration compaction equipment.

#### Mitigation Measures

2.6.2 As detailed within **Chapter 10 Noise & Vibration, (Document Ref: 6.2 ES Vol.1, 6.2.10)**, no secondary mitigation measures are required in addition to the embedded mitigation measures during the decommissioning of the Proposed Development as the impact is considered to be Not Significant. In order to manage and minimise potential impacts of noise and vibration generated by activities associated with the decommissioning phase of the Proposed Development at ESR locations in the proximity of the Site, embedded mitigation measures in the form of good practicable means (BPM) shall be implemented through the detailed DEMP(s). It is expected that similar reductions in noise of between 5dB and 10dB attenuation will be achieved,

similar to those achieved through the detailed CEMP(s) during the construction phase.

2.6.3 Decommissioning works are to be undertaken during working hours as defined in Section 1.7: Working Hours in this ODEMP. Works during the decommissioning phase will follow and implement standards of good practice for noise and vibration as well as any relevant British Standards (BS) that are in place at the time of decommissioning (e.g. BS 5228-1:2009, BS 5228-2:2009 'Code of Practice for Noise and Vibration Control on Construction and Open Sites').

2.6.4 The following good practice mitigation measures will also be put in place to minimise the impacts of any increased noise and vibration during the decommissioning phase:

- A display board will be installed onsite that will include contact details for the Site Manager or alternative public interface with whom complaints can be lodged. A logbook of complaints and remedial actions taken will be prepared and managed by the Site Manager and made available to the relevant local authority upon requested;
- Adherence to any restriction of operating hours imposed by Lincolnshire County Council (LCC);
- All plant and machinery will be regularly maintained to control noise emissions, with particular emphasis on lubrication of bearings and the integrity of silencers;
- A programme of all works will be distributed to all identified ESRs;
- Broadband reversing alarms will be chosen instead of tonal alarms;
- Site staff will be made aware that they are (where relevant) working adjacent to any residential areas and to avoid all unnecessary noise due to misuse of tools and equipment, unnecessary shouting and loud radios;
- A further measure to reduce noise levels at the ESRs will include, as far as possible, the avoidance of multiple noisy operations occurring simultaneously in close proximity to the same ESRs;
- Idling engines will be turned-off when possible; and
- In the event that any decommissioning activities need to be carried out during night-time hours, this will be first be discussed and agreed with the relevant local authority, which may request details of any night working to be provided in advance.

#### Monitoring

2.6.5 No monitoring is proposed during decommissioning.

## 2.7 Water Resources & Flood Risk

2.7.1 Regionally, the Site lies within the EA's 'Black Sluice IDB draining to the South Forty Foot Drain Water Body' catchment and within the Black Sluice IDB area. On a local scale, the Site is split between two surface water catchments: Heckington Eau and South Forty Foot Drain Catchment. Within these catchments there are a number of Main Rivers and Ordinary Watercourses, and IDB drains, that are within the Site. There are three LWS downstream of



the Site with hydro-ecological significance; the Old Forty Foot Drain to South Forty Foot Drain, Old Forty Food Drain, and Broadhurst Drain East. There are no registered private water supplies within 2km of the Site.

- 2.7.2 Superficial deposits vary across the Site from those with no groundwater resources (Tidal Flat Deposits) to those considered to be locally important aquifers (Glaciofluvial Ice Contact Deposits and Sleaford Sand and Gravel). The bedrock geology is not considered to be a groundwater resource. Parts of the Site are considered to be at risk of flooding. There are 16 licensed surface water abstraction locations downstream of the Site.
- 2.7.3 Potential effects on the water environment are those that may change the hydrological and hydrogeological flow regime, and those which may cause pollution and a degradation in water quality.
- 2.7.4 Appendix 11.1 Flood Risk Assessment (Document Ref: 6.3 ES Vol.2, 6.3.81) has found that the Solar Array Area, Cable Route Corridor and Bespoke Access Corridor are located within Flood Zones 1, 2 and 3. The risk of flooding to the Site from fluvial, surface water, groundwater and artificial sources varies across the Site. Eastern areas of the Site and southern portions of the Cable Route Corridor are located within Flood Zone 3 (i.e. High risk). These areas are also at risk of reservoir flooding. Areas of the Site are also at high risk of surface water flooding with overland flow pathways extending through central areas of the Solar Array Area and sections of the access road and Cable Route Corridor. Western areas of the Site may also be susceptible to groundwater flooding.
- 2.7.5 Throughout the pre-application design stage, the initial layout and locations of the access tracks and ancillary infrastructure have been designed to avoid hydrologically sensitive areas. A minimum 9m separation distance from built development has been applied along or around every watercourse and waterbody in-line with the Internal Drainage Board (IDB) requirements.

#### Mitigation Measures

- 2.7.6 Decommissioning will be undertaken in accordance with all relevant and prevailing guidance and codes of best practice in force at the time. If still applicable at the point of decommissioning, the following documents include details of best practice industry guidance intended to prevent adverse impacts during decommissioning and are relevant:
- Guidance for Pollution Prevention (GPP) 1: Understanding Your Environmental Responsibilities - Good Environmental Practices;
  - GPP 2: Above Ground Oil Storage Tanks;
  - GPP 4: Treatment and Disposal Of Wastewater Where There is no Connection to The Public Foul Sewer;
  - GPP 5: Works and Maintenance in or Near Water;
  - GPP 6: Working at Construction and Demolition Sites;
  - GPP 8: Safe Storage and Disposal of Used Oils;
  - GPP13 Vehicle Washing and Cleaning;
  - GPP21 Pollution Incident Response Planning;
  - GPP22: Dealing with Spills;
  - GPP26 Safe Storage - Drums and Intermediate Bulk Containers;
  - Construction Information Research and Information Association (CIRIA) C532 Control of Water Pollution from Construction Sites;

- CIRIA C741 Environmental Good Practice Onsite Guide;
- CIRIA C750 Groundwater Control - Design and Practice; and
- CIRIA C753 The SuDS Manual.

2.7.7 The measures detailed in these guidance documents will limit the potential for disturbance or contamination of water resources and will be adopted.

2.7.8 Pollution prevention guidance and methods (e.g. spill kits and emergency response plans) are outlined, below, and within both Section 1.16: Environmental Incidents & Emergencies and Section 3.1 Environmental Procedures within this ODEMP.

#### Water Runoff and Infiltration

2.7.9 In addition to the above, the measures outlined below take into account current good practice, legislation, regulations and guidance relevant to the water environment:

- A number of measures will be adopted to prevent and control the release of sediment, with the measures used dependent upon the situation encountered onsite. Examples of measures include surface water being directed across vegetated zones or through mesh fencing to capture sediment, as appropriate. Alternatives, such as sediment traps or settlement lagoons, may also be considered if the quantity of sediment laden water is anticipated to be large. Maintenance measures would ensure that sediment control measures, drains and potholes would be regularly inspected and cleared / infilled / repaired;
- Pollution incident response plans will be prepared for incorporation into the decommissioning phase detailed DEMP(s) and will identify the type and location of onsite resources (e.g. spill kits, absorbent materials, oil booms, *etcetera*) available for the control of accidental releases of pollution and other environmental incidents;
- The time any excavation is open will be kept to a minimum to avoid ingress and removal of water;
- Where appropriate, temporary cut-off drains will be installed to prevent shallow throughflow entering excavations. Treated / clean water would be discharged downstream of the excavation and encouraged to infiltrate into the ground mimicking natural flow patterns;
- Excavations will be reinstated as soon as practicable once deconstruction works are complete and will ensure that natural hydrological conditions are restored as far as possible;
- Where possible, storage of materials and stockpiling to be located outside the functional fluvial floodplain (Flood Zone 3a), flood storage areas and areas known to be at risk of surface water flooding;
- Preference to strip soils and vegetation should only be carried out under the driest practicable conditions, this must take into account of prevailing weather conditions;
- Use of track mats to prevent unnecessary soils compaction, damage to vegetation, and/or erosion;
- Grass seeding after decommissioning works encourage grass regrowth;

- Site runoff will either be treated on the Site and discharged under a Water Discharge Environmental Permit (permit that will be applied for during the detailed design stage) from the Environment Agency to Controlled Waters (potentially also including infiltration to ground) or removed from the Site for disposal at an appropriate and licensed waste facility;
- Equipment and plant will be washed out and cleaned in designated areas where runoff can be isolated for treatment before disposal as outlined above; and
- The Site will be maintained in a clean and tidy state to prevent debris and other material from entering surface water drains. Additionally, clearly labelled waste receptacles will be provided, as well as grid covers and the presence of Site security fencing to prevent external material entering the Site.

2.7.10 Additional mitigation measures for flood risk management are outlined within Chapter 2.8 Climate Change of this ODEMP.

#### Spills / Pollution Control

2.7.11 In addition to the above, the measures outlined below will be implemented to address the potential of spills / releases to water resources as a result of the decommissioning activities:

- Fuel will be stored and used in accordance with the relevant guidance and regulations in place at the time of decommissioning;
- All fuel, oils and other polluting substances would be securely stored in suitably bunded containers on impermeable surfaces. The total quantity and range of potential pollutants to be used onsite is anticipated to be small.
- The use of biodegradable oils and lubricants will also be used, where practicable;
- All plant, vehicles and machinery will be inspected regularly for leaks and maintained to ensure that they are in good working order and clean for use;
- All washing down of vehicles and equipment will take place in designated areas and wash water will be prevented from passing untreated into watercourses;
- Static machinery and plant would, where practicable, have integral drip trays of 110% of the capacity of the fuel tank
- All refuelling, oiling and greasing will be undertaken in a designated refuelling area and / or above drip trays, or on an impermeable surface that provides protection to underground strata and watercourses and away from drains as far as reasonably practicable. Vehicles will not be left unattended during refuelling;
- Spill kits and oil absorbent material will be carried by mobile plant and located at high-risk locations across the Site and regularly topped up. All decommissioning workers will receive spill response training and toolbox talks (TBT);
- The Site will be made secure (as required) to prevent any vandalism that could lead to a pollution incident;
- Surface water drains on public roads trafficked by plant or within the decommissioning compound will be identified and, where there is a risk that fine particulates or spillages could enter them, the drains will

be protected (e.g. using covers or sandbags) or the road regularly cleaned by road sweeper; and

- If runoff from the decommissioning of the Site is treated onsite, a Water Discharge Environmental Permit will be acquired, as necessary.

2.7.12 The following measures will be applied to control groundwater contamination and prevent pollution of underlying aquifers.

- Designated washout areas lined with impermeable materials will be used to contain wash water, preventing seepage into the ground or aquifers. Containment systems such as bunds or tanks must also be installed to capture wash water effectively and avoid accidental releases.
- Wash water should be treated on-site before any discharge or reuse to reduce the risk of contaminating soil and groundwater. Direct discharge of untreated wash water onto soil or into drainage systems is strictly prohibited to protect underlying aquifers.
- Regular inspection and maintenance of washout and containment facilities are essential for early leak detection and contamination prevention. Additionally, site workers must be trained in proper wash water handling and disposal procedures to ensure compliance and environmental protection.
- Where permitted, solidifiers or flocculants may be applied to treat wash water prior to disposal, helping to manage water quality safely. All activities must comply with relevant environmental permits and regulations to guarantee lawful and safe operations.
- To protect groundwater from both free-phase and dissolved phase contamination, all fuels, oils, and hazardous materials will be stored and handled in controlled conditions, including the use of bunded or double-skinned tanks, impermeable surfacing, and designated refuelling areas with appropriate spill containment. Regular inspection, maintenance, and monitoring will be carried out, and spill kits will be available across the Site with trained staff to ensure rapid response.
- If the presence of hydrocarbon in water in excavations is identified through either visual observation or water quality analysis, the contaminated water shall be pumped from the excavation to a bunded container and tankered offsite to an appropriately licenced waste facility for disposal.

### Monitoring

- 2.7.13 Water quality monitoring of potentially affected watercourses will be undertaken prior to decommissioning in order to establish a baseline condition to ensure that any pollution events can be detected against baseline conditions and managed effectively. The results of these monitoring activities will inform the detailed DEMP(s). In the event that adverse changes in water quality are identified, the cause will be investigated in co-ordination with other development projects and remedial measures implemented, where appropriate.
- 2.7.14 Owing to the low level of risk posed by the decommissioning works, water quality monitoring will consist of visual and olfactory observations, plus *in-situ* testing using hand held water quality meters, only. Monitoring locations would

include surface water locations, such upstream and downstream of to be decommissioned watercourse crossings and / or watercourse within the Solar Array Area.

## 2.8 Climate Change

2.8.1 A detail assessment of climate change impacts related to the Proposed Development has been carried out in **Chapter 12 Climate Change (Document Ref: 6.2 ES Vol.1, 6.2.12)**. This has had regard to the potential impacts of the decommissioning phase to the local and global climate as well as the impacts of climate change to the decommissioning phase, including:

- Production of greenhouse gas (GHG) emissions;
- Use of natural resources;
- Effects of climate change to the decommissioning phase, including:
  - Increased summer maximum temperatures;
  - Increased winter precipitation;
  - Increased frequency and severity of storms;
  - Increased frequency and severity of heatwaves; and
  - Reduced summer rainfall.

2.8.2 Activities carried out during the decommissioning phase will be short-term and temporary and will likely mirror the construction phase. Given the proposed 40-year operational life of the Proposed Development, however, the climate may have altered at the point at which decommissioning is undertaken.

### Mitigation Measures

2.8.3 The Principal Decommissioning Contractor will ensure that the current (at the time of decommissioning) best practices and guidance are adopted to reduce the GHG emissions produced during the decommissioning phase, where possible. Over the lifetime of the Proposed Development, it is highly likely that there will be technological improvements and greater mitigation options available. The effects of the decommissioning stage on climate change will, therefore, be reconsidered and updated as part of the detailed DEMP(s) in advance of decommissioning.

### Vehicles / Plant

2.8.4 The Principal Decommissioning Contractor will adhere to the procedures and guidance set out in Section 1.10: Traffic Management and Section 2.5: Access & Traffic of this document, including the use of the DTMP and DWTP to utilise sustainable modes of transport. These include, but are not limited to, the following:

- Ensure vehicles conform to the current emissions standards at the time of decommissioning;
- Vehicles and plant to be turned off when not in use;
- Optimisation of transportation and decommissioning efficiency by conducting regular maintenance on decommissioning plant and machinery; and
- Use of alternatives to diesel / petrol-powered equipment and / or use of energy efficient vehicles and plant, where possible.

### Waste

2.8.5 The Principal Decommissioning Contractor will adhere to the procedures and guidance set out in Section 1.12: Waste Recycling and Disposal of this ODEMP, the principles set out in **Appendix 17.2 Waste & Recycling Strategy (Document Ref: 6.3 ES Vol.2, 6.3.113)** of the ES and the Site Waste Management Plan (to be prepared as part of the detailed DEMP(s)) to minimise the use of materials and avoid waste generation. These include (but not limited to) the following:

- Adhering to the management of waste outlined in the Waste Hierarchy;
- Reuse of materials onsite and recycling of waste materials to be prioritised wherever possible;
- Increasing recyclability by segregating waste to be reused and recycled wherever reasonably practicable; and
- Where the generation of waste is unavoidable, waste will be disposed of / treated at appropriate waste management facilities.

#### Site Operation & Management

2.8.6 The following mitigation measures will be implemented to reduce GHG emissions during the decommissioning phase:

- Utilising local personnel, contractors and / or businesses where possible; and
- Any equipment / plant required will be sourced locally, where possible.

#### Effects of Climate Change to Decommissioning Phase

2.8.7 The potential effects of climate change on the decommissioning stage (as outlined above) will be mitigated by implementing the following measures:

- Appointment of a designated Flood Warden to be prepared for and manage the response to flood incidents, to be aware of flood and weather warnings, and local water levels;
- Storing materials outside of areas impacted by flood, mainly Flood Zone 3, as far as reasonably practicable; and
- Risk assessments and health and safety plans will account for potential climate change impacts on workers (e.g. extreme weather events, such as heatwaves, extreme rainy conditions, lightning and storms).

#### Monitoring

2.8.8 Monitoring of flood and weather warnings, regularly recording compliance in a logbook will be the responsibility of the Project Environmental Manager. Additional monitoring requirements at the time of decommissioning will be confirmed by the Principal Decommissioning Contractor and included in the detailed DEMP(s).

## 2.9 Glint & Glare

2.9.1 Decommissioning activities include dismantling the structures / infrastructure within the Order Limits, including the solar PV arrays within the Solar Array Area. A number of factors make it unlikely that decommissioning will affect glint and glare significantly. Following removal of the panels, there is a slight risk of reflections from steel legs prior to removal of the legs. However, given

the surface area of the steel is considerably smaller than the panels, the risk of reflection is limited and not expected to cause significant glint and glare effects. Nonetheless, the time between the removal of the panels and the legs will be minimised so as to limit the chance of reflections.

#### Mitigation Measures

- 2.9.2 The majority of mitigation against the effects of glint and glare to sensitive receptors will be addressed during the detailed design stage (i.e. the selection of panel type, inclination, orientation and height, etcetera). Therefore, there are no mitigation measures required specific to the decommissioning phase.

#### Monitoring

- 2.9.3 No monitoring is required.

## 2.10 Soils and Agricultural Land

- 2.10.1 Activities during the decommissioning phase may have an impact on soils (in terms of damage and degradation resulting in the loss of the soil resource) and agricultural land (in terms of land lost from agricultural production) in the context of the Site and surrounding area, and a detailed assessment is included within **Chapter 14 Soils and Agricultural Land (Document Ref: 6.2 ES Vol.1, 6.2.14)** of the ES.
- 2.10.2 As the solar array piles will be driven directly into the ground, their removal will result in minimal soil damage or loss. The main risk activities in relation to soils and agricultural land during decommissioning will be due to the trafficking of vehicles / plant and incorrect soil handling, which can cause damage to soil structure through compaction and smearing. Both effects are sometimes referred to as 'deformation'.
- 2.10.3 It is assumed that the Cable Route will be made safe and remain *in situ* during decommissioning. Therefore, it is not anticipated that there will be any further effects on agricultural land or the soil resource (in terms of loss and structural damage) within the Cable Route Corridor after construction and, in relation to any potential maintenance requirements during operation.
- 2.10.4 The potential impacts of the decommissioning phase to soils and agricultural land are anticipated to be similar to the that of the construction phase and are summarised below:
- Damage to soil on agricultural land by trafficking of vehicles / plant and incorrect soil handling, which can cause damage to soil structure through compaction and smearing; and
  - Localised movement of stockpiled soils to support restoration.

#### Mitigation Measures

- 2.10.5 Prior to decommissioning, **Appendix 14.4: Outline Soil Management Plan (OSMP) (Document Ref: 6.3, ES Vol.2, 6.3.95)** will be used to prepare a detailed Soil Management Plan (SMP) (or plans in the event that the Proposed Development is decommissioning in phases) for the decommissioning phase. The detailed SMP(s) will include the following:
- Details of the decommissioning works and identification of measures of how soil damage will be minimised;



- Measures to ensure good soil handling and storing practices and the protection and conservation of soil resources;
- Measures to maintain the physical properties of the soils through the adoption of current (at that time) good practice working methods;
- Provide onsite reference on the management of soil resources for Site operators undertaking the works; and
- Detail a methodology for monitoring soil condition and criteria against which compliance will be assessed.

2.10.6 The detailed SMP(s) will include good practice guidance to ensure that any impact to soils and agricultural land is minimal and reversible. These include, but are not limited to:

- After the removal of all project infrastructure and the reinstatement of any stripped topsoil and subsoil, a suitable cover crop to reduce bare soil exposure should be implemented prior to cultivation for the first arable crop; and
- A field drainage network will be reinstated to at least the same standard as the drainage system was prior to construction as part of the decommissioning work to allow the land to be returned to agricultural use.

2.10.7 The Principal Decommissioning Contractor will seek to protect and conserve soil resources onsite wherever feasibly possible and maintain the physical properties of the soils through the adoption of best practices. Any excavations are to be backfilled using soil sourced onsite (or imported soil where necessary) using appropriate soil management techniques.

2.10.8 Any required closure or severance of field access at key times of the farming year would be communicated and negotiated with landowners to mitigate potential short-term effects on farm businesses as a result of activities associated with the decommissioning phase.

2.10.9 Upon completion of the decommissioning phase, the Applicant will ensure that sufficient works are undertaken to ensure that disturbed soil profiles will be restored to agricultural land. The extent and specification of the restoration works will be provided in the detailed SMP(s).

#### Monitoring

2.10.10 In order to ensure compliance with the detailed SMP(s), the works will be monitored during soil handling activities; thereby helping to ensure that the soils are maintained in good condition permitting the continued, sustainable use of the soil resource.

## 2.11 Socio-Economic

2.11.1 As detailed within **Chapter 15 Socio-economics (Document Ref : 6.2 ES Vol. 1, 6.2.15)** of the ES, the potential socio-economic impacts of the decommissioning phase to the local area and the decommissioning workforce are as follows:

- Loss of jobs created during the operational phase;
- Increase of jobs during decommissioning phase;
- Increased exposure to noise and traffic;

- Pressure on local services;
- Restricted access to land and economic displacement of farming activities; and
- Restricted access to recreational areas and footpaths.

2.11.2 It is anticipated that the decommissioning phase would require a similar level of employment and generate a similar scale and character of workforce spending and supply chain effects as the construction phase. As such, it is anticipated that the decommissioning phase would generate the same level of effects as reported in the construction phase.

2.11.3 As per **Chapter 15 Socio Economics (Document Ref: 6.2 ES Vol.1, 6.2.15)** net employment will be circa 262 jobs, after accounting for operations jobs lost post-closure. **Appendix 15.3 Outline Skills, Supply Chain and Employment Plan (OSSCEP) (Document Ref: 6.3 ES Vol. 2, 6.3.98)** estimates that a total of 556 FTE jobs will be created for construction, which, for the purpose of the assessment, has also been assumed for decommissioning.

#### Mitigation Measures

2.11.4 The impact from the influx of workers and the recruitment approach and procurement process during the decommissioning phase will be managed by the **Appendix 15.3 Outline Skills, Supply Chain and Employment Plan (OSSCEP), (Document Reference: 6.3 ES Volume 2, 6.3.98)** (as secured through a requirement in Schedule 2 to the **Draft DCO (Document Ref: 3.1)**). This includes measures intended to mitigate impacts related to the loss of employment and enhances beneficial impacts from employment creation. The objectives of the OSSCEP will include the following:

- Prioritising local employment and local procurement wherever possible;
- Reskilling of temporary farm workers to avoid economic displacement, and / or support in finding alternative agricultural work;
- Reskilling of workers after the operational phase;
- Collaboration with neighbouring development projects to manage worker demand;
- Enhancing supply chain opportunities; and
- Potential upskilling of local residents through apprenticeships.

2.11.5 Additional mitigation and enhancement measure relevant to socio-economic impacts are included in **Appendix 15.3 Outline Skills, Supply Chain and Employment Plan (OSSCEP), (Document Reference: 6.3 ES Volume 2, 6.3.98)**.

#### Monitoring:

2.11.6 The Principal Decommissioning Contractor will appoint a Community Liaison Officer (CLO) who will be responsible for addressing concerns and resolving complaints. In-line with the OSSCEP, the CLO will engage with the Principal Decommissioning Contractor and local planning authorities to monitor the following during the decommissioning phase:

- Local employment, supply chain benefits and apprenticeship opportunities;
- The capacity of health infrastructure;
- Impacts to local services;

- Impacts and accessibility of vulnerable groups;
- Local accommodation capacity; and
- The impacts of worker influx on local vulnerable population (e.g. the elderly).

## 2.12 Air Quality

2.12.1 **Chapter 16 Air Quality (Document Reference: 6.2 ES Vol.1, 6.2.16)** outlines the potential effects on air quality during the decommissioning phase, and includes the following:

- Increased nitrogen dioxide (NO<sub>2</sub>) and particulate matter (PM<sub>10</sub>) from plant and vehicle emissions; and
- Increased NO<sub>2</sub> and PM<sub>10</sub> from activities, materials, transportation, storage and handling.

2.12.2 Whilst it is anticipated that the potential impacts and mitigation measures for the decommissioning phase are likely to be similar to the construction phase, it is not possible to accurately predict what the air quality baseline will be at the end of the 40 year operational lifetime of the Proposed Development (in terms of background concentrations, vehicle emission factors, and fleet composition).

### Mitigation Measures

- 2.12.3 The Non-Road Mobile Machinery (NRMM) of 36kW to 560kW will comply with the latest emission standards that are in effect at the time of decommissioning.
- 2.12.4 Prior to decommissioning, a dust risk assessment will be undertaken and a Dust Management Plan (DMP) will be prepared (if required) as part of the detailed DEMP(s).
- 2.12.5 Unless otherwise stated in relevant guidelines and legislation, appropriate standards and good practice control measures will be included in the detailed DEMP(s). These may include, but are not limited to the following:

### Communications

- The Community Liaison Officer (CLO) will develop and implement a stakeholder communications plan that includes community engagement before work commences onsite. There will also be a system that displays the contact details of person(s) accountable for air quality and dust issues during the decommissioning phase (Principal Decommissioning Contractor, Project Environmental Manager and / or Site Manager), including their head or regional office contact information;
- Any dust and air quality complaints will be recorded, and appropriate measures would be taken to identify causes and reduce emissions in a timely manner. Exceptional incidents that cause dust and / or emissions and the action taken to resolve the situation will be recorded in a logbook and made available to the local planning authorities upon request; and
- It will be important to understand the interactions of the offsite transport / deliveries that might be using the same strategic road network routes. During the decommissioning works, regular liaison meetings with any other high-risk decommissioning sites within 500m

of the Proposed Development (or greater, if applicable) is recommended to ensure plans are co-ordinated and dust and particulate matter emissions are minimised.

#### Site Management & Operations

- Implement any additional guidelines and measures outlined within the DMP (if required, see paragraph 2.12.4, above);
- Plan Site works so that machinery and dust causing activities are located away from sensitive receptors, as far as practicable;
- Fully enclose operations where there is a high potential for dust production and if the onsite activities are within 100m of sensitive receptors and will remain active for an extensive period of time;
- Keep Site fencing, barriers and scaffolding clean using wetting methods;
- Remove materials that have a potential to produce dust as soon as practicable, unless being reused onsite. If they are being reused onsite, cover;
- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction (e.g. suitable local exhaust ventilation systems);
- Ensure an adequate water supply on the Site for effective dust / particulate matter suppression/mitigation, using non-potable water from temporary water tanks where practicable and appropriate; and
- Implement appropriate measures to avoid Site runoff of water and / or mud; and
- Ensure equipment is readily available onsite to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

#### Vehicle/Machinery and Travel

- Mitigation measures to reduce the emissions produced by vehicles and plant and during the decommissioning phase are outlined within Section 1.10: Traffic Management and Section 2.55 Access & Traffic of this ODEMP. This includes implementing practices outlined within the DTMP and DWTP to utilise sustainable modes of transport where possible; and
- Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided).

#### Waste

- 2.12.6 Burning of waste or unwanted materials will not be permitted onsite. Waste is addressed in Section 1.12: Waste Recycling and Disposal of this ODEMP.

#### Trackout

- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the Site. This may require the sweeper being continuously in use;
- Avoid dry sweeping of large areas;
- Ensure vehicles entering and leaving the Site are covered to prevent escape of materials during transport;

- Inspect onsite haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable;
- Record all inspections of haul routes and any subsequent action in a site logbook;
- Implement temporary mat covered haul routes, which are regularly damped down with fixed or mobile sprinkler systems (sourced via water from the temporary water tanks) and regularly cleaned; and
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the Site where reasonably practicable).

### Monitoring

- 2.12.7 The DMP (if required, see paragraph 2.12.4, above) will include monitoring methods of dust deposition, real-time PM<sub>10</sub> continuous monitoring and / or visual inspections. The DMP (if required) will also specify the requirement and timescales of any relevant baseline dust monitoring to be undertaken before the decommissioning stage.

## 3. Emergency Response and Communications Plan

### 3.1 Environmental Procedures

3.1.1 The following will be carried out during the decommissioning of the Proposed Development:

- **Spills and releases:** procedures will be set out in the detailed DEMP(s) to establish the prevention, response, notification and clean-up of spills, as well as the personnel training, material handling and storage to prevent spills. Pollution incident response plans will be prepared at each compound area and will identify the type and location of onsite resources (e.g. spill kits, absorbent materials and oil booms, *etcetera.*) available for the control of accidental spills and releases of pollution. Additional mitigation measures relating to spills and releases are set out in paragraph 2.7.9 of this ODEMP.
- **Hazardous waste management:** procedures will be set out in the detailed DEMP(s) to establish the proper identification, storage, transport and disposal of hazardous waste. Additional procedures will include detailing the requirements for emergency response, personnel training, product review and approval and record keeping.
- **Non-hazardous waste management:** procedures will be set out in the detailed DEMP(s) to establish the management and disposal of used drums, used lubricants and general waste.

### 3.2 Occupational Health and Safety Procedures

3.2.1 The Principal Decommissioning Contractor will be responsible for employee health and safety. The Principal Decommissioning Contractor will develop or have an existing training program that can be implemented to appropriately train personnel on decommissioning programs, environmental, health and safety procedures. To maintain employee health and safety throughout the decommissioning phase, the following safety procedures will be implemented:

- Handrails, toe-boards and non-slip surfaces will be applied to and required on all elevated platforms, ladders and walkways;
- Electrical equipment will be insulated and grounded in compliance with the appropriate electrical code; and
- Personal Protective Equipment (PPE) will be worn by personnel when on duty, including non-slip footwear, eye protection, clothing and hardhats or as applicable guidance requires at that time.

### 3.3 Health and Safety

3.3.1 A Health and Safety Plan will be prepared (to be included as part of the detailed DEMP(s)) by the Principal Decommissioning Contractor to include public and occupational health and safety issues. This may include protecting the public from equipment and decommissioning areas by posting warning signs, the use of PPE, accident reporting and equipment operation, and fire control methods.

3.3.2 The appointed Principal Decommissioning Contractor will ensure that the following are implemented onsite during the decommissioning phase:

- A visible breakdown of team roles, names and responsibilities;
- All training requirements by the staff working on the decommissioning phase are completed;
- Flow of information via onsite briefings and toolbox talks (TBT) to equip the decommissioning staff with the necessary degree of knowledge for the decommissioning practices;
- Measures to advise employees of changing circumstances as work progresses;
- Communication methods;
- Document control; and
- Environmental emergency produces.

## 4. Monitoring

- 4.1.1 Environmental monitoring during the decommissioning phase of the Proposed Development will be undertaken to ensure that the mitigation measures proposed in the ODEMP and the **Environmental Statement (Document Ref: 6.2, ES Vol.1)** are implemented effectively. Any specific monitoring requirements proposed are outlined in Sections 2.2 to 2.12 of this ODEMP.
- 4.1.2 The appointed Principal Decommissioning Contractor will allocate a designated Project Environmental Manager who will be present onsite throughout the decommissioning phase. The Project Environmental Manager will also act as the day-to-day contact with relevant local authorities and other regulatory agencies, such as the Environment Agency.
- 4.1.3 The Project Environmental Manager and/or Site Manager will arrange regular formal inspections to ensure the requirements of the detailed DEMP(s) are being adhered to. After completion of the works, the Project Environmental Manager will conduct a final review.
- 4.1.4 To ensure and provide evidence that the detailed DEMP(s) is being efficiently and properly implemented, the Project Environmental Manager / Site Manager will retain the following records of environmental monitoring:
- Licences and approvals;
  - Environmental equipment test records;
  - Results of inspections;
  - Records of onsite complaints; and
  - Other environmental surveys and investigations.

### 4.2 Review

- 4.2.1 Regular reviews of the detailed DEMP(s) will be conducted at predetermined intervals, such as project milestones or in response to significant events like environmental incidents or changes in onsite rules or regulations.
- 4.2.2 The process will involve evaluating the effectiveness of mitigation measures, incorporating feedback from stakeholders, updating the detailed DEMP(s) to address new risks or changes in scope, and documenting all revisions to ensure they are communicated to relevant parties. Existing control measures and mitigation will not be amended without prior agreement with the relevant local planning authorities.
- 4.2.3 The process will involve evaluating the effectiveness of mitigation measures, incorporating feedback from stakeholders, updating the ODEMP into the detailed DEMP(s) to address new risks or changes in scope, and documenting all revisions to ensure they are communicated to relevant parties. In the future, any amendments to relevant governing legislation, guidelines and licencing requirements, *etcetera* will be confirmed prior to any affecting works commencing. Existing control measures and mitigation will not be amended without prior agreement with the relevant local authorities.