

# The Keadby 3 Low Carbon Gas Power Station Project

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**The Keadby 3 (Carbon Capture Equipped Gas Fired Generating Station) Order**

**Land at and in the vicinity of the Keadby Power Station site, Trentside, Keadby, North Lincolnshire**

## Environmental Statement Volume II - Appendix 17A: Sustainability Review

**The Planning Act 2008**

**The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017**

**Applicant: Keadby Generation Limited**

**Date: May 2021**

## DOCUMENT HISTORY

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## GLOSSARY

<b>Abbreviation</b>	<b>Description</b>
ALARP	As Low As Reasonably Practicable
BAT	Best Available Techniques
CEMP	Construction Environmental Management Plan
CCR	Climate Change Resilience
DCO	Development Consent Order
DEMP	Decommissioning Environmental Management Plan
ES	Environmental Statement
ICCI	In-Combination Climate Change Impact
INNS	Invasive Non-Native Species
LSE	Likely Significant Effect
UN SDG	The United Nations Sustainable Development Goals

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## 1.0 INTRODUCTION

### 1.1 Overview

- 1.1.1 The scope of the sustainability review set out in this appendix is to assist in understanding, assessing and prioritising any actions that may be taken to improve the sustainability of the Proposed Development during the operational phase, beyond the application of best available techniques (BAT) that will be applied through the Environmental Permit. The review could assist in defining actions that can be incorporated into the overall integrated environmental, health and safety and quality management system by the Applicant.
- 1.1.2 Construction and decommissioning activities are not included in the scope of the sustainability review given the broad application of best practice guidance during these stages, based on the Framework Construction Environmental Management Plan (CEMP) (**Application Document Ref. 7.1**) and the final Decommissioning Environmental Management Plan (DEMP) that is proposed to be secured by requirement of the draft DCO (**Application Document Ref. 2.1**). The sustainability review is qualitative, but where relevant, uses data provided within quantitative assessment to provide a basis for targeting any actions in the future.

## **2.0 SUSTAINABILITY REVIEW**

### **2.1 Overview**

- 2.1.1 The United Nations Sustainable Development Goals (UN SDG) provide the basis for this sustainability review. The UN SDG are widely recognised by stakeholders, especially in local, regional and national government, where they are mandated. The UN SDG apply to all countries globally and are relevant for all economic sectors.
- 2.1.2 As the scope of this sustainability review is limited to the data on the Proposed Development presented in the DCO Application documents, including the Environmental Statement (ES), a number of the UN SDG are not considered relevant/ in scope. All UN SDG are included, but those aspects which are out of scope are indicated in Table 1, below. For those aspects in scope, commentary and signposting is provided to where the relevant assessment is provided in this ES.

**Table 1: UN Sustainability Goals**

UN Sustainability Goal	Does the Proposed Development have the potential to influence this goal within the scope of its planned operations? N (No influence) L (Limited influence) S (Potential to influence)	Commentary and Signposting
<b>Goal 1.</b> End poverty in all its forms everywhere	L	<b>Chapter 16:</b> Socio-economics (ES Volume I – <b>Application Document Ref. 6.2</b> ) describes the creation of direct long term employment opportunities and indirect employment that will contribute towards this goal, although the beneficial effects of this are <b>not significant</b> .
<b>Goal 2.</b> End hunger, achieve food security and improved nutrition and promote sustainable agriculture	L (construction phase influence)	<b>Chapter 5:</b> Construction Programme and Management (ES Volume I – <b>Application Document Ref. 6.2</b> ) explains that a agricultural land is required temporarily for construction laydown. This will be restored to provide long-term beneficial use for agriculture once returned to the landowner. The control measures within the Soil Resources Plan of the final CEMP, secured by DCO requirement ( <b>Application Document Ref. 2.1</b> ), will control the handling of best and most versatile agricultural soils for future beneficial agricultural use.

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		Use of this land post-construction by the landowner is outside of the scope of this ES.
<p><b>Goal 3.</b> Ensure healthy lives and promote well-being for all at all ages</p>	L	<p><b>Appendix 16A:</b> Human Health Signposting (ES Volume II – <b>Application Document Ref. 6.3</b>) provides an assessment of where human health effects have been considered in this ES. In summary the Proposed Development during its operational phase does not result in significant adverse residual effects for human health. The exception to this is in relation to visual amenity effects which are considered moderate adverse (<b>significant</b>) at four local viewpoints during the operational stage and cannot be mitigated by the addition of landscape features.</p> <p>The Applicant is investing in a Landscaping and Biodiversity Management and Enhancement Plan (<b>Application Document Ref. 5.10</b>) that will provide</p>

UN Sustainability Goal	Does the Proposed Development have the potential to influence this goal within the scope of its planned operations? N (No influence) L (Limited influence) S (Potential to influence)	Commentary and Signposting
		healthy spaces during the operational phase within the Proposed Development Site.
<p><b>Goal 4.</b> Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</p>	P	<p><b>Chapter 16:</b> Socio-economics (ES Volume I – <b>Application Document Ref. 6.2</b>) confirms that the Applicant proposes to provide an employment, skills and training development programme which would help local residents and unemployed workers into roles at the Proposed Development Site. This could lead onto training for roles at the Proposed Development. The skills and employment programme is proposed to be secured by a requirement of the draft DCO (<b>Application Document Ref. 2.1</b>). Although a beneficial effect, this is assessed as <b>not significant</b> in the ES. In addition, although not controlled by the DCO, the Applicant has a track record of working in partnership with local schools to share expertise.</p>
<p><b>Goal 5.</b> Achieve gender equality and empower all women and girls</p>	N/A	Equality aspects are not within the agreed scope of the ES or DCO and are therefore out of scope.

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		These aspects are covered by the Applicant's workplace policies.
<b>Goal 6.</b> Ensure availability and sustainable management of water and sanitation for all	L	The effects on the water environment have been assessed in <b>Chapter 12: Water Environment and Flood Risk</b> (ES Volume I – <b>Application Document Ref. 6.2</b> ) and it's accompanying appendices and are considered <b>not significant</b> , with the application of embedded and additional mitigation. Controls within the Environmental Permit are considered adequate to prevent water pollution incidents and provide the necessary action plans to take rapid remedial action if incidents occur.
<b>Goal 7.</b> Ensure access to affordable, reliable, sustainable and modern energy for all	S	As described in <b>Chapter 4: The Proposed Development</b> (ES Volume I – <b>Application Document Ref. 6.2</b> ) the aim of the Proposed Development is to assist in the UK Government's target to achieve Net Zero carbon emissions by 2050. Controls will be provided within the Environmental Permit which allow measurement of progress against the relevant

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		targets. The greenhouse gas emissions are assessed within <b>Chapter 17: Climate Change and Sustainability (ES Volume I – Application Document Ref. 6.2)</b> as a contribution to the overall global climate as <b>not significant</b> .
<b>Goal 8.</b> Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	N/A	The investment decisions to date, and that will be made in the future in relation to the Proposed Development, are based upon the Applicant’s commitment to long-term economic, social and environmental sustainability. The Planning Statement ( <b>Application Document Ref. 5.5</b> ) provides further explanation. Effects are not assessed in the ES.
<b>Goal 9.</b> Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation	N/A	As explained in <b>Chapter 4: The Proposed Development (ES Volume I – Application Document Ref. 6.2)</b> , the technology proposed is ‘First of a Kind’ in the UK and therefore fosters innovation, although this aspect is not assessed in the ES. The approach taken to the design of the Proposed Development is

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		further explained in the Design and Access Statement ( <b>Application Document Ref. 5.6</b> ).
<b>Goal 10.</b> Reduce inequality within and among countries	N/A	Equality aspects are not within the agreed scope of the ES although it is recognised that the Proposed Development (as a part of the Zero Carbon Humber Cluster) will provide a positive contribution to the regional economy within the Humber.
<b>Goal 11.</b> Make cities and human settlements inclusive, safe, resilient and sustainable	S	<b>Chapter 18:</b> Major Accidents and Disasters (ES Volume I - <b>Application Document Ref. 6.2</b> ) assesses the potential for a wide range of major accidents and disasters, (e.g. fires, explosions and the release of carbon dioxide (CO <sub>2</sub> ) gas) with the potential to impact people both on and off-site, as well as assets and property and the surrounding environment. Such incidents have an extremely low probability of occurrence but would have the potential for significant effects on people and the environment without mitigation. The embedded mitigation and control of operations through relevant regulatory

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		<p>regimes is proposed to be applied to reduce risks to As Low As Reasonably Practicable (ALARP) such that residual effects would be <b>not significant</b>.</p> <p><b>Appendix 12A:</b> Flood Risk Assessment (ES Volume II - <b>Application Document Ref. 6.3</b>) describes the flood resilience measures proposed for the Proposed Development Site. Operation of the Proposed Development will not increase flood risk elsewhere, in line with relevant national policy. Effects related to flood risk are assessed in <b>Chapter 12: Water Environment and Flood Risk</b> (ES Volume I – <b>Application Document Ref. 6.2</b>) as <b>not significant</b>.</p> <p>The Landscaping and Biodiversity Management and Enhancement Plan (<b>Application Document Ref. 5.10</b>) describes the Applicant’s proposals to provide an overall net gain for biodiversity that will provide healthy spaces within the Proposed Development</p>

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		Site, and which includes proposals for planting in areas such as the Proposed Development Site entrance, that have the potential to benefit transient users of the A18. The beneficial effect of this is quantified but not assessed in <b>Chapter 11: Biodiversity and Nature Conservation</b> (ES Volume I – <b>Application Document Ref. 6.2</b> ).
<b>Goal 12.</b> Ensure sustainable consumption and production patterns	N/A	Consumption of raw materials will be controlled by the Environmental Permit and is therefore not within the scope of this review.
<b>Goal 13.</b> Take urgent action to combat climate change and its impacts	S	As described in <b>Chapter 4: The Proposed Development</b> (ES Volume I – <b>Application Document Ref. 6.2</b> ) the aim of the Proposed Development is to assist in the UK Government’s target to achieve Net Zero carbon emissions by 2050 in order to combat climate change and its impacts by capturing over 90% of the carbon dioxide that would otherwise be emitted from the generating station. Residual

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		<p>greenhouse gas emissions are assessed as <b>not significant</b>.</p> <p>This chapter describes the measures within the Proposed Development that are proposed to strengthen resilience and adaptation to a number of climate-related hazards. In combination climate impacts (ICCI) and climate change resilience (CCR) impacts and effects are assessed as <b>not significant</b>.</p>
<p><b>Goal 14.</b> Conserve and sustainably use the oceans, seas and marine resources for sustainable development</p>	<p>S</p>	<p>The effects on the marine environment, including in relation to biodiversity (species and habitats) has been assessed in the ES. <b>Chapter 12: Water Environment and Flood Risk</b> (ES Volume I – <b>Application Document Ref. 6.2</b>) and its accompanying appendices (<b>Appendix 12B: Water Framework Directive Assessment</b> and <b>Appendix 12C: Navigational Risk Assessment</b> (ES Volume II – <b>Application Document Ref. 6.3</b>)) present the assessment of effects on the marine environment.</p>

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		<p>With the application of embedded mitigation, effects on the marine environment are considered <b>not significant</b>.</p> <p>In addition, the potential for likely significant effects (LSE) on designated habitats within the River Trent is further assessed in the Habitat Regulations Screening Report (<b>Application Document Ref. 5.12</b>). No LSE are identified.</p>
<p><b>Goal 15.</b> Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</p>	<p>S</p>	<p><b>Chapter 11:</b> Biodiversity and Nature Conservation (ES Volume I – <b>Application Document Ref. 6.2</b>) describes the measures proposed to prevent the introduction and reduce the impact of invasive alien non-native species (INNS) within the water environment via the proposed cooling water abstraction and discharge. With the control measures proposed, effects are assessed as <b>not significant</b>.</p>

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		<p>Proposals to achieve no net loss of biodiversity and a quantifiable gain for biodiversity as a result of the Proposed Development are outlined in the Landscaping and Biodiversity Management and Enhancement Plan (<b>Application Document Ref. 5.10</b>) including:</p> <ul style="list-style-type: none"> <li>• enhancing field drain habitats for the benefit of water vole to compensate for temporary and permanent losses of habitat to the Proposed Development;</li> <li>• enhancing grassland habitats for the benefits of pollinators and other invertebrates, birds, badger, brown hare and other species;</li> <li>• providing nesting and roosting features for birds and bats to address a general lack of natural features in the local area to meet this need; and</li> </ul>

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		<ul style="list-style-type: none"> <li>enhancing the habitat and green infrastructure network adjacent to and through the Proposed Development Site.</li> </ul>
<b>Goal 16.</b> Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	N/A	It is considered that this goal is covered by the Applicant's wider corporate policies. Effects are not assessed in this ES.
<b>Goal 17.</b> Strengthen the means of implementation and revitalise the global partnership for sustainable development	N/A	It is considered that this goal is covered to a limited extent by the Applicant's presence within the Zero Carbon Humber Partnership. Effects are not assessed in this ES.