ENVIRONMENTAL STATEMENT – VOLUME 1 – CHAPTER 19 SUMMARY OF SIGNIFICANT EFFECTS

Drax Bioenergy with Carbon Capture and Storage

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19. SUMMARY OF LIKELY SIGNIFICANT ENVIRONMENTAL EFFECTS

19.1. INTRODUCTION

19.1.1. **Chapters 5 to 17** (document references 6.1.5-6.1.17) of this Environmental Statement (ES) have considered the potential environmental impacts and likely significant effects of the Proposed Scheme. Topic specific impact assessments are presented in detail in **Chapters 5 to Chapter 17**. This chapter provides a summary of the likely significant effects reported in the topic chapters of the ES and this is provided in **Table 19.2 (Summary of Likely Significant Environmental Effects)** below.

19.2. SIGNIFICANCE OF EFFECTS

19.2.1. As set out in **Section 4.10 of Chapter 4 (EIA Methodology)** (document reference 6.1.4) of this ES, effects, whether adverse or beneficial, assessed as having "moderate", "large" or "very large" significance are deemed to be significant. Effects determined to be "slight" or "neutral" are deemed to be not significant. Any deviation from this approach is detailed in the topic **Chapters 5 – 18** of this ES. **Table 19.2** presents a summary of likely significant residual effects only i.e. those that have been assessed as "moderate" or above, or "significant" in relation to Ecology (see methodology set out in **Table 8.3** of **Chapter 8 (Ecology)** (document reference 6.1.8). **Table 19.3** presents a summary of likely significant residual effects in relation to the Cumulative Assessment (see **Chapter 18 (Cumulative Effect)** (document reference 6.1.18) and sets out the likely significant intra-project and inter-project residual effects.

19.2.2. The following topics did not identify any likely significant effects in their assessments following the implementation of mitigation and are therefore not included in this Chapter:

a. **Chapter 6 (Air Quality)** (document reference 6.1.6);
b. **Chapter 7 (Noise and Vibration)** (document reference 6.1.7);
c. **Chapter 11 (Ground Conditions)** (document reference 6.1.11);
d. **Chapter 13 (Materials and Waste)** (document reference 6.1.13);
e. **Chapter 14 (Climate Resilience)** (document reference 6.1.14); and
f. **Chapter 17 (Major Accidents and Disasters)** (document reference 6.1.17)

19.2.3. **Table 19.2** includes the following information:

a. A description of the effect;
b. The phase of the Proposed Scheme at which the effect is anticipated to occur (construction phase, operational phase or decommissioning phase);

c. A summary of the nature and significance of likely significant effects identified within the ES prior to the implementation of secondary mitigation;
d. Secondary mitigation measures to be implemented to minimise the significance of these significant effects; and
e. The residual significance of these effects assuming all proposed mitigation is implemented. The abbreviations used are defined in **Table 19.1** below.

Table 19.1 - Abbreviations Used in Table 19.2

Abbreviation	Definition
P / T	Permanent or Temporary
D / I	Direct or Indirect
ST / MT / LT	Short Term, Medium Term or Long Term
N/A	Not Applicable

Table 19.2 - Summary of Likely Significant Effects

Description of Effect	Construction / operation / decommissioning	Significance and Nature of Effects Prior to Mitigation / Enhancement	Summary of Mitigation / Enhancement	Residual Significance of Effects
Chapter 5 (Traffic and Transport) (document reference 6.1.5)				
Junction 4 (M62 Junction 36) – Driver Delay	Construction / decommissioning	**Major adverse**	Enhanced Construction Worker Travel Plan and Construction Traffic Management Plan	**Major adverse** T / D / ST
Junction 4 (M62 Junction 36) - Highway Safety	Construction / decommissioning	**Moderate adverse**	N/A	**Moderate adverse** T / D / ST
Chapter 8 (Ecology) (document reference 6.1.8)				
Habitats of Principal Importance - Removal and disturbance from construction and site clearance	Construction	**Significant adverse at a Local Scale**	Reinstatement, creation and enhancement of habitats within on and off-site areas as per Outline Landscape and Biodiversity Strategy	**Significant adverse at a Local Scale** P / D / N/A
Bats - Disturbance from site and vegetation clearance and loss of commuting and foraging habitat	Construction	**Significant adverse at a Local Scale**	Reinstatement, creation and enhancement of habitats within on and off-site areas as per Outline Landscape and Biodiversity Strategy.	**Significant Adverse at a Local Scale** T / I / ST

Description of Effect	Construction / operation / decommissioning	Significance and Nature of Effects Prior to Mitigation / Enhancement	Summary of Mitigation / Enhancement	Residual Significance of Effects
Breeding and Wintering Birds - Disturbance from site and vegetation clearance and loss of suitable nesting and foraging habitat.	Construction	**Significant Adverse at a District Scale**	Reinstatement, creation and enhancement of habitats within on and off-site areas as per Outline Landscape and Biodiversity Strategy. Construction hoarding.	**Significant Adverse at a District Scale** T / I / ST
Terrestrial Invertebrates - Disturbance from site and vegetation clearance	Construction	**Significant Adverse at a District Scale**	Reinstatement, creation and enhancement of habitats within on and off-site areas as per Outline Landscape and Biodiversity Strategy	**Significant Adverse at a Local Scale** T / I / ST
Vascular Plants - Removal of habitat supporting green-winged orchids	Construction	**Significant Adverse at a County Scale**	Preparation of a receptor site for the translocation of green-winged orchid as per the Outline Landscape and Biodiversity Strategy	**Significant Adverse at a County Scale** T / D / ST
Bats - Operational lighting illuminating unlit areas which could deter foraging and commuting	Operation	**Significant Adverse at a Local Scale**	Operational lighting strategy. Reinstatement, creation and enhancement of habitats on and off-site.	**Significant Beneficial at a Local Scale** P / I / LT
Breeding and Wintering Birds - operation phase effects post-construction	Operation	**Not significant**	Reinstatement, creation and enhancement of habitats on and off-site.	**Significant Beneficial at a Local Scale**

Description of Effect	Construction / operation / decommissioning	Significance and Nature of Effects Prior to Mitigation / Enhancement	Summary of Mitigation / Enhancement	Residual Significance of Effects
				P / I / LT
Amphibians – operation phase effects post-construction	Operation	**Significant Adverse at a Local Scale**	Reinstatement, creation and enhancement of habitats on and off-site.	**Significant Beneficial at a Local Scale** P / I / LT
Terrestrial Invertebrates – operation phase effects post-construction	Operation	**Significant Adverse at a District Scale**	Reinstatement, creation and enhancement of habitats on and off-site.	**Significant Beneficial at a District Scale** P / I / LT
Chapter 9 (Landscape and Visual Impact) (document reference 6.1.9)				
Visual Amenity - Residents living in properties with western - facing views (**Pear Tree Avenue, Carr Lane / Redhouse Lane and Main Road)**. The change in views are due to: • Visible construction activities would include those within the laydown area off New Road (east) and the movement of plant and materials along New Road.	Construction / decommissioning	**Moderate adverse**	• Advance mitigation planting along the East Construction Laydown Area boundary. • Site hoardings provided to construction areas.	**Moderate adverse** **T / D / ST**

Description of Effect	Construction / operation / decommissioning	Significance and Nature of Effects Prior to Mitigation / Enhancement	Summary of Mitigation / Enhancement	Residual Significance of Effects
• Views of tall plant associated with the construction of the Proposed Scheme above and in the gaps between the built form in Drax Power Station.				
Visual Amenity - Residents living in properties with eastern facing views **(Camela Lane / Clay Lane)**. The change in views are due to: • Views of tall plant associated with the construction of the Proposed Scheme within the western aspect of Drax Power Station.	Construction / decommissioning	**Moderate adverse**	• No additional mitigation measures are proposed • The construction activity associated with • Proposed Scheme will be visible above • intervening vegetation and landform.	**Moderate adverse** **T / D / ST**
Visual Amenity - Residents in properties with north-east facing views from the settlement of Camblesforth. The change in background views are due to: • Views of tall plant associated with the construction of the	Construction / decommissioning	**Moderate adverse**	• No additional mitigation measures are proposed. • The construction activity associated with the Proposed Scheme will be visible above intervening vegetation and landform.	**Moderate adverse** **T / D / ST**

Description of Effect	Construction / operation / decommissioning	Significance and Nature of Effects Prior to Mitigation / Enhancement	Summary of Mitigation / Enhancement	Residual Significance of Effects
Proposed Scheme within the western aspect of Drax Power Station.				
Visual Amenity - People travelling along PRoW with close proximity eastern facing views. The change in background views are due to: • **The proximity and prominence of construction activity associated with the Proposed Scheme, experienced in sequential views approaching Drax Power Station and alongside its boundary.**	Construction / decommissioning	**Moderate adverse**	• Site hoardings provided to construction areas.	**Moderate adverse** T / D / ST
Visual Amenity - People travelling along PRoW with south-western facing views. The change in background views are due to: • Visible construction activities within the East Construction Laydown Area and the	Construction / decommissioning	**Moderate adverse**	• Advance mitigation planting along the East Construction Laydown Area boundary. • Site hoardings provided to construction areas.	**Moderate adverse** **T / D / ST**

Description of Effect	Construction / operation / decommissioning	Significance and Nature of Effects Prior to Mitigation / Enhancement	Summary of Mitigation / Enhancement	Residual Significance of Effects
movement of plant and materials along New Road. • Views of tall plant associated with the construction of the **Proposed Scheme above and in the gaps between the built** form in Drax Power Station.				
Chapter 10 (Heritage) (document reference 6.1.10)				
Unknown buried HAs - Any groundworks within the East Laydown area have the potential to impact upon any buried archaeological remains include but are not limited to ground levelling, topsoil stripping, the removal of existing road surfaces, construction of temporary compounds and haulage roads, and the installation of infrastructure items **Any form of landscaping, including the planting of trees**	Construction / decommissioning	**Negligible Adverse to Moderate Adverse**	• Mitigation through preservation in-situ. • Mitigation through preservation by record.	**Negligible Adverse to Moderate Adverse** P / D / N/A

Description of Effect	Construction / operation / decommissioning	Significance and Nature of Effects Prior to Mitigation / Enhancement	Summary of Mitigation / Enhancement	Residual Significance of Effects
and hedges for screening and ecological mitigation, within the Habitat Provision Area has the potential to disturb buried archaeological remains.				
Chapter 12 (Water Environment) (document reference 6.1.12)				
Increased flood risk associated with an increase in the rate and volume of surface water runoff from an increase in impermeable areas at Drax Power Station Site, impacting the Site and local people and properties.	Operation	**Very large adverse**	• Implementation of the surface water drainage strategy as detailed in **Appendix 12.3** (document reference 6.3.12.3).	**Moderate beneficial** **P / D/ LT**
Chapter 15 (Greenhouse Gases) (document reference 6.1.15)				
Greenhouse gas (GHG) emissions generated through the construction phase of the Proposed Scheme (104,700 tCO_2e)	Construction	**Moderate adverse**	Design and construction mitigation measures incorporating the carbon reduction hierarchy.	**Moderate adverse** **P / D/ LT**
GHG emission reduction from the operational Carbon Capture process of the Proposed Scheme (-7,976,185 tCO_2**e**)	Operation	**Major beneficial**	Selection of Best Available Technique (BAT) equipment and technology; implementation of an operational planned and preventative maintenance and	**Major Beneficial** **P / D/ LT**

Description of Effect	Construction / operation / decommissioning	Significance and Nature of Effects Prior to Mitigation / Enhancement	Summary of Mitigation / Enhancement	Residual Significance of Effects
			replacement regime; working with suppliers.	
Chapter 16 (Population and Health) (document reference 6.1.16)				
The Proposed Scheme will generate an estimated 4,500 total net construction jobs per annum, 3,825 of which will be in the local (Selby District Council and East Riding of Yorkshire) area. Relative to the size of the local economy there is likely to be a direct, temporary, long-term, moderate beneficial (significant) effect prior to the implementation of mitigation measures.	Construction	**Moderate beneficial**	There are no additional mitigation measures required or proposed in relation to this effect.	**Moderate beneficial** **T / D/ LT**

Table 19.3 - Summary of Likely Significant Cumulative Effects

Description of Effect	Construction / operation / decommissioning	Significance and Nature of Effects Prior to Mitigation / Enhancement	Summary of Mitigation / Enhancement	Residual Significance of Effects
Intra - project Cumulative Effects - Construction				
Residents living in properties with western facing views off Pear Tree Avenue.	Construction	Views for residents would be disrupted and the Landscape Character altered, with moderate adverse effects. There may be slight adverse effects due to construction noise. Residents may also experience effects as a result of increased dust deposition (although these effects are anticipated to be negligible).	As detailed in **paragraph 18.10.1**, of **Chapter 18 (Cumulative Effects)** no additional mitigation is proposed.	**Moderate Adverse** T / I + D / ST
Residents living in properties with eastern facing views (Camela Lane / Clay Lane)	Construction	Views for residents would be disrupted and the Landscape Character would be altered, with moderate adverse effects. There may be slight adverse effects due to construction noise. Residents may also experience effects as a result of increased dust deposition (although these effects are anticipated to be negligible).	As detailed in **paragraph 18.10.1**, of **Chapter 18 (Cumulative Effects)** no additional mitigation is proposed.	**Moderate Adverse** T / I + D / ST

Residents in properties with north-east facing views from the settlement of Camblesforth	Construction	Views for residents would be disrupted and the Landscape Character would be altered, with moderate adverse effects. There may be slight adverse impacts due to construction noise. Residents may also experience effects as a result of increased dust deposition (although these effects are anticipated to be neutral / negligible).	As detailed in **paragraph 18.10.1**, of **Chapter 18 (Cumulative Effects)** no additional mitigation is proposed.	**Moderate Adverse** T / I + D / ST
Inter-project Significant Effects - Construction				
Short List ID 3 **2021/0450/SCP** **SEGL2 (Scotland to England Green Link pipeline)**	Construction	It is predicted that there would be temporary moderate adverse effects on Common Visual receptors due to the increase in large scale infrastructure within the view.	As detailed in **paragraph 18.10.1**, of **Chapter 18 (Cumulative Effects)** no additional mitigation is proposed.	**Moderate Adverse** on Common Visual receptors T / I + D / ST
Short List ID 6 **NY/20022/0027/SCO** **Barlow Mound - recovery of ash resource.**	Construction	It is predicted that there would be temporary moderate adverse effects on Common Visual receptors (residents with south-eastern facing views and footpath users). It is also anticipated that there would be significant effects on	As detailed in **paragraph 18.10.1**, no additional mitigation is proposed.	**Moderate Adverse** on Common Visual receptors **Significant** effects on ecological

		ecological receptors at the District level.		receptors at a District level. T / I + D / ST
Short List ID 8 **2020/1357/FULM** **Development of an energy storage facility.**	Construction	It is predicted that there would be temporary moderate adverse effects on Common Visual receptors (residents of Drax village with south-facing views and footpath users).	As detailed in **paragraph 18.10.1**, no additional mitigation is proposed.	**Moderate Adverse** on Common Visual receptors. T / I + D / ST
Short List ID 10 **2021/0788/EIA** **Solar farm development on Camela Lane.**	Construction	It is predicted that there would be temporary moderate adverse effects on Common Visual receptors (footpath users and residents of Camblesforth).	As detailed in **paragraph 18.10.1**, no additional mitigation is proposed.	**Moderate Adverse** on Common Visual receptors T / I + D / ST
Short List ID 12 **2020/0994/FULM** **Demolition of Flue Gas Desulphurisation Plan and associated works.**	Construction	It is predicted that there would be temporary moderate adverse effects on Common Visual receptors (footpath users and residents of Camblesforth and Drax).	As detailed in **paragraph 18.10.1**, no additional mitigation is proposed.	**Moderate Adverse** on Common Visual receptors T / I + D / ST