

The Drax Power (Generating Stations) Order

Land at, and in the vicinity of, Drax Power Station, near Selby, North Yorkshire

Outline Landscape and Biodiversity Strategy



The Planning Act 2008
The Infrastructure Planning (Applications: Prescribed Forms and Procedure)
Regulations 2009 – Regulation 5(2)(a)

Drax Power Limited

Drax Repower Project

Applicant: DRAX POWER LIMITED

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Glossary

Abbreviation	Description
Application	The DCO Application
BBOP	Business and Biodiversity Offsetting Programme
CIRIA	Construction Industry Research and Information Association
CIEEM	Chartered Institute of Ecology and Environmental Management
Compensation Areas	Areas of land identified for the provision of landscaping and new / restored habitats
IEMA	Institute of Environmental Management and Assessment
DEFRA	Department of Environment, Farming and Rural Affairs



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1 OUTLINE LANDSCAPE AND BIODIVERSITY STRATEGY

1.1 Introduction

Overview

- 1.1.1. This Outline Landscape and Biodiversity Strategy ('Strategy') has been prepared on behalf of Drax Power Limited. It forms part of the application for a Development Consent Order (DCO) that has been submitted to the Secretary of State (SoS).
- 1.1.2. Drax Power Limited is seeking to repower up to two existing coal fired units, and construct up to two new gas fired power generation units. Each unit, which is a new gas fired generating station in its own right, would comprise of new gas turbines that can operate in both combined cycle gas turbine (CCGT) and open cycle gas turbine (OCGT) technology.
- 1.1.3. For the purposes of this Strategy it is assumed that both units are constructed.

Drax Power Limited

1.1.4. Drax Power Limited ('Drax') own and manage Drax Power Station and is part of the Drax Group Plc, one of the UK's largest energy producers.

Existing Drax Power Station Complex

- 1.1.5. Drax Power Station is located near Selby, North Yorkshire.
- 1.1.6. Drax Power Station began generating electricity after its first 660 MW coal fired unit was commissioned in 1974. In 1975, Drax Power Station was officially opened, with three coal fired units and a total generating capacity of just under 2,000 MW. Eleven years later, in 1986, Drax Power Station doubled in size and became the largest power station in the UK.
- 1.1.7. There are now six units at Drax Power Station which include three units converted to biomass (units 1-3), with the fourth unit expected to be converted in 2018. Drax Power Station now has the capacity to meet 8% of the UK's electricity need and employs 830 people directly throughout the year. A further 4,500 jobs depend on Drax throughout Yorkshire and the Humber.
- 1.1.8. Land uses within the Existing Drax Power Station Complex are predominantly associated with the operation of Drax Power Station. This includes a coal stock yard, hard standing, contractors' compounds, car parks, access/service roads and a riverside loading / unloading jetty, which is linked to the River Ouse to the east. Other land uses within the Existing Drax Power Station Complex not directly related to the operation of Drax Power Station comprise open grassland, scrub, small pockets of woodland and farmland.
- 1.1.9. The area within the Existing Drax Power Station Complex where development is proposed is referred to as the Power Station Site and is approximately 36.1 ha. The area adjacent to the Existing Drax Power Station Complex where construction laydown would take place and which would subsequently be reserved for carbon capture storage is called the Carbon capture readiness reserve space and is approximately 17.3 ha.



Pipeline Area

- 1.1.10. The Gas Pipeline route is approximately 3 km in length and crosses agricultural land to the east of the Existing Drax Power Station Complex. The land within the Pipeline Construction Area is 26.5 ha.
- 1.1.11. An additional area is located on Rusholme Lane to accommodate potential passing places for traffic during construction of the Gas Pipeline. This is considered to be part of the Pipeline Area.
- 1.1.12. The Site on which the Proposed Scheme would be delivered comprises the Power Station Site, the Pipeline Area, and the Carbon capture readiness reserve space (which is space adjacent to the Existing Drax Power Station Complex which will be set aside for when the Carbon capture readiness state is achieved, but which in the meantime will be used as a construction Laydown Area in connection with the construction of Units X and Y).
- 1.1.13. Current land uses within the Power Station Site, the Carbon capture readiness reserve space and the Pipeline Area can be broken down into development parcels, and these are described in Table 1.1 below, and accord with the development parcels shown on Figure 6.7.1 in Appendix 1:

Table 1-1 Description of Development Parcels within the Power Station Site, Carbon capture readiness reserve space and Pipeline Area

Development Parcel	Description	
	n Site and the Carbon capture readiness reserve space	
Α	Agricultural land owned by the applicant and leased to third parties for agricultural purposes	
В	Scrub land within the curtilage of the Existing Drax Power Station Complex	
С	Area of hardstanding within the curtilage of the Existing Drax Power Station Complex	
D	Roadway from North Gate Entrance	
E	Scrub land within the curtilage of the Existing Drax Power Station Complex	
F	Units 5 and 6 (including, associated infrastructure), stores, contractors facilities (including, car park), sludge lagoon and National Grid substation within the curtilage of the Existing Drax Power Station Complex	
G	Drax jetty - no longer part of Proposed Scheme	
Н	Hardstanding, fuel oil store, grassland and other infrastructure within the curtilage of the Existing Drax Power Station Complex	
Pipeline Area		
1	Agricultural land	
J	Pipeline	
K	Agricultural land	
L	Agricultural land	

The Proposed Scheme

1.1.14. The Proposed Scheme is to repower up to two existing coal-powered generating units (Units 5 and 6) at the Existing Drax Power Station Complex with new gas fired units which



- integrates into some of the existing Power station infrastructure. The term "repower" is used as existing infrastructure, such as the steam turbine and cooling towers, that are currently used for the coal fired units would be reutilised for the new gas fired generating units/stations.
- 1.1.15. The repowered units (which each constitute a new gas fired generating station) would have a new combined capacity of up to 3,600 MW in combined cycle mode (up to 1,800 MW each), replacing existing units with a combined capacity to generate up to 1,320 MW (660 MW each).
- 1.1.16. Each gas generating station would have up to two gas turbines, with each gas turbine powering a dedicated generator of up to 600 MW in capacity. The gas turbines in each generating station (or unit), therefore, would have a combined capacity of up to 1,200 MW. The gas turbines in each generating station (or unit), in combined cycle mode, would provide steam to the existing steam turbine (through Heat Recovery Steam Generators (HRSGs)) which would generate up to 600 MW per unit. Each unit would have up to two HRSGs. This results in a capacity for each generating station of up to 1,800 MW and, should both units be repowered, a combined capacity of up to 3,600 MW. The new gas turbine generating units have been designated the terms "Unit X" and "Unit Y".
- 1.1.17. Each unit would have (subject to technology and commercial considerations) a battery energy storage facility with a capacity of up to 100 MW per unit, resulting in a combined battery energy storage capacity of up to 200 MW. All battery units would be stored in a single building.
- 1.1.18. The total combined capacity of the two gas fired generating stations and two battery storage facilities (i.e. the total combined capacity of the Proposed Scheme) is therefore 3,800 MW.
- 1.1.19. Drax is seeking consent for the flexibility to either repower one unit (i.e. construct a single generating station) (with up to 1,800 MW generating capacity and up to 100 MW battery storage capacity) or to repower two units (two generating stations each with an up to 1,800 MW generating capacity and each with its own up to 100 MW battery storage capacity). The decision as to whether Drax repowers two units (Units X and Y) and constructs two gas fired generating stations as opposed to a single unit (Unit X) is a commercial decision that can only be taken post any consent being granted.
- 1.1.20. In order to repower to gas, a new Gas Pipeline would be constructed from the Existing Drax Power Station Complex to the National Transmission System (NTS). Pipeline infrastructure would be the same for both one and two unit scenarios.
- 1.1.21. A Gas Receiving Facility (GRF) comprising Pipeline Inspection Gauge (PIG) Trap Facility (PTF), Pressure Reduction and Metering Station (PRMS) and compressor station is proposed south of woodland to the east of New Road.
- 1.1.22. At the connection to the NTS would be the Above Ground Installations (AGIs).
- 1.1.23. A list of the main elements of the works described above and which need to be authorised by the DCO is summarised in Table 1-2 below, with the corresponding Work Number from Schedule 1 of the draft DCO in the left column.



Table 1-2 Description of the works

Work Number	Title of the works
(Work No)	
Work No. 1	An electricity generating station (Unit X) fuelled by natural gas and with a gross electrical output capacity of up to 1,800 megawatts.
Work No. 2	An electricity generating station (Unit Y) fuelled by natural gas and with a gross electrical output capacity of up to 1,800 megawatts.
Work No. 3	Up to two battery storage facilities with a combined gross storage capacity of up to 200 megawatts.
Work No. 4	Up to two new gas insulated switchgear banking buildings.
Work No. 5	A natural gas receiving facility.
Work No. 6	Above ground gas installation.
Work No. 7	A gas pipeline.
Work No. 8	Electrical connections between Work No. 4 and the existing 400 kilovolt National Grid substation.
Work No. 9	Temporary construction laydown areas.
Work No. 10	Carbon capture readiness.
Work No. 11	Retained and enhanced landscaping comprising- (a) soft landscaping including planting; (b) landscape and biodiversity enhancement measures; and (c) security fencing, gates, boundary treatment and other means of enclosure
Work No. 12	Decommissioning and demolition of sludge lagoons and construction of replacement sludge lagoons.
Work No.13	Removal of existing 132 kilovolt overhead line and associated towers and foundations.
Work No. 14	Passing place on Rusholme Lane
Work No. 15	Site reconfiguration works.

- 1.1.24. All of the above Work Numbers, with the exception of Work Nos. 8, 9, 11, 12, 13 and 14 include works relating to the provision of "hard and soft landscaping, including tree planting, and ecological mitigation". Work Number 11 relates to the retention and enhancement of existing landscaping situated within the Power Station Site and Carbon capture readiness reserve space. Schedule 1 of the draft DCO also includes a generic clause for planting.
- 1.1.25. The Proposed Scheme would be implemented over a number of stages as summarised below and detailed in Table 1-3.
 - Stage 0 = Site Reconfiguration Works
 - Stage 1 = Construction of Unit X
 - Stage 2 = Operation of Unit X and construction of Unit Y
 - Stage 3 = Operation of Unit X and Y
 - Stage 4 = Decommissioning

Table 1-3 Stages of the Proposed Scheme That Have Been Considered in the ES

Stage	Title	Description	Indicative programme
0	Site Reconfiguration Works	Works may be completed via two possible mechanisms as follows:	Works completed by end of 2018 (if completed pursuant to TCPA
			permission).



Stage	Title	Description	Indicative programme
Stage	Title	•	indicative programme
		A TCPA application, applied for in 2018. As part of the DCO Application.	Existing planting associated with the Site Reconfiguration Works and within Development Parcel H would be
1	Construction of Unit X	This stage refers to the construction of Unit X, along with the construction of the Gas Pipeline, GRF, AGIs, the battery storage facility for Unit X, and the building to house the battery storage (for both Units X and Y). Laydown areas for the Gas Pipeline, GRF and AGIs will be reinstated once construction of these facilities is complete. Once Unit X is ready for connection into the steam turbine, one existing coalfired unit will be turned off so as to allow the steam turbine to be used for Unit X. At this point, there would be one remaining coal-fired unit in operation.	removed Works undertaken over a three year duration and commence in 2019/2020 with OCGT capability by 2021/2022 and CCGT ready by 2022/2023. Existing planting to accommodate Unit X and associated construction areas within the Power Station Site would be removed or disturbed. One disused sludge lagoon would be brought back into operation and the southern sludge lagoon filled in to accommodate a construction laydown.
2	Operation of Unit X and construction of Unit Y.	The stage refers to the operation and maintenance of Unit X, the Gas Pipeline and the battery storage facility and the construction of Unit Y. If Unit Y is not built then this stage 2 is a worst case assessment of the operation of Unit X. Two scenarios will be considered for NOx abatement technology during the construction of Unit X. These are as follows: No NOx abatement technology.	The construction of Unit Y is assumed to take place 12 months after Unit X is complete Works on Unit Y would commence 2024 and run to 2027 Existing vegetation to accommodate Unit Y would be removed or disturbed and sludge lagoons relocated to Area E.



Stage	Title	Description	Indicative programme
		Installation of Selective Catalytic Reduction (SCR).	
		The construction laydown areas on the Carbon capture reserve space will be reinstated after Unit Y is built.	
3	Operation of Unit X and Y.	This stage refers to the operation and maintenance of Unit X, Unit Y, the Gas Pipeline and the battery storage facility. Once Unit Y is ready for connection into the steam turbine, the remaining coal-fired unit will be turned off so as to allow the steam turbine to be used for Unit Y. At this point, there would no remaining coal-fired units in operation at the Existing Drax Power Station Complex.	It is assumed that both Units would be operating by end of 2027. All new mitigation measures would be implemented by 2027 and as part of Stage 0, 1 and 2.

The Purpose and Structure of the Strategy

- 1.1.26. The purpose of the Strategy is to outline in draft the measures which would mitigate the effects of the Proposed Scheme on landscape and biodiversity features and enhance the value of such features in accordance with relevant national and local planning policies. The Strategy is supported by a set of indicative mitigation plans referred to in Appendix 1 of this document.
- 1.1.27. Following DCO consent and prior to commencement of each of Work Numbers 1-7, 10 and 15 detailed above in Table 1-2, a detailed Landscape and Biodiversity Strategy, which includes a management, maintenance and monitoring plan and detailed mitigation plans would be submitted for approval in respect of that work (note that this could be discharged individually per work number or cumulatively with more than one work number). The draft DCO (DCO Document Reference 3.1) includes a requirement in Schedule 2 providing that:
 - 9—(1) Each of numbered works [1, 2, 3, 4, 5, 6, 7,10, 11 and 15] of the main development must not be commenced until, for that numbered work, a written strategy substantially in accordance with the outline landscape and biodiversity strategy (as relevant for that numbered work) has been submitted to and, after consultation with North Yorkshire County Council approved by the relevant planning authority.



- (2) The strategy submitted and approved pursuant to sub-paragraph (1) must include details of all proposed hard and soft landscaping works and ecological mitigation measures (as applicable for the relevant numbered work) and, where applicable,-
- the location, number, species, size and planting density of any proposed planting including details of any proposed tree planting and the proposed times of such planting;
- cultivation, importing of materials and other operations to ensure plant establishment;
- hard surfacing materials;
- an implementation timetable;
- annual landscaping and biodiversity management and maintenance; and.
- badger sett closure and artificial sett creation proposals, where required;
- Measures to avoid, minimise or mitigate impacts on protected and notable species, where required.
- (3) Any shrub or tree planted as part of the approved strategy that, within a period of five years after planting, is removed, dies or becomes, in the opinion of the relevant planning authority, seriously damaged or diseased, must be replaced in the first available planting season with a specimen of the same species and size as that originally planted unless otherwise agreed with the relevant planning authority.
- (4) The strategy must be implemented and maintained in accordance with the implementation timetable in the strategy submitted and approved pursuant to subparagraph (1) unless otherwise agreed with the relevant planning authority.
- 1.1.28. The siting of the Proposed Scheme and its design has been influenced by environmental and technological constraints. On-site mitigation (within the Site Boundary) and additional areas of land under Drax's ownership were identified to secure net gains for landscape and biodiversity. The assessment process and impact avoidance measures are described in Chapter 9 Biodiversity and Chapter 10 Landscape and Visual Impact Assessment (LVIA) of the ES.
- 1.1.29. The Ecological Impact Assessment (EcIA) approach to the Biodiversity chapter highlights the potentially significant effects of the Proposed Scheme on sensitive ecological receptors. Receptors include internationally and nationally designated sites, Habitats of Principal Importance (HPI) and those with ecological value, and protected and notable species.
- 1.1.30. The LVIA concluded that there would be significant effects on specific landscape character types and areas, the Lower Derwent Important Local Area and local landscape features. Equally, adverse effects would be experienced by a variety of local visual receptors within 3 km of the Proposed Scheme subject to their proximity, orientation and presence of intervening vegetation and the built form.
- 1.1.31. This document outlines the landscape and biodiversity mitigation measures that would be implemented prior to and during construction of the Proposed Scheme. As detailed above such measures would be secured through requirements in Schedule 2 of the draft DCO and these would include a detailed Landscape and Biodiversity Strategy comprising an overarching management, maintenance and monitoring plan and detailed proposals for each numbered work, prior to that work number being brought forward.
- 1.1.32. This strategy presents a coordinated approach to ecological and landscape requirements, in order to minimise the potential for conflict between each disciplines' requirements.
- 1.1.33. The Strategy is structured as follows:
 - Section 1.2: Legislation, Policy and Guidance



- Section 1.3: Existing landscape and biodiversity features and the impacts of the Proposed Scheme
- Section 1.4: The requirements of impact avoidance, both during advance works and during the construction phase
- Section 1.5: The proposals for landscape and biodiversity enhancement
- Section 1.6: Indicative measures required for the effective management and maintenance of the proposed enhancements; and
- Section 1.7: The roles and responsibilities of all parties involved in the delivery of the detailed approved Strategy.

1.2 Legislation, Policy and Guidance

Legislation

- 1.2.1. The following legislation has been considered in the preparation of this Strategy:
 - Conservation of Habitats and Species Regulations (Habitats Regulations) 2017 (Ref. 1.1)
 - Wildlife and Countryside Act 1981 (as amended) (Ref. 1.2)
 - Natural Environment and Rural Communities Act 2006 (Ref. 1.3)
 - Countryside and Rights of Way Act, 2000 (as amended) (Ref. 1.4)
 - Hedgerow Regulations, 1997 (Ref. 1.5)

National Planning Policy

- 1.2.2. Relevant national planning policy that has been considered in relation to landscape and biodiversity impact avoidance and enhancement is as follows:
 - Overarching National Policy Statement (NPS) for Energy (EN-1) (Ref. 1.6).
 - National Policy Statement for Fossil Fuel Electricity Generating Infrastructure (EN-2) (Ref. 1.7).
 - National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) (Ref. 1.8).
 - National Planning Policy Framework, 2012 (Ref. 1.9).
 - National Planning Policy Framework Consultation Proposals, March 2018 (Ref 1.10).

National Policy Statements

- 1.2.3. Overarching National Policy Statement for Energy (EN-1): In terms of landscape Policy, EN1 paragraph 5.9.8 accepts that nationally significant energy infrastructure will have effects on the landscape. Projects should be designed carefully, the aim being to "minimise harm to the landscape, providing reasonable mitigation where possible and appropriate." Paragraphs 5.9.21 to 5.9.23 encourages the preparation of landscape schemes to mitigate adverse landscape and visual impacts including landscaping off site. Works may include filling in gaps in existing tree and hedge lines to mitigate against impacts from a more distant vista.
- 1.2.4. Section 5.3 of the overarching National Policy Statement (NPS) for Energy (EN-1) (Ref 9.2) refers to biodiversity and states that the Applicant should clearly set out any effects of the development on internationally, nationally and locally designated sites of nature conservation importance, on protected species and habitats and other species identified as being of principal importance for the conservation of biodiversity. The Applicant should also demonstrate how the development has taken measures to conserve and enhance biodiversity.



- 1.2.5. Reference is also made to green infrastructure and connectivity (paragraph 5.10.20) and the need to impose requirements to ensure the connectivity of green infrastructure network is maintained within the vicinity of the development and that any necessary works are undertaken, where possible, to mitigate any adverse effect.
- 1.2.6. The NPs for Fossil Fuel Electricity Generating Infrastructure (EN-2) acknowledges that "it is not possible to eliminate the visual impacts associated with a fossil fuel generating station. Mitigation is therefore to reduce the visual intrusion of the buildings in the landscape and minimise impact on visual amenity as far as reasonably practicable" (paragraph 2.6.5). Paragraph 2.6.7 goes on to state that "earth bunds and mounds, tree planting, or both may be used for softening the visual intrusion".
- 1.2.7. The NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), section 2.21 refers to biodiversity, landscape and visual impacts and considers effects on "specific landscape elements within and adjacent to the pipeline route, such as grasslands, field boundaries (hedgerows, hedgebanks, drystone walls, fences), trees, woodlands, and watercourses, all of which are important biodiversity and landscape components.

National Planning Policy Framework and Planning Practice Guidance

- 1.2.8. The Government sets out a number of overriding core planning principles that are relevant to the landscape including:
 - Always seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings.
 - Take account of the different roles and character of different areas.
 - Contribute to conserving and enhancing the natural environment and reducing pollution.
- 1.2.9. In Section 11 "Conserving and enhancing the natural environment", paragraph 109 of the NPPF notes that "the planning system should contribute to and enhance the natural and local environment by:
 - protecting and enhancing valued landscapes, geological conservation interests and soils:
 - recognising the wider benefits of ecosystems services;
 - minimising impacts on biodiversity and providing net gains in biodiversity where
 possible, contributing to Government's commitment to halt the overall decline in
 biodiversity, including by establishing a coherent ecological networks that are more
 resilient to current and future pressures....".
- 1.3 The National Planning Policy Framework Consultation Proposals, March 2018 (Ref 1.10) differs from the current NPPF and states under Chapter 15 "Conserving and enhancing the natural environment" paragraph 168 a) that valued landscapes, sites of geological interest and soils should be protected and enhanced "in a manner commensurate with their statutory status or identified quality".
- 1.4 Under paragraph 109 clause b) an additional reference is added stating that the "intrinsic character and beauty of the countryside, and the wider benefits from natural capital including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland" must be recognised. Further text has been added to this paragraph under clause d) which emphasises that impacts on biodiversity should be minimised and net gains achieved by "establishing ecological networks that are more resilient to current and future pressures". Under clause e) further text has been added



stating that "development should, wherever possible, help to improve local environmental conditions."

LOCAL PLANNING POLICY

- 1.4.1. The local planning policies that are relevant to the Site are set out in the following documents:
 - 'Saved' policies of the Selby District Local Plan (Ref.1.11).
 - Selby District Core Strategy Local Plan (Ref. 1.12).
 - East Riding Local Plan Strategy document (Ref. 1.13).
 - Doncaster's Core Strategy 2011- 2028 (Ref. 1.14).
- 1.4.2. Policies of relevance to the need for landscape and biodiversity mitigation and enhancement for the Proposed Development are as follows:

Selby District Council

1.4.3. Policies of relevance in landscape and visual terms to the Proposed Scheme are as follows:

Selby District Core Strategy Local Plan:

- SP15 Sustainable Development and Climate Change.
- SP 18 Protecting and Enhancing the Environment.
- SP 19 Design Quality.

"Saved" policies from Selby District Local Plan:

- ENV 1 Control of Development.
- ENV 14 Protected Species
- ENV 15 Locally Important Landscape Area (Magnesian Limestone Ridge, Brayton Barff and Hambleton Hough).
- ENV21 Landscaping Requirements.
- EMP 10 Additional Industrial Development at Drax and Eggborough Power Stations.

East Riding of Yorkshire

- 1.4.4. The following policies were considered of relevance to the Site and drawn from the East Riding Local Plan Strategy document, adopted 2016 (Ref. 1.13):
 - Policy EC5 Supporting the Energy Sector.
 - Policy ENV1 Integrating High Quality Design.
 - Policy ENV2 Promoting a High Quality Landscape.
 - Policy ENV3 Valuing Our Heritage.
 - Policy ENV4 Conserving and Enhancing Biodiversity and Geodiversity.
 - Policy ENV5 Strengthening Green Infrastructure.

Doncaster Metropolitan Council

- 1.4.5. Doncaster's Core Strategy 2011- 2028 was adopted in 2012 (Ref. 1.14). Policies of relevance to the Proposed Scheme and Study Area are as follows:
 - Policy CS3 Countryside.
 - Policy CS14 Design and Sustainable Construction.
 - Policy CS15 Valuing our Historic Environment.
 - Policy CS16 Valuing our Natural Environment Policy CS17 Providing Green Infrastructure.



CONVENTIONS AND GUIDANCE

- 1.4.6. The following conventions and guidance documents have been referred to within this Strategy:
 - European Landscape Convention (Ref. 10.15).
 - National Planning Policy Guidance (Ref. 10.16).
 - Selby Local BAP (Ref. 10.17).
 - Department for Environment, Food and Rural Affairs (DEFRA) Offsetting Pilot (Ref. 10.18).
 - Business and Biodiversity Offsetting Programme (BBOP) (Ref. 10.19).

European Landscape Convention

1.4.7. The landscape and visual impact assessment takes account of legislation relevant to landscape and visual issues, including the European Landscape Convention (ELC) which was ratified in the UK on the 21 November 2006. The ELC became binding on 1 March 2007 and provides a basis for closer co-operation on landscape issues across Europe. The Convention highlights the need to recognise landscape in law, to develop landscape policies dedicated to the protection, management and creation of landscapes, and to establish procedures for the participation of the general public and other stakeholders in the creation and implementation of landscape policies. It also encourages the integration of landscape into all relevant areas of policy, including cultural, economic and social policies. The ELC defines landscapes as:

"An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors."

- 1.4.8. The ELC applies to natural, rural, urban and peri-urban areas including land, inland water and marine areas. Its purpose is to promote landscape protection, management and planning in relation to all landscapes regardless of whether their quality and condition is considered outstanding, ordinary or degraded. The UK is recognised as already putting many of the principles of the ELC into practice. The importance of landscapes in contributing to local identity and in reflecting local cultural influences and ecological diversity is shown through the use of Landscape Character Assessments and Natural England's National Character Areas Project.
- 1.4.9. In addition, this Chapter has been prepared in accordance with the Government's National Planning Practice Guidance Section Natural Environment Landscape (Ref 10.15) which contains the following relevant paragraph:
- 1.4.10. Paragraph: 001 Reference ID: 8-001-20140306. This section states that:

"One of the core principles in the National Planning Policy Framework is that planning should recognise the intrinsic character and beauty of the countryside. Local plans should include strategic policies for the conservation and enhancement of the natural environment, including landscape. This includes designated landscapes but also the wider countryside".

1.4.11. The Proposed Scheme has adopted the Defra metric and the biodiversity net gain process. This has been used to quantify the biodiversity which will be lost due to the Proposed Scheme and provide an indication of the biodiversity which will be replaced once the Proposed Scheme has been built (Ref 1.20). The biodiversity net gain (BNG) process uses the offsetting metric by DEFRA and draws further influence from a range of other guidance



- produced by BBOP, CIRIA, CIEEM and IEMA to ascertain what is needed to offset losses sustained from development.
- 1.4.12. The DEFRA metric calculates the number of 'biodiversity units' that need to be provided by a developer to offset losses. BNG is definitively achieved by adding more habitat with a greater biodiversity value to the environment than that was lost by the Proposed Scheme. This Landscape and Biodiversity Strategy adheres to BBOP's Mitigation Hierarchy (Ref 1.19) by avoiding and minimising loss of certain areas of habitats on site and reinstating lost habitat as far as possible. Biodiversity offsets would also be delivered through enhancement of habitats outside the Site and through targeted management of reinstated habitats within the Site have been included where avoidance and minimisation would not fully avoid impacts.
- 1.5 Existing Landscape and Biodiversity Features and Development Impacts

 Existing Landscape and Associated Habitats
- 1.5.1. Existing landscaping associated with the Existing Drax Power Station Complex includes a wide variety of planting and associated habitats:
 - Broadleaved woodland (planted and semi-natural)
 - Broadleaved parkland / scattered trees (ornamental tree planting and avenue tree planting)
 - Mixed woodland
 - Coppice woodland
 - Ornamental shrub planting
 - Scrub
 - Native hedgerows
 - Semi improved, marshy and amenity grassland
 - Riparian planting
- 1.5.2. The planting is of varying condition ranging from poor to moderate. Management appears to be variable across the Site and much of the existing woodland lacks diverse understorey planting and ground flora; trees are either semi mature or mature.
- 1.5.3. The original planting scheme was designed by A Weddle in the 1960's and is supported by a number of plans and a landscape management report dating from July 1987 / Revised July 1990.
- 1.5.4. Externally, planting sought to completely screen open views from main roads and villages and improve connectivity creating the illusion of an extensive woodland by linking existing areas of planting (woodland, hedgerows and trees) and creating, where feasible, large scale areas of woodland. The scale of planting sought to replicate the size of the original Drax Power Station.
- 1.5.5. Internally, planting aimed to provide a high quality landscape, reduce visual clutter and create a neat and tidy impression as well as provide a transition between the original Drax Power Station and surrounding landscape. Extensive lengths of hedgerow planting provided visual screening at a low level and areas of amenity or wildflower grassland served a function in integrating the power station within the surrounding landscape.
- 1.5.6. On and off site planting sought to achieve the following objectives:
 - Maximise benefits of screening from critical viewpoints;



- Harmonise and integrate the large scale man made constructional elements within the small scale landscape;
- Establish a new landscape framework of small woodlands of indigenous species and productive farmland;
- Encourage agricultural use of land within the power station ownership;
- Create an attractive working environment within the confines of the station;
- Provide a landscape structure capable of incorporating continuing development of ancillary industry; and
- Use ecological principles to create and maintain a mosaic of diverse habitat.
- 1.5.7. Whilst the original design has been modified internally as a result of further on-site development, external off-site planting remains intact, and woodland forming part of Weddle's original design will remain undisturbed as a consequence of the Proposed Scheme.
- 1.5.8. The Proposed Scheme would be concentrated within the northern, eastern and south western confines of the Existing Drax Power Station Complex which is bounded by New Road, the A645 and a freight rail line into the Existing Drax Power Station Complex and, internally, to the east, the northern and southern cooling towers, generator building and old wood yard. Beyond is a mix of agricultural land, woodland plantations and to the south east, English Salads Limited, Drax Golf Course and associated club house.
- 1.5.9. Additional loss of land beyond the Existing Drax Power Station Complex includes permanent land lost to accommodate the Gas Receiving Facility (GRF) and AGIs, and temporary land lost associated with a construction laydown area within Development Parcel A (the Carbon capture readiness reserve space) and the Gas Pipeline.
- 1.5.10. The Gas Pipeline passes through an intensively managed arable landscape to the east of the Existing Drax Power Station Complex, with small areas of grazing pasture, semi improved grassland and scattered trees. The Gas Pipeline runs across large and open fields bounded by fences or ditches with a small number of hedgerows. Limited stretches of hedgerows and hedgerow trees would be affected by the construction of the Gas Pipeline and all would remain undisturbed through the use of, where possible, trenchless construction techniques and on site micro-siting to avoid damage to trees and associated root protection areas. The route has been realigned to avoid trees protected by Tree Preservation Orders (TPOs) and areas of woodland through the design process (refer to Figure 10.5 of the ES Landscape Chapter).

Existing Biodiversity Features

- 1.5.11. A variety of habitats have been recorded within the Site Boundary, largely made up of the following Phase 1 habitat types as per the Joint Nature Conservation Committee's (JNCC) Phase 1 Handbook:
 - Broadleaved woodland, semi-natural
 - Plantation broadleaved woodland
 - Broadleaved parkland / scattered trees
 - Semi improved, improved, marshy and amenity grasslands
 - Intact Species-rich and species-poor hedgerows
 - Defunct hedgerows
 - Dense and scattered scrub
 - Tall ruderal
 - Standing water, running water and dry ditches



Arable land

- 1.5.12. In addition to the above, large extents of hard-standing and buildings have been recorded within the Existing Drax Power Station Complex. Recorded habitats are shown on Figure 9.3 of the ES Biodiversity Chapter.
- 1.5.13. Some of the above habitats are identified as HPIs via the provisions of Section 41 of the Natural Environment and Rural Communities Act 2006 and some are identified as locally important habitats as per the Selby LBAP. These habitats and their importance have been considered as part of this Strategy.
- 1.5.14. Habitats within and adjacent to the Site provide suitable conditions for a range of protected and notable species. Evidence of badger (*Meles meles*), otter (*Lutra lutra*) and water vole (*Arvicola amphibius*) have been recorded within the Site.
- 1.5.15. Evidence of otter has been recorded within parts of the Pipeline Area and to the north of the Power Station Site. Ditches and drains with recorded otter evidence include Carr Dyke and Dickon Field Drain (ES Figure 9.5). Evidence of otter has also been recorded on the River Ouse approximately 0.4 km m north of the Pipeline Area. Habitat within the Power Station Site is largely unsuitable, with no evidence of otter recorded.
- 1.5.16. The presence of water vole has been confirmed within the Pipeline Area via droppings, feeding remains, burrows and an individual sighting along an unnamed drain parallel to Main Road (ES Appendix 9.9: Otter and Water Vole Survey Report). Water vole are likely to be using the surrounding ditch network. Habitat within the Power Station Site is largely unsuitable, with no evidence of the species recorded.
- 1.5.17. Badger setts, latrines and associated badger paths have been recorded within and adjacent to the Site. At least one sett is likely to need closure to allow construction of the Proposed Scheme to go ahead. Due to the sensitivities regarding the legal protection of badgers and historic persecution in the UK, details are not reported in this document. Detailed results of badger surveys and likely mitigation requirements are provided in confidential Appendix 9.3 of the ES; these will be made available to Natural England (NE), North Yorkshire Council Ecology Service (NYCES) and other stakeholders as appropriate and to be agreed with PINS.
- 1.5.18. Habitats within and adjacent to the Site provide suitable conditions for commuting and foraging bats. No roosts have been recorded within or adjacent to the Site. Common pipistrelle (*Pipistrellus pipistrellus*), *Myotis* sp and brown long-eared (*Plecotus auritus*) have been recorded during initial activity surveys in 2018. Other species, including soprano pipistrelle (*Pipistrellus pygmaeus*), noctule (*Nyctalus* noctula) and Daubenton's bat (*Myotis daubentonii*) are also likely to use habitats within the Site. These species were recorded using habitats within 2 km of the Site during ecological surveys carried out for the White Rose Carbon Capture and Storage (WRCCS) (Ref 1.24) Project and Barlow Ash Mound ecological monitoring surveys (Ref 1.25)
- 1.5.19. Habitats within the Power Station Site provide suitable conditions for native UK reptiles. No reptiles have been recorded within the Site during targeted surveys between early April and early May in 2018 as reported in the ES Biodiversity chapter. A small population of grass snake (*Natrix helvetica*) has been recorded previously to the North and North West of the Site within Barlow Ash Mound (Ref 1.25).
- 1.5.20. The Site supports wintering and breeding birds. Further details of the species recorded are provided in the Biodiversity Chapter of the ES and accompanying Appendix 9.7. Targeted



wintering bird surveys were completed for the Proposed Scheme between November and March 2018, with breeding bird surveys being completed between April and June 2018. Some of the species recorded during the surveys are included on Schedule 1 of the WCA 1981 (as amended), or are identified as Species of Principal Importance via the provisions of the Natural Environment and Rural Communities Act 2006 or are listed on the Selby BAP. The Site supports a succession of habitats from grassland, scrub and woodland to arable, hedgerows and field boundaries, which are used by these species.

1.5.21. Indian balsam (*Impatiens glandulifera*) and cotoneaster (*Cotoneaster horizontalis*) have been recorded in various parts of the Power Station. Indian balsam has been recorded in Development Parcel C. Cotoneaster has been recorded in Development Parcel C. Precautionary working methods outlined in the Strategy and alongside measures in the CEMP will control the spread of these invasive non-native species.

Impacts on Landscape and Biodiversity Features

1.5.22. The Proposed Scheme would result in both temporary short to medium-term and permanent/long term loss of habitats. Details of predicted habitat loss are set out in Table 1-4, below:

Table 1-4 Landscape and associated loss (assuming construction of both Units X and Y)

Landscape / habitat type	Predicted temporary extent of landscape / habitat loss (ha) / linear metres	Predicted permanent extent of landscape / habitat loss (ha) / linear metres
Broadleaved woodland – semi natural	0.24	
Broadleaved woodland - plantation	0.07	
Broadleaved parkland / scattered trees (ornamental tree planting and avenue tree planting)	0.36	2.268
Scrub / continuous / dense	0.1	0.28
Introduced shrub	0.26	0.23
Improved grassland	1.46	
Poor semi improved grassland	1.19	2.17
Amenity grassland	0.47	3.57



Landscape / habitat type	Predicted temporary extent of landscape / habitat loss (ha) / linear metres	Predicted permanent extent of landscape / habitat loss (ha) / linear metres
Marshy grassland	1.42	0.31
Cultivated / disturbed land - arable	8.7	2.73
Oher tall herb and fern – ruderal	0.23	0.3
Standing water		0.25
Running water		215.51 (linear m)
Dry ditch	708.96 (linear m)	
Intact hedge – native species rich	52.69 (linear m)	
Intact hedge – species poor	226.25 (linear m)	315.6 (Linear m)
Defunct hedge – species poor	581.57 (linear m)	110.37 (linear m)
Buildings	0.00012	3.18
Hard standing	2.61	11.51
Bare ground	0.07	0.26
Fence	303.54 (linear m)	0.01 (linear m)
Total (ha and m)	17.18 ha 1,873 Linear metres	27.103 ha 641.49 m

1.5.23. A total of 17.18 ha and 1,873 linear metres of landscape / habitat would be temporarily lost during construction. Areas would be internal on the Existing Drax Power Station Complex, the carbon capture readiness reserve space and associated with the Pipeline Area. Such areas include temporary construction areas / laydowns and room to accommodate the



- temporary structures and associated infrastructure as well a construction laydown area along the Gas Pipeline and AGI during construction.
- 1.5.24. A total of 27.10 ha and 641.49 linear metres of landscape / habitat would be permanently lost to accommodate new structures and associated infrastructure linked to the Proposed Scheme including Units X and Y, battery storage facilities, GRF including the compressor building, Site Reconfiguration Works and AGIs. A substantial proportion of this (14.69 ha) comprises existing buildings and areas of hardstanding of negligible ecological importance.
- 1.5.25. Arable land temporarily lost during construction would be reinstated following construction and would regenerate quickly.

1.6 Impact Avoidance Requirements

Overview

- 1.6.1. The impact avoidance measures outlined below would be implemented, as relevant and appropriate, prior to and during the construction phase of each Work Number. The purpose being to minimise the work's impact on landscape features and associated habitats and to comply with legislation.
- 1.6.2. The LVIA concluded that there would be significant effects on landscape character, local landscape features, designations and visual receptors. Mitigation measures seek to protect and retain existing vegetation unaffected by proposals and restore the landscape temporarily lost where possible, in accordance with Weddle's aspirations, with additional areas set aside for landscape and biodiversity enhancement.
- 1.6.3. The Biodiversity assessment in Chapter 9 of the ES concluded that significant effects on designated sites, habitats and species could arise (in the absence of mitigation) as a result of the Proposed Scheme. Avoidance and minimisation measures will be implemented and measures to prevent infringement of wildlife legislation have also been proposed. This outline Landscape and Biodiversity Strategy identifies the provision of replacement / compensatory habitats, to address loss and disturbance of existing habitats.
- 1.6.4. Due to the limited extent of compensation areas within the Site Boundary, additional areas of land within Drax ownership are proposed for mitigation as well as the enhancement of existing on-site planting to improve / extend screening, improve habitat structure and quality and improve longevity of tree cover.

Pre-construction Surveys

- 1.6.5. An ecologist would complete a pre-construction/site clearance walkover at least three months ahead of commencement (for relevant work numbers) where there could be an impact on the biodiversity interest of the Site. The aim of this advanced Site visit would be to re-assess the ecological baseline and to determine if any additional ecological mitigation is required beyond that specified in this Strategy and the ES. These pre-construction surveys would be secured through the detailed Landscape and Biodiversity Strategy which would be approved by Drax, North Yorkshire County Council and SDC.
- 1.6.6. The scope of each walkover would be defined on a case by case basis in consultation and with the agreement of Drax, North Yorkshire County Council and SDC, and informed by the results of the site walkover described above. The results of the pre-construction walkovers would inform the detailed delivery of construction phase ecological mitigation.



- 1.6.7. Existing or potential landscape and biodiversity constraints to be reassessed and / or monitored during updated surveys would include, as a minimum:
 - Badger setts.
 - Otters and water voles (where works would take place within 50 m of a watercourse).
 - Breeding birds (if clearance works were proposed during the bird breeding season).
 - Invasive non-native plant species.
 - Trees including their suitability to support protected species.
 - Any changes in habitat condition or other evidence indicating previously unrecorded protected species could be present.
- 1.6.8. Should any new constraints arise these would be identified in the detailed Landscape and Biodiversity Strategy which would be submitted to cover specific work numbers.

Invasive Non-Native Species

1.6.9. Stands of Indian balsam and *Cotoneaster* (likely *C. horizontalis*) were identified in Development Parcel C as per section 9.5.58 of the Biodiversity Chapter and ES Figure 9.3. In order to control the spread of these species a method statement would be produced in receipt of the specific Site construction works and this would form part of the detailed and approved Landscape and Biodiversity Strategy.

Clerk of Works and Toolbox Talks

- 1.6.10. The necessity for a Clerk of Works and Toolbox Talks during works would be advised by the landscape architect and ecologist based on relevant and appropriate environmental commitments in receipt of the specific Site construction works. The need for ECoW would also be informed by the findings of the pre-construction surveys, with this forming part of the detailed approved Landscape and Biodiversity Strategy where specified.
- 1.6.11. All Site staff involved with Proposed Scheme works will receive Toolbox Talks on the relevant ecological risks, legal requirements and working requirements to comply with legislation and the detailed approved Landscape and Biodiversity Strategy. Toolbox Talks would be repeated as necessary over the duration of the construction works for Stage 0 to 2.

Tree Works

- 1.6.12. Existing trees would be lost within the Existing Drax Power Station Complex as a consequence of the Proposed Scheme. Where works would be undertaken in close proximity to retained trees, such works would be in accordance with best practice:
 - British Standard (BS) 5837:2012 trees in relation to design, demolition and construction recommendations (Ref. 1.21).
 - National Joint Utilities Group (NJUG) Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Ref. 1.22).
- 1.6.13. Access for construction works would be required in close proximity to trees and woodland. Construction works required within the Root Protection Area (RPA) and / or crown spread of retained trees would be carefully controlled through the use of temporary tree protection measures, ground protection measures and by adopting working methods including the storage and management of materials. Methods would be set out in an Arboricultural Method Statement and associated RPA Plans which would be prepared in advance of the works and to accompany a detailed Landscape and Biodiversity Strategy.



1.6.14. Temporary tree protection fencing in accordance with BS 5837:2012 would be installed before works commence and also for the duration of the works to protect the RPAs of retained trees. Suitable ground protection measures would be implemented to prevent the distortion or compaction of underlying soil.

Impact Avoidance Measures for Hedgerows, Hedgerow Trees and Woodland

1.6.15. Trenchless construction techniques would be used where possible for the installation of the Gas Pipeline, to avoid the removal of existing vegetation in the form of hedgerows and hedgerow trees.

Offsets and easements

Offsets

- 1.6.16. Working areas would be offset from existing and retained landscape features and associated habitats to minimise the risk of accidental damage, these have been defined as minimum distances of:
 - Hedgerows 5 m offset.
 - Woodland 15 m offset.
 - Existing ditches and buildings 2 m to allow maintenance access.

Easements (Pipeline and overhead lines)

1.6.17. Areas of planting would be constrained by easements associated with the Gas Pipeline and overhead cables.

Pipeline:

- 1.6.18. Hedgerows may be planted only where a hedge is necessary either for screening purposes or to indicate a field boundary using hardwood plants such as blackthorn.
- 1.6.19. Individual tree species can be planted in a single row between 6 to 10 m of the Gas Pipeline, whilst dense tree planting can be undertaken only beyond 10 m of a pipeline, (The Applicant would follow the species drawn from National Grid's approved list of suitable species) (Ref 1.22).

Overhead Lines:

- 1.6.20. Landscaping schemes should only introduce slow and low-growing species of trees and shrubs beneath and adjacent to existing overhead lines to reduce the risk of growth to a height which compromises statutory safety clearances.
- 1.6.21. Tree planting can be undertaken beyond a specified distance of any overhead cables subject to the voltage as detailed in Energy Network Association Technical Specification 43-8, Issue 4 2015 (Ref. 1.23).
- 1.6.22. An allowance has been made of 10 m for tree planting on Figures 6.7.1 to 9 in Appendix 1.
 Precautionary Working Methods
- 1.6.23. Precautionary working methods would be employed to minimise potential adverse impacts on protected species prior to and during construction. Detailed information on the following precautionary measures would be included in the CEMP:



- Clear demarcations to fence off construction footprints to prevent plant machinery and personnel damaging or disturbing retained habitats and/or areas that may support protected species;
- Sheer sided excavations greater than 50cm deep to be securely fenced and escape ramps fitted to minimise the likelihood of incidental capture of mammals such as badger and otter.
- Sensitive vegetation clearance methodologies would be followed to minimise the risk of incidental mortality of small mammals and widespread amphibian and reptile species.
- Avoidance of any obstructions to established otter paths and access to open water.
- The marking of, and adherence to, 30 m exclusion zones around any holts and shelters identified as a result of updated survey. If otters are known or suspected to be breeding, the exclusion zone would be extended to at least a 200 m radius. However, it could be reduced to 100 m depending on the nature of the works, topography and natural screening (for example flood defence bunding along the banks of the River Ouse. This will require judgement from an experienced ecologist.
- Screening with fencing or planting of thicket-type vegetation to reduce noise and visual disturbance to otter commuting routes during operation.
- The capping of any exposed pipe systems when contractors are off site, and providing exit ramps from any exposed trenches or holes (to prevent otters entering and becoming trapped).
- Screening with fencing or planting of thicket-type vegetation to reduce noise and visual disturbance to otter commuting routes.
- In the event that trenchless crossings could not be used for watercourse crossings, detailed proposals for retaining habitat connectivity for otters and avoiding the incidental mortality of water voles would be developed based on construction proposals and included in the detailed and approved Landscape and Biodiversity Strategy.

1.7 Landscape and Habitat Reinstatement, Creation and Enhancement

Overview

- 1.7.1. Landscape and habitat reinstatement, creation and enhancement measures would be delivered within the compensation areas covering:
 - On site Compensation Areas which lie within the Site Boundary.
 - Additional areas of land outside of the Site Boundary but which fall under Drax's ownership.
- 1.7.2. Compensation Areas which lie within the Site Boundary would be secured under the DCO and associated consent procedure via the approval of the detailed Landscape and Biodiversity Strategies.
- 1.7.3. Landscape and biodiversity measures associated with the Proposed Scheme will seek to:
 - Protect existing trees and hedgerows.
 - Improve the age structure of existing woodland.
 - Reinstate vegetation temporarily lost as a result of the Proposed Scheme.
 - Reduce visual clutter on site through screening.
 - Create a diversity of habitats and support associated species.
 - Improve ecological connectivity across the Site and beyond.
 - Visually screen additional development within Drax's footprint.
 - Screen some low level filtered views.



Features to be created, enhanced and managed

- 1.7.4. This section summarises in general terms the features which would be enhanced, managed and created alongside the proposed planting palette. It then focuses on each specific compensation area (refer to Figure 6.7.1 to 6.7.9 in Appendix 1).
- 1.7.5. The Compensation Areas which include mitigation measures associated with specific development parcels and additional areas of land outside of the Site Boundary but within Drax's ownership include a variety of existing and proposed landscape features / associated habitats. Existing features would be enhanced and managed whilst new landscape features would be introduced. The nature of such landscape and associated habitats is summarised below.

Existing and Proposed Woodland

- 1.7.6. Existing areas of broadleaved and mixed woodland which fall within the Compensation Areas or additional areas would be managed and enhanced to improve their longevity and diversity. Investigations would be undertaken prior to submission of a detailed Strategy to determine the condition of trees and whether appropriate replacement planting should be introduced where there are suitable gaps in the woodland and where trees have failed and gaps are evident.
- 1.7.7. Soil samples would be taken to inform species selection and soil remediation works undertaken if required. Refer to Table 1-5 and 1-6 for proposed species.
- 1.7.8. New broadleaved, coppice woodland / scrub and woodland carr would be planted at a range of densities. The distribution of species and sizes (a mix of transplants, whips and feathered trees) would seek to maximise habitat diversity, cover and connectivity as well as provide a screening function, reduce visual clutter and enhance local landscape features. Straight lines and regular spacing would be avoided to create a natural structure and edges would vary between tree groups and understorey planting. Trees would be distributed in small groups with gaps to allow for natural regeneration.
- 1.7.9. Small gaps in both coppice woodland and woodland carr would be created to achieve species diversity and enable natural regeneration. Coppice woodland would be managed on a 5 to 20 year rotation.
- 1.7.10. All trees would be notched planted into cultivated ground and supported by an appropriate timber stake and tree shelter (fitted in accordance with manufacturer's instructions). Protective fencing would be introduced for a minimum of three years until growth is taller than 1.5 m to prevent deer and rabbit damage.

Broadleaved Parkland / Scattered Trees (Ornamental Tree Planting)

- 1.7.11. New broadleaved parkland / scattered / ornamental tree planting would be introduced to provide low level visual screening and reduce perceptions of visual clutter. Tree species would be drawn from Table 1-5 below.
- 1.7.12. All trees would be a mix of standards, whips and feathers, planted into tree pits to a depth which will be specified in the detailed Strategy and backfilled with a mix of screened excavated material, a slow release fertiliser and soil conditioner if appropriate. In locations where there is poor drainage a layer of gravel covered with a suitable geotextile membrane would be added to the base of the pits.



1.7.13. All trees would be supported by an appropriate timber stake and tree shelter (fitted in accordance with manufactures instructions).

Existing and Proposed Scrub

- 1.7.14. Scrub planting would enhance the habitat mosaic associated with the woodland areas and form a new understorey within and edging proposed woodlands, improve habitat cover and connectivity for local wildlife and achieve a greater diversity of species and habitats.
- 1.7.15. The location of proposed planting within existing woodland would be determined on site and would be dependent on availability of light and space. Proposed planting within new woodlands or forming part of a coppice woodland would be planted at a range of densities and sizes to maximise habitat diversity. This would be specified in detail in the detailed Strategy.
- 1.7.16. All scrub planting would be notch planted into cultivated ground at centres to be agreed and supported by an appropriate timber stake and shrub shelter (fitted in accordance with manufacturer's instructions). The shrub mix would reflect native species identified on site in addition to some holly for evergreen screening. Refer to Table 1-5 for proposed species.

Existing and Proposed Ornamental Shrubs

- 1.7.17. Existing ornamental shrub planting would be maintained and enhanced through additional planting introduced where appropriate to increase coverage. All shrubs would be sourced from local certified suppliers and drawn from the list in Table 1-5 below.
- 1.7.18. The depth of shrub pits would be specified in the detailed Strategy and backfilled with a mix of screened excavated material, a slow release fertiliser and soil conditioner if appropriate. In locations where there is poor drainage a layer of gravel covered with a suitable geotextile membrane would be added to the base of the pits.

Existing and Proposed Hedgerows

- 1.7.19. Existing hedgerows would be infilled where gappy with hedgerow planting and new hedgerow trees. Species would replicate those within the immediate vicinity and be drawn from Table 1-5 and 1-6 below.
- 1.7.20. Hedgerows would be notch planted in cultivated ground at 500 mm spacings in a double staggered row and supported by an appropriate timber stake and guard (fitted in accordance with manufactures instructions).

Grassland (Species Rich, Marsh and Amenity)

- 1.7.21. Species rich grassland habitats would be established following topsoil removal or inversion and ground preparation. New neutral /acidic grassland would replace grassland lost and new areas would be provided within the Additional Areas.
- 1.7.22. The wildflower grassland seed mix sown would be appropriate to the local geographic context and consultations would take place with Yorkshire Wildlife Trust to determine where suitable seed could be harvested or green hay gathered for subsequent sowing. Seed would be wild native species (i.e. no cultivars) of UK provenance.
- 1.7.23. New marshy grassland would replace grassland lost with a mix to match species identified through the Phase 1 Habitat Survey and in consultations with North Yorkshire Council Ecology Service.



1.7.24. Amenity grassland would be introduced where the grassland abuts access roads or other hard surfacing and where it is deemed appropriate to maintain a short verge. Germinal Seed A4 Low maintenance grass mix (or similar approved) sown at a density of 35/gm" would be used.

New Ponds

1.7.25. New ponds would be introduced to replace those lost during construction and to support wider habitat enhancement. The ponds would be designed in such a way as to provide potential habitat for a range of freshwater and wetland flora and fauna. Planting of waterbodies with planting stock is not proposed, as it is considered most appropriate to allow native, locally occurring wetland species to colonise new water features. Where existing ponds are lost, consideration would be given to translocating plants and soil from the existing pond to the new pond, to support establishment of the new pond. No topsoil would be placed into new ponds, to avoid introducing excess nutrients.

Ground Flora Planting

- 1.7.26. Opportunities for plug planting of woodland ground cover would be identified within existing areas of woodland to provide increased cover and diversity of vegetation. Suitable locations are more likely to be on the woodland edges where there is a partial canopy and more light is available, and where the screening function of the woodland is not a priority, refer to Table 1-5 for an indicative planting list
- 1.7.27. Appropriate fencing would be erected around areas of new ground flora planting to prevent damage by rabbits and deer.
- 1.7.28. Dead wood habitat piles would also be provided with retained woodland areas to benefit invertebrates, and in turn wildlife such as birds and bats. Wood would be available from trees felled on site to facilitate the Proposed Scheme.

Proposed Planting Palette

1.7.29. The proposed planting palette would be drawn from species outlined in the two Tables below and informed by the extended Phase 1 habitat surveys, landscape field visits and Weddle's Landscape Management Report 1987 / Revised July 1990. The lists below are not comprehensive but do identify species which have an abundant, frequent or occasional presence. Additional species may be added / substituted (Ash (*Fraxinus excelsior*) may be substituted with an alternative native species) to the list in consultation with NYCC, SDC, and Yorkshire Wildlife Trust post DCO submission.

Table 1-5 Indicative proposed planting associated with the On-site Compensation Areas and Additional Areas

Power Station Site	
Habitat types	Indicative Species
Woodland (Broadleaved semi natural	Silver Birch (Betula pendula)
woodland) and understorey	English / Pedunculate Oak (Quercus robur)
	Rowan (Sorbus acuparia)
	Bird Cherry (Prunus padus)
	Guelder Rose (Viburnum opulus)
	Dog Rose (Rosa canina)
	Dogwood (Cornus sanguinea)
	Hawthorn (Crataegus monogyna)
	Hazel (Corylus avellana)



Power Station Site	
Habitat types	Indicative Species
The state of the s	Elder (Sambucus nigra)
	Field Maple (Acer campestre)
	Holly (Ilex aquifolium)
Coppice woodland / scrub	Hazel
Coppies Westiana / Seras	English / Pedunculate Oak
	Hawthorn
	Guelder rose
Woodland carr	Alder (Alnus glutinosa)
VVoodiana can	Silver Birch
	Goat willow (Salix caprea)
Broadleaved Parkland / Scattered	Aspen (Populus tremula)
Trees (Ornamental Tree Planting)	Alder
Trees (ornamental free Hanting)	Ash (Fraxinus excelsior)*
	Field maple (Acer campestre)
	Grey willow (Salix cinerea)
	Hornbeam (Carpinus betulus)
	English / Pedunculate Oak
	Scots Pine (Pinus sylvestris)
	Rowan
	Silver birch
	Lime (Tilia cordata / euchlora)
	Wild cherry (Prunus avium)
Scrub	,
Scrub	Blackthorn (<i>Prunus spinosa</i>) Hawthorn
	Field maple Hazel
	Holly
Hodgorow troop and hodgorows	Wayfaring tree (Viburnum lantana)
Hedgerow trees and hedgerows	English / Pedunculate Oak Ash
	Blackthorn
	Field maple
	Hawthorn
	Dog rose (Rosa Canina)
	Hazel
Own amountal Charles	Wild cherry
Ornamental Shrubs	Cotoneaster microphylus
	Cornus var
	Hypericum var
	Lavender
	Rose var
	Rosemary
	Santolina var
0 15 "	Sencecio var
Ground Flora (from Barlow mound)	Bluebells (Hyacinthoides non scripta)
	Lesser celandine (Ficaria verna)
	Wood avens (Geum urbanum
	Lords and ladies (Arum maculatum)
	Herb Robert (Geranium robertianum)
	Wood forget-me-not (Myosotis sylvatica)



Table 1-6 Indicative proposed planting associated with the Gas Pipeline

Gas Pipeline	
Habitat types	Indicative Species
Hedgerow trees	Ash Field maple Hawthorn English / Pedunculate Oak Rowan
Species rich hedgerows	Blackthorn Hawthorn Elder Field maple Common osier (Salix viminalis) Crack willow (Salix fragilis) Dog rose (Rosa Canina)
Coppice woodland / scrub	Hazel English / Pedunculate Oak Hawthorn Guelder rose

Compensation Areas

1.7.30. The proposed Compensation Areas are summarised under the following stages, refer to Figure 6.7.1 to 6.7.9 in Appendix 1 for further details. Works associated with each Compensation Area fall under the following Work Numbers in accordance with the DCO Application and as summarised in Table 1-7 below.

Table 1-7 Compensation Areas, timing of their implementation and associated work numbers

Compensation Area (based on Development Parcels and Work Numbers)	Stage	Area (Ha)	Work Number (WN)
Development Parcel A	2	0.62	WN 11 and, generally, Schedule 1
Development Parcel B	2	2.24	WN 11 and, generally, Schedule 1
Development Parcel C	2	1.56	WN 11 and, generally Schedule 1
Development Parcel F	2	1.97	WN 2D and 11, and generally, Schedule 1



Compensation Area (based on Development Parcels and Work Numbers)	Stage	Area (Ha)	Work Number (WN)
Development Parcel H	0	0.07	WN 11 and 15B
Additional Area 1: Old Wood Yard	0 -1	5.16	NA
Additional Area 2: Peat Storage Area	1	9.45	NA
Additional Area 3: Skylark Reserve	0 -1	0.76	NA
 Development Parcel J: Along Wren Hall Lane South of Rusholme Lane Close to and around the AGIs 	1	0.5 0.7 0.41	WN7A
Development Parcel K: AGIs	1	0.3	WN 6A and 6B

STAGE 0

Development Parcel H

- 1.7.31. Development Parcel H would accommodate the Site Reconfiguration Works refer to Appendix 1, Figure 6.7.6 and Work Number 11 and 15B. Proposals would include the introduction of some broadleaved trees / scattered trees within Development Parcel H during Stage 0. Proposals would provide a screening function, reduce views from the A645 of the site contractor's compound, reduce visual clutter and improve connectivity between existing areas of broadleaved planting. Species already present include alder, ash, silver birch, field maple, grey willow, hornbeam, English / pedunculate oak and wild cherry.
- 1.7.32. Total area of planting would be 0.07 ha and works would be implemented during construction of development parcel H in Stage 0. A breakdown of the proposed and existing landscape / habitat types is summarised in Table 1-8 below:

Table 1-8 Table of Proposed and Existing Landscape / Habitat Types in Development Parcel H

1 41 551 11		
Landscape / Habitat types	Predicted extent of reinstatement area (ha)	
Proposed		
Proposed broadleaf parkland / scattered trees	0.07	
Existing (retained with management and or enhancement)		
Hedgerow	490.35 m (linear)	
Broadleaved parkland/scattered trees	0.32	
Cultivated/disturbed land - amenity grassland	0.44	



Ornamental shrub planting	0.04

STAGE 0 - 1

Additional Area 1: The Old Wood Yard

- 1.7.33. Additional Area 1: The Old Wood Yard is located immediately north west of the Proposed Scheme and comprises buildings, bare ground, hard standing and areas of equipment storage refer to Appendix 1 Figure 6.7.9. Pockets of naturally regenerated birch on old stocks on biomass material are present on its periphery. A Public Right of Way (PRoW) (PRoW 35.6/12/1) runs around the northern edge of the area). The area of new planting would be implemented between Stage 0 to 1.
- 1.7.34. The area is of low landscape value and provides opportunities for diverse habitat creation and enhancement. From an ecological perspective, due to its proximity to the Proposed Scheme, it is the most suitable area in terms of reducing the displacement of protected/notable species and for providing compensatory habitat close to the point of loss. In terms of the LVIA, the area provides the opportunity to tie-in landscaping visually with Barlow Mound to the west, strengthen and increase the woodland edge along the Site's northern boundary and improve connectivity with Additional Area 2.
- 1.7.35. Additional Area A provides the opportunity to introduce a range of planting, achieving a varied habitat mosaic. Planting would include native broadleaved woodland, coppice / woodland and semi improved grassland as well as riparian vegetation associated with a new pond.
- 1.7.36. The area would also benefit from the management of vegetation to allow for the creation of a semi-improved grassland enriched with a mix of species characteristic of neutral grassland. The space available in Area A provides the opportunity to amend the topography creating bunds, which would provide suitable basking sites for reptiles. Proposed bunds would also include artificial hibernation sites for reptiles and amphibians. The created habitats would also provide suitable conditions for breeding and wintering birds and foraging and commuting bats.
- 1.7.37. To the east of this area of the Old Wood Yard it is proposed that an existing broadleaf woodland would be gapped up with new understorey planting to diversify the existing structure and reduce views.
- 1.7.38. Total area of planting would be 5.16 ha. Works would be implemented between Stage 0 to 1. A breakdown of the proposed and existing landscape / habitat types is summarised in Table 1-9 below:

Table 1-9 Table of Proposed and Existing Landscape / Habitat Types in Additional Area 2

Landscape / Habitat types	Predicted extent of reinstatement area (ha)
Proposed	
Proposed semi-improved grassland	4.95
Proposed pond	0.23
Proposed bunding	0.58
Proposed broadleaf woodland	1.24



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Proposed coppice woodland / scrub	0.62	
Existing (retained with management and or enhancement)		
Existing broadleaf woodland enhanced with	0.21	
understorey planting		

Additional Area 3: Skylark Reserve

- 1.7.39. Additional Area 3 is situated to the west of Barlow Mound and within the Skylark Reserve (Area G1/23 on Figure with Drax Unique No. 116745) refer to Appendix 1 Figure 6.7.9.
- 1.7.40. This is an area of short, rough grassland mown on an annual basis. There are opportunities for ecological benefits by reducing the intensity of mowing, potentially to a rotational biennial cut. This area is adjacent to reptile mitigation features to the west, and would therefore be particularly suitable as a receptor site for reptiles, if translocation of species needs to take place in advance of site clearance. Some south-facing basking banks/hibernacula and a small pond would be created alongside a reduction in intensity and sensitive timing of grassland management. The proposed area serves a limited landscape function other than providing a variety of interest within a very localised area.
- 1.7.41. The total area of planting would be 0.76 ha and works would be undertaken between Stage 0 to 1. A breakdown of the proposed and existing landscape / habitat types is summarised in Table 1-10 below:

Table 1-10 Table of Proposed and Existing Landscape / Habitat Types in Additional Area 3

Landscape / Habitat types	Predicted extent of reinstatement area (ha)	
Proposed		
Proposed pond	0.04	
Proposed bunding	0.07	
Existing (retained with management and or enhancement)		
Existing semi-improved grassland	0.65	

STAGE 1

Additional Area 2: Peat Storage Area

- 1.7.42. Additional Area 2: Peat Storage Area is situated to the north of the Old Wood Yard and north west of the Proposed Scheme refer to Appendix 1 Figure 6.7.9 The area supports a mosaic of reed beds, rough grassland, scattered trees and scrub with existing ponds. The area is already of some moderate landscape / ecological value and therefore enhancement opportunities are limited.
- 1.7.43. Landscape proposals seek to supplement existing tree / shrub cover to enhance visual screening and habitat connectivity. Planting would partially screen at a low elevation the existing Lytag plant to the north west of the Site.
- 1.7.44. Planting would include new wet woodland carr and localised management of the ponds and grassland to improve diversity. The topography would be altered to create additional scrapes and bunding, increasing habitat diversity and providing suitable habitats for



- amphibians, reptiles, breeding and wintering birds and bats. The proposed wetland areas could potentially also benefit local water vole and otter populations. Given the limited connectivity with watercourses in the wider locality, regular usage by otters in future is considered unlikely.
- 1.7.45. Total area of planting would be 9.45 ha and works would be undertaken during Stage 1. A breakdown of the proposed and existing landscape / habitat types is summarised in Table 1-11 below:

Table 1-11 Table of Proposed and Existing Landscape / Habitat Types in Additional Area 2

Landscape / Habitat types	Predicted extent of reinstatement area (ha)	
Proposed		
Proposed bunding	0.56	
Scrapes	0.62	
Proposed woodland carr	2.27	
Proposed marshy grassland	7.56	
Existing (retained with management and or enhancement)		
Standing water	0.60	

Development Parcel J - Reinstatement of arable land

- 1.7.46. Arable land along the entire Gas Pipeline would be reinstated following the completion of the Gas Pipeline installation during Stage 1 refer to Appendix 1 Figure 6.7.7 and 8 and Work Number 7A.
- 1.7.47. Micro-siting of the Gas Pipeline would be undertaken to avoid significant trees and hedge lines, the soil stripped and a trench dug along the route. A temporary haul road would be constructed along the route corridor in order to provide access for pipe laying. Temporary storage areas for soil and subsoil would run adjacent to the haul route and occasional traffic and storage of vehicles would be visible along the route. Overall it is assumed that a 30 m corridor may be required to accommodate the laying of the pipeline, haul route and storage areas.
- 1.7.48. Due to constraints on planting over pipelines, the reinstatement of the land once the pipeline has been installed would be with existing turf, shallow rooting native shrubs and/or small trees. Where possible, reinstatement would involve the careful handling of soils and a return to the existing habitat type.
- 1.7.49. Total area of arable land reinstatement would be 8.7 ha. Works would be undertaken within 12 months of completion of the Gas Pipeline and it is expected that such works would be phased, with land reinstated immediately after completion of specific sections of the pipeline during Stage 1. A breakdown of the proposed and existing landscape / habitat types is summarised in Table 1.12 below:

Development Parcel J - Planting on either side of Wren Hall Lane

1.7.50. Existing hedgerows with occasional broadleaved trees (largely oaks) on either side of Wren Hall Lane would be enhanced through infill native hedgerow planting and hedgerow trees refer to Appendix 1 Figure 6.7.7 and Work Number 7A.



- 1.7.51. Proposals would provide visual benefits to the landscape and mitigate effects on local visual receptors. The proposed planting would also provide additional nesting and foraging resources for local bird populations, and additional foraging and commuting habitat for local bat populations.
- 1.7.52. Total area of planting would be 0.5 ha. Works would be implemented during Stage 1. A breakdown of the proposed and existing landscape / habitat types is summarised in Table 1.12 below:

Development Parcel J - Planting south of Rusholme Lane and around the AGIs

- 1.7.53. A new single avenue of broadleaved native tree planting would be introduced south of Rusholme Lane to screen visual impacts from the Trans Pennine Trail which runs along the top of the northern levee of the River Ouse. Planting would need to be offset from both the proposed pipeline associated with the Proposed Scheme and Feeder Pipe 29 linked to National Grid's AGI.
- 1.7.54. Total area of planting would be 0.7 ha. Works would be implemented during Stage 1.
- 1.7.55. Coppice woodland / scrub would be planted to mitigate the visual impact of the AGI. New planting would consist of small pockets of coppice woodland around the AGI; to the west, south and east of the AGI and associated access road allowing for a 2 m offset to the edge of the ditch (the Dickon Field Drain). The proposed planting would also provide additional nesting and foraging resources for local bird populations, and additional foraging and commuting habitat for local bat populations.
- 1.7.56. Total area of planting would be 0.41 ha refer to Appendix 1 Figure 6.7.8 and Work Number 6B and 7A. Works would be implemented during Stage 1. A breakdown of the proposed and existing landscape / habitat types is summarised in Table 1.12 below:

Table 1-12 Table of Proposed and Existing Landscape / Habitat Types in Development Parcel J

Landscape / Habitat types	Predicted extent of reinstatement area (ha)	
Proposed		
Arable land (Reinstated)	13.09	
Proposed Avenue of Broadleaved Trees	0.05	
Proposed Coppice Woodland / Scrub	0.67	
Semi-improved species rich grassland	0.11	
Existing (retained with management and or enhancement)		
Broadleaved Parkland/scattered trees	0.10	
Proposed enhanced hedgerow with infill planting and hedgerow trees	0.04	

Development Parcel K: AGIs

1.7.57. Coppice woodland/scrub planting would be undertaken to mitigate the visual impact of the AGIs. New planting would consist of small pockets of coppice woodland around the AGIs and along the southern boundary of the site allowing for a 2 m offset to the edge of the ditch of the field refer to Appendix 1 Figure 6.7.8 and Work Number 6A.



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- 1.7.58. Planting proposals would mitigate against views from the Diamond Cottage to the west, views from Asselby to the east and properties to the south and south-east. Screening would also reduce visual impacts from the Trans Pennine Trail which runs along the top of the northern levee of the River Ouse. The proposed planting would also provide additional nesting and foraging resources for local bird populations, and additional foraging and commuting habitat for local bat populations.
- 1.7.59. Total area of planting would be 0.3 ha and works would be undertaken during Stage 1 following completion of the construction of the AGIs. A breakdown of the proposed and existing landscape / habitat types is summarised in Table 1.13 below:

Table 1-13 Table of Proposed and Existing Landscape / Habitat Types in Development Parcel K

Landscape / Habitat types	Predicted extent of reinstatement area (ha)
Proposed	
Proposed Coppice Woodland / Scrub	0.29

STAGE 2

Development Parcel A

- 1.7.60. Development Parcel A covers the reinstatement of hedgerow planting and some hedgerow trees lost as a consequence of the creation of a temporary access point into Development Parcel A and a temporary footbridge linking Development Parcel A and F refer to Appendix 1 Figure 6.7.2, Work Number 11 and, generally Schedule 1.
- 1.7.61. Planting would include new hedgerow planting and hedgerow enhancement including the gapping up of existing hedgerows and introduction of infill hedgerow tree planting with native trees.
- 1.7.62. Construction land would be offset by 15 m to the south to protect existing broadleaf woodland and 5 m from the inner boundary of the existing hedgerows on either side of the development parcel. Offset areas of land would be enhanced by sowing with an agreed species rich grassland mix achieved through the stripping of topsoil and appropriate management to achieve a diverse ecological edge and encourage the establishment of a more ecologically diverse field margin.
- 1.7.63. Total area of planting would be 0.62 ha and reinstated in Stage 2 once Unit Y has been completed. A breakdown of the proposed and existing landscape / habitat types is summarised in Table 1.14 below:

Table 1-14 Table of Proposed and Existing Landscape / Habitat Types in Development Parcel A

Landscape / Habitat types	Predicted extent of reinstatement area (ha)
Proposed	
New hedgerow enhanced with infill planting and hedgerow trees	127.04 m (linear)



Landscape / Habitat types	Predicted extent of reinstatement area (ha)
Arable land (reinstated)	9.82
Existing (retained with management and or enhancement)	
Hedgerow enhanced with infill hedgerow	1,124.28 m (linear)
trees	
Arable enhanced to semi improved	0.83
Broadleaved woodland - semi-natural	0.24
Broadleaved parkland/scattered trees	0.12
Improved grassland	0.11
Other tall herb and fern - ruderal	0.02

Development Parcel B

- 1.7.64. A new native hedgerow would be introduced wrapping around existing broadleaved and mixed woodland. Semi improved species rich grassland and native hedgerow would be reinstated within Development Parcel B lost as a consequence of Stage 2 when land is set aside as a construction area. Planting would be reinstated / introduced to reduce visual clutter and reflect Weddle's original aspirations of a transitional landscape refer to Appendix 1 Figure 6.7.3 and Work Number 11 and, generally Schedule 1.
- 1.7.65. In addition to compensating for the habitat loss associated with the Proposed Scheme, the proposed planting would provide suitable habitats for amphibians, reptiles, breeding and wintering birds and bats. The proposed wetland areas could potentially also benefit local water vole and otter populations. Given the limited connectivity with watercourses in the wider locality, regular usage by otters or water voles in future is considered unlikely.
- 1.7.66. Total area of planting would be 2.24 ha and implemented during Stage 2 once Unit Y has been constructed. A breakdown of the proposed and existing landscape / habitat types is summarised in Table 1.15 below:

Table 1-15 Table of Proposed and Existing Landscape / Habitat Types in Development Parcel B

Landscape / Habitat types	Predicted extent of reinstatement area (ha)	
Proposed		
Proposed hedgerow	443.51 m (linear)	
Reinstated hedgerow	214.95 m (linear)	
Reinstated semi-improved species rich grassland	1.97	
Amenity grassland reinstated	0.07	
Existing (retained with management and or enhancement)		
Broadleaved woodland - plantation	0.72	
Cultivated/disturbed land - arable	0.49	
Mixed woodland - plantation	2.40	
Scrub - dense/continuous	0.08	



Landscape / Habitat types	Predicted extent of reinstatement area (ha)
Improved grassland	1.35
Cultivated/disturbed land - amenity	0.14
grassland	

Development Parcel C

- 1.7.67. Reinstatement of planting west of a proposed flood alleviation channel and the battery storage facility in the form of broadleaved parkland / scattered trees (ornamental) / coppice woodland / scrub, hedgerows and semi improved species rich grassland. A new pond would be introduced with riparian vegetation to replace the pond lost during construction laydown. The vegetation would serve a screening function, reduce visual clutter and improve habitat diversity on site refer to Appendix 1 Figure 6.7.4 and Work Number 11 and, generally Schedule 1.
- 1.7.68. In addition to compensating for the habitat loss associated with the Proposed Scheme, the proposed planting would provide suitable habitats for amphibians, reptiles, breeding and wintering birds and bats.
- 1.7.69. Total area of planting would be 1.56 ha and implemented on completion of Stage 2, once Unit Y has been constructed. A breakdown of the proposed and existing landscape / habitat types is summarised in Table 1.16 below:

Table 1-16 Table of Proposed and Existing Landscape / Habitat Types in Development Parcel C

Landscape / Habitat types	Predicted extent of reinstatement area (ha)			
Proposed				
Proposed Hedgerow	373.11 m (linear)			
Proposed Semi-improved grassland	1.59			
Proposed broadleaf parkland / scattered trees	0.34			
Proposed Coppice Woodland / Scrub	0.29			
Pond	0.07			
Existing (retained with management and or enhancement)				
Poor semi-improved grassland	0.19			
Cultivated/disturbed land - amenity grassland	0.24			
Introduced shrub	0.03			

Development Parcel F

1.7.70. Ornamental broadleaved trees, hedgerow and amenity grassland lost as a consequence of the temporary footbridge and to provide a link between development Parcels A and F would be reinstated. Replacement trees and hedgerow would provide a low level screen reducing visual clutter internally refer to Appendix 1 Figure 6.7.5 and Work Number 2D, 11 and, generally Schedule 1. The species, depth and spacing of planting would replicate existing



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- planting on site; a mix of hawthorn, cherry, field maple and dog rose with ash forming an avenue of trees. Discussions would need to take place over a suitable substitute to ash based on restrictions associated with ash dieback (*Hymenoscyphus fraxineus*)
- 1.7.71. In addition to replacement planting, new ornamental trees and shrub planting would be introduced extending existing vegetation further south along the western edge of New Road. The condition of ornamental shrub planting is poor and ground coverage limited. Further planting would improve overall ground coverage and create a unified appearance.
- 1.7.72. Marshy grassland lost during the construction of Units X and Y and associated cable routes would be reinstated, ground prepared and seed sown.
- 1.7.73. Total area of planting would be 1.97 ha and implemented during Stage 2, after Unit Y has been constructed. A breakdown of the proposed and existing landscape / habitat types is summarised in Table 1.17 below:

Table 1-17 Table of Proposed and Existing Landscape / Habitat Types in Development Parcel F

Landscape / Habitat types	Predicted extent of reinstatement area (ha)			
Proposed				
Ornamental hedgerow and hedgerow trees	136.32 m (linear)			
Amenity grassland reinstated	0.09			
Marsh/marshy grassland	1.48			
Existing (retained with management and or enhancement)				
Ornamental hedgerow and hedgerow trees	76.51 m (linear)			
Ornamental planting enhanced with further tree planting	0.05			

HABITAT CREATION PRINCIPLES

- 1.7.74. Where planting and the creation of new habitats is undertaken the following principles will apply:
 - Consultation will take place pre construction with NYCES and SDC to agree the indicative planting palette including seed mixes and sourcing of material.
 - All seed mixes and planting stock will be ordered as early as possible to ensure that the supply does not risk substitution.
 - All seed mixes and tree and shrub stock will be sourced from a specialist producer of British native plants and who can identify all stock.
 - Native trees and shrubs will be sourced from a supplier which follows the Forestry Commission's Voluntary Identification Scheme for British Native trees and Shrubs;
 - Grassland wildflower mixes will be approved by Defra under the Seed (Registration, Licensing and Enforcement) (England) Regulations 2002.
 - Terms of supply will include a condition that no part of the order shall be substituted with alternative stock or of unapproved origin and that any change must be mutually agreed.



- 1.7.75. The above requirements will be incorporated into contractors' specifications and contracts as appropriate to deliver agreed planting stock in accordance with the aims and objectives of this outline Strategy.
- 1.7.76. Tree protection measures would either be through the use of standard tree or shrub shelters or through the erection of appropriate post and wire fencing with rabbit proof netting. This would be determined through the detailed applications and will depend on the specific areas of planting proposed and associated site conditions.

Biodiversity Offsetting

- 1.7.77. Table 1.18 below extracted from the Biodiversity Net Gain report (ES Appendix 9.7) demonstrates that the Proposed Scheme under the worst case scenario (assuming the greatest impact on biodiversity) achieves a net gain for biodiversity for area based habitats (such as grasslands and woodlands) and a net loss for biodiversity for linear habitats (such as hedgerows and ditches). Although the Proposed Scheme achieves a net gain for area based habitats, it cannot claim full biodiversity net gain for the Proposed Scheme as a whole as a net gain for linear habitats is not achieved. The BNG assessment would be revisited in consultation with NYCES prior to examination, in order to explore opportunities to deliver no net loss or net gain for linear habitats.
- 1.7.78. It is intended that a detailed post-development biodiversity offsetting calculation be completed as part of finalisation of the detailed and approved Landscape and Biodiversity Strategy is finalised. This updated assessment will be based on more accurate scenarios for losses and gains of biodiversity units than the current assessment (for example as a result of greater detail on construction phase habitat losses being available), and will be able to determine whether revisions of the habitat types and area of habitat to be recreated are needed and whether additional offsite compensation will be required to meet net gain or no net loss. This would also consider whether there are options to achieve a net gain with a slight reduction in compensation provision.
- 1.7.79. To support updates of the biodiversity offsetting calculations, Phase 1 habitat surveys and condition assessments of Additional Areas 1 3 would be undertaken by ecologists to gather additional habitat data for these areas.
- 1.7.80. Options to include additional areas of linear habitats by restoring these within the footprint of the Proposed Scheme would also be explored during the updating of the biodiversity offsetting calculations. If this was not possible create or enhance habitats offsite as compensation for the impact of the development.



Offic	3 (LU)			
UNIT TYPE	TOTAL BASELINE UNITS LOST (A)	TOTAL UNITS POST- DEVELOPMENT (B)	UNIT DIFFERENCE (B – A)	OUTCOME
BU	131.4	145.5	14.1	NET GAIN (11% increase)
LU	3458.0	1959.1	-1498.9	NET LOSS

Table 1-18 Summary of Total Post-Development Biodiversity Units (BU) and Linear Units (LU)

1.8 Indicative Measures for the effective Management and Maintenance of the Proposed Enhancements

Overview

- 1.8.1. All new landscape/habitat creation and enhancement works would be subject to a long term (25 year) management, maintenance and monitoring plan to ensure the full and successful establishment of the planting. The plan would form part of the detailed approved landscape and biodiversity strategy. The plan would prescribe the maintenance regimes for all different landscape / habitats considering the aims, objectives and functions of each area of planting / habitat. Further details would be agreed with NYCC and SDC prior to construction of works associated with each Work Number.
- 1.8.2. New planting would be subject to a five year defects liability period, secured by a requirement in Schedule 2 of the draft DCO (DCO Document Reference 3.1). This period would commence on completion of landscaping works associated with each Work Number. All plants found dead or dying would be replaced within the first available planting season.
- 1.8.3. If areas of planting are seen to be failing, soil samples would be taken to identify potential soil issues affecting plant health and soil remediation considered and / or alternative more suitable plants chosen to maintain proposed features.
- 1.8.4. An approved contractor would undertake a number of operations including weed control, checking plants, pruning and replacement planting as well as watering.
- 1.8.5. The plan would consider the management of the following elements in further detail:

Existing and Proposed Woodland and Trees

- 1.8.6. The management, maintenance and monitoring plan as well as the detailed plans of each compensation area would draw on the UK Forest Standards (Ref. 1.24) and consider opportunities to:
 - Create a diverse structure where opportunities arise to improve habitat diversity and encourage natural regeneration.
 - Retain a proportion of fallen or standing deadwood to improve ecological value;
 - Explore opportunities to enhance the woodland edge where light and space is available through the introduction of ground flora and understorey planting.
 - Create the opportunities for glades through the felling of single trees or groups of trees where this does not contradict visual screening objectives.



- Undertake woodland and hedgerow management outside of the breeding bird season.
- Consider risk and opportunities for climate change in the selection of new woodlands and restocking.

Existing and Proposed Coppice Woodland / Scrub

- 1.8.7. The following would be considered for existing and proposed coppice woodland / scrub:
 - Thinning and coppicing of trees and shrubs would achieve a diverse form and habitats undertaken on rotation in specific blocks;
 - Coppice stools would be protected from deer/ rabbit browsing by piling brashings; and
 - Coppice stools would monitored for regrowth and replanted where appropriate.

Existing and Proposed Hedgerows

- 1.8.8. The following issues would be considered for existing and proposed hedgerows:
 - In order to maintain a natural profile, hedgerows would be cut at an appropriate time of year to avoid impacting on breeding birds.
 - Hedgerows would be cut on a rotational basis, allowing the growth of individual hedgerow trees.
 - Dead / diseased wood would be pruned back and material removed except where its retention would have ecological benefit.
 - Consideration would be given to coppicing or laying.
- 1.8.9. Ground flora beneath the hedge line would be allowed to develop and herbicides / pesticides avoided.

Existing and Proposed Grassland

1.8.10. An appropriate management regime for grassland would be defined and agreed with NYCC and SDC prior to the construction of each Work Number. Specific mowing regimes for different types of grassland would be agreed and arisings either removed or left for a period of time to allow seed and invertebrates to drop out.

New ornamental trees and shrub planting

1.8.11. An appropriate management regime for existing and new ornamental trees and shrubs would be defined and agreed with NYCC and SDC prior to the construction of each Work Number.

New Waterbodies

- 1.8.12. Appropriate management regimes for new water bodies would be defined and agreed with NYCC and SDC prior to the construction of each Work Number. Consideration would be given to the desilting of ponds and management of vegetation with any necessary thinning of wetland vegetation.
- 1.8.13. Inspection of wetland planting would be carried out to assess weeds and pests and disease control, and any required litter picking. Access in and out of the water bodies would also be assessed prior to each survey to ensure safe and easy means of escape from the water are maintained.
- 1.9 Roles and Responsibilities
- 1.9.1. Drax Power Limited or its appointed contractor would be responsible for:



- Correct instruction of all parties contributing to delivery of the detailed approved Landscape and Biodiversity Strategy (including but not restricted to Drax staff, ecologists, arboriculturalists, landscape architects, landscape contractors, construction contractors and management organisations).
- Compliance with the detailed approved Landscape and Biodiversity Strategy, relevant legislation and any related planning commitments.
- Keeping the appointed ecologist/ landscape architect/ arboriculturalist informed of work activities that require support and supervision, so that it is clear when attendance at site is required.
- Enacting/ enforcing recommendations made by the ecologist/ landscape architect / arboriculturalist, or otherwise agreeing an appropriate alternative course of action if it is subsequently determined that previous advice is not practicable or is out of date.
- Keeping a record of measures taken to deliver the requirements of the detailed approved Landscape and Biodiversity Strategy to provide an auditable record of compliance.
- 1.9.2. The appointed ecologist would be responsible for:
 - Advising Drax on ecological matters and requirements for compliance legislation, providing support as instructed, and monitoring compliance on the detailed approved Landscape and Biodiversity Strategy.
 - Providing Drax with survey reports and other written evidence required by accordance with the agreed scope of work and contractual obligations.
 - Planning and undertaking ecological monitoring surveys (where necessary) which will be outlined in detail within the overarching management, maintenance and monitoring plan as part of the detailed Landscape and Biodiversity Strategy.
- 1.9.3. The appointed landscape architect / arborculturalist would be responsible for:
 - Providing specialist site supervision in the form of walk over assessments relating to relevant landscape areas. This will be to assess landscape components and their condition and identify the need for landscape enhancement as instructed and in accordance with the agreed scope of work and contractual obligations, once the proposed scheme has been completed;
 - Monitoring and assessing the landscape related elements of the detailed approved strategy for their effectiveness on an annual basis for the first five years following the completion of the development, informed by the management, maintenance and monitoring plan within the detailed landscape and biodiversity strategy;
 - Ensuring that the landscape related elements of the detailed approved strategy are
 reviewed every five years beyond the initial monitoring and assessment stage. The
 strategy shall be amended accordingly to suit any changing landscape conditions and
 ultimately inform the landscape maintenance operations associated with the
 development throughout the operational life of the proposed scheme; and
 - Ensuring that any reviews associated with landscape related elements of the detailed approved strategy clearly identifies any changes to site conditions and circumstances, whether the aims and objectives of the detailed approved Strategy are being met, and where identified changes are needed to existing management practices and timeframes.



REFERENCES

- Ref 1.1 Department for Environment, Food and Rural Affairs (Defra), 2017, Conservation of Habitats and Species Regulations, HMSO.
- Ref 1.2 Department for Environment, Food and Rural Affairs (Defra) The Wildlife and Countryside Act 1981 (as amended), HMSO.
- Ref 1.3H Department for Environment, Food and Rural Affairs (Defra), 2006, The Natural Environment and Rural Communities (NERC) Act, HMSO.
- Ref. 1.4 Department for Environment and Rural Affairs, 2000, Countryside and Rights of Way Act, HMSO.
- Ref. 1.5 Department for Environment, Food and Rural Affairs (Defra), 1997, No 1160 Countryside - Hedgerow Regulations, 1997, HMSO.
- Ref. 1.6 Department for Energy and Climate Change (DECC), 2011, National Policy Statement for Energy EN-.1, HMSO.
- Ref. 1.7 Department for Energy and Climate Change (DECC), 2011b, National Policy Statement for Fossil Fuel Electricity Generating Infrastructure (EN-2), HMSO.
- Ref. 1.8 Department for Energy and Climate Change (DECC), 2011b, National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), HMSO.
- Ref. 1.9 Department for Communities and Local Government (DCLG), 2012, National Policy Framework, HMSO.
- Ref 1.10 Ministry of Housing, Communities and Local Government, March 2018, National Planning Policy Framework – Consultation Proposals
- Ref. 1.11 Selby District Council, 2005, Selby District Local Plan, adopted February 2005, saved policies.
- Ref. 1.12 Selby District Council, 2013, Selby District Core Strategy Local Plan, adopted October 2013
- Ref. 1.13 East Riding of Yorkshire Council, East Riding Local Plan Strategy Document 2012-2029, adopted April 2016.
- Ref. 1.14 Doncaster Metropolitan Borough Council, Core Strategy Development Plan Document, adopted May 2012.
- Ref. 1.15 Council of Europe, 2000, The European Landscape Convention.
- Ref 1.16 Ministry of Housing, Communities and Local Government, National Planning Practice Guidance Section Natural Environment, 21 January 2016.
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APPENDICES



















