H2Teesside Project

Planning Inspectorate Reference: EN070009/APP/5.9

Land within the boroughs of Redcar and Cleveland and Stockton-on-Tees, Teesside and within the borough of Hartlepool, County Durham

Document Reference: 5.9: Outline Landscape and Biodiversity Management Plan

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

Applicant: H2 Teesside Ltd

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1.0 INTRODUCTION

1.1 Overview

1.1.1 This Outline Landscape and Biodiversity Management Plan (Outline LBMP) forms part of a Development Consent Order (DCO) application and provides a framework for delivering the landscape and ecological strategy and the successful establishment and future management of proposed landscape works associated with the H2Teesside project (hereafter referred to as 'the Proposed Development'). It sets out the short and long-term measures and practices that will be implemented by the Applicant to establish, monitor and manage landscape and ecology mitigation measures embedded in the design.

1.1.2 As set out in the Draft DCO [REP6a-007], a requirement will necessitate the submission and approval of a detailed Landscape and Biodiversity Management Plan (LBMP) to deliver the provisions as set-out in this Outline LBMP.

1.1.3 This Outline LBMP is a live document, the context of which will continue to be updated, refined and (where necessary) added to, based on ongoing discussions between the Applicant and statutory bodies and relevant Local Planning Authorities. It will be updated by the Applicant into a Final LBMP prior to the commencement of works in accordance with the Requirements contained in Schedule 2 of the Draft DCO[REP6a-007].

1.2 The Proposed Development

1.2.1 The Proposed Development will comprise the construction, operation (including maintenance where relevant) and decommissioning of an up to 1.2-Gigawatt Thermal (GWth) Lower Heating Value (LHV) Carbon Capture and Storage (CCS) enabled a Hydrogen Production Facility (the 'Production Facility') located in Teesside, along with the pipeline infrastructure required to supply hydrogen (H_2) to offtakers (customers) and the necessary utility connections.

1.3 Purpose and Structure of this Document

1.3.1 The purpose of this document is to set out the proposed strategy to mitigate the effects of the Proposed Development on landscape and biodiversity features and to enhance the biodiversity, landscape and green infrastructure (GI) value of the Proposed Development to secure compliance with relevant national and local planning policies.

1.3.2 The Proposed Development has been designed, as far as is practicable, to avoid or reduce effects on landscape and biodiversity features through development design and impact avoidance. Opportunities to secure net gains for landscape and biodiversity as part of the implementation of the Proposed Development have also been considered. This assessment process and the impact avoidance measures to be implemented are described in Chapter 5: Construction Programme and Management [APP-057], Chapter 12: Ecology and Nature Conservation [APP-064], Chapter 13: Ornithology [APP-065]; and Chapter 16: Landscape and Visual Amenity [APP-069].

1.3.3 This document outlines the landscape and biodiversity avoidance measures that would be implemented prior to, and during, construction of the Proposed Development, as well as the habitat restoration, enhancement, management, and monitoring measures to be implemented once the Proposed Development is operational. Implementation of these measures is proposed to be secured by the requirement for a detailed LBMP to be produced in accordance with this Outline LBMP.

1.3.4 The Outline LBMP is structured as follows:

- Section 1.0 sets out the purpose of the plan;
- Section 2.0 sets out the relevant legislation that are applicable to the Proposed Development;
- Section 3.0 sets out the landscape and ecological context of the Proposed Development;
- Section 4.0 details the measures required for the protected and invasive species impact avoidance;
- Section 5.0 describes the landscape and ecology reinstatement and enhancement proposals for landscape and biodiversity impact mitigation including the effective management and maintenance of the habitats;
- Section 6.0 describes post-construction monitoring to determine that the functions documented within this Outline LBMP are being achieved and whether remedial action may be required; and
- Section 7.0 sets out the roles and responsibilities during construction of the Proposed Development and for implementation of the LBMP.

1.4 Objectives

1.4.1 The overarching objectives of the Outline LBMP are to:

- avoid or minimise adverse ecological, landscape and visual effects as far as practicable;
- promote the conservation, protection and improvement of the physical and natural environment within the Proposed Development and its setting;
- diversify ecological value of existing habitats through restoration and enhancement of bankside vegetation, restoration and creation of woodland; and
- outlines the measures which are proposed to enhance biodiversity.

2.0 RELEVANT LEGISLATION

2.1 Introduction

2.1.1 The legislation and planning policy relevant to construction of the Proposed Development and the specification of biodiversity specific mitigation and

enhancement is listed in this section. This legislation and planning policy have been considered when formulating this Plan. Chapter 12: Ecology and Nature Conservation [APP_064] and Chapter 13: Ornithology [APP-065] provide more details on this relevant legislation and planning policy.

2.1.2 Post-Brexit, the Secretary of State for the Environment, Food and Rural Affairs has made various changes to parts of the Conservation of Habitats and Species Regulations 2017 (referred to as the 2017 Regulations) so that they operate effectively. Most of these changes involve transferring functions from the European Commission to the appropriate authorities in England. A national site network within the UK has been created comprising the protected sites already designated under the Habitats Regulations. All other processes or terms in the 2017 Regulations remain substantively unchanged and existing guidance is still relevant.

2.1.3 Key legislation relevant to the Proposed Development is summarised below.

Invertebrates

2.1.4 Sixteen species of invertebrate present in the United Kingdom are protected pursuant to the 2017 Regulations (as amended).

2.1.5 Approximately 50 species of invertebrate are included in Schedule 5 of the Wildlife and Countryside Act (WCA) 1981 (as amended) (HM Government, 1981).

2.1.6 Section 40 of the Natural Environment and Rural Communities Act 2006 has recently been amended by Section 102 of the Environment Act 2021. The amended Section 40 now places a duty on local authorities to conserve and enhance biodiversity when undertaking their public duty and in doing so, they "…must from time to time consider what action the authority can properly take, consistently with the proper exercise of its functions, to further the general biodiversity objective." (Section 40 (subsection A1) of the 2006 Act). In achieving this, the Government has published a list of Species of Principal Importance (SPI) for nature conservation in England, which includes invertebrates.

Great Crested Newt (GCN)

2.1.7 GCN are protected in England under the 2017 Regulations (as amended) and are included on Schedules 5 of the Wildlife and Countryside Act 1981 (as amended). The above collectively prohibits the following:

- deliberately or recklessly capturing, injuring, taking or killing of a GCN;
- deliberately or recklessly harassing a GCN;
- intentionally or recklessly disturbing of a GCN in its place of rest, or which is used for protection or rearing young;
- deliberately or recklessly damaging, destroying or obstructing access to any resting place or breeding area used by GCN;
- deliberately or recklessly disturbing a GCN in any way which is likely to significantly affect the local populations of the species, either through affecting

their distribution or abundance, or affect any individual's ability to survive, reproduce or rear young; and

- possession or advertisement/sale/exchange of a GCN (dead or alive) or any part of a GCN.

2.1.8 GCN are included as a European Protected Species under the Annex II and Annex IV of Council Directive 92/43/EEC.

2.1.9 GCN are also strictly protected under Appendix II of the Bern Convention. This Appendix prohibits the capture, injuring / killing, disturbance and trade of GCN.

Reptiles

2.1.10 Common species of reptile (*common lizard Zootoca vivipara, slow worm Anguis fragilis, grass snake Natrix etanusa* and adder *Vipera berus*) are protected against intentional killing and injury under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). There is no requirement for a licence where development works affect common species of reptiles. Instead, Natural England advise that where reptiles are present, they should be protected from any harm that might arise during the development works through appropriate mitigation.

Salmon and Freshwater Fisheries

2.1.11 The Salmon and Freshwater Fisheries Act 1975 (HM Government, 1975) covers the regulation of fisheries in England and Wales and includes legislation that covers the introduction of polluting effluents, the obstruction of fish passage (screens, dams, weirs, culverts etc) illegal means of fishing, permitted times of legal fishing and fishing licencing (which covers electric fishing).

2.1.12 Under this act any person who causes or knowingly permits to flow, or puts or knowingly permits to be put, into any waters containing fish or into any tributaries of waters containing fish, any liquid or solid matter to such an extent as to cause the waters to be poisonous or injurious to fish or the spawning grounds, spawn or food of fish, shall be guilty of an offence.

2.1.13 The act also requires that fish passes are installed on new and rebuilt barriers that affect waters frequented by salmon or migratory trout. In the future, it is likely that fish passage facilities will need to be designed to accommodate all fish species and life stages, with nature-like bypass channels being the most appropriate solution currently available.

Eels

2.1.14 The Eels (England and Wales) Regulations 2009 (HM Government, 2009) implement Council Regulation (EC) No 1100/2007 of the Council of the European Union, which required Member States to establish measures for the recovery of the stock of European eel. The regulations apply to England and Wales.

2.1.15 They give powers to the regulators (the Environment Agency and Natural Resources Wales) to implement recovery measures in all freshwater and estuarine waters in England and Wales. The aim of the regulations is to achieve 40 per cent escapement of adult eels relative to escapement levels under pristine conditions. The measures,

as set out in the legislation, by which this is to be achieved are to reduce fishing pressures, improve access and habitat quality and reduce the impact of impingement and entrainment.

2.1.16 Under the Regulations, the regulators can serve notice to companies detailing their legal obligation to screen intakes and outfalls for eel and/or to remove or modify obstructions to eel migration. However, it is possible for companies to be granted with exemptions if the costs of works greatly exceeds the benefits. In such a situation it is likely the regulator will seek a package of more cost-effective, "alternative measures".

Bats

2.1.17 All species of bat, their breeding sites and resting places are protected under the 2017 Regulations (as amended) and the Wildlife and Countryside Act 1981 (as amended) (HM Government, 1981). Regulation 43 of the Habitats Regulations makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats (which includes any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate or to affect significantly the local distribution or abundance of the species to which they belong);
- damage or destroy a breeding site or resting place of a bat; or
- possess, control, transport, sell or exchange, or offer for sale or exchange, any live or dead bat or part of a bat or anything derived from a bat or any part of a bat.

2.1.18 Under Section 9 of the WCA (s.9(4)(b), 9(4)(c) and 9(5) only), it is an offence (in relation to bats) to:

- intentionally or recklessly disturb a bat while it is occupying a structure or place of shelter or protection;
- intentionally or recklessly obstruct access to any structure or place used by a bat for shelter or protection; or
- sell, offer or expose for sale, or have in their possession or transports for the purpose of sale, any live or dead bat or any part of, or anything derived from a bat (or be responsible for adverts suggesting the intention to do this).

2.1.19 Where development will result in damage to suitable habitat where bats are present, or risks harming or significantly disturbing bats, or breaching any of the above, a European Protected Species Mitigation Licence is likely to be required to allow the works to proceed. To obtain a licence an applicant needs to demonstrate that there is no long-term harm to the conservation status of the affected bats.

Water Vole

2.1.20 The water vole is protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) (HM Government, 1981). This makes it an offence to:

- intentionally capture, kill or injure water voles;
- intentionally or recklessly damage, destroy or block access to their places of shelter or protection (on purpose or by not taking enough care);
- intentionally or recklessly disturb them in a place of shelter or protection (on purpose or by not taking enough care); and
- possess, sell, control or transport live or dead water voles or parts of them (excluding water voles bred in captivity).

2.1.21 The Act provides a defence against the offences outlined above. However, the defence is only sustained if it can be argued that the potential offence was 'the incidental result of a lawful operation', which includes activities carried out under a planning permission and subject to a licence and 'could not reasonably have been avoided' as set out in the Wildlife and Countryside Act 1981 (as amended). In order to demonstrate these two elements of the defence, as far as is reasonable, appropriate action would need to be taken to safeguard water vole and their shelters to ensure there is as little risk as possible of interfering with them. Short-term low-level disturbance which 'allows water vole to flee and then later return' is not considered likely to trigger an offence under the Wildlife and Countryside Act 1981 (as amended). Where development cannot avoid potential offences then a licence from Natural England will be required.

Otter

2.1.22 Otter and their resting places receive protection under the 2017 Regulations (as amended) and the Wildlife and Countryside Act 1981 (as amended) Under the 2017 Regulations (as amended), it is an offence to "deliberately capture, injure or kill an otter; deliberate disturbance of otters; or damage or destroy a breeding site or resting place used by an otter."

2.1.23 Under the Wildlife and Countryside Act 1981 (as amended) it is a criminal offence to:

- intentionally or recklessly damage, destroy, or obstruct access to a place used by an otter for shelter or protection;
- possess, sell, control or transport live or dead otters, or parts of otters; and
- The disturbance offence within the Habitat Regulations is not concerned with levels of disturbance which would be unlikely to adversely affect otter. Under this legislation there would only be a conflict with the above legislation where disturbance is of sufficient extent or magnitude to:
  - impair the ability of otter to survive, to breed or reproduce, or to rear or nurture their young; or
  - significantly affect the local distribution or abundance of the species.

2.1.24 Where development cannot avoid potential offences, then a European Protected Species Mitigation Licence from Natural England will be required.

Nesting Birds

2.1.25 All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), with some species afforded greater protection under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). In addition to the protection from killing or taking that all birds receive; Schedule 1 birds and their young must not be disturbed at the nest.

2.1.26 There are no licensing purposes that explicitly cover development activities affecting wild birds.

Other Animals

2.1.27 All wild mammals are protected from unnecessary suffering under the Wild Mammals (Protection) Act 1996.

Hedgerows

2.1.28 The Hedgerow Regulations 1997 (HM Government, 1997) introduced protection for countryside hedgerows that are defined as 'important' because they meet specific wildlife or landscape criteria. The assessment has evaluated hedgerows affected by the Proposed Development by way of field survey, to determine whether any qualify as important under the ecological criteria.

Invasive Species

2.1.29 Part 14 of the Wildlife and Countryside Act 1981 (as amended) makes it unlawful to plant or otherwise grow in the wild any plant which is listed under Part II of Schedule 9. Part 14 of the Wildlife and Countryside Act 1981 (as amended) states that 'if any person plants or otherwise causes to grow in the wild, plants which are included in Part II of Schedule 9, he shall be guilty of an offence'. The Wildlife and Countryside Act 1981 (as amended) also states that persons must take reasonable all steps and must exercise due diligence to avoid committing an offence. It is not an offence to have plants listed under Schedule 9 on the land, it is an offence to cause the spread of these plants to new areas.

2.1.30 The Environmental Protection Act 1990 (HM Government, 1990) classifies soil and other waste containing viable propagules if INNS as controlled waste. This waste must be disposed of in accordance with the duty of care outlined in Section 34 of the 1990 Act.

Biodiversity Net Gain

2.1.31 The Applicant notes that the provisions of the Environment Act 2021 relating to Biodiversity Net Gain ('BNG') in relation to Town and Country Planning Act 1990 application have now come into force. However, provisions relating to Planning Act 2008 projects have not yet come into force and are not expected to until at least November 2025.

2.1.32 At a national level, this delay reflects the need for the complexities of infrastructure projects and its interaction with the BNG metric to be fully understood by Natural England and project promoters, acknowledging that they are not the same as blocks of land lost to housing developments for example.

2.1.33 This is particularly true for a project such as the Proposed Development, with its numerous corridors involving a mix of above and underground land requirements for different types of pipelines, but which are also surrounded by a number of existing assets, necessitating differing limits of deviation. Infrastructure also have a range of 'temporary' land requirements that are shown in the red line boundary but may not in fact involve habitat loss. As such, the true 'loss' of habitats to the Proposed Scheme are much less than would actually be the case than simply assuming that the loss includes the entirety of the Order limits. Natural England is therefore working with the energy and infrastructure industry to consider how best the metric can apply to projects such as this.

2.1.34 A specific additional complexity for the Proposed Development is the Main Site. At the moment the Main Site is the subject of extensive demolition works being undertaken by the landowner of the old South Tees Development Corporation (STDC) steel plant and infrastructure; and it is anticipated it will also shortly be subject to extensive remediation activities. The former works are subject to restoration and habitat establishment requirements, and it is considered likely that this will apply to the remediation works. As such, the ecological baseline position of the site now would, for BNG purposes, be unrealistic in terms of establishing what the 'pre-development' habitat condition should be considered to be for the Main Site.

2.1.35 For the reasons given in the Planning Statement (EN070009/APP/5.2), the Applicant has not submitted a BNG Report / Assessment based on the BNG Metric as part of its DCO Application for the Proposed Development. However, the Applicant's proposals for gains / enhancements are set out in Section 5 of the Outline Landscape and Biodiversity Management Plan. The measures in the latter will be developed into a Full LBMP to reflect the detailed design (and impacts) of the Proposed Scheme, in substantial accordance with that outline. This is secured through the DCO.

2.1.36 Furthermore, the Applicant is keen to secure enhancements in the wider Teesside area off-site from the Order limits and is working with stakeholders such as the EA, Natural England and RPSB to develop proposals in this regard. Whilst the Applicant does not propose to quantify these in BNG metric terms at this point in time, it is hoped that such measures, to be secured though a section 106 Agreement, will be able to demonstrate a wider qualitative net gain overall as a result of the Proposed Development.

3.0 LANDSCAPE, ECOLOGICAL AND BIODIVERSITY CONTEXT

3.1 Existing Landscape and Biodiversity Features

Designated Sites

3.1.1 Table 3-1 summarises the designated sites which have the potential to be affected by the Proposed Development and their reasons for designation. Figure 12-1: Statutory Designated Sites within 15 km [AS-018]shows the locations of the designated sites in relation to the Proposed Development Site.

Table 3-1: Designated Sites and Reason for Designation

DESIGNATED SITE	IMPORTANCE	PROXIMITY TO MAIN SITE (APPROX)	PROXIMITY TO CONNECTION CORRIDORS (APPROX)	REASON FOR DESIGNATION
Teesmouth and Cleveland Coast Special Protection Area (SPA)	International	Adjacent	Overlapping	Qualifying features (Natural England, 2020): Pied avocet (*Recurvirostra avosetta*) (breeding); Red knot (*Calidris canutus*) (non-breeding); Ruff (*Calidris pugnax*) (non-breeding); Common redshank (*Tringa 12etanus*) (non-breeding); Sandwich tern (*Thalasseus sandvicensis*) (non-breeding); Common tern (*Sterna hirundo*) (breeding); Little tern (*Sternula albifrons*) (breeding); and Waterbird assemblage.
Teesmouth and Cleveland Coast Ramsar	International	Adjacent	Overlapping	The site qualifies as a Ramsar for the following Ramsar criteria (Natural England, 2020): Criterion 5 – Assemblages of international importance: Species with peak counts in winter: 26,786 waterfowl (5 year peak mean 2011/12-2015/16). Criterion 6 – Species/populations occurring at levels of international importance: Qualifying Species/populations (as identified at designation): Species with peak counts in spring/autumn: Common redshank; 1,648 individuals representing an average of 1.1% of the East Atlantic population (1987-91). Species with peak counts in winter: Red knot; 5,509 individuals representing an average of 1.6% of the NE Canada/Greenland/Iceland/UK population (5 year peak mean 1991/92-1995/96); Sandwich tern; 1,900

DESIGNATED SITE	IMPORTANCE	PROXIMITY TO MAIN SITE (APPROX)	PROXIMITY TO CONNECTION CORRIDORS (APPROX)	REASON FOR DESIGNATION
				individuals representing an average of 4.3% of the GB population (1988-1992).
Teesmouth and Cleveland Coast Site of Special Scientific Interest (SSSI)	National	Overlapping	Overlapping	The site is of special interest for the following nationally important ecological features (Natural England, 2018): sand dunes; saltmarshes; breeding harbour seals (*Phoca vitulina*); breeding avocet, little tern, common tern; a diverse assemblage of breeding birds of sand dunes, saltmarsh and lowland open waters and their margins; non-breeding shelduck (*Tadorna tadorna*), shoveler (*Spatula clypeata*), gadwall (*Mareca strepera*), ringed plover (*Charadrius hiacula*), knot, ruff, sanderling (*Calidris alba*), purple sandpiper, redshank and sandwich tern; an assemblage of more than 20,000 waterbirds during the non-breeding season; and a diverse assemblage of invertebrates associated with sand dunes.
Teesmouth National Nature Reserve (NNR)	National	1.8 km west	30 m west	The reserve covers 350 ha in two sections separated by Hartlepool PowerStation. North Gare lies to the north, and Seal Sands to the south. North Gare comprises of sand dunes and areas of saltmarsh. The dunes and saltmarsh support a wide variety of plants, and in winter large flocks of birds roost at Seaton Snook. Seal Sands comprises of mudflats and are home to the common and grey seals (Halichoerus grypus) and the winter home for hundreds of shelduck. More than 20,000 individual waterfowl visit Teesmouth during the year. The reserve supports four different species of marsh orchid and two nationally scarce species of grass.
Philips Tank Farm Grassland	District	4.3 km west	73 m north-west	The site comprises urban grassland which has developed on site that supports at least 10 herb species required for LWS selection in the Tees Valley. The site

DESIGNATED SITE	IMPORTANCE	PROXIMITY TO MAIN SITE (APPROX)	PROXIMITY TO CONNECTION CORRIDORS (APPROX)	REASON FOR DESIGNATION
Local Wildlife Site (LWS)				supports breeding populations of GCN, and the site boundaries encompass both aquatic and terrestrial habitats used by GCN. The site regularly supports green hairstreak (*Callophrys rubi*) or white-letter hairstreak (*Satyrium w-album*) or a significant population (i.e. 10 individuals) of dingy skipper (*Erynnis tage*s). The site supports a good population of water vole, including areas of suitable habitat that link good populations even when the area is not currently occupied.
Saltern Grassland LWS	District	4.8 km west	95 m west	The site supports saltmarsh habitat and was created as an inter-tidal habitat of 20 ha in 2014 by the Environment Agency.
Greatham Creek North Bank Saltmarsh LWS	District	4.1 km west	Overlapping	The site supports a saltmarsh habitat, dominated by saltmarsh grass (*Puccinellia* spp.)
Coatham Marsh LWS	District	1.3 km east	Overlapping	The site supports a saltmarsh, coastal grasslands, flushes, seepages, springs, neutral and urban grassland habitats and vascular plants.
Eston Pumping Station LWS	District	1.1 km south	Overlapping	The site supports a mosaic of habitats and borderline neutral urban grasslands.
Cowpen Bewley Woodland Park (CBWP) LWS	District	Over 2 km	Overlapping	Former agricultural, landfill and brickworks land now supporting grassland and freshwater habitats which support a good population of GCN.

3.2 Habitats

3.2.1 The following habitats of ecological importance are present within the Proposed Development Site and have the potential to be affected by the proposed development. The locations of habitats are shown in Figure 12-4: Phase 1 Habitat Survey Results [PDA-011].

Table 3-2: Habitats of Ecological Importance with the Potential to be Affected by the Proposed Development

HABITAT TYPE	IMPORTANCE
Open Mosaic Habitat on Previously Developed Land	District
Watercourses	Local to International
Hedgerows	Local
Broad-leaved Plantation Woodland	District and Local
Semi-improved Grassland / Floodplain grazing Marsh	Local and District
Marshy Grassland	Local
Swamp	Local and District

3.3 Species

3.3.1 The desk study and field surveys confirmed presence or identified habitats suitable for the following species or species groups:

- Invertebrates – habitats within and adjacent to the Proposed Development Site support an invertebrate assemblage of up to National importance.
- Amphibians – habitats within the Proposed Development Site may support amphibians including Great Crested Newt (GCN) and common toad (*Bufo bufo*);
- Reptiles – habitats within the Proposed Development Site support common reptile species such as common lizard (*Zootoca vivipara*);
- Fish – watercourses within the Proposed Development Site may support fish;
- Birds – habitats within and adjacent to the Proposed Development Site may support breeding and non-breeding birds (Including Schedule 1 species);
- Bats – habitats within the Proposed Development Site support foraging and commuting bats;
- Water vole – watercourses within the Proposed Development Site support water vole (*Arvicola amphibius*);
- Otter – watercourses within the Proposed Development Site are used by foraging and commuting otter (*Lutra lutra*);
- Brown hare – habitats within the Proposed Development Site have suitability for brown hare (*Lepus europaeus*);
- Hedgehog – hedgerows, woodland and grassland habitats within the Proposed Development Site are suitable for hedgehog (*Erinaceus europaeus)*;

- Aquatic macroinvertebrates and macrophytes – present within watercourses within the Proposed Development Site; and
- Invasive non-native species – within the Proposed Development Site and along watercourses within the Study Area.

3.3.2 Species such as badger (*Meles meles*) which are assumed absent from the Proposed Development Site are not included within the sections below. In the event that evidence of badger is identified on site, an ecologist should be contacted for advice and this report will be updated accordingly.

4.0 PROTECTED AND INVASIVE SPECIES IMPACT AVOIDANCE REQUIREMENTS

4.1 Overview

4.1.1 The Proposed Development has been designed to avoid the temporary or permanent loss of notable habitats (see Table 3-2 above), as far as is practicable.

4.1.2 The impact avoidance measures outlined below will be implemented, as relevant and appropriate, prior to and during the construction phase of the Proposed Development, the purpose being to minimise the impact of works on landscape and biodiversity features and to achieve legislative compliance. These measures with the exception of protected species mitigation licences will be secured through the Final CEMP(s).

4.1.3 Standard environmental best practice and mitigation will be implemented to ensure construction and operation of the Proposed Development complies with legislation relating to protected species. It will also ensure the Proposed Development does not compromise the local conservation status of ecological features present within or in the vicinity of the Proposed Development Site.

4.2 Pre-construction Activities

Habitats

4.2.1 A pre-commencement walkover survey will be undertaken by the Ecological Clerk of Works (EcoW). The purpose of the walkover will be to review the site conditions prior to works commencing, to identify any baseline changes on site or ecological constraints and ensure that appropriate mitigation measures are implemented prior to works commensing.

Invertebrates

4.2.2 Periodic disturbance of habitats can be of benefit to invertebrate communities as it prevents rapid ecological succession and can lead to a favourable mosaic of sparsely vegetated habitats. Where excavations require backfilling, a dry, low nutrient substrate will be used to create habitat that is suitable for burrowing. The re-establishment of vegetation will be left to natural processes. Where possible, areas of varied topography will be created to produce warm microclimates and basking spots.

Great Crested Newts

4.2.3 Work within the Proposed Development Site will take place under a District Level Licence (DLL) from Natural England (The Applicant submitted the application for the DLL to Natural England on 22 January 2024, all requests for additional information have been responded to and agreement is expected to be concluded prior to examination). The licence will permit acts, subject to licence conditions, including killing, injury, disturbance, capture and transport of GCN, as well as damage and destruction of their breeding sites and resting places. Impacts of development progressing under the Licence will be fully compensated for by off-site habitat

provision that is being paid for by the Applicant which will be appropriate to the requirements required by Natural England. However, reasonable measures can be undertaken to minimise impacts to any GCN which may be present within or immediately adjacent to the development footprint, as set out below.

4.2.4 The EcoW will provide a toolbox talk prior to the works commencing to outline:

- the terms and conditions of the DLL;
- identification of GCN;
- how to minimise the risk of harming GCN; and
- what to if GCN or other amphibians are found during the works.

4.2.5 Any areas of potentially suitable habitat will be noted during the pre-commencement walkover and communicated to the Site Manager.

Reptiles

4.2.6 Any areas of potentially suitable habitat will be noted during the pre-commencement walkover and communicated to the Site Manager.

4.2.7 Where suitable habitat is identified, the EcoW will advise on timings and appropriate working methods required to avoid harm. Working methods will be outlined in a method statement and may include a hand search of areas prior to clearance, or the vegetation managed to discourage reptiles from the working area. This should only be completed during suitable weather conditions and will involve the phased mowing or strimming of vegetation. Vegetation will first be cut to a height of 250 mm using a strimmer and then after at least 2 hours cut to 100 mm or less. If reptiles are encountered at any time, then works in that area will cease until the reptiles have moved from the working area and the EcoW advises that works can proceed.

Nesting Birds

4.2.8 Where possible, vegetation clearance works will be completed outside of the nesting bird season (which is from March to September). If this is not possible, each area of habitat to be cleared will be checked for nesting birds prior to clearance (a maximum of 48 hours before works commencing) by the EcoW. If an active nest is found, then the nest and its immediate surroundings will need to be left undisturbed until nesting is complete and the birds have fledged. A suitable species dependent buffer will need to be implemented (as advised by the EcoW).

4.2.9 At Greatham Creek the timing of works within and adjacent to the SPA will be completed between September and the end of November inclusive to avoid the most sensitive periods for breeding and wintering birds). Open cut pipeline installation (including site clearance, all other preparatory works, installation of pipelines and reinstatement of habitats) across Brinefields and Cowpen Bewley will be carried out across a single breeding season, between mid-March and mid-September to avoid the most sensitive period for non-breeding SPA, Ramsar and SSSI qualifying bird species, with the noise and visual mitigation measures, presence of an on-site EcoW and nesting bird checks in place to avoid impacts on breeding

birds in these areas. The same restrictions will be applied to installation of pipelines along existing pipe racking between Saltholme Substation and Cowpen Bewley Road. Where these commitments are made to install connections within a single season, the works are regarded, for the purposes of assessment, as short-term.

4.2.10 The key locations identified for restrictions to duration of works and closed board acoustic and visual screening barriers are shown in Figure 14a and Figure 14b to the Habitats Regulations Assessment (Report to Inform Habitats Regulations Assessment [REP6a-010]).

4.2.11 Ground nesting species may be dissuaded from nesting in construction / site access routes by removing the surface vegetation from the desired area before the breeding season commences. Where this is not possible bird deterrent measures will be deployed to deter birds from nesting, followed by the completion of a pre works survey to check for presence of nests.

4.2.12 If Schedule 1 species are found breeding within the working area, works will stop immediately and Natural England will be advised.

Non-breeding Birds

4.2.13 An EcoW will be appointed to advise on working methods and timings to avoid disturbance of birds during sensitive periods. For example, construction may be temporarily suspended within certain areas during conditions of inclement weather (storms / onshore winds) and high tides / spring tides when more birds are sheltering inland.

Foraging and Commuting Bats

4.2.14 Sensitive lighting is proposed during the construction phase to avoid disturbance of nocturnal wildlife including foraging and commuting bats. The following lighting principles will be followed (as per the Indicative Lighting Strategy (Construction) [APP-046]):

- lighting required during the construction and operation stages of the Proposed Development will be designed to reduce unnecessary light spill outside of the Site boundary-see below for summary;
- adopting a lighting control strategy that turns lights off or dims as necessary for site safety and security;
- using photocells as a primary means of control to prevent light from being used when sufficient daylight is available;
- where possible, adopting LED luminaires to control obtrusive light due to their high directionality and accordingly the achievable ratio of useful light to spill light;
- careful consideration of placement of lighting column and luminaire positioning;
- adopting luminaires with minimal upward lighting ratio and full cut-off, where possible;

- not tilting luminaires to have uplift above the horizontal, if this is not possible add shielding, hoods baffles, louvres as necessary to ensure potential upward light is controlled;
- optimising column heights to allow for sufficient light coverage and minimal tilt of luminaires;
- minimising building mounted luminaire heights;
- adopting lamps with similar correlated colour temperatures;
- using lamps with a limited UV spectrum in locations which might affect ecological receptors;
- using shields and baffles to luminaires;
- lighting the site boundaries with low power periphery lighting with an asymmetric forward optic having good back-light cut-off characteristics; and
- directing luminaires away from ecologically sensitive receptors (woodland, hedgerows, waterbodies and ponds, watercourses and coastal habitats).

Otter

4.2.15 Watercourses within the Proposed Development Site have been surveyed for otter (no evidence of breeding otter was found) (Appendix 12F: Water vole and Otter Survey Report [APP-206]. The EcoW will check for any new otter resting places (holts / couches) during the pre-commencement walkover survey. If an otter resting place is found, an appropriate buffer will be implemented to ensure otter are not disturbed. If it is not possible to avoid disturbance of otter, a European Protected Species Mitigation Licence (EPSML) from Natural England will be required. Where survey data is older than 18 months, update surveys will be necessary.

Water Vole

4.2.16 Water vole are confirmed present on watercourses intersecting with the Proposed Development Site (refer to Appendix 12F: Water vole and Otter Survey Report [APP-206]), however no burrows were identified at locations where pipeline crossing points are currently proposed therefore no licence from Natural England is required at this time.

4.2.17 Prior to construction, update surveys will be completed to confirm the continued absence of water vole burrows from crossing point locations once the proposed pipeline crossing point locations are fixed. Update water vole surveys will be completed between April and September with reference to the water vole mitigation guidelines (Dean *et al*, 2016).

4.2.18 A mitigation licence from Natural England would be required if water vole burrows will be affected. The licence will detail the appropriate timing and ecological watching brief of construction to permit the temporary dispersal of water vole from the working area. Habitat would be reinstated / enhanced following completion of the works in accordance with the licence conditions. The Framework CEMP [REP6a-014] details measures to prevent and control pollution during construction.

Hedgehog

4.2.19 The site contains habitats suitable for hedgehog. Any areas of dense vegetation, refugia or potential hedgehog nests will be checked and removed under supervision of the EcoW. Any individuals found will be moved to a safe area away from the construction area. Brash piles should not be removed between November and February or where temperatures are below 5°C to avoid disturbing hibernating hedgehogs.

Invasive Species

4.2.20 Any invasive species present within the site boundary will be noted during the site walkover. It should be noted that invasive species may not be visible during the winter months, therefore an update walkover may be required depending upon the start date for construction and the schedule of works. Areas of invasive species will be fenced off and a specialist invasive species contractor appointed to treat and / or remove from site.

4.3 Protected Species Licences

4.3.1 Any necessary protected species licences will be applied for and obtained prior to undertaking any works that might result in offences under the relevant legislation.

4.4 Tree Works

4.4.1 Where works in close proximity to retained trees cannot be practicably avoided, these works would be undertaken in accordance with current best practice at the time of the works. In January 2023, current best practice is defined in:

- British Standard Institute (BSI) 5837: 2012 Trees in relation to design, demolition and construction – Recommendations (BSI, 2012); and
- National Joint Utilities Group (NJUG) Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (NJUG, 2007).

4.4.2 All necessary protective fencing would be installed prior to the commencement of any site clearance or construction works. Details of this would be set out in Arboricultural Method Statements prepared as part of the Final LBMP.

4.4.3 A section of mature trees within Cowpen Bewley Woodland Park, adjacent to the railway line, will be retained and protected via trenchless construction methods and protective fencing. Detail of this will be set out in the Final LBMP.

4.5 Hedgerow Works

4.5.1 The Proposed Development has been routed and designed to minimise the loss of and avoid significant impacts on existing landscape features. Where this is not possible, any impacted area of hedgerow will be replanted where feasible upon completion of the construction phase.

4.6 Watercourses and Bankside Vegetation

4.6.1 The Proposed Development has been routed and designed to minimise and avoid significant impacts on existing watercourses and bankside vegetation. Where this is not possible, any impacted area of bankside vegetation will be replanted were feasible upon completion of the construction phase. A pre-construction Hydromorphological Survey of all proposed open-cut watercourse crossings will be undertaken to inform a Channel Reinstatement Scheme. This will ensure that the channel is reinstated as found or better, with riparian bankside reinstatement (either by re-planting or allowing to re-vegetate naturally) to return the watercourse corridor to at least its original condition.

4.6.2 Where impacts on fish cannot be avoided, such as damming, fish removal and relocation works may be necessary. This would require an application to the Environment Agency for authorisation to use fishing equipment other than rod and line.

Precautionary Working Methods

4.6.3 Precautionary working methods would be adopted to minimise potential adverse effects on protected/notable species prior to and during construction. Precautionary working method statements would be produced as necessary to specify working requirements and other necessary impact avoidance measures. These measures would be controlled and implemented through the Final CEMP(s) produced pre-construction, pursuant to the DCO.

Animal Welfare Requirements

4.6.4 Construction excavations have the potential to trap wildlife, such as badger and otter, and result in offences under animal welfare legislation. Implementation of measures to avoid animals being injured or killed within construction working areas, through excluding them from such areas and preventing them from falling into and becoming trapped in excavations. Where practicable, excavations will remain open overnight, however if this is not possible, ramps or alternative means of exit will be provided to allow animals a means of escape. Areas will be checked to ensure no animals are present, prior to backfilling of any excavations.

4.7 Habitat Reinstatement

4.7.1 Habitats that would be temporarily lost or damaged during construction, would be reinstated on a like-for-like basis as shown in Figure 1 Sheets 1 to 11 (Annex A). The time required for habitats to reach target condition is considered to be the same as the timescales used in the DEFRA metric. Monitoring will be undertaken as described in section 6 below.

4.7.2 Associated requirements for protection of retained vegetation e.g. during vehicle movements and construction / re-instatement works, soil protection and handling, and temporary soil storage are beyond the scope of this Plan and will be specified in the Final CEMP(s) prepared by the EPC Contractor(s). These specifications will reflect current industry good practice and will be location specific.

4.7.3 The broad approach for reinstatement (where required) of each relevant habitat type is set out below.

Open Mosaic Habitat

4.7.4 No reinstatement of OMH is proposed. Instead, the re-establishment of vegetation will be left to natural processes. This approach is consistent with the mechanism by which the OMH and its associated biodiversity value originally established. It is considered that the benefits arising from construction disturbance, specifically the resetting of vegetation succession back to an earlier stage, outweighs any effect on biodiversity at the local scale (see Chapter 12: Ecology and Nature Conservation [APP-064]).

Woodland

4.7.5 Areas of tree planting that will be temporarily disturbed by the construction of any Above Ground Infrastructure (AGI) will be reinstated or reprovisioned.

4.7.6 Where re-planting is required then the specification for the new planting will be consistent with the extent and composition of the area of woodland removed (as described in Chapter 12: Ecology and Nature Conservation [APP-064] and its appendices [APP-201 to APP-207]. Aftercare would be provided for five years or as otherwise agreed with the landowner.

4.7.7 All new trees and shrubs will be notch planted at approximately 2 m centres with a random distribution into cultivated ground. All planting will also be supported by an appropriate timber stake and biodegradable tree shelter and will be fitted as per manufacturer's recommendations.

4.7.8 During maintenance undesirable species will be spot treated, plants will be inspected on an annual basis or after periods of strong wind and plants re-firmed if required. Stakes will be adjusted to prevent damage to the trees.

4.7.9 Stakes and tree shelters will be removed prior to the end of the 5 year establishment maintenance period.

4.7.10 Areas of tree and shrub planting will be inspected every five years throughout the operational phase of the Proposed Development and a scheme of replacement planting will be implemented as and when required to replace failing or failed specimens.

Flood Plain Grazing Marsh

4.7.11 Areas of reinstatement of flood plain grazing marsh will be re-sown with a grass mixture comparable to the existing species recorded during the baseline surveys.

4.7.12 Management, in the first year (potentially extending into Year 2, depending on the time of sowing and rate of establishment), will be in accordance with the aftercare regime recommended by the seed producer. This would involve:

- periodic mowing in the first year after sowing to maintain a sward height of 40-60mm, removing all arisings for off-site disposal or in a pre-agreed location

where this would not conflict with biodiversity objectives and habitat management;

- Spot treatment of perennial weeds such as broad-leaved dock (Rumex obtusifolius), creeping thistle (Cirsium arvense) and spear thistle (Cirsium vulgare) with an approved herbicide;
- Common ragwort (Jacobaea vulgaris), as an ecological beneficial plant species, will only be controlled if there is identified specific legal reason to do so. Otherwise, it will be tolerated for its biodiversity value; and
- Review requirements for Year 2 at end of aftercare Year 1. Move into the long-term nature conservation management regime (see below) if appropriate.

4.7.13 After the aftercare period of management, the grassland will be maintained through a nature conservation regime. This regime will be specified in more detail in the Final LBMP but will allow for:

- mowing of plots on rotation so that in any one year there always remains a high percentage of areas of longer tussocky grassland suitable to provide foraging habitat and places of refuge for other wildlife, e.g. over-wintering invertebrates, when the remainder of the grassland is cut;
- mowing grassland to 100 mm height between late July and early September, with all arisings removed; and
- periodic control of scrub cover if it establishes greater than 10% total cover, and pernicious weeds such as creeping thistle, spear thistle and broad-leaved dock where these start to dominate to the exclusion of other flora.

Bankside Vegetation

4.7.14 Areas of reinstatement of bankside vegetation will be re-sown with a grass mixture comparable to the existing species recorded during the baseline surveys.

4.7.15 Management of the bankside vegetation will be similar to the flood plain grazing marsh and is detailed in the Enhancement section of this report.

Grassland

4.7.16 Where grassland needs to be reinstated prior to return of temporary construction compounds and construction corridors to the relevant landowners then this will be re-instated in a manner consistent with the existing baseline condition.

4.7.17 After construction, all hardstanding and materials would be removed, soils would be reinstated and prepared for sowing, and then a suitable grassland seed mixture will be sown. Specifically:

- all agricultural pasture will be re-sown with a basic agricultural grass seed mixture and grass-dominated regularly mown road verges will be sown with a low maintenance grass seed mixture;
- all other grasslands will be re-sown with a wildflower mixture comparable to the baseline species mix;

- small-scale disturbances of grassland occurring in matrix with ephemeral plant communities and/or OMH will not be re-sown. Instead the re-establishment of vegetation will be left to natural processes to secure biodiversity opportunities (e.g. for notable butterflies and other invertebrates) associated with early succession vegetation.

4.7.18 Where grassland is sown, sufficient aftercare will be provided to establish a closed grassland sward. After this period, responsibility for management of these grasslands would return to the landowner.

4.8 Long Term Management

4.8.1 Management of Reinstated vegetation will be undertaken during the first five years following implementation of each planting phase and managed in the long-term until decommissioning of the Proposed Development.

5.0 LANDSCAPE AND BIODIVERSITY ENHANCEMENT

5.1 Approach to Landscape and Biodiversity Reinstatement and Enhancement

5.1.1 The proposed measures include the reinstatement and enhancement of bankside vegetation associated with water vole habitat and woodland planting as well as provision of compensatory woodland planting for the loss of woodland within Cowpen Bewley Woodland Park referred to as Cowpen Bewley Open Space Replacement Land. Cowpen Bewley Open Space Replacement Land is secured via an article in the DCO and does not need to be included in the Landscape and Biodiversity Management Plan secured by a requirement.

5.1.2 The details of the proposed woodland planting secured by this plan and bank side vegetation works, including programme, will be set out within the final Plan.

5.2 Habitat Creation Principles

5.2.1 Where new native habitats are to be created, or new native planting undertaken, the following principles would apply:

- all seed mixes and planting stock would be ordered as early as reasonably practicable to ensure that supply can be met without risk of substitution;
- all seed mixes and planting stock would be sourced from a specialist producer of British native plants who can source-identify all stock (i.e. not a non-specialist nursery that buys in stock or an agricultural/general merchant that buys stock from diverse sources, including non-British sources);
- native shrubs would be sourced from a supplier which follows the Forestry Commission's Voluntary Identification Scheme for British Native Trees and Shrubs (Forestry Commission, 2019); and
- terms of supply would include a condition that no part of the order shall be substituted with stock of alternative species or origin and that any change must be mutually agreed.

5.2.2 The above requirements would be incorporated into contractor specifications and contracts, as appropriate, to deliver genuinely native planting in accordance with the biodiversity objectives of this Plan.

<u>Bank Side Vegetation</u>

5.2.3 The bank side vegetation areas shown on Figure 1 Sheets 1 to 11 (Annex A), which are adjacent to areas of existing bankside vegetation, will be sown with an appropriate grassland seed mix with a comparable botanical composition to the existing habitat. The increase in width of the bank side vegetation areas will compensate for, and represent an improvement over, the loss of bank side vegetation at site clearance.

5.2.4 The proposed grassland seed mixture will be comparable to the species already present within the bank side areas.

5.2.5 It is intended that a seed mixture be used as a starter pack to provide an initial grassland sward and rapid biodiversity gain, while not negating potential for the further establishment of additional plant species from habitats located nearby.

5.2.6 Management, in the first year (potentially extending into Year 2, depending on the time of sowing and rate of establishment), will be in accordance with the aftercare regime recommended by the seed producer. This would involve:

- Periodic mowing in the first year after sowing to maintain a sward height of 40-60mm, removing all arisings for off-site disposal or in a pre-agreed location where this would not conflict with biodiversity objectives and habitat management;
- Spot treatment of perennial weeds such as broad-leaved dock (*Rumex obtusifolius*), creeping thistle (*Cirsium arvense*) and spear thistle (*Cirsium vulgare*) with an approved herbicide.
- Common ragwort (*Jacobaea vulgaris*), as an ecological beneficial plant species, will only be controlled if there is identified specific legal reason to do so. Otherwise it will be tolerated for its biodiversity value; and
- Review requirements for Year 2 at end of aftercare Year 1. Move into the long-term nature conservation management regime (see below) if appropriate.

5.2.7 After the aftercare period of management, the grassland will be maintained through a nature conservation regime. This regime will be specified in more detail in the Final LBMP but will allow for:

- mowing of plots on rotation so that in any one year there always remains a high percentage of areas of longer tussocky grassland suitable to provide foraging habitat and places of refuge for other wildlife, e.g. over-wintering invertebrates, when the remainder of the grassland is cut;
- mowing grassland to 100 mm height between late July and early September, with all arisings removed; and
- periodic control of scrub cover if it establishes greater than 10% total cover, and pernicious weeds such as creeping thistle, spear thistle and broad-leaved dock where these start to dominate to the exclusion of other flora.

Woodland Creation

5.2.8 The new area of woodland creation within the Cowpen Bewley Open Space Replacement Land will be implemented in consideration of the area of woodland lost within Cowpen Bewley. The Applicant will work with Stockton-on-Tees Borough Council to agree the layout and planting of this land, pursuant to the DCO.

5.2.9 The specification for the new planting will be consistent with the extent and composition of the area of woodland removed at the specific site location (as described in Chapter 12: Ecology and Nature Conservation [APP-064] and its appendices [APP-201 to APP-207]. Aftercare would be provided for five years or as otherwise agreed with the landowner. The specification for planting and management is as per that set out within Section 4.8 of this Outline LBMP.

6.0 MONITORING AND EVALUATION

6.1 Habitats

6.1.1 Monitoring is required in order to determine that the functions documented within this Outline LBMP are being achieved and whether any remedial management action may be required. The baseline data which has informed the ES will be updated pursuant to the pre-commencement walkover referenced in section 4.2, to form the basis against which the effects of the actions in the Final LBMP can be compared against.

6.1.2 A post-construction monitoring programme will be formalised and included within the Final LBMP. Walkover surveys will be conducted by a competent and trained Ecologist between April and June in years 2, 4, 6, 10 and then every 5 years post-construction until year 30. The surveys will involve inspection of the habitats to check that target condition based on the timescales used in the DEFRA metric is being achieved.

6.2 Species

6.2.1 Monitoring will be required as part of the water vole mitigation licence and will be detailed within the licence documents. The LBMP will be updated once monitoring requirements are confirmed.

6.2.2 An Invasive Non-Native Species Management Plan (targeting plants and animals) will be developed (this will form part of the Final CEMP(s)), identifying relevant invasive non-native species within the area to make sure that all necessary precautions are taken to prevent their spread. This will include a biosecurity protocol for all site traffic.

7.0 ROLES AND RESPONSIBILITIES

7.1 Introduction

7.1.1 The exact roles and responsibilities will be confirmed prior to construction; however, the following section provides an indication of the roles which are envisaged. Clearly establishing roles and responsibilities is vital to ensure the successful construction of the Proposed Development, including the implementation of the LBMP.

7.2 The Applicant

7.2.1 The Applicant will distribute the LBMP to all relevant personnel involved in the construction and long-term operation of the Proposed Development. These personnel will include the site manager and site operatives/ contractors and visitors as appropriate. The Applicant will establish the appropriate roles and responsibilities for site staff as set out in the Framework Construction Environmental Management Plan (CEMP) [REP6a-014].

7.3 Environmental Clerk of Works

7.3.1 An Environmental or Ecological Clerk of Works (EnvCoW or EcoW) will be appointed for the duration of the construction phase. The purpose of this appointment is to ensure that the environmental interests of areas that may be affected by the works are safeguarded. The EnvCoW will have the appropriate authority to review Risk Assessments and Method Statements, oversee works and recommend action as appropriate, including temporarily stopping works where non-compliant working is observed, for example to safeguard protected species and their habitats, or where any other breaches of environmental legislation are likely to occur.

7.3.2 The EnvCoW will ensure the implementation of, and compliance with, the provisions of the Final CEMP(s) and the mitigation contained within the Environmental Statement (ES) as well as licensing or other conditions imposed on the construction.

7.3.3 The EnvCoW may be from a company who provide a general Clerk of Works who can liaise with a team of internal specialists (Technical Specialist Advisors) on specific environmental subjects, for example, ecology, soils, noise, air quality, or pollution where required throughout construction, or a suitably qualified individual.

7.3.4 In summary, the EnvCoW is responsible for:

- inspections of the Contractor's work site to ensure compliance with environmental standards and requirements;
- routine audits of the Contractor's compliance with the Final CEMP(s) – site activities and record keeping;
- monitoring or inspection of site activities in response to incidents, breaches of the Final CEMP(s) or complaints received from a third party;

- inspections of works to ensure that environmental mitigation measures incorporated into the design have been implemented;
- implementation of corrective mitigation measures where proposed mitigation results in effects over and above those within any ES chapter, licence or planning conditions; and
- delivering toolbox talks on environmental matters and sensitivities to the appropriate staff prior to works being undertaken.

7.4 Ecological Clerk of Works

7.4.1 An EcoW will be appointed by the Applicant to provide advice to the appointed contractor regarding ecological issues. The EcoW will check that ecological protection, mitigation and enhancement measures as detailed in this document are implemented. The EcoW will be a suitably qualified ecologist who is a competent and experienced field surveyor with protected and notable species identification skills, understanding of relevant legislation and appropriate guidelines to be able to provide guidance on mitigation and management of habitats and protected species. The EcoW will deliver a toolbox talk to the Site Manager / Principal Contractor prior to works commencing to outline the ecological protection, mitigation and enhancement measures specified in this document.

7.5 Site Manager / Principal Contractor

7.5.1 The Contractor appointed by the Applicant to construct the Proposed Development will be responsible for establishing, managing and monitoring the implementation and establishment of landscape and ecological mitigation within the five-year establishment aftercare period. The Applicant will inspect and report on the success of establishment during this period.

7.5.2 The Site Manager will be responsible for ensuring that all relevant management and monitoring activities take place and keep a record of actions as evidence. The Site Manager should be responsible for contacting the EcoW in the event of uncertainties regarding ecological issues.

7.5.3 General responsibilities of the Site Manager will include:

- supervising and monitoring the implementation and maintenance of protective or mitigation measures as set out in this document;
- delivering and ensuring all site operatives and other site workers / visitors receive either a site introduction or tool box talk (with the support of the EcoW where necessary) so they are aware of any ecological constraints on Site;
- consult with the EcoW for advice e.g., prior to, and during, site works for each development phase;
- liaising with the client and all relevant stakeholders about ecological issues; and
- monitoring protection zones / buffers.

7.5.4 The site managers responsibilities may be undertaken on their behalf by an appropriate person under their instruction.

8.0 REFERENCES

- British Standards Institute (BSI) (2012). *5837: 2012 Trees in relation to design, demolition and construction – Recommendations.*
- Chartered Institute of Ecology and Environmental Management (CIEEM) (2019). *Advice note on the lifespan of ecological reports and surveys.*
- Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016) *The Water Vole Mitigation Handbook (the Mammal Society Mitigation Series).* Eds Fiona Matthews and Paul Chanin. The Mammal Society, London.
- Forestry Commission (2019). Voluntary Identification Scheme for British Native Trees and Shrubs.
- HM Government (1975). *Salmon and Freshwater Fisheries Act 1975.*
- HM Government (1981). *Wildlife and Countryside Act 1981 (as amended).*
- HM Government (1990). *Environmental Protection Act 1990.*
- HM Government (1996). *Wild Mammals (Protection) Act 1996.*
- HM Government (1997). *The Hedgerows Regulations 1997.*
- HM Government (2006). *Natural Environment and Rural Communities Act 2006.*
- HM Government (2009). *The Eels (England and Wales) Regulations 2009.*
- HM Government (2017). *The Conservation of Habitats and Species Regulations 2017.*
- HM Government (2017). *Wildlife and Countryside Act 1981 (as amended).*
- National Joint Utilities Group (NJUG) (2007). *NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.*
- Natural England (2020). *Teesmouth and Cleveland Coast Special Protection Area Qualifying Features.*

ANNEX A FIGURES

Figure 1: Outline Landscape and Biodiversity Management Plan Sheets 1 to 11

Revision: 02 Drawn: KH Checked: CL Approved: KK Date: 2024-10-10

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All habitat to be reinstated like-for-like unless otherwise specified

Appropriate landscape planting on margins of main site and AGI where possible.

Trees to be retained between AGI and Railway.

Bankside vegetation to be reinstated post construction.

N

1:2,500 @ A0

100 50 0 100 200 Metres

AECOM

PROJECT

H2Teesside DCO

APPLICANT

H2 Teesside Limited

CONSULTANT

AECOM Limited
100 Embankment,
Cathedral Approach,
Manchester, M3 7FB
www.aecom.com

LEGEND

- Proposed Development Site
- AGI
- Waterbody
- Waterbody Area

NOTES

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ISSUE PURPOSE

Landscape & Biodiversity Management Plan

PROJECT NUMBER

60689030

FIGURE TITLE

Outline Landscape and Biodiversity Plan

FIGURE NUMBER

Figure 1 (Sheet 1 of 11)

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All habitat to be reinstated like-for-like unless otherwise specified

Appropriate landscape planting on margins of main site and AGI where possible.

Trees to be retained between AGI and Railway.

Bankside vegetation to be reinstated post construction.

Appropriate landscape planting on margins of main site and AGI where possible.

Bankside vegetation to be reinstated post construction.

Appropriate landscape planting on margins of main site and AGI where possible.

Bankside vegetation

N

1:2,500 @ A0

100 50 0 100 200 Metres

AECOM

PROJECT

H2Teesside DCO

APPLICANT

H2 Teesside Limited

CONSULTANT

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LEGEND

- Proposed Development Site
- AGI
- Waterbody
- Waterbody Area

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ISSUE PURPOSE

Landscape & Biodiversity Management Plan

PROJECT NUMBER

60689030

FIGURE TITLE

Outline Landscape and Biodiversity Plan

FIGURE NUMBER

Figure 1 (Sheet 2 of 11)

All habitat to be reinstated like-for-like unless otherwise specified

Bankside vegetation to be restored post construction.

Appropriate landscape planting on margins of main site and AGI where possible.

Appropriate landscape planting on margins of main site and AGI where possible.

N

1:2,500 @ A0

100 50 0 100 200 Metres

AECOM

PROJECT
H2Teesside DCO

APPLICANT
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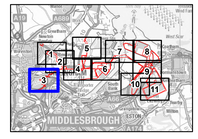
LEGEND
- Proposed Development Site
- AGI
- Waterbody
- Waterbody Area



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ISSUE PURPOSE
Landscape & Biodiversity Management Plan

PROJECT NUMBER
60689030

FIGURE TITLE
Outline Landscape and Biodiversity Plan

FIGURE NUMBER
Figure 1 (Sheet 3 of 11)

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All habitat to be reinstated like-for-like unless otherwise specified

Appropriate landscape planting on margins of main site and AGI where possible.

Appropriate landscape planting on margins of main site and AGI where possible.

Bankside vegetation to be reinstated post construction.

1-Holme Fleet

Holme Fleet

N

1:2,500 @ A0

100 50 0 100 200 Metres

AECOM

PROJECT
H2Teesside DCO

APPLICANT
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LEGEND
- Proposed Development Site
- AGI
- Waterbody
- Waterbody Area

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ISSUE PURPOSE
Landscape & Biodiversity Management Plan

PROJECT NUMBER
60689030

FIGURE TITLE
Outline Landscape and Biodiversity Plan

FIGURE NUMBER
Figure 1 (Sheet 4 of 11)

All habitat to be reinstated like-for-like unless otherwise specified

Appropriate landscape planting on margins of main site and AGI where possible.

Floodplain grazing marsh habitat to be reinstated post construction.

Floodplain grazing marsh habitat to be reinstated post construction.

N

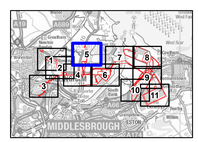
AECOM

PROJECT
H2Teesside DCO

APPLICANT
H2 Teesside Limited

CONSULTANT
AECOM Limited
100 Embankment,
Cathedral Approach,
Manchester, M3 7FB
www.aecom.com

LEGEND
- Proposed Development Site
- AGI
- Waterbody
- Waterbody Area



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ISSUE PURPOSE
Landscape & Biodiversity Management Plan

PROJECT NUMBER
60689030

FIGURE TITLE
Outline Landscape and Biodiversity Plan

FIGURE NUMBER
Figure 1 (Sheet 5 of 11)

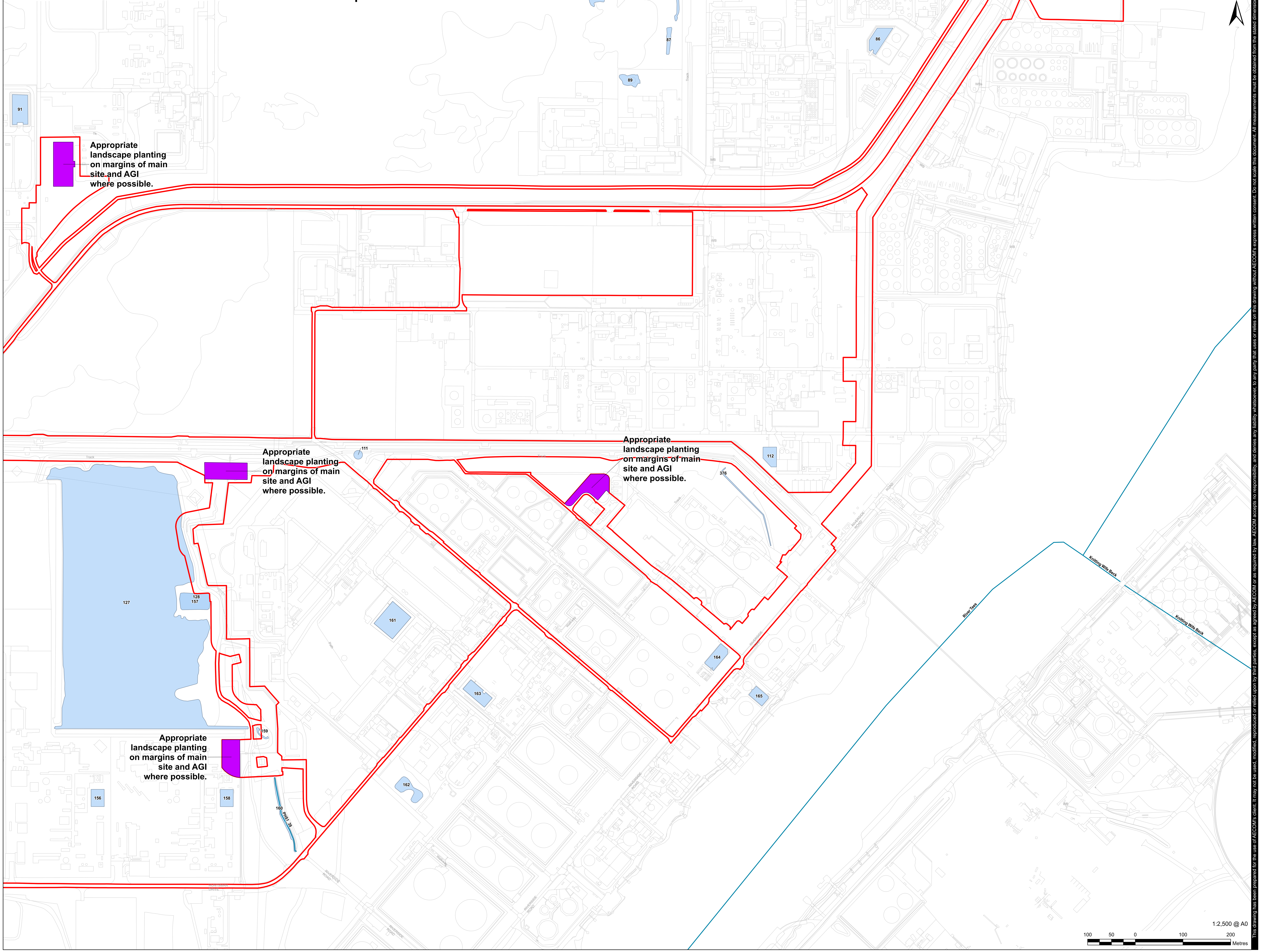
1:2,500 @ A0

100 50 0 100 200 Metres

Revision: 02 Drawn: KH Checked: CL Approved: KK Date: 2024-10-10

Filename: \\na.aecomnet.com\ik\EMEA\Bristol-UKBRI\2\Legacy\UKBRI2FP001\VOL1\BEP\Projects\Environmental\General\GIS\Projects\H2 Teesside\02_Maps\H2Teesside Landscape Biodiversity Management Plan\H27_Landscape_Biodiversity_Management_Plan_Revision.aprx

All habitat to be reinstated like-for-like unless otherwise specified



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PROJECT

H2Teesside DCO

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H2 Teesside Limited

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Cathedral Approach,
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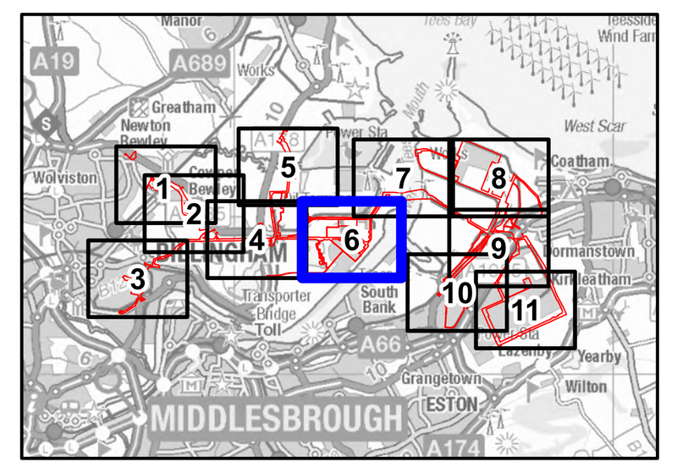
www.aecom.com

LEGEND

- Proposed Development Site
- AGI
- Waterbody
- Waterbody Area



NOTES

ISSUE PURPOSE

Landscape & Biodiversity Management Plan

PROJECT NUMBER

60689030

FIGURE TITLE

Outline Landscape and Biodiversity Plan

FIGURE NUMBER

Figure 1 (Sheet 6 of 11)

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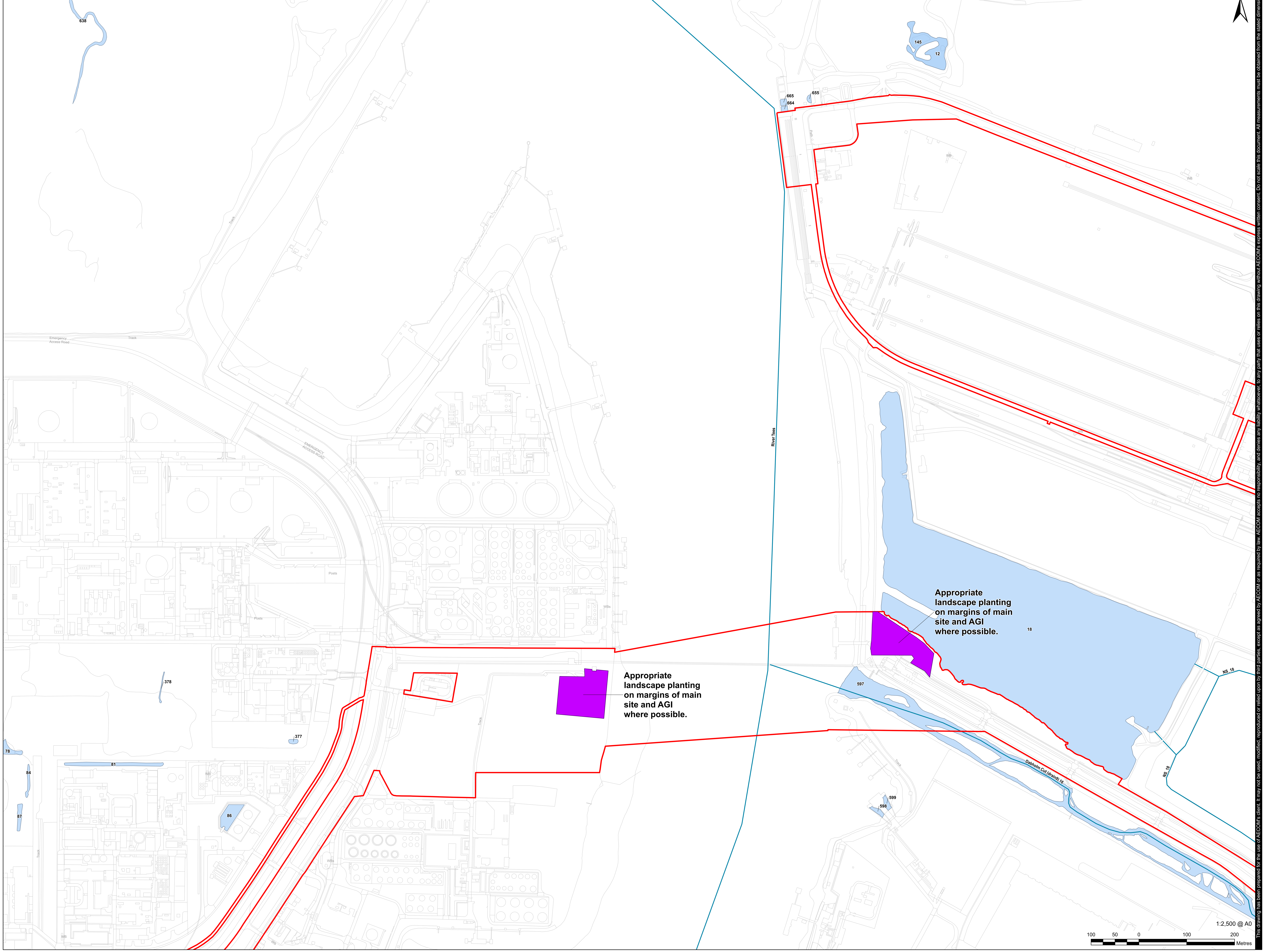
All habitat to be reinstated like-for-like unless otherwise specified



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PROJECT
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APPLICANT
H2 Teesside Limited

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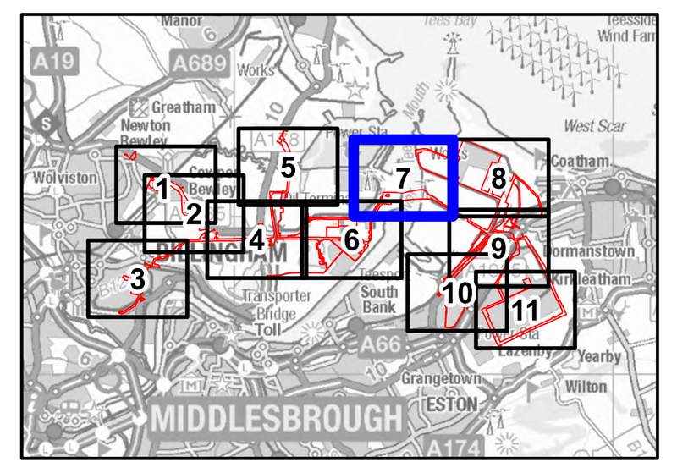
LEGEND
- Proposed Development Site
- AGI
- Waterbody
- Waterbody Area



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ISSUE PURPOSE
Landscape & Biodiversity Management Plan

PROJECT NUMBER
60689030

FIGURE TITLE
Outline Landscape and Biodiversity Plan

FIGURE NUMBER
Figure 1 (Sheet 7 of 11)

Revision: 02 Drawn: KH Checked: CL Approved: KK Date: 2024-10-10

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All habitat to be reinstated like-for-like unless otherwise specified

Appropriate landscape planting on margins of main site and AGI where possible.

Open mosaic habitat allowed to regenerate naturally using low nutrient, free draining substrates.

Appropriate landscape planting on margins of main site and AGI where possible.

Appropriate landscape planting on margins of main site and AGI where possible.

N

1:2,500 @ A0

100 50 0 100 200 Metres

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PROJECT

H2Teesside DCO

APPLICANT

H2 Teesside Limited

CONSULTANT

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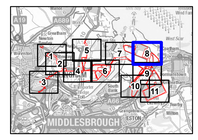
LEGEND

- Proposed Development Site
- Main Site
- AGI
- Work No. 1 - Carbon Capture Enabled Hydrogen Production Facility
- Waterbody
- Waterbody Area



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ISSUE PURPOSE

Landscape & Biodiversity Management Plan

PROJECT NUMBER

60689030

FIGURE TITLE

Outline Landscape and Biodiversity Plan

FIGURE NUMBER

Figure 1 (Sheet 8 of 11)

All habitat to be reinstated like-for-like unless otherwise specified

Habitat to be reinstated post construction.

Open mosaic habitat allowed to regenerate naturally using low nutrient, free draining substrates.

Appropriate landscape planting on margins of main site and AGI where possible.

Appropriate landscape planting on margins of main site and AGI where possible.

Appropriate landscape planting on margins of main site and AGI where possible.

Appropriate landscape planting on margins of main site and AGI where possible.

Open mosaic habitat allowed to regenerate naturally using low nutrient, free draining substrates.

N

1:2,500 @ A0

100 50 0 100 200 Metres

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PROJECT
H2Teesside DCO

APPLICANT
H2 Teesside Limited

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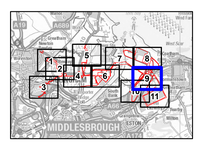
LEGEND
- Proposed Development Site
- AGI
- Waterbody
- Waterbody Area



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ISSUE PURPOSE
Landscape & Biodiversity Management Plan

PROJECT NUMBER
60689030

FIGURE TITLE
Outline Landscape and Biodiversity Plan

FIGURE NUMBER
Figure 1 (Sheet 9 of 11)

Revision: 02 Drawn: KH Checked: CL Approved: KK Date: 2024-10-10

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Revision: 02 Drawn: KH Checked: CL Approved: KK Date: 2024-10-10

All habitat to be reinstated like-for-like unless otherwise specified

Appropriate landscape planting on margins of main site and AGI where possible.

N

AECOM

PROJECT
H2Teesside DCO

APPLICANT
H2 Teesside Limited

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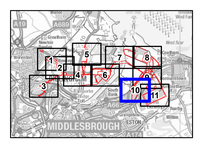
LEGEND
- Proposed Development Site
- AGI
- Waterbody
- Waterbody Area



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ISSUE PURPOSE
Landscape & Biodiversity Management Plan

PROJECT NUMBER
60689030

FIGURE TITLE
Outline Landscape and Biodiversity Plan

FIGURE NUMBER
Figure 1 (Sheet 10 of 11)

1:2,500 @ A0

100 50 0 100 200 Metres

All habitat to be reinstated like-for-like unless otherwise specified

Appropriate landscape planting on margins of main site and AGI where possible.

Open mosaic habitat allowed to regenerate naturally using low nutrient, free draining substrates.

Appropriate landscape planting on margins of main site and AGI where possible.

N

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PROJECT
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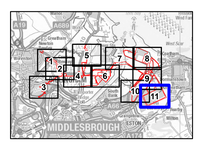
LEGEND
- Proposed Development Site
- AGI
- Waterbody
- Waterbody Area



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ISSUE PURPOSE
Landscape & Biodiversity Management Plan

PROJECT NUMBER
60689030

FIGURE TITLE
Outline Landscape and Biodiversity Plan

FIGURE NUMBER
Figure 1 (Sheet 11 of 11)

1:2,500 @ A0

100 50 0 100 200 Metres

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