SOUTH HUMBER BANK ENERGY CENTRE OUTLINE ECOLOGICAL MITIGATION AND ENHANCEMENT PLAN

Chapter 10: Ecology in the Environmental Statement (ES) Volume I (Section 10.7) outlines the proposed ecological mitigation and enhancement measures for the Proposed Development Site ('the Site'), which will be formalised in an Ecological Mitigation and Enhancement Plan in accordance with a planning condition. This information is reproduced below.

The indicative location for habitat creation within the Site, to the west of the South Humber Bank Power Station (SHBPS) is shown on Figure 4.2 in ES Volume II (also attached).

Ecological Management and Enhancement Plan (EMEP)

An EMEP will be prepared and agreed with the local planning authority prior to the commencement of works, or otherwise as conditioned. An area of land approximately 1 ha in extent has been set aside within the Site for ecological mitigation and biodiversity enhancements to the west of the SHBPS as an 'ecological mitigation and enhancement area' (see Figure 4.2).

The EMEP will include details on:

- water vole mitigation;
- grass snake mitigation;
- breeding bird mitigation;
- new pond creation (including detailed pond design, location and planting specification);
- grassland mitigation (location and detailed planting specification);
- fish mitigation;
- the location and construction specifications for log pile refuges and bird nest boxes;
- appropriate management of the habitats including the newly created grassland and new pond;
- habitat monitoring (including targets and thresholds for remedial action); and
- timetables and responsibilities for undertaking the above tasks.

Water Vole Mitigation

Culvert Installation on Ditch 3

Works to install the culvert on Ditch 3 will be undertaken under the supervision of an ecologist holding a Class Licence for water vole. This is due to the minor extent of the works (approximately 8 – 10m) that does not trigger the requirement for a development licence from Natural England. A separate water vole mitigation strategy document will be prepared as part of the Class Licence process; however, the approach and timings are outlined below. It is assumed that an appropriately worded planning condition will be attached to the planning consent.

The approach to mitigation (based on the current indicative construction programme) will be as follows:

- ditch vegetation (within the channel and on the banks) will be strimmed back to ground level under the supervision of the Class Licensed ecologist to displace water voles from the affected section of habitat in the period 15th February to 15th April 2019;
- ditch vegetation will be kept strimmed short until works commenced;
- arisings will be removed;
- prior to the commencement of works, the Class Licensed ecologist will inspect the working area to confirm that water voles were absent from any burrows present;

- on confirmation of the absence of water voles, works to install the culvert will commence under the supervision of the Class Licensed ecologist; and
- any amphibians encountered during the works will be moved to a place of safety away from the working area.

This mitigation approach will also be sufficient to address the risk of accidental killing/ injury to water shrew (*Neomys fodiens*), which has been recorded on Pond 2 and may be present in the perimeter ditches see Appendix 10E: Otter and Water Vole Survey Report in ES Volume III. This species is protected under the Wildlife and Countryside Act 1981.

Any amphibians (e.g. common toad) encountered during the works will be moved to a place of safety by the supervising ecologist; likely to be in close proximity to a nearby ditch.

Pond Removal

Works to remove the ponds will also be undertaken under the supervision of an ecologist holding a Class Licence for water vole, as for Ditch 3. The mitigation strategy (based on the current indicative construction programme) is outlined below.

- Pond marginal vegetation would be strimmed back to ground level under the supervision of the Class Licensed ecologist to displace water voles from the ponds in the period 15th February to 15th April 2019.
- A vole-proof fence will be installed around each pond to maintain the exclusion area until construction commences in around Autumn 2019. The fence will be constructed from sheets of thick marine plywood (or similar) at least 25 mm thick, installed to a minimum above-ground height of 1.2 m and buried to a minimum depth of 0.5 m (posts to be located on the inside of the fenced area). The fence will be set back from the pond edge by at least 2 m.
- The fencing will be installed under the supervision of the Class Licensed ecologist, and will be maintained as a vole-proof barrier until the draining and infilling works are to be undertaken.
- The removal of the vole-proof fence will be undertaken under the supervision of the Class Licensed ecologist.
- The draining and infilling of the ponds will be undertaken under the supervision of the Class Licensed ecologist.

This mitigation approach will also be sufficient to address the risk of accidental killing/ injury to water shrew, which has been recorded on Pond 2, and may also be present on Pond 1 see Appendix 10E: Otter and Water Vole Survey Report in ES Volume III. This species is protected under the Wildlife and Countryside Act 1981.

Any amphibians (e.g. common toad) encountered during the draining and infilling will be moved to a place of safety by the supervising ecologist; likely to be in close proximity to a nearby ditch.

Grass Snake Mitigation

Due to the potential for grass snake to occur on the banks of ditches, a precautionary approach to the clearance of vegetation will be undertaken (alongside the mitigation for water vole). The strimming of vegetation from the banks of Ditch 3 for water vole displacement will also be sufficient to displace grass snake.

Breeding Bird Mitigation

The removal of the marginal vegetation from the ponds and the affected sections of ditch will be timed to ensure that there is no risk of breeding birds nesting in the vegetation prior to works commencing. If the vegetation removal does not commence until after the end of March 2019, then a pre-works check for nests will be undertaken. However, given that the nesting species incidentally recorded in the reed vegetation are largely migratory passerines (e.g. reed

bunting, sedge warbler), it is considered unlikely that any would have established nests by early April.

Grassland vegetation will be removed by the end of March 2019 at the latest (based on the current indicative construction programme) to avoid ground nesting bird constraints. If vegetation removal (including topsoil stripping) cannot be undertaken prior to the onset of the nesting season (i.e. by 1st April 2019), then bird deterrent measures will be implemented to deter birds from nesting e.g. bird scaring tape, or vegetation removal will be delayed until after the breeding bird season.

Pond Mitigation

A new wildlife pond will be created to mitigate for the loss of the two small ponds within the Proposed Development area. The new pond will be created in habitat west of the existing SHBPS, where it will remain in close proximity to the perimeter ditches so that it is similarly accessible by foraging water voles resident on the ditches.

The pond will be designed with a non-uniform margin and varying depths to maximise the habitat niches available for aquatic plants, invertebrates, reptiles and amphibians.

The margins of the pond will be planted with a small amount of native aquatic and marginal plant species to assist with the establishment of vegetation, but will be primarily allowed to establish naturally.

If the timescales permit, and if practicable, the new pond will be 'seeded' with water from the ponds being drained and infilled, to transfer aquatic invertebrates and plant fragments to assist with the establishment of the pond. This would not be undertaken if any invasive non-native plant species are subsequently found to have colonised these ponds.

An appropriate management plan for the mitigation pond will be developed and implemented post-completion of the pond. This will be incorporated within the EMEP (see above). The initial post-completion and establishment period will be for five years, and the pond will be monitored annually in September to determine whether any management intervention (e.g. targeted reed clearance to maintain open water, removal of leaf litter etc.).

Grassland Mitigation

An area of species-rich grassland will be created in the ecological mitigation and enhancement area, which will be established to the west of the SHBPS. This will offset some of the losses of semi-improved grassland within the footprint of the Main Development Area. Creation and management of the habitat will be set out in the EMEP (see above).

The initial post-completion and establishment period will be for five years, and the grassland will be monitored once every other year (commencing one year after planting) to determine whether any management intervention is required (e.g. targeted weed removal, greater frequency of mowing etc.).

Fish Mitigation

A Fish Management Plan will be prepared prior to the drainage of the ponds and agreed with relevant stakeholders. This will set out measures to comply with the relevant legislation regarding fish welfare that will be implemented prior to and during the draining and infilling of the ponds during the construction phase. Health checks will be completed on the fish (fish health checks are necessary where they are to be introduced into rivers, canals and lakes connected to open waters; the requirement for this will be determined in advance of fish mitigation works commencing), and an appropriate receptor site will be sourced, subject to satisfactory health of the fish. An Environment Agency permit will be obtained prior to any movement of live fish to a receptor site.

Biodiversity Enhancement

Biodiversity enhancement measures will be set out in the EMEP, and will be in addition to the mitigation measures set out above. The following habitat enhancements will be delivered:

- creation of log pile refuges in the ecological mitigation and enhancement area to create ecological niches for reptiles, amphibians and terrestrial invertebrates; and
- installation of bird nest boxes on mature trees to the west of the SHBPS.

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- Application Boundary
- Main Development Area for South Humber Bank Energy Centre
- Proposed Ecological Mitigation and Enhancement Area (Indicative)
- Proposed Indicative Extents of 2.5m Close Board Fence to Provide Visual Screening for Waterbirds

Purpose of Issue
ENVIRONMENTAL STATEMENT

Client
EP SHB

Project Title
SOUTH HUMBER BANK ENERGY CENTRE

Application Document Ref
ECOLOGICAL MITIGATION AND ENHANCEMENTS (INDICATIVE)

Drawn	Checked	Approved	Date
HW	LK	IC	30/11/2018

AECOM Internal Project No.	Scale @ A3
60580855	1:4,000

AECOM
One Trinity Gardens
Quayside
Newcastle upon Tyne
NE1 2HF
T +44 (0)191 224 6500
www.aecom.com

Drawing Ref
FIGURE 4.2

Rev

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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