10 TERRESTRIAL ECOLOGY

10.1 Introduction

10.1.1 This section of the ES presents ecological information obtained during a desk study, ecological walkover surveys, otter survey, water vole survey, reptile survey, bat survey and breeding bird surveys. All of these studies and surveys were undertaken between 2011 and 2014. The usage of the area by feeding and roosting waterbirds (including the overwintering period) is described in **Section 9.**

10.1.2 This Ecological Impact Assessment (EcIA) evaluates the nature conservation value of ecological features present within the study area, assesses the significance of the effects of the proposed scheme on these features, and sets out proposed mitigation and enhancement measures. Legislation relevant to the ecological features associated with the scheme footprint is covered in **Appendix 10.1**.

10.1.3 The Habitats Directive and Birds Directive, as implemented in the UK through The Conservation of Habitats and Species Regulations 2010, are particularly relevant to this project. The proposed scheme has been assessed with reference to these Regulations (see **Section 2.3** and **Document 6.3** of the DCO application).

10.1.4 The scope of this EcIA has included:

- data gathering of existing ecological information within the vicinity of the site from appropriate sources;
- ecological walkover survey of land within and adjacent to the site;
- evaluation of the area of land within and adjacent to the site with regard to its nature conservation value;
- identification of potential impacts on ecological features;
- consideration of mitigation measures to minimise negative impacts and enhancement measures to increase the biodiversity value of the land within the site; and,
- assessment of the significance of potential ecological impacts from the proposals, taking mitigation into account, including habitat loss, disturbance of animals and off-site impacts from the proposed scheme.

10.1.5 This section of the ES satisfies the Regulation 5(2)(l) of the Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009.

10.2 Guidance and consultation

Policy and guidance

10.2.1 The EcIA has been undertaken with reference to current best practice and, in particular, the Guidelines for Ecological Impact Assessment in the United Kingdom (Institute of Ecology and Environmental Management (IEEM), 2006).

10.2.2 The proposed scheme footprint is in close proximity to designated sites for nature conservation, including the Teesmouth and Cleveland Coast SPA and Ramsar site (see Section 9) and, therefore, the potential exists for the proposed scheme to have an effect on these designated sites. This potential

has been considered further through the production of a HRA Report which supports this ES (see **Document 6.3**).

10.2.3 RCBC's Local Plan contains policies that are relevant to ecology and biodiversity. In particular, Policy CS24 refers to the requirement to protect and enhance the Borough's biodiversity and geological resource, including protecting the integrity of European sites. Policy DP3 (an adopted Development Plan Document Policy) requires all development to be designed to a high standard that respects or enhances the character and surroundings of the site, including biodiversity designations.

10.2.4 The terrestrial aspects of the proposed scheme are located fully within the administrative boundary of RCBC, therefore, the policies within SBC's Local Plan are not considered to be relevant to this section of the ES.

Consultation

10.2.5 In addition to the provision of the Environmental Scoping Report (Royal HaskoningDHV, 2013) to PINS, the scope of the terrestrial ecology surveys that have been undertaken to inform the EIA process was presented and discussed at the stakeholder workshop held on 10 April 2014 attended by Natural England, Environment Agency, the MMO and the RSPB.

10.2.6 **Table 10-1** provides a summary of the comments received from PINS in the Scoping Opinion (**Appendix 4.2**) and in response to the Section 42 consultation under the Planning Act 2008 relevant to terrestrial ecology.

Table 10-1 Summary of scoping comments received from PINS during EIA scoping phase and Section 42 consultation responses with regard to terrestrial ecology

Consultation Comment	Response / section of the ES in which the comment has been addressed
Scoping Opinion (January 2014)	
Secretary of State	
The proposals should fully address the needs of protecting and enhancing biodiversity. The assessment should cover habitats, species and processes with the sites and surroundings.	**Sections 10.5 and 10.6**
The study area assessed by habitat survey should be sufficient to consider temporary and permanent land take and receptors within the vicinity of the site where impact pathways may be present.	**Section 10.3**
It is noted that Phase 2 survey is not intended to be carried out. This should be agreed with Natural England.	**See note below *** Natural England stated within its response under Section 42 of the Planning Act 2008 that appropriate ecological surveys have been undertaken.
A number of species surveys are proposed. The ES should clearly state the methodologies used within the assessments and the applicant is advised to agree these with Natural England.	**Section 10.3**
Where existing data is to be used, this needs to be relevant and representative of the baseline. The suitability of such data should be explained within the ES.	Site specific ecological surveys were undertaken for the proposed scheme.
The assessment should take account of impacts on noise, vibration and air quality (including dust) and cross reference to these reports.	Cross reference to Section 13 (air quality) and Section 14 (noise and vibration) and has been undertaken.
Potential impacts on internationally and nationally designated habitats should be assessed as well as county level habitats.	**Sections10.5 and 10.6**
The applicant is encouraged to engage with PINS in the preparation of their HRA report.	The draft HRA was submitted to PINS as part of the draft documentation. PINS comments on the draft were received and have been taken on board.
Natural England	
Natural England advises that the potential impact upon features of nature conservation interest and opportunities for habitat creation/enhancement should be included within the assessment.	**Section 10.5 and 10.6**

Consultation Comment	Response / section of the ES in which the comment has been addressed
Guidelines for Ecological Impact Assessment (EcIA) have been developed by the Institute of Ecology and Environmental Management (IEEM). EcIA may be carried out as part of the EIA process or to support other forms of environmental assessment.	**Section 10.3**
It has already been established that the proposal has the potential to affect species protected under European or UK legislation. Records of protected species should be sought from appropriate local biological record centres, nature conservation organisations, groups and individuals. Consideration should be given to the wider context of the site for example in terms of habitat linkages and protected species populations in the wider area.	**Section 10.3, 10.4, 10.5 and 10.6**
Ecological surveys should be carried out at appropriate times of the year.	**Section 10.3**
The development should seek if possible to avoid adverse impact on sensitive areas for wildlife within the site, and is possible provide opportunities for wildlife gain.	**Section 10.5 and 10.6**
The ES should thoroughly assess the impacts of proposals on habitats and/or species listed as 'Habitats and Species of Principal Importance' within the England Biodiversity List.	The Phase 1 habitat survey did not identify habitats and species of principal importance as being present within the proposed development site.
The England Biodiversity Strategy establishes principles for consideration of biodiversity and the effects of climate change. The ES should reflect these principles and identify how the developments' effects on the natural environment will be influenced by climate change and how ecological networks will be maintained.	**Section 10.6**
Section 42 responses	
Environment Agency	
The application may provide opportunities to incorporate features into the design which are beneficial to wildlife, beyond those required for mitigation.	**Section 10.5 and 10.6**
Natural England	
A number of comments were provided by Natural England on the draft HRA submitted as part of the PER.	**Comments have been addressed within the HRA, which forms Document 6.3 of the DCO application**
Natural England is satisfied that appropriate surveys have been undertaken and note evidence of otter at the northern end of the lagoon. The project design should seek to avoid habitat loss / disturbance for this species. There do not appear to be any licensing issues associated with European Protected Species.	**Section 10.4, 10.5 and 10.6**

Consultation Comment	Response / section of the ES in which the comment has been addressed
The application may provide opportunities to incorporate features into the design which are beneficial to wildlife, such as provision of bat boxes and enhancement measures beyond those required for mitigation.	**Section 10.5 and 10.6**
The ES should thoroughly assess the impact of the proposals on habitats and species listed as Habitats and Species of Principal Importance. Natural England advises that survey, impact assessment and mitigation proposals for Habitats and Species of Principal Importance should be included in the ES. Consideration should also be given to those species and habitats included in the LBAP.	The Phase 1 habitat survey did not identify habitats and species of principal importance as being present within the proposed development site. An assessment of (terrestrial) habitats and species of Principal Importance was therefore not undertaken.

* Based on the findings of the Phase I habitat surveys, it was considered that none of the habitats surveyed were of significance, being for the most part semi-improved calcareous or mesotrophic grasslands which have lost most of their ecological interest due to becoming overgrown and rank. Whilst the Phase 1 survey highlighted some areas of slightly more biological diversity, it was the opinion of the surveyor that none of the area merited more detailed examination for other biological groups such as invertebrates. None of the areas surveyed were of sufficient botanical interest or habitat scarcity to merit more detailed investigation, such as a Phase 2 National Vegetation Classification (NVC) survey. NVC survey is normally only worthwhile in areas where there is likely to be loss or damage to scarce or valuable habitat which may require mitigation, such as areas of SSSI or Local Wildlife Sites. Natural England has confirmed (in its response under Section 42 of the Planning Act 2008) that appropriate ecological surveys have been undertaken.

10.3 Methodology

10.3.1 To define the total extent of the study area for the ecological assessment, the proposed activities to be undertaken during the construction and operational phase of the proposed scheme were reviewed in order to identify the spatial scale at which ecological features could be affected.

10.3.2 The zone of influence (ZOI) is the area encompassing all potential negative ecological effects from the proposed scheme, both those which would occur as a result of land-take and habitat loss and those which may occur indirectly through disturbance such as noise or lighting. It was considered that the potential impacts of the proposed scheme would not extend beyond the footprint of the development and its immediate surroundings. A zone of 5km around the proposed scheme footprint was, therefore, considered appropriate for the desk study data gathering exercise.

10.3.3 For the field surveys, the proposed scheme footprint (illustrated on **Figure 1-2**) plus a 50m zone was considered an appropriate area to survey (with a 500m zone for the purposes of the great crested newt survey). Further details on the desk study and field survey methodologies are provided in the subsequent sections.

10.3.4 Potential ecological impacts have been assessed in the context of how the existing environment within the ZOI would change during the lifetime of the proposed scheme (refer to **Section 3**).

Existing environment

Desk top study

10.3.5 An initial ecological desk study was undertaken in 2011 by INCA; this was updated by INCA and Royal HaskoningDHV in 2013 and 2014. The Multi-Agency Geographic Information for the Countryside (MAGIC) website was used to identify all statutory designated nature conservation sites and notable habitats (i.e. Ancient Woodlands) within, and up to 5km from, the proposed scheme footprint.

10.3.6 Information on locally designated non-statutory sites of importance for nature conservation, in particular County Wildlife Sites (CWS), and sites which are protected by planning policies at a local authority level, was requested from Environmental Records Information Centre North East (ERIC). The search area for this data request extended 2km from the proposed scheme footprint boundary.

10.3.7 Great crested newts (a species which is afforded protection by both British and European law) use water bodies as breeding habitat and can use terrestrial habitat up to 500m from their breeding habitat as a foraging area (English Nature, 2001). Ordnance Survey (OS) maps were used to identify the presence of water bodies within, and up to 500m zone from, the scheme footprint boundary in order to establish whether the footprint and surrounding area contains any potential breeding habitat for great crested newts.

10.3.8 OS maps were also used to identify any water bodies within or adjacent to the proposed scheme footprint to identify the potential for presence of other protected species including otter, water vole and white clawed crayfish, which might use such water bodies. Google Earth photography was reviewed to assist in identifying any other notable habitats.

10.3.9 Information was obtained from ERIC on all records of legally protected BAP and locally notable or rare species within, and up to 2km from, the boundary of the proposed scheme footprint. Additional data was collated from the records INCA hold for the area to supplement this information.

10.3.10 Both the UK BAP and Tees Valley BAP (Local BAP) were reviewed to identify habitats and species of conservation concern that may be present within the zone of influence.

Field surveys

10.3.11 An extended Phase 1 habitat survey of areas within and adjacent to the proposed scheme footprint, illustrated on **Figure 1-2** (including land up to 50m from the scheme boundary), was undertaken in 2011. This was subsequently updated in 2013 (INCA, 2014). These surveys followed JNCC guidance and were extended to include a search for evidence of the presence of notable and protected species (and for the potential for habitats to support such species) as recommended by IEEM.

10.3.12 During the 2011 and 2013 extended Phase 1 habitat surveys, the following activities were undertaken:

- a visual inspection from the ground of all trees and structures within the scheme footprint to assess their suitability for roosting bats;
- assessment of potential for habitats to support nesting birds (including Schedule 1 species which are afforded special protection, such as barn owls and kingfishers) within the scheme footprint;
- assessment of habitat potential for amphibians, in particular great crested newts, and assessment of potential aquatic and terrestrial habitats;
- assessment of potential of habitat to support reptiles within the scheme footprint;
- searching for evidence of water vole activity, such as the presence of burrows, feeding stations, faeces and latrines along the water bodies within the scheme footprint;
- searching for evidence of otter activity, such as the presence of spraints, lying up places and holts within the water bodies within and adjacent to the scheme footprint;
- assessment of potential habitat to support white clawed crayfish within the water bodies within and adjacent to the scheme footprint;
- a search for signs of badger activity including setts, tracks, snuffle holes and latrines within the scheme footprint and up to 50m outside the scheme footprint;
- assessment of potential of habitat to support dormice within the scheme footprint; and,
- a search for evidence of presence of invasive plants listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and which are subject to strict legal control.

10.3.13 The list of invasive species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) is extensive and these plants are found in a range of different habitats, including aquatic habitats. The extended Phase 1 surveys checked, in particular, for the presence of Japanese knotweed, giant knotweed, hybrid knotweed, giant hogweed, rhododendron and Himalayan balsam. Other invasive species, in particular those associated with aquatic habitats, may not have been recorded, but it is considered that the walkover surveys are sufficient to identify any significant constraints posed by invasive species.

10.3.14 Reports produced by INCA following surveys undertaken in 2014 are presented in **Appendix 10.2**, and these should be referred to for further details.

Bat survey

10.3.15 All surveys of buildings and the habitat assessment were undertaken in accordance with the 'Bat Workers' Manual (3rd Edition)' (Mitchell-Jones & McLeish, 2004) and 'Bat Survey Good Practice Guidelines' (Hundt, 2012), and by an independent ecologist who is a licenced bat surveyor. The initial bat surveys undertaken in February 2014 were carried out outside of the main period of activity for bats, therefore these survey results provided a preliminary appraisal involving investigation of the degree of risk relating to structures and their suitability for roosting bats. The 2013 extended Phase 1 habitat survey also identified habitat suitable within the proposed scheme footprint for foraging and commuting bats.

10.3.16 Five bridges and the industrial plant at Bran Sands lagoon were identified as potential bat roosting habitat (**Figure 10-1**). A daytime inspection was carried out to search for bats or signs of bats (e.g. droppings, feeding remains, staining) between September 2013 and December 2013. All surveys were conducted in good light, using close-focusing binoculars and a powerful (million candlepower) Clulite torch where appropriate. These surveys identified the potential of each structure to support roosting bats and identify if further detailed surveys would be required.

10.3.17 Criteria which increase the possibility of roosting bats being present in the buildings included:

- building disused or undisturbed;
- roof spaces present;
- wall cavities present;
- uneven roof with spaces;
- other spaces for bats to enter (via cladding, holes. fascia, tiles); and,
- proximity to potential feeding area.

10.3.18 For the bridges, the relevant criteria are:

- widening joints and expansion joints;
- gaps at buttress corners;
- widening gaps where the bridge width has been increased;
- cracks and crevices between stonework and brickwork (over 100mm deep);
- drainage pipes and ducts;
- internal voids in box girder bridges;
- proximity to potential feeding areas; and,
- purpose of bridge and assumed level of activity.

10.3.19 The trees and buildings were categorised based on a four point scale for their potential to support roosting bats:

- Negligible potential – no features present which could offer bats the opportunity to roost.
- Low potential – only minor crevices or cracks present; considered to offer poor roosting spaces for bats.
- Medium potential – features present such as small cavities and gaps leading to small enclosed spaces, which offer some form of protection for either individual bats or small numbers of bats.

- High potential – significant holes, cracks or crevices in roof or building structures, which are considered very suitable to be used by bats for roosting and could support large or important roosts such as maternity roosts.

10.3.20 In addition to the daytime inspection surveys, two dusk surveys were subsequently undertaken (one on 24 September 2013 at Bridges 2 and 3 and another on 8 October 2013 at Teesport Buildings 7 and 8). While it was recognised that the timing of the survey work fell outside of the normally accepted survey period, it was considered that the warm frost-free weather throughout September 20130 and early October 2013 was conducive to observing any late season bat activity.

10.3.21 For each survey, an ecologist was stationed close to the feature being surveyed. Handheld bat detectors (Bat Box Duet) were used to allow surveyors to hear and identify bats. Dusk emergence surveys were carried out from 30 minutes before sunset until one hour and 30 minutes after sunset, or until it was no longer light enough to see whether bats were emerging from the structure. Any bat activity was recorded manually.

10.3.22 The results of these dusk surveys have been used to inform the risk assessment rather than form any definitive conclusions about bat use of a particular part of the study area. This is especially important to bear in mind as bat activity in the late season may not reflect bat activity in the study area and within the main season of activity, due to changing use of areas which bats show in different seasons.

10.3.23 Additional bat survey was undertaken by Ecosurv Ltd during the bat breeding season (May and June 2014) to identify if bats utilise the bridges illustrated in **Figure 10-1**. Evening emergence surveys together with dawn return surveys were conducted at each bridge location, with a single dawn and dusk survey being conducted at each point. In order to provide further information as to the potential presence of bats to the wider surrounds, a static bat detector was also used during the survey. Equipment used consisted of a AnaBat SD2 and Songmeter SM2 detector.

10.3.24 The weather during the May and June 2014 surveys was good, with high evening and overnight temperatures, maintaining a high level of insect prey species for bats.

Reptile survey

10.3.25 The 2013 extended Phase 1 habitat survey identified ten areas that have optimal habitat to support common reptile species (see **Figure 10-2**). These areas were mostly open mosaic habitats of grass tussocks and zones of sparse vegetation with industrial debris such as metal sheeting and wooden planks that could serve as reptile refuges. There were also paved and concrete sections that reptiles could use as basking sites.

10.3.26 Reptile surveys were undertaken at these ten survey plots (**Figure 10-2**) in accordance with the recommendations in *Reptile Survey: An Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation* (Froglife, 1999) between May 2013 and October 2013.

10.3.27 Ninety six reptile 'refuges' were placed in a grid pattern across the ten survey plots and were numbered from 1 to 96. The reptile refuges consisted of 0.5m^2 squares of roofing felt. Each refuge was examined on ten separate occasions between 26 September 2013 and 24 October 2013. On each visit the surface of the mats were examined and the mat was raised to check for the presence of reptiles. Other

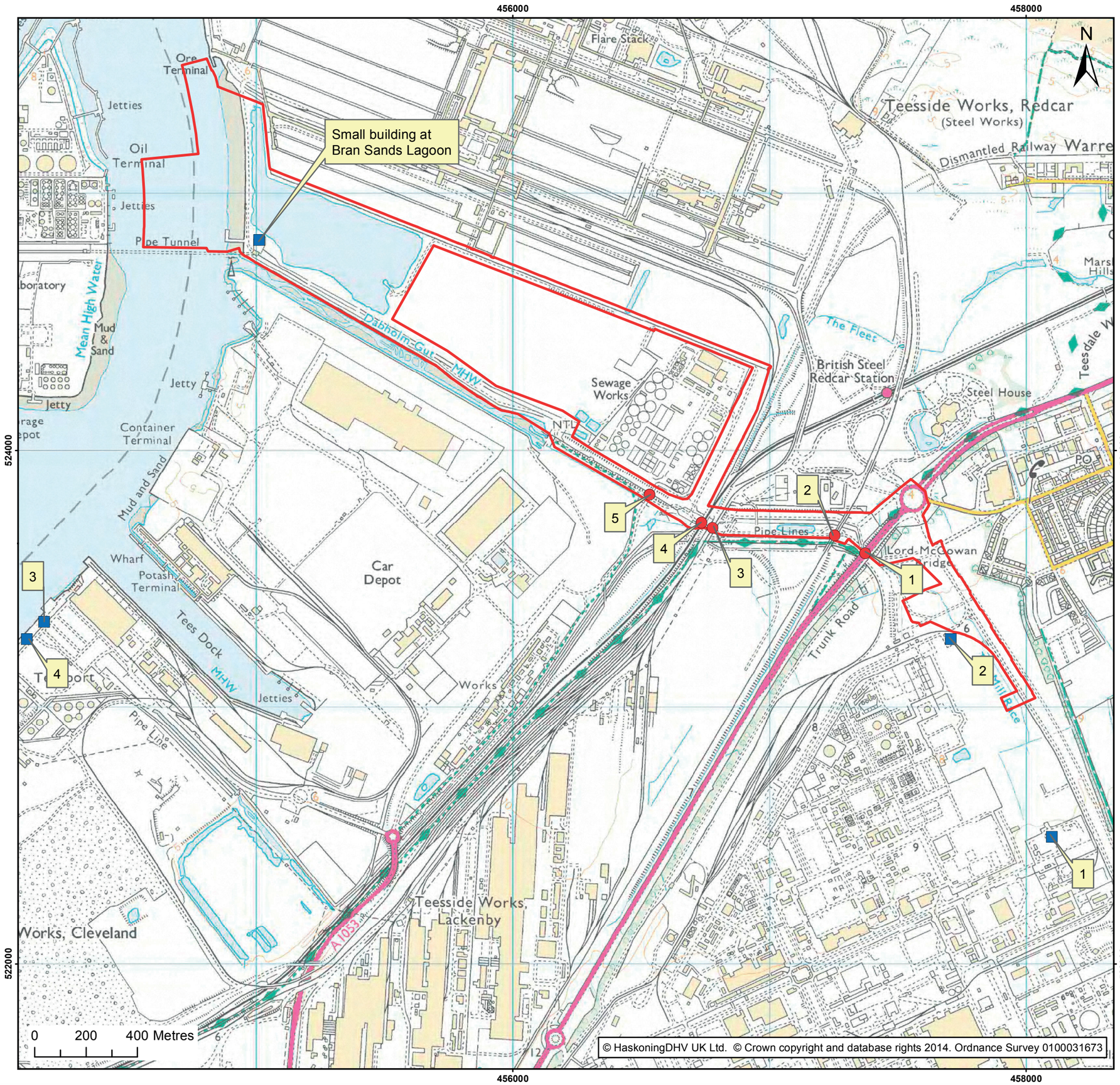
potential basking areas such as rock piles, bare patches within open mosaic grassland and the edges of tarred roads were also checked for reptiles. All surveys were carried out in fine weather with sunshine and temperatures between 13 and 21°C. Any amphibians found were also recorded.

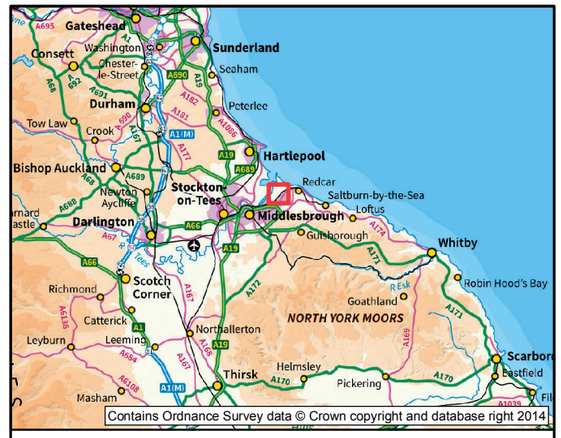
Otter and water vole survey

10.3.28 The desk top study identified two water bodies within and immediately adjacent to the proposed scheme footprint, namely Bran Sands lagoon and Dabholm Beck (which runs into Dabholm Gut) (**Figure 6-1**). Both of these water bodies were assessed as having optimal habitat for otter and water vole. Each water body was assessed (from within the channel for Dabholm Beck and the perimeter of Bran Sands lagoon) for signs of otter and water vole. Water vole surveys were undertaken in accordance with the Water Vole Conservation Handbook (Strachan and Moorhouse, 2006).

10.3.29 Both the otter and water vole surveys were undertaken on 24 October 2013 (for Dabholm Beck) and 29 October 2013 (for Bran Sands lagoon). While this was outside the optimum survey period for water vole (which is typically between March–September) it was considered that the unseasonably mild and frost-free weather experienced until at least the end of October 2013 would allow surveys for these species to be undertaken slightly outside of the usual period. However, a repeat survey for water vole was undertaken in June 2014 by INCA. There is no seasonal constraint for otter survey.

10.3.30 For otter, key field signs which were the focus of the survey included holts, spraints and footprints in mud, with spraints typically being located on prominent rocks within water courses or bodies. For water voles, key signs searched for included burrows, latrines, grazed feeding stations and footprints. All signs or sightings were recorded with their geographical location.





Legend:

DCO Order Limits

Potential Bat Roosting Sites

- Buildings
- Bridges

DCO Order Limits as of 24/02/15

Client:	Project:
York Potash Limited	York Potash Project Harbour Facilities

Title:

Environmental Statement: Potential Bat Roosting Habitat Near Harbour Facilities

Part:	Figure:	Drawing No:
HF	10.1	9Y0989-HF-10-001

Rev:	Date:	Drawn:	Checked:	Size:	Scale:
1	06/03/2015	JE	CS	A3	1:15,000
0	10/12/2014	JE	CS	A3	1:15,000

Co-ordinate system: British National Grid

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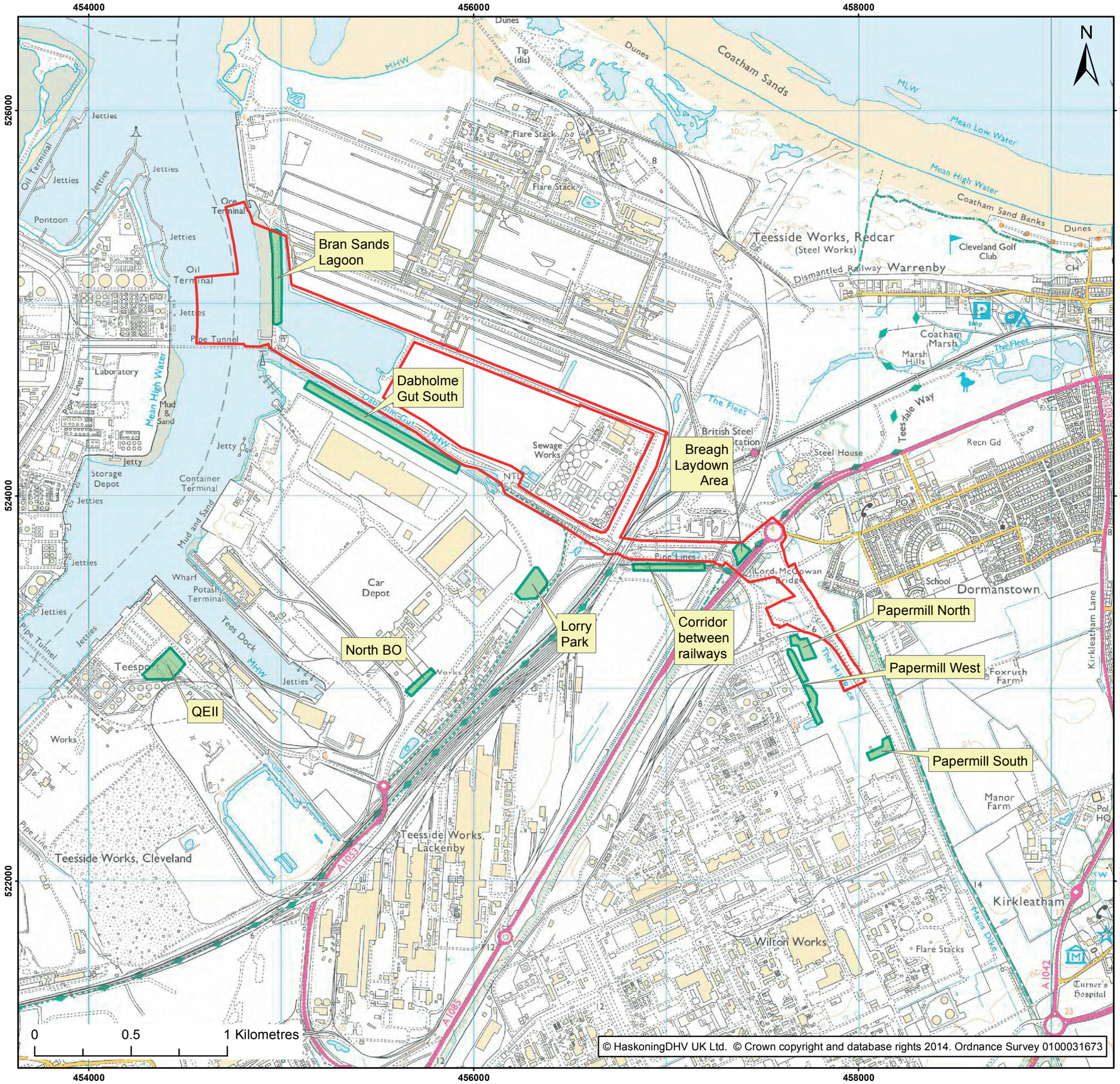

Legend:

- DCO Order Limits
- Reptile Survey Sites

DCO Order Limits as of 24/02/15

Client:	Project:
York Potash Limited	York Potash Project Harbour Facilities

Title: Environmental Statement: Reptile Survey Sites Near Harbour Facilities

Part:	Figure:	Drawing No:
HF	10.2	9Y0989-HF-10-002

Rev:	Date:	Drawn:	Checked:	Size:	Scale:
1	03/03/2015	JE	SC	A3	1:20,000
0	10/12/2014	JE	SC	A3	1:20,000

Co-ordinate system: British National Grid

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Methodology for the assessment of potential impacts

10.3.32 The nature conservation value, or sensitivity, of an ecological feature has been determined within a defined geographic context:

- Very high: of international importance (e.g. SAC, SPA, Ramsar sites, or species directly linked to the designation of these sites).
- High: of national importance (e.g. NNR, SSSI, protected species).
- Medium: of regional importance (e.g. Environment Agency regional biodiversity indicators, important features in Natural England Natural Areas) or of county importance (e.g. Local Nature Reserve (LNR), CWS).
- Low: habitats and species important within the district.
- Negligible: features of local (parish) importance or importance within the site and immediate environs only (e.g. ditches, hedgerows, ponds).

10.3.33 The assessment of the potential impacts of the proposed scheme has taken into account both on-site impacts and those that may occur to adjacent and more distant ecological features. Impacts can be positive or negative. Potential impacts could include:

- direct loss or gain of wildlife habitats;
- fragmentation and isolation or consolidation of habitats;
- disturbance to species from noise, light of other visual stimuli;
- changes to key habitat features; and,
- changes to water quality and/or air quality.

10.3.34 Negative and positive impacts on nature conservation features have been characterised based on predicted changes as a result of the proposed scheme (**Table 10-2**). In order to characterise the impacts on each feature, the following parameters were taken into account:

- the magnitude of the effect (e.g. high, medium, low, negligible);
- the spatial extent over which the effect would occur;
- the temporal duration of the effect;
- whether the effect is reversible and over what timeframe; and,
- the timing and frequency of the effect.

10.3.35 The assessment identified those positive and negative impacts which would be 'significant', based on the value or sensitivity of the ecological feature and the magnitude of the effect. Impacts were considered unlikely to be significant where features of local value or sensitivity would be subject to low magnitude or short-term effects. However, where there were a number of low magnitude effects that were not considered to be significant alone, cumulatively, these may result in an overall significant impact.

10.3.36 The assessment also takes into account the likely success of any proposed mitigation. Monitoring requirements and criteria for measuring the success of mitigation are identified where appropriate.

10.3.37 Enhancement measures (i.e. measures that are in addition to mitigation requirements) are also identified. The residual impact assessment (i.e. following mitigation) reflects the predicted impact of the

completed scheme; the residual impact assessment does not take account of enhancement measures that may be proposed.

Table 10-2 Categorisation of impacts

Significance of impact	Sensitivity of receptor and magnitude of impact
High adverse	Permanent or long-term adverse and / or large scale / high magnitude adverse impact on integrity and / or conservation status of a feature of county or greater value (e.g. receptors of medium, high or very high sensitivity).
Moderate adverse	Temporary and / or small scale / low magnitude adverse impact on integrity and / or conservation status of a feature of national or greater value (e.g. receptors of high or very high sensitivity). Short or medium term and / or moderate scale / medium magnitude adverse impact on integrity and / or conservation status of a feature of county or greater value (e.g. receptors of medium, high or very high sensitivity). Permanent or long-term and/or large scale / high magnitude adverse impact on integrity and / or conservation status of a feature of district value (e.g. receptors of low sensitivity)
Low adverse	Temporary and / or small scale / low magnitude adverse impact on integrity and / or conservation status of a feature of district or county value (e.g. receptors of low sensitivity). Adverse impacts on integrity and / or conservation status of a feature of local / Site value (e.g. receptors of low sensitivity).
Negligible	Negligible impact on integrity and / or conservation status.
Low beneficial	Temporary and / or small scale / low magnitude beneficial impact on integrity and/or conservation status of a feature of district or county value (e.g. receptors of low sensitivity). Beneficial impacts on integrity and / or conservation status of a feature of local / Site value (e.g. receptors of low sensitivity)
Moderate beneficial	Temporary and / or small scale / low magnitude beneficial impact on integrity and / or conservation status of a feature of national or greater value (e.g. receptors of high or very high sensitivity). Short or medium term and / or moderate scale / medium magnitude beneficial impact on integrity and / or conservation status of a feature of county or greater value (e.g. receptors of medium, high or very high sensitivity). Permanent or long-term and / or large scale / high magnitude beneficial impact on integrity and / or conservation status of a feature of district value (e.g. receptors of low sensitivity).
High beneficial	Permanent or long-term and / or large scale / high magnitude beneficial impact on integrity and / or conservation status of a feature of County or greater value (e.g. receptors of medium, high or very high sensitivity).

10.4 Existing environment

Designated sites

10.4.1 The proposed scheme footprint is not located within the boundary of a statutory or non-statutory designated nature conservation site. However, there are a number of environmentally designated sites for nature conservation within 5km of the proposed scheme footprint (see **Figure 8-8**), namely:

- Teesmouth and Cleveland Coast SPA;
- Teesmouth and Cleveland Coast Ramsar site;
- Seal Sands SSSI;
- Seaton Dunes and Common SSSI;
- South Gare and Coatham Sands SSSI;
- Redcar Rocks SSSI;
- Tees and Hartlepool Foreshore and Wetlands SSSI;
- Cowpen Marsh SSSI; and,
- Teesmouth NNR.

10.4.2 The closest statutory designated nature conservation sites to the proposed scheme footprint are the Teesmouth and Cleveland Coast SPA and Ramsar site. The Teesmouth and Cleveland Coast SPA and Ramsar site are located approximately 1km from the proposed scheme footprint at its closest point. They include a range of coastal habitats, including sand and mudflats, areas of rocky shore, saltmarsh, freshwater marsh and sand dunes, all of which are located within or around an estuary which has been subject to extensive modification by human activities (see **Section 8**). Together these habitats provide feeding and roosting opportunities for important numbers of waterbirds in winter and during passage periods. In summer, little tern *Sterna albifrons* breed on beaches within the designated site, while sandwich tern *Sterna sandvicensis* are abundant on passage (see **Section 9**).

10.4.3 The proposed scheme does not have the potential to impact on any non-marine/coastal elements of the above designations and no potential to affect non-statutory designations. Designated sites are not, therefore considered further in this chapter.

Habitats

10.4.4 The main terrestrial / freshwater habitats within the proposed scheme footprint are shown on **Figure 10-3**. Target Notes (TN) were used to describe habitat and species composition and highlight features of ecological interest (see the Extended Phase 1 Survey report (INCA, 2014) within **Appendix 10.2**). The key habitats noted during the 2013 survey include:

- semi-improved neutral grassland;
- ditches;
- scattered trees (young and semi-mature);
- standing water (i.e. ponds);
- scattered areas of scrub;
- tall ruderals; and,
- areas of hard standing and buildings.

10.4.5 Adjacent to the Breagh Laydown area (shown in Map 2 of Appendix 10.2) is an extensive stand of Japanese knotweed *Fallopia japonica*. No species of local, regional or national significance were recorded within the survey area.

Semi-improved grassland

10.4.6 The majority of the study area is semi-improved calcareous or mesotrophic grasslands which have lost most of their interest due to becoming overgrown and rank.

Ditches

10.4.7 A ditch runs the length of the paper mill site, with the majority of the ditch bound by rank grassland, with sections engulfed by scrub.

Scattered trees

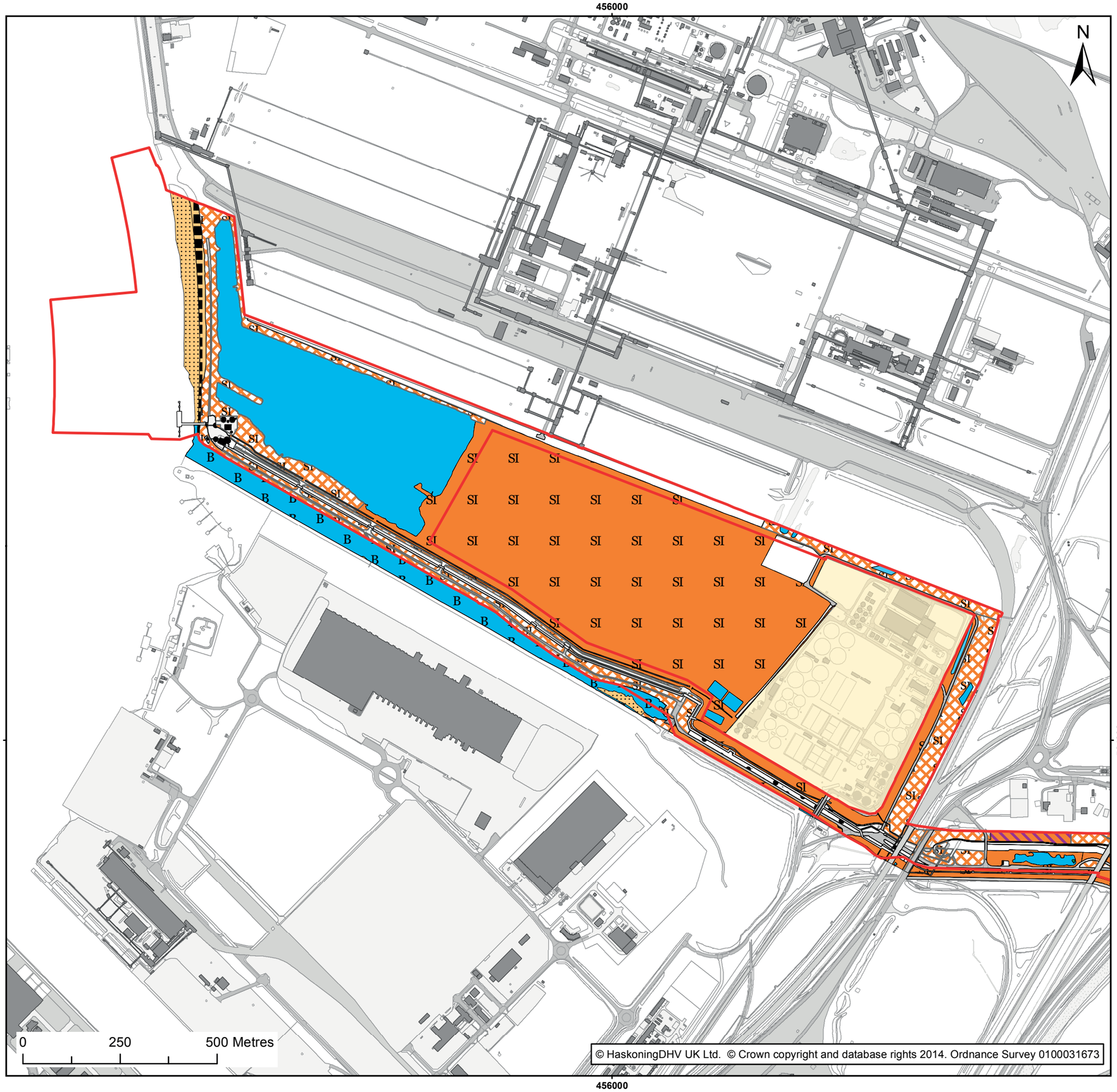
10.4.8 Within the study area there are a number of scattered young and semi-mature trees. Many of these have been planted as screens. Tree species include willow, elder, birch, hawthorn and apple.

Ponds

10.4.9 There are several waterbodies in the study area, with the ICI Ecology Pond being the largest. The margins are dense with common reed *Phragmites australis* and common reedmace *Typha latifolia*. The pond itself has dense *Potamageton* weed, especially in the western end, and supports very high numbers of stickleback *Gasterosteus aculeatus*. Other waterbodies are present within the study area which are dense with common reedmace and common reed. Most hold water throughout the year and support amphibian populations of common toad, common frog and smooth newt.

Scattered areas of scrub

10.4.10 Within the site there are several areas of scrub which include bramble, blackthorn and hawthorn. All of these areas have the potential to support nesting birds.



Legend:

- DCO Order Limits
- Broad-leaved Parkland/Scattered Trees
- SI — Neutral Grassland - Semi-improved
- Calcareous Grassland - Semi-improved
- Marsh/Marshy Grassland
- Swamp
- Standing Water
- B — Running Water - Brackish
- Intertidal
- Intertidal - Boulders/Rocks
- Earth bank
- Buildings
- Bare
- Other
- Sewage Farm

Client:	Project:
York Potash Limited	York Potash Project Harbour Facilities

Title: Environmental Statement: Harbour Facilities Phase 1 Habitat Survey

Part:	Figure:	Drawing No:
HF	10.3	9Y0989-HF-10-003

Rev:	Date:	Drawn:	Checked:	Size:	Scale:
1	09/03/2015	JE	CS	A3	1:10,000
0	10/12/2014	JE	CS	A3	1:10,000

Co-ordinate system: British National Grid

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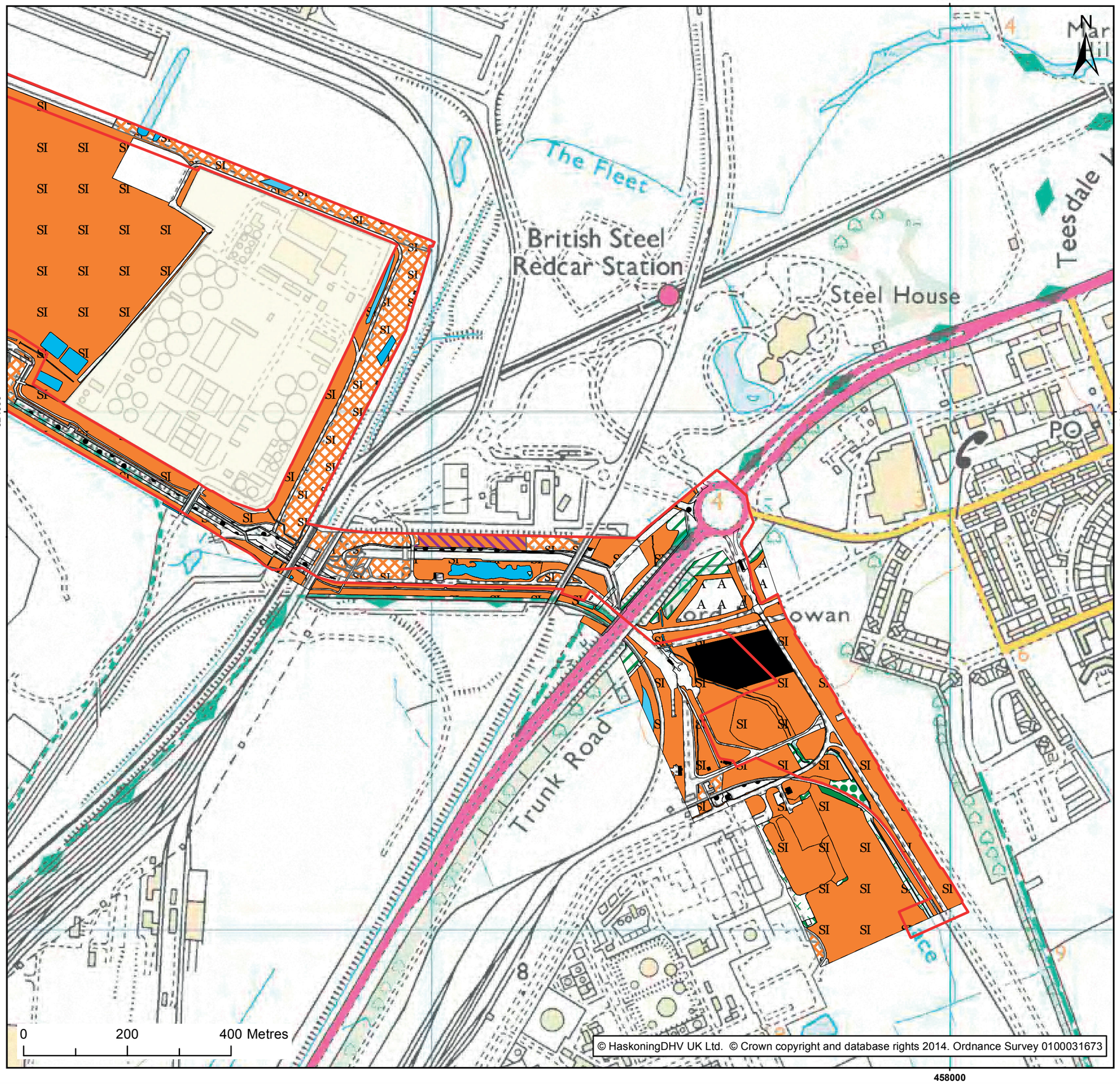

Legend:

- DCO Order Limits
- Sewage Farm
- Broad-leaved Woodland - Semi-natural
- Broad-leaved Woodland - Plantation
- Scrub - Dense/Continuous
- Scrub - Scattered
- Broad-leaved Parkland/Scattered Trees
- SI Neutral Grassland - Semi-improved
- Calcareous Grassland - Semi-improved
- Marsh/Marshy Grassland
- Swamp
- Standing Water
- Running Water
- A Cultivated/Disturbed Land - Arable
- Dry Ditch
- Buildings
- Bare
- Other

DCO Order Limits as of 24/02/15

Client:	Project:
York Potash Limited	York Potash Project Harbour Facilities

Title:

Environmental Statement: Harbour Facilities
Phase 1 Habitat Survey

Part:	Figure:	Drawing No:
HF	10.4	9Y0989-HF-10-004

Rev:	Date:	Drawn:	Checked:	Size:	Scale:
1	09/03/2015	JE	CS	A3	1:7,500
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Co-ordinate system: British National Grid

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Species within and in the vicinity of the proposed scheme footprint

Bats

10.4.11 The desk top study identified observations of foraging common pipistrelle *Pipistrellus pipistrellus* in a number of locations within the study area and a single location near Teesport. No evidence of roosting bats within the Wilton or Teesport industrial complexes has been recorded.

10.4.12 The nearest records of bat roosts are of a common pipistrelle roost at Wilton Village (NZ584198) in July 2011, which is 4km south-east of the proposed scheme footprint. A roost of soprano pipistrelle *Pipistrellus pygmaeus* of undisclosed size was recorded in the Kirkleatham area of Redcar (NZ595218) in July 2010, which is 3km south-east of the proposed scheme footprint.

10.4.13 The daytime bat roost assessment undertaken as part of the 2013 extended Phase 1 habitat survey identified five bridges and 11 buildings which represented potential roosting sites for bats. The five bridges were inspected and no sign of bat activity was noted. The daytime inspections identified potential roosting opportunities (i.e. gaps and crevices within the bridge structure). However, each bridge currently experiences regular traffic use and, therefore, in combination with associated vibrational disturbance, it is considered that these bridges have low to medium potential to support roosting bats. Furthermore, all of the bridges are in close proximity to good foraging habitat, with bats observed in the wider area of the bridges. On this basis, it is considered that each of the bridges has a low to medium risk of roosting bats being present.

10.4.14 Dusk emergence surveys were carried out at Bridges 2 and 3 on 24 September 2013. Activity was observed from a single common pipistrelle around the north-eastern abutment of bridge 3. This activity, detected at 45kHz, started at 19.00 (sunset) and continued with regular feeding buzzes noted until 20:00. Activity at Bridge 2 was a little later, when a single common pipistrelle pass was noted at 19:15. A further ten passes were noted up until the survey finished at 20:30.

10.4.15 Dusk emergence surveys took place on 8 October 2013 to assess any activity by bats using the complex of buildings in the Teesport area. There was no activity observed around the Teesport buildings.

10.4.16 The industrial plant at Bran Sands lagoon was also inspected. The majority of these buildings are of steel construction which does not constitute desirable roosting locations for bats. Only one building is of brick construction, which is tightly constructed giving limited possible entry points for bats. Large fans are located within this building which runs continuously, making the building less attractive to bats. These buildings were, therefore, assessed as having a low bat potential.

10.4.17 During the evening emergence and dawn return surveys undertaken by Ecosurv Ltd in May and June 2014, a single common pipistrelle bat was found to be flying below Bridge 1 on 29 May 2014. Records from the SM2 and AnaBat recorders identified the activity at 21.06 and 21.09, some 26 minutes before sunset.

10.4.18 Bats in low numbers, predominantly common pipistrelle with the occasional soprano pipistrelle were observed to utilise the land adjacent to the bridges. The maximum number of bats observed utilising land surrounding the bridges at any one time was three.

10.4.19 Bat feeding within the Wilton Ecology Pond was almost continuous during the May and June 2014 surveys (between the hours of sunset and sunrise). A noctule bat *Nyctalus noctula* was also noted on a single occasion during the survey.

10.4.20 It was concluded that Bridges 1 to 5 may provide occasional daytime roosting sites for single bats that may be prevented from returning to their usual day roosts by inclement weather. The bridges are considered unsuitable as a maternity roost or hibernation site.

Reptiles

10.4.21 The desk top study identified two records of slow-worm within 10km of the proposed scheme footprint and a single record of adder and common lizard. All records of grass snake were at distances greater than 10km from the proposed scheme footprint. No records of reptiles for the proposed scheme footprint or for areas adjoining these sites were found in either INCA's Ecological Database or in the published literature. The nearest sites to the survey areas for which there are confirmed records of common lizard are Eston Moor and South Gare, which at its closest point is 2km north-east of the proposed scheme footprint.

10.4.22 The detailed reptile surveys undertaken in 2013 and over a ten day period recorded no reptile species either on or under the mats or in other areas of the survey sites. The only amphibian species recorded during the surveys was the common toad *Bufo bufo* at the Breagh Laydown and Papermill West locations, which are the only two survey sites immediately adjacent to permanent ponds. This species was recorded in low numbers.

Great crested newts

10.4.23 There are no records of the great crested newt *Triturus cristatus* within or adjacent to the proposed scheme footprint. No newt species was recorded during the 2013 surveys, although smooth newt *Lissotriton vulgaris* is present within the water body adjacent to the Bran Sands lagoon on the Wilton International site. Due to the absence of great crested newt in the surveyed water bodies, it is considered that the proposed scheme would not have any impact on this species and, therefore, is has not been considered further in this assessment.

Otter

10.4.24 Otter *Lutra lutra*, and their holts are fully protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). The species is also protected under Schedule 2 of the Conservation of Habitats and Species Regulations 2010. The desk top study identified no records of otter within a 6km radius of the proposed scheme footprint.

10.4.25 The 2011 walkover survey identified two locations with potential otter habitat; Dabholm Beck and Bran Sands lagoon. The south-eastern end of Dabholm Beck has been surveyed on previous occasions and no signs of otter activity were noted. Two signs of otter were recorded within Dabholm Beck in 2013; firstly of a spraint situated on a rock within the beck channel and secondly of footprints in mud adjacent to the channel.

10.4.26 The waterside habitat around the whole perimeter of Bran Sands lagoon is lined with rip-rap and the lagoon itself is saline. Two locations along the northern edge of Bran Sands lagoon showed signs of otter with a single otter spraint seen at each location. These were situated on prominent rocks in the shallows at the edge of the lagoon. There was no evidence of an otter holt along the entire shoreline of Bran Sands lagoon or at the Dabholm Beck site.

10.4.27 The low frequency of otter signs observed during this detailed survey suggests occasional use of the area by a single otter or by a small number of commuting otters as part of a foraging range.

Water vole

10.4.28 The water vole *Arvicola amphibious* is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). The ERIC North East database provided one record of water vole within a 6km radius of the proposed scheme footprint. This was recorded in April 2010 at the western boundary of the Wilton site. No other records were provided within 6km of the proposed scheme footprint.

10.4.29 At the south-eastern end of Dabholm Beck there is a small area of *Phragmites* reedbed. This was checked for signs of water vole in August, September, October 2013 and June 2014. No sign of water vole activity was noted during this survey, indicating that this species is not present. The exposed banksides along Dabholm Beck and the whole perimeter of Bran Sands lagoon were found to be sub-optimal for water vole as they are lined with rip-rap. In addition, Bran Sands lagoon is saline and, therefore, provides sub-optimal habitat for water vole. No signs of this species were found at either of these locations and, therefore, it is considered that the proposed works would not have any impact on this species and water vole has not been considered further in this assessment.

White clawed crayfish, badger and dormice

10.4.30 The desk study did not return any records for white clawed crayfish, badger or dormice. Furthermore, the 2013 extended Phase 1 habitat survey did not identify any suitable habitat within the proposed scheme footprint for these species. It is, therefore, considered unlikely that these species are present within the proposed scheme footprint or adjacent area. As such, these species have not been considered further in this assessment.

10.5 Assessment of potential impacts during construction

Potential impacts on habitats

10.5.1 The habitat types present within the proposed scheme footprint are considered to be common in this area. There is no terrestrial or freshwater BAP habitat located within the proposed scheme footprint. However, the construction works associated with the proposed scheme would directly and indirectly affect a number of different habitats, including those of nature conservation value, such as semi-improved neutral grassland, areas of dense scrub and areas of open water (both standing and brackish waters).

10.5.2 The habitats within the proposed conveyor corridors comprise grassland with occasional scrub, semi-mature tree and scrub cover along the A1085 road corridor and coarse grassland with occasional regenerating scrub.

10.5.3 The habitats within the proposed scheme footprint (inclusive of all scheme elements) are considered to be of low ecological value and an effect of low magnitude is predicted during construction. Given this, an impact of negligible significance is predicted.

Potential impacts on terrestrial birds

10.5.4 All breeding wild birds, their occupied nests and eggs are protected by the Wildlife and Countryside Act 1981 (as amended) (see Appendix 10.1).

10.5.5 The areas of open semi-improved neutral grassland and scrub within the proposed scheme footprint currently provide food and nesting opportunities for birds. Some removal of this habitat would be required to deliver the proposed scheme. However, the surrounding landscape provides very similar habitat and the terrestrial (land) area of the proposed scheme is considered to have limited suitability for nesting birds, given the lack of suitable ground conditions and limited vegetation that could support breeding birds. It is concluded that the works in this area are unlikely to have a significant impact on breeding birds (if the removal of habitat occurs at an appropriate time).

10.5.6 Given this, despite the high sensitivity of nesting birds, a low magnitude is predicted during construction as a result of the loss of these areas; which in turn result in an impact of negligible significance during construction.

Mitigation measures and residual impact

10.5.7 In advance of the works vegetation clearance would be undertaken to minimise the risk of any harm to nesting birds (should they be present). Any vegetation clearance that is required would be undertaken outside of the breeding bird season (i.e. between September and February, as the breeding bird season is typically between March to August, but is weather dependent).

10.5.8 Should further vegetation clearance be required within the nesting season, surveys for occupied nests (or nests being built) would be carried out prior to any works being undertaken. A survey would be undertaken a maximum of 48 hours prior to the commencement of works, to check for occupied nests or those being built, in order to minimise the chance of nest building being undertaken between the survey and the start of the works. Any nest in use or being built during this survey would need to be left undamaged until the chicks have fledged and an alternative approach to the works proposed. The residual impact would be of negligible significance.

Potential impacts on bats

10.5.9 None of the bridges or buildings assessed as having bat potential would be lost as a result of the proposed scheme and, therefore, potential impacts on bats as a result of the works are likely to be restricted to disturbance / displacement of commuting and foraging bats as a result of general site presence, noise, and lighting.

10.5.10 From the surveys that have been undertaken, it can be concluded that all five bridges provide foraging habitat for low numbers of bats. It is also concluded that the bridges may provide occasional daytime roosting sites for single bats (maximum of three seen at any one time).

10.5.11 It is understood that all of these bridges are already subject to noise disturbance throughout the entire day from on-going activities. These bridges are not currently illuminated and, therefore, any installation of lighting potentially would cause disturbance to feeding and any roosting bats. Given this, despite the high sensitivity of bats, a low magnitude is predicted; resulting in an impact of negligible significance during construction.

Mitigation measures and residual impact

10.5.12 Given that it is likely that there would be some night working, it is proposed that any construction lighting would be located away from the bridges to avoid disturbance to any potential bat roost. The lighting requirements for the proposed works would be designed in accordance with guidance from the Bat Conservation Trust.

10.5.13 The residual impact would remain of negligible significance.

Potential impacts on reptiles

10.5.14 While no reptile species were recorded within the proposed scheme footprint, the presence of suitable habitat (i.e. areas of scattered scrub and hard standing areas) means that there is the potential for these species to use the area if they are present in the wider area. The areas of semi-improved neutral grassland were considered to provide suitable shelter, forage and basking habitat for common reptile species.

10.5.15 There is the potential for construction activities to temporarily disturb and possibly injure or kill common reptile species, such as grass snakes, adders, slow-worms or common lizards, however, despite the high sensitivity of reptiles, a low magnitude effect is predicted as no reptiles have been recorded during the surveys to date, resulting in a predicted impact of negligible significance during construction.

Mitigation measures and residual impact

10.5.16 It is proposed that a Precautionary Method of Working document would be prepared by an ecologist and would cover the site works associated with the proposed scheme in order to minimise the risk of harm to reptiles. Habitat manipulation would be undertaken which would comprise vegetation cutting and the removal of debris which could provide shelter. This would encourage any reptiles present on site to move onto adjacent areas; much of the land surrounding the proposed scheme footprint also provides similar habitats which could be utilised by reptiles.

10.5.17 All advance habitat manipulation works would be supervised by an ecologist. Clearance of potential reptile refuges and vegetation cutting would be undertaken outside of reptile hibernation season (which is generally between October and February) when daytime maximum temperatures are below 10°C. The residual impact would be of negligible significance.

Potential impacts to otter

10.5.18 Dabholm Beck and Bran Sands lagoon are the two water bodies within and immediately adjacent to the proposed scheme footprint where evidence of otter activity has been recorded. These water bodies would not be lost as a result of the proposed scheme, and no holts are present. Consequently, the

proposed scheme would not have a direct impact on holts. However, due to the proximity of the works, there may be some indirect disturbance to otters during the construction phase, although movement along the water bodies would not be restricted and it is unlikely that any animals would venture into the proposed scheme footprint due to the high levels of activity. Despite the high sensitivity of otters, a low magnitude is predicted, resulting in an impact of negligible significance during construction.

Mitigation measures and residual impact

10.5.19 As a precaution, it is proposed that any trenches and excavations would be closed overnight and escape routes provided should an animal become trapped.

10.5.20 With these measures in place, the residual impact would be of negligible significance.

10.6 Assessment of potential impacts during operation

Potential impacts on habitats

10.6.1 On completion of the proposed scheme, the existing habitats would largely remain. Based on the findings of the site specific terrestrial ecology surveys undertaken to inform this assessment, it is considered that there are no particularly sensitive habitats which are likely to affected by climate change. It is therefore considered that there would be no effect on ecological networks in this context.

10.6.2 Given this, a residual impact of negligible significance on habitats is predicted in the operational phase.

Potential impacts on terrestrial birds

10.6.3 The trees and areas of scrub within the proposed scheme footprint provide food and nesting opportunities for birds. The removal of some of this habitat would be required as part of the proposed works. However, given the presence of similar habitat in adjacent areas, the loss of some potential nesting habitat would have a negligible effect on the conservation status of the local bird populations during operation and result in an impact of negligible significance.

Potential impacts on bats

10.6.4 Based on the surveys undertaken to date, no bat maternity roosts or hibernation sites have been recorded within the proposed scheme footprint and no structures which have been assessed as having potential to support roosting bats would be lost as a result of the proposed scheme. However, the area within the scheme's footprint has been noted to provide feeding, foraging and commuting habitat for bats. Given this, a residual impact of negligible significance on bats is predicted in the operational phase.

Potential enhancement measures

10.6.5 During the development of the proposed scheme, habitat enhancement opportunities have been identified and would be incorporated within the proposed works. These enhancement measures would include the installation of bat boxes within suitably identified mature trees, along with the planting of species, which in turn would provide good quality foraging habitat for bats. It is, therefore, concluded

that a low magnitude beneficial effect could arise on a receptors of high sensitivity. It is, therefore, predicted that there would be a long-term impact of minor beneficial significance.

Potential impacts to reptiles

10.6.6 The development of the proposed scheme has considered the opportunity to provide additional habitats (i.e. through the landscape planting scheme and creation of log piles) and opportunities for basking reptiles (i.e. through the creation of open grassland areas), including small areas of planted scrub on completion of the works. Hence the proposed design, as well as proposals for site management (i.e. habitat manipulation to discourage reptiles from entering the proposed working areas) and the implementation of a precautionary method of working in the operational phase would have a low magnitude, but beneficial effect on reptiles (a receptor of high sensitivity). It is, therefore, predicted that there would be a long-term impact of minor beneficial significance.

Potential impacts on otters

10.6.7 Habitat enhancement proposals have been developed for Bran Sands lagoon (see Section 3.1) and comprise the placement of (clean) material derived from the dredging which forms part of the proposed scheme, as well as maintenance dredging, within Bran Sands lagoon. These enhancement measures would include the creation of new shallows and islands which foraging and commuting otters could use. It is, therefore, concluded that a low magnitude beneficial effect could arise on a receptor of high sensitivity. Hence there would be a long-term impact of minor beneficial significance on otters.

10.7 Assessment of impacts during decommissioning

10.7.1 Ecological surveys would be required prior to the start of the decommissioning works for the conveyor to verify that no protected species could be impacted and to identify the requirement for mitigation to be implemented in order to avoid any impacts.

10.7.2 On removal of all elements of the conveyor and the establishment of additional areas of grassland, scrub and woodland planting, the overall biodiversity value of the site would increase. Opportunities for species to use these areas for nesting, shelter and foraging would also contribute towards increasing the biodiversity value of the area.

10.8 Summary

10.8.1 An extensive suite of desk and species specific surveys (namely bats, amphibians, reptiles, water vole, otter and terrestrial bird surveys) were undertaken between 2011 and 2014 to inform the EcIA. Based on the findings of the initial Phase 1 habitat surveys, it is considered that none of the habitats surveyed are of significance being for the most part semi-improved calcareous or mesotrophic grasslands which have lost most of their interest due to becoming overgrown and rank. While the Phase 1 survey highlighted some areas of slightly more biological diversity it was the opinion of the surveyor that none of the areas merited more detailed examination for other biological groups such as invertebrates. None of the areas surveyed are of sufficient botanical interest or habitat scarcity to merit more detailed investigation such as a Phase II NVC survey. NVC survey is normally only worthwhile on areas where there is likely to be loss or damage to scarce or valuable habitat which may require mitigation, such as areas of SSSI or Local Wildlife Sites.

10.8.2 The proposed scheme would give rise to a number of impacts to terrestrial ecology, however, all potential impacts are predicted to be of negligible or minor beneficial significance.

10.8.3 Uncertainty in the assessment of impacts on terrestrial ecology is considered to be low for all stages of the proposed scheme, given the large volume of data (sourced from targeted site specific terrestrial ecological surveys) used to assist in the determination of impact significance.

10.8.4 Table 10-3 presents a summary of the terrestrial ecology impacts anticipated to arise during the construction, operation and decommissioning of the proposed scheme.

Table 10-3 Summary of terrestrial ecology impacts anticipated to arise during construction, operation and decommissioning of the proposed scheme

Impact	Sensitivity of receptor	Magnitude of effect	Significance of impact	Mitigation	Significance of residual impact (adverse/beneficial)
Construction					
Habitats	Low	Low	Negligible	Majority of habitats would be retained.	Negligible
Terrestrial birds	High	Low	Negligible	Any vegetation removal would be undertaken outside the bird breeding season.	Negligible
Bats (commuting and foraging)	High	Low	Negligible	Lighting proposals to consider BCT and RSPB guidance.	Negligible
Reptiles	High	Low	Negligible	Precautionary Method of Working proposed to include habitat manipulation (e.g. vegetation stripping) and tool box talks with contractors.	Negligible
Otter	High	Low	Negligible	All trenches and excavations would be closed overnight and escape routes provided should an animal become trapped.	Negligible
Operation					
Habitats	Low	Low	Negligible	Reinstatement of habitats and implementation of landscape strategy.	Negligible
Terrestrial birds	High	Low	Negligible	Implementation of landscape strategy.	Negligible

Impact	Sensitivity of receptor	Magnitude of effect	Significance of impact	Mitigation	Significance of residual impact (adverse/beneficial)
Bats (commuting and foraging)	High	Low	Negligible	Implementation of landscape strategy and installation of bat boxes within suitably identified mature trees.	Minor beneficial
Reptiles	High	Low	Negligible	Implementation of landscape strategy which includes the creation of additional habitats such as log piles.	Minor beneficial
Otters	High	Low	Negligible	Creation of new shallows and islands using dredged material.	Minor beneficial
Decommissioning					
On removal of all elements of the conveyor (during decommissioning) and the establishment of additional areas of grassland, scrub and woodland planting, the overall biodiversity value of the site would increase. Opportunities for species to use these areas for nesting, shelter and foraging would also contribute towards increasing the biodiversity value of the area.					

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