South Industrial Zone

41

- Las

1002

Habitat Regulations Assessment July 2020 South Tees Development Corporation

South Industrial Zone

Habitats Regulations Assessment: Stage 1 (Screening) and Stage 2 (Appropriate Assessment)

Issue | 6 July 2020

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 276320-01

Ove Arup & Partners Ltd Central Square Forth Street Newcastle upon Tyne NE1 3PL United Kingdom www.arup.com

ARUP

Document Verification

ARUP

Job title		South Industrial Zone		Job number			
				276320-01			
Document title			gulations Assessment	e	File reference		
		(Screening)	and Stage 2 (Approp	6-02 Reports			
Document r	·ef						
Revision	Date	Filename	2020_05_xx_STDC	T.docx			
Draft 1	1 July 2020	Description	Issued for review				
			Prepared by	Checked by	Approved by		
		Name	Victoria Newlove	Zoe Webb	Fraser Maxwell		
		Signature	V. Naullus	Chel.	F. Maxwell		
[ssue	6 July	Filename	2020_07_01_STDC SIZ HRA CLEAN.docx				
	2020	Description	Updated to address client comments – Final issue for use				
			Prepared by	Checked by	Approved by		
		Name	Zoe Webb	Fraser Maxwell	Fraser Maxwell		
		Signature	The .	F. Maxwell	F. Maxwell		
[ssue	6 July	Filename	2020_07_01_STDC SIZ HRA CLEAN.docx				
	2020	Description	Updated to address client comments – Final issue for use				
			Prepared by	Checked by	Approved by		
		Name	Dan Wales	Fraser Maxwell	Fraser Maxwell		
		Signature	De	F. Maxwell	F. Maxwell		
		Filename					
		Description					
			Prepared by	Checked by	Approved by		
		Name					
		Signature					
	I	-	Issue Docume	nt Verification with I	Document		

Contents

			Page		
1	Introd	Introduction			
	1.1	Overview	3		
2	The H	abitats Regulations Assessment Process	4		
	2.1	Overview	4		
	2.2	Requirements of the Habitats Regulations	4		
3	Propo	sed Development Description	7		
	3.1	Proposed Development Site Overview	7		
	3.2	Proposed Development	7		
	3.3	Construction	8		
4	Stage	1 – Screening	11		
	4.1	Methodology	11		
5	Intern	nationally Important Sites under Consideration	14		
	5.1	Teesmouth and Cleveland Coast SPA	16		
	5.2	Teesmouth and Cleveland Coast Ramsar	17		
	5.3	North York Moors SAC	18		
	5.4	North York Moors SPA	18		
	5.5	Durham Coast SAC	18		
	5.6	Northumbria Coast SPA	19		
	5.7	Northumbria Coast Ramsar	19		
	5.8	Castle Eden Dene SAC	20		
	5.9	Conservation Objectives	20		
6	Check	ing for Likelihood of a Significant Effect	23		
	6.1	Teesmouth and Cleveland Coast SPA and Ramsar	23		
	6.2	North York Moors SAC and SPA	28		
	6.3	Durham Coast SAC	29		
	6.4	Northumbria Coast SPA and Ramsar	29		
	6.5	Castle Eden Dene SAC	30		
	6.6	Consultation	30		
7	Summ	nary	32		
8	Stage	2 – Appropriate Assessment	33		
	8.1	Methodology	33		
	8.2	Assessment of Impacts	34		
	8.3	Assessment of in-combination effects	40		
	8.4	Summary	40		

Appendices

Appendix A Red Line Boundary for the Proposed Development Site

Appendix B South Industrial Zone Location

Appendix C Map of Internationally Important Sites under Consideration

Appendix D 2020 Breeding Bird Survey Data

Executive Summary

This document has been prepared by Ove Arup and Partners Ltd (Arup) on behalf of South Tees Development Corporation (STDC), in connection with a planning application for the proposed development of the South Industrial Zone (SIZ). This report details the Habitats Regulations Assessment (HRA) Stage 1 and Stage 2 assessments for the proposed development.

There are eight internationally important designated sites within 20km of the proposed development site. Of these eight designated sites, North York Moors Special Area of Conservation (SAC) and Special Protection Area (SPA), Durham Coast SAC, and Northumbria Coast SPA and Ramsar, and Castle Eden Dene SAC were scoped out of further assessment due to their distance from the proposed development site, and lack of direct impact pathways.

The Teesmouth and Cleveland Coast SPA and Ramsar sites are immediately adjacent to the proposed development site and have the potential to be impacted during the construction and operation of the proposed development. Therefore, the Teesmouth and Cleveland Coast SPA and Ramsar sites were scoped into Appropriate Assessment (AA).

The construction works have potential to impact on the qualifying features of the SPA and Ramsar through loss of habitat within the proposed development site that may support small numbers of qualifying species of the SPA/Ramsar, disturbance and/or loss of habitats within the SPA/Ramsar from pollution, and noise/visual disturbance of small numbers of qualifying species utilising the SPA/Ramsar site for foraging, commuting and/or roosting.

During operational periods there is a risk of disturbance and/or loss of habitats within the SPA/Ramsar from pollution. This could impact qualifying species utilising the SPA and Ramsar for foraging, commuting and/or roosting activities.

In-combination effects were considered at the Appropriate Assessment stage.

Based on the information currently available, it is considered that there will likely be **no significant effects** to the integrity of the Teesmouth and Cleveland Coast SPA and Ramsar from the construction and operation of the proposed development.

It is considered likely that no further stages of the HRA process will be required.

However, information regarding the construction and operation of the proposed development site is currently limited and subject to further refinement. It is therefore important that the HRA is reviewed and updated as further information becomes available.

In respect of wintering birds, information on the use of the proposed development site by these qualifying features of the SPA/Ramsar is currently based only on anecdotal evidence and professional judgement as detailed wintering bird surveys have not yet been undertaken. It is recommended that these are completed prior to any works commencing, and the HRA reviewed in light of the results of those surveys.

1 Introduction

1.1 Overview

This document has been prepared by Ove Arup and Partners Ltd (Arup) on behalf of South Tees Development Corporation (STDC), in connection with an outline planning application for the proposed development of part of the South Industrial Zone (SIZ) (hereafter referred to as the 'proposed development').

This report provides information to inform both Stage 1 (Screening) and Stage 2 (Appropriate Assessment [AA]) of a Habitats Regulations Assessment (HRA). It has been prepared to inform the 'competent authority', which is Redcar and Cleveland Borough Council (RCBC) as the Local Planning Authority, about the implications of the proposed development on nearby internationally important sites, as required under Regulation 63 of The Conservation of Habitats and Species Regulations 2017 (hereafter referred to as the 'Habitats Regulations')¹. The report has been prepared in accordance with the Habitats Regulations Assessment Handbook².

Sections 4 to 7 of this report include Stage 1 of the HRA process; a statement to inform the Screening stage of the HRA process for the proposed development.

Section 8 of this report comprises Stage 2 of the HRA process; a statement to inform an AA for the proposed development.

¹ The National Archives. *The Conservation of Habitats and Species Regulations 2017*. Available: <u>http://www.legislation.gov.uk/uksi/2017/1012/contents/made</u>. Accessed 21 May 2020.

² Tyldesley D. & Chapman, C. (2013) *The Habitats Regulations Assessment Handbook*, 2019 edition UK: DTA Publications Limited.

2 The Habitats Regulations Assessment Process

2.1 Overview

Figure 1 provides an overview of the HRA process for projects within or with the potential to affect internationally important sites.

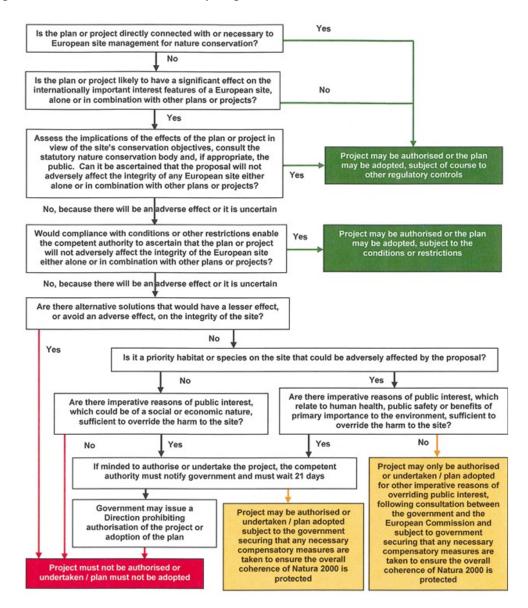


Figure 1: The Habitats Regulations Assessment Process²

2.2 **Requirements of the Habitats Regulations**

The Habitats Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna provides legal protection for habitats and species of

European importance. The Directive is transposed into UK law by the Habitats Regulations¹.

Regulation 63 of the Habitat Regulations requires a competent authority to make an 'appropriate assessment' of the implications of a plan or project for that site in view of its conservation objectives, before deciding to undertake or give consent for a plan or project which: (a) is likely to have a significant effect on an internationally important site (either alone or in combination with other plans or project); and, (b) is not directly connected with or necessary to the management of that site.

The HRA process employs the precautionary principle and Regulation 63 ensures that where a project is *"likely to have a significant effect"*, it can only be consented if the competent authority can ascertain (following an appropriate assessment) that it *"will not adversely affect the integrity of the European site"*. European Sites include Special Areas of Conservation (SACs), candidate SACs, Offshore Marine SACs and Special Protection Areas (SPAs). However, it is government policy in England and Wales to also include Wetlands of International Importance (Ramsar sites), potential SPAs and possible Ramsar sites as European Sites.

All plans and projects should identify any such possible effects early in the plan/project making process and then either alter the plan/project to avoid them or introduce mitigation measures to the point where no adverse effects occur. The competent authority is to agree to the plan or project only after having ascertained that it would not adversely affect the integrity of the site concerned and, if appropriate, having obtained the opinion of the general public.

An in-combination assessment is required where an impact is identified which would have an insignificant effect on its own (a residual effect) but where likely significant effects arise cumulatively with other plans or projects.

The assessment of a plan or project under the Habitats Regulations can be split into several sections as shown in Figure 1. There are effectively four stages to the assessment, comprising:

- Stage 1 Screening: This is the assessment of the likelihood of a plan or project having a significant effect on an internationally important site or its features. This is the trigger for the need for an Appropriate Assessment as set out in Regulation 61(1);
- Stage 2 Appropriate Assessment: This is the detailed consideration of the potential effects of the plan or project in relation to the conservation objectives for the internationally important site to determine if there is likely to be an adverse effect on the integrity of the site (i.e. an effect that would compromise the site meeting its conservation objectives). The integrity of a European site is described in the Government Circular (06/2005) on biodiversity and geological conservation as:

"the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified." Providing it can be demonstrated that with appropriate mitigation measures the plan or project would not give rise to an adverse effect on the integrity of an internationally important site, the plan or project can proceed;

- Stage 3 Consideration of Alternatives: Where it cannot be demonstrated that the project could give rise to an adverse effect on the integrity of an internationally important site, or there is uncertainty, the assessment would need to consider if there were any other alternatives to the plan or project that would not give rise to adverse effects on the integrity of the internationally important site; and
- Stage 4 Reasons of Overriding Public Interest: If there are no alternatives, Stage 4 would then consider if there are any imperative reasons of overriding public interest, and whether there were any compensatory measures that might be required.

3 Proposed Development Description

3.1 Proposed Development Site Overview

The proposed development site is located within the STDC land zone and is a site that makes up part of the SIZ³ and the red line boundary is included in Appendix A. It is located between PD Ports, Teesport and the Teesport Commerce Park. The proposed development site's history includes iron and steel industries and the storage of materials and freight rail infrastructure uses. The south eastern corner of the proposed development site has previously been in use as landfill and waste management facilities used for the disposal of by-products from iron and steel making, cement, metals and non-hazardous waste.

The SIZ is comprised of three areas: South Bank; Grangetown Prairie; and the Lackenby Steelmaking complex. The latter includes an area of land fronting Tees Dock Road and the Trunk Road. The SIZ includes river frontage extending to over 1km in length, mainly comprised of South Bank Wharf. Virtually the entire length of this frontage is currently dilapidated and non-usable.

The habitats present within the proposed development site include: Open Mosaic Habitats (OMH) formed from brownfield land, with a disturbed substrate and buried waste material, or 'made ground' present; neutral grassland which is generally species-poor; modified grassland; broadleaved woodland; mixed scrub; open water; saltmarsh; intertidal mud; reedbed; and sparsely vegetated (ephermeral/ruderal) land. The remainder of the proposed development site is comprised of developed land or artificial habitats.

3.2 Proposed Development

Details of the proposed scheme are still under development, however for the purposes of this assessment it is assumed that 90% of the site will be developed for B2 use (general industry) and 10% for B1 use (office) following a precautionary approach to reflect a 'worst case' scenario.

The draft description of the development is as follows:

"Outline planning application for the demolition of existing structures on site and development of up to 418,000sqm (gross) of general industry (Use Class B2) and storage or distribution facilities (Use Class B8) with ancillary office accommodation, HGV and car parking and associated works. All matters reserved other than access."

The proposed development site red line boundary is provided in Appendix A.

Appendix B outlines the location of the SIZ in relation to the wider STDC site.

³ South Tees Development Corporation (November 2019) South Tees Regeneration Master Plan. <u>https://www.southteesdc.com/wp-content/uploads/2020/01/South-Tees-Master-Plan-Nov-19.2.pdf</u> Accessed 18 June 2020.

3.3 Construction

This section provides information on the anticipated construction programme and methods, provided at the time of writing. Further details on this are set out in Chapter B of the ES.

3.3.1 Programme of Works

The proposed development will be brought forward in phases based on market demand for the employment uses proposed. The first phase of the development will include the delivery of site preparation works and access arrangements for the site. It is currently assumed that site preparation and infrastructure works will take between 12 and 18 months following planning permission being granted and the discharge of relevant planning conditions. On this basis it is assumed that work will begin on site in early 2021 (subject to the determination of the planning application).

Following this, it is assumed that the subsequent phases will deliver a proportion of the employment units and their associated infrastructure over a period of five to eight years (based on market demand), with first occupation in 2023. It is assumed that construction will commence to the east (at the metals recovery site) and the proposed development site will be developed east to west over the five to eight year period.

As the application is submitted in outline, apart from access, reserved matters applications for appearance, landscaping, layout and scale will be submitted to RCBC at the appropriate time for each phase of the development. These details will accord with the development parameters set out within the ES.

3.3.2 Development Works

The relevant details of the main stages of the construction works are set out below.

1. Pre-Commencement

Any requirement for further site and ground investigations will be carried out at this stage of the construction process. The scope of this will be confirmed following the results of technical assessments and they will be secured by way of a planning condition.

2. Site Preparation

Site and mitigation hoarding/fencing, plant and machinery and safety and security lighting will be erected at the site. Mitigation fencing and other best practice measures will be installed based on advice from technical consultants.

STDC is in the process of defining an STDC masterplan wide construction strategy. This will include a construction support site, although its location has not yet been determined. The proposed development site will also have its own construction compound as part of the phased built out. The compound will include waste and fuel storage areas and construction car parking facilities. No overnight staff accommodation is proposed.

3. Enabling and Ground Works

At this stage, it is assumed that the site will be cut and fill sustainable. All hazardous waste will go to the Highfield Landfill Site. The railway bridge in the north western part of the site will be demolished as part of this application. Other existing structures will be demolished through separate prior approval applications.

4. Access and Highways Works

The proposed development will include the creation of two main access points (one located at the east of the site at Tees Dock Road and the second at the west of the site located on Smiths Dock Road). A new access roundabout is being developed at Dockside Road / Smith's Dock Road.

A service route will come forward as and when the development on site requires it.

5. Drainage Construction

The site's drainage strategy will link to the wider STDC masterplan area strategy. This is currently being developed.

6. Building Foundations and Construction

It is assumed that piling will be used for the proposed development. The site includes approximately 8-10m of dense compacted slag so concrete piles will not be feasible. Work is ongoing to establish piling methods and a piling risk assessment will be completed.

Materials are anticipated to include steel, timber and metal and those associated with the construction of warehouses. Where possible, materials will be sourced from local construction companies to reduce the need for deliveries and transportation times. An opportunity exists to source materials from within the STDC area and its existing manufacturers and steel works.

Building materials will be stored at the on-site compound and they will be ordered when each warehouse is constructed to avoid the need to store excess materials on site.

The construction of each building will require the use of large cranes, tower/mobile cranes, scaffolding and hoists.

All construction works will be designed to meet engineering and safety standards. All works will be coordinated daily to ensure the safety and wellbeing of personnel on site.

3.3.3 Site Specific and Environmental Control Measures

Site specific control measures will be implemented throughout the construction process. Those relevant include:

- Hours of work are anticipated to cover 24 hours a day, 7 days a week. The construction hours have been chosen to accord with the construction and operation hours of surrounding uses. An extension beyond typical construction hours will allow the construction phase of the development to be brought forward at a faster phase, thereby reducing the time for temporary impacts associated with this phase of the development; and
- Best practice construction techniques and methods will be adopted and these will be detailed in a Construction Environmental Management Plan ('CEMP'). These measures will be agreed between all technical consultants, including a suitably qualified ecologist.

3.3.4 Operation

The access road into the site will operate as normal and provide ingress and egress to the development. Offices and industrial buildings/manufacturing facilities will be present on site, however detail is not available at this stage.

Relevant components of the operation of the proposed development site are likely to include:

- increase in road traffic from staff/personnel vehicles;
- provision of operational lighting for on-site safety and general security;
- movement of operational machinery/vehicles throughout the site; and
- movement of staff/personnel within the site.

4 Stage 1 – Screening

4.1 Methodology

4.1.1 Desk Study and Evidence Gathering

In order to understand the potential implications for internationally important sites from the proposed development, it is necessary to identify those sites that are located close to the proposed development or provide a pathway for effect on internationally important sites.

All internationally important sites within a 20km radius of the proposed development were identified (Appendix C). Once these internationally important sites and the pathway for an effect had been identified, the pathway was investigated further through a desk study review. The ecological data available was used to support the assessment to determine the likelihood for a significant effect.

The ecological data reviewed to inform Stage 1 of the HRA process comprised:

- Natural England's Departmental Brief for the proposed extension to the Teesmouth and Cleveland proposed SPA (pSPA) and proposed Ramsar sites⁴. *Note:* These sites have now been fully adopted, however the Departmental Brief documents still contain the most up to date information pertaining to the SPA and Ramsar sites;
- Internationally important designated site data sheets available from the Joint Nature Conservation Committee (JNCC)^{5, 6, 7, 8, 9, 10};
- Updated information regarding internationally important designated sites available from Natural England's Designated Sites View¹¹;

¹¹ NE. Designated Sites View: Northumbria Coast Special Protection Area. Available:

⁴ NE (2018) Departmental Brief: Teesmouth and Cleveland Coast potential Special Protection Area (pSPA) and Ramsar. Available: <u>https://consult.defra.gov.uk/natural-england-</u> marine/teesmouth-and-cleveland-coast-potential-sp/ Accessed 2 March 2020.

⁵ JNCC. North York Moors Special Area of Conservation Information Sheet. Available: <u>https://sac.jncc.gov.uk/site/UK0030228</u> Accessed 9 June 2020.

⁶ JNCC. North York Moors Special Protection Area Information Sheet. Available: https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9006161.pdf. Accessed 9 June 2020.

⁷ JNCC. Durham Coast Special Area of Conservation Standard Data Form. Available: <u>http://jncc.defra.gov.uk/ProtectedSites/SACselection/n2kforms/UK0030140.pdf</u> Accessed 9 June 2020.

⁸ JNCC. Northumbria Coast Special Protection Area Standard Data Form. Available:

http://jncc.defra.gov.uk/pdf/SPA/UK9006131.pdf Accessed 9 June 2020.

⁹ JNCC. Northumbria Coast Ramsar Information Sheet. Available:

http://jncc.defra.gov.uk/pdf/RIS/UK11049.pdf Accessed 9 June 2020.

¹⁰ JNCC. *Castle Eden Dene Special Area of Conservation Standard Data Form*. Available: <u>https://sac.jncc.gov.uk/site/UK0012768</u> Accessed 28 February 2020.

https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK900613 1 Accessed 9 June 2020.

- The findings of three breeding bird surveys undertaken by the Industry Nature Conservation Association (INCA) at the proposed development site during May and June 2020 (Appendix D);
- Desk Study information collated in May 2020 including records of legally protected or notable species within 2km of the proposed development site requested from the Environmental Records Information Centre North East (ERIC NE); and
- Wetland Bird Survey (WeBS) data obtained from the British Trust for Ornithology (BTO) including: Tees Estuary low tide count data (2012 & 2018), and five-year summary data for two recording sections: Tees Estuary opposite Smith Dock and Hargreaves Quarry (2012-2017) and Bran Sands South (2014-2019). The WeBS data does not cover the extent of the proposed development site.

4.1.2 Consultation

At this stage of assessment, it has been assumed that development of the site will be cut and fill neutral. However it should be noted that if there is the potential that soils from the proposed development site will be taken and stored somewhere else within the STDC site, consultation was undertaken by INCA in July 2019 with Andrew Whitehead from Natural England to determine if there was the potential for likely significant effects from temporary storage of materials in six locations across wider site owned by STDC.

In June 2020, Adrian Miller (RCBC Environment Officer) and Andy Whitehead (Natural England) were contacted to discuss the scope of the Ecological Impact Assessment (EcIA) and HRA.

4.1.3 Zone of Influence

This report considers whether any internationally important sites within approximately 20km of the proposed development could be potentially be affected by it. This distance from the proposed development is precautionary and was determined by ecological and construction effect features, such as species mobility distances and distances at which air and hydrological pollution events could have a significant effect.

4.1.4 In-combination Assessment

Due to the significance of effects identified at the Screening stage of assessment, an in-combination assessment has been undertaken at the AA stage only (Section 8.1.1).

4.1.5 Limitations and Assumptions

This assessment has utilised the information available at the time of writing. Itshould be noted that as the scheme is currently in outline assumptions have been made where detailed scheme information is not yet defined. These assumptions and the absence of relevant data may result in limitations to the findings, however professional judgement has been applied to the assessment (Section 4.1.6).

As full details of the proposed development are not currently available, this assessment is based on the following assumptions:

- all existing habitat on site will be lost;
- no habitats will be replaced and the proposed development site will be characterised entirely by hardstanding and buildings/structures; and
- no development will take place within the River Tees channel, with all construction limited to land within the red line boundary (Appendix A).

The following technical survey information is not available at the time of writing but should be collected at the earliest opportunity in order to provide a more detailed assessment of the potential effects and to refine the recommended mitigation measures:

- full suite of breeding bird survey data for the proposed development site (three surveys have been undertaken to date, in May and June 2020);
- passage/wintering bird survey data for the proposed development site and adjacent sections of the River Tees (which forms part of the Teesmouth and Cleveland Coast SPA and Ramsar); and
- detailed noise assessment to predict the equivalent continuous noise levels (LAeq) during key phases of work.

4.1.6 Use of Professional Judgement

Professional judgement has been used in this assessment where specific guidance or detailed project information was not available. Where there is insufficient information regarding the likelihood of qualifying interests being present, or of the risk of impacts, the assessment uses the precautionary principle to inform the judgement. The precautionary principle has been applied to ensure that any assessment maintains an appropriate and reasonable level of caution.

Where available, anecdotal evidence from INCA regarding use of the proposed development site by qualifying features of the SPA has been taken into account in the assessment as INCA have had a consistent presence on the proposed development site for several years.

Professional judgement has been applied to the assessment where insufficient information about the elements and interests is available, with consideration of the following factors:

- the vulnerability/sensitivity of the receiving feature(s) of interest;
- when the risk of effects is likely to occur (e.g. construction and/or operation);
- the likely geographical extent of the effects; and
- likelihood of significant effects occurring based on previous experience with similar elements, where available.

5 Internationally Important Sites under Consideration

Eight internationally important sites are present within 20km of the proposed development, including three Special Protection Areas (SPA), three SACs, and two Ramsar sites.

These are summarised in Table 1, with locations of these internationally important sites illustrated in Appendix C^{12} .

Internationally Important Site	Designation	Distance from Proposed Development	Reason for Designation
Teesmouth and Cleveland Coast	adjacen propose develop site, alo north-w	Immediately adjacent to proposed development site, along north-western boundary	The extensions to the Teesmouth and Cleveland Coast SPA were formally classified on 16 January 2020. The formal designation and boundaries of the extension have not been released but are detailed in the Consultation Report ¹³ . Site supports internationally important population of breeding little tern (<i>Sterna</i> <i>albifrons</i>), common tern (<i>Sterna</i> <i>hirundo</i>), and pied avocet (<i>Recurvirostra</i> <i>avosetta</i>). Site supports internationally important population of non-breeding Sandwich
			tern (Thalasseus sandvicensis), ruff (Calidris pugnax), red knot (Calidris canutus) and common redshank (Tringa totanus).
			Site supports an internationally important seabird assemblage , regularly used by more than 20,000 wintering waterbirds.
			See Section 5.1.
	Ramsar	250m north- west	The extensions to the Teesmouth and Cleveland Coast Ramsar were formally classified on 16 January 2020. The formal designation and boundaries of the extension have not been released but are detailed in the Consultation Report ¹³ .

Table 1: Internationally important sites within 20km of the proposed development site.

¹³ Natural England (2019) *Teesmouth and Cleveland Coast potential Special Protection Area* (*pSPA*) and proposed Ramsar Site: Report of Consultation by Natural England, 2019. <u>https://consult.defra.gov.uk/natural-england-marine/teesmouth-and-cleveland-coast-potential-</u> sp/supporting documents/Teesmouth%20and%20Cleveland%20Coast%20Consultation%20Repor

<u>sp/supporting_documents/Teesmouth%20and%20Cleveland%20Coast%20Consultation%20Repo</u> <u>t%20February%202020.pdf</u>. Accessed 9 June 2020.

¹² The updated boundary for the Teesmouth and Cleveland Coast SPA was not available at the time of writing this report. The Defra Consultation Report was reviewed to understand the new extent of the SPA.

Internationally Important Site	Designation	Distance from Proposed Development	Reason for Designation
			Wetland of international importance. Designated under Ramsar criterion 5 ¹⁴ for assemblages of international important numbers of waterbirds and Criterion 6 for regularly supporting 1% of the individuals in a population of more than one species of waterbird. The site is also designated for peak counts
			of common redshank in spring and autumn, and wintering red knot .
	<u></u>		See Section 5.2.
North York Moors	SAC	9.6km south	Site supports the Annex I habitats : Northern Atlantic wet heaths with cross- leaved heath (<i>Erica tetralix</i>); and European dry heaths.
			Site supports the Annex I habitat , but is not a primary reason for selection of the site: Blanket bogs.
	CD 4	0.(1	See Section 5.3.
	SPA	9.6km south	Site supports internationally important population of breeding merlin (<i>Falco</i> <i>columbarius</i>), and golden plover (<i>Pluvialis apricaria</i>).
			See Section 5.4.
Durham Coast	SAC	15.5km north	Site supports the Annex I habitat : Vegetated sea cliffs of the Atlantic and Baltic Coasts. See Section 5.6.
Northumbria Coast	SPA	15.5km north	Site supports internationally important population of breeding Arctic tern (<i>Sterna paradisaea</i>) and little tern (<i>Sterna albifrons</i>).
			Site supports internationally important population of non-breeding purple sandpiper (<i>Calidris maritima</i>) and turnstone (<i>Arenaria interpres</i>). See Section 5.6.
	Ramsar	15.5km north	Site supports internationally important population of breeding little tern . Site supports internationally important population of non-breeding purple sandpiper and turnstone . See Section 5.7.

¹⁴ Ramsar Convention of Wetlands (1971) *The Ramsar Sites Criteria*.

https://www.ramsar.org/sites/default/files/documents/library/ramsarsites_criteria_eng.pdf Accessed 9 June 2020.

Internationally Important Site	Designation	Distance from Proposed Development	Reason for Designation
Castle Eden Dene	SAC	19.1km north- west	Site supports the Annex I habitat : Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco- Brometalia</i>). See Section 5.8.

5.1 Teesmouth and Cleveland Coast SPA

The extensions to the Teesmouth and Cleveland Coast SPA were formally classified on 16 January 2020. The SPA is now 12,210.62ha in size. The following alterations were made to the final SPA boundary¹³:

- Exclusion of the upper reaches of the Lackenby Channel (Drainage Cut), Billingham Beck up to the A1032 road bridge, Normanby Beck, Ormesby Beck, Old River Tees, The Fleet and Stainsby Beck watercourses within the SPA only (as watercourses are not included within Ramsar designations);
- Exclusion of the Warrenby Reedbeds area of Coatham Marsh from SPA and Ramsar; and
- Minor amendments to the boundary to address mapping errors and anomalies between the SPA and Ramsar and the underlying Site of Specific Scientific Interest (SSSI) of the same name.

The Teesmouth and Cleveland Coast SPA qualifies under Article 4.1 by regularly supporting populations of international importance of the following Annex I species:

- Little tern, of which a mean of 81 breeding pairs are present within the site, representing at least 4.3% of the breeding population in Great Britain;
- **Common tern**, of which a mean of 399 breeding pairs are present within the site, representing at least 4.0% of the breeding population of Great Britain; and
- **Pied avocet**, of which a mean of 18 breeding pairs are present within the site, representing at least 1.2% of the breeding population of Great Britain.

Under Article 4.2, qualifying overwintering species comprise:

- Sandwich tern, of which a mean of 1,900 individuals are present within the site over winter, representing at least 1.3% of the Western Internationally important/Western African wintering population;
- **Ruff**, of which a mean of 19 individuals are present within the site over winter, representing at least 2.4% of the Great Britain wintering population;
- **Red knot**, of which a mean of 5,509 individuals are present within the site over winter, representing at least 1.6% of the North-eastern Canadian/Greenlandic/Icelandic/UK wintering population; and

• **Common redshank**, of which a mean of 1,648 individuals are present within the site over winter, representing at least 1.1% of the East Atlantic wintering population.

Teesmouth and Cleveland Coast SPA also qualifies under Article 4.3 by regularly supporting a waterbird assemblage of international importance (i.e. more than 20,000 individuals), as the site supports an average of 26,014 individuals. The assemblage includes a wide range of wintering and passage waterbird species, including those of European importance that qualify as SPA features in their own right. The current waterbird assemblage includes the following species: knot, redshank, cormorant *Phalacrocorax carbo*, shelduck *Tadorna tadorna*, teal *Anas crecca*, shoveler *Anas clypeata* and sanderling *Calidris alba*.

5.2 Teesmouth and Cleveland Coast Ramsar

The extensions to the Teesmouth and Cleveland Coast Ramsar was formally classified on 16 January 2020. The Ramsar is 2,065.21ha in size. See Section 5.1 for more detail on final alterations to the SPA and Ramsar boundaries¹³.

Ramsar sites do not include watercourses or marine areas themselves, and therefore only overlap with the terrestrial habitat designated under the SPA site.

Teesmouth and Cleveland Coast proposed Ramsar fulfils Ramsar Criterion 6, as it supports particular species occurring at levels of international importance:

- Little tern, of which a mean of 81 breeding pairs are present within the site, representing at least 4.3% of the breeding population in Great Britain;
- **Common tern**, of which a mean of 399 breeding pairs are present within the site, representing at least 4.0% of the breeding population of Great Britain;
- **Pied avocet**, of which a mean of 18 breeding pairs are present within the site, representing at least 1.2% of the breeding population of Great Britain;
- Sandwich tern, of which a mean of 1,900 individuals are present within the site over winter, representing at least 1.3% of the Western Internationally important/Western African wintering population;
- **Ruff**, of which a mean of 19 individuals are present within the site over winter, representing at least 2.4% of the Great Britain wintering population;
- **Red knot**, of which a mean of 5,509 individuals are present within the site over winter, representing at least 1.6% of the North-eastern Canadian/Greenlandic/Icelandic/UK wintering population; and
- **Common redshank**, of which a mean of 1,648 individuals are present within the site over winter, representing at least 1.1% of the East Atlantic wintering population.

Teesmouth and Cleveland Coast proposed Ramsar fulfils Ramsar Criterion 5, as it regularly supports a waterbird assemblage of international importance (i.e. more

than 20,000 individual waterbirds). The designated site supports an average of 26,786 individuals¹⁵.

5.3 North York Moors SAC

North York Moors SAC covers 44,053ha and is designated for its Annex I habitat, **Northern Atlantic wet heaths with** *Erica tetralix*, the largest continuous tract of upland heather moorland in England. This Annex I habitat is found on the eastern and northern moors where the soil is less free draining. On the western, southern and central moors where the soil is free draining, the site contains the Annex I habitat, internationally important dry heaths.

The site also contains blanket bogs, which are recognised as an Annex I qualifying feature, but not a primary reason for selection of this SAC site.

5.4 North York Moors SPA

The North York Moors SPA covers 44,087ha and contains the largest continuous tract of heather moorland in England¹⁶.

The SPA qualifies under Article 4.1 by regularly supporting populations of Internationally important importance of the following Annex I species:

- Merlin of which a mean of 35-40 breeding pairs are present within the site, representing at least 2.7% of the breeding population in Great Britain; and
- **Golden plover** of which a mean of 526-706 breeding pairs are present within the site, representing at least 2.3% of the breeding population in Great Britain.

In addition, this site supports a rich upland breeding bird assemblage of shorteared owl (*Asio flammeus*), peregrine (*Falco peregrinus*) and hen harrier (*Circus cyaneus*) (all Annex I species), together with common redshank, red grouse (*Lagopus lagopus scoticus*) and a nationally important population of curlew (*Numenius arquata*).

5.5 Durham Coast SAC

Durham Coast SAC covers 390ha and is designated for the presence of one Annex I habitat: **Vegetated sea cliffs of the Atlantic and Baltic Coasts**.

Durham Coast SAC is the only example of vegetated sea cliffs on magnesian limestone exposures in the UK. These cliffs extend along the North Sea coast for over 20 km from South Shields southwards to Blackhall Rocks. Their vegetation is unique in the British Isles and consists of a complex mosaic of paramaritime,

 ¹⁵ Greylag goose (*Anser anser*) and mute swan (*Cygnus olor*) are not included in the SPA assemblage because they are not migratory populations, hence the difference in average number of waterbirds supported between the Teesmouth and Cleveland Coast SPA and Ramsar sites.
¹⁶ Natural England. Internationally important Site Conservation Objectives North York Moors SPA (UK9006161) <u>http://publications.naturalengland.org.uk/publication/6207512114102272</u> Accessed 21 May 2020.

mesotrophic and calcicolous grasslands, tall-herb fen, seepage flushes and windpruned scrub.

Within these habitats rare species of contrasting phytogeographic distributions often grow together forming unusual and species-rich communities of high scientific interest. The communities present on the sea cliffs are largely maintained by natural processes including exposure to sea spray, erosion and slippage of the soft magnesian limestone bedrock and overlying glacial drifts, as well as localised flushing by calcareous water.

5.6 Northumbria Coast SPA

Northumbria Coast SPA covers 1,097ha and includes much of the coastline between the Tees and Tweed estuaries. The site consists mostly of discrete sections of rocky shore with associated boulder and cobble beaches, artificial pier structures and small sections of sandy beach.

Northumbria Coast SPA qualifies under Article 4.1 by regularly supporting populations of Internationally important importance of the following Annex I species:

- Arctic tern, of which a mean of 1,549 breeding pairs are present within the site, representing at least 2.92% of the breeding population in Great Britain¹⁷; and
- Little tern, of which a mean of 40 breeding pairs are present within the site, representing at least 1.7% of the breeding population in Great Britain.

Under Article 4.2, qualifying overwintering species comprise:

- **Purple sandpiper**, of which a mean of 787 individuals are present within the site over winter, representing at least 1.6% of the Eastern Atlantic wintering population; and
- **Turnstone**, of which a mean of 1,739 individuals are present within the site over winter, representing at least 2.6% of the Western Palearctic wintering population.

5.7 Northumbria Coast Ramsar

Northumbria Coast Ramsar covers 1,108ha and includes much of the coastline between the Tees and Tweed estuaries. The Ramsar site covers much the same habitat included within the Northumbria Coast SPA.

Northumbria Coast Ramsar fulfils Ramsar criterion 6, as it supports particular species occurring at levels of international importance:

• Little tern, of which a mean of 40 breeding pairs are present within the site, representing at least 1.7% of the breeding population in Great Britain;

¹⁷ Northumbria Coast SPA was amended on 29 January 2017 to include Arctic tern as a Qualifying Feature of the SPA.

- **Purple sandpiper**, of which a mean of 787 individuals are present within the site over winter, representing at least 1.6% of the Eastern Atlantic wintering population; and
- **Turnstone**, of which a mean of 1,739 individuals are present within the site over winter, representing at least 2.6% of the Western Palearctic wintering population.

5.8 Castle Eden Dene SAC

Castle Eden Dene SAC covers 189ha and is designated for the presence of one Annex I habitat: **Yew woods of the British Isles**.

Castle Eden Dene SAC represents the most extensive northerly native occurrence of yew woodland in the UK. Extensive yew groves are found in association with ash-elm (*Fraxinus excelsior – Ulmus* spp.) woodland. The designated site is the only site selected for yew woodland on magnesian limestone in North East England.

5.9 **Conservation Objectives**

5.9.1 SPA and Ramsar Sites

The conservation objectives of Teesmouth and Cleveland Coast SPA¹⁸ and Ramsar¹⁹, North York Moors SPA²⁰ and Northumbria Coast SPA²¹ are to "*ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring*:

- the extent and distribution of the habitats of the qualifying features;
- the structure and function of the habitats of the qualifying features;
- the supporting processes on which the habitats of the qualifying features rely;
- the population of each of the qualifying features; and,
- the distribution of the qualifying features within the site."

http://publications.naturalengland.org.uk/publication/6619918699069440 Accessed 13 May 2020. ¹⁹ The conservation objectives of the Teesmouth and Cleveland Coast SPA and Ramsar are

considered to be the same as the objectives given for the pSPA and pRamsar. 20 Natural England European Site Conservation Objectives for North York Moors Special Protection Area Site Code: UK9006161. Available at:

https://infrastructure.planninginspectorate.gov.uk/wp-

¹⁸ Natural England. Internationally important Site Conservation Objectives for Teesmouth and Cleveland Coast pSPA. Available:

content/ipc/uploads/projects/EN010082/EN010082-000444-North-York-Moors-SPA-CO.pdf Accessed 21 June 2020.

²¹ Natural England. Internationally important Site Conservation Objectives for Northumbria Coast SPA. Available: <u>http://publications.naturalengland.org.uk/publication/6372874327687168</u> Accessed 13 May 2020.

Conservation objectives of Northumbria Coast Ramsar and Teesmouth and Cleveland Coast Ramsar¹⁹ sites are not readily available. However, the overarching strategic plan for Ramsar Wetlands²² lists the following strategic goals and targets (Table 2).

Table 2: Ramsar Convention strategic goals and targets.

Target	Description		
Goal 1: Ad	dressing the Drivers of Wetland Loss and Degradation		
Target 1	Wetland benefits are featured in national/local policy strategies and plans relating to key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture, fisheries at the national and local level.		
Target 2	Water use respects wetland ecosystem needs for them to fulfil their functions and provide services at the appropriate scale inter alia at the basin level or along a coastal zone.		
Target 3	The public and private sectors have increased their efforts to apply guidelines and good practices for the wise use of water and wetlands.		
Target 4	Invasive alien species and pathways of introduction and expansion are identified and prioritized, priority invasive alien species are controlled or eradicated, and management responses are prepared and implemented to prevent their introduction and establishment.		
Goal 2: Ef	fectively Conserving and Managing the Ramsar Site Network		
Target 5	The ecological character of Ramsar sites is maintained or restored, through effective planning and integrated management.		
Target 6	There is a significant increase in area, numbers and ecological connectivity in the Ramsar Site network, in particular under-represented types of wetlands including in under-represented ecoregions and Transboundary Sites.		
Target 7	Sites that are at risk of change of ecological character have threats addressed.		
<u> </u>	sely Using All Wetlands		
Target 8	National wetland inventories have been initiated, completed or updated and disseminated and used for promoting the conservation and effective management of all wetlands.		
Target 9	The wise use of wetlands is strengthened through integrated resource management at the appropriate scale, inter alia, within a river basin or along a coastal zone.		
Target 10	The traditional knowledge, innovations and practices of indigenous peoples and local communities relevant for the wise use of wetlands and their customary use of wetland resources are documented, respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention, with a full and effective participation of indigenous peoples and local communities at all relevant levels.		
Target 11	Wetland functions, services and benefits are widely demonstrated, documented and disseminated.		
Target 12	Restoration is in progress in degraded wetlands, with priority to wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods and/or climate change mitigation and adaptation.		
Target 13	Enhanced sustainability of key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture and fisheries, when they affect wetlands, contributing to biodiversity conservation and human livelihoods.		

²² The Ramsar Convention 4th Strategic Plan 2016-2024. Available at:

https://www.ramsar.org/sites/default/files/documents/library/4th_strategic_plan_2016_2024_e.pdf Accessed 22/06/20.

5.9.2 SAC Sites

The conservation objectives of North York Moors SAC²³, Durham Coast SAC²⁴ and Castle Eden Dene SAC²⁵ are to "ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- *the extent and distribution of qualifying natural habitats;*
- *the structure and function (including typical species) of qualifying natural habitats; and*
- the supporting processes on which the qualifying natural habitats rely."

²³ Natural England. Internationally important Site Conservation Objectives for North York Moors SAC. Available: <u>http://publications.naturalengland.org.uk/publication/6048216608931840</u> Accessed 13 May 2020.

²⁴ Natural England. Internationally important Site Conservation Objectives for Durham Coast SAC. Available: http://publications.naturalengland.org.uk/publication/4949450761961472 Accessed 13 May 2020.

²⁵ Natural England. *European Site Conservation Objectives for Castle Eden Dene SAC*. Available: http://publications.naturalengland.org.uk/publication/5362023844020224

6 Checking for Likelihood of a Significant Effect

This initial assessment considers whether the proposed development is directly connected with, or necessary to, the management of the internationally important sites listed in Table 1 for nature conservation. It also checks whether the proposed development would be likely to have an effect and whether the effect could be significant.

Each relevant internationally important site is considered in turn in Sections 6.1 to 6.4.

6.1 Teesmouth and Cleveland Coast SPA and Ramsar

The proposed development is not directly connected with, or necessary to, the management of this site for nature conservation.

The proposed development will not result in any direct land-take of the Teesmouth and Cleveland Coast SPA and Ramsar through either construction or operational phases. Construction is limited to the proposed development site boundary with no permanent or temporary land-take from the internationally important site required to facilitate construction or operation.

The habitats within the proposed development site include areas of open water, saltmarsh, and intertidal mud. The wintering bird assemblage utilising the proposed development site can only be estimated using desk study information, as no wintering bird surveys have been undertaken at the time of writing due to the timing of this planning application submission.

Anecdotally²⁶, common redshank (which qualify as a non-breeding feature of the SPA/Ramsar) have been recorded using these habitats with The Slems (a wetland area in the south-eastern corner of the proposed development site) in limited numbers. It is likely other wintering bird species that contribute towards the SPA and Ramsar wintering waterbird assemblage are present within The Slems, albeit in relatively low abundance. Shelduck (part of the waterbird assemblage qualifying feature) have been recorded breeding within the proposed development site. Up to four confirmed breeding pairs were present during surveys in 2020, three of these being present within the Cleveland Channel and Lackenby Channel in the south-east of the proposed development. It is considered likely that shelduck would consistently breed within the proposed development site due to the suitability of habitat.

Breeding bird surveys confirmed other waterbird species breeding within the proposed development site that would contribute towards the Teesmouth and Cleveland Coast SPA and Ramsar waterbird assemblages. These include mallard (*Anas platyrhynchos*), moorhen (*Gallinula chloropus*), reed bunting (*Emberiza schoeniclus*), and reed warbler (*Acrocephalus scirpaceus*). Grey heron (*Ardea*

²⁶ Per comms with INCA

cinerea), herring gull (*Larus argentatus*), and lesser black-backed gull (*Larus fuscus*) were also present within the proposed development site.

At both the construction phase of the proposed development, the loss of habitats within the proposed development site has the potential to impact on breeding waterbirds designated under the waterbird assemblage and on common redshank, which are designated as a non-breeding qualifying feature.

It is considered unlikely that the proposed development site would support breeding habitat for the qualifying, breeding features of the SPA (little tern, common tern and pied avocet). The main breeding ground for little tern is present at Crimdon Denemouth, approximately 14.5km north of the proposed development site²⁷. The main common tern breeding colony is located at Saltholme (approximately 1.8km west). The vast majority of common tern utilise marine areas and the Teesmouth area for foraging, specifically the Seaton-on-Tees Channel within Teesmouth²⁸. Pied avocet within the SPA and Ramsar site are mostly restricted to Greatham Creek (approximately 3.3km north-west) and Greenabella Marsh (approximately 4.4km north-west)⁴.

During construction there is the potential for an accidental spillage event, specifically spillage of oil or powdery type construction material entering the adjacent River Tees and thus the Teesmouth and Cleveland Coast SPA and Ramsar. There is potential for this to occur where works are taking place in the north-western part of the proposed development site, which is adjacent to the River Tees. The likelihood of a pollution/spillage event affecting the River Tees (and thus the Teesmouth and Cleveland Coast SPA and Ramsar) reduces with distance of the works from the River Tees.

Any accidental spillage events or contamination of the river could disturb and/or destroy the habitats used by the qualifying features for foraging, commuting and/or roosting. A spillage could also kill invertebrate species within the SPA/Ramsar site that are a foraging resource for the qualifying features.

Due to the proximity of the proposed development site to the SPA and Ramsar, there is potential for noise and visual disturbance of the qualifying features. This could occur where the qualifying species are utilising the sections of the SPA/Ramsar in proximity to the proposed development site, for foraging, commuting and/or roosting. Noise disturbance has potential to occur during piling works in particular. Visual disturbance may occur as a result of large machinery such as tower cranes being utilised on site.

The waterbirds for which the SPA is designated are known to roost on saltmarsh, particularly at Greatham Creek and Seal Sands Peninsula, rocky shores and slag

²⁷ Natural England Conservation Advice for Marine Protected Areas: Teesmouth and Cleveland Coast SPA. Available at:

https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK900606 1&SiteName=teesmouth&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&HasCA= 1&NumMarineSeasonality=4&SiteNameDisplay=Teesmouth%20and%20Cleveland%20Coast%2 0SPA. Accessed 29/06/20.

²⁸ JNCC (2016) Species Accounts - Species List: Redshank (non-breeding). Available at: <u>https://webarchive.nationalarchives.gov.uk/20190307214632/http://jncc.defra.gov.uk/page-1418-theme=default</u>. Accessed 22/06/20.

training walls, for example at Seaton Snook and Bran Sands, and on the upper mudflats and sandflats at Seal Sands, North Tees Mudflat, Bran Sands, Hartlepool North Sands and North Gare Sands.²⁹ Many waterbirds feed on invertebrates including crustaceans, molluscs and worms mainly in the intertidal mudflats and sandflats, rocky shores and saltmarshes within the estuary.

A narrow strip of intertidal mudflat is present within the river channel adjacent to the proposed development site. Wintering bird surveys have not been undertaken to determine the species assemblage utilising this area of mudflat, however based on the limited size of habitat and availability of more extensive areas of mudflat in the surrounding area, it is considered unlikely that qualifying features of the SPA/Ramsar use this area in significant numbers.

During operation, there is the potential for an accidental spillage event, specifically spillage of oil or fuel from vehicles. Any accidental spillage events or contamination of the river could disturb and/or destroy the habitats used by the qualifying features for foraging, commuting and/or roosting. A spillage could also kill invertebrate species within the SPA/Ramsar site that are a foraging resource for the qualifying features.

Coastal species

Of the qualifying features of these European sites, several species are exclusively dependent upon coastal and marine habitats for foraging and commuting and are strictly coastal breeders:

- Sandwich tern within the Teesmouth and Cleveland Coast SPA extent are mostly present within Coatham Sands (approximately 3.6km north-east of the proposed development), North Gare (approximately 3.3km north), Seal Sands (approximately 2.2km north) and other areas around the estuary mouth and feed within the river at Teesmouth⁴.
- Little tern are found almost exclusively in the very northern extent of the European sites at Crimdon Dene (approximately 11km north)⁴, distant from the proposed development.³⁰
- Pied avocet present within the European site extent are mostly restricted to Greatham Creek (approximately 3.3km north-west) and Greenabella Marsh (approximately 4.4km north-west)⁴, distant from the proposed development.
- Red knot tend to frequent large muddy estuaries around the coast. Within the European site extents, red knot are mostly confined to the estuary at Seal Sands, and use coastal sites subject to low human disturbance, such as Coatham Sands, Redcar Rocks (approximately 7.2km east) and around Hartlepool Headland (approximately 10km north).

²⁹ JNCC (2016) *Species Accounts - Species List: Redshank (non-breeding)*. Available at: <u>https://webarchive.nationalarchives.gov.uk/20190307214632/http://jncc.defra.gov.uk/page-1418-theme=default</u>. Accessed 22/06/20.

³⁰ Natural England (2016) Natural England Commissioned Report NECR212: Tern verification surveys for marine sites. Available:

http://publications.naturalengland.org.uk/file/4504267260428288. Accessed 22/06/20

None of these species have been reported within the Wetland Bird Survey (WeBS) data for *Tees Estuary opposite Smith Dock and Hargreaves Quarry*. This recording section is located immediately adjacent to the proposed development site.

At *Bran Sands South*, located approximately 0.8km north of the proposed development site, sandwich tern only have been recorded. The five-year average monthly counts for sandwich tern in this recording section range from 0 to 3. The five-year peak monthly counts for this species range from 0 to 12 (recorded in June 2016).

The national and international importance of Bran Sands South for each species is represented by the percentage of the relevant threshold level in operation during 2018/2019 based on the five-winter mean of peak counts for each species. For example, 50% would indicate that the five-winter mean of peak counts is half the threshold level. It follows that values of 100% or higher indicate nationally or internationally important numbers of a given species occur on the site.

For sandwich tern, the autumn peak was calculated as 4% of the national threshold and the spring peak was calculated as 6% of the national threshold. The annual peak compared with the national threshold was 8%. The peak counts for sandwich tern were calculated as 0% of the international threshold. These figures are significantly lower than the value that would indicate nationally or internationally important numbers of sandwich tern are present in proximity to the proposed development site.

There is no direct impact upon habitat that would support these four species as a result of construction of the proposed development. This is due to the distance between the proposed development site and the locations in which sandwich tern, little tern, pied avocet, and red knot occur, and also due to the lack of marine and coastal habitats within the proposed development site (even prior to development) that would support foraging, commuting, roosting and/or nesting of these species.

Other species

- Common tern and common redshank are known to occur within the River Tees channel, using it for foraging and commuting purposes. The main common tern breeding colony is located at Saltholme (approximately 1.8km west). The vast majority of common tern utilise marine areas and the Teesmouth area for foraging, specifically the Seaton-on-Tees Channel within Teesmouth³⁰.
- Anecdotally, common redshank are reported to utilise The Slems wetland area within the proposed development site, specifically the open water features and intertidal mud habitats.
- Ruff are present in low numbers (19 individuals) within the European sites, however this equates to 2.4% of the Great Britain population of ruff⁴. Ruff occur within shallow waterbodies across the European site extents, in particular at Saltholme. Ruff are a rare breeder within the UK, with only several reported breeding pairs located in Norfolk (south-east England).

Common tern and common redshank have been recorded in low numbers within the WeBS data for *Tees Estuary opposite Smith Dock and Hargreaves Quarry*.

The five-year average monthly counts for common tern range from 0 to 3. The five-year peak monthly counts for this species range from 0 to 6 (recorded in July 2014).

The autumn peak compared with the national threshold for common tern was calculated as 8% and the spring peak was calculated as 6% of the national threshold. The annual peak compared with the national threshold was calculated as 10%. The peak counts for common tern were calculated as 0% of the international threshold. These figures are significantly lower than the value that would indicate nationally or internationally important numbers of common tern are present in proximity to the proposed development site.

The five-year average monthly counts for common redshank range from 0 to 14. The five-year peak monthly counts for this species range from 0 to 46 (recorded in August 2016).

The autumn and winter peaks compared with the national threshold for common redshank were calculated as 1% and the spring peak was calculated as 0% of the national threshold. The annual peak compared with the national threshold was calculated as 2%. The autumn peak compared with the international threshold for common redshank was calculated as 1% and the winter peak was calculated as 0% of the international threshold. The spring peak compared with the national threshold for common redshank was calculated as 1% and the winter peak was calculated as 0% of the international threshold. The spring peak compared with the national threshold was calculated as 0% and the annual peak was 1% of the international threshold. These figures are significantly lower than the value that would indicate nationally or internationally important numbers of common redshank are present in proximity to the proposed development site. However, they have been reported anecdotally to utilise habitat within the proposed development site.

Common tern and common redshank have also been recorded in low numbers within the WeBS data for *Bran Sands South*.

The five-year average monthly counts for common tern range from 0 to 6. The five-year peak monthly counts for this species range from 0 to 30 (recorded in September 2015).

The autumn peak at *Bran Sands South* compared with the national threshold for common tern was calculated as 24% and the spring peak was calculated as 10% of the national threshold. The annual peak compared with the national threshold was calculated as 28%. The autumn peak compared with the international threshold for common tern was calculated as 1% and the spring peak was calculated as 0% of the international threshold. The annual peak of common tern at *Bran Sands South* was 1% of the international threshold.

The five-year average monthly counts for common redshank range from 1 to 92. The five-year peak monthly counts for this species range from 3 to 190 (recorded in February 2016).

The autumn peak count of common redshank at *Bran Sands South* compared with the national threshold was calculated as 10% and the winter peak was calculated

as 19% of the national threshold. The spring peak was calculated as 4% and the annual peak compared with the national threshold was calculated as 19%.

The autumn peak compared with the international threshold for common redshank was calculated as 4% and the winter peak was calculated as 7% of the international threshold. The spring peak compared with the national threshold was calculated as 2% and the annual peak was 7% of the international threshold.

There is no direct impact upon habitat that would support these three species as a result of construction of the proposed development. Although common tern and common redshank have been recorded on sections of the River Tees close to the proposed development site, there is no habitat within the proposed development site that would support foraging, commuting, roosting and/or nesting of these species.

Ruff have not been reported within the WeBS data for *Tees Estuary opposite Smith Dock and Hargreaves Quarry* or *Bran Sands South* recording sections. It is therefore considered that ruff are unlikely to be present within the locality of the proposed development.

Summary

Potential impacts upon the Teesmouth and Cleveland Coast SPA and Ramsar are summarised as:

- a) During construction, the loss of habitat within the proposed development site suitable to support foraging, commuting and/or roosting by some qualifying features of the SPA and Ramsar, including the open water habitats, saltmarsh and intertidal mud. *This aspect is scoped into the AA*.
- b) During construction, the risk of loss and/or disturbance of habitats from pollution from within the proposed development site (impacting on the SPA and Ramsar) that support foraging and commuting activities, and/or roosting of the qualifying features. *This aspect is scoped into the AA*.
- c) During construction, the risk of noise/visual disturbance of insignificant numbers of qualifying species utilising the adjacent SPA/Ramsar side for foraging and commuting activities, and/or roosting. *This aspect is scoped into the AA*.
- d) During operation, the risk of disturbance and/or loss of habitats from pollution (from within the proposed development site, impacting on the SPA and Ramsar) that support foraging and commuting activities, and/or roosting and nesting of the qualifying features, including the potential displacement of these features. *This aspect is scoped into the AA*.

6.2 North York Moors SAC and SPA

The proposed development is not directly connected with, or necessary to, the management of this site for nature conservation.

The proposed development will not result in any direct loss to the designating features of the North York Moors SAC and SPA through either the construction or operation phases.

Both the North York Moors SAC and SPA are 9.6km south of the proposed development site at their closet point. There are a number of large housing estates, agricultural fields and major roadways between the proposed development site and the designated sites. Construction and operation of the proposed development is therefore highly unlikely to result in direct disturbance of designating features within the SAC and SPA itself. Any possible direct disturbance caused by the proposed development is likely to be attenuated over this distance.

The proposed development works are located within an area that is highly industrialised and regularly active with other works. The proposed development site is considered to contain little to no suitable habitat for the qualifying features (merlin and golden plover) of the North York Moors SPA.

It is therefore considered that there is no impact pathway and the North York Moors SAC and SPA will not be impacted directly or indirectly from the construction or operation of the proposed development site.

No AA of this designated site is required.

6.3 Durham Coast SAC

The proposed development is not directly connected with, or necessary to, the management of this site for nature conservation.

The proposed development will not result in any direct loss to the designating features of the Durham Coast SAC through either the construction or operation phases.

The Durham Coast SAC is over 15km north of the proposed development site. Construction and operation of the proposed development is therefore highly unlikely to result in direct disturbance of the vegetated sea cliffs within the SAC itself.

Any possible indirect disturbance (e.g. pollution) caused by the proposed development is likely to be attenuated over this distance. It is therefore considered that there is no impact pathway and the Durham Coast SAC will not be directly or indirectly impacted from the construction or operation of the proposed development.

No AA of this aspect is required.

6.4 Northumbria Coast SPA and Ramsar

The proposed development is not directly connected with, or necessary to, the management of this site for nature conservation.

The proposed development will not result in any direct loss to the designating features of the Northumbria Coast SPA or Ramsar through either the construction or operation phases.

Both the Northumbria Coast SPA and Ramsar are over 15km north of the proposed development site. Construction and operation of the proposed development is therefore highly unlikely to result in direct disturbance of designating features within the SPA or Ramsar.

Any possible indirect disturbance (e.g. pollution) caused by the proposed development is likely to be attenuated over this distance. It is therefore considered that there is no impact pathway and the Northumbria Coast SPA and Ramsar will not be directly or indirectly impacted from the construction or operation of the proposed development.

No AA of this aspect is required.

6.5 Castle Eden Dene SAC

The proposed development is not directly connected with, or necessary to, the management of this site for nature conservation.

Castle Eden Dene SAC is 19.1km north-west of the proposed development site. It is considered that there will be no direct or indirect impact upon the designating feature of this European site, as a result of construction or operation of the proposed development. This is due to the lack of any potential impact pathways between the proposed development site and this European site.

No AA of this aspect is required.

6.6 **Consultation**

A HRA was undertaken in May 2019 by INCA which assessed the potential impact to the Teesmouth and Cleveland Coast pSPA and Ramsar³¹ from the temporary storage and permanent use of spoil arisings at various locations across the STDC site. As soils from the proposed development site may be stored in one of these six locations, and not within the proposed development site, this HRA was reviewed as part of this assessment.

Six locations were assessed with the closest located approximately 100m from the pSPA, and the other locations between 230m and 1km from the parts of the pSPA which has the potential to provide a significant function for pSPA designating bird species. Any likely significant effects were screened out.

This report was provided to Natural England, with a response received on 1 July 2019, stating that Natural England was satisfied with the assessment and agreed that an AA was not required and that there were no likely significant effects from storage of materials in the six locations. The potential impacts from storage of

³¹ At the time of the INCA 2019 report, the Teesmouth and Cleveland Coast SPA and Ramsar was still classified as a pSPA and Ramsar.

soils in other areas of the STDC site have therefore, not been assessed further in this HRA.

At the time of writing this assessment, no response had been obtained from RCBC.

A consultation meeting was undertaken on 25th June 2020 with Natural England (represented by Andy Whitehead). During this meeting the potential scope of the HRA was discussed in high-level detail, with an indication of the likely scope of the AA provided. At this stage of the project, the HRA had not been fully undertaken and therefore Natural England are expected to provide formal, final comment on receipt of this HRA document.

7 Summary

There are eight internationally important sites present within 20km of the proposed development: the Teesmouth and Cleveland Coast SPA and Ramsar; North York Moors SAC and SPA; Durham Coast SAC; Northumbria Coast SPA and Ramsar; and Castle Eden Dene SAC.

Given the distance and lack of suitable or contiguous habitats for designated bird species within the proposed development site and lack of connectivity, the following internationally important sites have been scoped out of further assessment: North York Moors SAC and SPA; Durham Coast SAC; Northumbria Coast SPA and Ramsar; and Castle Eden Dene SAC.

Possible effects of construction and operation that were considered in relation to their possible impacts on the Teesmouth and Cleveland Coast SPA and Ramsar were those that could involve loss of habitat suitable to support qualifying features, those that could result in pollution and contamination to the estuary, or those that could cause noise/visual disturbance to qualifying features of the site.

Potential impacts upon the Teesmouth and Cleveland Coast SPA and Ramsar are summarised as:

- a) During construction, the loss of habitat within the proposed development site suitable to support foraging, commuting and/or roosting by some qualifying features of the SPA and Ramsar, including the open water habitats, saltmarsh and intertidal mud.;
- b) During construction, the risk of disturbance and/or loss of habitats within the SPA and Ramsar that support foraging, commuting and/or roosting of the qualifying features, due to pollution from within the proposed development site;
- c) During construction, the risk of noise/visual disturbance of small numbers of qualifying species utilising the adjacent SPA/Ramsar site for foraging and commuting activities, and/or roosting; and
- d) During operation, the risk of disturbance and/or loss of habitats that support foraging and commuting activities, and/or roosting of the qualifying features, due to pollution from within the proposed development site.

Following the consultation response from Natural England, the potential impact from soil storage in other areas of the STDC have not been assessed further in this HRA.

8 Stage 2 – Appropriate Assessment

Following the conclusion of potential disturbance or likely significant effects to the Teesmouth and Cleveland Coast SPA and Ramsar in the Screening Stage, further assessment has been undertaken. The following section comprises Stage 2 of the HRA process, the AA.

8.1 Methodology

The purpose of the AA is to undertake an objective scientific assessment of the implications for the internationally important sites' qualifying features potentially affected by the project in light of their conservation objectives. It is a transparent and iterative process, which is fully documented in this report. It provides the information necessary for RCBC to assess whether the project has an adverse effect on the integrity of internationally important sites.

Where significant effects have been identified during screening, or the significance of effects are uncertain, further consideration has been given to the potential for these effects to be of a sufficient scale and magnitude to hinder the features of the internationally important sites from meeting their conservation objectives. This stage in the process also takes account of mitigation measures, which cannot be considered within the Screening stage of the assessment.

Professional judgement (see Section 4.1.6) has been used in the interpretation of results in relation to assessment of effects, the significance of effects and consequences for the conservation objectives of internationally important sites. A precautionary assessment has been applied in line with current guidance, whereby an effect is deemed significant if the effect cannot be ruled out on the basis of objective information.

With respect to Teesmouth and Cleveland Coast SPA and Ramsar, the AA provides an assessment of the effects of the project in relation to the conservation objectives, outlines any mitigation measures included within the proposed development, and then concludes whether the project is considered likely to have an adverse impact on the integrity of Teesmouth and Cleveland Coast SPA and Ramsar.

8.1.1 Other Projects and Plans

The following developments have been considered within the cumulative effects assessment (Table 3).

Address	Application Reference Number	Type of Application	Current Known Status	Description of Development
Grangetown prairie Land East of John Boyle Road and West of Tees Dock Road Grangetown	R/2019/0767 /OOM	Outline	Awaiting determination, target determination date 30.06.2020	Outline application for the construction of an Energy Recovery Facility (ERF) and associated development.
Land at Former South Bank Works; Grangetown Prairie; British Steel and Warrenby Area	R/2019/0427 /FFM	Full	Granted, 25.05.2017	Demolition of structures and engineering operations associated with ground preparation and temporary storage of soils and its final use in the remediation and preparation of land for regeneration and development

Table 3: Schemes included within the cumulative effects assessment.

All other developments in proximity to the proposed development site have been excluded from the cumulative assessment, either due to their distance from the site or due to the absence of effects on the internationally important sites.

8.2 Assessment of Impacts

The construction and operation of the proposed development will occur immediately adjacent to the Teesmouth and Cleveland Coast SPA and Ramsar sites. The following potential effects have been scoped into this AA:

- a) During construction, the loss of habitat within the proposed development site suitable to support foraging, commuting and/or roosting by qualifying features of the SPA and Ramsar, including the open water habitats, saltmarsh and intertidal mud;
- b) During construction, the risk of disturbance and/or loss of habitats that support foraging and commuting activities, and/or roosting of the qualifying features, due to pollution from within the proposed development site;
- c) During construction, the risk of noise/visual disturbance of small numbers of qualifying species utilising the adjacent SPA/Ramsar site for foraging and commuting activities, and/or roosting; and
- d) During operation, the risk of disturbance and/or loss of habitats that support foraging and commuting activities, and/or roosting of the qualifying features, due to pollution from within the proposed development site.

These potential impacts are assessed further in the following sections.

8.2.1 Construction of the Proposed Development

8.2.1.1 Habitat loss within the proposed development site

The habitats within the proposed development site include areas of open water, saltmarsh, and intertidal mud. Anecdotally²⁶, common redshank have been recorded using these habitats within The Slems in very limited numbers. The area of suitable habitat for waterbird species that will be lost to the proposed development totals approximately 11ha. This consists primarily of open water and reedbed; only a very small proportion at the margins of the waterbody comprises intertidal mud. The Teesmouth and Cleveland Coast SPA and Ramsar is known to support a mean of 1,648 common redshank over winter. Given the limited area of suitable habitat available, it is likely that the proposed development site only has capacity to support a very small number of individuals, likely to be less than 1% of the wintering population for which the SPA and Ramsar are designated.

It is likely other bird species that contribute towards the SPA and Ramsar wintering waterbird assemblage are present within The Slems, albeit in relatively low abundance. Up to four confirmed breeding pairs of Shelduck have been recorded within the proposed development site, three of these being present within the Cleveland Channel and Lackenby Channel in the south-east of the proposed development site. Shelduck form part of the wintering waterbird assemblage qualifying feature, however wintering bird data is not currently available to determine the use of the proposed development site by this species.

Breeding bird surveys confirmed other waterbird species breeding within the proposed development site that would contribute towards the Teesmouth and Cleveland Coast SPA and Ramsar waterbird assemblages. These include mallard, moorhen, reed bunting and reed warbler. Grey heron, herring gull and lesser black-backed gull were also present within the proposed development site. Data is not currently available on the use of the proposed development site by these species during winter.

It is currently assumed that all existing habitats on site will be lost to development and none will be replaced within the proposed development boundary. This will result in loss of supporting habitat for these qualifying features of the SPA/Ramsar. However, due to the limited amount of suitable habitat available on site, it is anticipated that these species would only be present in relatively low abundance. Therefore, **no significant effect on the integrity of the internationally important sites are anticipated** as a result of habitat loss within the proposed development.

8.2.1.2 Effects from pollution

STDC is in the process of defining an STDC masterplan wide construction strategy. At present it is known that construction will include enabling and ground works, cut and fill, removal of hazardous waste, demolition of a railway bridge, creation of two new access points, a new drainage system, piling and construction of buildings using large cranes, tower/mobile cranes, scaffolding and hoists.

Any contamination that might be generated during construction (e.g. dust or disturbance of contaminated spoil) will be temporary. The construction environment will be controlled through the implementation of a CEMP. The CEMP will set out the standards and procedures to which the developer/ contractor will adhere to, in order to manage the potential environmental impacts of construction works. The CEMP will set out methodologies to prevent and mitigate any accidents including but not limited to spills, storage of soils and control of construction related dust.

The CEMP will be in line with the Environment Agencies (EA) 'Pollution Prevention for Businesses' which details how construction sites can avoid causing pollution from construction related activities such as oil storage and/or spills and contamination of water³². A pollution incident response plan will be implemented as part of this CEMP.

Once these best practice construction methods are implemented and adhered to, the likelihood of a pollution incident occurring is considered to be extremely low. The measures will ensure that any spillages are contained quickly and effectively. It is therefore considered that there will be **no significant effects on the integrity of the internationally important sites** as a result of contamination.

8.2.1.3 Noise and visual disturbance

Noise and visual disturbance may occur during construction activities, in particular during piling.

A study by Wright *et al.* $(2010)^{33}$ on the impacts of noise disturbance on waterfowl birds concluded '*Intentional disturbance at very low dB(A) levels is highly unlikely to elicit a behavioural response, while at above 65.5 dB(A) a behavioural response of some kind becomes more likely to occur than no response. At above 72.2 dB(A) flight with abandonment of the site becomes the most likely outcome of the disturbance. If non-response and non-flight response were taken to be relatively harmless, and flight responses potentially costly (in terms of energy expenditure), then for those species studied at the site a costly outcome becomes more likely at = 69.9 dB(A).'*

Deleterious effects of chronic noise exposure have been suggested to begin at levels as low as 55–60 dB(A) (Dooling & Popper 2007)³⁴, though data on physiological effects are lacking. The effects of chronic or impulsive noise on the population density of wintering birds is also poorly understood.

³² DEFRA and Environment Agency (2 May 2019) Guidance: Pollution Prevention for Businesses. <u>https://www.gov.uk/guidance/pollution-prevention-for-businesses</u>. Accessed 22 May 2020.

³³ Wright, MD; Goodman, P; and Cameron, TC. (2010). Exploring behavioural responses of shorebirds to impulsive noise. Journal: Wildfowl (2010) 60, pp 150 -167. Wildfowl and Wetlands Trust

³⁴ Dooling RJ. & Popper AN. (2007) The Effects of Highway Noise on Birds. Environmental BioAcoustics LLC Rockville, MD 20853.

The ranges in noise which caused behavioural responses were outlined as:

- No observable behavioural response: 54.9–71.5 dB(A) (with a high proportion of extreme outliers).
- Non-flight behavioural response: 62.4–79.1 dB(A).
- Flight with return: 62.4–73.9 dB(A).
- Flight with all birds abandoning the site: 67.9–81.1 dB(A).

A study by Cutts *et al.* $(2009)^{35}$ determined that ambient construction noise levels should be restricted to below 70dB(A) as birds will habituate to regular noise below this level. Where possible, sudden irregular noise above 50dB(A) should be avoided as this causes maximum disturbance to birds.

An assessment of the construction noise during piling activities has been undertaken at several receptors. Modelling has been applied to seven locations within the River Tees close to the proposed development site (Figure 2).

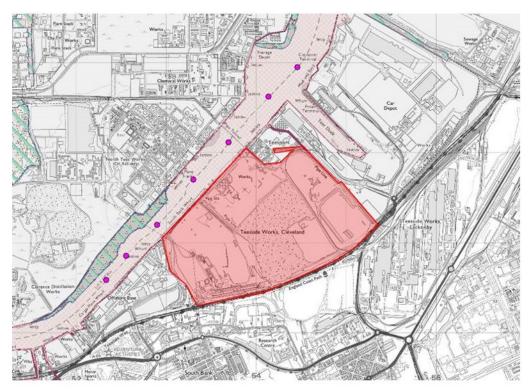


Figure 2: Noise assessment locations

Table 4 presents the results of the noise assessment at the locations shown in Figure 2 (numbered 1-7 from north to south).

³⁵ Cutts, N., Phelps, A. & Burdon, D. (2009) Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance. Report to Humber INCA. Institute of Estuarine and Coastal Studies, University of Hull.

Assessment Location ID	dBA
1	32.4
2	35.5
3	37.9
4	38.5
5	37.8
6	36.9
7	34.1

Table 4: Results of noise assessment within the River Tees

The data demonstrates that construction noise levels within the River Tees (and therefore the SPA and Ramsar) will be well below above 50dB(A) even during hydraulic piling. It is considered unlikely that wintering birds utilising the River Tees in proximity to the proposed development site would therefore be disturbed as a result of noise during construction activities.

Visual disturbance could occur as a result of large plant/machinery including tower cranes and hoists moving on site. The Waterbird Disturbance Mitigation Toolkit identifies occasional movement of cranes as a moderate to low stimuli for disturbance³⁶. Moderate level visual disturbance can be typified as either high level disturbance which has occurred over long periods so that birds become habituated to it, or less intrusive works which still cause a degree of disturbance. This describes visual stimuli such as works or third parties on the flood bank. Low level visual disturbance is stimuli that is unlikely to cause a response in birds using an adjacent wetland. Most works would not qualify as low-level impact unless they were out of sight of the birds and any disturbance then would be considered noise-related disturbance (there remain overflight issues for some species whereby flights to and from inland feeding and roost sites can mean that behind bank works have an effect)³⁶.

Site hoarding/fencing will be installed around the proposed development site prior to works commencing. This will create a barrier to lower level visual stimuli (e.g. contractors/personnel moving around the site) which is generally considered to cause a higher level of visual disturbance.

The following Best Practicable Means (BPM) will be included in the CEMP in order to further reduce the potential noise disturbance effects on qualifying species of the SPA. These are based on low noise emission plant and processes, as specified in British Standard BS5228-1 Annex B.

BPM would include noise and vibration control at source, for example:

³⁶ Cutts, N., Hemingway, K. & Spencer J. (2013) Waterbird Disturbance Mitigation Toolkit: Informing Estuarine Planning & Construction Projects. Produced by the Institute of Estuarine & Coastal Studies (IECS), University of Hull. Available at: <u>http://bailey.persona-pi.com/Public-Inquiries/M4%20-%20Revised/11.3.67.pdf</u>. Accessed 23/06/20.

- The selection of quiet and low vibration equipment, review of construction programme and methodology to consider quieter methods (including non-vibratory compaction plant, where required), location of equipment on site away from dwellings, control of working hours, the provision of acoustic enclosures and the use of less intrusive alarms, such as broadband vehicle reversing warnings; and
- Screening for example local screening of equipment, perimeter hoarding or the use of temporary stockpiles.

Once the mitigation measures within the CEMP are implemented, it is considered that the effects of visual and noise disturbance on qualifying species of the SPA will be significantly reduced. Taking into account the low numbers of SPA qualifying species that are anticipated to be impacted by noise and visual disturbance, combined with the temporary nature of the disturbance effects, **no significant effect on the integrity of the internationally important sites** are anticipated during the construction phase of the proposed development.

8.2.2 **Operation**

The specific end uses of the proposed development site are not currently known, however a precautionary assumption has been made that up to 90% of the site will be developed for general industry (use B2). During operational periods, it is therefore assumed that frequent vehicle movements will occur along access roads and within the site. Some industrial processes may also occur within the site that create visual and noise disturbance through movement of plant/machinery and staff/personnel on site.

As the detail of these industries is not currently known, detailed assessment of the potential effects on the internationally important site cannot be undertaken. However, it should be noted that birds are liable to habituation, i.e. they usually become more tolerant with increased exposure time to regular activities, to both aural and visual disturbance stimuli³⁶. The STDC site has a long history of industrial use which has required movement of plant and machinery throughout the site, or noisy industrial processes. Grangetown Prairie was previously used for iron and steel work and was extensively occupied by buildings and freight rail infrastructure. Former uses included the Cleveland Iron and Steel Works, where the heavy end operations (coke ovens, iron making and steel making) were located along the western periphery of the Grangetown Prairie site, with mills dominating the central and eastern zones.

No significant effect on the integrity of the internationally important sites are therefore anticipated during the operational phase of the proposed development however, it is recommended that any proposed development on the site is subject to further detailed assessment at the detailed planning stage.

8.3 Assessment of in-combination effects

8.3.1 **Proposed Energy Recovery Facility (R2019076700M)**

The proposed ERF development covers an area of approximately 10ha (NGR NZ54312145) and will be capable of processing up to 450,000 tonnes of waste per annum.

A HRA screening report was produced in December 2019 and considered the risk of pollution to the Teesmouth and Cleveland Coast SPA and Ramsar site from construction and operation of the proposed development site.

The HRA concluded that there would be no likely significant effect and pollution to the watercourse would either be insignificant or would be controlled in the overarching design of the facility. The HRA determined that without mitigation there were no likely significant effects from the proposed ERF development on the Teesmouth and Cleveland Coast SPA and Ramsar sites, therefore, no AA was required.

It is therefore considered, that as the proposed ERF development will control pollution to the SPA and Ramsar in the overarching design of the facility and the proposed development site will separately control pollution impacts, no additional mitigation will be required to specifically control in-combination effects these developments.

8.3.2 Land at Former South Bank Works (R/2019/0427/FFM)

The potential effects of this application on Teesmouth and Cleveland Coast SPA and Ramsar was assessed under a HRA Screening, undertaken in May 2019 by INCA (see Section 6.6).

Six locations for the potential storage of soil were assessed and any likely significant effects were screened out. This report was provided to Natural England, with a response received on 1 July 2019, stating that Natural England was satisfied with the assessment and agreed that an AA was not required.

It is therefore considered that there are no likely in-combination effects resulting from scheme in proximity to the proposed development.

8.4 Summary

Based on the information currently available, it is considered that there will likely be **no significant effects** to the integrity of the Teesmouth and Cleveland Coast SPA and Ramsar from the construction and operation of the proposed development.

It is considered likely that no further stages of the HRA process will be required.

However, as this HRA is being undertaken at outline planning permission stage, information regarding the construction and operation of the site is currently limited and subject to further refinement. It is therefore important that the HRA is

reviewed as further information becomes available to ensure that likely significant effects will not occur as a result of the construction or operation of the scheme.

Information on the use of the proposed development site by qualifying features of the SPA is currently based on anecdotal evidence and detailed desk study information as detail wintering bird surveys (WBS) have not yet been undertaken.

At the time of writing this assessment, WBS data of the proposed development site was not available to inform the impact assessment due to timing of the application.

Further work is also currently on going in the form of an invertebrate survey of the intertidal mud which provide additional data inform the level offsite habitat creation and enhancement for wintering birds. In due course the offside habitat creation and enhancement measures will be informed by, where possible, WBS between November 2020 and March 2021.

Appendix A

Red Line Boundary for the Proposed Development Site



Appendix A	A: Proposed Developme
Map Number	Project Title
-	Environment & Biodiv
Contains OS data © Crov	wn Copyright and database right (2020)
Date:24/06/2020	Scale at A

Appendix **B**

South Industrial Zone Location

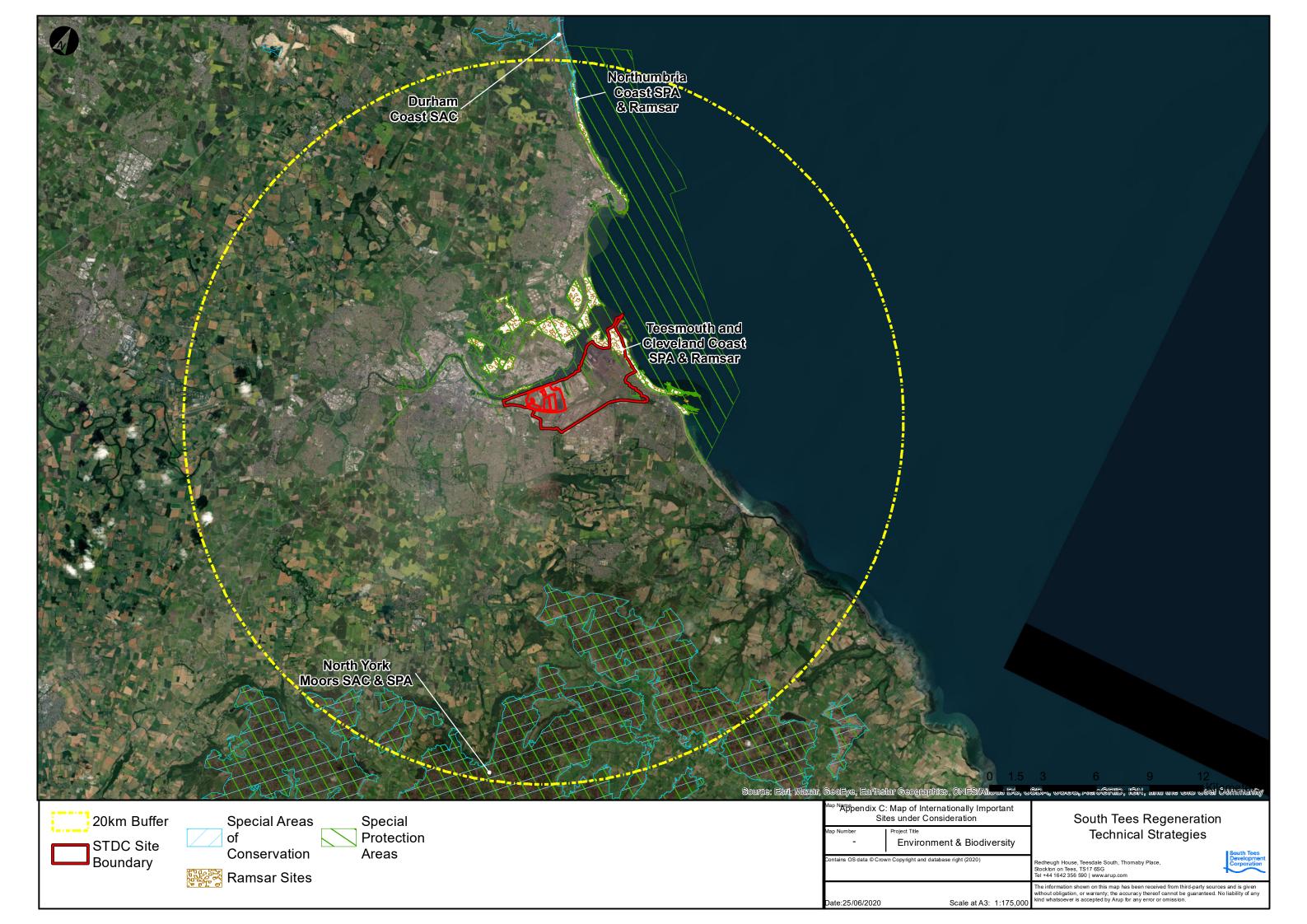


South Industrial Zone Red Line Boundary
STDC Site Boun

ap Name Appendix B: South Industrial Zone I			
ap Number	Project Title		
-	Environment & Biodiv		
ntains OS data © Cn	own Copyright and database right (2020)		
ate:24/06/2020	Scale at A		

Appendix C

Map of Internationally Important Sites under Consideration



Appendix D

2020 Breeding Bird Survey Data

