South Tees Development Corporation

Eston Road Highways Scheme

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

Issue | 28 May 2020

Job number 602510-87

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

ARUP

Contents

Appendices

Appendix A

Red Line Boundary for the Proposed Development Site

Appendix B

Proposed Development Road Corridor

Appendix C

Map of Internationally Important Sites under Consideration

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 Eston Road and associated roundabout and road links. This report details the Habitats Regulations Assessment (HRA) Stage 1 and Stage 2 assessments for the proposed Eston Road development.

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

The Teesmouth and Cleveland Coast SPA and Ramsar is hydrologically connected to the proposed development site through the Holme Beck and has the potential to be polluted during the construction and operation activities of the proposed development. Therefore, the Teesmouth and Cleveland Coast SPA and Ramsar was scoped into Appropriate Assessment (AA).

In-combination effects were considered for the proposed Energy Recovery Facility (ERF) development. There will be no in-combination effects from the proposed ERF development and the Eston Road proposed development site.

The construction works will be undertaken using best practice construction methods and will be managed through a Construction Environmental Management Plan (CEMP). Due to the distance of the proposed development works from the Teesmouth and Cleveland Coast SPA and Ramsar, and implementation of best practice construction methods, it is considered that there will be no significant impact with regards to contamination.

During operational periods, the road will have an increase in traffic movements into the wider STDC site. Operation will include associated lighting for traffic and pedestrian safety and will include a number of footpaths and cycle paths for pedestrians. Due to the distance of the proposed development site from the Teesmouth and Cleveland Coast SPA and Ramsar, it is not considered that there will be a significant impact from increased traffic, lighting or increased numbers of pedestrians.

There are currently limited drainage or filtering capabilities within the proposed development site. It is considered that the implementation of the drainage systems and the daylighting of the Holme Beck will have positive effects on the water quality of the Holme Beck and thus any water entering the Teesmouth and Cleveland Coast SPA and Ramsar from the operation of the proposed development.

At the current time, and in consideration of the current construction and operational components of the proposed development, it is assumed that with

implementation of a CEMP, there will be **no adverse effects** on the Teesmouth and Cleveland Coast SPA and Ramsar as a result of the proposed development.

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

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 a planning application for the proposed development of Eston Road and associated roundabout and road links (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', Redcar and Cleveland Borough Council (RCBC) 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.

Sections 4 to 8 of this report include the first stage of the HRA process; a statement to inform the HRA screening process for the proposed development.

Section 9 of this report comprises the second stage 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: http://www.legislation.gov.uk/uksi/2017/1012/contents/made. Accessed 21 May 2020.

2 The Habitats Regulations Assessment Process

2.1 Overview

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

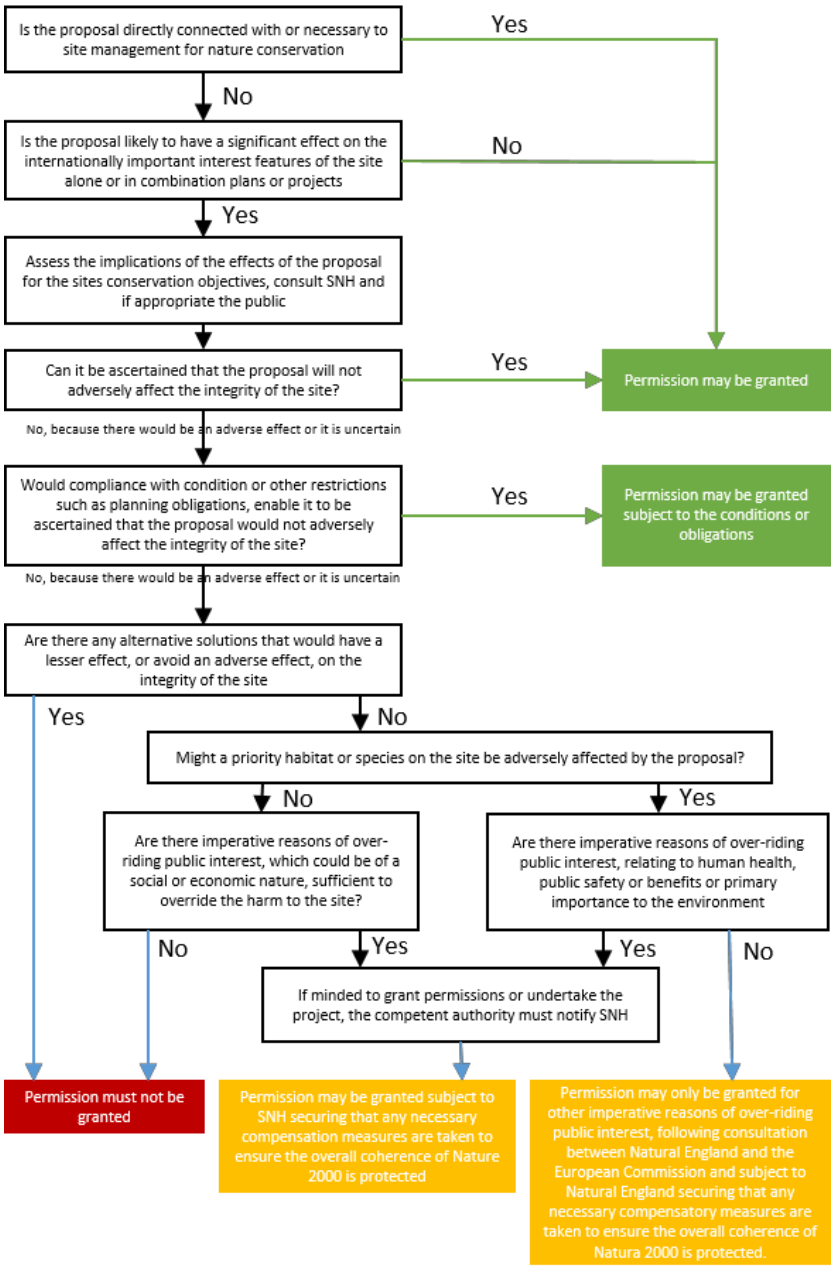


Figure 1: The Habitats Regulations Assessment Process[2]

[2] Tyldesley D. (2011) *Assessing Projects under the Habitats Directive: Guidance for Competent Authorities.* Countryside Council for Wales [now Natural Resources Wales], Bangor.

Regulation 63 of The Conservation of Habitats and Species Regulations 2017[1] (hereby referred to as 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 a 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.

In light of the conclusions of the assessment, the competent authority may proceed with or consent to the plan or project only after having ascertained that it would not adversely affect the integrity of the internationally important site.

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.

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). 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 a 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 known as Grangetown Prairie[3]. The Grangetown Prairie site is largely vacant but has a long history of iron and steel work uses 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.

The proposed development site consists of Eston Road and the eastern end of Middlesbrough Road East. The Holme Beck is located within the proposed development site and runs along the eastern boundary of Eston Road through the proposed development site. The Holme Beck is largely culverted but where open, consists of vertical sides made of stone.

3.2 Proposed Development

The proposed development comprises an upgrade to the existing Eston Road and the Eston Road A66 junction, with the design of a roundabout and associated north/south and east/west link roads into the wider Grangetown Prairie site, that is anticipated to be developed at a later stage.

The proposed development will include a preliminary drainage design for the proposed road, which will include the 'daylighting' of the Holme Beck watercourse.

The soils within the proposed development site are considered to contain primarily 'made-ground' and are not considered to contain contaminates from the heavy end operations noted above[4].

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

Appendix C outlines the locations of the Grangetown Prairie site and wider STDC site in relation to the proposed development.

3.3 Construction

It is currently believed that construction will begin in 2020 and last for approximately 12 months.

Relevant components of the proposed development construction include:

[3] South Tees Development Corporation (November 2019) South Tees Regeneration Master Plan. https://www.southteesdc.com/wp-content/uploads/2020/01/South-Tees-Master-Plan-Nov-19.2.pdf Accessed 12 May 2020.
[4] Wood Environment & Infrastructure Solutions UK Limited 2019. (June 2019) South Tees Development Corporation: Former Steelworks Land, South Tees – Outline Remediation Strategy.

- Removal of existing surfacing, and the preparation of ground for the construction of the road(s);
- Removal of existing vegetation within the proposed development site;
- In-channel works to open up the culverted section of Holme Beck;
- Construction of road and associated infrastructure;
- Provision of a grassy swale, designed to be dry for most of the year, and act as a sustainable drainage system (SuDS) where excess water during high rain events can collect and soak away; and
- Habitat creation to compensate for habitat loss and enhance the appearance of the proposed development.

These elements of construction are likely to lead to:

- Increased traffic movements to the proposed development site, however these are not anticipated to be significantly higher than those currently experienced and traffic movements during 'normal' construction hours, which will be defined within the Construction Environmental Management Plan (CEMP);
- Generation of some dust which will be controlled by standard environmental management control methods (e.g. wheel washing and road brushing) which will be defined within the CEMP;
- Generation of noise and vibration which will be temporary and avoided or minimised through the implementation of the CEMP. The CEMP would include restrictions and targets for specific work activities, including monitoring. If required, appropriate mitigation measures to deal with any noise and vibration impacts would be put in place around the proposed development site;
- Emissions from on-site plant and construction vehicles, which would have a minor adverse, temporary effect on the environment and require no mitigation other than standard best practice for construction sites; and
- A low risk of leachates or the escape of products/by-products that may constitute a contaminant in the environment, to be managed through best practice construction management techniques in line with the CEMP.

3.4 Operation

The road will operate as normal and provide ingress and egress to the Grangetown Prairie site.

Relevant components of the operation of the proposed development site include:

- Increase in road traffic, including construction vehicles once future construction on the wider Grangetown Prairie site[5] commences and future developments become operational;
- Improved public spaces and access are likely to increase the use of pathways for cycling and walking; and
- Provision of operational lighting for on-site safety and general security.

The proposed road corridor is shown in Appendix B.

[5] This does not form part of the current planning application.

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. 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:

- Information on internationally important designated sites available through Natural England Open Data[6];
- Internationally important designated site data sheets available from the Joint Nature Conservation Committee (JNCC)[7, 8, 9, 10, 11, 12];
- Updated information regarding internationally important designated sites available from Natural England's Designated Sites View[13]; and
- Industry Nature Conservation Association (INCA) HRA Screening Report for ground preparation works within STDC[14].

[6]Natural England Open Data. https://naturalengland-defra.opendata.arcgis.com/ Accessed 5 May 2020.
[7] JNCC. *Northumbria Coast Special Protection Area Standard Data Form*. Available: http://jncc.defra.gov.uk/pdf/SPA/UK9006131.pdf Accessed 5 May 2020.
[8] JNCC. *Northumbria Coast Ramsar Information Sheet.* Available: http://jncc.defra.gov.uk/pdf/RIS/UK11049.pdf Accessed 5 May 2020..
[9] JNCC. *Durham Coast Special Area of Conservation Standard Data Form.* Available: http://jncc.defra.gov.uk/ProtectedSites/SACselection/n2kforms/UK0030140.pdf Accessed 5 May 2020.
[10] JNCC. *Northumberland Marine Special Protection Area Information Sheet*. Available: https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9020325.pdf Accessed 5 May 2020.
[11] JNCC. North York Moors Designated Special Area of Conservation. https://sac.jncc.gov.uk/site/UK0030228. Accessed 21 May 2020.
[12] JNCC. North York Moors Special Protection Area. https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9006161.pdf. Accessed 21 May 2020.
[13] NE. *Designated Sites View: Northumbria Coast Special Protection Area.* Available: https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9006131 Accessed 5 May 2020.
[14] INCA (May 2019) Information to Inform Screening for a Habitats Regulations Assessment of Ground Preparation Works. Report ID INCA 201916.

4.1.2 Consultation

As the construction of the proposed development site will likely require the movement of earth and storage of soils, 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.

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 Other Projects and Plans

One development has been included in the cumulative effects assessment, namely the Energy Recover Facility (ERF) within the Grangetown Prairie site[15].

[15] JBA Consulting (December 2019) Energy Recovery Plant: Habitats Regulations Assessment (HRA) Screening Report.

5 Internationally Important Sites under Consideration

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

These are summarised in Table 1, with locations of these internationally important sites illustrated in Appendix C[16].

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

Internationally Important Site	Designation	Distance from Proposed Development	Reason for Designation
Teesmouth and Cleveland Coast[17]	SPA	1.7km north west	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[18]. Designated for important populations of breeding avocet (*Recurvirostra avosetta*), common tern (*Sterna hirundo*) and little tern (*Sterna albifrons*). As well as, important populations of non-breeding sandwich tern (*Thalasseus sandvicensis*), ringed plover (*Charadrius hiaticula*, knot (*Calidris canutus*), redshank (*Tringa totanus tetanus*) and ruff (*Calidris pugnax*). The Salthome RSPB Reserve is part of the wider Teesmouth and Cleveland Coast SPA. Also designated for an important assemblage of over-wintering wetland birds. See Section 5.1
	Ramsar	1.9km 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.[18]

[16] 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.
[17] DEFRA. Teesmouth and Cleveland Coast SPA, Ramsar and SSSI. https://consult.defra.gov.uk/natural-england-marine/teesmouth-and-cleveland-coast-potential-sp/ Accessed on 7 May 2020.
[18] Natural England (March 2019) Teesmouth and Cleveland Coast potential Special Protection Area (pSPA) and proposed Ramsar Site (pRamsar): Report of Consultation by Natural England, 2019. https://consult.defra.gov.uk/natural-england-marine/teesmouth-and-cleveland-coast-potential-sp/supporting_documents/Teesmouth%20and%20Cleveland%20Coast%20Consultation%20Report%20February%202020.pdf. Accessed 12 May 2020.

Internationally Important Site	Designation	Distance from Proposed Development	Reason for Designation
			Wetland of international importance. Designated under Ramsar criterion 5[19] for assemblages of international important numbers of waterbirds and criterion 6 for regularly supporting 1% of the individuals in a population of one species of waterbird. Also designated for peak counts of common redshank in spring and autumn, and wintering red knot (*Calidris canutus islandica*). See Section 5.2
North York Moors	SAC[11]	9.6km south	Site supports the Annex I habitats: Northern Atlantic wet heaths with cross-leaved heath (*Erica tetralix*); and Internationally important dry heaths. Site supports the Annex I habitat, but is not a primary reason for selection of the site: Blanket bogs. See Section 5.3
	SPA[12]	9.6km south	Site supports internationally important population of breeding merlin (*Falco columbarius*) and golden plover (*Pluvialis apricaria*). See Section 5.4
Durham Coast	SAC[9]	17km north	Site supports the Annex I habitat: Vegetated sea cliffs of the Atlantic and Baltic Coasts. See Section 5.5
Northumbria Coast	SPA[7]	17.3km north	Site supports internationally important population of breeding Arctic tern (*Sterna paradisaea*) and little tern. Site supports internationally important population of non-breeding purple sandpiper (*Calidris maritima*) and turnstone (*Arenaria interpres*). See Section 5.5
	Ramsar[8]	17.3km 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

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 considered to be 12,210.62ha in size. The following alterations were made to the final SPA boundary[18]:

[19] Ramsar Convention of Wetlands (Ramsar, Iran, 1971) The Ramsar Sites Criteria. https://www.ramsar.org/sites/default/files/documents/library/ramsarsites_criteria_eng.pdf Accessed 7 May 2020.

- Exclusion of the upper reaches of the Lackenby Channel (Drainage Cut), Billingham Beck, Normanby Beck, Ormesby Beck, Old River Tees Beck, the Fleet and Stainsby Beck within the pSPA only;
- Exclusion of the Warrenby Reedbeds area of Coatham Marsh from pSPA and Ramsar; and
- Minor amendments to the boundary to address mapping errors and anomalies to pSPA and Ramsar.

The Teesmouth and Cleveland Coast SPA qualifies under Article 4.1 by regularly supporting populations of Internationally important importance of the following Annex 1 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.

5.2 Teesmouth and Cleveland Coat Ramsar

The extensions to the Teesmouth and Cleveland Coast Ramsar was formally classified on 16 January 2020. The Ramsar is now considered to be 2,065.21ha in size. See Section 5.1 for more detail on final alterations to the SPA and Ramsar boundaries[18].

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 individuals.

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 1 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 England[20].

[20] Natural England. Internationally important Site Conservation Objectives North York Moors SPA (UK9006161) http://publications.naturalengland.org.uk/publication/6207512114102272 Accessed 21 May 2020.

The SPA qualifies under Article 4.1 by regularly supporting populations of Internationally important importance of the following Annex 1 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 short-eared owl (*Asio flammeus*), peregrine (*Falco peregrinus*) and hen harrier (*Circus cyaneus*) (all Annex I species), together with 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, mesotrophic and calcicolous grasslands, tall-herb fen, seepage flushes and wind-pruned 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 1 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 Britain[21]; and

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

- **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;
- **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 Conservation Objectives

5.8.1 SPA and Ramsar Sites

The conservation objectives of Teesmouth and Cleveland Coast SPA[22] and Ramsar[23], North York Moors SPA[20] and Northumbria Coast SPA[24] 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;*

[22] Natural England. Internationally important Site Conservation Objectives for Teesmouth and Cleveland Coast pSPA. Available: http://publications.naturalengland.org.uk/publication/6619918699069440 Accessed 13 May 2020.
[23] 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.
[24] Natural England. Internationally important Site Conservation Objectives for Northumbria Coast SPA. Available: http://publications.naturalengland.org.uk/publication/6372874327687168 Accessed 13 May 2020.

- *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."*

Conservation objectives of Northumbria Coast Ramsar and Teesmouth and Cleveland Coast Ramsar[23] sites are not readily available.

5.8.2 SAC Sites

The conservation objectives of North York Moors SAC[25] and Durham Coast SAC[26] 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."*

[25] Natural England. Internationally important Site Conservation Objectives for North York Moors SAC. Available: http://publications.naturalengland.org.uk/publication/6048216608931840 Accessed 13 May 2020.
[26] Natural England. Internationally important Site Conservation Objectives for Durham Coast SAC. Available: http://publications.naturalengland.org.uk/publication/4949450761961472 Accessed 13 May 2020.

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 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 operation.

The proposed development site contains the Holme Beck which is connected to the Cleveland channel, which is then connected to the Lackenby Channel which flows directly into the River Tees and thus the Teesmouth and Cleveland Coast SPA and Ramsar. There is therefore a potential impact pathway through which this internationally important site could be affected by the proposed development. On a precautionary approach, this impact is considered to be a direct impact to the Teesmouth and Cleveland Coast SPA and Ramsar.

During construction, there is the potential for an accidental spillage event, specifically spillage of oil or powdery type construction material entering the watercourse. This could also include high levels of soils from the in-river works required to daylight the culvert.

During operation, there is the potential for an accidental spillage event, specifically spillage of oil from cars. There is also the potential for run off from the operational road entering the watercourse.

Any accidental spillage events or contamination of the water course could

- Destroy and/or disturb the habitats used by the qualifying features for foraging, commuting and/or roosting; and/or
- Kill invertebrate species that are a foraging resource for the qualifying features.

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

a) 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 and nesting of the qualifying features (bird species identified in Sections 5.1 and 5.2); and

b) During operation, 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 and nesting of the qualifying features, including the potential displacement of these features.

6.1.1 Assessment of Effects Taking Account of Avoidance Measures

a) The proposed development site is hydrologically connected to the Teesmouth and Cleveland Coast SPA and Ramsar through the Holme Beck. There is the potential for habitats within the SPA and Ramsar to be destroyed and/or disturbed from contamination, caused by construction related activities. *This aspect is scoped into AA.*

b) The operational road will be hydrologically connected to the Teesmouth and Cleveland Coast SPA and Ramsar through the Holme Beck. There is the potential for habitats within the SPA and Ramsar to be destroyed and/or disturbed from contamination, caused by operation related activities. *This aspect is scoped into AA.*

6.2 North York Moors SAC and SPA

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 the 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 minimal in nature and 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 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 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 17km 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 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 17.3km 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 Consultation

A HRA was undertaken in May 2019 by INCA which assessed the potential impact to the Teesmouth and Cleveland Coast pSPA and Ramsar[27] from the temporary storage and permanent use of spoil arisings at various locations across the STDC site[14]. 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

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

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

7 Assessment of In- Combination Effects

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 therefore concluded that without mitigation there were no likely significant effects from the proposed ERF development on the Teesmouth and Cleveland Coast SPA and Ramsar sites. In-combination effects were not anticipated from the proposed ERF development. In summary, no AA was required for the proposed ERF development.

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 from the proposed ERF development and the Eston Road proposed development site.

In-combination effects have therefore *not been scoped into the AA.*

8 Summary

There are seven 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 and Northumbria Coast SPA and Ramsar.

Given the distance and lack of suitable habitats for designating bird species [where relevant] within the proposed development site, and lack of connectivity between the proposed development site and the North York Moors SAC and SPA, Durham Coast SAC and Northumbria Coast SPA and Ramsar, these internationally important sites have ben scoped out of further assessment.

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 provide pollution and contamination through the hydrological connection of Holme Beck to the River Tees and thus the Teesmouth and Cleveland Coast SPA and Ramsar.

Any accidental spillage events or contamination of the water course during construction or operation could:

- Destroy and/or disturb the habitats used by the qualifying features for foraging, commuting and/or roosting; and/or
- Kill invertebrate species that are a foraging resource for the qualifying features.

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

a) 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 and nesting of the qualifying features (bird species identified in Sections 5.1 and 5.2); and

b) During operation, 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 and nesting of the qualifying features, including the potential displacement of these features.

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.

No in-combination effects have been identified.

9 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.

9.1 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.

Professional judgement 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 further mitigation measures, 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 internationally important.

9.2 Assessment of Impacts

The construction and operation of the proposed development will occur 1.7km and 1.9km from the Teesmouth and Cleveland Coast SPA and Ramsar respectively but is hydrologically connected through the Holme Beck. Due to the potential for impact to the habitats and foraging resource from pollution events such as spillage or leaks of oil and/or soils entering the watercourse the following impacts have been scoped into this AA:

a) 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 and nesting of the qualifying features (bird species identified in Sections 5.1 and 5.2); and

b) During operation, 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 and nesting of the qualifying features, including the potential displacement of these features.

These potential impacts are assessed further in the following sections.

9.2.1 Historical and Baseline Conditions

As detailed in Section 3, the wider STDC site was a very active industrial site prior to 2015, when the SSI went into liquidation and a large portion of works within the STDC site stopped. Despite this, a number of industrial businesses are still active within the wider STDC site.

The Holme Beck runs along Eston Road through the proposed development site. Once the Holme Beck leaves the Grangetown Prairie site, the Beck is connected to the Cleveland Channel, which then flows in to the Lackenby Channel, the water flows next to the PD Ports Teesport site and the active SLEMS landfill and waste management facilities.

It is considered that the historic conditions of the proposed development site were likely worse than those of the current baseline. As detailed below, the proposed mitigation and enhancement of the proposed development site, which includes daylighting part of Holme Beck, is likely to improve the ecological conditions of the proposed development site, most notably of the Holme Beck.

9.2.2 Construction of the Proposed Development

A separate HRA was undertaken to assess the potential impact from storage of soils in other parts of the STDC site[14]. It is considered that any of these six areas may be used to store soils generated from the construction of the proposed development. As detailed in Section 6.5, there are no likely significant effects on the integrity of the SPA and Ramsar from the storage of soils in these six locations.

The habitats within the proposed development site primarily consist of sparsely vegetated grassland, scrub and areas of hardstanding. It is therefore considered that the habitats within the proposed development site are not suitable for the coastal/ estuarine birds for which the Teesmouth and Cleveland Coast SPA and Ramsar are designated. No designating bird species have been recorded within the proposed development site.

The proposed development works are to include the daylighting of the Holme Beck which will involve the removal of the stone sides and provision of more naturalised banks. This will include associated vegetation planting on the banks of the improved watercourse. The proposed works are also to include the provision of a grassy swale, which is to be designed to be dry for most of the year. This swale will act as a SuDS where excess water during high rain events can collect and soak away.

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 construction environment will also be managed through the implementation of the CEMP, which 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 water[28]. A pollution incident response plan will be implemented as part of this CEMP.

Due to the distance of the proposed development works from the Teesmouth and Cleveland Coast SPA and Ramsar, and implementation of best practice construction methods, it is considered that there will be no significant impact with regards to contamination.

Therefore, it is considered that there will be no significant impact to the Teesmouth and Cleveland Coast SPA and Ramsar or the features for which it is designated, from the construction of the proposed development.

9.2.3 Operation

During operational periods, the road will have an increase in traffic movements into the wider STDC site, specifically the Grangetown Prairie site. Operation of the proposed development will also facilitate access of future construction vehicles into the Grangetown Prairie site once development of that land zone begins.

Any future construction works that require use of the proposed development as an operational road, will be required to implement best practice construction methods such as a CEMP to manage construction related pollution from those future developments.

Operation is likely to include associated road lighting for traffic and pedestrian safety. Operation will also include new and enhanced pedestrian cycle and footpaths which will eventually link into a wider pedestrian cycle and footpath network in the STDC site. However, due to the distance of the proposed development site from the Teesmouth and Cleveland Coast SPA, it is not considered that there will be a significant impact from lighting or increased numbers of pedestrians.

Operation will include a fully functional SuDS system including a grassy swale which will help to manage excess rainfall and run off from the operation road.

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

Following completion of the proposed development works, the Holme Beck will be daylighted and further naturalised. This will include softer bank edges and associated planting along the banks. This naturalised watercourse will help to manage flooding events not only in the local area but further downstream where the Beck continues to be culverted before reaching the River Tees. Similarly, the vegetated banks are likely to help filter any contamination upstream and any generated from the operational road.

There is currently limited drainage or filtering capabilities within the proposed development site. It is considered that the implementation of the SuDS and the daylighting of the Holme Beck will have positive effects on the water quality of the Holme Beck and thus any water entering the Teesmouth and Cleveland Coast SPA and Ramsar.

Therefore, it is considered that there will be no significant impact to the Teesmouth and Cleveland Coast SPA and Ramsar or the features for which it is designated, from the operation of the proposed development.

9.3 Summary

Based on the information provided in Sections 9.2.1 to 9.2.3, 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.

At the current time, and in consideration of the current construction and operational components of the proposed development, it is assumed that with implementation of a CEMP, there will be **no adverse effects** on the Teesmouth and Cleveland Coast SPA and Ramsar as a result of the proposed development.

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

Appendix A

Red Line Boundary for the
Proposed Development Site

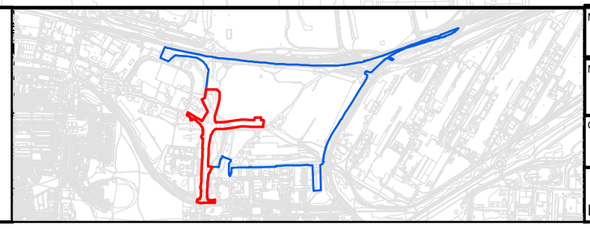
0 0.5 1 2 3 4 Kilometers

Legend

- Proposed Development Site Boundary
- Grangetown Prairie Area

Holme Beck Culvert

- Culverted section
- Open section (150m)



Map Name: Appendix A - Proposed Development Site Red Line Boundary

Map Number: -

Project Title: Eston Road Highway Scheme

Date:28/05/2020

Scale at A3: 1:3,500

Eston Road Highway Scheme

Redheugh House, Teesdale South, Thornaby Place,
Stockton on Tees, TS17 6SG
Tel +44 1642 356 590 | www.arup.com

Appendix B

Proposed Development Road Corridor

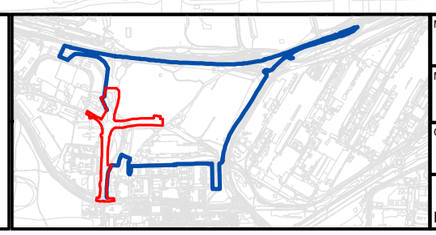
0 0.5 1 2 3 4 Kilometers

Legend

- Proposed Development Site Boundary
- Grangetown Prairie Site
- SuDS Basin

Holme Beck Culvert

- Culverted section
- Open section (150m)



Map Name: Appendix B - Proposed Development Site Road Corridor

Map Number: -

Strategy Title: Eston RoadHighway Scheme

Date:28/05/2020

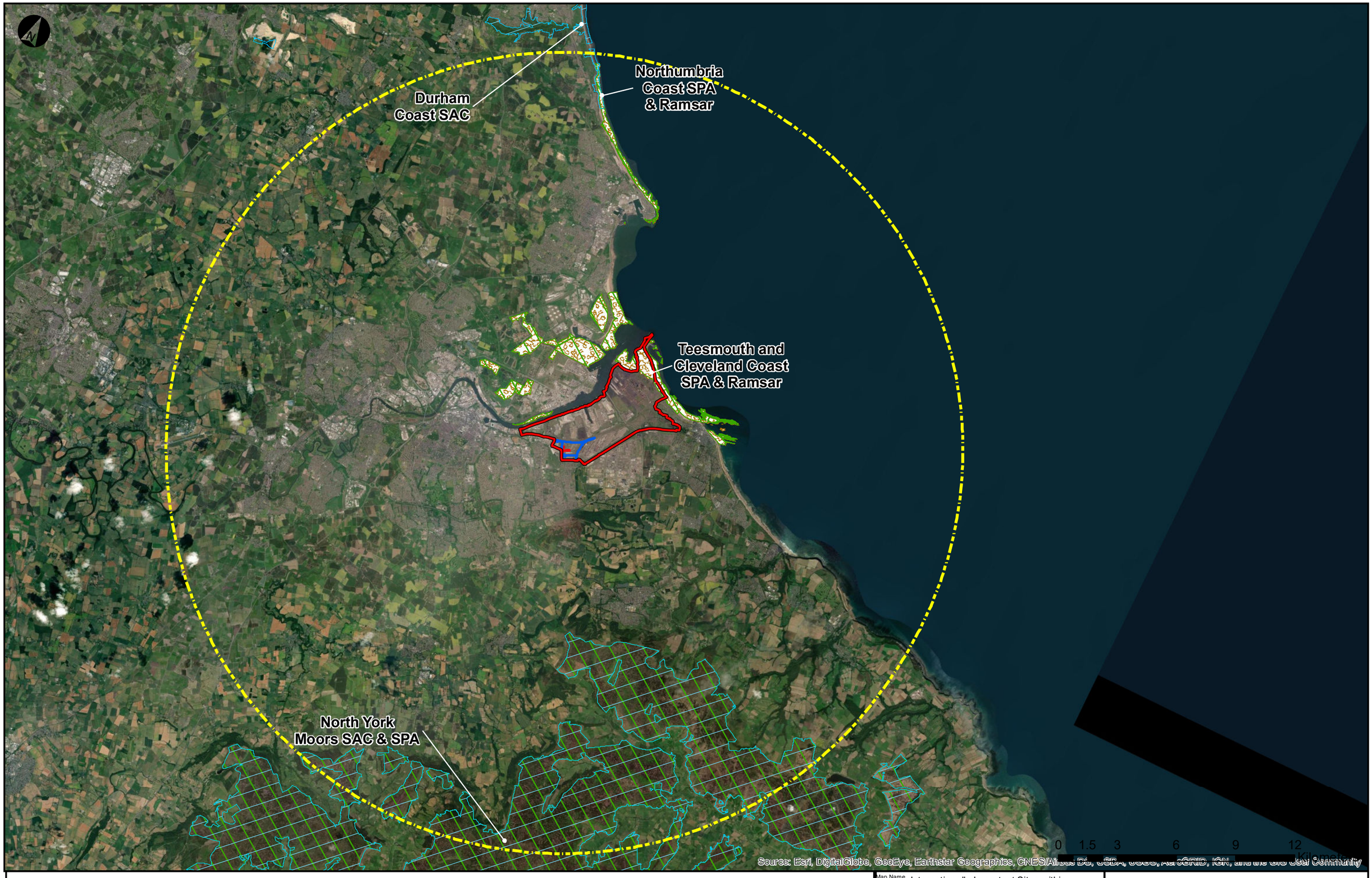
Scale at A3: 1:3,500

Eston Road Highway Scheme

Redheugh House, Teesdale South, Thornaby Place,
Stockton on Tees, TS17 6SG
Tel +44 1642 356 590 | www.arup.com

Appendix C

Map of Internationally Important Sites under Consideration



Legend

- Proposed Development Site Boundary
- 20km Buffer
- STDC Site Boundary
- Grangetown Prairie Area
- Special Areas of Conservation
- Ramsar Sites
- Special Protection Areas

Map Name: Internationally Important Sites within 20km of the Proposed Development Site

Map Number: -

Project Title: Eston Road Highway Scheme

Date:28/05/2020

Scale at A3: 1:175,000

Eston Road Highway Scheme

Redheugh House, Teesdale South, Thornaby Place,
Stockton on Tees, TS17 6SG
Tel +44 1642 356 590 | www.arup.com