# REPORT on the IMPLICATIONS for EUROPEAN SITES Proposed York Potash Harbour Facilities Order

An Examining Authority report prepared with the support of the Environmental Services Team



25 November 2015

#### **CONTENTS**

1.0	INT	RODUCTION	3
	Back	kground	3
	Docu	uments used to inform this RIES	4
	Stru	cture of this RIES	4
2.0	OVE	RVIEW	6
	Euro	pean Sites Considered	6
	HRA	Matters Considered During the Examination	8
3.0	LIKE	ELY SIGNIFICANT EFFECTS	10
4.0	ADV	ERSE EFFECTS ON INTEGRITY	14
	Cons	servation Objectives	14
	The	Integrity Test	14
ANN	EX 1	SCREENING MATRICES	
ANN	EX 2	INTEGRITY MATRICES	
ANN	EX 3	LIST OF DOCUMENTS REVIEWED TO PRODUCE THE RIES	

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#### 1.0 INTRODUCTION

#### Background

- 1.1 York Potash Ltd (the applicant) has applied to the Secretary of State for a development consent order (DCO) under section 37 of the Planning Act 2008 (as amended) for the proposed York Potash Harbour Facilities Order (the Harbour Facility application). The Secretary of State has appointed an Examining Authority (ExA) to conduct an examination of the Harbour Facility application, to report its findings and conclusions, and to make a recommendation to the Secretary of State as to the decision to be made on the application.
- 1.2 The relevant Secretary of State is the competent authority for the purposes of the Habitats Directive<sup>1</sup> and the Habitats Regulations<sup>2</sup> for applications submitted under the Planning Act 2008 regime (as amended). The findings and conclusions on nature conservation issues reported by the ExA will assist the Secretary of State in performing their duties under the Habitats Regulations.
- 1.3 This report compiles, documents and signposts information provided within the DCO application, and the information submitted throughout the examination by both the applicant and interested parties, up to and including Deadline 5 (20 November 2015), in relation to potential effects to European Sites<sup>3</sup>. It is not a standalone document and should be read in conjunction with the examination documents referred to in this report.
- 1.4 It is issued to ensure that interested parties including the relevant statutory nature conservation body (Natural England (NE)) is consulted formally on Habitats Regulations matters. This process may be relied on by the Secretary of State for the purposes of Regulation 61(3) of the Habitats Regulations. Following consultation the responses will be considered by the ExA in making their recommendation to the Secretary of State and made available to the Secretary of State along with this report. The Report on the Implications for European Sites (RIES) is not revised following consultation.
- 1.5 The applicant has not identified any potential impacts on European sites in other European Economic Area States within their Habitat Regulations

<sup>&</sup>lt;sup>1</sup> Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (as codified) (the 'Habitats Directive')

<sup>&</sup>lt;sup>2</sup> The Conservation of Habitats and Species Regulations 2010 (as amended) (the Habitats Regulations)

<sup>&</sup>lt;sup>3</sup> The term European Sites in this context includes: Special Areas of Conservation (SACs), candidate SACs and possible SACs; Special Protection Areas (SPAs), potential SPAs; Sites of Community Importance (SCIs); listed or proposed Ramsar sites; and any sites identified as compensatory measures for adverse effects on any of the above. For a full description of the designations to which the Habitats Regulations apply, and/ or are applied as a matter of Government policy, see the Planning Inspectorate's Advice Note 10 (Habitats Regulation Assessment) and the Habitats Regulations Assessment Handbook (DTA Publications July 2014)

Assessment report 'HRA Report' [APP-127 and APP-128]. Only UK European sites are addressed in this report.

#### Documents used to inform this RIES

- 1.6 The applicant's DCO application concluded that there is the potential for likely significant effects on two European sites and therefore provided a HRA Report entitled 'York Potash Project Harbour Facilities Habitats Regulations Assessment' together with screening and integrity matrices [APP-127 and APP-128] with the DCO application.
- 1.7 The documents used to inform this RIES are listed in **Annex 3** of this report<sup>4</sup>. These include the documents submitted by the applicant and other interested parties, up to and including Deadline 5 (20 November 2015).

#### **Updated matrices**

1.8 Revised screening and integrity matrices were requested in Question HRA 1.20 of the ExA's First Written Questions to include missing site features and to provide further detail in the footnotes [PD-006]. The applicant provided revised screening and integrity matrices in their response to Deadline 1 [REP1-036]. The applicant subsequently provided revised screening and integrity matrices in response to the ExA's Second Written Questions at Deadline 4, following NE's confirmation that Sandwich tern is a qualifying interest for the Teesmouth and Cleveland Coast Ramsar site [Appendix 4, REP4-014]. The applicant's revised screening matrices are provided in Annex 1 of this report. The applicant's integrity matrices have been updated by the ExA, with the support of the Environmental Services Team of the Planning Inspectorate, to include reference to relevant submissions from interested parties. These matrices are provided in Annex 2 of this report.

#### Structure of this RIES

- 1.9 The reminder of this report is as follows:
  - **Section 2** identifies the European sites that have been considered within the DCO application and during the examination period, up to and including Deadline 5 (20 November 2015). It provides an overview of the issues that have emerged during the examination.
  - **Section 3** identifies the European sites and qualifying features screened by the applicant for potential likely significant effects, either alone or in-combination with other projects and plans.

<sup>&</sup>lt;sup>4</sup> The document references within the RIES refer to the Project Examination Library which is available on the National Infrastructure Planning website

- **Section 4** identifies the European sites and qualifying features which have been considered in terms of adverse effects on site integrity, either alone or in-combination with other projects and plans.
- Annex 1 comprises the screening matrices provided by the applicant at Deadline 4 [Appendix 4, REP4-014] for those European sites and qualifying features for which the applicant's conclusions were not disputed by any interested parties.
- **Annex 2** comprises the integrity matrices provided at Deadline 4 [Appendix 4, **REP4-014**] for those European sites and qualifying features which the applicant has undertaken an appropriate assessment for, which have been updated by the ExA, with the support of the Environmental Services Team of the Planning Inspectorate.
- Annex 3 comprises a list of the documents reviewed to produce the RIES.

#### 2.0 OVERVIEW

#### **European Sites Considered**

- 2.1 The applicant's HRA Report [APP-127 and APP-128] does not clearly specify whether or not the Harbour Facility application is connected with, or necessary to, the management for nature conservation of any of the European sites considered within the applicant's assessment.
- 2.2 The applicant's HRA Report [APP-127 and APP-128] identified the following five UK European sites and features for inclusion within the applicant's assessment:

Table 1: Sites Screened into the applicant's HRA

Name of European Site	Qualifying Features / Interests					
North York Moors SAC	Northern Atlantic wet heaths with <i>Erica</i> tetralix					
	European dry heaths					
	Blanket bogs					
North York Moors SPA	Golden plover					
	Merlin					
Arnecliff and Park Hole Woods SAC	Old Sessile Oak woods with <i>llex</i> and <i>Blechnum</i>					
	Killarney Fern					
Teesmouth and Cleveland Coast SPA	Little tern (breeding)					
	Sandwich tern (passage)					
	Knot					
	Redshank <sup>5</sup>					
	Waterbird assemblage <sup>5</sup>					
	Ringed plover <sup>6</sup>					
	Little tern (foraging) <sup>5</sup>					
	Common tern (foraging) <sup>5</sup>					
Teesmouth and Cleveland Coast	Common redshank (passage)					
Ramsar	Red knot (wintering)					

<sup>&</sup>lt;sup>5</sup> See text under 'HRA matters considered during the examination – Potential extension to the Teesmouth and Cleveland Coast SPA'

<sup>&</sup>lt;sup>6</sup> Through the JNCC SPA Review 2001, Ringed plover is proposed to be added as a qualifying feature to this site (HRA Report paragraphs 5.2.6 and 5.6.7 [APP-127 and APP-128]). The HRA Report records that NE had advised the applicant to following the same HRA process for the features identified in the SPA review i.e. Ringed plover, as if they were SPA interest features (paragraph 5.2.8 of the HRA Report [APP-127 and APP-128]). The applicant has assessed Ringed plover within their HRA Report [APP-127 and APP-128]

Waterbird assemblage	
Sandwich tern (passage) <sup>7</sup>	

- 2.3 The locations of the European sites identified in Table 1 above of this report are shown on Figure 5.1 in the applicant's HRA Report [APP-127 and APP-128].
- 2.4 Paragraph 4.1.2 of the applicant's HRA Report [APP-127 and APP-128] confirms that a 5km buffer zone was applied around the draft DCO boundary to identify European sites that have the potential to be affected by the Harbour Facility application. The use of 5km as an appropriate study area is explained as being based on the geographical features of the study area, the feature and reasons for designation of the relevant European sites and the mechanisms by which the Harbour Facility application could affect designated features/interests. NE confirmed in response to Question HRA 1.1 of the ExA's First Written Questions that an appropriate study area has identified all relevant European Sites and interest features which may be affected by the Harbour Facility application [REP1-015].
- 2.5 Within their Written Representation NE also identified Sandwich tern (nonbreeding) as a qualifying interest of the Teesmouth and Cleveland Coast Ramsar [Section 5.1, REP1-015] and within the accompanying Designation Citation (March 2000) [REP1-017] provided as part of their Deadline 1 submission. However, the applicant had not identified Sandwich tern as a qualifying interest of the Ramsar within their HRA Report [APP-127 and APP-128], and the Ramsar Information Sheet for this site (dated 2008) provided on the JNCC website does not include Sandwich tern as a qualifying interest feature for this Ramsar. NE confirmed in their response to Question HRA 2.1 of the ExA's Second Written Questions [REP4-009] that the applicant should have considered Sandwich tern as a qualifying interest of the Teesmouth and Cleveland Coast Ramsar, because it appears on the Ramsar citation (which was produced by English Nature), which is used by NE as the official legal document and record of the qualifying features. However, NE is content that the applicant has considered Sandwich tern within their assessment, albeit as an interest feature of the Teesmouth and Cleveland Coast SPA. In response to NE's confirmation, the applicant subsequently provided revised screening and integrity matrices for the Teesmouth and Cleveland Coast Ramsar site, including the qualifying interest Sandwich tern (passage) [Appendix 4, REP4-014].

7

<sup>&</sup>lt;sup>7</sup> Not identified as a qualifying interest within the applicant's HRA Report [**APP-127** and **APP-128**]. See paragraph 2.5 of the RIES for an explanation

#### HRA Matters Considered During the Examination

#### Potential extension to the Teesmouth and Cleveland Coast SPA

- 2.6 Paragraph 5.2.6 of the applicant's HRA Report [APP-127 and APP-128] explains that NE had advised the applicant that a potential extension to the boundary of the Teesmouth and Cleveland Coast SPA to encompass Bran Sands Lagoon and Dabholm Gut has been proposed and would include the following features:
  - Little tern
  - Common tern; and
  - Amendment to the wintering bird assemblage.
- 2.7 The applicant has considered these features in their HRA Report [APP-127 and APP-128].
- 2.8 NE advised in their Written Representation (paragraph 6.2.3) [REP1-015] that as a result of the informal consultation on the SPA review, in addition to the extension to encompass Bran Sands Lagoon and Dabholm Gut in relation to the waterbird assemblage and redshank, the intertidal frontage may also be included due to Common tern foraging. NE has advised that the ExA may wish to consider whether the applicant's HRA should include consideration of this issue at this stage to future proof the proposal.
- 2.9 In their response to Question HRA 2.1 of the ExA's Second Written Questions [REP4-009], NE explains that without there being a pSPA at present, there is no obligation on the applicant to provide any information on the potential extension to the Teesmouth and Cleveland Coast SPA. NE acknowledges that the boundary to the extension is unknown at present, but identifies that the extension could potentially encompass the intertidal frontage. NE notes that the applicant's HRA considers boundary extensions to the SPA, but that the HRA as currently worded does not specifically note the potential to include the foreshore. NE suggests that the applicant could amend their HRA to "include a phrase describing the low risk of a negative impact in relation to common tern should the boundary encompass the intertidal habitat. In addition the applicant could safely describe that these impacts are adequately mitigated for on a precautionary basis" (NE's response to ExA's Second Written Question HRA 2.1 [REP4-009]).
- 2.10 At Deadline 4, the applicant provided a supplementary note to their HRA Report, providing the applicant's view on the consideration of Common tern and the implications of the proposed extension to the SPA (Response to Question HRA 2.1 and Appendix 4 of the ExA's Second Written Questions [REP4-014]). The applicant's supplementary note to their HRA Report explains that the HRA has considered potential impacts on the

intertidal frontage and the role it plays in supporting waterbird species that form part of the populations of the SPA and Ramsar site, including Common tern [Appendix 4, **REP4-014**].

#### Securing and delivering HRA mitigation through the DCO

- 2.11 As a result of the screening assessment, the applicant concluded in their HRA Report [APP-127 and APP-128] that the Harbour Facility application was **not likely** to give rise to significant effects, either alone or incombination with other projects or plans, on the qualifying features of: North York Moors SAC; North York Moors SPA; and Arnecliff and Park Hole Woods SAC. However, the applicant is relying on a number of mitigation measures to reach the conclusion of no adverse effect on site integrity for the Teesmouth and Cleveland Coast SPA and Ramsar sites in their HRA [APP-127 and APP-128]. In particular, the habitat creation measures in the Bran Sands Lagoon Mitigation and Monitoring Strategy (MMS), which both the applicant and NE agree are 'mitigation'.
- 2.12 NE's proposed some amendments to the mitigation strategy prior to the start of the examination and raised concern regarding how some of the mitigation measures relied on in the applicant's HRA would be secured and delivered through the draft DCO [RR-007]. Subsequently, paragraphs 6.2.4-6.2.12 of NE's Written Representation explained their precise concerns regarding securing the mitigation measures [REP1-015]. Paragraph 1.3 and 4.9 of the applicant's Statement of Common Ground (SoCG) with NE submitted for Deadline 1, confirmed that the only matter remaining to be agreed at that time was the wording of the DCO, including the Deemed Marine Licence (DML), to ensure that all mitigation measures would be secured [REP1-051]. Section 4 of the RIES provides information on the mitigation measures that the applicant has relied upon in their HRA to reach the conclusion of no adverse effect on the integrity of the Teesmouth and Cleveland Coast SPA and Teesmouth and Cleveland Coast Ramsar sites and how these mitigation measures would be secured and delivered through the draft DCO.

#### 3.0 LIKELY SIGNIFICANT EFFECTS

3.1 The applicant has described how they have determined what would constitute a 'significant effect' within paragraph 1.1.1 of their HRA Report [APP-127 and APP-128], as "any effect that may be reasonably predicted as a consequence of the Harbour facilities (alone and in combination) affecting the conservation objectives of the qualifying features for which a site is designated, but excluding trivial or inconsequential effects".

#### In-combination effects

- 3.2 The applicant has addressed potential in-combination effects within the following sections of their HRA Report [APP-127 and APP-128]:
  - Section 8.3: Harbour Facility application in-combination with the other elements of the York Potash project; and
  - Section 8.4: Harbour Facility application in-combination with the other elements of the York Potash project and other relevant plans and projects.
- 3.3 In Section 8.3 of the HRA Report [APP-127 and APP-128] the applicant has considered the following elements of the overall York Potash Project, the locations of which are shown on Figure 5.1 in the applicant's HRA [APP-127 and APP-128]:
  - Minehead and other ancillary facilities for the mine located at Dove's Nest Farm, near Whitby
  - The Mineral Transport System, consisting of:
    - Lady Cross Plantation Intermediate Shaft Site
    - Lockwood Beck Intermediate Shaft Site; and
    - Tocketts Lythe Intermediate Shaft Site.
  - Materials Handling Facility located at Wilton.
- 3.4 The applicant's HRA Report explains that an application was made jointly to the North York Moors National Park Authority and Redcar and Cleveland Borough Council for the Mine and Mineral Transport System; and an application to Redcar and Cleveland Borough Council for the Mineral Materials Handling Facility (paragraph 1.2.4 of applicant's HRA Report [APP-127 and APP-128]). Planning applications were also submitted to Scarborough Borough Council and North York Moors National Park Authority for the Construction Village and Park and Ride Facilities and Operational Park and Ride Facilities (paragraph 1.2.4 and Appendix 2.1 of the applicant's HRA Report [APP-127 and APP-128]). The applicant's HRA that accompanied the planning applications for the Mine and Mineral

- Transport System Information and the Minerals Handling Facility has also been provided, for information, with the DCO application [APP-023].
- 3.5 In Section 8.4 of the HRA Report [APP-127 and APP-128] the applicant has considered the following plans/projects:
  - York Potash Project Materials Handling Facility
  - Dogger Bank Teesside A and B Offshore Windfarm<sup>8</sup>
  - Maintenance dredging within the Tees Estuary
  - Northern Gateway Container Terminal
  - QEII Berth Development; and
  - Tuned In! arts and media centre (constructed).
- 3.6 NE [REP1-015] and Redcar and Cleveland Borough Council [REP1-021] have confirmed that they are content with the plans/projects considered by the applicant in their in-combination assessment.

#### The applicant's screening conclusion

- 3.7 As a result of the screening assessment, the applicant concluded in their HRA Report [APP-127 and APP-128] that the Harbour Facility application was **not likely** to give rise to significant effects, either alone or incombination with other projects or plans, on the qualifying features of the following European sites:
  - North York Moors SAC
  - North York Moors SPA; and
  - Arnecliff and Park Hole Woods SAC.
- The applicant concluded that there are no likely significant effects from the Harbour Facility application alone and in-combination with other elements of the overall York Potash Project on the North York Moors SAC and North York Moors SPA (13km from the Harbour Facility site boundary) and the Arnecliffe and Park Hole Woods SAC (31km from the Harbour Facility site boundary), due to the distances from these European Sites to the Harbour Facility site and the lack of pathways for indirect effects (Tables 8.3, 8.4 8.5 in the applicant's HRA Report [APP-127 and APP-128]). Whilst the applicant's HRA Report notes that there is evidence of Golden Plover, which is a qualifying feature of the North York Moors SPA, using the Tees Estuary in which the Harbour Facility application would be located, the applicant's HRA has concluded that these are not the same birds that are breeding in the North York Moors SPA, which is 13km from the Harbour Facility site boundary. On this basis, the applicant

<sup>&</sup>lt;sup>8</sup> In response to ExA's First Round Question HRA 1.22, NE explained that on the basis that they were aware that Dogger Bank C & D would not be proceeding, there will be no in-combination impacts arising from the Dogger Bank C and D Offshore Wind Farm and the project [REP1-015]

has concluded that no likely significant effects are anticipated on the North York Moors SPA from the Harbour Facility application alone and incombination with other elements of the overall York Potash Project (Table 8.4, HRA Report [APP-127 and APP-128]).

- 3.9 Annex 1 comprises the revised screening matrices produced by the applicant [Appendix 4, REP4-014] for the qualifying features of the North York Moors SAC, North York Moors SPA and Arnecliff and Park Hole Woods SAC. Whilst the revised screening matrices for North York Moors SAC and North York Moors SPA identify likely significant effects on these sites, these effects are identified as arising from the mine and Lockwood Beck Intermediate Shaft Site alone and in-combination, which form part of the overall York Potash Project. The applicant's HRA Report for the Harbour Facility application has not identified any pathways for effects from the Harbour Facility on the North York Moors SAC and North Moors SPA, either alone or in-combination with other elements of the overall York Potash Project (Section 8 of the applicant's HRA Report [APP-127 and APP-128]). The applicant's HRA that accompanied the planning applications for the Mine and Mineral Transport System Information and the Minerals Handling Facility has also been provided, for information, with the DCO application [APP-023].
- 3.10 As a result of the screening assessment, the applicant concluded that the Harbour Facility application was **likely** to give rise to significant effects, either alone or in-combination with other projects and plans, on the qualifying features of the following European sites:
  - Teesmouth and Cleveland Coast SPA; and
  - Teesmouth and Cleveland Coast Ramsar.
- 3.11 Likely significant effects were identified on these sites in relation to construction and operational effects, arising from the Harbour Facility application alone and in-combination with other plans and projects [Appendix 4, REP4-014]. Due to the potential direct and indirect loss of habitat, potential disturbance of the qualifying features / interests due to noise and visual disturbance, potential reductions in water quality due to capital dredging and piling and the potential alteration of coastal processes which could impact on the availability of feeding resources (Section 9, applicant's HRA Report [APP-127 and APP-128]).
- 3.12 However, no likely significant effects were identified on these sites in relation to decommissioning effects, arising from the Harbour Facility application alone and in-combination with other plans and projects. The applicant's assessment concluded no likely significant effects on the basis that decommissioning of the Harbour Facility would only involve removal of the overland conveyor. Therefore, there is no potential for an effect on coastal processes, habitats or water and sediment quality, and that as the

decommissioning works would take place in 100 years' time, incombination effects cannot be reasonably foreseen (Appendix 4, Revised Appendix 8.1 to the HRA (Document 6.3), Tables 1 and 2, footnote (f) [REP4-014]). Requirement 11 of the draft DCO provided at Deadline 4 [REP4-053 and REP4-054] requires the undertaker (defined in Article 2(1) of the draft DCO) to submit a decommissioning plan to the local authority for approval prior to the decommissioning phase of the authorised development. Requirement 11 limits the scope of the decommissioning plan to only include "those parts of the authorised development to be decommissioned". As the draft DCO provided at Deadline 4 does not specify what parts of the authorised development would be decommissioned, it is unclear on what basis the applicant has stated that only the overland conveyor would be removed during decommissioning of the proposed Harbour Facility, which the applicant has relied upon to screen out potential decommissioning effects on the European sites.

- 3.13 NE noted in the SoCG with the applicant, that the applicant had concluded that the proposed Harbour Facility had the potential to only result in significant effects on the Teesmouth and Cleveland Coast SPA and the and Cleveland Coast Ramsar their Teesmouth and qualifying features/interest, as listed in Table 1 of this report (paragraph 2.8, SoCG between the applicant and NE [REP1-051]). NE only identified these two European sites in their Relevant Representation [RR-007] and Written Representation [REP1-015], as being the relevant designated sites of concern. NE confirmed in response to Question HRA 2.2 of the ExA's Second Written Questions [REP4-009], that they agree with the applicant's conclusion that there would be no likely significant effects on North York Moors SAC, North York Moors SPA and the Arnecliffe and Park Hole Woods SAC as a result of the Harbour Facility alone, or incombination with other plans/projects, having considered these European sites already within the overall HRA for the York Potash Project in the mine and MTS applications and the potential for in-combination affects across all sites.
- 3.14 The conclusions of the applicant's screening assessment have not been disputed by any interested parties.
- 3.15 **Annex 1** comprises the revised screening matrices produced by the applicant [Appendix 4, **REP4-014**] for the European sites and features which the applicant screened into their assessment.

#### 4.0 ADVERSE EFFECTS ON INTEGRITY

#### **Conservation Objectives**

- 4.1 The conservation objectives for the Teesmouth and Cleveland Coast SPA are provided in Appendix 5.1 of the Applicant's HRA Report [APP-127 and APP-128] and NE's Written Representation provided at Deadline 1 [REP1-017].
- 4.2 Discussion regarding the Teesmouth and Cleveland Coast Ramsar site is set out in Section 2 of this report. NE has corrected the information provided on the JNCC website and confirmed that Sandwich tern (passage) is a qualifying interest of this site (Response to ExA's Second Written Question HRA 2.1, [REP4-009]).

#### The Integrity Test

#### No Adverse Effects on Site Integrity

- 4.3 Sections 10 and 11 of the applicant's HRA Report provide information to inform an appropriate assessment of the effects of the Harbour Facility alone, and in-combination with other plans and projects, on the qualifying features/interests of the Teesmouth and Cleveland Coast SPA and the Teesmouth and Cleveland Coast Ramsar sites [APP-127 and APP-128]. The applicant's HRA Report concluded that the Harbour Facility application alone, and in-combination with other plans and projects, would not adversely affect the integrity of the Teesmouth and Cleveland Coast SPA and the Teesmouth and Cleveland Coast Ramsar sites [Sections 10.4 and 11.4, APP-127 and APP-128].
- NE agrees that there would not be an adverse effect on the Teesmouth and Cleveland coast SPA, or any other European designated site due to the Harbour Facility application (paragraph 6.22, York Potash and Natural England SoCG [REP1-051]). In response to Question HRA 2.3 of the ExA's Second Written Questions, NE confirmed that this statement also includes the Teesmouth and Cleveland Coast Ramsar site and applies to consideration of the Harbour Facility alone, and in-combination with other plans and projects, including the other elements of the overall York Potash Project (NE response to Question 2.3 [REP4-009]). However, NE advised that this conclusion was reliant on the assumption that all mitigation measures relied upon by the applicant are fully delivered through the DCO/DML (paragraphs 6.21 and 6.24, York Potash and Natural England SoCG [REP1-051]).
- 4.5 The applicant's integrity conclusions in relation to the qualifying features/interests of the Teesmouth and Cleveland Coast SPA and Ramsar sites were not disputed by any interested parties.

#### Securing and delivering HRA mitigation through the MMS

#### Loss of functional land used by waterbirds

- 4.6 The potential effects during the construction and operation of the Harbour Facility application are described in paragraph 10.3.15-10.3.22 of the HRA Report [APP-127 and APP-128]. Paragraph 10.3.15 of the HRA Report [APP-127 and APP-128] quantifies the loss of functional land used by SPA birds at Dabholm Gut, the intertidal area where the port terminal is proposed to be located, and the Northumbrian Water jetty which is proposed for removal. Paragraph 10.3.16 of the HRA Report [APP-127 and APP-128] acknowledges that Dabholm Gut and Bran Sands Lagoon are important supporting habitats to the SPA.
- 4.7 To mitigate for the loss of functional land used by waterbirds linked to the Teesmouth and Cleveland Coast SPA and Ramsar sites, the applicant is proposing to provide habitat creation in Bran Sands Lagoon. The habitat creation would be delivered through a Mitigation and Monitoring Strategy (MMS). A draft MMS was provided in Appendix 3.1 of the applicant's HRA Report [APP-128]. NE suggested within their Relevant Representation that the design of the islands in Bran Sands Lagoon, as described in the MMS, could be amended to improve the suitability of the mitigation [RR-**007**]. The proposed changes were set out in sections 6.14-6.16 of the applicant's SoCG with NE [REP1-051]. The applicant submitted a revised MMS at Deadline 2 [REP2-006] to respond to the comments made by NE. A further revised draft MMS was submitted by the applicant at Deadline 4 [REP4-060] following agreement with NE (Response to Question HRA 2.4, [REP4-009]) and the MMO (Response to Question HRA 2.4, [REP4-010]), that the wording in the MMS should be amended. Section 4 of the MMS describes the 'Habitat Enhancement Proposals' in Bran Sands Lagoon, which are relied upon to avoid significant adverse effects on the existing interest features that use Bran Sands Lagoon and to mitigate the direct loss of habitats used by waterbirds. Table 3.2 in the MMS describes the objectives and predicted effects of the habitat enhancement proposals [REP4-060].

#### Maintaining water levels

4.8 Paragraph 10.3.23 of the applicant's HRA Report [APP-127 and APP-128] confirms that the Harbour Facility application has the potential to affect the water exchange which currently occurs between the Tees Estuary and the Bran Sands lagoon which is a functional habitat of the SPA once the development has been constructed. The potential impacts have been informed by the use of a hydrogeological model based on studies undertaken as described in Chapter 6 of the Environmental Statement (ES) [APP-201]. An assessment of the potential effects is

- provided in paragraph 10.3.24-10.3.34 of the applicant's HRA Report [APP-127 and APP-128].
- 4.9 Section 4 of the MMS (Habitat Enhancement Proposals) includes proposals to maintain the current range of water levels experienced in the lagoon. This would be through control of the water exchange between the lagoon and the Tees Estuary (section 4.4 of the MMS [REP4-060]) via the proposal to replace the existing flow control pipe (which connects Bran Sands Lagoon and the Tees Estuary) with two new control pipes (DCO works 2(4) and 3(2) and the Licenced Activity in paragraph 4(f) of Part 2 of the draft DML in Schedule 5 of the draft DCO [REP4-053 and REP4-054]).
- 4.10 The second of the two pipes would be used should any future monitoring of the lagoon suggest that the alteration of the water level regime in the lagoon would be beneficial (paragraph 10.3.34 of the applicant's HRA Report [APP-127 and APP-128] and the applicant's response to Question HRA 1.14 of the ExA's First Written Questions [REP1-028]). Within section 6.3 of their Relevant Representation [RR-007], NE confirmed that the wording of the Licenced Activity in paragraph 4(f) of Part 2 of the DML in Schedule 5 of the draft DCO [APP-003] would need to be amended to reflect the fact that two flow control pipes would be installed. This change was subsequently reflected in the next version of the draft DCO submitted by the applicant at Deadline 2 [REP2-002 and REP2-003] and is included in the draft DCO submitted at Deadline 4 [REP4-053 and REP4-054].

#### **Construction Noise and Visual Disturbance**

- 4.11 Paragraph 10.3.55 of the applicant's HRA Report [APP-127 and APP-128] confirms that the Harbour Facility application has the potential to result in disturbance to SPA birds. Potential impacts during the construction of the development include airborne and underwater noise, movements of plant and personnel (visual disturbance) and lighting as described paragraphs 10.3.58-10.3.76 of the applicant's HRA Report [APP-127 and APP-128].
- 4.12 Section 5 of the MMS describes 'Other Mitigation Measures of Relevance to SPA Interest Features', which relate to measures to mitigate indirect effects on waterbirds relating to noise and visual disturbance, arising during the construction phase of the proposed Harbour Facility.
- 4.13 Section 5.2 of the MMS and paragraph 10.3.76 of the applicant's HRA Report [APP-127 and APP-128] proposes the use of noise attenuation barriers as mitigation for the potential impact of noise and visual disturbance during the construction phase and describes the location of these proposed barriers which would screen the construction works. The applicant confirmed in response to Question HRA 2.6 in the ExA's Second

- Written Questions that the temporary fencing to be used for the acoustic screening will also be used for the visual screening [REP4-014].
- 4.14 Work No. 5(10) in Schedule 1 of the draft DCO secures 'temporary acoustic fencing and visual screening' [REP4-053 and REP4-054]. Items 30 and 31 of the Updated Governance Tracker [REP4-061] confirm that details of the temporary acoustic fencing and visual screening would be secured through the Construction Ecological Management Plan (CEMP) (draft DCO Requirement 6(1)(b) and 6(1)(d)) [REP4-061]). Whilst Requirement 6(1) specifies that the CEMP must be drafted in accordance with the principles set out in the Outline CEMP [REP1-041], and incorporating the mitigation identified in the Governance Tracker, Requirement 6 as drafted in the Deadline 4 version of the draft DCO [REP4-053 and REP4-054], refers to the previous version of the Governance Tracker [REP1-043] and the current version of the Outline CEMP [REP1-041]. Requirement 6 and the Outline CEMP have not been updated to reflect the new Item 31 in the Updated Governance Tracker [REP4-061], which has been amended to reflect the change to Work No. 5(10) in the draft DCO to include 'visual screening'.
- 4.15 NE confirm in their response to Question HRA 2.7 of the ExA's Second Written Questions that they are content that the detailed design of the temporary acoustic fencing would be delivered through the CEMP and would be secured through the revised wording of Requirement 6(b) in the draft DCO [REP4-009].
- 4.16 Section 5.2 in the MMS and paragraph 10.4.7 of the HRA Report [APP-127 and APP-128] refers to the potential use of a noise reduction curtain over a hammer piling rig during percussive operations for the quay. However, the applicant in response to the ExA's First Written Questions, Question HRA 1.16 stated that "Whether or not a noise reduction curtain could be used depends on the detail of the methodology and approach for piling proposed by the contractor. As this cannot be ascertained with certainty, the HRA does not assume that this is a mitigation measure that can be implemented and, therefore, is not taken into account in determining no adverse effect on site integrity on the European sites" [REP1-028]. This takes a precautionary approach.

#### **Construction Lighting Disturbance**

4.17 Section 5.3 of the MMS and paragraph 10.3.75 of the applicant's HRA Report [APP-127 and APP-128] describes the mitigation measures which would need to feature in the construction lighting design strategy to mitigate effects on SPA birds. These measures are outlined at Item 32 of the Updated Governance Tracker [REP4-061] and would be delivered through the CEMP and DML, secured through Requirement 6(1)(g) and Schedule 5 of the draft DCO [REP4-053 and REP4-054]. NE confirmed in

their response to Question HRA 2.5 of the ExA's Second Written Questions that they are content with both the measures proposed to mitigate potential construction lighting effects and with the means of securing these in the draft DCO [REP4-009]. However, Requirements 6(1) and 6(1)(g) in the version of the draft DCO provided at Deadline 4 [REP4-053 and REP4-054], refer to the previous version of the Governance Tracker [REP1-043] and the current version of the Outline CEMP [REP1-041]. Requirement 6 and the Outline CEMP have not been updated to reflect the Updated Governance Tracker [REP4-061].

#### **Nesting Platforms**

- 4.18 Section 5.4 in the MMS [REP4-060] and paragraph 5.4 of the applicant's HRA Report [APP-127 and APP-128] indicate that artificial nesting platforms for shags could be provided beneath the suspended deck of the quay (if the open quay structure is proposed). In response to Question HRA 1.13 of the ExA's First Written Questions [REP1-028] the applicant explained that the nesting platforms are an enhancement measure, and are not a mitigation measure and therefore are not proposed as part of the MMS for the lagoon. This is because they are not required to ensure no adverse effect on site integrity for the Teesmouth and Cleveland Coast SPA and Ramsar sites. Conversely, NE responded to confirm that this measure should be included in the MMS as it would make a positive contribution to biodiversity, although NE agreed it is not a mitigation measure (Response to Question HRA 1.13, [REP1-015]).
- 4.19 At Deadline 4, in response to the ExA's Second Written Questions (Questions HRA 2.4 and HRA 2.12, [REP4-014]), the applicant confirmed that the revised MMS provided at Deadline 4 has been amended to confirm that artificial nesting platforms will be provided if an open quay structure is constructed [REP4-060, paragraph 5.4]. However, the applicant explained that at this stage it is not thought appropriate to agree the precise number of artificial nesting platforms. This will be agreed subsequently with the local planning authority and the MMO, in consultation with NE, during the later stages of the design of the quay. NE confirmed at Deadline 4 [Question HRA 2.12, REP4-009] that the amended wording included in the MMS at paragraph 5.4, regarding the applicant's confirmation that they will provide artificial nesting platforms, if an open quay structure is developed, has been agreed with NE.

#### Monitoring

4.20 Section 6 of the MMS [**REP-060**] describes the 'Monitors and Indicators of Success', and identifies the principles required to inform the pre and post construction monitoring plan that would be developed and agreed with NE, the Environment Agency (EA), Cefas and the MMO. In response to the ExA's Second Written Questions, the applicant explained that maintenance

of the lagoon enhancement works may comprise intervention measures, should it be determined through the proposed monitoring of the works that intervention measures are required, in order to ensure that the Indicators of Success are reached (Response to Question HRA 2.4(2) [REP4-014]). The MMS states that responsibility for the management of the habitat enhancement scheme would rest with the applicant (Section 6.3 of the MMS [REP4-060]).

- 4.21 Section 6.2 of the MMS provides an indication to what the Indicators of Success of habitat enhancement should relate to; and Section 6.3 provides an indication of what intervention measures may be implemented, should the monitoring indicate that the habitat enhancement proposals are not achieving their defined objective.
- 4.22 NE and the MMO in their response to the ExA's Second Written Questions identified the need for re-wording of Section 6.3 (Intervention Measures) in the MMS to reflect the obligation on the applicant to implement intervention measures to ensure that the Indicators of Success are met (Response to Question HRA 2.4(3) and 2.4(5) NE [REP4-009] and the MMO [REP4-010]). NE has confirmed in their response to the ExA's Second Written Questions that they have agreed with the applicant the amended text for inclusion in Section 6.3 of the MMS (Response to Questions HRA 2.4(3) and 2.4(5) [REP4-009]). The amended wording for Section 6.3 agreed between the applicant and NE has been included in the version of the MMS submitted at Deadline 4 [REP4-060]).

#### Securing the mitigation in the MMS through the DCO/DML

The lagoon habitat enhancement works (as defined in Article 2(1) of the draft DCO [REP4-053 and REP4-054]) are secured through Paragraph 7 of Part 2 (licensed activity) and Condition 48 in Part 4 of the draft DML in Schedule 5 of the draft DCO. Paragraph 7 requires that the lagoon enhancement works must not commence until a written lagoon habitat enhancement plan (to include details of the pre and post construction monitoring) has been submitted to and approved by the MMO, following consultation with NE, the EA and the local planning authority. The information to be included in the lagoon enhancement works is specified in Paragraph 7(2), which includes details of the pre and post construction monitoring and must be in accordance with the MMS (Paragraph 7(3) of the draft DCO [REP4-053 and REP4-054]). Condition 48 of Part 4 of the draft DML in Schedule 5 of the draft DCO [REP4-053 and REP4-054] requires the undertaker (as defined in defined in Article 2 of the draft DCO [REP4-053 and REP4-054]) to implement and comply with the lagoon habitat enhancement plan (including pre and post construction monitoring) approved pursuant to paragraph 7; and to monitor and maintain the lagoon habitat enhancement works in accordance with the

- lagoon habitat enhancement plan and the principles outlined in the MMS and as agreed with the MMO in consultation with NE, the EA and the local planning authority.
- 4.24 NE [REP4-009] and the MMO [REP4-010] identified, in response to the ExA's Second Written Questions (Question HRA 2.4(4)), that Paragraph 7 of Part 2 and Condition 48 in Part 4 of the draft DML should be re-worded to give greater clarity regarding the monitoring requirements for the lagoon enhancement works, which would be captured within the lagoon habitat enhancement plan. The amended wording to Paragraph 7 and Condition 48, which NE and the MMO have agreed with the applicant, is recorded in NE's and the MMO's response to the ExA's Second Written Questions (Response to Question HRA 2.4(4) [REP4-009] and [REP4-010], respectively). The applicant has submitted a revised draft DCO for Deadline 4 [REP4-053 and REP4-054] with amendments to Paragraph 7 and Condition 48 in the draft DML, to reflect the changes suggested by NE and the MMO. The wording of the version of Paragraph 7 and Condition 48 provided in the draft DCO ([REP4-053] and [REP4-054]) is not identical to the wording suggested by NE and the MMO (Response to Question HRA 2.4(4) [REP4-009] and [REP4-010], respectively). However, this change in wording does not affect the overall meaning.
- 4.25 The EA confirms in their response to Question HRA 2.4 of the ExA's Second Written Questions that in respect to the content of the MMS, they defer to NE and the MMO [REP4-001].

#### Operational mitigation

- 4.26 Paragraph 10.3.56 of the applicant's HRA Report [APP-127 and APP-128] confirms that potential disturbance during the operation of the development may arise as a result of noise, interruption to sightlines and overshadowing, ship wash disturbance and lighting. The potential impacts are described in paragraphs 10.3.77-10.3.86 of the applicant's HRA Report [APP-127 and APP-128] and the applicant concludes that no adverse effects on the integrity of the SPA are anticipated as a result of disturbance during the operation of the development.
- 4.27 The MMS [REP4-060] does not include measures to mitigate indirect effects on waterbirds relating to noise and visual disturbance, arising during the operational phase of the proposed Harbour Facility. However, details are provided in the applicant's HRA Report [APP-127 and APP-128] regarding proposed measures to mitigate visual disturbance during the operational phase, which are described in the paragraphs below. The applicant confirmed in response to Question HRA 2.8 of the ExA's Second Written Questions [REP4-014] that operational acoustic fencing is not required.

- 4.28 Paragraph 10.3.86 of the applicant's HRA Report [APP-127 and APP-128] confirms that during the operation of the development, the parking and storage areas immediately adjacent to Bran Sands Lagoon would need to be screened (for example by fencing) to minimise visual disturbance. The applicant has provided revised plans for the two proposed permanent compounds showing proposed screen fencing and these plans [APP-110 and APP-111] are referred to in the updated Parameters Table [Work Nos. 6B and 9, REP1-044]. Schedule 1 of the draft DCO (authorised development) specifies that Work Nos. 1-12 are to be carried out in accordance with the parameters set out in the parameters table [REP4-053 and REP4-054], which is defined in Article 2(1) of the draft DCO, as the parameters table certified by the Secretary of State (Article 38 of the draft DCO provides for the certification of documents, which includes reference to the latest version of the parameters table [REP1-044]).
- 4.29 In relation to the operational lighting design, paragraph 10.3.86 of the applicant's HRA Report [APP-127 and APP-128] confirms that the principles described for the construction phase lighting design, as described in paragraph 10.3.75 of the HRA Report, would be followed. NE advised the ExA in response to Question HRA 2.9 of the ExA's Second Written Questions [REP4-009] that the applicant will need to incorporate these operational mitigation measures into the Ecological Management Plan (EMP) and on this basis, NE would be satisfied.
- Item 37 of the Updated Governance Tracker [REP4-061] confirms that these operational mitigation measures would be delivered through the EMP which is secured in Requirement 9 of the draft DCO [REP4-053 and REP4-054]. NE [REP4-009] and the MMO [REP4-010] identified in response to the ExA's Second Written Questions (Question DCO 2.8) that Requirement 9 should be re-worded to give greater clarity regarding the involvement of the different statutory bodies in relation to the EMP. The amended wording to Requirement 9, which NE and the MMO have agreed with the applicant, is recorded in NE's and MMO's response to the ExA's Second Written Questions (Response to Question DCO 2.8 [REP4-009] and [REP4-010], respectively). The applicant has submitted a revised draft DCO submitted for Deadline 4 [REP4-053 and REP4-054] with amendments to Regulation 9 in the draft DCO, to reflect the changes suggested by NE and the MMO. The wording of the version of Requirement 9 provided in the draft DCO ([REP4-053] and [REP4-054]) is not identical to the wording suggested by NE and the MMO (Response to Question DCO 2.8 [REP4-009] and [REP4-010], respectively). However, this change in wording does not affect the overall meaning.
- 4.31 Requirement 9 of the draft DCO specifies that the EMP must be in accordance with the principles set out in the outline EMP [REP4-059] and incorporate the mitigation measures identified in the Updated Governance

Tracker [REP4-061]. The revised outline EMP, submitted at Deadline 4, [REP4-059] has been amended at Section 3.5 (Waterbird populations) to incorporate reference to the operational visual screening and operational visual lighting measures which are relevant to overwintering water birds. However, the revised outline EMP submitted at Deadline 4 [REP4-059] refers to the previous version of the Governance Tracker [REP1-043] and not the current Governance Tracker provided at Deadline 4 [REP4-061].

#### Changes to sediment and water quality

- 4.32 Paragraph 10.3.35 of the applicant's HRA Report [APP-127 and APP-128] confirms that changes to sediment and water quality during the construction and operation of the development could affect habitat quality and prey availability. Potential impacts include suspended sediment concentration in the water column during capital dredging, sediment deposition and water quality in Bran Sands lagoon and the potential effect of dust generation from handling of polyhalite and subsequent deposition onto habitats used by waterbirds. The potential impacts during the construction and operation of the development are described in paragraphs 10.3.36 10.3.54 of the applicant's HRA Report [APP-127 and APP-128]. The applicant concludes that there would be no adverse effects on the integrity of the site as a result of changes to sediment and water quality (paragraph 10.4.9-10.4.13, HRA Report [APP-127 and APP-128]).
- 4.33 To avoid contamination as a result of suspended sediment, the silts would be dredged using an enclosed grab (paragraph 103.39, HRA Report [APP-127 and APP-128]). This measure is secured in paragraph 6(3) of Part 2 of the DML (licensable activities) of Part 5 of the draft DML in Schedule 5 of the draft DCO [REP4-053 and REP4-054].

#### Adequacy of mitigation measures

- 4.34 Table 1 in the applicant's SoCG with NE [REP1-051] confirms the agreement that the Harbour Facility, when taking into account the proposed mitigation measure in Bran Sands lagoon together with other mitigation would not result in an adverse effect on the integrity of the Teesmouth and Cleveland Coast SPA and Ramsar site, either alone or incombination with other plans and projects.
- 4.35 In response to the mitigation measures identified in NE's Written Representation [REP1-015], the applicant explained that with the following mechanisms in place, the mitigation referred to by NE is appropriately secured: the revised MMS [REP4-060]; amended Schedule 2 in the draft DCO (in particular Requirement 9) [REP4-053 and REP4-054]; production of the Outline EMP [REP4-059]; and amendments to the DML, in particular paragraph 7 [REP4-053 and REP4-054].

- 4.36 NE confirmed in response to Question HRA 2.11 of the ExA's Second Written Questions [REP4-009] that providing the revisions identified in their response to ExA's Second Written Questions DCO 2.7, DCO 2.8, HRA 2.4, HRA 2.5, HRA 2.7, HRA 2.9 and HRA 2.12 are made to the draft DCO, NE are satisfied that these would resolve the matter of securing the mitigation, ongoing monitoring and management of the site. On this basis, NE would be able to consider that the mechanisms are appropriate to secure the mitigation in order to conclude no adverse effect on site integrity of the Teesmouth and Cleveland Coast SPA and Ramsar sites (Response to Question HRA 2.11, [REP4-009]). The applicant confirms in their response to the ExA's Second Written Questions, that having had prior sight of NE's Deadline 4 response, that they have addressed all of the points raised by NE within their Deadline 4 submissions [REP4-014 and REP5-009].
- 4.37 **Annex 2** of this report comprises integrity matrices for the European sites and qualifying features/interests which the applicant provided information on to inform an appropriate assessment, if required by the competent authority. The integrity matrices have been provided by the applicant (Revised Appendix 10.1 to the applicant's HRA Report [Appendix 4, **REP4-014**]) and updated by the ExA, with the support of the Environmental Services Team of the Planning Inspectorate.

# ANNEX 1: SCREENING MATRICES PRODUCED BY THE APPLICANT

The Screening Matrices were provided by the applicant for Deadline 4 (6 November 2015) (Revised Appendices 8.1 and 8.2 to the applicant's HRA Report, [Appendix 4, **REP4-014**]) and are available at the following link:

http://infrastructure.planningportal.gov.uk/wp-content/ipc/uploads/projects/TR030002/Events/Deadline%204%20-%206%20November%202015%20-%2006-11-2015/York%20Potash%20Ltd%20(2).pdf

The applicant's Screening Matrices have not been amended by the ExA.

### **ANNEX 2: INTEGRITY MATRICES**

#### **Integrity Matrices**

This annex of the RIES identifies the European sites and features for which the applicant concluded that the Harbour Facility application was likely to give rise to significant effects, either alone or in-combination with other plans and projects, and therefore the applicant provided information to inform an appropriate assessment, if required by the competent authority. The integrity matrices are based on those submitted by the applicant for Deadline 4 (6 November 2015) (Revised Appendix 10.1 to the applicant's HRA Report [Appendix 4, REP4-014]). The integrity matrices have been revised by the ExA, with the support of the Environmental Services Team of the Planning Inspectorate, to take into account all relevant submissions made during the course of the examination, up to and including Deadline 5 (20 November 2015).

#### **Key to Matrices:**

- √ Adverse effect on integrity cannot be excluded
- x Adverse effect on integrity can be excluded
- C construction
- O operation
- D decommissioning

Information supporting the conclusions is detailed in footnotes for each table with reference to relevant supporting documentation.

Where an impact is not considered relevant for a feature of a European site, the cell in the matrix is formatted as follows:

N/A

#### **Integrity Matrix 1: Teesmouth and Cleveland Coast SPA**

Site Code: UK9006061

Distance to project: 900m from the harbour facilities

European site		Likely effect of NSIP														
features	Coasta	al proce	sses	Habita	Habitat loss/change						Water/sediment quality			In-combination		
	С	0	D	С	0	D	С	Ο	D	С	0	D	С	0	D	
Little tern (breeding)	×a,h	×a,h	N/A b,h	×c,h	×c,h	N/A b,h	×d,h	×e,h	N/A b,h	×f,h	×f,h	N/A b,h	×g,h	×g,h	N/A b,h	
Sandwich tern (passage)	×a,h	×a,h	N/A b,h	×c,h	×c,h	N/A b,h	×d,h	×e,h	N/A b,h	×f,h	×f,h	N/A b,h	×g,h	×g,h	N/A b,h	
Knot	×a,h	×a,h	N/A b,h	×c,h	×c,h	N/A b,h	×d,h	×e,h	N/A b,h	×f,h	×f,h	N/A b,h	×g,h	×g,h	N/A b,h	
Redshank	×a,h	×a,h	N/A b,h	×c,h	×c,h	N/A b,h	×d,h	×e,h	N/A b,h	×f,h	×f,h	N/A b,h	×g,h	×g,h	N/A b,h	
Little tern (foraging)	×a,h	×a,h	N/A b,h	×c,h	×c,h	N/A b,h	×d,h	×e,h	N/A b,h	×f,h	×f,h	N/A b,h	×g,h	×g,h	N/A b,h	
Common tern (foraging)	×a,h	×a,h	N/A b,h	×c,h	×c,h	N/A b,h	×d,h	×e,h	N/A b,h	×f,h	×f,h	N/A b,h	×g,h	×g,h	N/A b,h	
Ringed plover	×a,h	×a,h	N/A b,h	×c,h	×c,h	N/A b,h	×d,h	×e,h	N/A b,h	×f,h	×f,h	N/A b,h	×g,h	×g,h	N/A b,h	
Waterbird	×a,h	×a,h	N/A	×c,h	×c,h	N/A	×d,h	×e,h	N/A	×f,h	×f,h	N/A	×g,h	×g,h	N/A	

assemblage	b,h	b,h		b,h		b,h		b,h

#### Notes:

- a. Paragraphs 10.3.6-10.3.14 and 10.4.3 of the applicant's HRA Report [APP-127 and APP-128] confirm that construction and operational effects of the proposed development on coastal processes (comprising effects on tidal propagation, wave climate, current speeds and sediment budget of the estuarine system) are assessed and reported in Section 5.6 of the Environmental Statement (ES) [APP-198] and supported by wave modelling data provided in ES Appendix 5.1 [APP-199]. Whilst impacts of a localised nature and low magnitude are anticipated on the hydrodynamic and sedimentary regime as a result of the capital dredging, it has been concluded that these are unlikely to result in adverse effects on the integrity of the site (paragraph 10.4.3, of the applicant's HRA Report [APP-127 and APP-128]).
- The applicant's assessment concluded no likely significant effects on the Teesmouth and Cleveland Coast SPA and b. Teesmouth and Cleveland Coast Ramsar sites in relation to decommissioning effects from the Harbour Facility alone and in-combination and therefore did not take forward to appropriate assessment the consideration of decommissioning effects. The revised screening and integrity matrices provided by the applicant for Deadline 4 (Revised Appendices 8.1 and 10.1 to the applicant's HRA Report, footnote (f) [Appendix 4, REP4-014]) confirm that decommissioning of the Harbour Facility in about 100 years' time would only involve removal of the overland conveyor and therefore there is no potential for an effect from the Harbour Facility alone on coastal processes, habitats or water and sediment quality. The applicant has also screened decommissioning in-combination effects out of their assessment, on the basis that as this decommissioning work would take place in 100 years' time in combination effects cannot be reasonably foreseen. Requirement 11 of the draft DCO provided at Deadline 4 [REP4-053 and REP4-054] requires the undertaker (defined in Article 2(1) of the draft DCO) to submit a decommissioning plan to the local authority for approval prior to the decommissioning phase of the authorised development. Note that Requirement 11 limits the scope of the decommissioning plan to only include "those parts of the authorised development to be decommissioned". As the draft DCO provided at Deadline 4 does not specify what parts of the authorised development would be decommissioned, it is unclear on what basis the applicant has stated that only the overland conveyor would be removed during decommissioning of the proposed Harbour Facility, which the applicant has relied upon to screen out potential decommissioning effects on the European site.

#### c. <u>Direct impact on functional land used by waterbirds</u>

The potential effects during the construction and operation of the Harbour Facility application are described in paragraph 10.3.15-10.3.22 of the HRA Report [APP-127 and APP-128]. Paragraph 10.3.15 of the HRA Report [APP-127 and APP-128] quantifies the loss of functional land used by SPA birds at Dabholm Gut, the intertidal area where the port terminal is proposed to be located, and the Northumbrian Water jetty which is proposed for removal. Paragraph 10.3.16 of the HRA Report [APP-127 and APP-128] acknowledges that Dabholm Gut and Bran Sands Lagoon are important supporting habitats to the SPA.

To mitigate for the loss of functional land used by waterbirds linked to the Teesmouth and Cleveland Coast SPA and Ramsar sites, the applicant is proposing to provide habitat creation in Bran Sands lagoon. The habitat creation would be delivered through a Mitigation and Monitoring Strategy (MMS). A draft MMS was provided in Appendix 3.1 of the applicant's HRA Report [REP1-015 and REP1-028]. NE suggested within their Relevant Representation that the design of the islands in Bran Sands Lagoon as described in the MMS could be amended to improve the suitability of the mitigation [RR-007]. The proposed changes were set out in sections 6.14-6.16 of the applicant's SoCG with NE [REP1-051]. The applicant submitted a revised MMS at Deadline 2 [REP2-006] to respond to comments raised by NE. A further revised draft MMS was submitted by the applicant at Deadline 4 [REP4-060] to respond to comments raised by NE [REP4-009] and the MMO [REP4-010] in their response to Question HRA 2.4 of the ExA's Second Written Questions. Section 4 of the MMS describes the 'Habitat Enhancement Proposals' in Bran Sands Lagoon, which are relied upon to avoid significant adverse effects on the existing interest features that use Bran Sands Lagoon, to mitigate the direct loss of habitats used by waterbirds. Table 3.2 in the MMS describes the objectives and predicted effects of the habitat enhancement proposals [REP4-060].

Section 6 of the MMS [REP-060] describes the 'Monitors and Indicators of Success', which identifies the principles required to inform the pre and post construction monitoring plan that would be developed and agreed with NE, the EA, Cefas and the MMO. In response to the ExA's Second Written Questions, the applicant explained that maintenance of the lagoon enhancement works may comprise intervention measures, should it be determined through the proposed monitoring of the works that intervention measures are required, in order to ensure that the Indicators of Success are reached (Response to Question HRA 2.4 (2) [REP4-014]). The MMS states that responsibility for the management of

the habitat enhancement scheme would rest with the applicant (Section 6.3 of the MMS [REP4-060]). NE has confirmed in their response to the ExA's Second Written Questions that they have agreed with the applicant the amended text for inclusion in Section 6.3 of the MMS, which provides for intervention measures should the monitoring indicate that the habitat enhancement proposals are not achieving their defined objective (Response to Questions HRA 2.4(3) and 2.4(5) [REP4-009]). The amended wording for Section 6.3 agreed between the applicant and NE has been included in the version of the MMS submitted at Deadline 4 [REP4-060]).

The lagoon habitat enhancement works (as defined in Article 2(1) of the draft DCO [REP4-053 and REP4-054]) are secured through Paragraph 7 of Part 2 (licensed activity) and Condition 48 in Part 4 of the draft DML in Schedule 5 of the draft DCO. Paragraph 7 requires that the lagoon enhancement works must not commence until a written lagoon habitat enhancement plan (to include details of the pre and post construction monitoring) has been submitted to and approved by the MMO, following consultation with NE, the EA and the local planning authority. The information to be included in the lagoon enhancement works is specified in Paragraph 7(2), which includes details of the pre and post construction monitoring and must be in accordance with the MMS (Paragraph 7(3) of the draft DCO [REP4-053 and REP4-054]). Condition 48 of Part 4 of the draft DML in Schedule 5 of the draft DCO [REP4-053 and REP4-054] requires the undertaker (as defined in defined in Article 2 of the draft DCO [REP4-053 and REP4-054]) to implement and comply with the lagoon habitat enhancement plan (including pre and post construction monitoring) approved pursuant to paragraph 7; and to monitor and maintain the lagoon habitat enhancement works in accordance with the lagoon habitat enhancement plan and the principles outlined in the MMS and as agreed with the MMO in consultation with NE, the EA and the local planning authority. The applicant has submitted a revised draft DCO for Deadline 4 [REP4-053 and REP4-054] with amendments to Paragraph 7 and Condition 48 in the draft DML, to reflect the changes suggested by NE and the MMO (Response to Question HRA 2.4(4) [REP4-009] and [REP4-010], respectively). The wording of the version of Paragraph 7 and Condition 48 provided in the draft DCO ([REP4-053] and [REP4-054]) is not identical to the wording suggested by NE and the MMO (Response to Question HRA 2.4(4) [REP4-009] and [REP4-**010**], respectively). However, this change in wording does not affect the overall meaning.

The EA confirms in their response to Question HRA 2.4 of the ExA's Second Written Questions that in respect to the content of the MMS, they defer to NE and the MMO [REP4-001].

#### <u>Impact on functional land as a result of changes to water exchange</u>

Paragraph 10.3.23 of the HRA Report [APP-127 and APP-128] confirms that the Harbour Facility application has the potential to affect the water exchange which currently occurs between the Tees Estuary and the Bran Sands lagoon which is a functional habitat of the SPA once the development has been constructed. The potential impacts have been informed by the use of a hydrogeological model based on studies undertaken as described in Chapter 6 of the Environmental Statement (ES) [APP-201]. An assessment of the potential effects is provided in paragraph 10.3.24-10.3.34 of the HRA Report [APP-127 and APP-128].

Section 4 of the MMS (Habitat Enhancement Proposals) includes proposals to maintain the current range of water levels experienced in the lagoon. This would be through control of the water exchange between the lagoon and the Tees Estuary (section 4.4 of the MMS [REP4-060]) via the proposal to replace the existing flow control pipe (which connects Bran Sands Lagoon and the Tees Estuary) with two new control pipes (DCO works 2(4) and 3(2) and the Licenced Activity in paragraph 4(f) of Part 2 of the draft DML in Schedule 5 of the draft DCO) [REP4-053 and REP4-054]. The second of the two pipes would be used should any future monitoring of the lagoon suggest that the alteration of the water level regime in the lagoon would be beneficial (paragraph 10.3.34 of the applicant's HRA Report [APP-127 and APP-128] and the applicant's response to Question HRA 1.14 of the ExA's First Written Questions [REP1-028]). Within section 6.3 of their relevant representation [RR-007], NE confirmed that the wording of the Licenced Activity in paragraph 4(f) of Part 2 of the DML in Schedule 5 of the draft DCO [APP-003] would need to be amended to reflect the fact that two flow control pipes would be installed. This change was subsequently reflected in the next version of the draft DCO submitted by the applicant at Deadline 2 [REP2-002 and REP2-003] and is included in the draft DCO submitted at Deadline 4 [REP4-053] and REP4-054].

#### **d.** Construction noise and visual disturbance

Paragraph 10.3.55 of the applicant's HRA Report [APP-127 and APP-128] confirms that the Harbour Facility application has the potential to result in disturbance to SPA birds. Potential impacts during the construction of the development include airborne and underwater noise, movements of plant and personnel (visual disturbance) and lighting as described paragraphs 10.3.58-10.3.76 of the applicant's HRA Report [APP-127 and APP-128].

Section 5.2 of the MMS and paragraph 10.3.76 HRA Report [APP-127 and APP-128] proposes the use of noise attenuation barriers as mitigation for the potential impact of noise and visual disturbance during the construction phase and describes the location of these proposed barriers which would screen the construction works. The applicant confirmed in response to Question HRA 2.6 in the ExA's Second Written Questions that the temporary fencing to be used for the acoustic screening will also be used for the visual screening [REP4-014]. Work No 5(10) in Schedule 1 of the draft DCO secures 'temporary acoustic fencing and visual screening' [REP4-053 and REP4-054]. Items 30 and 31 of the Updated Governance Tracker [REP4-061] confirm that details of the temporary acoustic fencing and visual screening would be secured through the CEMP (draft DCO Requirement 6(1)(b) and 6(1)(d)) [REP4-061]). NE confirm in their response to Question HRA 2.7 of the ExA's Second Written Questions that they are content that the detailed design of the temporary acoustic fencing would be delivered through the CEMP and would be secured through the revised wording of Requirement 6(b) in the draft DCO [REP4-009].

Section 5.3 of the MMS and paragraph 10.3.75 of the applicant's HRA Report [APP-127 and APP-128] describes the mitigation measures which would need to feature in the construction lighting design strategy to mitigate effects on SPA birds. These measures are outlined at Item 32 of the Updated Governance Tracker [REP4-061] and would be delivered through the CEMP and DML, secured through Requirement 6(1)(g) and Schedule 5 of the draft DCO [REP4-053 and REP4-054]. NE confirmed in their response to Question HRA 2.5 of the ExA's Second Written Questions that they are content with both the measures proposed to mitigate potential construction lighting effects and with the means of securing these in the draft DCO [REP4-009].

#### e. Operational noise and visual disturbance

Paragraph 10.3.56 of the applicant's HRA Report [APP-127 and APP-128] confirms that potential disturbance during the operation of the development may arise as a result of noise, interruption to sightlines and overshadowing, ship wash disturbance and lighting. The potential impacts are described in paragraphs 10.3.77-10.3.86 of the applicant's HRA Report [APP-127 and APP-128] and the applicant concludes that no adverse effects on the integrity of the SPA are anticipated as a result of disturbance during the operation of the development. The applicant confirmed in response to Question HRA 2.8 of the ExA's Second Written Questions [REP4-014] that operational acoustic fencing is not required.

Paragraph 10.3.86 of the applicant's HRA Report [APP-127 and APP-128] confirms that during the operation of the development, the parking and storage areas immediately adjacent to Bran Sands Lagoon would be required to be screened (for example by fencing) to minimise visual disturbance. The applicant has provided revised plans [APP-110 and APP-111] are referred to in the updated Parameters Table [Work Nos. 6B and 9, REP1-044]. Schedule 1 of the draft DCO (authorised development) specifies that Work Nos. 1-12 are to be carried out in accordance with the parameters set out in the parameters table, which is defined in Article 2(1) of the draft DCO, as the parameters table certified by the Secretary of State (Article 38 of the draft DCO provides for the certification of documents, which includes reference to the latest version of the parameters table [REP1-044]).

In respect to the operational lighting design, paragraph 10.3.86 of the applicant's HRA Report [APP-127 and APP-128] confirms that these would follow the principles described for the construction phase lighting design which are described in paragraph 10.3.75 of the HRA Report. NE advised the ExA in response to Question HRA 2.9 of the ExA's Second Written Questions [REP4-009] that the applicant will need to incorporate these operational mitigation measures into the Ecological Management Plan (EMP) and on this basis, NE would be satisfied.

Item 37 of the Updated Governance Tracker [REP4-061] confirms that these operational mitigation measures would be delivered through the EMP which is secured in Requirement 9 of the draft DCO [REP4-053] and REP4-054]. NE [REP4-009] and the MMO [REP4-010] identified in response to the ExA's Second Written Questions (Question DCO 2.8) that Requirement 9 should be re-worded to give greater clarity regarding the involvement of the different statutory bodies in relation to the EMP. The amended wording to Requirement 9, to which NE and the MMO have agreed with the applicant, is recorded in NE's and MMO's response to the ExA's Second Written Questions (Response to Question DCO 2.8 [REP4-009] and [REP4-010], respectively). The applicant has submitted a revised draft DCO submitted for Deadline 4 [REP4-053] and REP4-054] with amendments to Regulation 9 in the draft DCO, to reflect the changes suggested by NE and the MMO. The wording of the version of Requirement 9 provided in the draft DCO ([REP4-053] and [REP4-054]) is not identical to the wording suggested by NE and the MMO (Response to Question DCO 2.8 [REP4-009] and [REP4-010], respectively). However, this change in wording does not affect the overall meaning.

Requirement 9 of the draft DCO specifies that the EMP must be in accordance with the principles set out in the Outline EMP [REP4-059] and incorporate the mitigation measures identified in the Updated Governance Tracker [REP4-061].

The revised outline EMP, submitted at Deadline 4, [REP4-059] has been amended at Section 3.5 (Waterbird populations) to incorporate reference to the operational visual screening and operational visual lighting measures which are relevant to overwintering water birds.

#### f. Changes to sediment and water quality

Paragraph 10.3.35 of the applicant's HRA Report [APP-127 and APP-128] confirms that changes to sediment and water quality during the construction and operation of the development could affect habitat quality and prey availability. Potential impacts include suspended sediment concentration in the water column during capital dredging, sediment deposition and water quality in Bran Sands lagoon and the potential effect of dust generation from handling of polyhalite and subsequent deposition onto habitats used by waterbirds. The potential impacts during the construction and operation of the development are described in paragraphs 10.3.36 – 10.3.54 of the applicant's HRA Report [APP-127 and APP-128]. The applicant concludes that there would be no adverse effects on the integrity of the site as a result of changes to sediment and water quality (paragraph 10.4.9-10.4.13, HRA Report [APP-127 and APP-128]).

To avoid contamination as a result of suspended sediment, the silts would be dredged using an enclosed grab (paragraph 103.39, HRA Report [APP-127 and APP-128]). This measure is secured in paragraph 6(3) of Part 2 of the DML (licensable activities) of Part 5 of the draft DML in Schedule 5 of the draft DCO [REP4-053 and REP4-054].

- g. The assessment of potential in-combination effects is provided in Section 11.3 of the HRA Report [APP-127 and APP-128]. Paragraph 11.4.1 of the applicant's HRA Report concludes that in light of the conservation objectives for the SPA, the proposed Harbour facilities, when assessed in-combination with other relevant plans and projects, would not result in an adverse effect on the integrity of the Teesmouth and Cleveland Coast SPA. Paragraph 11.4.2 of the applicant's HRA Report concludes that the proposed Harbour Facility alone would not affect the structure or function of the Ramsar site.
- h. Table 1 in the applicant's SoCG with NE [REP1-051] confirms the agreement that the Harbour Facility, when taking into account the proposed mitigation measure in Bran Sands lagoon together with other mitigation would not result in an adverse effect on the integrity of the Teesmouth and Cleveland Coast SPA and Ramsar site, either alone or incombination with other plans and projects.

In response to the mitigation measures identified in NE's Written Representation [REP1-015], the applicant explained that with the following mechanisms in place, the mitigation referred to by NE is appropriately secured: the revised MMS [REP4-060]; amended Schedule 2 in the draft DCO (in particular Requirement 9) [REP4-053 and REP4-054]; production of the Outline EMP [REP4-059]; and amendments to the DML, in particular paragraph 7 [REP4-053 and REP4-054].

NE confirmed in response to Question HRA 2.11 of the ExA's Second Written Questions [REP4-009] that providing the revisions identified in their response to ExA's Second Written Questions DCO 2.7, DCO 2.8, HRA 2.4, HRA 2.7, HRA 2.9 and HRA 2.12 are made to the draft DCO, NE are satisfied that these would resolve the matter of securing the mitigation, ongoing monitoring and management of the site. On this basis, NE would be able to consider that the mechanisms are appropriate to secure the mitigation in order to conclude no adverse effect on site integrity of the Teesmouth and Cleveland Coast SPA and Ramsar sites (Response to Question HRA 2.11, [REP4-009]). The applicant confirms in their response to the ExA's Second Written Questions that having had prior sight of NE's Deadline 4 response, that they have addressed all of the points raised by NE within their Deadline 4 submissions [REP4-014 and REP5-009].

#### **Integrity Matrix 2: Teesmouth and Cleveland Coast Ramsar**

Site Code: UK11068

Distance to project: 900m from the harbour facilities

European site	Likely effect of NSIP														
features	Coasta	al proce	sses	Habitat loss/change			Disturbance			Water/sediment quality			In-combination		
	С	0	D	С	0	D	С	0	D	С	0	D	С	0	D
Common Redshank (passage)	×a,h	×a,h	N/A b,h	×c,h	×c,h	N/A b,h	×d,h	×e,h	N/A b,h	×f,h	×f,h	N/A b,h	×g,h	×g,h	N/A b,h
Red knot (wintering)	×a,h	×a,h	N/A b,h	×c,h	×c,h	N/A b,h	×d,h	×e,h	N/A b,h	×f,h	×f,h	N/A b,h	×g,h	×g,h	N/A b,h
Sandwich Tern (passage)	×a,h	×a,h	N/A b,h	×c,h	×c,h	N/A b,h	×d,h	×e,h	N/A b,h	×f,h	×f,h	N/A b,h	×g,h	×g,h	N/A b,h
Waterbird assemblage	×a,h	×a,h	N/A b,h	×c,h	×c,h	N/A b,h	×d,h	×e,h	N/A b,h	×f,h	×f,h	N/A b,h	×g,h	×g,h	N/A b,h

#### Notes:

Please refer to the footnotes provided above in the ExA's Integrity Matrix for the Teesmouth and Cleveland Coast SPA. This follows the approach taken by the applicant in their integrity matrix for the Ramsar site (Revised Appendix 10.1 to the applicant's HRA Report [Appendix 4, **REP4-014**]).

# ANNEX 3: LIST OF DOCUMENTS REVIEWED TO PRODUCE THE RIES

#### **Document List**

#### **Application Documents**

- DCO [**APP-003**]
- Governance Tracker [APP-016]
- Parameters Table [APP-017]
- Permanent Compound Site A Plan [APP-110]
- Permanent Compound Site C Plan [APP-111]
- Habitat Regulations Assessment 1 of 2 [APP-127]
- Habitat Regulations Assessment 1 of 2 [APP-128]
- Environmental Statement Section 5: Hydrodynamic and Sedimentary Regime [APP-198]
- Environmental Statement Section 5: Appendix 5.1 Hydraulic Studies to Support EIA [APP-199]
- Environmental Statement Section 6: Hydrology, Hydrogeology and Land Quality [APP-201]
- Environmental Statement Section 7: Marine Sediment and Water Quality
   [APP-206]
- Environmental Statement Section 8: Marine Ecology [APP-209]
- Environmental Statement Section 9: Marine and Coastal Ornithology
   [APP-213]
- Environmental Statement Section 11: Fisheries and Fishing Activity [APP-219]
- Environmental Statement Section 13: Air Quality [APP-234]
- Environmental Statement Section 14: Noise and Vibration [APP-236]
- Environmental Statement Section 20: Appendix 20.4 Technical Lighting Assessment [APP-254]

#### **Relevant Representations**

- Environment Agency [RR-017]
- Marine Management Organisation [RR-015]
- Natural England [RR-007]

#### Deadline 1 (21 August 2015)

 Marine Management Organisation (Written Representation and Response to the ExA's First Written Questions) [REP1-012]

- Natural England (Written representation, Summary and list of Annexes)
   [REP1-015]
- Natural England (Written representation Annex A Designated Site Maps)
   [REP1-016]
- Natural England (Written representation Annex B Designated site conservation objectives and citations) [REP1-017]
- Redcar and Cleveland Borough Council (Response to ExA's First Written Questions) [REP1-021]
- York Potash Limited (Response to ExA's First Written Questions) [REP1-028]
- York Potash Limited (Revised Screening and Integrity Matrices) [REP1-036]
- York Potash Limited (Outline Construction Environmental Management Plan [REP1-041]
- York Potash Limited (Outline Ecological Management Plan [REP1-042]
- York Potash Limited (Updated Governance Tracker) [REP1-043]
- York Potash Limited (Updated Parameters Table) [REP1-044]
- York Potash Limited (SoCG with Natural England) [REP1-051]

#### Deadline 2 (7 September 2015)

- Marine Management Organisation (Comments on the Responses to the ExA's First Written Questions) [REP2-019]
- York Potash Limited (Comments on the Responses to the ExA's First Written Questions) [REP2-015]
- York Potash Limited (Response to Written Representations) [REP2-007]
- York Potash Limited (Draft DCO) [REP2-002 and REP2-003]
- York Potash Limited (Mitigation and Monitoring Strategy) [REP2-006]

#### Deadline 3 (2 October 2015)

- Marine Management Organisation (Table of Responses to the ExA's Questions) [REP3-001]
- York Potash Limited (Draft DCO) [REP3-003 and REP3-004]
- York Potash Limited (Submissions from Hearings 23-25 September 2015)
   [REP3-005]

#### Deadline 4 (6 November 2015)

Environment Agency (Response to ExA's Second Written Questions)
 [REP4-001]

- Marine Management Organisation (Response to ExA's Second Written Questions) [REP4-010]
- Natural England (Response to ExA's Second Written Questions) [REP4-009]
- York Potash Limited (Response to ExA's Second Written Questions)
   [REP4-014]
- York Potash Limited (Outline Ecological Management Plan) [REP4-059]
- York Potash Limited (Mitigation and Monitoring Strategy Rev 4) [REP4-060]
- York Potash Limited (Governance Tracker) [REP4-061]
- York Potash Limited (Draft Development Consent Order [REP4-053 and REP4-054]

#### Deadline 5 (20 November 2015)

- Marine Management Organisation (Comments on Responses to ExA's Second Written Questions)[REP5-004]
- York Potash Limited (Hierarchy Document) [REP5-008]
- York Potash Limited (Applicant's Comments on Responses to ExA's Second Written Question) [REP5-009]

#### **Other Documents**

- Examining Authority's First Round of Written Questions [PD-006]
- Examining Authority's Second Round of Written Questions [PD-008]