The Planning Inspectorate
Yr Arolygiaeth Gynllunio

REPORT on the IMPLICATIONS for EUROPEAN SITES

Proposed A63 Castle Street Improvement Scheme- Hull

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

Planning Inspectorate Reference: TR010016

11 July 2019

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1 INTRODUCTION

1.1 Background

1.1.1 Highways England (the Applicant) has applied to the Secretary of State for a development consent order (DCO) under section 37 of the Planning Act 2008 (PA2008) for the proposed A63 Castle Street Improvement, Hull (the Proposed Development). The Secretary of State has appointed an Examining Authority (ExA) to conduct an examination of the 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.

1.1.2 The relevant Secretary of State is the competent authority for the purposes of the Habitats Directive[1] and the Habitats Regulations[2] for applications submitted under the PA2008 regime. 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.

1.1.3 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 (IPs), up to 11 July 2019 in relation to potential effects to European Sites[3]. It is not a standalone document and should be read in conjunction with the examination documents referred to. Where document references are presented in square brackets [] in the text of this report, that reference can be found in the Examination library published on the National Infrastructure Planning website at the following link:

https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010016/TR010016-000261-Examination%20Library%20A63%20Castle%20Street.pdf

1.1.4 This report is issued to ensure that IPs including the statutory nature conservation bodies i.e. Natural England (NE), are consulted formally on Habitats Regulations matters. This process may be relied on by the Secretary of State for the purposes of Regulation 63(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 RIES will not be revised following consultation.

1.1.5 The Applicant has not identified any potential impacts on European sites in other EEA States[4] in the Assessment of Implications on European Sites

[1] 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').

[2] The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations).

[3] The term European Sites in this context includes Sites of Community Importance (SCIs), Special Areas of Conservation (SACs) and candidate SACs, Special Protection Areas (SPAs), possible SACs, potential SPAs, Ramsar sites. For a full description of the designations to which the Habitats Regulations apply, and/ or are applied as a matter of Government policy, see PINS Advice Note 10.

[4] European Economic Area (EEA) States.

(AIES) submitted as part of the DCO application [APP-069]. Only UK European sites are addressed in this report.

1.2 Documents used to inform this RIES

1.2.1 The Applicant provided an Assessment of the Implications for European Sites (AIES) titled A63 Castle Street Improvement, Hull AIES (HRA) Screening Report [APP-069] with the DCO application, together with screening matrices.

1.2.2 The Applicant concluded within their DCO application that there would be no likely significant effects (LSE) on any European site(s) screened. The Humber Estuary Special Protection Area (SPA)/Special Area of Conservation (SAC)/Ramsar site are the only European designations in the vicinity of the proposals (295m away from the designations boundaries) and are identified as the receptors that could be affected by the Proposed Development.

1.2.3 The HRA Screening Report [APP-069] and screening matrices (Appendix C) were provided by the Applicant in support of this conclusion.

Examination

1.2.4 The Applicant's conclusions reached for the European sites and qualifying features considered in the HRA Screening Report have not been disputed.

1.2.5 However, paragraph 10.7.12 of the Environmental Statement [AS-012] lists a series of measures that are necessary to mitigate impacts to fauna from proposed piling activities. Therefore, during the First Written Questions [ExQ1 [PD-006], the ExA asked the Applicant to explain whether, the conclusions reached in the HRA Screening Report, were predicated on the proposed mitigation and if regard had been given to the judgment in People over Wind and Sweetman v Coillte Teoranta (C-323/17).

1.2.6 In response to the ExA's questions (Q1.0.11 and Q1.2.3 of ExQ1 [PD -006], the Applicant's responses [REP2-003] were somewhat ambiguous with regards to the approach in response to the judgement made by the Court of Justice of the European Union (CJEU) in the case of People Over Wind and Sweetman v Coillte Teoranta (C-323/17). The issue is explained in detail at Paragraphs 3.2.33.2.3 to 3.2.12 of this report.

Application Documents

- A63 Castle Street Improvement, Hull AIES (HRA) Screening Report (the Applicant's HRA Report dated September 2018) [APP-069];
- Outline Environmental Management Plan (OEMP) [AS-015];
- Register of Environmental Actions and Commitments (REAC) [AS-013];
  - Commitment E1 and E5
- Environmental Statement [AS-012];

- Paragraph 10.7.12

Representations

- Highways England Response to Examining Authority's Written Questions [REP2-003];
  - Responses to Q1.0.11 & Q1.2.3
- Hull City Council Local Impact Report [REP2-016]
  - Paragraph 5.5.1

Statements of Common Ground

- DRAFT A63 Castle Street Improvement, Hull TR010016 Statement of Common Ground with Natural England [REP1-015];
  - Table 3.3. -Summary of issues discussed in the A63 Castle Street Improvement AIES Screening Report September 2018

Examination Documents

- ExA's written questions and requests for information (ExQ1) [PD-006] dated 1 April 2019;
  - Q1.0.11 & Q1.2.3

Other Documents

- ExA's written questions and requests for information (ExQ2) dated 11 July 2019

1.3 Structure of this RIES

1.3.1 The remainder of this report is as follows:

- **Section 2** identifies the European site(s) that have been considered within the DCO application and during the examination period, up to 11 July 2019. It provides an overview of the issues that have emerged during the examination.
- **Section 3** identifies the European site(s) and qualifying feature(s) screened by the applicant for potential likely significant effects, either alone or in-combination with other projects and plans. It also records the ExA's exploration of the approach taken in the AIES Screening Report [APP-069]
- **Section 4** identifies the European sites and qualifying features which have been considered by the ExA in terms of adverse effects on site integrity.
- **Section 5** summarises the conclusions and deadline for IPs' comments

- **Annex 1** lists the potential impacts of the Proposed Development.
- **Annex 2 and Annex 3** comprise screening and integrity matrices for three European sites and their qualifying features. The screening matrices are based on those provided in the Applicant's HRA Screening Report [APP-069] and have been updated by the ExA, with the support of the Environmental Services Team. The integrity matrices have been produced by the ExA with the support of the Environmental Services Team.

2 OVERVIEW

2.1 European Sites Considered

2.1.1 The Proposed Development is not connected with or necessary to the management for nature conservation of any of the European site(s) considered within the Applicant's assessment (Chapter 10 of the Environmental Statement [AS-012]).

2.1.2 The Applicant's HRA Report identified site(s) (and features) for which the UK is responsible for inclusion within the assessment. These are presented at Annex 1.

2.1.3 The HRA Report submitted by the Applicant [APP-069] takes into account European Sites within 2km of proposed highway schemes, including temporary construction sites. The HRA Report identifies that the Humber Estuary SPA/SAC and Ramsar sites are located within 2km of the site boundary.

2.1.4 The boundary for each of these designations are contiguous to the Proposed Development (approximately 90m (nearest point of wider scheme) and 295m (Princes Quay Bridge piling footprint). The designated features that could be affected by the Proposed Development are depicted on Appendix A of the AIES Screening Report [APP-069].

2.1.5 No additional European sites nor features were identified by any IPs during examination.

2.1.6 The HRA Report identified the following impacts which could potentially affect the European Protected sites:

- **Silt and sediments and pollution spills during construction**; The HRA Report concluded that the sediment disturbance and contamination due to accidental spillage are unlikely to have a significant impact on the Humber Estuary protected sites due to the high degree of dilution within the marina. The HRA Report contains a hydrological technical note demonstrating the dilution rate.
- **Sedimentation during the re-siting of the Spurn Lightship**; The Lightship will be moved manually by ropes, and as such the disturbance will be minimal.
- **Noise and vibration during construction;** The assessment concluded that the nearest habitats that could support qualifying bird species are at a distance where airborne construction noise would have no impacts.
- **Vibration from piling works in the marina for Princes Quay Bridge**. Vibrations from piling works could affect protected species individual but not the conservation status of European Protected Sites.

- **Air emissions**;
  The assessment concluded that no air emissions arising by the construction and operation of the Proposed Development will have a significant effect on the qualifying habitat of the European Protected Sites.
- **Groundwater contamination**;
  The assessment concluded that there is limited connectivity between the docks (where construction works will take place) and the Humber Estuary.

2.1.7 During Examination (Deadline 1), the Applicant submitted a draft Statement of Common Ground (SoCG) [REP1–015] with Natural England. At Table 3.3 of the SoCG under "Summary of issues discussed in the A63 Castle Street Improvement AIES Screening Report September 2018", the Applicant quoted consultations with Natural England stating that "*I can confirm that, based on the justification set out in Section 3*[5] *of the report, Natural England agrees with the conclusion of no likely significant effect*".

2.1.8 The Applicant responded to the First Written Questions (Highways England Response to Examining Authority's Written Questions [REP2-003]) that the HRA Report [APP-069] concludes that without mitigation, the proposed development would cause "No Significant Effects" to the European Sites located within 2km of the Proposed Development either alone or in-combination with other projects and plans. Therefore an Appropriate Assessment was not required. The conclusion was reached with due regard to the judgement made by the Court of Justice of the European Union (CJEU) in the case of People Over Wind and Sweetman v Coillte Teoranta (C-323/17).

2.1.9 However, mitigation measures connected to the Humber Estuary are mentioned in another response and other submitted documents. This is explained in detail at Section 3.1 of this report.

2.2 HRA Matters Considered During the Examination

2.2.1 The Examination has focussed on establishing the position of relevant parties on the scope and outcomes of the HRA Screening Report. Part of this was to examine the Applicant's approach and whether mitigation had been taken into account for the purposes of screening and determined if likely significant effects will occur.

2.2.2 The ExA also noticed the reduced survey effort conducted at the construction compounds which could support qualifying bird species connected to the Humber Estuary SPA. Due to the limited survey data available, the ExA questioned [Q1.2.3 of PD-006] whether the construction works would have a likely significant effect on birds present within the Humber Estuary all year around. The ExA asked the Applicant to advise

[5] Section 3 of the AIES dated September 2018 (APP-069)

whether there is any functional link between Neptune Street compound and the Humber Estuary in terms of both wintering and breeding birds.

3 LIKELY SIGNIFICANT EFFECTS

3.1 Overview

3.1.1 The Applicant's HRA Report describes how they have determined what would constitute a 'significant effect' (paragraph 2.2.2 of the AIES Screening Report [APP-069]). This follows EC guidance on habitats assessment (EC Guidance document: 'Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (2000)' and EC Guidance document: 'Assessment of plans and projects significantly affecting Natura 2000 sites (2001)').

3.1.2 The Applicant has addressed potential in-combination effects within their HRA Report (Section 3.11 of the AIES Screening Report [APP-069]). The following other projects have been included in the in-combination assessment carried out by the applicant:

- Construction of the Princes Quay Bridge along the A63 Castle Street.

3.1.3 The scope of the in-combination assessment was not disputed by Natural England (See Table 3.3. of the DRAFT SoCG [REP1-015]).

3.1.4 The Applicant's screening assessment in the HRA Screening Report [APP-069] concluded that the Proposed Development would have **no likely significant effect**, either alone or in-combination with other projects or plans, on the qualifying features of the European site(s) listed at Table 3.1).

3.1.5 The Applicant's conclusions in relation to these sites and their features **were not disputed** by any IPs during the examination (see DRAFT SoCG between the Applicant and Natural England [REP1-015]).

3.1.6 However, during examination the Applicant has referred to mitigation measures necessary to prevent effects upon the designated sites in the Humber Estuary (see response to Q1.2.3 [REP2-003]). In light of the judgment in People over Wind and Sweetman v Coillte Teoranta (C-323/17), the ExA has issued further questions (11 July 2019) to investigate the approach taken by the Applicant and to understand the extent to which mitigation measures are necessary to support the approach taken in the HRA Screening Report. See section 3.2 of this report.

Table 3.1: The applicant's screening exercise and degree of agreement with Interested Parties

Features	Screening result*: LSE alone or in combination?	Agreed with SCNB and other relevant parties?	Assessment of effects on integrity required?	Agreed with SNCB and other relevant parties?
Humber Estuary SAC				
Annex I habitats:				
1130 Estuaries	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
1140 Mudflats and sandflats not covered by seawater at low tide	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
1110 Sandbanks which are slightly covered by sea water all the time	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
1150 Coastal lagoons	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
1310 Salicornia and other annuals colonizing mud and sand	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])

Features	**Screening result*: LSE alone or in combination?**	**Agreed with SCNB and other relevant parties?**	**Assessment of effects on integrity required?**	**Agreed with SNCB and other relevant parties?**
2110 Embryonic shifting dunes	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
2120 "Shifting dunes along the shoreline with Ammophila arenaria	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
2130 "Fixed coastal dunes with herbaceous vegetation	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
2160 Dunes with H*ippophae rhamnoides*	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
Annex II species:				
1095 Sea lamprey *Petromyzon marinus*	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
1099 River lamprey *Lampetra fluviatilis*	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
1364 Grey seal *Halichoerus grypus*	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])

Features	**Screening result*: LSE alone or in combination?**	**Agreed with SCNB and other relevant parties?**	**Assessment of effects on integrity required?**	**Agreed with SNCB and other relevant parties?**
Humber Estuary SPA:				
ARTICLE 4.1 QUALIFICATION (79/409/EEC):				
During breeding season the area regularly supports: Bittern, Marsh Harrier, Avocet, Little Tern.	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
Over winter the area regularly supports: Bittern, Hen Harrier, Bar-tailed Godwit, Golden Plover, Avocet	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
On passage the area regularly supports: Ruff	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
ARTICLE 4.2 QUALIFICATION (79/409/EEC):				
Over winter the area regularly supports: Dunlin, Knot, Black-	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])

Features	**Screening result*: LSE alone or in combination?**	**Agreed with SCNB and other relevant parties?**	**Assessment of effects on integrity required?**	**Agreed with SNCB and other relevant parties?**
Tailed Godwit, Common Shelduck, Redshank.				
On passage the area regularly supports: Dunlin, Knot, Black-tailed Godwit, Redshank	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
In the non-breeding season the area regularly supports: 153934 waterfowl	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
Humber Estuary Ramsar Site:				
Ramsar criteria (see Annex 1 for detail):				
Ramsar criterion 1	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
Ramsar criterion 3	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
Ramsar criterion 5	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])

Features	**Screening result*: LSE alone or in combination?**	**Agreed with SCNB and other relevant parties?**	**Assessment of effects on integrity required?**	**Agreed with SNCB and other relevant parties?**
Ramsar criterion 6	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])
Ramsar criterion 8	No (Appendix C of AIES [APP-069])	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])	No	Yes (Table 3.3. of DRAFT SoCG with NE [REP1-015])

*From applicant's HRA report (AIES Screening Report [APP-069]) and screening matrices (Appendix C of the HRA Screening Report).

3.2 Summary of HRA Screening outcomes during the examination

3.2.1 A total of three European sites were screened by the Applicant prior to examination (see Annex 1). Of these sites, the Applicant concluded that there would be no likely significant effect on any of the European sites and their qualifying features (see Table 3.1). The IPs did not dispute the Applicant's conclusion of no likely significant effects on these European sites and their qualifying features during the examination (see Table 3.3. of the DRAFT SoCG between the Applicant and Natural England [REP1-015]).

3.2.2 As noted at paragraph 3.1.6 of this report, the Applicant has referred to mitigation measures linked to the Humber Estuary in the application documents. The REAC [AS-013] lists a series of measures to prevent airborne dust, noise, vibration and contaminant pollution and sedimentation from entering the Humber Estuary and other measures to prevent causing harm to marine fauna (including grey seal and lampreys which are qualifying features of the Humber Estuary SAC/Ramsar). Piling activities at the Humber Dock Marina are a particular concern in this regard. Additionally, paragraph 10.7.12 of the submitted Environmental Statement [AS-012] lists a series of measures that should be followed to mitigate impacts to fauna in the Estuary prior to pilling commencing. These measures are the same listed at Commitment E1 of the REAC [AS-013].

3.2.3 The ExA issued written questions on 1 April 2019 to request information from the Applicant (ExQ1) [PD-006] on these matters. Q1.0.11 [PD-006] asked the Applicant to comment on whether, the approach taken to establishing likely significant effect in the HRA Report was robust having regard to the judgment in People over Wind and Sweetman v Coillte Teoranta (C-323/17) and measures necessary to avoid or reduce impacts from the Proposed Development.

3.2.4 The Applicant stated in their response to Q1.0.11 that the HRA Report [APP-069] does not take into account mitigation measures.

3.2.5 The ExA noted at Q1.2.3 (ExQ1, [PD-006]) that breeding bird surveys conducted at the proposed construction compounds were concentrated between May and June 2016 but that the proposed site compound at Neptune Street was not surveyed. The ExA asked the Applicant whether there was a functional link between Neptune Street site compound and the Humber Estuary. The ExA asked both the Applicant and Natural England whether the level of surveys conducted were sufficient to support the conclusions that the Proposed Development will not have a likely significant effect on birds present within the Humber Estuary all year around.

3.2.6 The Applicant's response to Q1.2.3 [REP2-003] stated that Neptune Street site compound was first identified as a potential site compound in July 2016 and access was not granted until August 2016 after the breeding bird surveys had been undertaken and at the end of the optimal survey season.

The Applicant explained that Neptune Street site compound was removed from the Proposed Development in January 2018 but was then incorporated back into the scheme on 22 May 2018 due to change in availability of alternative sites.

3.2.7 These timescales prevented breeding bird surveys being undertaken at this compound site. The Applicant considered that significant effects have been correctly identified with regards to breeding birds in the Neptune Street site compound. The Applicant responded that there was no functional link between the Neptune Street site compound and the Humber Estuary in relation to wintering birds. However, a functional link between the site compound and the Humber Estuary is not explicitly excluded in relation of breeding birds. The Applicant stated that despite the ecology assessment concluding with probable certainty that there would be no significant effects to breeding birds at Neptune Street compound, measures have been implemented to prevent impacts to birds during clearance (see OEMP [AS-015] and REAC [AS-013] reference E5). The mitigation measures to prevent effects upon the Estuary designated sites have been accepted by NE.

3.2.8 The Applicant's response at Q1.2.3 presents some ambiguity when compared with the conclusions of the Applicant's HRA Screening Report [APP-069] that LSE are excluded in connection with the qualifying features of the Humber Estuary SPA.

3.2.9 It is noted that Hull City Council Local Impact Report [REP2-016] at paragraph 5.5.1 states that the use of the identified construction compounds, including those at Humber Quays West and Neptune Street, in relative proximity to the Humber Estuary Ramsar Site, SPA, SAC, and SSSI, should not have any likely significant effect on the estuary, given the lack of functional links **and** the imposition of management measures to be secured by the CEMP[6] requirement on the DCO.

3.2.10 NE has not responded to the ExA's question (Q1.0.11 of ExQ1 [PD-006]) to date.

3.2.11 Therefore, as a precautionary measure, this RIES has been prepared to record the issue and its evolution to date.

3.2.12 The ExA understands that the measures included in the REAC ([AS-013] Ref E5) and OEMP [AS-015] are intended to reduce or avoid impacts on species which are qualifying features of the European sites.

3.2.13 Accordingly, the ExA considers that there are measures proposed by the Applicant to avoid or reduce effects from the Proposed Development. The ExA is of the view that, in light of such measures, it is necessary to consider whether there would be any adverse effects on the integrity of the European sites.

[6] Construction Environmental Management Plan

4 ADVERSE EFFECTS ON INTEGRITY

4.0 Conservation objectives

4.0.1 The conservation objectives and vulnerabilities of the Humber Estuary SPA, SAC and Ramsar sites are provided within Appendix A: Characteristics of European Sites of the HRA Report [APP-069].

4.1 The Integrity Test

Adverse Effects on Site Integrity

4.1.1 The Applicant has concluded that the Proposed Development would not result in a LSE on any of the European sites considered in the AIES [APP-069]. The Applicant has therefore not presented information specifically in relation to the assessment of effects on the integrity of the European sites, including whether there are any implications on the conservation objectives of these sites.

4.1.2 The ExA understands that the measures included in the REAC ([AS-013] and OEMP [AS-015] are intended (in whole or in part) to reduce or avoid effects on species which are qualifying features of the European sites. In absence of information to the contrary the ExA considers that those measures are necessary to avoid or reduce effects on the integrity of the European sites considered.

4.1.3 As such, Stage 2 integrity matrices have been produced and are included in Annex 2 of this RIES.

4.1.4 On the basis of information provided to date the ExA is minded to conclude that with the measures to avoid and reduce effect being in place any **adverse effects on the integrity of the identified European Protected sites can be excluded**.

5 CONCLUSIONS

5.0.1 The ExA has produced this RIES to outline the latest position in respect of HRA matters during the examination.

5.0.2 The Applicant's HRA Screening Report concluded that no LSE are predicted on any of the European sites and their qualifying features. The ExA issued written questions asking the Applicant and NE to comment on whether, the approach taken to establishing likely significant effect in the HRA Report was robust having regard to the judgment in People over Wind and Sweetman v Coillte Teoranta (C-323/17) and measures necessary to avoid or reduce impacts from the Proposed Development.

5.0.3 The Applicant responded that HRA Report [APP-069] does not take into account mitigation measures.

5.0.4 However, the ExA noted that mitigation measures to avoid and reduce the effect of the Proposed Development during construction are presented and relied upon in several, of the submitted documents i.e. the REAC [AS-013], OEMP [AS-015] and Chapter 10 of the ES [AS-012].

5.0.5 The ExA has produced (with the support of the Environmental Services Team) integrity matrices for the identified European Protected sites where such measures are relevant. These are presented at Annex 3 of this RIES. The ExA has taken into consideration the proposed measures to avoid and reduce effects and is minded to conclude that adverse effects on the integrity of the identified European Protected sites can be excluded.

ANNEX 1: POTENTIAL IMPACTS

Potential Impacts

Potential impacts upon the European site(s) which are considered within the Applicant's HRA Screening Report for the A63 Castle Street Improvement Scheme [APP-069] are provided in the Table below.

Designation	**Potential Impacts as submitted**	**Presented in screening matrices as**
Humber Estuary SAC/SPA/Ramsar	Pollution and scour of estuarine habitats via surface water discharge	Surface water discharge
	Contamination during construction of bridge and dry dock	Dust, sediment and construction run-off
	Noise and vibration during construction of wider scheme, bridge and dry dock	Noise and Vibration
	Air Quality during construction and traffic during operation	Air emissions
	Contamination of ground water	Groundwater contamination
	Accidental injury of protected species during construction due to trenches be left open at night and destruction of active nests	Accidental injury of protected species
	Impacts in combination of wider scheme and Princes Quay Bridge	In combination effects

ANNEX 2: STAGE 1 MATRICES: SCREENING FOR LIKELY SIGNIFICANT EFFECTS

Stage 1 Matrices: Screening for Likely Significant Effect

The screening matrices are based on those provided by the Applicant in [APP-069] but have been amended by the ExA (with the support of the Environmental Services Team) where considered necessary, based on the information gathered during the examination.

Evidence for, or against, likely significant effects (LSE) on the European sites and their qualifying features is detailed within the footnotes that follow the screening matrices. Where LSE cannot be excluded, that potential impact source is carried forward to Stage 2 assessment. This annex of the RIES identifies the European sites and features for which the Applicant's conclusions were considered ambiguous with regards to the use of mitigation measures. Therefore, revised screening matrices have been produced by the Planning Inspectorate.

Where the potential impact only relates to the construction of the Princes Quay Bridge and dry dock, it has been specified in the matrices.

Key to Matrices:

✓	Likely significant effect (LSE) **cannot** be excluded
×	LSE **can** be excluded
?	The ExA is unclear as to whether LSE can be excluded
C	construction
O	operation
D	decommissioning
a- g	Reference to evidence (see footnotes)

Information supporting the conclusions is detailed in footnotes (shown as letters a to g) 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

Stage 1 Matrix 1: Humber Estuary SAC

Site Code: UK0030170

Distance to project: 90m (nearest point of wider scheme) 295m (Princes Quay Bridge piling footprint)

European site feature(s)	**Likely Effects of Proposed Development**																				
	Surface Water discharge			**Dust, sediment and construction run-off (Princes Quay Bridge only)**			**Noise and vibration**			**Accidental Injury**			**Groundwater Contamination**			**Air Emissions**			**In-combination Effects**		
Stage of development	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Annex I Habitats:																					
1130 Estuaries	× a	× a	n/a	× b	n/a	n/a	× c[1]	× c[2]	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a
1140 Mudflats and sandflats not covered by seawater at low tide	× a	× a	n/a	× b	n/a	n/a	× c[1]	× c[2]	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a

European site feature(s)	**Likely Effects of Proposed Development**																				
	Surface Water discharge			**Dust, sediment and construction run-off (Princes Quay Bridge only)**			**Noise and vibration**			**Accidental Injury**			**Groundwater Contamination**			**Air Emissions**			**In-combination Effects**		
Stage of development	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
1110 Sandbanks which are slightly covered by sea water all the time	× a	× a	n/a	× b	n/a	n/a	× c[1]	× c[2]	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a
1150 Coastal Lagoons	× a	× a	n/a	× b	n/a	n/a	× c[1]	× c[2]	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a
1310 Salicornia and other annuals colonizing mud and sand	× a	× a	n/a	× b	n/a	n/a	× c[1]	× c[2]	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a
1330 Atlantic salt meadows (Glauco-Puccinellietalia	× a	× a	n/a	× b	n/a	n/a	× c[1]	× c[2]	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a

European site feature(s)	**Likely Effects of Proposed Development**																				
	Surface Water discharge			**Dust, sediment and construction run-off (Princes Quay Bridge only)**			**Noise and vibration**			**Accidental Injury**			**Groundwater Contamination**			**Air Emissions**			**In-combination Effects**		
Stage of development	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
maritimae)																					
2110 Embryonic shifting dunes	× a	× a	n/a	× b	n/a	n/a	× c^1	× c^2	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a
2120 Shifting dunes along the shoreline with Amnophila arenaria (""white dunes"")"	× a	× a	n/a	× b	n/a	n/a	× c^1	× c^2	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a
2130 Fixed coastal dunes with herbaceous vegetation (""grey dunes"")"	× a	× a	n/a	× b	n/a	n/a	× c^1	× c^2	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a

European site feature(s)	**Likely Effects of Proposed Development**																				
	Surface Water discharge			**Dust, sediment and construction run-off (Princes Quay Bridge only)**			**Noise and vibration**			**Accidental Injury**			**Groundwater Contamination**			**Air Emissions**			**In-combination Effects**		
Stage of development	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
* Priority feature																					
2160 Dunes with *Hippophae rhamnoides*	× a	× a	n/a	× b	n/a	n/a	× c^1	× c^2	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a
Annex II Species																					
1095 Sea lamprey *Petromyzon marinus*	× a	× a	n/a	× b	n/a	n/a	? c^1	× c^2	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a
1099 River lamprey *Lampetra fluviatilis*	× a	× a	n/a	× b	n/a	n/a	? c^1	× c^2	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a

European site feature(s)	**Likely Effects of Proposed Development**																				
	Surface Water discharge			**Dust, sediment and construction run-off (Princes Quay Bridge only)**			**Noise and vibration**			**Accidental Injury**			**Groundwater Contamination**			**Air Emissions**			**In-combination Effects**		
Stage of development	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
1364 Grey seal *Halichoerus grypus*	× a	× a	n/a	× b	n/a	n/a	? c[1]	× c[2]	n/a	? d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a

Evidence supporting conclusions:

a. Surface water from the Proposed Development will be discharged to the existing public sewer network at the existing flow rates. A network of on-site water collection attenuation features will retain any additional surface water/run off.

b. The high dilution within the Humber Estuary will disperse the sedimentation and contamination (Appendix E Hydrology and water quality technical note within AIES [APP-069]).

c_1 Noise and vibration during construction of the wider scheme and Princes Quay Bridge. The prediction of ground-borne vibration from construction activities such as piling and vibratory compaction indicates the potential for perceptible levels of vibration at receptors within 30m of the works. The Humber Estuary is approximately 90m at the nearest point from the works on the wider scheme. However, some of the protected species for which the Humber Estuary is designated can be present within the Humber Dock Marina during the piling works and other construction activities in connection with the Princes Quay Bridge. The Marina is located adjacent to the boundaries of the Humber Estuary designations, which are contiguous in this location. The finding of no LSE on some of the designated species appears to be reliant upon the implementation of measures designed to avoid or reduce harm as listed at Commitment E1 of the Register of Environmental Actions and Commitments (REAC) [AS-013] and Outline Environmental Management Plan (OEMP) [AS-015].

c_2 Unlike impacts during construction the noise and vibration during operation will have no impacts upon the habitats of the Humber Estuary, lamprey or grey seals. See Chapter 7 of submitted Environmental Statement [AS-012].

d. Commitment E5 of the submitted REAC [AS-013] and OEMP [AS-015] states that mitigation measures will be in place during construction at the construction compound sites (Wellington Street Island Warf, Livingstone Road) to prevent grey seals being injured by trenches left open at night. As grey seals are part of the designation of the Humber Estuary SAC, the ExA cannot exclude LSE on some of the designated species without taking into account the mitigation measures. Accidental injury can be excluded during operation.

e. The degree of hydraulic connectivity between groundwater at the development site and the Humber Estuary is likely to be very limited and the zone of influence for the underpass construction is small and does not extend to the estuary.

f. Total nitrogen deposition is below the critical load range and the change in deposition associated with the wider scheme is less than 1% of the critical load (See Chapter 6 of the Environmental Statement [AS-012]). These air quality effects and the wider scheme impacts are concluded to be not significant for ecological receptors based on the magnitude of increase and because the flushing action due to tides is likely to reduce the input of atmospheric nitrogen (N) to the saltmarsh ecosystem. Predicted air quality emissions during construction will not generated a LSE on designated features.

g. No likely cumulative effects of the A63 Castle Street Improvement Scheme in combination with the Princes Quay Bridge were identified.

Stage 1 Matrix 2: Humber Estuary SPA

Site Code: UK9006111

Distance to project: 90m (nearest point of wider scheme) 295m (Princes Quay Bridge piling footprint)

European site feature(s)	**Likely Effects of Proposed Development**																				
	Surface Water discharge			**Dust, sediment and construction run-off (Princes Quay Bridge only)**			**Noise and vibration**			**Accidental Injury**			**Groundwater Contamination**			**Air Emissions**			**In-combination Effects**		
Stage of development	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Article 4.1 Qualification (79/409/EEC)																					
During breeding season the area regularly supports: Bittern, Marsh Harrier, Avocet, Little Tern.	× a	× a	n/a	× b	n/a	n/a	× c[1]	× c[2]	n/a	? d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a
Over winter the area regularly supports:	× a	× a	n/a	× b	n/a	n/a	× c[1]	× c[2]	n/a	×	×	n/a	×	×	n/a	×	×	n/a	×	×	n/a

European site feature(s)	**Likely Effects of Proposed Development**																				
	Surface Water discharge			**Dust, sediment and construction run-off (Princes Quay Bridge only)**			**Noise and vibration**			**Accidental Injury**			**Groundwater Contamination**			**Air Emissions**			**In-combination Effects**		
Stage of development	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Bittern, Hen Harrier, Bar-tailed Godwit, Golden Plover, Avocet										d	d		e	e		f	f		g	g	
On passage the area regularly supports: Ruff	x a	x a	n/a	x b	n/a	n/a	x c^1	x c^2	n/a	x d	x d	n/a	x e	x e	n/a	x f	x f	n/a	x g	x g	n/a
Article 4.2 Qualification (79/409/EEC):																					
Over winter the area regularly supports: Dunlin, Knot, Black-Tailed Godwit, Common	x a	x a	n/a	x b	n/a	n/a	x c^1	x c^2	n/a	x d	x d	n/a	x e	x e	n/a	x f	x f	n/a	x g	x g	n/a

European site feature(s)	**Likely Effects of Proposed Development**																				
	Surface Water discharge			**Dust, sediment and construction run-off (Princes Quay Bridge only)**			**Noise and vibration**			**Accidental Injury**			**Groundwater Contamination**			**Air Emissions**			**In-combination Effects**		
Stage of development	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Shelduck, Redshank.																					
On passage the area regularly supports: Dunlin, Knot, Black-tailed Godwit, Redshank	× a	× a	n/a	× b	n/a	n/a	× c^1	× c^2	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a
In the non-breeding season the area regularly supports: 153934 waterfowl	× a	× a	n/a	× b	n/a	n/a	× c^1	× c^2	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a

Evidence supporting conclusions:

a. Surface water from the Proposed Development will be discharged to the existing public sewer network at the existing flow rates. A network of on-site water collection attenuation features will retain any additional surface water/run off. LSE on protected species can be excluded.

b. The high dilution within the Humber Estuary will disperse the sedimentation and contamination (Appendix E Hydrology and water quality technical note within AIES [APP-069]).

c_1. Noise and vibration during construction of the wider scheme and Princes Quay Bridge. The prediction of ground-borne vibration from construction activities such as piling and vibratory compaction indicates the potential for perceptible levels of vibration at receptors within 30m of the works. The Humber Estuary is approximately 90m at the nearest point from the works on the wider scheme. Impact on Humber Estuary SPA qualifying features can be excluded.

c_2. Impact of operational noise on the Humber Estuary SPA qualifying features can be excluded based on the predicted noise (See Chapter 7 of submitted Environmental Statement [AS-012]).

d. During the Examination, the ExA noted at Q1.2.3 (ExQ1, [PD-006]) that breeding bird surveys conducted at the proposed construction compounds were concentrated between May and June 2016 but that the proposed site compound at Neptune Street was not surveyed. The ExA asked the Applicant whether there was a functional link between Neptune Street site compound and the Humber Estuary. The ExA asked both the Applicant and NE whether the level of surveys conducted were sufficient to support the conclusions that the Proposed Development will not have a likely significant effect on birds present within the Humber Estuary all year around.

The Applicant considered (see Applicant's response to Q1.2.3 [REP2-003]) that significant effects have been correctly identified with regards to breeding birds in the Neptune Street site compound. The Applicant responded that there was no functional link between the Neptune Street site compound and the Humber Estuary in relation to wintering birds. However, functional link between the site compound and the Humber Estuary is not explicitly excluded in relation of breeding birds (see Applicant's response at [REP2-003]). The Applicant stated that despite the ecology assessment concluding with probable certainty that there would be no significant effects to breeding birds at Neptune Street compound, measures have been implemented to prevent impacts to birds during clearance (see OEMP [AS-015] and REAC [AS-013] reference E5). The mitigation measures to prevent effects upon the Estuary designated sites have been

accepted by NE. This presents some ambiguity when compared with the conclusions of the Applicant's HRA Screening Report [APP-069] that LSE are excluded in connection with the qualifying features of the Humber Estuary SPA.

Hull City Council Local Impact Report [REP2-016] at paragraph 5.5.1 states that the use of the identified construction compounds, including those at Humber Quays West and Neptune Street, in relative proximity to the Humber Estuary Ramsar Site, SPA, SAC, and SSSI, should not have any likely significant effect on the estuary, given the lack of functional links **and** the imposition of management measures to be secured by the CEMP requirement on the DCO. NE has not responded to the ExA's question (ExQ1 [PD-006]) to date.

The finding of no LSE on some of Humber Estuary SPA qualifying features (breeding birds) appears to be reliant upon the implementation of measures intended to avoid or reduce harm as listed at Commitment E5 of the Register of Environmental Actions and Commitments (REAC) [AS-013] and Outline Environmental Management Plan (OEMP) [AS-015]. Therefore, the ExA is of the view that, in light of such measures, it is necessary to consider whether there would be any adverse effects on the integrity of the European sites- see Stage 2 Matrix 2 of Annex 3.

e. The degree of hydraulic connectivity between groundwater at the development site and the Humber Estuary is likely to be very limited and the zone of influence for the underpass construction is small and does not extend to the estuary.

f. Air quality effects and the wider scheme impacts are concluded to be not significant for ecological receptors (See Chapter 6 of the Environmental Statement [AS-012]). Predicted air quality emissions during construction will not generated a LSE on designated features.

g. No likely cumulative effects of the A63 Castle Street Improvement Scheme in combination with the Princes Quay Bridge were identified.

Stage 1 Matrix 3: Humber Estuary Ramsar site

Site Code: UK11031

Distance to project: 90m (nearest point of wider scheme) 295m (Princes Quay Bridge piling footprint)

European site feature(s)	**Likely Effects of Proposed Development**																				
	Surface Water discharge			**Dust, sediment and construction run-off (Princes Quay Bridge only)**			**Noise and vibration**			**Accidental Injury**			**Groundwater Contamination**			**Air Emissions**			**In-combination Effects**		
Stage of development	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
Ramsar criteria (See Appendix A of Applicant's HRA Screening Report [APP-069]																					
Ramsar criterion 1 An example of near natural beauty.	× a	× a	n/a	× b	n/a	n/a	× c^1	× c^2	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a
Ramsar criterion 3 Supports	× a	× a	n/a	× b	n/a	n/a	? c^1	× c^2	n/a	? d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a

European site feature(s)	**Likely Effects of Proposed Development**																				
	Surface Water discharge			**Dust, sediment and construction run-off (Princes Quay Bridge only)**			**Noise and vibration**			**Accidental Injury**			**Groundwater Contamination**			**Air Emissions**			**In-combination Effects**		
Stage of development	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
populations of animal species important for maintaining the biological diversity of a region (grey seal and natterjack toad)																					
Ramsar criterion 5 Regularly supports 20,000	× a	× a	n/a	× b	n/a	n/a	× c[1]	× c[2]	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a

European site feature(s)	**Likely Effects of Proposed Development**																				
	Surface Water discharge			**Dust, sediment and construction run-off (Princes Quay Bridge only)**			**Noise and vibration**			**Accidental Injury**			**Groundwater Contamination**			**Air Emissions**			**In-combination Effects**		
Stage of development	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
or more waterbirds																					
Ramsar criterion 6 Supports populations of waterbirds at levels of international importance.	× a	× a	n/a	× b	n/a	n/a	× c[1]	× c[2]	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a
Ramsar criterion 8 Important migration route for river lamprey	× a	× a	n/a	× b	n/a	n/a	× c[1]	× c[2]	n/a	× d	× d	n/a	× e	× e	n/a	× f	× f	n/a	× g	× g	n/a

European site feature(s)	**Likely Effects of Proposed Development**																				
	Surface Water discharge			**Dust, sediment and construction run-off (Princes Quay Bridge only)**			**Noise and vibration**			**Accidental Injury**			**Groundwater Contamination**			**Air Emissions**			**In-combination Effects**		
Stage of development	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**	**C**	**O**	**D**
and sea lamprey.																					

Evidence supporting conclusions:

a. Surface water from the Proposed Development will be discharged to the existing public sewer network at the existing flow rates. A network of on-site water collection attenuation features will retain any additional surface water/run off. LSE on Ramsar qualifying features can be excluded.

b. The high dilution within the Humber Estuary will disperse the sedimentation and contamination (Appendix E Hydrology and water quality technical note within AIES [APP-069]). LSE on Ramsar qualifying features can be excluded.

c_1. Noise and vibration during construction of the wider scheme and Princes Quay Bridge. The prediction of ground-borne vibration from construction activities such as piling and vibratory compaction indicates the potential for perceptible levels of vibration at receptors within 30m of the works. The Humber Estuary is approximately 90m at the nearest point from the works on the wider scheme. However, some of the protected species for which the Humber Estuary is designated can be present within the Humber Dock Marina during the piling works and other construction activities in connection with the Princes Quay Bridge. The Marina is located adjacent to the boundaries of the Humber Estuary designations, which are contiguous in this location. The finding of no LSE on some of the designated species appears to be reliant upon the implementation of measures designed to avoid or reduce harm as listed at Commitment E1 of the Register of Environmental Actions and Commitments (REAC) [AS-013] and Outline Environmental Management Plan (OEMP) [AS-015].

c_2. Impact of operational noise on the Humber Estuary Ramsar qualifying features can be excluded based on the predicted noise (See Chapter 7 of submitted Environmental Statement [AS-012]).

d. The finding of no LSE on some of Humber Estuary Ramsar qualifying features (grey seal) appears to be reliant upon the implementation of measures intended to avoid or reduce harm as listed at Commitment E5 of the Register of Environmental Actions and Commitments (REAC) [AS-013] and Outline Environmental Management Plan (OEMP) [AS-015]. Therefore, the ExA is of the view that, in light of such measures, it is necessary to consider whether there would be any adverse effects on the integrity of the European sites- see Stage 2 Matrix 3 of Annex 3.

e. The degree of hydraulic connectivity between groundwater at the development site and the Humber Estuary is likely to be very limited and the zone of influence for the underpass construction is small and does not extend to the estuary.

f. Air quality effects and the wider scheme impacts are concluded to be not significant for ecological receptors (See Chapter 6 of the ES [AS-012]). Predicted air quality emissions during construction will not generated a LSE on designated features.

g. No likely cumulative effects of the A63 Castle Street Improvement Scheme in combination with the Princes Quay Bridge were identified.

ANNEX 3: STAGE 2 MATRICES: ADVERSE EFFECT ON INTEGRITY

Stage 2 Matrices: Adverse Effect on Integrity

The European sites considered in the screening assessment have been subject to further assessment in order to establish if the Proposed Development could have an adverse effect on their integrity. These integrity matrices have been produced by the ExA (with the support of the Environmental Services Team) based on the submissions during the Examination.

Key to Matrices:

✓	Adverse effect on integrity (AEoI) cannot be excluded
×	No AEoI
?	Applicant and Interested Parties do not agree that and AEOI can be excluded
C	construction
O	operation
D	decommissioning
a- c	Reference to evidence (see footnotes)

Information supporting the conclusions is detailed in footnotes (shown as letters a to c) for each table with reference to relevant supporting documentation.

Cells filled with grey tone denote effects screened out at Stage 1 as not likely to be significant for the reasons and justifications given in the Stage 1 screening matrices.

Stage 2 Matrix 1: Humber Estuary SAC

Site Code: UK0030170

Distance to project: 90m (nearest point of wider scheme) 295m (Princes Quay Bridge piling footprint)

European site feature(s)	**Likely Effects of Proposed Development**					
	Noise and vibration			**Accidental Injury**		
Stage of development	**C**	**O**	**D**	**C**	**O**	**D**
Annex II Species						
1095 Sea lamprey *Petromyzon marinus*	× a					
1099 River lamprey *Lampetra fluviatilis*	× a					
1364 Grey seal *Halichoerus grypus*	× a			× b		

Evidence supporting conclusions:

a. The Applicant's screening assessment in the HRA Report [APP-069] concluded that the Proposed Development would have **no likely significant effect**, either alone or in-combination with other projects or plans, on the qualifying features of the European site(s).

The Applicant's conclusions in relation to these sites and their features **were not disputed** by any IPs during the examination (see DRAFT SoCG between the Applicant and Natural England [REP1-015]). However, the submitted REAC [AS-013] at Commitment E1 lists a series of measures to avoid or prevent harm during piling activities to marine fauna (including grey seal and lampreys which are qualifying features of the Humber Estuary SAC/Ramsar). Additionally, paragraph 10.7.12 of the submitted ES [AS-012] lists a series of measures that should be followed to mitigate impacts to fauna in the Estuary prior to pilling commencing. These measures are the same listed at Commitment E1 of the REAC [AS-013] and are:

- The dock gates would be closed during piling to control and contain silt and sediment and absorb noise and vibration from entering the Humber Estuary.
- Trained marine fauna ecologists would act as observers to check that the dock area and up to 500m beyond the dock gates is clear of marine animals.
- A soft start-up of machinery to disperse any potential fish, birds or mammals

The ExA issued written questions on 1 April 2019 to request information from the Applicant (ExQ1) [PD-006] on these matters. Q1.0.11 [PD-006] asked the Applicant to comment on whether, the approach taken to establishing likely significant effect in the HRA Report was robust having regard to the judgment in People over Wind and Sweetman v Coillte Teoranta (C-323/17) and measures necessary to avoid or reduce impacts from the Proposed Development.

The Applicant stated in their response to Q1.0.11 that the HRA Report [APP-069] does not take into account mitigation measures. NE has not responded to the ExA's question (ExQ1 [PD-006]) to date.

Taking into account the measures listed at Commitment E1 of the REAC [AS-013] which is part of the OEMP [AS-015] and it is secured by requirement in the DCO, the ExA is minded to conclude that **adverse effects on the integrity of the Humber Estuary SAC can be excluded**.

b. The Applicant's screening assessment in the HRA Report [APP-069] concluded that the Proposed Development would have **no likely significant effect**, either alone or in-combination with other projects or plans, on the qualifying features of the European site(s).

The Applicant's conclusions in relation to these sites and their features were not disputed by any IPs during the examination (see DRAFT SoCG between the Applicant and Natural England [REP1-015]). However, the submitted REAC [AS-013] at Commitment E5 states that at site compounds Wellington Street Island Wharf and Livingstone Road, measures should be implemented that require open trench and other excavations to be covered at night to prevent grey seal / otter from falling in. This is a measure to prevent causing harm to qualifying features during construction.

Taking into account the mitigation measures listed at Commitment E5 of the REAC [AS-015] which is part of the OEMP [AS-015] and it is secured by requirement in the DCO, the ExA has reached the conclusion that **adverse effects on the integrity of the Humber Estuary SAC can be excluded**.

Stage 2 Matrix 2: Humber Estuary SPA

Site Code: UK9006111

Distance to project: 90m (nearest point of wider scheme) 295m (Princes Quay Bridge piling footprint)

European site feature(s)	**Likely Effects of Proposed Development**		
	Accidental Injury		
Stage of development	**C**	**O**	**D**
Article 4.1 Qualification (79/409/EEC)			
During breeding season the area regularly supports: Bittern, Marsh Harrier, Avocet, Little Tern.	x C		

Evidence supporting conclusions:

c. Taking into account the mitigation measures listed at Commitment E5 of the REAC [AS-013] which is part of the OEMP [AS-015] and it is secured by requirement in the DCO, the ExA has reached the conclusion that **adverse effects on the integrity of the Humber Estuary SAC can be excluded**.

Stage 2 Matrix 3: Humber Estuary Ramsar site

Site Code: UK11031

Distance to project: 90m (nearest point of wider scheme) 295m (Princes Quay Bridge piling footprint)

European site feature(s)	**Likely Effects of Proposed Development**					
	Noise and vibration			**Accidental Injury**		
Stage of development	**C**	**O**	**D**	**C**	**O**	**D**
Ramsar criteria (See Appendix A of Applicant's HRA Screening Report [APP-069]						
Ramsar criterion 3 Supports populations of animal species important for maintaining the biological diversity of a region (grey seal and natterjack toad)	× a			× b		

Evidence supporting conclusions: See footnotes for the integrity matrices for Humber Estuary SAC