



The Planning Inspectorate
Yr Arolygiaeth Gynllunio

REPORT on the IMPLICATIONS for EUROPEAN SITES

Proposed Portishead Branch Line - MetroWest Phase 1

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

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1 INTRODUCTION

1.1 Background

- 1.1.1 North Somerset District Council (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 Portishead Branch Line - MetroWest Phase 1 (the Proposed Development). The Secretary of State (SoS) has appointed an Examining Authority (ExA) to conduct an examination of the DCO application, to report its findings and conclusions, and to make a recommendation to the SoS as to the decision to be made on the DCO application.
- 1.1.2 The relevant SoS is the competent authority for the purposes of the Habitats Regulations¹ for applications submitted under the PA2008 regime. The findings and conclusions on nature conservation issues reported by the ExA will assist the SoS in performing their duties under the Habitats Regulations.
- 1.1.3 This Report on the Implications for European Sites (RIES) 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 Deadline 6 of the Examination (15 March 2021) in relation to potential effects to European Sites². 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:
<http://infrastructure.planninginspectorate.gov.uk/document/TR040011-000588>
- 1.1.4 This report is issued to ensure that IPs including the statutory nature conservation bodies: Joint Nature Conservation Committee (JNCC) and Natural England (NE), are consulted formally on Habitats Regulations matters. This process may be relied on by the SoS 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

¹ The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations) as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (collectively referred to as the Habitats Regulations). It is noted that the amendment regulations introduce new terminology including reference to the National Site Network rather than the Natura 2000 network, which remains the collective term for sites in the European Union.

² 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, 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 PINS Advice Note 10.

to the SoS and made available to the SoS 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 European Economic Area States ([APP-100], [REP6-120]). Only UK European sites are addressed in this report.

1.2 Key documents used to inform this RIES

- 1.2.1 The Applicant provided a report entitled "*Report to Inform Habitats Regulations Assessment*" [APP-072] (the HRA Report) with the DCO application, together with screening and integrity matrices in accordance with the Inspectorate's Advice Note Ten (AN10)³. The same HRA Report was submitted in duplicate as an appendix to the Environmental Statement (ES) at [APP-142].

- 1.2.2 The HRA Report concluded that there was the potential for likely significant effects on two European sites. One of these two sites is the Avon Gorge Woodlands Special Area of Conservation (SAC) and, based on the information provided to inform an appropriate assessment, the Applicant concluded that adverse effects on the integrity of the site could not be excluded. Therefore, the Applicant also provided information on their consideration of alternatives, compensatory measures, imperative reasons of overriding public interest (IROPI) in order to inform the competent authority in carrying out their functions under the Habitats Regulations.

Examination

- 1.2.3 In response to the ExA's questions, issue specific hearings and representations made by IPs during the Examination, the Applicant provided updated versions of its HRA Report (version 2) prior to the formal commencement of the Examination [AS-027] and a third version as a late submission to Deadline 6 of the Examination [REP6-120]. Unless otherwise stated, subsequent references to the Applicant's HRA Report in this RIES are made to this most recent iteration of the document [REP6-120].

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 Deadline 6 (15 March 2021). 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. The section also identifies where IPs have disputed the applicant's conclusions, together with any additional European sites and

³ <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

qualifying features screened for potential likely significant effects during the Examination;

- **Section 4** identifies the European site(s) and qualifying feature(s) which have been considered in terms of adverse effects on site integrity, either alone or in-combination with other projects and plans. The section identifies where IPs have disputed the applicant's conclusions, together with any additional European sites and qualifying features considered for adverse effects on integrity during the Examination;
- **Section 5** outlines the Applicant's consideration of alternative solutions to the Proposed Development;
- **Section 6** presents the Applicant's information to inform a case for IROPI (if required by the Secretary of State); and
- **Section 7** describes compensatory measures for the relevant features of the Avon Gorge SAC where the Applicant has not excluded an adverse effect on their integrity as a result of the Proposed Development.

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 HRA Report (paragraph 0.1.4 of [REP6-120]). Paragraph 1.3.11 of the HRA Report [REP6-120] sets out the designations to be included as 'European sites', consistent with footnote ² of this RIES. Section 1.3 of the updated version of the HRA Report [REP6-120] also reflects the publication of new UK Government HRA guidance⁴ as set out in paragraph 1.3.2 of the HRA Report and considered in later sections of this RIES.

2.1.2 The Applicant's HRA Report identified the following European site(s) for which the UK is responsible for inclusion within the assessment.

Table 2.1: Sites screened into the HRA by Applicant

Name of European Site	Distance to the DCO Order Limits
Avon Gorge Woodlands SAC	Within the DCO Order Limits
Severn Estuary Special Protection Area (SPA)	0.08 km (Nb functionally linked land to the SPA and Ramsar within 650m)
Severn Estuary SAC	
Severn Estuary Ramsar site	
North Somerset and Mendip Bats SAC	9 km
Chew Valley Lake SPA	9 km
Wye Valley Woodlands SAC	18.5 km
Wye Valley and Forest of Dean Bat Sites SAC	19 km
Mendip Limestone Grasslands SAC	21 km
Bath and Bradford-on-Avon Bats SAC	22 km
Mells Valley SAC	24 km

Note: Rows shaded in grey identify sites for which bat qualifying features alone are relevant to the consideration of likely significant effects, as discussed in the following paragraphs

2.1.3 The table above is adapted from Table 5.1 of the Applicant's HRA Report [REP6-120] which outlines the qualifying features of each site in full. They

⁴ <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>
<https://www.gov.uk/guidance/duty-to-protect-protect-restore-european-sites>
<https://www.gov.uk/government/publications/habitats-regulations-assessment-derogation-notice>

are not replicated here but are considered further in later sections of this RIES as relevant.

- 2.1.4 Paragraph 5.1.1 of the HRA Report explains that the search area for screening of European sites for consideration as part of the HRA was a 10km radius from the DCO order limits, and an extended radius of 30 km for European sites where one or more bat species are a qualifying feature. The relevant sites are those listed above in Table 2.1 above (as detailed further in Table 5.1 of the HRA Report) and shown in Figures 1 and 2 in Annex A of the HRA Report.
- 2.1.5 In response to the ExQ1 BIO.1.41, NE [REP2-045], North Somerset District Council as the local planning authority (NSDC) [REP2-038] and Bristol City Council (BCC) [REP2-036] did not identify any other UK European site or European site features that could be affected by the Proposed Development beyond those identified by the Applicant. No other IPs raised any concerns in this regard during the examination.
- 2.1.6 Annex B of the HRA Report [REP6-120] presents the relevant European Site Data Sheets for each of the sites listed above.

2.2 HRA Matters Considered During the Examination

- 2.2.1 The Examination has primarily focussed on:
- The Applicant's assessment of the North Somerset and Mendip Bats SAC (in relation to severance of foraging routes due to vegetation clearance and lighting) and identification of mitigation measures in order to reach a conclusion of no Adverse Effect on Integrity (AEoI);
 - The extent, efficacy and delivery mechanisms of the compensatory measures proposed in respect of the following features of the Avon Gorge Woodlands SAC (for which the Applicant was not able to exclude the possibility of adverse effects on the site integrity):
 - Semi-natural dry grasslands and scrubland facies on calcareous substrates;
 - *Tilio-Acerion* forests of slopes, screes and ravines; and
 - Rare whitebeam trees (some of which are endemic to the Avon Gorge) and are a component of the SAC woodland qualifying feature.
- 2.2.2 These were the main features of the Examination with regards to HRA matters and are explored in further detail in the following sections of this RIES, along with the Applicant's conclusions in relation to all other European Sites screened in to the HRA.

3 LIKELY SIGNIFICANT EFFECTS

3.0.1 The Applicant has described how they have determined what would constitute a 'significant effect' within their HRA report (section 1.3 of [REP6-120]). This appears to follow current best practice, and section 1.3 of the Applicant's HRA Report was updated to version 3 at Deadline 6 of the Examination [REP6-120] to reflect the UK Government's updated HRA guidance⁴.

3.1 Pathways of effect to European sites

3.1.1 Section 5.2 of the HRA Report [REP6-120] sets out the identification of potential impacts to European sites as a result of the Proposed Development, split by construction and operational phases. These are summarised below but not replicated in full:

Construction

- Temporary habitat loss as a result of:
 - Excavations, placing of new ballast, sleepers and rails, troughing for cabling and drainage works, vegetation removal, construction compounds and haul roads;
 - Temporary vegetation clearance prior to re-profiling and embankments and cuttings works;
 - Geotechnical works in the Avon Gorge, including inspections of the rock face, installation of rock bolts and erection of catch fences;
 - Reconstruction and remedial works to existing bridges;
- Permanent habitat loss where vegetation removal is needed for new railway infrastructure e.g. fencing, maintenance and emergency access compounds, culverts, access, telecommunications masts and signalling, and repair works to bridge and tunnel structures;
- Disturbance of birds, bats and other fauna due to noise and vibration, visual disturbance, lighting and presence of construction workers, plant and machinery; and
- Damage to flora and fauna (including aquatic) due to air pollution, pollution of watercourses and trampling.

Operation

- Increases in train frequency and associated disturbance due to visual intrusion, noise and vibration and air quality (and increased traffic movements associated with the rail line);

- Ongoing vegetation management as part of standard Network Rail (NR) maintenance (e.g. vegetation clearance and periodic application of herbicides);
- Inspections and periodic maintenance of rock faces through the Avon Gorge;
- Disturbance from permanent maintenance compounds at Sheepway, Pill, Ham Green and Clanage Road;
- Increase in recreational disturbance due to improved accessibility; and
- Contamination in drainage and run-off and possible pollution during maintenance activities.

3.1.2 In terms of decommissioning, the Applicant has stated that there are “no intentions to decommission the DCO Scheme in the foreseeable future and therefore impacts of decommissioning have not been assessed” (paragraph 5.2.3 of [REP6-120]).

3.1.3 Paragraphs 3.2.69 - 3.2.75 of [REP6-120] also set out the Applicant’s view that the passenger services will continue for as long as there is a business case for doing so, and that closure is a regulated process, overseen by the Office of Rail and Road. In the event that the train operating company were to cease passenger services on the Portishead Branch Line, it is likely that the railway assets would remain in place and that the line between Royal Portbury Dock and Parson Street would remain open for freight services to the Port (any decision on cessation of freight services would be a matter for relevant freight operating companies and the Bristol Port Company).

3.1.4 The ExA asked ExQ1 GC.1.20 and BIO.1.42 [PD-010] on this matter and sought to establish whether NE and other IPs were content with this approach in terms of the HRA. No parties raised concerns in this regard. NSDC noted that the Application represents a substantial long term investment and that they were satisfied that matters of decommissioning would be controlled by prevailing guidance and regulation at that time [REP2-038]. BCC also agreed that they had no concerns and that the HRA Report puts forward reasonable justification for not assessing the decommissioning of the railway.

3.1.5 NE have recorded specific agreement with the Applicant on the approach taken to decommissioning (item 5.2.13 of [REP6-146]).

3.1.6 NE have also set out their agreement with the extent of the impact pathways considered as part of the Applicant’s HRA Report, particularly that “*Natural England is satisfied that the HRA has identified all potential impact pathways for European sites and their qualifying features*” (item 5.1.1 of [REP6-146]).

3.1.7 No other IP’s disputed the Applicant’s consideration of the relevant pathways of impact to European sites.

3.2 In-combination effects

- 3.2.1 The applicant has addressed potential in-combination effects within their HRA report at section 7.2, and a list of projects included for consideration in the in-combination assessment is presented in Table 7.2 of [REP6-120]. The approach taken in identifying relevant plans and projects is consistent with that described in the Chapter 18 of the ES [APP-113].
- 3.2.2 The relevant projects considered are summarised as follows:
- National Grid Hinkley Point C Connection Project;
 - Cargo storage area at Royal Portbury Docks (16/P/1987/F);
 - Avonmouth / Severnside Enterprise Area Ecology Mitigation and Flood Defence Project;
 - Residential led mixed-use development of 1,000 dwellings at land to North of A369 Martcombe Road, Easton-in-Gordano (18/P/4072/EA1); and
 - West of England Joint Spatial Plan, Joint Transport Study and Draft Joint Local Transport Plan.
- 3.2.3 Locations of these projects are set out in Figure 18.1 of the ES [APP-124]. Further details of the justification for these plans and projects being screened in or out of further consideration as part of the HRA are set out in Table 7.2 of [REP6-120].
- 3.2.4 In ExQ1 GC.1.1 [PD-010] the ExA queried whether the delay between the acceptance of the Application and the start of the Examination affected any of the assumptions in the ES or HRA in respect of cumulative and / or in-combination effects, and whether IP's had any concerns in this regard.
- 3.2.5 The Applicant [REP2-013] provided updated information on the projects identified that had become available to them during the time since the submission of the Application. However, the Applicant concluded that the delay to the programme for the Proposed Development would not affect the assumptions made or conclusions reached in the cumulative assessment in the ES or HRA in-combination assessment.
- 3.2.6 NE raised no concerns in respect of the in-combination assessment in their Relevant Reqs (RR), Written Reqs (WR), responses to written questions or in their latest statement of common ground (SoCG) with the Applicant [REP6-146].
- 3.2.7 BCC identified two additional planning applications that had been received since the submission of the DCO application, although it considered that the conclusions of the cumulative assessment in the ES [APP-131] (from which the HRA in-combination assessment draws) would remain valid [REP2-036]. This is also recorded as item 8.1.10 of their SoCG with the Applicant [REP5-021].
- 3.2.8 Similarly, NSDC identified an additional project in their response to the ExQ1 GC.1.2 [REP2-038] but again concluded that it would be unlikely to

affect the conclusions of the cumulative assessment. This is also recorded in their SoCG with the Applicant [REP1-016].

3.2.9 In ExQ BIO.1.13 [PD-010], the ExA sought clarification as to forestry works being undertaken by Forestry England in Leigh Woods (observed during an Unaccompanied Site Inspection [EV-001]), and whether those works had been considered as part of the HRA in-combination assessment for the Proposed Development. The Applicant clarified at [REP2-013] that the felling works:

- Were carried out in line with Forestry England's long-term Leigh Woods Forest Design Plan 2011-2021 (which was consented by NE in January 2016);
- Are not relevant to the in-combination assessment "*because they are directly connected with the management of the designated site, with the objective of the felling to improve the condition of the SSSI / SAC...[and the works]...do not contribute towards potential adverse effects on the SAC*"; and
- Do not affect the currency and validity of the survey(s) reported in the application documents as the felled areas are outside the land within NR ownership that was surveyed.

3.2.10 No IPs raised any comments or concerns in response to these explanatory points made by the Applicant.

3.3 LSE Assessment Outcomes

Severn Estuary SAC, SPA and Ramsar site

3.3.1 The Severn Estuary SAC, SPA and Ramsar is around 1.2 km north of the Proposed Development at its closest point but is functionally linked via the Portbury Wharf Nature Reserve (the southern end of the which adjoins the existing railway corridor between Portishead and Sheepway). The closest habitat used by SPA and Ramsar-qualifying species are the southern pools and lagoons approximately 650m from the disused line. The existing line near Pill is around 80 m from the Severn Estuary SAC, SPA and Ramsar site at its closest point. There are no works within the designated sites, however a temporary cycle path diversion at Jennys Meadow near Pill may come within 30m during the construction phase.

3.3.2 The potential for impacts on the Severn Estuary SAC, SPA and Ramsar is primarily via noise and visual disturbance of SPA and Ramsar-qualifying bird species and possible contamination / pollution events (hydrological and air quality effects) on the qualifying habitats of the SAC.

3.3.3 Paragraphs 5.3.8 - 5.3.11 of the HRA Report [REP6-120] outline the DCO works that are of relevance and the pathways of impact to these European sites. Ornithological surveys (undertaken at Portbury Wharf Nature Reserve and at Pill Marshes) are reported in full at Appendices 9.3a (Ornithology of Portbury Wharf Nature Reserve) and 9.3b (Wintering bird

surveys) respectively of the ES [APP-135] and summarised at paragraphs 6.3.1 – 6.3.10 of the HRA Report [REP6-120].

- 3.3.4 In respect of all qualifying bird features of the SPA and Ramsar, the adjacent intertidal section of the River Severn at the Proposed Development location is currently subject to a range of noise and visual disturbance, including existing freight rail traffic, M5 traffic and recreational users.
- 3.3.5 Table 7.103 of ES Appendix 13.7 [APP-153] shows existing noise levels at the SAC, SPA and Ramsar at Pill. The Applicant concludes that additional noise from construction activities would not result in LSE on SPA / Ramsar birds features. Similarly, at Portbury Wharf Nature Reserve (although background noise levels are lower), construction activity noise levels are assessed as being below levels found to cause disturbance of wetland birds.
- 3.3.6 During operation, the Applicant concludes that changes in long term noise levels ($LA_{eq,16h}$) would not exceed existing levels, and maximum levels would not result in a LSE. This is because the SPA is currently exposed to noise from the M5 (which dominates the noise climate) and operations around Royal Portbury Dock and it is considered unlikely that the addition of the passenger trains would increase the level of disturbance at the SPA / Ramsar.
- 3.3.7 Matrices D3 and D4 and the HRA Report [REP6-120] set out the Applicant's conclusions in further detail including references to supporting evidence in the ES (Annex D of [REP6-120]). The Applicant's conclusions apply in respect of all bird qualifying features of the SPA and Ramsar.
- 3.3.8 NE stated in their written representations that it was "*satisfied that significant effects on the Severn Estuary European site (s) have been ruled out through the sHRA screening on the basis of objective information, including bird surveys that suggested qualifying species of the SPA/Ramsar do not occur in significant numbers within the survey area, and an assessment of noise that appears to show that noise levels within the Severn Estuary designated site and functionally linked will be largely unaffected by the construction or operation of the new passenger service*". [REP2-045]. Agreement of the conclusion of no LSE alone or in combination with other plans and projects is also recorded in 5.1.2 of the SoCG between NE and the Applicant [REP6-146].
- 3.3.9 No other IPs disputed the Applicant's conclusions of no LSE for the Severn Estuary SPA and Ramsar site.
- 3.3.10 Effects on the Severn Estuary SAC and Ramsar are considered in terms of habitat degradation due to run-off of pollution and air quality effects.
- 3.3.11 The air quality changes due to the Proposed Development are considered to be minimal at the closest proximity to the SAC and Ramsar site qualifying habitat and existing nitrogen deposition ($12.3 \text{ kg N ha}^{-1} \text{ yr}^{-1}$) is "well below" the relevant critical load for salt meadow habitat ($20\text{-}30 \text{ kg N ha}^{-1} \text{ yr}^{-1}$). No LSE during construction or operation is therefore predicted by the Applicant and this conclusion has not been disputed by any IPs during the Examination.

- 3.3.12 In terms of run-off / pollution to the SAC, the qualifying Atlantic salt meadow habitat is located within 80m of the Proposed Development at its closest point, as set out in paragraphs 5.3.10 and 5.3.18 – 5.3.21 of the HRA Report [REP6-120]. The potential for LSE was ruled out on the basis that there is no hydrological connectivity between the Proposed Development and the closest qualifying habitat. LSE for all other SAC qualifying features and Ramsar criterion are excluded on the basis that they are further away than the closest Atlantic salt meadow habitat and are either estuarine or covered by seawater part or all of the time). The HRA Report concludes that even if run-off could reach the estuary it would be rapidly diluted due to the nature and scale of the estuarine environment.
- 3.3.13 In ExQ1 GC.1.17 [PD-010], the ExA sought assurances to support the assertion at paragraph 7.3.2 of the HRA Report that “*no hydrological connectivity is present between the DCO Scheme and the SAC qualifying habitat*”. The Applicant’s response at [REP2-013] clarified a number of these points, including reference to further consideration of these issues of hydraulic connectivity in ES Chapter 9 [AS-031] and ES Appendix 17.3 [APP-190].
- 3.3.14 In their WR and responses to ExQ1, NE stated their satisfaction that “*there is no impact pathway between the project and the Severn Estuary SAC...on the basis of objective information can justifiably exclude a Likely Significant Effect*” [REP2-045]. This is also recorded at item 5.1.3 of the SoCG between the Applicant and NE [REP6-146].

Wye Valley Woodlands SAC, Wye Valley and Forest of Dean Bat Sites SAC, Mendip Limestone Grasslands SAC, Bath and Bradford-on-Avon Bats SAC and Mells Valley SAC

- 3.3.15 Only bat qualifying features of these SACs are screened in for further consideration given that there are no potential effects (direct or indirect) on any of the qualifying habitat features of any of the SACs given their location relative to the Proposed Development (paragraphs 5.3.22 – 5.3.23 of [REP6-120]). Matrices D7 – D11 (Annex D of the HRA Report [REP6-120]) list all of the qualifying features associated with each of these European sites.
- 3.3.16 Of the bat qualifying features, only lesser and greater horseshoe bats were identified within the Proposed Development’s bat survey study area (paragraph 6.4.1 of [REP6-120]), and therefore only these two features were screened in for consideration as follows:
- **Lesser horseshoe bat *Rhinolophus hipposideros***
 - Wye Valley Woodlands SAC
 - **Greater horseshoe bat *Rhinolophus ferrumequinum***
 - Mells Valley SAC
 - Mendip Limestone Grasslands SAC
 - **Both Lesser and Greater horseshoe bat qualifying features**

- Bath and Bradford-on-Avon Bats SAC
- Wye Valley and Forest of Dean Bat Sites SAC

3.3.17 On the basis of the proximity between these sites and the Proposed Development, no LSE to bat qualifying features alone or in-combination is predicted by the Applicant, as set out in paragraphs 7.3.6 – 7.3.8 of the HRA Report [REP6-120].

3.3.18 The Applicant's conclusions of no LSE for any qualifying features of any of these SACs has not been disputed by any IPs during the Examination. NE specifically agreed to the conclusions of no LSE for these sites in item 5.1.2 of [REP6-146].

3.3.19 Consideration of the North Somerset and Mendip Bats SAC is given in later sections of this RIES (the Applicant concluded that there would be potential for LSE for this SAC and provided information to inform an appropriate assessment).

Chew Valley Lake SPA

3.3.20 The Chew Valley Lake SPA is designated for a single qualifying feature, shoveler. Although shoveler have been recorded at the Portbury Wharf Nature Reserve, the Applicant considers it unlikely that they are connected to the Chew Valley Lake SPA population due to the 9km separation distance. Further, those shoveler that were observed at Portbury Wharf are not predicted by the Applicant to experience noise disturbance during construction or operation of the Proposed Development above a level where a response would be expected and there is not predicted to be any increase in recreational pressures to Portbury Wharf (footnotes a and b of Matrix D6, Annex A of [REP6-120]).

3.3.21 NE agreed with the Applicant's conclusions of no LSE on the Chew Valley SPA alone or in-combination with other plans and projects at item 5.1.2 of [REP6-146]. These conclusions were not disputed by any other IPs during the Examination.

North Somerset and Mendip Bats SAC

3.3.22 Greater and lesser horseshoe bats have been demonstrated to use habitats along the route of the Proposed Development, and both are qualifying features of the SAC. The Applicant identified LSE in relation to severance of foraging routes due to vegetation clearance and lighting during construction and operation of the Proposed Development. Whilst a pathway between the SAC and the Proposed Development has been identified, the Applicant states that not all of the greater and lesser horseshoe bats using areas in and around the area of the Proposed Development would be part of the SAC population and not all bats from the SAC would use areas in and around the Proposed Development.

3.3.23 As listed in Table 5.1 of [REP6-120], there are also Annex I qualifying habitats of the North Somerset and Mendip Bats SAC:

- Semi-natural dry grasslands and scrubland facies on calcareous substrates;

- *Tilio-Acerion* forests of slopes, screes and ravines; and
- Caves.

3.3.24 The closest point of the SAC to the Proposed Development is some 9km to the south, and there are no direct effects on any of the qualifying annex I habitats as a result. Therefore, the Applicant's consideration of LSE extended only to the bat qualifying features.

3.3.25 The Applicant provided information to inform an appropriate assessment in relation to greater and lesser horseshoe bats at paragraphs 8.3.23 – 8.3.40 of [REP6-120]. This is discussed further in the following section of this RIES.

The Avon Gorge Woodlands SAC

3.3.26 The Proposed Development runs through the Avon Gorge Woodlands SAC. The works required to upgrade the existing operational railway line are set out in Table 5.2 of the HRA Report [REP6-120]. The locations of these works in relation to the SAC are shown on Figure 2 (sheets 1-7), Annex A of the HRA Report [REP6-120]. Section 3.1 of this RIES also sets out the pathways of effect to European sites, primarily to the Avon Gorge Woodlands SAC.

3.3.27 The SAC covers an area of 151ha and is designated for:

- *Tilio-Acerion* forests of slopes, screes and ravines (mixed woodland on base-rich soil associated with rocky slopes) (Priority habitat and primary reason for selection of this site); and
- Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (present as a qualifying feature, but not a primary reason for selection)

3.3.28 However, the site is also important because of small leaved lime *Tilia cordata* woodland, and the high number of uncommon species, including rare whitebeams *Sorbus spp.*, with two unique to the Avon Gorge, *S. bristoliensis* and *S. wilmottiana*, and other important plants, such as Bristol rock-cress *Arabis scabra*, honewort *Trinia glauca* and yew *Taxus baccata*. In particular, the rare whitebeams are part of the SAC qualifying habitat *Tilio-Acerion* forests.

3.3.29 Table 7.1 of [REP6-120] presents the Applicant's LSE conclusions in relation to the Avon Gorge SAC, summarised in Table 3.1 below.

Table 3.1: LSE conclusions for the Avon Gorge SAC

Qualifying Feature	Phase of the Proposed Development	Pathway of effect	LSE	Agreed with NE and other IPs
Tilio-Acerion forests	Construction	Habitat loss due to vegetation clearance.	Yes. Considered further in sections 4 and 5 of this RIES.	Yes
		Habitat fragmentation as a result of habitat loss.	No LSE. Fragmentation not anticipated as the route of the line already exists.	Not specifically disputed at any point in the Examination.
		Habitat degradation as a result of incursions and pollution events (including air quality).	Yes. Considered further in sections 4 and 5 of this RIES.	Yes
		Habitat degradation due to potential spread of invasive species.	Yes. Considered further in sections 4 and 5 of this RIES.	Yes
	Operation	Changes in ground flora composition as a result of changes to NOx concentration and N deposition.	No LSE. The increase in N deposition on SAC habitat is very small. Although critical loads are already exceeded at these receptors, the effects of the Proposed Development on air quality would be below the 1% threshold	Yes. Item 7.2.2 of the SoCG with NE [REP6-146] NSDC stated it was not agreed that no LSE can be excluded where critical loads are already

Qualifying Feature	Phase of the Proposed Development	Pathway of effect	LSE	Agreed with NE and other IPs
			increase, alone and in-combination). (See paragraphs 3.3.30 - 3.3.35 of this RIES).	exceeded [REP2-038].
		Habitat loss and fragmentation as a result of ongoing vegetation maintenance.	No LSE. Vegetation maintenance during the operation of the Proposed Development will not be greater than the extent of vegetation clearance undertaken during construction.	Not specifically disputed at any point in the Examination
		Indirect habitat loss as a result of windthrow following vegetation clearance.	Yes. Considered further in sections 4 and 5 of this RIES	Yes
Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia)	Construction	Habitat loss due to vegetation clearance.	Yes. Considered further in sections 4 and 5 of this RIES	Yes
		Habitat fragmentation as a result of habitat loss.	No LSE. Fragmentation is not anticipated as the route of the line already exists.	Not specifically disputed at any point in the Examination.

Qualifying Feature	Phase of the Proposed Development	Pathway of effect	LSE	Agreed with NE and other IPs
(*important orchid sites)		Habitat degradation as a result of incursions and pollution events during construction (including air quality).	Yes. Considered further in sections 4 and 5 of this RIES.	Yes
		Habitat degradation due to potential spread of invasive species during construction.	Yes. Considered further in sections 4 and 5 of this RIES.	Yes
	Operation	Habitat degradation, including increases in competitive tall grasses and a decline in diversity as a result of changes in NOx concentration and N deposition.	No LSE. Changes in NOx concentrations are negligible. The increase in N deposition is small and remains within the critical load range for grassland vegetation.	Yes. Item 7.2.2 of the SoCG with NE [REP6-146]
		Habitat loss and fragmentation as a result of ongoing vegetation maintenance.	No LSE. Vegetation maintenance during the operation of the Proposed Development will not be greater than the extent of vegetation clearance undertaken during construction.	Not specifically disputed at any point in the Examination.

- 3.3.30 The ExA sought clarification at ExQ1 in AQ.1.2 [PD-010] as to predicted increase in nitrogen deposition rates during operation at *Tilio-Acerion* forests where background concentrations are already in excess of the critical load.
- 3.3.31 The Applicant concluded no LSE during operation on the basis that the magnitude of impacts in terms of additional nitrogen deposition were minimal (Table 7.1 of [REP6-120]).
- 3.3.32 However in response to NE's comments on AQ.1.2 [REP2-045], the Applicant undertook additional work in revising the original air quality modelling calculations at the SAC as presented in the ES [APP-102] and HRA [APP-075]. The revised assessment took into account revisions to model verification and changes to the assessment "base year".
- 3.3.33 The revisions to the assessment were set out in a series of tables [REP3-031] submitted with the Applicant's comments on responses to ExQ1 [REP3-030] and in an updated ES air quality chapter ([REP6-074], [REP6-112]) and HRA Report submitted at Deadline 6 [REP6-120]. The Applicant concluded that the revisions demonstrated its assertion that process contributions to NO_x concentration, nitrogen deposition and acid deposition are below a 1% threshold of significance as stipulated in NE's guidance on the assessment of road traffic emissions under the Habitats Regulations⁵ and in the Institute of Air Quality Management (IAQM) nature conservation sites assessment guidance⁶. Such changes are expected within normal variation in N-deposition ([REP3-030] and paragraphs 6.2.19 – 6.2.25 of [REP6-120]).
- 3.3.34 In response, NE agreed with the Applicant that whilst the increases in nitrogen deposition represent "*an increase for a SAC where critical loads are already exceeded, Natural England considers that the Applicant has provided reasonable justification as to why the effects of the DCO Scheme on air quality would be below the 1% threshold increase, alone and in combination*" (item 7.2.2 of SoCG [REP6-146]). NE therefore agrees with the conclusions of no LSE for all qualifying features from air quality impacts during operation.
- 3.3.35 NSDC as the LPA raised concern in response to AQ.1.2 that LSE could not be excluded where critical loads are already exceeded [REP2-038]. However, NSDC also suggested "*this to be an issue best assessed by Natural England*". NSDC did not comment further on this issue during the Examination in response to the Applicant's additional work presented at Deadline 3 [REP3-030] or [REP3-031].

⁵ <http://publications.naturalengland.org.uk/publication/4720542048845824>

⁶ In [REP3-030] and paragraph 6.2.25 of [REP6-120], the Applicant cites a version of this guidance dated 2019, but the ExA understands this guidance was updated to version 1.1 in May 2020. <https://iaqm.co.uk/text/guidance/air-quality-impacts-on-nature-sites-2020.pdf>

3.4 Summary of LSE conclusions

- 3.4.1 As a result of the screening assessment, the Applicant concluded that the Proposed Development is likely to give rise to significant effects, on the qualifying features of the European sites listed below:
- **North Somerset and Mendip Bats SAC** (for greater horseshoe bat and lesser horseshoe bat qualifying features only); and
 - **Avon Gorge Woodlands SAC** (all qualifying features).
- 3.4.2 These are discussed further in sections 4 – 7 of this RIES.
- 3.4.3 For all other European sites considered by the Applicant in the HRA Report (as set out in Table 2.1 of this RIES), the Applicant concludes there would be no LSE alone or in-combination with other plans and projects, and these conclusions have not been disputed by any IPs.

4 ADVERSE EFFECTS ON INTEGRITY

4.1 Conservation Objectives

4.1.1 The conservation objectives for all of the European sites for which the Applicant has provided information to inform an appropriate assessment were provided as part of the HRA Report [REP6-120]:

- **North Somerset and Mendip Bats SAC** – paragraphs 8.2.11 – 8.2.14 of [REP6-120], including reference to:
 - the Site Improvement Plan for the SAC; and
 - condition assessment data for the component Sites of Special Scientific Interest (SSSI) of the SAC;
- **Avon Gorge Woodlands SAC** – paragraphs 8.2.5 - 8.2.8 of [REP6-120], including reference to:
 - NE’s supplementary advice on conserving and restoring site features (as set out in Table 8.1);
 - the Site Improvement Plan for the SAC; and
 - reference to the condition assessment of the Avon Gorge SSSI (the single component SSSI of the SAC).

4.2 North Somerset and Mendip Bats SAC

4.2.1 LSE for greater and lesser horseshoe bat populations that could comprise part of the SAC have been identified by the Applicant as a potential result of severance of navigational routes due to vegetation removal and lighting impacts, as set out in paragraphs 8.3.23 – 8.3.29 of the HRA Report [REP6-120].

4.2.2 Individuals associated with the SAC have been found to use habitats within the area and surroundings of the Proposed Development (although outwith the designated area of the SAC itself), and effects from severance of commuting routes is considered to exist along the disused railway section specifically around Portbury Dock (including in-combination effects with the recently developed Court House Farm site).

4.2.3 In the original version of the HRA Report [APP-075] and Ecology chapter of the ES [APP-104], the Applicant identified the potential importance of the freight line between Pill Viaduct and Avon Road, past Pill station (as shown on sheet 6 of the works plans [AS-013] as a sheltered corridor that could also be an important navigational route for horseshoe bats (paragraphs 8.4.60 – 8.4.63 of [APP-075]).

4.2.4 However, new data on the use by bats around Pill Station and the disused line was made available in summer 2020. This followed additional surveys carried out between May 2019 and March 2020 combining bat detector units and site inspections, as set out in Appendix 11 of ES Appendix 9.2

[AS-036]. Based on this additional survey information, the Applicant concluded that activity at, or close to Pill Station, is not strongly associated with the disused railway line and bat activity through the station is too low to indicate that it is an important commuting corridor with linkages between bat roosts at Pill Station and connectivity with the SAC bat population.

- 4.2.5 Based on activity surveys, the NSDC guidance for the North Somerset and Mendip Bats SAC⁷ (paragraph 8.5.13 of the HRA Report [REP6-120]), and given the distance of the Proposed Development from the closest component of the SAC, the Applicant considers it unlikely that the Pill Viaduct to Avon Road area (past Pill station) is a key foraging habitat for SAC bat populations.
- 4.2.6 Whilst the Proposed Development could impact upon individual greater and lesser horseshoe bats (some of which may be associated with SAC populations), the Applicant concludes that these would likely be in small numbers and not result in an AEOI of the SAC as a whole.
- 4.2.7 A number of embedded mitigation measures are proposed by the Applicant to further reduce the potential for adverse effects. These are set out in paragraphs 8.4.50 – 8.4.59 of [REP6-120] and include:
- Vegetation to be retained along the disused line and replanting strategy as identified in the Railway Landscape Plans [APP-017] (to be certified in Schedule 17 of the DCO);
 - Installation of fencing from adjacent farmland to minimise vegetation loss; and
 - Infill planting within land alongside the A369 Portbury Hundred [APP-049].
- 4.2.8 Further details of mitigation that provides benefit for bats are also set out in paragraphs 9.7.2 - 9.7.17 and 9.7.53 – 9.7.57 of ES Chapter 9 [AS-031].
- 4.2.9 The ExA asked a number of questions in ExQ1 [PD-010] BIO.1.25 – BIO.1.27 regarding the delivery of mitigation measures in respect of bats as a European protected species as well as HRA considerations.
- 4.2.10 The Applicant also states that *“a number of these measures are provided primarily to address legal requirements for bats (specifically those to address roost loss, disturbance and killing/injury of bats), separate to issues specific issues relating to the HRA. Therefore, the aim of the measures outlined below is to retain and enhance habitat and features of value to bats to retain landscape permeability along the route of the DCO Scheme”* (paragraph 8.4.50 of [REP6-120]).

⁷ <https://www.n-somerset.gov.uk/sites/default/files/2020-03/North%20Somerset%20and%20Mendip%20Bats%20SAC%20guidance%20supplementary%20planning%20document.pdf>

- 4.2.11 The Applicant identified the potential for in-combination effects with the Court House Farm development (paragraphs 7.2.5 and 8.3.35 - 8.3.40 of [REP6-120]).
- 4.2.12 The Applicant explains that at Royal Portbury Dock and around Marsh Lane, vegetation will be retained “*as far as possible and additional woodland planting is proposed*”. Where there is necessarily some loss of existing vegetation along the disused railway (as shown on the Railway Landscape Plans (Disused Line) [APP-017]), fencing would be installed from the railway or cycle track (alongside retained vegetation) to minimise loss and vegetation would be allowed to regrow (as temporary loss). As a result, no AEOI on the North Somerset and Mendip Bats SAC alone or in-combination is predicted by the Applicant.
- 4.2.13 In Section 5.3 of the SoCG between the Applicant and NE [REP6-146], NE have recorded specific agreement that “*Subject to the identified mitigation being secured, and adverse effect on the integrity of the North Somerset and Mendip Bats SAC can be avoided*”. NE has not raised any concerns regarding the mechanism for securing these measures during the Examination.
- 4.2.14 Although NSDC raised some general concerns in relation to the protection of bats from potential impacts of the Proposed Development [REP1-033], [REP1-016], [REP2-038], they have not disputed the Applicant’s conclusions of no AEOI on the North Somerset and Mendip Bats SAC.
- 4.2.15 Although not directly relevant to the HRA conclusions, the ExA notes that NE have provided a letter of no impediment (LoNI) to the granting of a bat mitigation licence to the Applicant should the DCO be granted [REP3-041].

4.3 Avon Gorge Woodlands SAC

- 4.3.1 The Applicant has identified pathways for potential adverse effects on the integrity of the Avon Gorge Woodlands SAC during construction and operation (paragraphs 8.3.2 – 8.3.22 of [REP6-120]):
- **Construction:**
 - Direct loss of SAC qualifying habitats (and component features particularly rare whitebeam species);
 - Habitat degradation due to the risk of invasive species and pathogen transfer and via incursions and accidental spillages of pollutants from construction material and equipment;
 - **Operation:**
 - Increased susceptibility of woodland habitat to windthrow due to removal of edge trees; and
 - Operational rock-face maintenance during operation and consequential impacts on supporting grassland habitat.
- 4.3.2 The Applicant ruled out any other plans or projects acting in-combination with effects on the Avon Gorge SAC. As set out in section 3.2 of this RIES,

the conclusions of the in-combination assessment has not been disputed by any IPs.

- 4.3.3 Table 3.1 of this RIES and Matrix E1 of [REP6-120] set out the pathways for which information to inform an appropriate assessment has been provided. The identification of pathways of effect taken forward to appropriate assessment have not been disputed during the Examination.
- 4.3.4 The agreement of NE in this regard for the Avon Gorge SAC is recorded at items 5.2.1 – 5.2.3 of their SoCG with the Applicant [REP6-146].
- 4.3.5 The Applicant concludes that there would be no AEOI on any of the qualifying features of the SAC during operation from potential windthrow effects or habitat degradation. For the operational effects considered by the Applicant (8.3.21 – 8.3.22 of [REP6-120]), whilst the need for ongoing vegetation management during operation is acknowledged, the total extent of clearance is considered to be no greater than that already cleared as part of the construction phase. Therefore, the following paragraphs and sections of this RIES relate to construction effects and discussions / representations made during the Examination on these points, some of which have a bearing on longer term maintenance of areas subject to vegetation clearance during construction.
- 4.3.6 Operational management measures in respect of the Avon Gorge SAC are described in paragraphs 8.4.44 – 8.4.49 of [REP6-120]. These largely relate to the vegetation management responsibilities of NR under the terms of their existing Site Management Statement (SMS) and Vegetation Management Plan (VMP), copies of which are included in ES Appendix 9.15 [AS-041]. The Applicant's own Avon Gorge Vegetation Management Plan (AGVMP) [REP6-136]⁸ is agreed at item 5.2.9 of the SoCG between the Applicant and NE as being "*to complement the existing Site Management Statement ("SMS") and Vegetation Management Plan ("VMP")*" [REP6-146].
- 4.3.7 The ExA posed question BIO.1.7 [PD-010] in order to fully understand the relationship between the Applicant's AGVMP and the ongoing duties of NR under their SMS, with the Applicant's response at [REP2-013]. No IP's raised any concerns in light of the Applicant's response.

Habitat Loss (including rare Whitebeams)

- 4.3.8 Paragraphs 8.3.4 – 8.3.15 and Table 8.3 of [REP6-120] set out the Applicant's quantification of habitat loss effects, briefly summarised as comprising the following vegetation clearance and removal:
- Either side of fences, access steps, wing walls, retaining walls and tie-ins, telecommunications masts and equipment boxes;
 - Around bridge works (as shown in Figure 8.1 of [REP6-120]);

⁸ Originally submitted as [APP-209], supersede by version 2 at [AS-044], and version 3 at [REP6-136]. At the time of publication of this RIES, version 3 was the most recent iteration

- Around temporary ramps from the freight line and a site compound area for the construction works to Quarry Bridge No. 2 (as shown in Annex C of [REP6-136]);
 - To facilitate geotechnical works on rock faces (preparing of areas for installation of rock bolts or rock catch fences, with the detailed design and exact locations yet to be determined⁹).
- 4.3.9 The Applicant also explains that preparation of five 'micro' construction compounds within the Avon Gorge would be required in areas where either no vegetation clearance is required, or where only low value vegetation is present. These are therefore excluded from the calculations of SAC habitat loss, although neither the Applicant nor NR have provided details of proposed locations of these compounds¹⁰.
- 4.3.10 Table 8.3 and paragraphs 8.3.13 – 8.3.15 of [REP6-120] summarise the total area of vegetation to be removed for each qualifying feature, and divides the loss of *Tilio-Acerion* woodland into semi-natural ancient woodland and secondary (recent) woodland that would be lost:
- Total vegetation clearance would be 0.79ha (0.52% of the total area within the SAC):
 - 0.06ha loss of grassland habitat (0.84% of the SAC total); and
 - 0.73ha of qualifying woodland habitat (45% secondary or recent woodland and 55% semi-natural ancient woodland). 0.73ha equates to 0.69% of the SAC total.
- 4.3.11 The Applicant considers the loss of rare whitebeams in paragraphs 8.3.16 – 8.3.18 and Table 8.4 of [REP6-120]. The potential impact comprises the loss or coppice of 27 whitebeam tress, summarised as follows:
- 12 Avon whitebeam (10 removed, 2 coppiced), 29% of the world and SAC population;
 - 1 Wilmott's whitebeam removed (1% of the world and SAC population);
 - 6 Leigh woods whitebeam removed (2% of the world and SAC population);
 - 1 Grey-leaved whitebeam removed (0.2% of the world population and 2% of the SAC population);

⁹ General locations of the rock faces are shown on Figure 2 of [AS-027] and a "realistic worst case approach" to determine the potential impact of geotechnical works is set out in Annex D of [AS-044].

¹⁰ DCO requirement 14(4) states that any temporary works within the Avon Gorge Woodlands SAC (including relating to construction compounds) "must not commence before the location, siting duration of use and details for the removal of the relevant facility has been approved by the relevant planning authority in consultation with Natural England".

- 5 round-leaved whitebeam (4 removed and 1 coppiced) (0.6% of the world population); and
- 2 Bristol whitebeam (1 removed and 1 coppiced), 0.7% of the world and SAC population.

4.3.12 The location of the whitebeams to be removed is described and shown in Figure 1, Annex F of [REP6-136]. Table 8.4 of [REP6-120] sets out the reasons for their removal:

- Dangerously overhanging;
- Overhanging rock face;
- Predicted for installation of rock bolts or catch fencing;
- To enable bridge works;
- For installation of new fencing; or
- Loss considered as a contingency.

4.3.13 The Applicant concludes that although mitigation measures are proposed (primarily in the form of the Code of Construction Practice (CoCP), Master Construction Environmental Management Plan (CEMP)¹¹ and Avon Gorge Vegetation Management Plan (AGVMP)), "*there is unavoidable loss of woodland and grassland qualifying features*" and that an AEoI due to the loss of these habitats (including rare whitebeams) cannot be excluded (paragraphs 8.5.4 – 8.5.11 of [REP6-120]).

4.3.14 This is considered further in the following section of this RIES, along with further consideration of mitigation and compensatory measures.

Habitat Degradation

4.3.15 The Applicant identified potential for LSE during construction works from inadvertent incursion or accidental pollutant spillages to qualifying habitats as well as the works potentially facilitating the spread of non-native invasive species.

4.3.16 Section 8.4 of [REP6-120] sets out the proposed mitigation measures that are:

- General best practice measures embedded into the design (paragraphs 8.4.1 – 8.4.20 of [REP6-120]) (CoCP, CEMP and AGVMP). These documents would be certified documents under DCO schedule 17 and secured by Requirements 5 and 14.
- Specific measures proposed in relation to Avon Gorge Woodland SAC (paragraphs 8.4.23 – 8.4.43) which are "*are routinely carried*

¹¹ The Master CEMP [REP6-140] is a document to be certified by the Secretary of State under DCO Schedule 17. DCO Requirement 5 specifies that construction of any "stage of authorised development" must not commence until a CEMP for that stage has been approved by the relevant LPA, and that each CEMP must be in accordance with the principles set out in the ES and the Master CEMP.

out" by NR as part of current practices (under the existing SMS and VMP), all of which are set out in section 5 of the AGVMP, including:

- Site briefings and works undertaken by a qualified Contractor, overseen by NSC and Ecological Clerk of Works (ECoW);
- Demarcation of sensitive species during works;
- Management of vegetation arisings to allow for variety of plant species, ages, sizes and decay (with separate measures for grassland and woodland habitat priorities);
- Tree surgery works to be carried out in accordance with BS 3998:2010: *Tree work. Recommendation* and specified measures for felling practices;
- Controlling the spread of non-native and invasive plants by supervision of works through appointment of an ECoW, training staff through tool box talks and compliance with CEMP measures; and
- Specific mitigation measures for Quarry Bridge No. 2 site compound (Annex C of the AGVMP).

4.3.17 Mitigation measures and their securing mechanism relevant to the Avon Gorge SAC are also summarised in the Applicant's Schedule of Mitigation [REP6-131].

4.3.18 The Applicant concludes that during construction, impacts relating to habitat degradation via invasive species and pollution / incursions in qualifying habitats could be mitigated by preventative measures secured through the DCO as set out above. No AEOI on the SAC are therefore predicted from habitat degradation during construction.

4.3.19 These conclusions are supported by NE at items 5.2.14 and 5.4.2 of their SoCG with the Applicant [REP6-146].

4.3.20 The discussions and representations made during the Examination in respect of the Avon Gorge SAC were largely around the compensatory measures proposed by the Applicant due to their conclusions that an AEOI on both qualifying habitat types could not be excluded in terms of habitat loss. These matters are considered in the following sections of this RIES.

4.4 Summary of Integrity Test considerations during the Examination

4.4.1 The Applicant concluded that AEOI could not be excluded in relation to the Avon Gorge SAC due to the loss of 0.73ha of *Tilio-Acerion* woodland and 0.06ha of *Festuco-Brometalia* grassland during the construction of the scheme that could not be fully mitigated.

4.4.2 As such, the Applicant acknowledges the process that must be followed by the competent authority under Regulation 64 of the Habitats Regulations, including consideration of alternative solutions, IROPI and compensatory

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measures. Information on these matters is provided sequentially in sections 9, 10 and 11 of the HRA Report [REP6-120].

5 ALTERNATIVE SOLUTIONS

- 5.0.1 The Applicant's assessment of alternative solutions to deliver the objectives of the Proposed Development are set out in section 9 of [REP6-120].
- 5.0.2 The need case for an 'intervention in the transport network' is set out in Chapter 1 (The Strategic Case) of the Outline Business Case ([APP-201] – [APP-203]), though these documents cover the entirety of the MetroWest programme (phases 1 and 2). Paragraphs 9.2.14 and 9.2.15 of the HRA Report [REP6-120] summarise the principal objectives of the wider MetroWest Phase 1 programme (and supporting objectives).
- 5.0.3 The focus of the Examination discussions and representations made in relation to HRA matters has been on the adequacy, delivery and efficacy of compensatory measures, and these points are considered in further detail in section 7 of this RIES.
- 5.0.4 The consideration of alternatives in the HRA Report is set out under the following headings (sections 9.2 – 9.6 of [REP6-120]):
- Alternative transport modes;
 - Alternative railway alignments;
 - Frequency of train services;
 - Opportunities (in design and operation) to avoid or have a lesser effect on the European site; and
 - A "do nothing" scenario.
- 5.0.5 Paragraph 9.2.17 of the HRA Report [REP6-120] concludes the Applicant's position that *"numerous studies and reports have concluded that re-opening of the Portishead Branch Line for heavy rail services is fully justified on the grounds of reducing congestion and increasing mobility. No feasible alternatives to a heavy rail railway as the transport mode for achievement of the project's objectives have been identified. The Portishead Branch Line track bed is in situ and large parts are existing operational railway. There is no realistic alternative that will achieve the aims of promoting mobility, reducing congestion and thereby benefiting human health and the environment"*. The Applicant also concludes that, *"No possible, less-damaging alternatives to the DCO Scheme have been identified that would meet the Scheme objectives with any lesser effect on the integrity of the Avon Gorge Woodlands SAC."*
- 5.0.6 Although alternatives to the Proposed Development have been discussed in a wider sense during the Examination by some IPs, no representations have been made by NE or the LPAs querying or disputing the Applicant's consideration of alternative solutions in the HRA Report or its conclusions.
- 5.0.7 In [REP2-047] and [REP4-066], the Portishead Busway Campaign disputed the Applicants conclusions in so far as the Portishead Busway Proposal represents a credible alternative to the Proposed Development in their view. The Applicant responded to these points at [REP3-036] and [REP4-

017], primarily that a busway scheme would not achieve a sufficiently shorter journey time to result in modal shifts (rail scheme journey time is 23 minutes compared to an hour predicted on the busway), and these matters are also addressed in section 9.2 of [REP6-120].

6 IMPERATIVE REASONS FOR OVERRIDING PUBLIC INTEREST (IROPI)

- 6.0.1 The Applicant sets out information to support (if required) the SoS making a case for IROPI in section 10 of [REP6-120].
- 6.0.2 During the course of the Examination on 24 February 2021, Defra published new guidance on Habitats Regulation Assessment and protecting European sites, derogation notices and the duty to protect, conserve and restore European sites⁴, and the Applicant's updated HRA Report at Deadline 6 [REP6-120] makes reference to this updated guidance.
- 6.0.3 The Applicant's information to inform IROPI sets out the different tests that should be applied in respect of priority and non-qualifying habitats (as explained in section 10.1 of [REP6-120]):
- *Festuco-Brometelia* grassland (non-priority natural habitat). The IROPI may include social or economic issues; and
 - *Tilio-Acerion* woodland (priority natural habitat). The IROPI should be considered under Regulation 64(2)(a) as those relating to human health, public safety or beneficial consequences of primary importance to the environment. Social or economic benefits may also be considered as "any other reasons" IROPI at the discretion of the competent authority under Regulation 64(2)(b).
- 6.0.4 The Applicant sets out their considerations in terms of IROPI in sections 10.3 – 10.6 of the HRA Report [REP6-120] as follows:
- **Public Safety** – Emergency services, transport modes, railway line safety through Avon Gorge;
 - **Human health** – Air quality considerations, modal shifts and accessibility towards active travel;
 - **Over-riding environmental benefit** – contribution of the Proposed Development towards wider MetroWest strategic aspirations including tackling car dependency and realising other wider environmental benefits; and
 - **Over-riding socio-economic benefit**¹² – positive cost / benefit ratio of the overall MetroWest programme.
- 6.0.5 The Applicant concludes at paragraph 10.7.1 of the HRA Report [REP6-120] that, in their view "*consent for the DCO Scheme may be granted as the benefits outweigh the harm to the European site*", listing a number of

¹² In respect of non-priority habitat only, see paragraph 6.0.3 of this RIES

“unusual” circumstances in respect of the Proposed Development itself which support their IROPI case.

- 6.0.6 No IPs have made representations or raised concerns directly around the IROPI case made by the Applicant in the HRA Report (including the LPAs and NE).
- 6.0.7 The ExA notes here that the IROPI case put forward by the Applicant makes reference to other important application documents that support their position, in particular:
- Transport Assessment (TA) [APP-155] – [APP-172];
 - Outline Business Case [APP-201] – [APP-203];
 - Relevant sections of the ES:
 - Chapter 7 Air Quality and Greenhouse Gases (and supporting Appendix 7.5 (Climate)) [REP6-074], [REP6-112]; and
 - Chapter 14 Socio-Economics and Economic Regeneration [APP-109] (and supporting appendices 14.1 (Equality Impact Assessment) and 14.2 (Health Impact Assessment)) [APP-154].
- 6.0.8 During the course of the Examination, various representations were made and questions posed by the ExA [PD-010 and PD-014] around matters presented as part of these documents which relate to the wider consideration of the case for development consent. As stated above, none of these submissions challenged the basis for the Applicant’s information to inform an IROPI case (if required).
- 6.0.9 The Applicant also provided a legal opinion on the HRA Report ([APP-197] which was updated as a late submission at Deadline 6 [REP6-133]). Paragraph 55 of that opinion [REP6-133] deals with IROPI matters, concluding that *“Specifically, it is relevant [to the Secretary of State in deciding whether an IROPI case is made] that this is a scheme promoted by a consortium of local authorities for public good.....which will provide long term benefit for the public and the environment and which will contribute to overcoming and increasingly unsustainable highway links, with attendant adverse consequences for social mobility, economic growth, public health and climate change”*.

7 COMPENSATORY MEASURES

7.0.1 Section 11.2 of the HRA Report [REP6-120] presents an overview of the compensation packages proposed by the Applicant, with the AGVMP central to the delivery of these measures (to be a certified document under the DCO and compliance with the AGVMP to be secured under DCO requirement 14):

- *Tilio-Acerion* Woodland compensation (1.45ha);
- Whitebeam replacement planting; and
- Grassland compensation (0.15ha).

7.0.2 Much of the examination of HRA matters and representations made by NE ([RR-022], [REP2-045], [REP3-017], [REP5-042]) focused on the adequacy, delivery and efficacy of the compensatory measures proposed by the Applicant.

7.1 *Tilio-Acerion* Woodland compensation

7.1.1 The loss of 0.73ha of *Tilio-Acerion* woodland is considered by the Applicant to represent a worst-case estimate that is "*likely to be reduced during GRIP 5 detailed design*" (paragraph 11.3.1 of [REP6-120]).

7.1.2 The specifics of the compensatory measures in respect of *Tilio-Acerion* woodland are set out in section 11.3 of the HRA Report [REP6-120]. The total area required for positive management of woodland habitat (both ancient semi-natural and secondary recent) is estimated at 1.45ha, as agreed with NE at 6.1.8 of the SoCG [REP6-146] with the Applicant. The actual physical measures proposed have not been subject to particular dispute during the Examination, however representations were made by NE relating to the location and legal specifications of the measures as set out below.

7.1.3 At ISH 3 [EV-010], NE raised concerns around the location of the "*positive management measures*" proposed by the Applicant in the Application version of the HRA Report [APP-142] (as updated by [AS-027] during pre-Examination and [REP6-120] as a late submission to Deadline 6).

7.1.4 NE's concerns primarily related to the provision of woodland compensation on NR owned land and the difficulty of distinguishing between measures that are in connection with the Proposed Development and any positive management that NR is already obliged to carry out under the Habitats Regulations. NE stated in their WR [REP2-045] that the active management and compensation being proposed needed "*to be clearly over and above what would normally be expected of the site owner to achieve favourable condition*". The ExA had posed question BIO.1.7 [PD-010] in order to fully understand the relationship between the Applicant's AGVMP and the ongoing duties of NR under their SMS, with the Applicant's response at [REP2-013].

7.1.5 The ExA posed further questions in response to these points in ExQ2 BIO.2.4 [PD-014], with NE responding at [REP5-042], concluding that

"whilst little progress to date on implementing agreed measures in the SMS and VMP...[has been made]...the Applicant has set out detailed proposals for positive management measures that would likely be achieved more quickly...We also accept that the positive management measures identified by the Applicant would deliver significant ecological benefit. We would, however, question whether the lack of progress by a public body like NR in meeting its responsibilities and implementing the SMS and VMP...should be taken to be grounds for authorising similar positive management measures on NR land within the SAC as compensation for the MetroWest Phase 1 project."

- 7.1.6 The Applicant's position was set out at ISH3 [REP4-017]. In response to ExQ2 [REP5-028], the Applicant stated that NR "does agree that the dedicated AGVMP on which it has collaborated with the applicant will aid in drawing distinction between requirements specifically related for the DCO scheme and the day-to-day activities NR and Natural England have agreed under the terms of the current SMS". Paragraph 32 of the legal opinion submitted on behalf of the Applicant [REP6-133] notes that the recent February 2021 updated HRA Guidance⁴ "does not as a separate requirement refer to the measures not being additional to normal practice".
- 7.1.7 At the point of DCO submission, the delivery of compensatory measures within NR land ownership was intended to "provide NE with the ability to approve whichever of the areas of compensation identified by the DCO Scheme it considers would best compensate for the predicted harm, taking into account the stage reached by NR in its own management plan". The Applicant referred to this as an "adaptive approach" to delivery of compensation. The Applicant's view remains that the SoS could "have certainty that the necessary compensatory measures would be secured, whilst also being satisfied that the conservation measures that NR is required to take in order to maintain or restore favourable conservation status within that part of the SAC that it owns will be delivered in accordance with the management plan that NE will oversee independently of the DCO Scheme" (paragraphs 11.1.4 – 11.1.5 of [REP6-120]).
- 7.1.8 However, during the course of the Examination (and in response to representations made by NE as cited above) the Applicant identified that all of the proposed woodland compensation could be provided on Forestry Commission (FC) land and that this was NE's preferred option because it would allow measures connected with the Proposed Development to be distinguished from the positive management that NR is already obliged to carry out.
- 7.1.9 As a late submission to Deadline 6 of the Examination, the Applicant submitted a copy of completed agreement between themselves and the FC allowing for the delivery of the proposed woodland compensation entirely on FC land [REP6-150]. The location of the FC land to which the agreement relates is shown at Annex M of the AGVMP [REP6-137] and as Appendix 1 to the agreement itself.
- 7.1.10 Under the terms of the agreement "The DCO Scheme will deliver the agreed level of compensation for the SAC by improving an equivalent area

of land on FC property adjacent to but outside the SAC rather than undertaking woodland compensation on NR land within the SAC”.

- 7.1.11 Both options for positive management (either on FC Land, or NR land) are retained in the DCO by the Applicant and could be delivered under the AGVMP (see section 4.1.2 of [REP6-136]).
- 7.1.12 NE expressed a clear preference for delivery of compensation on FC land as set out in 6.1.8 of the SoCG [REP6-146] in contrast with reservations regarding the delivery of the compensation if located within NR Land (as set out in paragraphs 7.1.3 – 7.1.5 above).
- 7.1.13 The legal opinion provided on behalf of the Applicant states that “unless the Secretary of State specifies otherwise in determining the DCO application, all compensatory positive woodland management will be undertaken on land adjacent to the SAC which is owned by the Secretary of State for Environment, Food and Rural Affairs and managed by the FC, in accordance with the detailed woodland management plan and monitoring at Annex M to the AGVMP” [REP6-133].
- 7.1.14 The legal opinion also explains that the FC land compensation option no longer relies on an “adaptive” approach as was allowed for in the original version of the AGVMP submitted as part of the Application, which was the subject of questioning under ExQ1 BIO.1.8 [PD-010].
- 7.1.15 Paragraph 2.4.10 of the HRA Report [REP6-120] explains under the February 2021 revised HRA guidance⁴, if an area providing compensatory measures is not within the European site, it should become designated as part of the European site and that it is protected under government policy until that happens. However, it is noted that any extension of the SAC to include the positive woodland management compensation does not fall within the scope of the SoS to consider in its role as consenting authority for the Proposed Development. The legal opinion also cites these points at paragraphs 13 and 42 [REP6-133].
- 7.1.16 The Applicant would be responsible for the delivery of the AGVMP regardless of whether the NR or FC land would provide the compensatory measures (including implementation and monitoring provisions in paragraphs 48, 51 and 52 of the legal opinion [REP6-133]).

7.2 Whitebeam replacement planting

- 7.2.1 The Proposed Development is predicted to result in the loss of up to 27 rare Whitebeam trees that are key species of the *Tilio-Acerion* forest qualifying feature (see paragraph 4.3.11 of this RIES).
- 7.2.2 The Applicant explained that the general positive management of existing *Tilio-Acerion* woodland would contribute to the compensation for loss of whitebeams, but that additional compensation is proposed for the anticipated loss of individual whitebeams (paragraph 11.5.1 [REP6-130]).
- 7.2.3 The proposed compensatory package comprises planting of 54 whitebeam saplings to replace those lost (a 2:1 replacement ratio). The nature of the compensation measures has not been subject to particular dispute during the Examination, however representations were made by NE relating to

the location and legal specifications of the measures ([REP2-045], [REP3-017], [REP5-042]).

- 7.2.4 The programme of whitebeam conservation is explained in Section 5.7 and Annex H of the AGVMP [REP6-136]. The issues and challenges associated with propagation of particular species, was considered at ExQ1 BIO.1.18 [PD-010]. The ExA sought to understand the implications for the compensation package if the Applicant was unable to replant all types of species on the basis of 2 specimens planted as replacement for every 1 specimen lost. In response, NE stated that they recognised the difficulties associated with the approach and that *"the applicant is exhausting all possibilities to maximise the number of these species planted as part of the compensation. Given this we are satisfied that the compensation package will be as optimal as it can be in terms of species of Whitebeam used"* [REP2-045]. NE's agreement in this regard is set out in 6.1.4 of their SoCG with the Applicant [REP6-146], and it is also considered specifically at paragraph 50 of the Applicant's legal opinion [REP6-133].
- 7.2.5 In their WR [REP2-045], NE expressed concern with two of the proposed whitebeam planting sites included in the Application version of the HRA Report [APP-142] (including AGVMP). NE considered that the Miles Dock and one of the two Nightingale Valley sites (as set out at 11.5.4 – 11.5.13 of [APP-142]) were inappropriate locations for whitebeam planting because they could adversely affect existing habitat features that are associated with the SAC/SSSI¹³. This issue was also discussed at ISH3 [EV-010]. At Deadline 4 of the Examination, the Applicant noted that discussions were ongoing with the FC and NE regarding the whitebeam compensation sites but maintained that their original approach with regard to the Miles Dock and Nightingale Valley sites was justifiable against the Habitats Regulations [REP4-018].
- 7.2.6 Discussions during the Examination lead to modifications to the whitebeam planting proposals including the addition of a new site (as described in paragraph 11.5.5 of the HRA Report submitted as a late response to Deadline 6 [REP6-120].)
- 7.2.7 The updated planting proposals comprised two alternative packages, set out in Annex H to the AGVMP [REP6-136];
- Package 1 – the original planting sites detailed in the Application version of the HRA Report [APP-142] (but with minor modifications), all within NR land; and
 - Package 2 - a new planting site on FC land plus two of the original sites identified on NR land, removing the Nightingale Valley 1a site and the Miles Dock site in response to NE concerns over aspects of package 1.
- 7.2.8 The proposed planting packages are summarised in Table 11.1a of the HRA Report, [REP6-120], showing that sites identified as site 1a, 1b, 2 and 3

¹³ The ExA notes that [REP2-045] refers to Nightingale valley (b) site as being not appropriate whereas, based on later submissions eg [REP4-017], [REP6-120]. [REP6-146], it is understood that Nightingale valley (a) site is the one for which NE expressed concern.

are associated with package 1, and sites 1b, 3 and 4 are associated with package 2. The characteristics of these sites are summarised in paragraph 11.5.5 and 11.5.9 – 11.5.14 of the HRA Report [REP6-120] and described further in Annexes H and M of the AGVMP [REP6-146] (including location plans at Figures 2-6 of Annex H). The DCO allows for the delivery of either package under the AGVMP as secured by DCO requirement 14. At ISH 3 [EV-010] the ExA asked whether or not a 'hybrid' solution between packages 1 and 2 could be delivered, but the Applicant confirmed that this is not proposed [REP4-017] (although the ExA notes that the Applicant did not and has not expressly excluded this possibility¹⁴).

- 7.2.9 As part of the same legal agreement described in paragraph 7.1.9 above [REP6-150], the Applicant and the FC have an agreement in place to allow for the delivery of the proposed whitebeam planting area at site 4 on FC land outside of the SAC.
- 7.2.10 The agreement between the Applicant and the FC securing package 2 is the preferred option for NE and the Applicant as set out in 6.1.7 of the SoCG: "*Natural England is satisfied that Whitebeam Planting Package 2 can deliver compensation that will meet the relevant legal requirements*" [REP6-146]. Item 6.1.6 of the SoCG with NE refers to package 1 and records agreement that "*the SAC qualifying features at the Miles Dock Embankment and Nightingale Valley 1a sites will not be adversely affected*" but that NE retain concerns about the potential impacts of whitebeam planting on the features associated with the Avon Gorge SSSI within these sites, hence package 2 remains it's preferred option.

7.3 *Festuco-Brometalia* Grassland

- 7.3.1 The loss of 0.06ha of grassland habitat relates to:
- A temporary site compound in the former quarry site (Quarry 2) (0.04 ha);
 - Clearance of grassland along the new railway fence line (0.008 ha); and
 - Loss of grassland as a result of geo-technical work on rock-faces (0.008 ha).
- 7.3.2 As set out in paragraph 8.5.6 of the HRA Report [REP6-120], the loss is estimated at 0.84% of the total grassland habitat within the SAC, and this has been considered as a worst case given the Applicant's acknowledgement that the "temporary losses" would occur over a number of years during the construction phase and that it would take time for the habitat to regenerate and restore.
- 7.3.3 Whilst general protective mitigation measures are set out in section 4.3 of this RIES (which the Applicant and NE are agreed would be generally for

¹⁴ The ExA notes that the AVGMP [REP6-136] seems to refer to an "either or" situation with regards package 1 and package 2, and that Requirement 14(6) states that "*The mitigation and compensation measures specified in the Avon Gorge Vegetation Management Plan must be carried out in accordance with the timetables set out in that document.*"

the benefit and protection of the SAC), the Applicant has proposed compensatory measures in the form of improvements to the condition of existing areas of *Festuco-Brometalia* grassland through positive vegetation management including scrub control, removal of non-native species and a conservation strategy for Bristol rock-cress *Arabis scabra* (to include micro-siting provisions for the detailed design phase and potential translocation).

- 7.3.4 The location of positive management areas is shown in Annex F of the AGVMP [REP6-136]. Management prescriptions for each of the areas are set out in Annex G and a separate conservation strategy is provided for Bristol rock-cress in Annex K.
- 7.3.5 During the course of the Examination, NE raised some concerns that the loss of a small area of qualifying grassland in the SAC on NR land may need the Applicant to explore alternative locations for offsite grassland compensation for the same reasons set out in relation to the positive woodland management (ie that proposed compensation measures should be over and above those that ought to be undertaken anyway by NR [EV-010], [REP5-042]).
- 7.3.6 The Applicant responded to these points in their oral case and response to representations at ISH3 [REP4-017] and [REP4-018], clarifying their position that compensation for loss of the grassland (in the form of positive management) could only be provided for on NR land as only this grassland is within their ownership.
- 7.3.7 The SoCG between NE and the Applicant provided as a late submission for Deadline 6 [REP6-146], items 6.1.9 and 6.1.10 demonstrates agreement of the grassland compensation package (including specific measures for the protection and management of the Bristol rock-cress, a species listed under Schedule 8 of the Wildlife and Countryside Act 1981). The agreement is understood to be based on the following:
- 0.04ha of the 0.06ha loss would be temporary (for the duration of the construction phase);
 - The positive management would benefit an area greater than double the area of the combined temporary and permanent loss; and
 - The loss is considered to be a small quantity relative to the total extent of the SAC and grassland habitat therein.
- 7.3.8 These points are also made in paragraph 50 of the legal opinion prepared on behalf of the Applicant [REP6-133].

7.4 Summary

- 7.4.1 The Applicant summarises the package of compensatory measures in section 11.6 of the HRA Report, including Table 11.3 which sets out their view that:

- The proposed compensation measures comply with the criteria in EC Guidance (11/18) (as set out in Table 11.3) and the updated HRA Guidance⁴;
- Compensation for the permanent loss of 0.73 ha of *Tilio-Acerion* woodland would be delivered on FC land outside the SAC (with the retained option to deliver within NR land); and
- Agreements are in place between the FC and the Applicant [REP6-150] and NR and the Applicant¹⁵ to make provision for the funding of the compensation measures.

7.4.2 The security of funding and roles and responsibilities around the delivery of the compensatory measures has not been raised as an area of concern by any IP during the Examination (other than in the context of the discussions around the provisions and responsibilities for the various compensatory packages that were discussed during the Examination as set out above).

7.4.3 The Applicant therefore concludes that the compensatory measures (in addition to mitigation measures), would be effective in providing for the long term favourable conservation status of the Avon Gorge Woodlands SAC and that "*...all three derogation tests are met in the case of the DCO Scheme... the grant of consent for the DCO Scheme will not cause detriment to the maintenance of the overall coherence of the national site network and that the grant of consent to the DCO Scheme offers potential to improve the condition of the Avon Gorge Woodlands SAC*".

¹⁵ The Applicant explains in paragraph 11.6.8 of the HRA [REP6-120] that this agreement is set out in the funding statement [APP-056]. The ExA is aware that the provisions in section 4 of the AGVMP [REP6-136] under requirement 14 of the DCO set out the roles and responsibilities for implementing the plan.