# HABITATS REGULATIONS ASSESSMENT FOR AN APPLICATION UNDER THE PLANNING ACT 2008

## Portishead Branch Line – MetroWest Phase 1

## 14 November 2022

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# 1. INTRODUCTION

## Background

1.1 This document ("the HRA Report") is a record of the Habitats Regulations Assessment ("HRA") that the Secretary of State for Transport has undertaken under regulation 63 of the Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations") in respect of the Development Consent Order ("DCO"), for the proposed 'Portishead Branch Line – MetroWest Phase 1' ("the Development"). The HRA Report includes an appropriate assessment for the purposes of regulation 63 of the Habitats Regulations.

1.2 The Habitats Regulations were amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 ("the 2019 Regulations") and the amendments were taken into account in the preparation of this HRA Report. Reference to the Habitat Regulations in this HRA Report are therefore to the latest amended version, unless otherwise stated.

1.3 North Somerset District Council ("the Applicant") submitted an application for development consent ("the Application") to the Planning Inspectorate ("the Inspectorate") on 15 November 2019 under section 37 of the Planning Act 2008 ("PA 2008"). The Development to which the Application relates is described in more detail in Section 2 of this HRA Report.

1.4 The Development constitutes a Nationally Significant Infrastructure Project ("NSIP") by virtue of it being the construction of a new railway within the meaning of sections 14(1)(k) and 25 of the PA 2008.

1.5 The Application was accepted for examination by the Inspectorate (under the delegated authority of the Secretary of State) on 12 December 2019.

1.6 The Applicant submitted requests to make changes to the Development to which the Application relates during the examination, as set out in Section 2.2 of the Examining Authority's (ExA) Recommendation Report ("the Recommendation Report"). Five specific changes to the Development were put forward altogether and were comprised in two change requests.

1.7 The first change request (Change Request A) was submitted in a letter from the Applicant dated 23 November 2020. The ExA determined that this change was 'non-material' and issued a procedural decision confirming this in a letter dated 22 December 2020.

1.8 The second change request (Change Request B) for four further changes was submitted on 19 January 2021. The ExA determined that these changes were also 'non-material amendments' and issued a procedural decision confirming this on 26 January 2021.

1.9 The examination concluded on 19 April 2021. The ExA submitted the report of the examination, including its recommendation, to the Secretary of State for Transport on 19 July 2021.

1.10 The Secretary of State's conclusions in relation to European sites have been informed by the Recommendation Report, documents and representations submitted during the examination and responses to the Secretary of State's requests for comments and further information issued on 26 July 2021 and 28 January 2022, insofar as these have any bearing on the effects of the Development on European sites.

## Habitats Regulations Assessment

1.11 The Habitats Regulations contain the relevant provisions for the protection of European sites. This is the broad term which is used to refer to Special Areas of Conservation (SAC) and Special Areas of Protection (SPA). SACs are designated for their habitat features and populations of non-avian species. SPAs are designated for their bird populations. These sites form the national site network which includes all SACs and SPAs currently designated and new SACs and SPAs designated under the Habitats Regulations (as defined in Regulation 8).

1.12 The UK Government is also a signatory to the Convention on Wetlands of International Importance 1972 ("the Ramsar Convention"). The Ramsar Convention provides for the listing of wetlands of international importance. Ramsar sites do not form part of the national site network, but all Ramsar sites are treated in the same way as SACs/SPA as a matter of Government policy[1].

1.13 For the purposes of this HRA Report, in line with the Habitats Regulations and relevant Government policy, the term "European sites" includes Special Areas of Conservation (SAC), candidate SACs (cSAC), possible SACs (pSAC), Special Protection Areas (SPA), potential SPAs (pSPA), Sites of Community Importance (SCI), listed and proposed Ramsar sites and sites identified or required as compensatory measures for adverse effects on any of these sites.

1.14 Regulation 63(1) of the Habitats Regulations requires that:

*"(1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which-*

*(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and*

*(b) is not directly connected with or necessary to the management of that site,*

*must make an appropriate assessment of the implications of the plan or project for that site in view of that site's conservation objectives…"*

1.15 Regulation 64(1) goes on to state that:

*"(1) If the competent authority is satisfied that, there being no alternative solutions, the plan or project must be carried out for imperative reasons of overriding public interest (which, subject to paragraph (2), may be of a social or economic nature), it may agree to the plan or project notwithstanding a negative assessment of the implications for the European site or the European offshore marine site (as the case may be)."*

1.16 Additionally, Regulation 68 states that:

*"Where in accordance with regulation 64—*

*(a) a plan or project is agreed to, notwithstanding a negative assessment of the implications for a European site or a European offshore marine site, or*

*(b) a decision, or a consent, permission or other authorisation, is affirmed on review, notwithstanding such an assessment,*

[1] Paragraph 181 of the National Planning Policy Framework (NPPF)

*the appropriate authority must secure that any necessary compensatory measures are taken to ensure that the overall coherence of Natura 2000 is protected."*

1.17 The Development is not connected with or necessary to the management of any European sites. Accordingly, the Secretary of State for Transport, as the competent authority for the purposes of Transport NSIPs under the PA 2008, has undertaken an assessment in line with the requirements of the Habitats Regulations. This HRA Report (Sections 1 to 5) is the record of the appropriate assessment for the purposes of Regulation 63 of the Habitats Regulations. Additionally, Sections 6 to 9 of this HRA Report record the Secretary of State's considerations with respect to Regulations 64 and 68 of the Habitats Regulations.

## The Report on the Implications for European Sites (RIES) and consultation with the appropriate nature conservation body

1.18 The ExA, with support from the Inspectorate's Environmental Services Team, produced a Report on the Implications for European Sites ("the RIES"). The purpose of the RIES was to compile, document and signpost information submitted by the Applicant and Interested Parties ("IPs") during the examination up to and including deadline 6 of the Examination (15 March 2021). It was issued to ensure that IPs, including Natural England ("NE") as the appropriate nature conservation body in respect of the Application for the Development, had been formally consulted on Habitats Regulations matters during the examination. The consultation period ran between 29 March 2021 and 14 April 2021.

1.19 Regulation 63(3) of the Habitats Regulations requires competent authorities (in this case the Secretary of State), if they undertake an appropriate assessment, to consult the appropriate nature conservation body and have regard to any representations made by that body.

1.20 The Applicant provided comments at deadline 7 of the examination but no other IPs responded. However, the Secretary of State notes that in the final version of the Statement of Common Ground ("SoCG") submitted at deadline 6 (15 March 2021), NE indicated agreement with the Applicant's conclusions on HRA.

## Changes to the Application during examination

1.21 In respect of the non-material amendments to the Application identified above and described at Section 2.2 of the Recommendation Report, the Secretary of State notes that the change requests all involved the removal of works listed in the draft DCO ("dDCO"). None of the works which were removed had any implications for effects on European sites or were related to mitigation for effects on European sites.

## Documents referred to in this HRA Report

1.22 This HRA Report has taken account of and should be read in conjunction with the documents produced as part of the application and examination, together with the responses to the Secretary of State's requests for comment and further information since 19 July 2021.

1.23 The Applicant provided a report titled 'Report to Inform Habitats Regulations Assessment' ("the Applicant's HRA Report") with the DCO application. The same report was submitted in duplicate as an appendix to the Environmental

Statement. This report was revised twice during the examination with the final version being submitted at deadline 6. Unless otherwise stated, subsequent references to the Applicant's HRA Report in this report refer to the version submitted at deadline 6.

1.24 The documents relied on in the preparation of this report are listed in Annex 1 of this report.

## Structure of this HRA Report

1.25 The remainder of this HRA Report is presented as follows

- Section 2 provides a general description of the Development.
- Section 3 describes the location of the Development and its relationship with European sites.
- Section 4 identifies the European sites and qualifying features subject to likely significant effects, alone or in-combination with other plans or project (HRA Stage 1).
- Section 5 considers adverse effects on the integrity of European sites, alone or in-combination with other plans or projects and summarises the Secretary of State's appropriate assessment and conclusions (HRA Stage 2).
- Section 6 summarises the Secretary of State's consideration of alternative solutions (HRA Stage 3).
- Section 7 considers imperative reasons of overriding public interest (HRA Stage 4).
- Section 8 discusses compensatory measures (HRA Stage 5).
- Section 9 summarises the Secretary of State's conclusion in respect of HRA Stages 3 to 5.

# 2. DEVELOPMENT DESCRIPTION

2.1 The Development consists of a new railway line to be constructed on the track bed of the former branch line from Bristol to Portishead. It comprises the works listed in Schedule 1 of the DCO as follows:

- A new railway of 4.762km in length from Quays Avenue in Portishead to Portbury Junction in Pill on the trackbed of the disused railway (Work Nos. 1 and 1A).
- A new railway from Portbury Junction through the village of Pill to a new junction west of Pill Tunnel on an existing freight line (Work No, 1B).
- A new railway from Portbury Junction, parallel to Work No 1B, through the village of Pill to a new junction west of Pill Tunnel on an existing freight line to connect to Royal Portbury Dock (Work No. 1C).
- New stations at Portishead and Pill together with new car parks and works to the highway network, urban realm and public right of way improvements.
- A new cycle and pedestrian bridge to the south of Trinity Primary School, Portishead and associated new cycle tracks.
- Permanent maintenance compounds at Sheepway, Severn Road, Pill and Ham Green (all in North Somerset) and Clanage Road in Bristol.
- Works to the bridleway network in the vicinity of Royal Portbury Dock and the extension of the bridleway under the M5 Avonmouth Bridge to provide a continuous public right of way to Pill.
- Bus stop works at Pill and District Memorial Club, Pill.
- Works to the Winterstoke Road/Ashton Vale Road Junction in Bristol.
- Temporary compounds and haul roads.

2.2 Work Nos. 1, 1A, 1B and 1C comprise the NSIP; the other works listed constitute associated development. The Development is part of the wider MetroWest programme. It is part of MetroWest Phase 1 which also includes proposals to upgrade the Severn Beach and Bath Spa lines to provide half hourly services into Bristol. MetroWest Phase 2 would upgrade the Yate to Bristol and Henbury to Bristol lines to allow a half hourly passenger service.

2.3 A description of the Development is included in Chapter 4 of the Environmental Statement (ES). A revised version of this chapter was provided at deadline 6 of the examination to reflect the non-material changes to the Development. The description provides an outline of the activities that would be required to construct the Development. This includes 3 different options for the removal of waste ballast and old track from the route section between Portishead and Portbury Junction.

2.4 Chapter 4 of the Environmental Statement is supported by Figures 2.3 (Works Plan), 2.4 (General Arrangement Plans), 2.29 (Compound, Haul Road and Access to Works Plan), 2.36 (Cross Section Plans), 2.38 (Portishead Station Car Park Layout, Landscaping and New Boulevard and Access Plan) and 2.47 (Ashton Vale Road and Winterstoke Road Highway Works Plan).

2.5 Operation of the Development would involve an hourly (or hourly plus) passenger service serving new or re-opened stations and Portishead and Pill and existing stations at Parson Green, Bedminster and Bristol Temple Meads.

2.6 The ES describes two possible operating scenarios for the Development . One would involve up to 18 passenger trains travelling in each direction per day on Monday to Saturday with approximately 10 passenger trains in each direction on a Sunday. The alternative scenario is that there would be up to 20 passenger trains in each direction per day on Monday to Saturday and approximately 10 passenger trains in each direction on a Sunday.

2.7 Decommissioning activities are not described in the ES or the Applicant's HRA Report on the grounds that there is no intention to decommission the Development in the foreseeable future and that the service would run as long as there remained a business case for its operation. Any future closure would be overseen by the Office of Rail and Road.

2.8 The potential effects on European sites associated with the construction and operation of the Development are addressed in Section 4 of this HRA Report.

# 3. LOCATION OF THE DEVELOPMENT AND RELATIONSHIP WITH EUROPEAN SITES

## Location and existing land use

3.1 The Development is located in North Somerset and the City of Bristol. It will run from Portishead which is located on the Bristol Channel to Bristol Temple Meads Station in central Bristol. The route runs along a disused rail corridor and along existing track.

3.2 The western end of the Development route lies in a retail area near the centre of Portishead. It then crosses Portbury Ditch which drains into the Severn Estuary. The route continues through residential areas before crossing low-lying coastal land which is mainly in agricultural use (and is designated as Green Belt). It runs to the south of the Royal Portbury Dock before crossing under the M5 just to the north east of Junction 19. It joins the existing operational Portbury Freight Line at Portbury Junction. The route then continues through residential areas in Pill, running in parallel with the River Avon. It enters the Pill Tunnel and then emerges to cross a recreational fishing lake on Miles Viaduct. It continues across farmland to enter the Avon Gorge.

3.3 The route runs along the Avon Gorge, parallel to the River Avon but separated from it by the River Avon Tow Path. The Avon Gorge contains extensive areas of ancient woodland and grassland which are covered by several statutory and non-statutory designations, including the Avon Gorge Woodlands SAC, the Avon Gorge Site of Special Scientific Interest (SSSI) and the Leigh Woods National Nature Reserve (NNR).

3.4 The Development route emerges from the Avon Gorge to cross low-lying open ground between the A369 and the River Avon. Land use in this section of the route includes cricket fields and allotments with Brunel Way running to the east. The route then passes under the A370 into the Ashton Gate area of Bristol. A short section from the A370 bridge adjoins the A329 just to the west of the Bristol City stadium. The last section of the route runs through industrial and retail areas up to Ashton Junction.

## European sites potentially affected by the Development

3.5 The Development is not connected with or necessary to the management of any of the European sites considered within the Applicant's HRA Report.

3.6 The Applicant considered the potential for likely significant effects (LSE) on the following 11 European sites.

- Avon Gorge Woodlands SAC;
- Severn Estuary SPA;
- Severn Estuary SAC;
- Severn Estuary Ramsar site;
- North Somerset and Mendip Bats SAC;
- Chew Valley Lake SPA;
- 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.

3.7 A plan showing the European sites identified in the Applicant's assessment is provided in Annex A of the Applicant's HRA Report. The proximity of the sites to the Development is as follows (taken from Table 2.1 of the RIES):

**Table 3.1 European sites screened into the Applicant's assessment**

| Name of European Site | Distance to the DCO Order Limits |
|---|---|
| Avon Gorge Woodlands SAC | Within the DCO Order Limits |
| Severn Estuary SPA | 0.08 km |
| Severn Estuary SAC | 0.08 km |
| Severn Estuary Ramsar site | 0.08 km |
| 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 |

3.8 The Applicant's approach to identifying relevant European sites is explained in paragraph 5.1.1 of their HRA Report. A search area of 10km radius around the DCO boundary was used to identify European sites. This area was extended to a radius of 30km for European sites where bat species are a qualifying feature.

3.9 The Secretary of State notes that the ExA asked NE, North Somerset District Council (NSDC) (acting in their capacity as a local planning authority) and Bristol City Council (BCC) if they were content that all the pathways which could lead to effects on European sites from the Development had been considered. No additional European sites or features which could be affected by the Development were identified in the responses to the question. No other IPs raised any concerns on this point. The Secretary of State is therefore content to accept the ExA's recommendation that no other European sites or features need to be addressed in this HRA Report.

# 4. STAGE 1: ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS (LSE)

## Potential effects from the Development

4.1 Section 5 of the Applicant's HRA Report describes its approach to screening for LSE. Section 5.2 identified the following potential effects from the construction and operation of the Development:

Construction

- Temporary habitat loss as a result of:
  - excavations to remove ballast, placing of new ballast, sleepers and rails; troughing for cabling and drainage works;
  - temporary changes in land use (including vegetation removal) for construction compounds and haul roads;
  - temporary vegetation clearance prior to re-profiling and strengthening embankments and cuttings, possibly including piling and soil nailing;
  - geo-technical works to rock faces in the Avon Gorge including inspections and scaling of the rock face, installation of rock bolts and block removal and erection of catch fences to the bottom of the slope; and
  - strengthening works to Quarry Bridge No. 2 and remedial works to existing bridges.
- Permanent habitat loss where vegetation removal is needed for new infrastructure such as new fencing, maintenance and emergency access compounds. Vegetation removal would be required 1m either side of the fence line. It would be allowed to re-grow outside the fence but within the fence line the Applicant has assumed that regeneration would not occur unless the fence line was "some distance" from the rail line.
- Disturbance of bats due to minor remedial works in the tunnels.
- Disturbance of birds and other fauna due to noise and vibration from construction operations.
- Visual disturbance of birds and other fauna due to the presence of construction works, plant and machinery.
- Disturbance of fauna including bats and otter from lighting and noise during night works.
- Changes in plant physiology and species composition due to air pollution from dust and exhaust fumes.
- Damage and changes in species composition of aquatic flora and fauna assemblages due to accidental pollution of watercourses.
- Damage to vegetation due to trampling and possible spillages of pollutants such as fuel or oil.

Operation phase

- Increased noise and visual disturbance from the increased frequency of trains travelling on sections of track currently only used by freight services.
- Ongoing vegetation management involving:
    - vegetation removal and pesticide application in the area 3m from the rail line;
    - removal of overhanging vegetation or any vegetation which could pose a danger to the railway; and
    - removal of vegetation in areas around access points or equipment/structures.

4.2 NE confirmed in their SoCG with the Applicant submitted at deadline 6, that all potential impact pathways on European sites had been identified.

4.3 As previously noted in this report, the effects of decommissioning were not considered in the Applicant's HRA Report. The Secretary of State notes that the ExA raised this point with NE and the relevant local planning authorities in their first round of written questions. No concerns were raised by any of the IPs. NSDC noted that the Development represents a substantial long-term investment and that they were satisfied that matters of decommissioning would be controlled by prevailing guidance and regulation at the point of decommissioning. The SoCG between the Applicant and NE submitted at examination deadline 6, states that NE agrees with the Applicant's approach to assessing decommissioning. The Secretary of State is therefore content that effects from decommissioning do not need to be considered further in this report.

4.4 The Secretary of State is satisfied that the Applicant's HRA Report has correctly identified all the potential effects on European sites from the Development alone.

## Potential in-combination effects

4.5 Table 7.2 of the Applicant's HRA Report lists the plans and projects which could lead to possible in-combination effects on European sites. The relevant plans and projects are 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.

4.6 The only project identified as contributing to in-combination effects was the cargo storage area at Royal Portbury Docks. Both this project and the Development are likely to lead to the removal of habitats used by the lesser or greater horseshoe bats which are qualifying features of the North Somerset and Mendip Bats SAC.

4.7 During the examination the ExA queried in their first round of written questions if the delay between the acceptance of the application and the start of the examination affected the scope of the in-combination effects. The

Applicant advised in their response submitted at deadline 2 of the examination, that the delay did not affect the assumptions made in the in-combination assessment or invalidate its conclusions. The deadline 2 response from BCC identified two additional further planning applications which had been received since the DCO application; the deadline 2 response from NSDC identified one further application. However, in their SoCGs with the Applicant submitted at examination deadline 7, both authorities advised that these additional applications would be unlikely to affect the in-combination assessment. NE raised no concerns in relation to the scope of the in-combination assessment in any of their responses to the examination.

4.8 The ExA sought clarification as to the potential for in combination effects with forestry works being undertaken by Forestry England in Leigh Woods (observed during the Unaccompanied Site Visit). The Applicant clarified at deadline 2 that the felling works were carried out in line with Forestry England's long-term Leigh Woods Forest Design Plan 2011-2021 and would not contribute towards potential adverse effects on the Avon Gorge Woodlands SAC.

4.9 The Secretary of State is satisfied that the Applicant's HRA Report has correctly identified the projects which could lead to in-combination effects on European sites.

## Sites and features subject to LSE

4.10 Table 4.1 summarises the European sites and features which were considered in the Applicant's HRA Report (the full list of qualifying features for each European site is provided in Annex 2 of this report). As noted above none of the IPs identified any other European sites or qualifying features likely to be subject to significant effects as a result of the construction or operation of the Development. The Secretary of State is content that the list in Table 4.1 includes all the sites and qualifying features which should be considered.

**Table 4.1 European sites and qualifying features covered in the Applicant's screening exercise**

| European site | Pathway of effect | Relevant qualifying features |
|---|---|---|
| Avon Gorge Woodland SAC | Habitat loss due to vegetation clearance during construction | *Tilio-Acerion* forests of slopes, screes and ravines (mixed woodland on base-rich soil associated with rocky slopes)<br><br>Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) |
| | Habitat fragmentation as a result of habitat loss during construction | |
| | Habitat degradation due to possible spread of invasive non-native species (INNS) during construction | |
| | Changes in ground flora composition as a result of air quality changes during operation | |
| | Habitat loss and fragmentation as a result of ongoing vegetation maintenance during operation | |
| | Indirect habitat loss as a result of windthrow following vegetation clearance | *Tilio-Acerion* forests of slopes, screes and ravines |
| Severn Estuary SAC | Habitat degradation due to pollution run-off during construction and operation | • Sandbanks which are slightly covered by sea water all the time; sub-tidal sandbanks<br>• Estuaries<br>• Mudflats and sandflats not covered by seawater at low tide; intertidal mudflats and sandflats<br>• Reefs<br>• Atlantic salt meadows (*Glauco-Puccinellietalia maritmae*)<br>• Sea lamprey (*Petromyzon marinus*)<br>• River lamprey (*Lampetra fluviatilis*)<br>• Twaite shad (*Alosa fallax*) |

| European site | Pathway of effect | Relevant qualifying features |
|---|---|---|
| | Habitat degradation due to changes in air quality during operation | • Sandbanks which are slightly covered by sea water all the time; sub-tidal sandbanks<br>• Estuaries<br>• Mudflats and sandflats not covered by seawater at low tide; intertidal mudflats and sandflats<br>• Reefs<br>• Atlantic salt meadows |
| Severn Estuary SPA | Noise and human disturbance of over-wintering and passage birds during construction | All qualifying features |
| | Disturbance from noise and vibration from passing trains during operation | All qualifying features |
| | Increased accessibility and potential for recreational disturbance | All qualifying features |
| Severn Estuary Ramsar site | Noise and human disturbance of over-wintering and passage birds during construction | All avian qualifying features |
| | Disturbance from noise and vibration from passing trains during operation | All avian qualifying features |
| | Increased accessibility and potential for recreational disturbance | All avian qualifying features |

| European site | Pathway of effect | Relevant qualifying features |
|---|---|---|
| | Habitat degradation due to run-off of pollution during construction and operation | • Ramsar criterion 1: Immense tidal range affects the physical environment and biological communities<br>• Ramsar criterion 3: Due to unusual estuarine communities, reduced diversity and high productivity.<br>• Ramsar criterion 4: Important for the run of migratory fish between sea and river via estuary.<br>• Ramsar criterion 8: One of the most diverse fish populations in an estuarine and river system in Britain with over 110 species recorded. |
| | Habitat degradation due to changes in air quality during operation | • Ramsar criterion 1: Immense tidal range affects the physical environment and biological communities<br>• Ramsar criterion 3: Due to unusual estuarine communities, reduced diversity and high productivity.<br>• Ramsar criterion 4: Important for the run of migratory fish between sea and river via estuary.<br>• Ramsar criterion 8: One of the most diverse fish populations in an estuarine and river system in Britain with over 110 species recorded. |
| North Somerset and Mendip Bats SAC | Severance of commuting routes through direct habitat loss or lighting during construction and operation | • Lesser horseshoe bat (*Rhinolophus hipposideros*)<br>• Greater horseshoe bat (*Rhinolophus ferrumequinum*) |
| | Loss of foraging habitat during construction and operation | |
| | Loss or damage to roosts during construction | |
| | Disturbance to retained roosts during construction | |

| European site | Pathway of effect | Relevant qualifying features |
|---|---|---|
| | Killing and injury during construction or operation through roost disturbance or collision risk | |
| | Disturbance of bats in tunnels due to increased frequency of trains during operation | |
| Chew Valley Lake SPA | Disturbance to birds from noise and human presence during construction | • Shoveler duck (*Anas clypeata*) – overwintering |
| | Disturbance from noise and vibration from passing trains during operation | |
| | Increased accessibility leading to a potential increase for recreational disturbance | |
| Wye Valley Woodlands SAC | Severance of commuting routes e.g. through direct habitat loss or lighting during construction or operation | • Lesser horseshoe bat |
| | Loss of foraging habitat during construction or operation | |
| | Loss or damage to roosts during construction | |
| | Killing and injury e.g. through disturbance to roosts or collision risk during construction or operation | |
| | Disturbance of bats in tunnels due to increased frequency of train operation | |
| Wye Valley and Forest of Dean Bat Sites SAC | Severance of commuting routes e.g. through direct habitat loss or lighting during construction or operation | • Lesser horseshoe bat<br>• Greater horsehoes bat |

| European site | Pathway of effect | Relevant qualifying features |
|---|---|---|
| | Loss of foraging habitat during construction or operation | |
| | Loss or damage to roosts during construction | |
| | Killing and injury e.g. through disturbance to roosts or collision risk during construction or operation | |
| | Disturbance of bats in tunnels due to increased frequency of train operation | |
| Mendip Limestone Grasslands SAC | Severance of commuting routes e.g. through direct habitat loss or lighting during construction or operation | • Greater horseshoe bat |
| | Loss of foraging habitat during construction or operation | |
| | Loss or damage to roosts during construction | |
| | Killing and injury e.g. through disturbance to roosts or collision risk during construction or operation | |
| | Disturbance of bats in tunnels due to increased frequency of train operation | |
| Bath and Bradford-on-Avon Bats SAC | Severance of commuting routes e.g. through direct habitat loss or lighting during construction or operation | • Greater horseshoe bat<br>• Lesser horseshoe bat<br>• Bechstein's bat |
| | Loss of foraging habitat during construction or operation | |

| European site | Pathway of effect | Relevant qualifying features |
|---|---|---|
| | Loss or damage to roosts during construction | |
| | Killing and injury e.g. through disturbance to roosts or collision risk during construction or operation | |
| | Disturbance of bats in tunnels due to increased frequency of train operation | |
| Mells Valley SAC | Severance of commuting routes e.g. through direct habitat loss or lighting during construction or operation | • Greater horseshoe bat |
| | Loss of foraging habitat during construction or operation | |
| | Loss or damage to roosts during construction | |
| | Killing and injury e.g. through disturbance to roosts or collision risk during construction or operation | |
| | Disturbance of bats in tunnels due to increased frequency of train operation | |

**Avon Gorge Woodlands SAC**

4.11 The details of the works required to upgrade the existing operational railway line running through the SAC are set out in Table 5.2 of the Applicant's HRA Report. They include minor modifications to the vertical and horizontal alignment of the existing line; replacement of the track and ballast; geotechnical stabilisation works on cliff faces and slopes including removal of trees and other vegetation, rock picking off cliff faces, installing rock bolts and erection of catch fences.

4.12 The 'Supplementary advice on conserving and restoring site features'[2] document for the SAC which was produced by NE, states that the SAC is an important example of a *Tilio-Acerion* forest in south-west England with the habitat type main occurring on "*typically on calcareous substrates associated with the limestone cliffs and screes*" of the Gorge but also occurring as "*a series of scattered patches grading into other types of woodland on the level plateau and on the slopes above*". Small-leaved lime (*Tilia cordata*) is locally abundant here but there are also a few large-leaved lime (*T. platyphyllos*) present.

4.13 The *Tilio-Acerion* woodland also holds populations of rare or declining plant species including whitebeams (*Sorbus* sp.) unique to the Avon Gorge, Avon whitebeam (*S. avonensis*), Bristol whitebeam (*S bristoliensis), S. x houstoniae,* Leigh Woods whitebeam (*S. leighensis*)*, S. spectans* and Wilmott's whitebeam (*S. wilmottiana*). NE's supplementary advice on conserving and restoring site features notes that "*There is good evidence to suggest that Sorbus taxa in the Gorge are in a state of contemporary evolution, which results in many closely related species and hybrids occurring within this discrete geographical area. Some of the taxa are Nationally Rare or Scarce, but Common Whitebeam Sorbus aria, in other instances presumed to be of low conservation concern is an important element of the evolutionary processes occurring here. The proper conservation of the Gorge's whitebeams should aim to encompass sufficient suitable habitat to allow the evolutionary process to continue*".

4.14 The *Festuco-Brometalia* grassland habitat also supports a number of rare plant species notably Bristol rock-cress (*Arabis scabra*), honewort (*Trinia glauca*) and round-headed leek (*Allium sphaerocephalon*) which are unique to the Gorge. These species are particularly associated with species-rich transitions to scrub and herb-rich calcareous open limestone grassland often found on cliff ledges.

4.15 The Applicant undertook botanical surveys (2015, 2016, 2017 and 2018) within the Avon Gorge which are reported in Appendices 9.1 and 9.10 of the ES and summarised in section 6.2 of the Applicant's HRA Report. The surveys demonstrated a mixture of ancient and secondary woodland. While the secondary woodland was noted to be less species rich the more open areas within it are noted as a key habitat for rare whitebeams. Six whitebeam species were recorded within Network Rail land: Avon whitebeam*,* Bristol whitebeam, Leigh Woods whitebeam*,* (*S. spectans*)*,* Wilmott's whitebeam and

[2] European Site Conservation Objectives: Supplementary advice on conserving and restoring site features Avon Gorge Woodlands Special Area of Conservation (SAC) http://publications.naturalengland.org.uk/publication/6740736611450880

two UK endemic species round-leaved whitebeam (*S. eminens*) and grey-leaved whitebeam (*S. porrigentiformis*).

4.16 Most of the habitats along the rail corridor were classed as woodland or scrub. However, two patches of the *Festuco-Brometalia* grassland were recorded south of Clifton Bridge No.1 Tunnel and north of Clifton Bridge No. 2 Tunnel. The communities occurred on cliffs and ledges within the railway boundary and grassland on the tow path. A number of significant plant species were recorded including the legally protected spiked speedwell (*Veronica spicata*) and Bristol rock-cress.

4.17 The Applicant's HRA Report (Table 7.1) identified LSE for both the qualifying features for the following reasons:

- Loss of approximately 0.73 ha of *Tilio-Acerion* woodland during construction (including rare whitebeams) as a result of vegetation clearance required to install fencing and other infrastructure.
- Loss of approximately 0.06 ha of grassland during construction as a result of vegetation clearance required to install fences and other infrastructure, work to rock faces and work to replace Quarry Bridge No. 2.
- Accidental trampling, incursion by machinery and spillages of pollutants could degrade both qualifying features during construction.
- The accidental introduction or spread of INNS could occur during construction.
- Potential for increased windthrow events leading to tree loss during operation.

4.18 The Applicant excluded LSE from further habitat fragmentation/loss on either qualifying feature for the following reasons:

- Habitat fragmentation would not occur as the route of the line already exists and vegetation removal would be limited to removing vegetation away from the line and selected individual trees on rock faces.
- Vegetation clearance for maintenance purposes during the operation of the line would be no greater than the extent cleared during construction so there would be no further habitat loss or fragmentation.

4.19 In relation to effects on air quality during operation, the Applicant undertook air quality modelling (presented in the version of Chapter 7 of the ES submitted at deadline 6 and associated appendices). The Secretary of State notes that this was in response to points raised by NE and NSDC (in their role as the local planning authority) during the examination.

4.20 The Applicant's assessment modelled nitrogen oxide ($NO_x$) concentrations, and rates of nitrogen deposition and acid deposition for the base year (2015), for 2021 without the Development ('Do-Minimum') and for 2021 with the Development in place and allowing for committed development ('Do-Something'). As such it can be viewed as an assessment of in-combination effects. The levels of each pollutant were estimated along two transects, one extending into the SAC from the existing line and one extending from the A369. The methodology is presented in ES Appendix 7.2. The results are presented in Tables 1.3 – 1.5 in ES Appendix 7.4.

4.21 The nitrogen deposition rate along the transects was compared against the lower range of the relevant critical loads provided on the Air Pollution

Information System (APIS) website. The predicted nitrogen deposition rates exceed the critical load range (15 to 25 kg N $ha^{-1}$ $year^{-1}$) for both qualifying features for the base year, the Do-Minimum and Do-Something scenarios. However, the Development contribution to the 'Do-Something' scenario is zero for all receptors apart from the receptor closest to the railway line which shows a predicted increase of 0.1 kg N $ha^{-1}$ $year^{-}$.

4.22 For acid deposition, the minimum critical load (1.2 $kEqH^{+}$ $ha^{-1}$ $year^{-1}$) would also be exceeded for all receptors under each scenario. For Receptors 42 and 43 the Development would lead to deposition equivalent to 0.2 and 0.3% of the critical load. Increases at other receptors within the SAC are predicted to be imperceptible.

4.23 As the contribution of the Development is less than 1% of the relevant critical loads for nitrogen and acid deposition, the Applicant concluded that LSE would not arise from changes in air quality during operation. NE agreed that although the Development would lead to an increase in nitrogen deposition for a site where critical loads are already exceeded, the Applicant had "*provided reasonable justification as to why the effects of the DCO Scheme on air quality would be below the 1% threshold, alone and in combination*" (see item 7.2.2 of the SoCG between NE and the Applicant submitted at deadline 6).

**Severn Estuary SAC, SPA and Ramsar site**

4.24 The Severn Estuary SAC, SPA and Ramsar is around 1.2 km north of the Development at its closest point but is functionally linked via the Portbury Wharf Nature Reserve (the southern end of which adjoins the existing railway corridor between Portishead and Sheepway).

4.25 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 Jenny's Meadow near Pill may come within 30m during the construction phase. Part of the field at the southern end of the Portbury Wharf Nature Reserve may be used as a site compound area during construction and as a maintenance compound in the operation phase.

4.26 The Applicant undertook ornithological surveys at Portbury Wharf Nature Reserve and Pill Marshes. The results of these surveys are provided in Appendices 9.3a and 9.3b of the ES and summarised in section 6.3 of the Applicant's HRA Report. Redshank was the only species recorded at Pill Marshes which is a qualifying feature of the SPA/Ramsar site. The numbers recorded were 1.39% of the original population size in the SPA citation but only 0.49% of the most recent SPA population estimate.

4.27 Table 6.2 of the Applicant's HRA Report records the presence of two species which are qualifying features of the SPA/Ramsar site – shelduck and gadwall. The population of shelduck represented less than 1% of the population listed on the SPA citation and of the most recent estimate of the SPA population, while the population of gadwall is present at 8.7% of the SPA citation population and 15.26% of the most recent SPA population estimate. Teal, pintail and breeding lesser black-backed gull were present but numbers were

less than 1% of the cited populations[3]. The proportion of the waterfowl assemblage feature present on the site is estimated by the Applicant to be 0.5%.

4.28 The Applicant's HRA Report noted that Pill Marshes and the adjacent intertidal section of the River Severn are already subject to a range of noise and visual disturbance including freight rail traffic, M5 traffic and dog walkers.

4.29 Table 7.103 of ES Appendix 13.7 shows the existing noise levels at the SPA/SAC/Ramsar site at Pill and at the Portbury Wharf Nature Reserve. Noise modelling undertaken by the Applicant (Chapter 13 of the ES submitted at deadline 6 and supporting appendices submitted at application) predicts construction noise levels of 69 Db $L_{Aeq, 12h}$ at the closest point to works at Pill. The existing noise levels are around 59 Db $L_{Aeq, 12h}$ dB. The Applicant concluded that given that the area was already subject to high levels of disturbance and the relatively low levels of usage by birds which are qualifying features of the SPA/Ramsar site, LSE due to noise or visual disturbance would not arise.

4.30 After the close of the examination, the Applicant submitted an Addendum to the HRA Report to reflect the removal of the Trinity Primary School bridge from the DCO. The addendum revises the assessment in the original HRA Report to reduce the predicted noise levels as the percussive piling during construction of the bridge will no longer occur.

4.31 During operation, train noise would reach maximum levels of 74 dB $L_{Amax}$ at 60m from the rail line and 71 dB $L_{Amax}$ at 120m distance (the existing line is 80m from the SPA/SAC/Ramsar site boundary). Train noise is expected to only be audible for a short period of time and the increase and decrease in sound would be gradual rather than sudden. The applicant concludes that as the area is already exposed to noise from the M5 and from freight trains, and the level of usage by bird species which are qualifying features of the SPA/Ramsar site is so low, LSE due to noise disturbance would not arise.

4.32 At Portbury Wharf Nature Reserve the existing noise level recorded nearest the pools and lagoons used by the bird species which are SPA/Ramsar qualifying features was 46 dB $L_{Aeq, 16h}$. The activities expected to be most likely to cause disturbance to birds using those lagoons are the ballasting, tamping and lining works during construction of the line and the percussive piling required for the construction of the Trinity Primary School Bridge. Both are predicted to lead to noise levels of 49 dB $L_{Aeq, 16h}$ at the pools and lagoons. These levels are not predicted to cause disturbance to wetland birds and therefore LSE would not arise.

4.33 During operation noise from passing trains is predicted to be below 30 dB $L_{Aeq, 16h}$. During operation of the Sheepway permanent maintenance compound, vehicle movements are predicted to generate noise levels of 63 dB $L_{Aeq, 16h}$ at 50m from the source of the noise. As the pools and lagoons would be 650m from the noise sources, noise levels during operation are not expected to be sufficient to cause disturbance to wetland birds. LSE would not therefore arise.

4.34 NE agreed in their written representations that the Applicant's evidence demonstrated that LSE would not arise from noise disturbance. No other IPs raised any concerns about the effects of noise disturbance on the qualifying features of the SPA/Ramsar site.

[3] These species are listed on the Ramsar Information Sheet as species identified subsequent for designation for possible future consideration under criterion 6 but are not fully designated features.

4.35 LSE from human disturbance caused by increased leisure use is discounted by the Applicant (see Table 7.1 of the Applicant's HRA Report). This is on the grounds that Pill Marsh is regularly used by dog walkers and is close to extensive residential and commercial areas so is already subject to high levels of disturbance. Portbury Wharf Nature Reserve is not considered by the Applicant to be close enough to any station stops to encourage additional visitors to the reserve. No concerns were raised by any IPs during the examination about disturbance effects from increased recreational use.

4.36 As noted above, the Applicant undertook air quality modelling in order to predict air quality changes during construction and operation. Air quality changes due to the Development are predicted to be minimal at the closest proximity to the SAC and Ramsar site qualifying habitat and existing nitrogen deposition (12.3 kg N $ha^{-1}$ $yr^{-1}$) is below the relevant critical load for salt meadow habitat (20-30 kg N $ha^{-1}$ $yr^{-1}$). No LSE during construction or operation is predicted by the Applicant. This conclusion has not been disputed by any IPs during the Examination.

4.37 LSE from pollution run-off during construction or operation is excluded in the Applicant's HRA Report. The route of the Development is 80m from Atlantic salt meadows which are qualifying features of the SAC/Ramsar site. However, the Applicant concludes that there are no identified hydrological connections which would provide a route for pollutants to reach the salt meadows or estuarine features. In the event that pollutants did reach the Severn Estuary, any pollutants would be subject to rapid dilution preventing effects on any of the SAC or Ramsar qualifying features. Supporting evidence on the lack of hydraulic connectivity is contained in ES Chapter 9 (version 3 submitted at deadline 6 of the examination) provided as an additional submission and ES Appendix 17.3 submitted at application). NE advised in its written representations that it agreed that there would be no hydrological connections between the Development and the Severn Estuary SAC.

**North Somerset and Mendip Bats SAC**

4.38 The habitats which are qualifying features of the SAC would not be directly or indirectly affected by the Development as there is no identified effect pathway which could lead to effects.

4.39 The Applicant undertook bat activity surveys of the disused railway section of the Development route in 2015/16, the results of which are presented in ES Appendix 9.2 (version 2 submitted to the examination as an additional submission) and summarised in the Applicant's HRA Report. The surveys demonstrated that greater and lesser horseshoe bats which are both qualifying features of the SAC are regularly present along the disused rail line between the Portbury Wharf area and Royal Portbury Dock.

4.40 Radio-tracking surveys of a male greater horseshoe bat (2015) and a pregnant female horseshoe bat (2018) showed movement between the disused railway line and Brockley Hall Stables SSSI which is part of the SAC. The female bat was found to use a number of day roosts between the SSSI and the disused rail line. The behaviour of the male bat suggested that it was behaving in a similar fashion.

4.41 Lesser and greater horseshoe roosts were identified in a derelict store on the disused railway line and two stone arches on the disused northern platform at Pill station. The roosts were a mixture of night and day roosts used by small numbers of bats; although bat numbers were low, monitoring of the Pill station site confirmed that use of the site is frequent.

4.42 Three tunnels on the Portbury Freight Line were recorded as roosts used by low numbers of bats – Clifton Bridge 2 (day roost for lesser horseshoe bats), Sandstone and Pill (both used for greater horseshoes gathering and socialising).

4.43 The Applicant concluded that LSE on the bat features of the SAC could not be excluded because vegetation clearance along the disused section of the line could lead to severance of commuting routes and loss of navigational features that bats rely on for movement through the landscape. Vegetation loss at Royal Portbury Dock could increase light penetration onto the rail corridor which could also disrupt bat flight lines. Horseshoe bats require dark, sheltered vegetated corridors in order to forage and commute between roosts. As noted above, the radio tracking surveys demonstrate a linkage between the greater horseshoe population using the disused railway section of the Development route and the SAC.

4.44 In addition to LSE from the Development alone, the Applicant's HRA Report also identified the potential for in-combination effects as a result of vegetation clearance (see paragraph 4.6 above).

4.45 The Applicant excluded LSE from disturbance to bats using roosts during construction and operation (Table 7.1 of the Applicant's HRA Report). Disruption to the roost in the derelict store may occur when vegetation is cleared but this would only affect a small number of bats so LSE on the SAC are not predicted to occur. The roost on Pill station could also be disturbed (and possibly abandoned altogether) as a result of lighting during operation. As this roost again only supports small numbers of bats its loss is not predicted to lead to LSE on the SAC. Bats roosting in tunnels on the freight line are already subjected to disturbance, the numbers affected would be small and alternative roost features are available to the bats using the Clifton Bridge No 2 Tunnel.

4.46 LSE from collision was excluded (Table 7.1 of the Applicant's HRA Report) on the grounds that horseshoe bats are likely to stick close to vegetation which would keep them away from the line of collision risk.

**Chew Valley Lake SPA**

4.47 The Applicant's surveys recorded shoveler duck (the only qualifying feature of the SPA) in the northern part of the Portbury Wharf. LSE were excluded for noise and human disturbance for the same reasons that LSE were excluded for the bird features of the Severn Estuary SPA/Ramsar site.

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

4.48 Only the bat qualifying features were reviewed for LSE for these sites in the Applicant's HRA Report as none of the habitat features would be affected by the Development either directly or indirectly. The Development has the potential to affect roosts, foraging and commuting routes beyond SAC boundaries which are still of importance to the qualifying species.

4.49 Only lesser and greater horseshoe bats were detected during the Applicant's bat surveys using the Development site, so the Applicant excluded LSE on the Bechstein's bat feature of the Bath and Bradford-on-Avon Bats SAC. As noted above, regular activity by these species was detected along the disused railway section suggesting that it contributes to horseshoe bat movement

through the landscape. Several small roosts were also recorded along the route of the Development.

4.50 The Applicant excluded LSE on the lesser and greater horseshoe bats on the grounds that research demonstrates that these species only forage within certain distances of their roost sites (Table 7.1 of the Applicant's HRA Report):

- Lesser horseshoe bats are stated to forage in habitat within 1 to 2.5km[4] of maternity roosts. Hibernation roosts are generally within 5km of maternity roosts. All the SACs are at least 18km away from the Development.
- The Wye Valley and Forest of Dean Bat Sites SAC is located on the opposite side of the Severn Estuary to the Development. The distance is such that it is unlikely to affect commuting or foraging habitat for the greater horseshoe bat population of the SAC.
- The Mendip Limestone Grasslands SAC is designated for hibernation roosts which when active in winter have a home range of around 2km (based on information supplied to the Applicant by the Somerset County Council ecologist). The SAC is too far from the Development to be affected.
- The core areas identified for the greater horseshoe populations of the Bath and Bradford-on-Avon Bats SAC extend to 4km from roosts. The SAC is too far from the Development to be affected.
- The core areas identified for the greater horseshoe bat population of the Mells Valley SAC are 8km for maternity roosts and 2.44km for other types of roost. The SAC is too far from the Development to be affected.

## LSE screening conclusions

4.51 The Applicant's HRA Report identifies LSE resulting from the construction and operation of the Development as summarised in the table below:

**Table 4.2 Summary of LSE screening conclusions**

| European site | Qualifying features affected | Nature of effect | Alone or in combination with other plans or projects? |
|---|---|---|---|
| Avon Gorge Woodlands SAC | *Tilio-Acerion* forests of slopes, screes and ravines<br>Semi-natural dry grassland and scrubland facies | Direct habitat loss through vegetation clearance required for the construction of fencing and other infrastructure. | Alone |
| | | Habitat loss or degradation. Accidental trampling, incursion by machinery and spillages of pollutants could | Alone |

[4] For the Bath and Bradford-on-Avon SAC, Table 7.1 of the Applicant's HRA report states that the core area for lesser horseshoe bats is 2km.

| | | | |
|---|---|---|---|
| | (*Festuco-Brometalia*) | degrade both qualifying features during construction. | |
| | | The accidental introduction or spread of INNS could occur during construction. | Alone |
| | *Tilio-Acerion* forests of slopes, screes and ravines | Potential for increased windthrow events leading to tree loss during operation. | Alone |
| North Somerset and Mendip Bats SAC | Greater horseshoe bat<br>Lesser horseshoe bat | Severance of commuting routes through vegetation clearance and lighting during construction and operation | Alone and in combination |

4.52 The Secretary of State has considered the evidence provided by the Applicant, the Recommendation Report and the RIES. It is noted that NE has expressed agreement with the Applicant's conclusions on LSE in the SoCG submitted at deadline 6. The Secretary of State agrees with the conclusion in the Recommendation Report that the Applicant's assessment correctly identifies the European sites and qualifying features subject to LSE as a result of the Development alone and in combination with other plans and projects.

# 5. STAGE 2: APPROPRIATE ASSESSMENT

5.1 As LSE cannot be excluded, the Secretary of State as the competent authority is required to undertake an appropriate assessment to determine the implications for the conservation objectives of the affected European sites. In line with the requirements of Regulation 63 of the Habitats Regulations:

*"(5)…the competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site";* and

*"(6) In considering whether a plan or project will adversely affect the integrity of the site, the competent authority must have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which it proposes that the consent, permission or other authorisation should be given".*

5.2 As noted in Section 1 of this HRA Report, the competent authority is obliged to consult the appropriate nature conservation body and have regard to any representations made by that body. For this purpose, the ExA prepared a RIES as set out in paragraphs 1.18 – 1.20 of this HRA Report. Although NE did not specifically provide a response to the RIES consultation, NE were actively engaged with the examination, and provided confirmation of their agreement with the Applicant's findings and outcomes in respect of HRA matters in their signed final SoCG at examination deadline 6. The Secretary of State is therefore satisfied that NE have been consulted in line with Regulation 63 of the Habitats Regulations.

5.3 If the competent authority in undertaking the appropriate assessment cannot exclude AEoI of the affected European sites on the basis of objective scientific evidence, then it can only agree to a plan or project if it complies with the requirements of Regulation 64 of the Habitats Regulations. Regulation 64 provides that the competent authority may agree to the plan or project only if satisfied that there are no alternative solutions, and that the plan or project must be carried out for imperative reasons of overriding public interest. In addition, Regulation 68 requires compensatory measures to be secured which maintain the overall coherence of the national site network.

## Conservation objectives

5.4 As mentioned in paragraph 1.15 above, where an appropriate assessment is required in respect of a European site, regulation 63(1) of the Habitats Regulations requires that it be an appropriate assessment of the implications of the plan or project for the site in view of its conservation objectives. Government guidance also recommends that in carrying out the stage one assessment (screening), applicants must check if the proposal could have a significant effect on a European site that could affect its conservation objectives.

5.5 The conservation objectives relevant to this HRA Report, as published by NE, are provided in Annex 3 of this HRA Report.

## North Somerset and Mendip Bats SAC

5.6 The Secretary of State has undertaken an objective scientific assessment of the implications of the Development on the qualifying features of the SAC, using the best available scientific knowledge. The assessment has been made

in light of the conservation objectives for the SAC, which are set out in Annex 3 of this HRA Report. A summary of the Secretary of State's appropriate assessment is presented below.

5.7 Paragraph 8.3.23 of the Applicant's HRA Report notes that the Development lies just within Zones B and C of the North Somerset 'Bat Consultation Zone' defined in supplementary planning guidance from NSDC[5]. These zones are defined to recognise the importance of habitats around the SAC for the bat species which are the SAC qualifying features. As noted in paragraph 4.40 above, radio-tracking established a connection between individual bats using the disused railway line and Brockley Hall SSSI which is a component of the SAC.

5.8 Clearance of trees and scrub along the disused line could affect features which the lesser and greater horseshoe bats use to navigate through the landscape. These species are sensitive to light and are known to avoid lit areas. Where a flyway is interrupted because of lighting or because vegetation cover is no longer continuous, the bats are likely to avoid the area. This may force a bat to find an alternative route which will require additional energy; the increased energy burden can affect the survival of both individual bats and the SAC population as a whole. If an alternative route is not available, the bat population could become isolated from important foraging areas and/or roosts.

5.9 NE agreed that the Applicant's assessment had correctly identified the potential effects on the SAC population as being severance to commuting routes through direct habitat loss or indirectly through lighting (see SoCG between NE and the Applicant submitted at deadline 6).

5.10 The section of the disused line where vegetation clearance is of particular concern is specifically around Portbury Dock. The version of the Applicant's HRA Report submitted at application also identified the freight line between Pill Viaduct and Avon Road, past Pill station as a sheltered corridor that could also be an important navigational route for horseshoe bats.

5.11 Additional surveys were undertaken between May 2019 and March 2020 which were reported in ES Appendix 9.2 (provided as an additional submission). This additional information led the Applicant to conclude that activity at, or close to Pill Station is not strongly associated with the disused 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.

5.12 Based on the new activity surveys, the guidance in the NSDC 'Bat Consultation Zone' supplementary planning document, and the distance from the closest component of the SAC, the Applicant also concluded that it is unlikely that the Pill Viaduct to Avon Road area is a key foraging area for the SAC bat populations. NE agreed with the Applicant's conclusions on the low value of area around Pill Station and Pill Viaduct to Avon Road area for the SAC bat population in their response at examination deadline 2 and in their SoCG with the Applicant (version submitted at deadline 6).

[5] The North Somerset and Mendip Bats SAC Guidance on Development: Supplementary Planning Document, North Somerset Council (2018) https://www.n-somerset.gov.uk/sites/default/files/2020-02/NSC%20and%20Mendip%20Bats%20SAC%20guidance%20-%20supplementary%20planning%20document.pdf

In-combination effects

5.13 As noted above, the Applicant's HRA Report identified potential in-combination effects with a development at Royal Portbury Docks. Paragraph 8.3.37 of the Applicant's HRA report states that as the Royal Portbury Docks development is largely completed there would be no overlap between the construction phases of the two developments. Any in-combination effects would arise during the operational phase of the Development.

5.14 The Applicant's HRA Report described the results of a lighting survey undertaken in 2019 along the disused railway line near the Royal Portbury Docks (reported in ES Appendix 9.17). The survey recorded existing light levels between 0.01 and 0.5 lux at the centre of the disused land. At a point where vegetation had been cleared to create a temporary road crossing between two sites belonging to the Bristol Port Company (responsible for the Royal Portbury Docks development) to the north and south of the disused land, light levels were 24.9 lux to the north, 0.16 lux to the south and 0.23 lux at the centre of the disused line.

5.15 Paragraph 8.3.40 of the Applicant's HRA Report notes that the report to inform the discharge of Condition 9 on the Royal Portbury Docks development confirmed that the at-grade crossing of the railway corridor will not be lit. Details of the type and location of the lighting for a new railway bridge will also need to be submitted for approval before construction on the bridge begins. Paragraph 8.5.16 also states that conditions on the Royal Portbury Docks permission require the Bristol Port Company to monitor light levels in the centre of the disused railway line.

5.16 However, as the Development will require the removal of vegetation between the Portbury Dock Road Bridge and Marsh Lane along the disused line, in-combination effects could arise due to the loss of habitat and increased light levels on the disused railway line.

Mitigation

5.17 The mitigation measures to be carried out are described in paragraphs 8.4.50 to 8.4.59 of the Applicant's HRA Report. Further details of mitigation which provide benefit to bats are also set out in paragraphs 9.7.2 to 9.7.17 and 9.7.53 to 9.7.57 of ES Chapter 9 (version submitted at examination deadline 6) although the ES also includes measures which are designed to meet the Applicant's general duties in relation to legally protected species. The specific measures proposed to avoid AEoI are:

- Vegetation is to be retained along one side of the disused line to maintain a corridor. Tall scrub and tree vegetation will be retained to the north and south of the Portishead to Pill line. The vegetation to be retained is identified in the Railway Landscape Plans.
- The access routes which will be used to install fences have been included in the details of the Development to avoid additional vegetation being removed to allow access to the edge of the rail corridor as shown in the Railway Landscape Plans.
- Woodland and hedges will be planted at a number of locations listed in paragraph 8.4.55 of the Applicant's HRA Report and shown in the Railway Landscape Plans.
- The M5 bridleway extension will provide alternative navigational features for bats under the motorway.

- Additional planting on land owned by the Applicant alongside the A369 Portbury Hundred. The land is located within the home range of the radio-tracked greater horseshoe bats. Numerous hedgerows link the A369 to the disused line through farmland.

5.18 Under Requirement 5 of the DCO, work cannot begin on a stage of the Development until the CEMP for that stage has been approved by the relevant planning authority. The CEMP for a stage must be in accordance with the principles set out in the ES and the Master CEMP. The Master CEMP is listed as a certified document in Schedule 17 of the DCO. The Master CEMP secures the general protection methods for all biodiversity and the appointment of an Ecological Clerk of Works (ECoW).

5.19 Requirement 6 of the DCO requires the Applicant to have a written landscaping scheme approved by the relevant local planning authority before Work Nos. 1 and 1A commence. Any tree or shrub planted as part of the landscaping scheme must be replaced if it dies within 5 years of planting. The landscaping scheme must be prepared in accordance with the Railway Landscape Plans. The Railway Landscape Plans are listed as certified documents in Schedule 17 of the DCO.

5.20 Requirement 31 of the DCO prevents the construction of the new bridleway until the design, landscaping and construction methods have been approved by the relevant planning authority. The submitted details must adhere to the principles shown on the Bridleway Extension under the Elevated M5 Plan.

5.21 Requirement 23 of the DCO requires the Applicant to obtain approval from the relevant planning authority (in consultation with NE and the highways authority) on the A369 Portbury Hundred before commencing Work Nos. 1, 1A, 1B and 1C.

5.22 NE advised in the SoCG with the Applicant (version submitted at deadline 6) that "…*the proposed mitigation has focused on the key risks. Provided the dark vegetated corridor along the disused line can be maintained and enhance, the lighting levels for the SAC bats will be acceptable and the proposed mitigation measures will be effective and deliverable. Additional planting proposed along that section of the scheme provides further confidence that the dark corridor will be maintained*."

## Conclusion of the appropriate assessment

5.23 The Secretary of State is satisfied that the Applicant has correctly identified the nature and extent of potential AEoI of the North Somerset and Mendip Bats SAC. In relation to the conservation objectives for the SAC, there is potential for the Development to affect the structure/function of supporting habitat. NE's 'Supplementary advice on conserving and restoring site features' for the SAC highlights the importance of maintaining dark corridors to provide flight lines for both the greater and lesser horseshoe bats into the landscape beyond the SAC boundaries. The availability of such dark corridors may be critical in supporting the bats to feed, breed and roost.

5.24 The Applicant's HRA Report concluded that AEoI would be avoided, both from the Development alone or in combination with the Royal Portbury Dock development, for the following reasons:

- While some of the bats affected by the Development could be associated with the SAC populations these are likely to be in such low numbers that an effect on the SAC population as a whole is unlikely.

- Various mitigation measures have been put forward which will prevent the loss of dark corridors currently used by lesser and greater horseshoe bats both alone and in combination with the development at Royal Portbury Dock.

5.25 The Secretary of State notes that NE are satisfied that the mitigation proposed by the Applicant would avoid AEoI. Timely delivery of the mitigation measures has been secured through the various mechanisms in the DCO and certified documents described in paragraphs 5.18 to 5.21.

5.26 The Secretary of State concludes that, with the mitigation listed in paragraph 5.17 in place, AEoI can be excluded for the Development alone and in combination with the Royal Portbury Docks development.

## Avon Gorge Woodlands SAC

5.27 The Secretary of State has undertaken an objective scientific assessment of the implications of the Development on the qualifying features of the SAC, using the best available scientific knowledge. The assessment has been made in light of the conservation objectives for the SAC, which are set out in Annex 3 of this HRA Report. A summary of the Secretary of State's appropriate assessment is presented below.

5.28 The Applicant identified LSE on the SAC from the Development alone but did not identify any effects in combination with other plans or projects. No concerns regarding this approach were raised by any IP and no evidence was submitted during the examination to suggest that any in-combination effects would arise. The Secretary of State is satisfied that AEoI would only arise from the Development alone.

5.29 <u>Direct habitat loss (construction only)</u>

5.30 Paragraphs 8.3.4 to 8.3.15 of the Applicant's HRA Report provide a detailed breakdown of the extent and location of vegetation clearance within the SAC during construction. In summary this would entail vegetation loss as a result of clearance:

- either side of fences, access steps, wing walls, retaining walls and tie-ins, telecommunications masts and equipment boxes;
- around bridge works;
- around temporary ramps from the freight line and a site compound area for the construction works to Quarry Bridge No. 2; and
- 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 determined).

5.31 Paragraph 8.3.7 of the Applicant's HRA Report states that five 'micro' construction compounds within the Avon Gorge will be placed in areas where no vegetation is required or where only low value vegetation such as bramble is present.

5.32 The exact location of the geotechnical works has not been fully determined so the Applicant's assessment was based on realistic worst-case scenarios. Similarly, the clearance required for construction works on Quarry Bridge No. 2 are also based on realistic worst-case scenarios. The figures for habitat loss are summarised in Table 8.3 of the Applicant's HRA Report:

- loss of *Tilio-Acerion* woodland (ancient woodland) – 4002 $m^2$;

- loss of *Tilio-Acernion* woodland (secondary woodland) – 3280 $m^2$ (some permanent, some long-term temporary during construction); and
- loss of *Festuco-Brometalia* grassland – 582 $m^2$ (permanent or long-term temporary).

5.33 Figure 2 of Annex A of the Applicant's HRA Report shows the overlap between the works and the SAC qualifying features. Figure 3 of Annex A shows the areas of habitat loss.

Loss of whitebeam species (construction only)

5.34 The number of whitebeams which would be lost is quantified in paragraphs 8.3.16 to 8.3.18 and Table 8.4 of the Applicant's HRA Report, with further clarification provided in their deadline 7 response to the RIES. Table 8.4 also gives the location and the reason for the removal of each tree. In summary the tree loss would be:

**Table 5.1 Effects on whitebeam species**

| **Tree species** | **Loss** | **Proportion of population lost** |
|---|---|---|
| Avon whitebeam | 10 to be removed (including 1 contingency*)<br>2 to be coppiced | Represents 29% of the world and SAC populations |
| Wilmott's whitebeam | 1 to be removed | Represents 1% of the world and SAC populations |
| Leigh Woods whitebeam | 6 to be removed (including 1 contingency) | Represents 2% of the world and SAC populations |
| Grey-leaved whitebeam | 1 to be removed as a contingency | Represents 0.2% of the world population and 2% of the SAC population |
| Round-leaved whitebeam† | 4 to be removed (including 1 contingency)<br>1 to be coppiced | 0.6% of the world population* and 1% of the survey population<br>* World population is estimated at 800 trees, no systematic survey data is available. The Applicant states that 33 of the SAC population have been removed since the original survey, potentially increasing the world population loss to 0.8% |
| Bristol whitebeam | 1 to be removed as a contingency<br>1 to be coppiced | 0.7% of the world and SAC population. |

*Trees included for contingency purposes are not expected to be lost but have been included to ensure full compensation if any unexpected losses "*through detailed design and construction tolerances*".

†The Applicant's response to the Secretary of State's request for further information dated 9 February 2022 stated that there would now be no need to remove 1 round-leaved whitebeam on Underbridge 6 so losses would reduce to three trees.

Habitat degradation (construction)

5.35 As previously noted, habitat degradation could arise from accidental spillages of pollutants or incursion by contractors into qualifying habitats.

Accidental introduction or spread of Invasive Non-Native Species (construction)

5.36 The Site Improvement Plan for the SAC produced by NE notes that a number of INNS are present in the SAC, including certain Cotoneaster species, holm oak (*Quercus ilex*), Japanese knotweed (*Fallopia japonica*) and Himalayan balsam (*Impatiens glandulifera*). These are a concern because they can spread quickly and can smother areas of the *Festuco-Brometalia* grassland and smaller rare species. Holm oak may also shade out plant species associated with the *Tilio-Acerion* woodland.

5.37 The Applicant's HRA Report (paragraph 8.2.9) notes that the SAC is divided into management units. Of the six units that would be affected by the Development, four are in 'unfavourable-recovering' condition. The main reason for this condition is stated to be scrub encroachment of grassland and the presence of INNS.

Increased windthrow events leading to tree loss (operation)

5.38 The Applicant's HRA Report (paragraph 8.3.21) notes that during the operation of the Development, the removal of edge trees may make the woodland feature more vulnerable to windthrow.

Loss of Bristol rock-cress associated with the *Festuco-Brometalia* grassland

5.39 The work on the site compound at Quarry Bridge No 2, fencing and work on rock faces could damage or destroy individual plants of this species.

Mitigation

5.40 The mitigation measures which are proposed to be implemented are described in paragraphs 8.4.21 to 8.4.49 of the Applicant's HRA Report. Delivery of mitigation is secured through the CEMP, Code of Construction Practice (CoCP) and the Avon Gorge Vegetation Management Plan (AGVMP). As noted above, delivery of the CEMP is secured through Requirement 5 of the DCO. Delivery of the CoCP is also secured through Requirement 5 and it is listed as a certified document in Schedule 17 of the DCO.

5.41 Delivery of the AGVMP is secured through Requirement 14 of the DCO. It is also listed as a certified document in Schedule 17 of the DCO. Requirement 14 is worded as follows:

(*1) Any part of the authorised development within the Avon Gorge Woodlands SAC must be carried out in accordance with the Avon Gorge Vegetation Management Plan.*

*(2) Any part of the authorised development within the Avon Gorge Woodlands SAC consisting of—*

*(i) foot accesses and steps;*

*(ii) GSMR masts, antennae and associated equipment boxes;*

*(iii) signal and associated equipment box;*

*(iv) catch fences;*

*(v) works to retaining walls and structures; or*

*(vi) rock stabilization works*

*must not commence before details of the location, siting and design of the relevant work, together with any required site clearance, working space and lay down areas, have been submitted to and approved by the relevant planning authority in consultation with Natural England. The details submitted for approval must be located within the areas shown for the relevant works on the general arrangement plans. The works must be carried out in accordance with the approved details*.

*(3) Work to remove, install or replace security fencing in the Avon Gorge Woodlands SAC must not commence before details of the location, siting, colour and design of the fencing, together with any required site clearance and working space, have been submitted to and approved by the relevant planning authority in consultation with Natural England. The details submitted for approval must be located within the areas shown for fencing in the habitat impacted by construction works within the Avon Gorge Vegetation Management Plan and any permanent security fencing to be installed must be of a nature substantially in accordance with the details set out in the relevant part of the general arrangement plans and the fencing grades summary. The works must be carried out in accordance with the approved details and the installed fencing thereafter retained unless alternative type fencing is required for railway operational safety reasons.*

*(4) Any temporary works within the Avon Gorge Woodlands SAC consisting of compounds or construction welfare facilities (including the temporary works that are part of Work No. 25) 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) The facilities described in paragraph (4) must be carried out as approved and the relevant facility must at the conclusion of the temporary works be removed to the satisfaction of the relevant planning authority in consultation with Natural England and in accordance with the approved details.*

*(6) 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 measures must thereafter be managed in accordance with the Avon Gorge Vegetation Management Plan to the satisfaction of the relevant planning authority in consultation with Natural England.*

*(7) The undertaker must provide monitoring reports to the relevant planning authority and Natural England no later than 12 months following first commercial use in accordance with the provisions of the Avon Gorge Vegetation Management Plan. Thereafter monitoring reports must be provided as specified in the Avon Gorge Vegetation Management Plan.*

5.42 The mitigation measures referred to in the Applicant's HRA Report are in summary:

- General protective measures to be undertaken during construction including measures to avoid accidental pollutant spills (delivery secured through the CEMP and CoCP).
- Site briefings and works undertaken by a qualified contractor, overseen by NSDC and the ECoW (delivery secured through the CEMP and the AGVMP).
- Demarcation of sensitive species during works (delivery secured through the CEMP and the AGVMP).
- Management of vegetation arisings to allow for variety of plant species, ages, sizes and decay with separate measures for grassland and woodland habitat priorities (delivery secured through the AGVMP).
- Tree surgery works to be carried out in accordance with BS 3998:2010: Tree work. Recommendation and specified measures for felling practices (delivery secured through the AGVMP).
- Controlling the spread of non-native and invasive plants by supervision of works through appointment of an ECoW, training staff through toolbox talks, compliance with CEMP measures and treatment of stumps of INNS with herbicide within 24 hours of felling (delivery secured through the CEMP and the AGVMP).
- Specific mitigation measures for Quarry Bridge No. 2 site compound described in Annex C of the AGVMP. Land affected by the works within National Trust ownership will be monitored for two years to control the spread of ruderal weeds (delivery secured through the AGVMP).
- During the detailed design phase of the Development, a survey will be undertaken to establish the location of Bristol rock-cress plants. The results of the survey will be used to design the works to minimise impacts on the Bristol rock-cress plants as far as possible. Vegetation clearance from the rock face owned by NR will be completed under supervision by a specialist botanist to avoid rare or notable species including the Bristol rock-cress.

5.43 The NR land is also covered by an existing Site Management Statement (SMS) and Vegetation Management Plan (VMP) which runs from July 2018 to June 2023. In response to a question from the ExA, the Applicant explained that these plans are intended to allow NR to meet their existing obligations in relation to management of the rail line which runs through the SAC. The AGVMP deals with the specific mitigation, monitoring and compensation measures for the Development. These are separate from the routine management measures NR undertakes. The Secretary of State notes that the SoCG between NE and the Applicant (version submitted at deadline 6) recorded agreement that the AGVMP complements the existing SMS and VMP.

5.44 Once the Development is operational NR will be responsible for maintenance and vegetation management. The Applicant stated in their deadline 2 response that subsequent VMPs (2023 – 2028 and 2028 – 2033) will accommodate the measures identified in the AGVMP such as long-term monitoring.

5.45 Paragraph 8.4.47 of the Applicant's HRA Report states that the current VMP will be planned such that the risk of windthrow is not increased during operation. The Secretary of State notes that any future SMS/VMP would have to be agreed and signed off by NE.

## Conclusion of the appropriate assessment

5.46 The Applicant concluded that with the mitigation above in place there would be no AEoI in relation to habitat degradation and spread of INNS during construction or windthrow during operation. However, the direct loss of small areas of the *Festuco-Brometalia* grassland, some Bristol rock-cress plants, areas of the *Tilio-Acerion* woodland and some rare endemic whitebeams would lead to AEoI of the SAC.

5.47 Paragraph 9.5.3 of the Applicant's HRA Report notes that during the detailed design stage of the Development it may be possible to further reduce the effects on the SAC. This would be done through micro-siting of replacement railway fencing, installation of catch fencing, rock dowels and line side equipment to avoid whitebeam trees. However, since it is not certain to what extent these measures will avoid adverse impacts on the qualifying features, the Applicant has taken a precautionary approach in concluding that AEoI would occur. It has not been possible to identify any other mitigation measures which could ameliorate these effects.

5.48 The Secretary of State notes that NE agree that the proposed mitigation measures are likely to be effective and that AEoI can be excluded for all matters apart from the direct loss of part of the qualifying features (see SoCG between NE and the applicant submitted at deadline 6).

5.49 The Secretary of State is satisfied that the Applicant has correctly identified the nature and extent of potential AEoI of the SAC. The conservation objectives for the site state that the extent and distribution of qualifying natural habitats should be maintained or restored. The implication of the Development going ahead affects the delivery of this conservation objective. The Secretary of State therefore agrees that AEoI cannot be excluded.

## Overall conclusion of the appropriate assessment

5.50 As the competent authority for Transport NSIPs as defined under the PA 2008, the Secretary of State for Transport has undertaken an appropriate assessment under Regulation 63 of the Habitats Regulations in relation to the North Somerset and Mendip Bats SAC and the Avon Gorge Woodlands SAC.

5.51 The Secretary of State is satisfied that, given the relative scale and magnitude of the identified effects on the qualifying features of these European sites and where relevant, the measures in place to avoid and reduce the potential harmful effects, there would not be any implications for the achievement of the conservation objectives for the North Somerset and Mendip Bats SAC.

5.52 In relation to the Avon Gorge Woodlands SAC, the Secretary of State is satisfied that AEoI would not arise in relation to habitat degradation and the spread of invasive species during construction or windthrow of trees during operation.

5.53 The Secretary of State concurs with the Applicant and NE that AEoI of the SAC could occur as a result of permanent loss of habitat within the SAC due to the construction of the Development. The Secretary of State has not identified any further mitigation measures that could be imposed in respect of the effect of habitat loss, which would remove the potential AEoI identified, and has therefore proceeded to consider the derogation provisions of the Habitats Regulations, as presented in Sections 6 to 9 below.

5.54 Based on the submissions to the examination, as summarised in the ExA's RIES and Recommendation Report, the Secretary of State is satisfied that the

views of NE as the appropriate nature conservation body have been considered and that they are in agreement with the scope and conclusions of the Applicant’s HRA assessment.

# 6. STAGE 3: CONSIDERATION OF ALTERNATIVE SOLUTIONS

6.1 In considering alternative solutions the Secretary of State has had regard to the guidance published by the Department of the Environment, Food and Rural Affairs (Defra), NE, the Welsh Government and Natural Resources Wales (2021) on 'Habitats Regulations Assessment: protecting a European site'[6].

## Development objectives

6.2 The objectives which the Development are intended to achieve are described in section 9.2 of the Applicant's HRA report and are as follows:

Main objectives:

- To support economic growth, through enhancing the transport links to the Temple Quarter Enterprise Zone ("TQEZ") and into and across Bristol City Centre, from the Portishead, Bath and Avonmouth/Severn Beach arterial corridors.
- To deliver a more resilient transport offer, providing more attractive and guaranteed (future proofed) journey times for commuters, business and residents into and across Bristol, through better utilisation of strategic heavy rail corridors from Portishead, Bath and Avonmouth/Severn Beach.
- To improve accessibility to the rail network with new and re-opened rail stations and reduce the cost of travel for commuters, business and residents.
- To make a positive contribution to social well-being, life opportunities and improving quality of life, across the three arterial corridors, Portishead, Bath and Avonmouth/Severn Beach.

Supporting objectives:

- To contribute to reducing road-based traffic congestion on the Portishead, Bath and Avonmouth/Severn Beach arterial corridors.
- To contribute to enhancing the capacity of the local rail network, in terms of seats per hour in the morning and afternoon peaks.
- To contribute to reducing the overall environmental impact of the transport network.

6.3 The Applicant has reviewed various alternative solutions in sections 9.2 to 9.7 of their HRA Report. The alternative solutions considered fall under the following headings:

- alternative transport modes;
- alternative railway alignments;
- frequency of train services;
- a 'do nothing' scenario; and

[6] Defra, NE, the Welsh Government and Natural Resources Wales (2021) 'Habitats Regulations Assessment: protecting a European site' https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site (Accessed 13/08/21)

- opportunities (in design and operation) to avoid or have a lesser effect on the European site.

## Consideration of alternative solutions

Alternative transport modes

6.4 Section 9.2 of the Applicant's HRA report states that the transport corridor from Portishead town centre and Bristol city centre presents a limited range of travel modes – the A369 highway, the Portbury Freight Line and a cycle route (National Cycle Network (NCN) route 26). The NCN route 26 is described by the Applicant as being un-surfaced, poorly lit and difficult to cycle in winter for much of the route. Most travel along this route is therefore by car.

6.5 The A369 is a single carriageway road (in each direction) and crosses junction 19 of the M5. There are stated to be limited alternatives to the route when congestion and disruption occurs, for example using the M5 to access Bristol via routes from Junctions 17 and 18.

6.6 The population in the vicinity of the corridor has increased dramatically in recent decades. The population of Portishead in 1961 was 6,440 and is now over 30,000. Further development in Portishead is expected in the near future, further increasing the demand for transport and consequently road congestion. In the morning peak traffic the average car journey time from Portishead to Bristol city centre takes approximately 50 minutes to travel 15km/9 miles. Traffic flow is impeded by traffic queueing onto and off Junction 19 on the M5 and by traffic congestion in Bristol around Ashton/Bower Ashton.

6.7 When incidents occur on the M5, motorists are diverted onto the A369 at Junction 19, which causes delays and disruption and makes journey times unreliable. The Applicant cites data published by Inrix in 2016 demonstrating that the West of England is the sixth most congested city region in the UK. The West of England had a recorded 619 traffic 'hot spot' incidents over 12 months with the worst recorded incident at Junction 20 on the M5 leading to 15 hour delays which caused traffic problems up to 36 miles away (see Appendix 1.1 of the Outline Business Case 2017). Appendix 1.2 of the Outline Business Case notes that all the primary highway corridors into and across Bristol, Bath and the surrounding towns are congested.

6.8 The consequences of this for the economy are described in the Outline Business Case 2017. As a result of the congestion businesses experience additional vehicle operating costs and decreased productivity. Effects on the general population include decreased access to education and work opportunities. The increased congestion is leading to worsening air quality and increased driver stress. Response times from the emergency services may be affected with implications for public services

6.9 The Applicant's initial feasibility studies calculate a rail journey time between Portishead and Bristol Temple Meads of 17 to 23 minutes (morning peak). These reduced journey times (compared to road journey times) are likely to be maintained into the future whereas the continued growth in traffic volumes means that road journey times are likely to increase in future.

6.10 The demand for rail travel in the West of England has also increased sharply; paragraph 9.2.11 of the Applicant's HRA Report quotes figures from the Office of Rail and Road (ORR) showing an increase in trips of 63% between 2006/7 and 2015/16. The Outline Business Case 2017 (submitted as part of the DCO application) states that the annual West of England Rail Survey shows a

growth of 93% across all local stations and an average growth per annum of 6.9%.

6.11 The Outline Business Case 2017 (section 1.5.3) states that the geographic reach of the local rail network is limited with only five rail corridors feeding into Bristol Temple Meads station. The local train service frequency is irregular, most of the local train network does not have a basic half hourly service and there are difficulties in connecting with other services for passengers wanting to go beyond Bristol Temple Meads. There are also limits on operational capacity which leads to problems from overcrowding.

6.12 Appendix 1.2 of the Outline Business Case 2017 describes the studies, options appraisals and public consultations which have informed the Development. The Applicant's HRA Report highlights various technical studies which established the case for the use of rail to alleviate the transport issues:

- Different modal options for the corridor were considered in the 1990s.
- The Greater Bristol Strategic Transport Study (2006) considered the potential for rapid transit and heavy rail. The outputs were used to inform the West of England Joint Local Transport Plan 2 (JLTP2).
- Greater Bristol Public Transport Corridor Options Study (2007) considered Bus Rapid Transport on the operational line or via the A4 Portway between Portishead and Avonmouth. The study identified significant issues with delivering either option.
- Initial technical feasibility studies (2008 to 2010) by NSDC on re-opening the Portishead Branch Line.
- Route Utilisation Strategy (2010) by NR which tested the feasibility of service enhancement to the local rail network to establish a Greater Bristol Metro.
- Joint Local Transport 3 (JLTP3) (2011) identified the re-opening of the Portishead Branch Line and the Greater Bristol Metro scheme as high priority schemes.
- Sub-regional rail study (2011) by Halcrow to assess the feasibility and deliverability of the various local rail schemes in JLTP3 which suggested combining the re-opening of the Portishead Branch Line.

6.13 The Secretary of State notes that the issue of using a busway rather than a rail line was considered during the examination. The Applicant presented evidence at examination deadline 1 in Appendix C of their comments on relevant representations that advised that neither the ORR nor the Rail Safety and Standards Board currently approve the use of buses on railways (except at level crossings).

6.14 In addition to the regulatory issues, the Applicant also advised that the standard gauge of the track would cause the tyres of a bus to travel over the top edge of the railway sleepers which would give rise to a number of technical and safety issues including ride comfort, load bearing and kerb guidance. Potential safety issues were also highlighted in the Applicant's deadline 1 response arising from operating a single-track railway with mixed vehicle types. Freight trains may be up to 2,300 tonnes in weight while buses would be approximately 18 tonnes. In the event of a collision consequences could be very serious. There would also be numerous system integration issues whereby buses would have to operate under railway signal control while on

the railway which would entail significant additional cost and regulatory approval.

6.15 Further representations on this point have been made to the Secretary of State since the examination has closed by the Portishead Busway Campaign and the Applicant. The Portishead Busway Campaign reiterated their concerns about the Development (response to the Secretary of State's consultation of 9 November 2021) and stated that there would be no need to remove/coppice the whitebeams if a busway was implemented rather than the Development (response to the Secretary of State's consultation of 28 January 2022).

6.16 The Applicant responded to the Portishead Busway Campaign representations by disputing that the busway proposals would be capable of tackling the issues with network resilience and reliable journey times or promoting modal shift. It also queried whether the busway proposals would be able to produce a positive business case in line with Department for Transport guidance.

**Secretary of State's conclusions on the use of alternative transport modes**

6.17 The Secretary of State accepts that the existing travel options between Portishead and central Bristol are limited. The existing congestion on the A369 is likely to increase as the West of England region population and economy continue to grow. Alternative road routes into Bristol are also subject to congestion. It appears unlikely that alternative modes of road transport – for instance through supporting more frequent bus services – would be able to provide significant reductions in traffic congestion or provide guaranteed journey times now or into the future with their consequential benefits to social well-being, economic growth and the wider environment.

6.18 Improving accessibility to the rail network is only likely to be achieved through a reliable connection between Portishead and Bristol Temple Meads. The Applicant has provided a convincing explanation as to why a busway would not be a viable alternative to the rail line. Notwithstanding the comments from the Portishead Busway Campaign, it does not appear to the Secretary of State that proposals for a busway represent a feasible alternative capable of achieving the objectives of the Development.

6.19 The Secretary of State is content that there are no other transport modes which would provide a feasible solution achieving the objectives of the Development.

<u>Alternative railway alignments</u>

6.20 Section 9.3 of the Applicant's HRA Report reviews the potential for alternative alignments. The rail corridor that the Development would follow is a historic route which was constructed in the 1860s. The pattern of housing and commercial development along the Portishead to Bristol transport corridor has developed around the existing rail corridor. Construction of a different alignment would therefore be likely to require extensive demolition and land clearance and the provision of alternative dwellings and business premises. This would generate additional pressure on the land available for development.

6.21 In addition, the topography of the area would require significant earthworks to create a gradient which meets modern technical standards. The Applicant estimates that the cost of creating a new alignment would be £25 to £50 million per kilometre. For an alignment length of approximately 15km this would lead to a cost of £375 to £750 million. The estimated cost of delivering the Development was initially calculated at £111 million. Although the cost of

the Development has increased, it is expected to remain significantly less than creating a new alignment.

6.22 The Applicant's HRA Report also states that the socio-economic and environmental effects would be of such magnitude that no alternative alignment could be feasible but does not provide specific evidence to support this statement.

**Secretary of State's conclusions on the use of alternative transport alignments**

6.23 It is noted that there was no evidence submitted during the examination which challenged the Applicant's assessment of the implications of an alternative alignment.

6.24 The Secretary of State concurs that the economic costs are such that a new alignment does not represent a feasible alternative solution.

Service frequency selection/opportunities to have a reduced effect on the Avon Gorge Woodland SAC

6.25 Section 9.4 of the Applicant's HRA Report deals with considerations around the selection of service frequency while section 9.5 considers how service frequency relates to effects on the SAC. The Secretary of State has chosen to consider them together since the two matters are heavily interlinked.

6.26 Section 9.4 of the Applicant's HRA Report explains that the preliminary business case (2014) submitted as an application document identified that the best value for money would be provided by a service of two trains per hour. However subsequent option appraisals identified significant works to update the Portbury Freight Line to meet the appropriate line speeds and standard for passenger trains. Additional highway works would also be required to provide an alternative access to the Ashton Vale Road. This led to a substantial increase in delivery costs for the Development (from £145 to £175 million) which were deemed unaffordable.

6.27 Value engineering work was undertaken by the Applicant in 2017 which concluded that it would be possible to operate a service of one train per hour (or one at 45 minute intervals described by the Applicant as 'one hour plus') without the additional works required for the two train scheme. The Secretary of State notes that there is still an aspiration to deliver the two trains per hour service but that this would come forward as a separate scheme.

6.28 Section 9.5 of the Applicant's HRA Report discusses how the reduction from two trains per hour to one per hour decreases the potential effects on the SAC. The one train per hour scheme will not require any changes in line speed, the track will remain on its current alignment and so will require much less vegetation clearance than the two train scheme.

**Secretary of State's conclusions on service selection frequency**

6.29 The Secretary of State is of the view that the two train scheme would have been likely to be more effective in achieving the objectives above, in that it would have provided a more flexible and attractive offer to people travelling between Portishead and Bristol. However, the Development will provide passenger journeys of 18 to 20 per day and will still be capable of meeting those objectives.

6.30 The Secretary of State notes that the two train scheme would probably have led to greater AEoI on the SAC than the Development. However, the financial

implications of the two train scheme alone prevent it from being a feasible alternative solution.

6.31 It is noted that there was no evidence submitted during the examination which identified any other alternative solutions which would have a lesser effect on the SAC.

'Do nothing' scenario

6.32 Section 9.6 of the Applicant's HRA Report outlines the outcomes if the Development is not implemented. Significant traffic congestion would remain along the A369 and is likely to increase as the West of England population and economy grows. Journey times between Portishead and Bristol would continue to increase. The resilience of the local and strategic network in the vicinity of the A369 to accidents or incidents would continue to be affected.

6.33 The Outline Business Case 2017 predicts that the social, economic and environmental effects from traffic congestion identified under paragraph 6.8 above will continue to get worse.

6.34 Paragraphs 9.6.5 and 9.6.6 of the Applicant's HRA Report states that the Joint Spatial Plan for the region depends on the delivery of the Development in order to meet the housing and job creation targets for the sub-region.

**Secretary of State's conclusions on 'do nothing' scenario**

6.35 The Secretary of State considers that the do nothing scenario would not achieve the objectives and concurs with the Applicant's conclusion that it would result in continued congestion, delay and unreliable journey times around the Portishead to Bristol transport corridor.

## Secretary of State's overall conclusions on alternative solutions

6.36 The Secretary of State notes that the ExA considered information on alternatives submitted by the Applicant and IPs and was satisfied that no feasible alternative solution exists that would represent a lesser effect on European sites.

6.37 Having identified the objectives of the Development and considered all alternative solutions that provide a means of fulfilling these objectives, the Secretary of State is also satisfied that no alternative solutions are available.

# 7. STAGE 4: IMPERATIVE REASONS OF OVERRIDING PUBLIC INTEREST

7.1 The Habitats Regulation derogation provisions provide that a project having an AEoI of a European site may proceed (subject to a positive conclusion on alternative solutions and provision of any necessary compensation) if the project must be carried out for Imperative Reasons of Overriding Public Interest (IROPI).

7.2 IROPI can include social and economic benefits, reasons of human health, public safety or beneficial consequences of primary importance to the environment. Where a priority habitat or species would be affected, social and economic benefits can only be considered if an opinion has been obtained from the appropriate authority supporting this approach.

7.3 The parameters of IROPI are explored in guidance[7], which identify the following principles:

- imperative – it is essential that it proceeds for public interest reasons;
- in the public interest - it has benefits for the public, not just benefits for private interests; and
- overriding – the public interest outweighs the harm or risk of harm, to the integrity of the European site that is predicted by the appropriate assessment. National strategic plans, policy statements and major projects are more likely to have a high level of public interest and to be able to show overriding public interest.

7.4 The Applicant provided a case for IROPI in section 10 of the Applicant's HRA Report. The ExA has also described their findings in respect of IROPI at Section 6.13 of the Recommendation Report. The Secretary of State has reviewed this supporting information and having regard to relevant guidance has set out the three key elements of the IROPI test below.

### Imperative reasons

7.5 The Applicant's case for the delivery of the Development draws on the evidence presented in the Transport Assessment and the Outline Business Case 2017. Figure 10.1 of the Applicant's HRA Report depicts the Portishead to Bristol transport corridor, highlighting the areas where congestion and accidents regularly occur. Paragraph 10.2.4 of the Applicant's HRA Report refers to the relevant sections of the Transport Assessment contained in ES Appendix 16.1 and states that:

7.6 "*…the highway network surrounding Portishead and between Portishead and Bristol (A369) is dominated by the M5 and this causes very poor network resilience. A major issue is the A369 is dissected by the M5 at Junction 19. Furthermore Junction 19 to Junction 18 is the Avonmouth Bridge which is a well-known hot spot on the strategic road network in respect of traffic delays, accidents and incidents. As a result traffic is diverted off the M5 at Junction 19 onto the local highway network (A369) in unpredictable occurrences, causing the A369 to become overwhelmed with traffic saturation, resulting in long*

[7] Habitats regulations assessments: protecting a European site from Department for Environment, Food and Rural Affairs, Natural England, Welsh Government and Natural Resources Wales

*delays, disruption to people and business and wide spread negative impacts. In practical terms, Portishead effectively regularly becomes cut off from Bristol for durations of several hours as the A369 is saturated and traffic on other indirect routes also becomes saturated*."

7.7 As noted in section 6 of this report, there are few options other than road transport for people travelling between Portishead and Bristol. In terms of modal shift, Table 10.2 of the Applicant's HRA Report predicts 377,021 passenger trips on the Portishead Line in the opening year, increasing to 509,167 trips in 2036. This equates to a reduction of 294 car trips per day in the Development's opening year and 415 trips per day in 2036. In the opening year this would translate into a reduction of 133,000 car trips and 3,900,000 car kilometres per annum.

7.8 The Development is part of a wider scheme involving improvements to the wider rail network – when the full scheme is implemented the reductions would be 580 car trips per day in the opening year and 890 trips per day by 2036. There would be a reduction of 7,552,018 car kilometres per year in the opening year of the whole MetroWest Phase 1 scheme.

7.9 Without the Development, the Outline Business Case 2017 (Chapter 2, Appendix 2.1) predicts a further reduction in vehicle speeds of 5% by 2036, with a continuing decrease in journey time reliability. The consequences of this are discussed below in the overriding reasons section.

7.10 The National Networks National Policy Statement (NN NPS) sets out the need for, and the Government's policies to deliver, improvement through NSIPs to the national road and rail networks in England. The Government has concluded that there is a critical need to improve the national road and rail networks. The overarching aim of national policy is to provide networks which support national and local economic growth, support and improve journey quality, reliability and safety, which support the delivery of environmental goals including decarbonisation and which improve connectivity between communities.

7.11 The NN NPS recognises the importance of modal shift from road to rail in delivering these national policy objectives. It further recognises that as demand pressures continue to rise there will be a need for new or re-opened rail alignments to improve capacity, speed, connectivity and reliability. The SoS concurs with the view of the ExA, as expressed in paragraph 5.2.19 of the Recommendation Report, that the provision of a rail link between Portishead and Bristol will help to promote modal shift and contribute to the achievement of the strategic aims set out in the NN NPS.

7.12 The Joint Local Transport Plan 4 (JLTP4) (2020 – 2036) for the West of England sub-region was adopted in March 2020. The transport challenges to the sub-region include high levels of commuting by car, congestion, population growth and significant contributions to greenhouse gas emissions. The JLTP4 identifies the need to encourage a substantial modal shift as a way of responding to these challenges. Policy W1 of the JLTP4 is to provide more public transport options and improve service quality. Under this policy improvements to the rail network are to be delivered through the MetroWest programme. The Development is a key component of the programme.

## Public Interest

7.13 The findings of the Recommendation Report confirm that the Development is in conformity with the NN NPS because it would contribute to the established

need for alternative modes of travel and would offer a viable alternative for travel between Portishead, Pill and Bristol.

7.14 The Development is being promoted by a public body and its objectives are designed to support long term economic growth in the West of England, to improve the resilience of the local transport network and to provide social and environmental improvements for the benefit of the region's population. The Development would make direct rail services available to 50,000 people living within the immediate catchment of the new stations at Portishead and Pill.

## Overriding reasons

7.15 As described in section 5 of this report, the extent of harm to the SAC will involve:

- direct loss of 0.06ha of the *Festuco-Brometalia* grassland (0.04ha to be restored when construction compound at Quarry Bridge No 2 is removed);
- potential loss of some of the Bristol rock-cress population within the SAC;
- direct loss of 0.73 ha of the *Tilio-Acerion* woodland feature (0.4ha of which is ancient woodland); and
- removal/coppicing of whitebeam species endemic to the UK, with greatest impacts on the Avon whitebeam population of the SAC.

7.16 These losses represent the worst-case scenario. As listed in Table 5.1 above, a number of the losses are included as a contingency and may not actually occur. It is also likely that some of the vegetation which has been cut back (or trees which have been coppiced) will re-grow. Nonetheless in weighing the harm to the SAC features against the benefits of the Development, the Secretary of State has considered the worst-case scenario as this level of loss cannot be excluded.

7.17 The Applicant's HRA Report identifies benefits from the Development to social and economic matters, public safety, human health and the environment as described in the following sections.

The Applicant's case for overriding benefits

*Public safety – improved emergency service response times*

7.18 The Applicant's HRA Report identifies potential benefits to public safety from the reduction in congestion on the A369. As noted above, the volume of traffic on the A369 is already beyond the capacity of the highway. Network resilience is also poor. The predicted reduction of 294 cars per day on the A369 in the opening year of the Development is expected to cut response times by the police, ambulance, fire and rescue and coast guard services. The Applicant's HRA Report states in paragraph 10.3.3 that it is not possible to quantify the benefit from the reduction in congestion in terms of survival rates and improved health outcomes but that the difference of even a few minutes can be significant. Similar points are made in relation to the emergency response times by the police (paragraph 10.3.4) and fire and rescue/coast guard services (paragraph 10.3.6).

*Public safety – reduced accident risk from modal shift*

7.19 The Applicant's HRA Report also identifies a reduced risk of accidents and fatalities for passengers using train travel compared with road users. Based on statistics from the Department for Transport for 2016 (see Tables 10.3 and 10.4) the Applicant states that there were 1,792 fatalities resulting from road

accidents and none from train accidents. Implementation of the whole MetroWest Phase 1 scheme including the Development is predicted to lead to 130 fewer accidents over a 60 year period and 175 fewer casualties (1 fatal, 16 serious and 158 slight) (see the Outline Business Case 2017, Chapter 2 and Table 2.14). The Applicant's transport modelling was unable to isolate the reduction in accidents as a result of the Development alone.

*Public safety – need for works in Avon Gorge*

7.20 The Secretary of State notes that the works in the Gorge are required to ensure the safety of the public, rail industry employees and rail passengers. Paragraph 10.3.15 of the Applicant's HRA Report states that some of the works would be required to maintain the freight line even if the Development does not proceed. No explanation is given as to which works would be required to maintain the freight line alone, without the need to upgrade the line standard to accommodate passenger trains.

*Human health – improvement to air quality*

7.21 The Applicant's HRA Report states that reducing car use through modal shift is the single most effective way for local authorities to meet air quality targets. The Joint Local Transport Plan 4 2019 – 36 (JLTP4) includes objectives to address poor air quality and reduce greenhouse gas emissions (see section L5 of the JLTP4). The Development would contribute to these objectives, both through a direct reduction in the number of car journeys and through its links to the other improvements in public transport promoted in JLTP4. One of the aims of JLTP4 is to deliver a fully integrated public transport system which offers a realistic alternative to car use. The Development integrates with other MetroWest services at Bristol Temple Meads station and with the MetroBus network, to allow easy public transport access across Bristol and the West of England region.

7.22 In 2022 a Clean Air Zone (CAZ) will be established in central Bristol to reduce public exposure to nitrogen dioxide. The CAZ will restrict the number of older, more polluting diesel vehicles entering the city centre through charging. The Development would offer an alternative way of reaching central Bristol when the CAZ comes into force.

7.23 Table 7.17 of the Applicant's assessment of air quality, as reported in ES Chapter 7 (version submitted at examination deadline 6) shows the net regional emissions for the opening year of the Development, calculated as the difference between increases in rail emissions from the Development and decreases in emissions from road transport as a result of modal shift. This demonstrates a net increase in emissions in 2023 (6803.2 kg/year for $NO_x$, 126.6 kg/year for $PM_{10}$ and 247 tonnes per year of carbon dioxide ($CO_2$)) based on the use of Diesel Multiple Units (DMU).

7.24 The Applicant is of the view that this is likely to improve as technology develops – hybrid units would reduce net emissions for $NO_x$ and $CO_2$ and deliver a net reduction in $PM_{10}$ emissions). The MetroWest Phase 1 scheme is predicted to lead to a reduction of 7100 tonnes of $CO_2$ emissions over 60 years (the Applicant's traffic modelling cannot isolate the reductions associated with the Development alone).

*Human health – improvements in accessibility and active travel*

7.25 The Applicant's HRA Report draws on the evidence presented in the Outline Business Case 2017; ES Chapter 14 Socio-economics and economic regeneration; the Equality Impact Assessment (ES Appendix 14.1); the Health

Impact Assessment (ES Appendix 14.2) and the Transport Assessment (ES Appendix 16.1) to support their position that the Development would provide public health benefits as a result of modal shift and the increased accessibility to services provided by the Development. Table 10.2 of the Applicant's HRA Report states that there would be a population of 50,000 within the catchment of the new stations at Pill and Portishead who could be affected by the Development.

7.26 The Development includes a number of improvements to pedestrian and cycle routes around the new station in Portishead including a new route for non-motorised users from Portishead town centre to the station. The Transport Assessment predicts that over 50% of train users would walk or cycle to Pill and Portishead stations. By promoting active travel the Development is expected to increase physical activity in residents which will provide positive health benefits.

7.27 The Applicant's HRA Report stated that driving has been found to be the most stressful mode of travel. It cites evidence from academic studies which link driver stress to unexpected delays and dissatisfaction with the time it takes to commute. Moving from driving on the congested and unreliable A369 to train use is therefore expected to reduce levels of driver stress.

7.28 The Development would increase accessibility to health care services, education and training and jobs by providing shorter and more reliable journey times between Portishead and Bristol. The Applicant cites evidence from research (see paragraphs 10.4.12 and 10.4.15) on the importance of income, having a secure job and access to health facilities in people's health and well-being.

7.29 The Development would offer an alternative form of transport to users who have reduced mobility or cannot afford cars. The Health Impact Assessment notes that Pill has a higher percentage of elderly people who could benefit from improved public transport to Portishead and Bristol. The Health Impact Assessment also states that the Portishead and Pill stations are designed to be fully accessible to wheelchair users and those with impaired mobility. During operation measures will be in place to assist the hearing and visually impaired.

*Environmental benefits*

7.30 The Applicant's HRA Report identifies the following environmental benefits from the Development:

- The Development is an important component in the wider MetroWest strategic programme to improve the rail network in the West of England which by 2023 will have provided new or better train services to 500,000 people living within 2km of local stations which are part of the programme. It will contribute to the improvements in air quality, greenhouse gas emissions and wider human health benefits of the wider MetroWest programme.
- The Development will contribute to the decarbonisation of the local transport network over the medium to long term as part of the modal shift being promoted by JLTP4.
- The Development offers the opportunity as new technologies develop to replace existing diesel rolling stock with hybrid diesel/battery power stations or hydrogen powered trains. The Applicant's HRA Report identifies several examples where these technologies are already coming to market.

- The Development would reduce car dependency on the Portishead corridor (79% of all journeys to work along the route are stated to be by car or van). Table 10.5 of the Applicant's HRA Report compares this with car use in populations within the catchments of stations with a 1 hourly service, where travel to work by car/van drops to 68% of journeys.
- Car ownership is also expected to decrease. Table 10.6 of the Applicant's HRA Report compares rates of car ownership in the Portishead catchment with those in the catchments of stations with a 1 hourly service. 46.1% of the households in the Portishead catchment own two or more cars, compared with 35.7% of households in other catchments. The proportion of 'no car' households is 12.7% for the Portishead catchment and 20% for other catchments. Cars/vans owned per household is an average of 1.44 in the Portishead catchment and 1.27 in the other catchments. If the number of cars/vans per household in Portishead dropped to 1.27 this would represent a decrease of 1,500 vehicles. This reduction would lead to reduced environmental impacts resulting from car manufacture and use although the Applicant states that it is too complicated to evaluate this effect over the 60 year design life of the Development.

*Social and economic matters*

7.31 The supporting evidence for the Applicant's case is provided in the Outline Business Case 2017, ES Chapter 14 Socio-economics and economic regeneration and the Planning Statement. The results are summarised in the Applicant's HRA Report.

7.32 As noted in section 6 of this report, the Portishead to Bristol transport corridor is already subject to high levels of congestion with correspondingly low levels of resilience to accidents or incidents, both on the A369 itself and on the wider local and strategic road network. According to the Outline Business Case 2017, delays around Junction 19 of the M5 affect the operation of the main M5 carriageway and have been known to affect the access to Bristol Port.

7.33 The Outline Business Case 2017 identifies the impacts on business as a result of the congestion/unreliable journey times between Portishead and Bristol. These include:

- effects on the ability to recruit suitably skilled staff, particularly for lower paid jobs where travel cost and time have a significant influence on how far job applicants will travel;
- the cost of non-productive travel time during the working day on trips to see clients etc;
- restrictions on the growth of existing business clusters in the region such as the aerospace and creative industries as a result of poor connectivity and congestion.
- As noted in section 6 of this report, the impacts of traffic congestion are likely to continue increasing as the West of England's economy and population continue to grow.

7.34 The Temple Quarter in Bristol is stated to be one of the UK's strongest performing Enterprise Zones (as of 2017) with Enterprise Zones also designated in Bath Riverside and the Somer Valley. Enterprise Areas have also been allocated at Weston-super-Mare, Filton, Emersons Green and Avonmouth/Severnside. The high traffic volumes on the key transport corridors in and around Bristol reflect the high levels of economic activity, the relatively limited range of transport choices and high levels of car

ownership/dependency. The existing West of England rail network has a limited geographical range and local services are often limited to hourly trains.

7.35 The Planning Statement states that residents in North Somerset have poorer public transport links to major employment sites compared with other West of England residents. Only 21% of North Somerset residents can access major employment sites by public transport within 20 minutes travel time and only 55% can reach such sites within 40 minutes. The equivalent figures for the West of England are 31% and 55% respectively. The Outline Business Case 2017 notes that the MetroWest Phase 1 scheme would bring more people within 30 minutes travel of the Temple Quarter Enterprise Zone although it does not provide a precise figure.

7.36 The Outline Business Case 2017 notes that growth is becoming constrained in the West of England as a result of traffic congestion. Transport modelling using the GBATS4 model predicts that the cost of congestion to the West of England economy will rise to over £500 million per annum in 2026 and £800 million per annum in 2036 without investment in strategic transport improvements.

7.37 The Applicant's position is that the Development would ameliorate the effects of traffic congestion on the Portishead to Bristol transport corridor by encouraging a shift to rail, as described in paragraph 7.7 above. The other projects within the MetroWest Phase 1 scheme are expected to reduce pressure on the A4 and M32 routes into Bristol. The cost/benefit ratios reported for the MetroWest Phase 1 Scheme in the Outline Business Case 2017 range from 3.48 to 3. Using the 2017 figures, the Applicant's modelling predicts a minimum £3.48 of quantified benefits for every £1 invested in the MetroWest Phase 1 scheme.

7.38 The direct benefits from the Development are stated to be:

- 207 net new direct permanent jobs (increasing to 514 net new permanent jobs for the wider MetroWest Phase 1 scheme according to the Outline Business Plan; the 2015 – 30 West of England Strategic Economic Plan predicts that 1150 jobs would be created).
- Gross Value Added (GVA) to the economy of £12.95 million in the Development's opening year and £139 million in the first ten years of operation (increasing to £264 million GVA for the first ten years of operation for the wider MetroWest Phase 1 scheme).
- Rail travel would be made directly available through the Development to a population of 50,000 people within the catchment of the new stations at Portishead and Pill. For the wider MetroWest Phase 1 scheme benefits would extent to a population of 180,000 living within 1km of the 16 existing stations.
- The Development will lead to improvements on the Portbury Freight Line which would otherwise not be delivered for the next 10 – 20 years.
- Social benefits will include addressing deprivation by providing better access to education, health and training opportunities. The elderly and disabled will also benefit from improved travel links throughout the region and beyond.

## The Secretary of State's conclusions on the IROPI case

7.39 On the basis of the evidence submitted by the Applicant and discussed in the Recommendation Report, the Secretary of State is satisfied that there are imperative reasons for providing an alternative mode of travel between

Portishead and Bristol in order to ameliorate the problems arising from current levels of traffic congestion along this route and to accommodate future growth in the West of England.

7.40 In addition, delivery of modal shift is a key objective of both national and local transport policy. The Secretary of State concurs with the ExA's view that the Development contributes to the delivery of the broad principles and strategic aims set out in the NN NPS by delivering new rail infrastructure, reducing road congestion, increasing network resilience, encouraging modal shift, providing safe and reliable journeys to work and supporting public transport to connect communities with public services.

7.41 The Development will be delivered by a consortium of public authorities and is intended to provide long term benefits to residents, business and visitors to the region. As noted above it will contribute to achieving the aims of national and local policy in terms of achieving modal shift from road to rail, decarbonising the transport system and supporting economic and housing growth. The Secretary of State is therefore convinced that delivery of the Development would be in the public interest.

7.42 In considering whether there are overriding reasons for the Development to be allowed, the Secretary of State is required to determine the balance between the harm to the integrity of the SAC and the benefits that would accrue from the Development. In terms of the harm to the SAC, the extent of the loss of the *Festuco-Brometalia* grassland and the *Tilio-Acerion* woodland represents a relativity small fraction of the areas of each feature within the SAC (0.84% and 0.69% respectively). The loss of whitebeams which are either endemic to the Avon Gorge or to the UK represents a more significant impact, particularly in terms of the Avon whitebeam.

7.43 The *Tilio-Acerion* woodland and its associated populations of whitebeams is classed as a priority feature. As noted in paragraph 7.2 above, where a priority habitat feature is affected the reasons can only include socio-economic matters in the event that the appropriate authority advises that this is acceptable. This restriction does not apply to the *Festuco-Brometalia* grassland where socio-economic benefits can be included in the consideration of overriding benefits without advice from the appropriate authority.

Benefits to public safety

7.44 The Applicant's case on the public safety benefits identifies potential for reduced response times for the emergency services and a reduced accident rate from modal shift. In addition, the works within the SAC are required for the safety of rail users.

7.45 It is noted that a reduction in traffic congestion is likely to improve response times by emergency services using the A369 and potentially on the wider strategic/local road network. However, the evidence available to the Secretary of State on current response times and potential improvements resulting from the Development is limited. The Secretary of State agrees that improvements in response times, especially during the morning and afternoon peak travel flows, are likely but the extent of these benefits cannot be quantified.

7.46 In relation to the works within the Avon Gorge to meet the rail safety standards for passenger lines, it appears to the Secretary of State that these works are largely required as a result of the Development. As such they do not represent a benefit from the Development and the Secretary of State has not

attached any weight to them in considering the overriding benefits of the Development.

7.47 The Secretary of State acknowledges that the Development is likely to lead to a decrease in accidents as a result of modal shift from car to rail. However, these benefits are relatively modest even when considered across the life of the Development. The Secretary of State acknowledges that the Development is likely to contribute to a reduction in emergency service response times and to the accident rate in the Portishead – Bristol transport corridor but does not consider that the evidence available to him is sufficient to conclude that these represent overriding benefits to public safety.

Benefits to human health

7.48 The Applicant's case on the benefits to human health suggests that encouraging modal shift from road to rail would lead to improvements in air quality, promote active travel and reduce driver stress. There would also be indirect benefits from improved access to health services, education and jobs. The Secretary of State agrees that there are likely to be benefits to the health of the local population as a result of the Development but these benefits are difficult to quantify and will depend heavily on the extent to which the new rail services are adopted. As such, the Secretary of State does not agree that these benefits can be classed as presenting overriding benefits to human health.

7.49 In terms of benefits from air quality, the use of DMUs is likely to result in a net increase of emissions in the short-term. The net increase would be too low to lead to additional effects on human health or the qualifying features of the SAC; it is noted that the ExA recommends that the weight attached to effects on air quality should be given a neutral weight in the planning balance.

7.50 Under the Government's plan to decarbonise transport[8], the intention is to remove all DMUs from the network by 2040. The introduction of replacements for DMUs is currently under investigation and will begin before 2040. In the long-term therefore the emissions associated with the operation of the Development can be expected to reduce. However, the Applicant's case for improvements in air quality rests largely on the importance of developing an integrated transport network which offers a realistic alternative to car use. The Development represents a significant link in that integrated network; notably by providing an alternative way of accessing central Bristol it could support the delivery of the CAZ in the city. Reductions in car use across the region are expected to lead to an improvement in air quality.

7.51 The Secretary of State recognises the importance of the Development in the development of an integrated transport network for the region and its importance in encouraging modal shift. However, on the basis of the evidence before the Secretary of State it cannot be concluded that the Development would provide direct and quantifiable benefits to human health which can be viewed as being of overriding importance.

Benefits of primary importance to the environment

7.52 The Applicant's case for benefits of primary importance to the environment refers to the role of the Development in contributing to improvements in the local rail network as part of the MetroWest programme which would deliver benefits to air quality and a reduction in greenhouse gas emissions through

[8] Decarbonising Transport: A Better, Greener Britain (2021) Department for Transport

encouraging modal shift. By providing an alternative mode of travel between Bristol and Portishead the Development would decrease car dependency, leading to a drop in car ownership. It offers an opportunity for the use of low emission rolling stock when this is available, making a further contribution to the decarbonisation of the transport network.

7.53 The Secretary of State agrees that some benefits are likely to accrue from a reduction in car dependency and potentially in car ownership as described in the Applicant's HRA Report. The extent to which these benefits would be delivered and over what timescale is uncertain and therefore the Secretary of State does not consider that they can be described as being of overriding importance.

7.54 The Government attaches substantial weight to the need to decarbonise the transport network. While the use of DMUs would lead to a net increase in $CO_2$ emissions, as with air quality, this is likely to decrease over time. As a key part of the MetroWest programme, the Development will support long term modal shifts to public transport and hence contribute to the decarbonisation of the transport network, in line with the strategic aims of the NN NPS. In the short-term however, the use of DMUs on the line means that net $CO_2$ emissions will increase.

7.55 While the Secretary of State is satisfied that the Development will contribute to a decrease in greenhouse gas emissions from transport in the long term, the extent of this benefit is currently uncertain. When set against a clearly established level of harm to the designated features of the SAC, the Secretary of State is not satisfied that the benefits to the environment are sufficient to be classed as of overriding importance.

Social and economic benefits

7.56 In relation to the benefits of the Development, the Secretary of State considers that the current levels of congestion within the West of England sub-region, particularly on the major roads running into Bristol, are likely to be affecting economic growth within the region. The problems along the A369 between Portishead and Bristol are particularly severe and are likely to hamper delivery of both homes and economic growth without improvements to the transport network.

7.57 The Development represents a cost-effective way of ameliorating these problems. It will offer commuters consistent and reliable journey times between Portishead and Bristol. Further to this, as part of the wider MetroWest programme it will increase access to the rail network within the region and beyond.

7.58 The economic benefits of the Development are relatively modest but the cumulative benefits of the MetroWest Phase 1 Scheme are substantially greater. The Secretary of State recognises that the benefits from the Development will be considerably amplified through the cumulative benefits of the wider MetroWest scheme (Phases 1 and 2) and that the Development is part of a wider attempt by the West of England local authorities to ensure that the transport network can support economic and housing growth into the future.

7.59 The social benefits are more difficult to quantify but the Secretary of State is of the view that there will be benefits, particularly to people who do not have access to private transport, from the increased access to education, training, health services, employment and travel. Bristol City Council, South

Gloucestershire Council and North Somerset Council all agreed during the examination that the Development would provide both social and economic benefits.

7.60 The Secretary of State acknowledges the harm to the qualifying features of the SAC. However, the Development represents the reinstatement of a passenger service which previously ran through the Avon Gorge for almost a century. The line has been used for freight since 2001. This suggests that the SAC features are capable of co-existing with an operational railway.

7.61 The Secretary of State is satisfied that, given the existing problems on the A369 and the social and economic benefits expected to flow from the Development, there are overriding social and economic reasons to progress the Development.

7.62 In relation to the *Festuco-Brometalia* grassland qualifying feature, the Secretary of State is satisfied that there are imperative overriding reasons of public interest for the Development to proceed.

7.63 In relation to the *Tilio-Acerion* woodland feature, the Secretary of State has been unable to conclude that there are overriding reasons for proceeding with the Development relating to public safety, human health or of primary importance to the environment. The Secretary of State has therefore chosen to seek an opinion from the appropriate authority to determine whether the social and economic benefits provided by the Development constitute imperative reasons of overriding public interest.

7.64 An opinion was sought from Defra as the appropriate authority on 15 October 2021. Following a review of the available information, Defra requested clarification on the reasons for the removal of the whitebeam trees. This information was requested in a letter to the Applicant dated 28 January 2022 and comprised the following questions:

- Given the diminutive size of the whitebeam trees which may need to be removed, why would individual trees identified in the Applicant's HRA Report need to be removed rather than left to grow and removed or coppiced at a later date?
- What is the exact nature of the threat posed to the railway line or to safety posed by each of the whitebeam trees identified for removal?
- What are the relevant regulations and/or legislation which is guiding the identification of individual trees as a threat to the railway? Are there examples of previous occasions where those regulations and/or legislation have been used?

7.65 The Applicant responded on 9 February 2022. The response identified that the works on Underbridge 6 are no longer required so the round-leaved whitebeam scheduled for removal at this location would now be retained. The total number of whitebeams which could be removed or coppiced has therefore reduced to 26; 18 out of the 26 whitebeams are assumed (on the basis of a realistic worst-case scenario) to clash with the proposed rock bolts and catch fence permanent works and to require removal.

7.66 However as there is a degree of flexibility in the final positioning of rock bolts and catch fences it is likely that some of the whitebeams can be avoided. Trees would only be removed where realignment of the catch fences and relocation of the rock bolts cannot be achieved. The catch fences and rock bolts are required to avoid the risk of rock falls on the line.

7.67 The Applicant also noted that Network Rail, as the undertaker of the work, would be required to seek an assent under the Wildlife and Countryside Act 1981 to allow works to be undertaken within the SSSI which underpins the SAC. The Applicant proposes that in addition to the mitigation measures already secured in the DCO, it would seek a joint inspection of relevant work sites with representatives of Natural England, Network Rail and the West of England Combined Authority during the detailed design and construction phases. The intention is to jointly agree actions to avoid impacts to the 18 whitebeams potentially affected by the installation of the rock bolts and catch fences.

7.68 Seven whitebeams (five Avon whitebeams, one round-leaved whitebeam and one Bristol whitebeam) are growing directly out of the tunnel portals. The Applicant stated that although the trees may be diminutive in size, they will cause damage as they grow, potentially leading to direct rock falls on the railway line. These events could occur without warning, especially in storms where the wind causes trees to move, exerting force at the point where the roots are embedded in rock or masonry.

7.69 The Applicant acknowledges that this is already a risk of this affecting the operational freight line but notes that the potential severity of any incident could increase with the increased number of trains using the railway; passenger rolling stock is also lighter than freight trains and may be more susceptible to derailment.

7.70 In response to the query about the regulations/legislative requirements behind the need to remove the whitebeams, the Applicant stated that Network Rail has a duty of care for the safety of railway employees under the Health and Safety at Work Act 1974 (HSWA) and to railway users under the Railways and Other Guided Transport Systems (Safety) Regulations 2006. This is stated to only apply to the removal of the seven whitebeams from the tunnel portal as these pose a threat to the railway.

7.71 The decision on the need to remove or coppice these trees was guided by Network Rail standard NR/l2/TRK/5201 – Management of Lineside Vegetation (Issue 4). Following an independent review, this standard has been replaced by Network Rail standard NR/L2/OTK/5201 – Lineside Vegetation Management Manual (Issue 5). However, this has not affected the need to remove or coppice the whitebeams on the tunnel portal to ensure that Network Rail meets its legal responsibilities.

7.72 The Secretary of State for Environment, Food and Rural Affairs' opinion (at Annex 4) was provided on 7 March 2022. It concluded that:

*"Based on the detailed information and explanations provided and taking account of the issues in this document the Secretary of State for Environment, Food and Rural Affairs is of the opinion that, notwithstanding the adverse effects caused by the work to provide a passenger rail service between Portishead and Pill/central Bristol, there are imperative reasons of overriding public interest for this work.*

*The Secretary of State for Environment Food and Rural Affairs' opinion is conditional on the following:*

- *The mitigation and compensatory measures must be implemented and monitored as described in the Avon Gorge Vegetation Management Plan.*
- *The competent authority must put in place a legally enforceable framework (which the Secretary of State understands will be via the DCO if granted)*

*for the delivery of the compensatory measures and their management for their duration.*

- *At the detailed design stage, all operations identified as potentially damaging the identified whitebeam species will be further assessed and less damaging options pursued where feasible (e.g. re-positioning of rock bolts). The Secretary of State accepts that in some cases, less damaging options may not be feasible e.g. where leaving whitebeams in-situ create a health and safety risk (e.g. destabilising tunnel infrastructure).*

- *North Somerset District Council will provide Natural England with an annual report on the delivery and management of the compensatory measures. This should also be made available to Defra so we may assess progress or any risks, noting the need to ensure that the overall coherence of the national site network is protected."*

7.73 The Secretary of State is satisfied that the provisions contained in the DCO and the AGVMP are sufficient to meet the stipulations contained in the Defra IROPI opinion. It is also noted that an assent will also be required from NE before works affecting the whitebeams can go ahead.

7.74 As noted in paragraphs 7.56 – 7.61 above, the Secretary of State is of the view that there are overriding social and economic reasons to progress the Development. In light of the Secretary of State for Environment, Food and Rural Affairs' opinion, the Secretary of State considers that there are imperative reasons of overriding public interest for the Development to proceed.

7.75

# 8. STAGE 5: COMPENSATORY MEASURES

8.1 The Secretary of State having in accordance with Regulation 64 determined that there are no alternative solutions and that the Development must be carried out for imperative reasons of overriding public interest, has considered below the requirements of Regulation 68, which are to secure that any necessary compensatory measures are taken to ensure that the overall coherence of the national site network is protected.

## The proposed compensatory measures

8.2 As described in section 5 of this report, implementation of the Development could lead to:

- direct loss of 0.06ha of the *Festuco-Brometalia* grassland (0.04ha to be restored when construction compound at Quarry Bridge No 2 is removed);
- direct loss of 0.73 ha of the *Tilio-Acerion* woodland feature; and
- removal/coppicing of up to 27 endemic whitebeams (now reduced to 26 trees according to the Applicant's response to the Secretary of State's request for further information of 28 January 2022).

8.3 The Applicant has developed a series of measures which are detailed in the AGVMP and summarised in section 11 of the Applicant's HRA Report. These can be summarised as:

- Management measures to improve the condition of 1.45ha of the existing *Tilio-Acerion* woodland including coppicing, felling of non-native trees and vegetation around whitebeam trees.
- Growing and re-planting up to 54 endemic whitebeams.
- Management measures to improve the condition of 0.15ha existing areas of *Festuco-Brometalia* grassland by controlling scrub.
- Measures to translocate Bristol rock-cress plants.

## Additionality and location of the compensatory measures

*Tilio-Acerion woodland*

8.4 The AGVMP identifies two options for delivering the compensatory measures, one of which would be delivered entirely on NR rail land and the other entirely on Forestry Commission (FC) land. These options are presented as alternatives – the Applicant would only deliver one of them to provide the required compensation. The works proposed at each location would be broadly similar but not identical.

8.5 The initial package of compensatory measures submitted as part of the DCO application documents was based entirely in land owned by NR and located within the SAC. These measures are described in Annex G of the AGVMP with the location shown on Figure 1 of Annex F. During the examination NE raised concerns that it would be difficult to distinguish between the management required as compensation for the SAC and the management NR are already obliged to carry out to achieve/maintain favourable condition of the SAC.

8.6 NE advised that the compensatory measures needed to be "…*clearly over and above what would normally be expected of the site owner to achieve favourable condition*" (deadline 2 response) and "…*there is duplication*

*between positive management measures that NR has committed to and should deliver and the positive management compensation measures proposed by the Applicant on NR land within the SAC. The precise extent of duplication is difficult to determine, in part because as the Applicant states it has provided greater detail on its proposals than NR…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"* (deadline 5 response to ExA's questions).

8.7 The Applicant maintained that it would be possible to make a clear distinction between the compensatory measures and the management measures required to achieve/maintain favourable condition on the NR land. However, in the course of the examination, the Applicant identified that all the proposed woodland compensation could be provided on FC land outside the borders of the SAC. The measures are described in Annex M of the AGVMP and shown on Figure 4 of Annex F. A final executed agreement between the Applicant and FC was submitted at deadline 7 of the examination.

8.8 Under the terms of the agreement the measures identified in the AGVMP would be delivered by FC (as the landowner) and funded by the Applicant. In the event that FC were not able to deliver the measures, the agreement allows the Applicant to undertake the works instead after a suitable period of notice. The location of the FC land covered by the agreement is shown in Annex M of the AGVMP and as Appendix 1 to the agreement itself.

8.9 As recorded in the SoCG between NE and the Applicant (deadline 6 version), NE's preferred approach is that the compensatory measures should be delivered on the FC land outside the SAC.

*Whitebeam species*

8.10 As described in the Applicant's HRA Report, potential planting sites were identified within the Avon Gorge following investigations by the relevant experts (described in more detail in Annex H of the AGVMP) where suitable conditions exist or could be created for re-planting whitebeams. However, NE raised concerns about two of the sites initially identified by the Applicant.

8.11 NE considered that these locations were inappropriate for whitebeam planting because they could adversely affect existing habitat features that are associated with the SAC/SSSI. As with the woodland management proposals, the Applicant maintained that the identified sites were suitable for delivering compensatory measures that met the requirements of the Habitats Regulations. Despite this, during the examination the Applicant identified an additional site on FC which could be used for re-planting whitebeams. Consequently, the Applicant's HRA Report and the AGVMP identified two alternative packages:

- Package 1 – the original planting sites detailed in the application version of the HRA Report with minor modifications, all within NR land.

  Or

- 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.

8.12 The proposed planting packages are summarised in Table 11.1a of the Applicant's HRA Report, showing that sites identified as site 1a, 1b, 2 and 3 are associated with Package 1, and sites 1b, 3 and 4 are associated with Package 2. The locations of the sites are shown in Annex H of the AGVMP.

8.13 As recorded in the SoCG between NE and the Applicant (deadline 6 version), NE's concerns about the potential impacts on the SAC/SSSI from the re-planting were addressed by the revised measures proposed for Package 2. The location of the additional planting site on FC land is secured through the legal agreement between FC and the Applicant.

*Festuco-Brometalia grassland*

8.14 The areas which would be subject to management measures are shown on Annex F of the AGVMP; they all lie within land owned by NR. During the examination NE raised concerns about this approach, again because of the difficulty of establishing that the compensatory measures would be over and above those required to restore/maintain favourable condition on the SAC.

8.15 The Applicant maintained that their approach met the requirements of the Habitats Regulations. They also advised that there were no other areas of suitable grassland available to them which could be restored through management. NE subsequently agreed, as shown in their SoCG with the Applicant, that delivering the grassland compensatory measures on the NR land was acceptable.

**Secretary of State conclusions on the location of compensatory measures**

8.16 The Secretary of State notes the advice in the Recommendation Report that, in relation to the woodland management areas and the whitebeam re-planting areas, the ExA sees no reason to recommend to the SoS anything other than the woodland compensatory measures and Package 2 of the whitebeam re-planting proposals secured under the agreement with FC "…*since to do so would go against the advice of NE and is not the preferred solution of any IP*".

8.17 The Secretary of State agrees that there is no obvious reason to pursue the other options identified by the Applicant, particularly in the light of NE's concerns about the risk of harm to the SAC/SSSI if Package 1 is pursued. The methods for carrying out the compensatory measures are broadly similar, whichever option is selected. The only significant difference is the location of the measures. The Secretary of State therefore agrees that the compensatory measures for the *Tilio-Acerion* woodland feature should be those described in Annex M of the AGVMP and Package 2 of the whitebeam re-planting proposals.

8.18 The Secretary of State notes that despite NE's concerns about the need to demonstrate that the compensatory measures are not simply replacing management works necessary to achieve favourable conservation status, it ultimately reached agreement with the Applicant in relation to the grassland compensatory measures. The Secretary of State is therefore content that the Applicant has identified appropriate locations for the delivery of the grassland compensatory measures. This report does not therefore discuss the other options proposed by the Applicant any further.

## Compensatory measures for the *Tilio-Acerion* woodland

*Woodland habitat*

8.19 The existing habitat on the FC land is described in the Applicant's HRA Report as woodland with planted native and non-native trees and old coppice stools of

small-leaved lime. The measures proposed for the FC land are (see Annex M of the AGVMP for full details):

- Selective felling of planted cherry, beech and conifer trees (Lawson cypress, hemlock, Corsican pine and Douglas fir).
- Re-coppicing small-leaved lime in some areas within coppice panels 30 m x 30 m in size or coppicing a strip at the bottom of the slope. Trees subject to coppicing will be selected on the basis of advice from an arboriculturalist as some may not respond well to this treatment.
- Within coppice panels, deer fencing will be installed for 2 years or until coppice has taken. Fencing will be 2 m high with steel mesh and chestnut stakes.

8.20 The total area subject to management is estimated at 1.45ha which is more than twice the area lost. NE indicated their agreement with the proposed measures and the extent of the area to be covered in their SoCG with the Applicant (deadline 6 version).

8.21 Monitoring will be undertaken post-management as detailed in Annex M of the AGVMP.

*Whitebeam species*

8.22 Paragraph 11.5.1 of the Applicant's HRA Report notes that the woodland management measures will provide some benefit to the whitebeam population of the Avon Gorge but does not consider this to be sufficient, given the rarity and global importance of the species present on the site.

8.23 The full details of the proposed measures (some of which are already underway) are provided in Annexes H and I of the AGVMP. In summary they involve propagating trees from seed collected in the SAC which will then be re-planted:

- Collection of seed from Avon, Bristol, round-leaved, Leigh Woods, grey-leaved and Wilmott's whitebeam from the SAC between 2016 and 2019.
- Collection of seed from Avon, Bristol, round-leaved and common whitebeam in 2020.
- Propagation of seeds collected from at Paignton Zoological Gardens, University of Bristol Botanic Garden and FC (Cheviot trees). To date, 75 trees have been grown to the sapling stage (listed below) and more are expected to germinate from the 2019 and 2020 seed collections:
  - 5 Avon whitebeam (this has since increased to 11 according to the Applicant's response to the Secretary of State's request for further information of 28 January 2022);
  - 30 Leigh Woods whitebeam;
  - 30 round-leaved whitebeam;
  - 7 Bristol whitebeam;
  - 2 Wilmott's whitebeam (but one sapling is very weak); and
  - 1 grey-leaved whitebeam.
- Hardwood cuttings were also taken from Avon whitebeam cuttings in 2019 but growing these on is considered unlikely to succeed.

- Identification and characterisation of 2 suitable planting sites (as described above to develop site-specific preparation measures before planting.
- Site preparation and planting.
- Monitoring and maintenance of plantings for 10 years after planting with additional stock propagated to replace any trees lost. Any surplus whitebeam saplings would be donated to other landowners within the Avon Gorge Woodlands SAC.

8.24 Table 11.1a of the Applicant's HRA Report summarises the number of whitebeam saplings that would be planted at each site as shown in Table 8.1.

**Table 8.1 Whitebeam replacement planting**

| **Species** | **Losses** | **Site 1b** | **Site 3** | **Site 4** | **Total** |
|---|---|---|---|---|---|
| Avon whitebeam | 12 | 3 | 2 | | 5 |
| Bristol whitebeam | 2 | | | 7 | 7 |
| Round-leaved whitebeam | 5 | | | 27 | 27 |
| Grey-leaved whitebeam | 1 | | 1 | | 1 |
| Leigh Woods whitebeam | 6 | 12 | | | 12 |
| Wilmott's whitebeam | 1 | | 2 | | 2 |
| **Total** | **27** | **15** | **5** | **34** | **54** |

8.25 The initial planting will use the saplings raised from the 2016 – 2018 seed collections and would be undertaken in early March. Planting will not take place in locations where tree canopy or branches would grow within 3m of the operational rail corridor. Annex H of the AGVMP provides more detail on the planting, aftercare and maintenance methods which will be employed.

8.26 Monitoring and maintenance will be carried out by FC as detailed in the AGVMP. In the first year after planning the trees would be checked monthly between April and September. In the second year after planting saplings will be checked in March and September, with additional checks being undertaken between April and September if any concerns are identified. In subsequent years the saplings will be checked in March and September.

8.27 The total number of whitebeams lost would be replaced on a 2:1 ratio. However, as show in Table 8.1 above, this would not be the case for individual species. Most of the whitebeam species would be replaced on a 1:1 basis. However, only five Avon whitebeams would be replaced compared with a loss

of 12 trees; additional numbers of round-leaved whitebeams would be planted to reach the total planting of 54 trees.

8.28 Paragraph 5.7.3 of the Applicant's HRA Report acknowledges that not all species can be replaced on a 2:1 basis as some species, including the Avon whitebeam, are more difficult to propagate. The effect of this on the adequacy of the proposed compensatory measures was raised by the ExA. NE recognised the difficulties of successfully propagating the species involved and advised at deadline 2 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*". NE reiterated their agreement with the Applicant's approach in item 6.1.4 of their SoCG (version submitted at deadline 6). Item 6.1.7 of the SoCG also states that NE is satisfied that the planting proposed as part of Package 2 is adequate to meet the requirements of the Habitats Regulations in relation to compensatory measures.

8.29 It should be noted that the Applicant advised, in response to the Secretary of State's request for further information of 28 January 2022, that it was confident that it could replace the seven whitebeams which would need to be removed from the tunnel portal on a 2:1 basis. It will continue to collect whitebeam seeds each autumn to cultivate more Avon whitebeams to replace any other unavoidable losses of this species. .

## Compensatory measures for the *Festuco-Brometalia* grassland

*Grassland habitat*

8.30 The measures to improve the quality of existing *Festuco-Brometalia* grassland are described in Annex G of the AGVMP and involve:

- Scrub control of native species by cutting plants to 50mm above ground and removing arising from the site. Plants would be allowed to re-grow.
- Removal of INNS followed by treatment with non-persistent herbicides to prevent re-growth.

8.31 The locations of the work are shown on Figure 1 of Annex F of the AGVMP. The total area covered by the measures would be 0.15 ha which is just over twice the area of the feature which would be lost. NE indicated their agreement with the proposed measures and the extent of the area to be covered in their SoCG with the Applicant (deadline 6 version).

*Bristol rock-cress*

8.32 The measures to replace plants lost as a result of the Development are described in Annex K of the AGVMP. As noted in section of this report, a survey will be undertaken during the detailed design phase to establish the location of individual plants which would be affected by the Development. Plants which would otherwise be lost will be translocated to a 'suitable botanic garden' such as the Bristol University Botanic Garden. They will either be re-planted at the receptor site or and/have seed collected from them.

8.33 Two sites on NR land have been identified as being suitable for re-planting. Re-planting with seed and transplanted plants will take place on stable rock slopes which would not be subject to further works on limestone ledges where a suitable micro-habitat can be created or maintained. The transplant sites will require initial watering and slug/snail controls to allow the plants to establish. The aim is to achieve a 2:1 replacement ratio.

8.34 A stock of pot-grown plants grown from the seed on the site will be maintained in the botanic garden for replacing any failed plants in the five years following planting. The re-planted areas will be checked twice a year for the two years after planting (years one and two) then once a year in years three to five, seven and nine.

8.35 NE indicated their agreement with the proposed measures in their SoCG with the Applicant (deadline 6 version).

## Secretary of State's conclusions on compensatory measures

8.36 In considering the compensatory measures the Secretary of State has had regard to the HRA guidance[9] from Defra, NE, the Welsh Government and Natural Resources Wales.

8.37 The subject of compensatory measures was given substantial consideration during the examination, with the Applicant's proposed compensation package examined in detail. The recommendation of the ExA is that the compensation package as proposed is feasible and appropriate and adequately secured in the DCO.

*Effectiveness and feasibility*

8.38 The Applicant has proposed a comprehensive set of measures which are targeted directly at compensating for the loss or damage to the SAC qualifying features. The measures would be located within or close to the boundaries of the SAC, within the existing woodland in the Avon Gorge. The Secretary of State notes that the Applicant's approach in treating positive management measures on existing SAC features as compensation rather than mitigation is in line with the findings of the Briels and Grace-Sweetman judgements[10].

8.39 The measures have been agreed with NE, the statutory nature conservation body for England. The measures would not have a negative effect on the national network of European sites. There is no evidence of any other IPs raising concerns about the adequacy of the compensatory measures proposed during the examination.

8.40 The measures for control of scrub and INNS are based on standard methods. Coppicing and crown lifting are traditional methods of tree/woodland management. The measures proposed by the Applicant include a commitment to select trees for coppicing which are likely to respond favourably and to provide protection against deer damage during re-growth. These measures are therefore likely to be highly effective and feasible to deliver. Furthermore, the AGVMP includes a commitment to monitoring the effectiveness of these measures.

8.41 As recorded in the Applicant's HRA Report and the AGVMP, it has already been demonstrated that the important whitebeam species which would be affected by the Development can be successfully propagated from seed. The Applicant has relied on advice from national experts in identifying suitable locations for planting and developing bespoke clearance management plans for each site.

8.42 Section 7 of Annex H of the AGVMP provides case studies on the previous projects where whitebeam species have been cultivated and then re-planted in

[9] Habitats regulations assessment: protecting a European site

[10] European Court of Justice cases C-521/12 Briels and Others v Minister van Infrastructuur en Milieu and C-164/17 Grace and Sweetman v An Bord Pleanála

the wild. The case studies contain only limited information on the cultivation and planting methods since this evidence was not available to the authors. However, the four projects reviewed demonstrated successful establishment and survival of a number of whitebeam species in wild/semi-wild situations. One of the projects was located in Leigh Woods in the Avon Gorge during the 1970s. A re-survey in 2019 recorded that the trees were still present and included surviving examples of re-planted Bristol, grey-leaved and Wilmott's whitebeams. This provides assurance that the proposed measures are feasible and have a strong chance of being effective. As described in the AGVMP, suitable receptor sites for the transplanted saplings have already been identified.

8.43 Annex K of the AGVMP identifies several examples where Bristol rock-cress has been successfully grown from seed and transplanted to rock faces or walls. Survival of the populations appears to have been long term (if not permanent. The measures proposed to cultivate and establish new populations of the Bristol rock-cress plants affected by the Development are based on the expert knowledge of botanists familiar with the Avon Gorge. Suitable receptor sites have already been identified.

8.44 The AGVMP includes commitments to undertake monitoring at regular intervals for the ten year period after planting or habitat management works have been undertaken. Failed whitebeam plantings will be replaced from cultivated seedlings.

8.45 The Secretary of State is satisfied that the compensatory measures will be feasible. The habitat management measures are highly likely to be effective. The Applicant has provided evidence that approaches similar to the measures proposed for the whitebeams and Bristol rock-cress can succeed. This gives the Secretary of State assurance that the compensatory measures will be successful.

*Ratio of compensatory measures to loss*

8.46 The Applicant's HRA Report states that the extent of the compensatory measures proposed is approximately twice the extent of the habitats and features lost. It should be noted that this applies to the overall number of whitebeams to be replaced rather than to the replacement of individual species. However, the Secretary of State notes that NE has agreed that the ratios of compensation to loss. In addition, the Applicant is continuing to collect seed and cultivate whitebeams which could be used in either the initial planting or to replace any failures, increasing the possibility that all species could be replaced on a 2:1 basis. The Secretary of State is therefore satisfied that the ratio of compensation to loss is acceptable.

*Timing of delivery of compensatory measures*

8.47 The timing of the delivery of the measures is described in section 4.2 of the AGVMP and Annexes G, K and M. The habitat management measures will be implemented during the construction phase, expected to be around 20 months in duration. As noted above, propagation of the endemic whitebeams has already been undertaken. Re-planting would take place during the construction period for the site on the FC land and after construction has been completed for the sites on the NR land.

8.48 In relation to the Bristol rock-cress population, the identification of affected plants will take place during the detailed design stage of the Development. Plants would be removed during construction before site clearance is

undertaken. The exact timescale for cultivation and transplanting cultivated plants is not specified in the AGVMP.

8.49 The Secretary of State notes that the Defra HRA guidance advises that compensatory measures should usually be in place and effective before the negative effect on a site occurs. Compensation measures to be delivered during the construction of the Development are likely to be in place close to the time that harm occurs. However, delivery of works on the NR land is not likely to be feasible before construction works have been completed. In addition, some of the measures, particularly around providing replacement whitebeam saplings, are inherently long term in nature. The Secretary of State is satisfied that the Applicant has taken steps to ensure that the compensatory measures will be delivered as rapidly as possible.

*Securing delivery of the compensatory measures*

8.50 The AGVMP notes that it has not yet been determined how the works on NR land would be delivered but expects it to be implemented by a combination of the main contractor for the construction works and a specialist contractor for the compensatory measures. Paragraph 4.3.1 of the AGVMP states that NR would manage the main contractor and the Applicant would have an overseeing role to ensure that the plan is implemented. The Applicant would be responsible for maintenance of the replanted whitebeams for the ten years after planting.

8.51 Under the agreement between FC and the Applicant, FC would be responsible for the woodland management measures, planting of the whitebeam saplings and maintenance of the saplings in the ten years after planting. If FC were unwilling or unable to deliver the compensatory measures then the Applicant would be able to take over delivery of the measures and monitoring.

8.52 Following the ten-year establishment period, long-term management would fall to the relevant landowners, FC and NR.

8.53 As noted in section 5 of this report, delivery of the AGVMP is secured through Requirement 14 of the DCO and it is also a certified document to the DCO. The works on the FC land and subsequent management and monitoring have also been secured through the executed agreement submitted by the Applicant at deadline 7 of the examination.

8.54 The Secretary of State has considered the provisions of Regulation 68 of the Habitats Regulations to secure that necessary compensatory measures are taken to ensure that the overall coherence of the national site network is protected and concludes that this would be satisfied with the compensatory measures in place.

# 9. SUMMARY OF CONCLUSIONS

9.1 The Secretary of State has carefully considered all the information presented within the application, during the examination and the representations made by IPs, along with the Recommendation Report and the responses to the Secretary of State's further consultations.

9.2 The Development is not directly connected with, or necessary to, the management of a European site, and is likely to have a significant effect on the North Somerset and Mendip Bats SAC and the Avon Gorge Woodland SAC. The Secretary of State therefore carried out an appropriate assessment to determine whether there would be any adverse effects on the integrity of these European sites.

9.3 The Secretary of State concludes that when mitigation measures are taken into account, adverse effects on the integrity of the North Somerset and Mendip Bats SAC can be excluded. However, adverse effects on the integrity of the Avon Gorge Woodland SAC cannot be excluded.

9.4 The Secretary of State is satisfied that there are no alternative solutions that would fulfil the objectives of the Development and that there are imperative reasons of overriding public interest for the Development to be carried out. The Secretary of State is satisfied that the public benefits of the Development would over-ride the impacts to the Avon Gorge Woodland SAC, subject to the securing of compensatory measures.

9.5 Having considered the package of compensatory measures proposed by the Applicant and secured through the DCO, the Secretary of State concludes that all legal, financial and technical arrangements are in place and that monitoring will be in place to ensure the compensatory measures are delivered and are in place in the timescales needed. The Secretary of State is satisfied that the overall coherence of the national site network would be protected by the implementation of the compensatory measures.

9.6 The Secretary of State has therefore concluded, as competent authority for the purposes of the Habitats Regulations, that taking into account the package of compensatory measures it is permissible for him to give consent for the Development in spite of the adverse effects which it would have on the integrity of the Avon Gorge Woodland SAC.

# Annex 1 Documents used to inform this HRA Report

Application Documents

- Environmental Statement Volume 2 Chapter 2 Description of the Study Area
- Environmental Statement Volume 4 Appendix 7 Series
- Environmental Statement Volume 4 Appendix 13 Series
- Environmental Statement Volume 4 Appendices 9.1 – 9.3c and 9.10
- Outline Business Case 2017 Parts 1 - 3

Examination documents produced by Applicant

*Examination deadline 1*

- Comments on Relevant Representations

*Examination deadline 2*

- Applicant's Responses to the ExA's First Written Questions

*Examination deadline 4*

- Applicant's Oral Case and Response to Representations at Issue Specific Hearing 3

*Examination deadline 5*

- Applicant's responses to the ExA's Further Written Questions

*Examination deadline 6*

- Avon Gorge Vegetation Management Plan (Version 3)
- Code of Construction Practice (Version 2)
- Environmental Statement Volume 2 Chapter 3 Scheme Development and Alternatives Considered
- Environmental Statement Volume 2 Chapter 4 Description of the Proposed Works
- Environmental Statement Volume 2 Chapter 7 Air Quality and Greenhouse Gases
- Environmental Statement Volume 2 Chapter 13 Noise and Vibration
- Environmental Statement Volume 4 Appendix 16.1 Transport Assessment (Version 2)
- Legal Opinion from Stephen Tromans QC regarding the Report to Inform the Habitats Regulations Assessment
- Report to Inform Habitats Regulations Assessment (Version 3)
- Statement of Common Ground with Natural England (Version 4)

*Examination deadline 7*

- Comments on the Report on the Implications for European Sites
- Completed Agreement with the Forestry Commission
- Master Construction Environmental Management Plan (Version 4)
- Schedule of Mitigation (Version 4)
- Statement of Common Ground with Bristol City Council (Version 3)
- Statement of Common Ground with North Somerset District Council Local Planning Authority (Version 3)

Examination documents produced by Interested Parties

- Relevant Representation from Natural England
- Bristol City Council's Deadline 2 submission – Response to the ExA's First Written Questions
- Natural England Deadline 2 Submission – Response to the ExA's First Written Questions
- Natural England Deadline 5 Submission – Response to the ExA's Further Written Questions
- North Somerset Distict Council's Deadline 2 submission – Response to the ExA's First Written Questions

ExA Procedural Decisions

- Report of Findings and Conclusions and Recommendation to the Secretary of State for Transport
- Written questions issued on 26 October 2020
- Further written questions issued on 26 January 2021
- Report on the Implications for European sites issued on 29 March 2021

Other Documents

- National Networks National Policy Statement
- Decarbonising Transport: A Better Greener Britain
- Conservation objectives for the North Somerset and Mendips Bat SAC and the Avon Gorge Woodland SAC
- Site Improvement Plan for the Avon Gorge Woodland SAC
- Avon Gorge Woodlands SAC Conservation Objectives Supplementary Advice
- Addendum to the Report to Inform Habitats Regulations Assessment (September 2021)
- Secretary of State request for further information dated 28 January 2022
- Applicant's response (dated 9 February 2022) to Secretary of State request for further information of 28 January 2022
- Response from Portishead Busway Campaign published 24 November 2021 to Secretary of State request for further information of 9 November 2021
- Response from Portishead Busway Campaign dated 31 January 2022 to Secretary of State request for further information of 28 January 2022
- Applicant's response to Portishead Busway Campaign dated 16 February to Portishead Busway Campaign response of 31 January 2022

NB. This list is not exhaustive. The HRA Report is informed by the application and submissions to the examination, together with submissions after the close of examination.

# Annex 2 Full list of qualifying features screened for LSE

| Site name | Qualifying features |
|---|---|
| Avon Gorge Woodlands SAC | *Tilio-Acerion* forests of slopes, screes and ravines (priority habitat) |
| | Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia)* Important orchid sites |
| Severn Estuary SPA | Bewick's swan (*Cygnus columbianus bewickii)* - non-breeding |
| | Common shelduck (*Tadorna tadorna*) – non-breeding |
| | Gadwall (*Anas strepera*) – non-breeding |
| | Common redshank (*Tringa tetanus*) – non-breeding |
| | Greater white-fronted goose (*Anser albifrons albifrons*) – non-breeding. |
| | Waterbird assemblage (non-breeding) |
| Severn Estuary SAC | Sandbanks which are slightly covered by sea water all the time; sub-tidal sandbanks |
| | Estuaries |
| | Mudflats and sandflats not covered by seawater at low tide; intertidal mudflats and sandflats |
| | Reefs |
| | Atlantic salt meadows (*Glauco-Puccinellietalia maritmae)* |
| | Sea lamprey (*Petromyzon marinus*) |
| | River lamprey (*Lampetra fluviatilis*) |
| | Twaite shad (*Alosa fallax*) |
| Severn Estuary Ramsar site | Ramsar criterion 1: Immense tidal range affects the physical environment and biological communities |

| | |
|---|---|
| | Sandbanks which are slightly covered by sea water all the time; sub-tidal sandbanks<br><br>Estuaries<br><br>Mudflats and sandflats not covered by seawater at low tide; intertidal mudflats and sandflats<br><br>Reefs<br><br>Atlantic salt meadows (*Glauco-Puccinellietalia maritma*e) |
| | Ramsar criterion 3: Due to unusual estuarine communities, reduced diversity and high productivity. |
| | Ramsar criterion 4: Important for the run of migratory fish between sea and river via estuary. Species include salmon (*Salmo salar*), sea trout (*S. trutta*), sea lamprey, river lamprey, allis shad (*Alosa alosa*), twaite shad and eel (*Anguilla anguilla*). Also of particular importance for migratory birds during spring and autumn |
| | Ramsar criterion 8: One of the most diverse fish populations in an estuarine and river system in Britain with over 110 species recorded. Provides a key migration route to spawning grounds in the tributaries of the Severn for salmon, sea trout, sea lamprey, river lamprey, allis shad, twaite shad and eel. Important as a feeding and nursery ground for many fish species, particularly allis shad and twaite shad. |
| | Ramsar criterion 5: Internationally important assemblage of waterfowl with peak counts in winter. |
| | Ramsar criterion 6: Species/populations occurring at levels of international importance.<br><br>Species with peak counts in winter:<br>• Bewick's swan;<br>• greater white-fronted goose;<br>• common shelduck;<br>• gadwall;<br>• dunlin; and<br>• common redshank. |

| | |
|---|---|
| | |
| Chew Valley Lake SPA | Northern shoveler (*Anas clypeata*) – non-breeding |
| North Somerset and Mendip Bats SAC | Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*); dry grassland and scrublands on chalk or limestone (important orchid sites). |
| | Caves not open to the public |
| | *Tilio-Acerion* forests of slopes, screes and ravines; mixed woodland on base-rich soils associated with rocky slopes (priority habitat). |
| | Lesser horseshoe bat (*Rhinolophus hipposideros*) |
| | Greater horseshoe bat (*Rhinolophus ferrumequinum*) |
| Wye Valley Woodlands SAC | *Asperulo-Fagetum* beech forests |
| | *Tilio-Acerion* forests of slopes, screes and ravines; mixed woodland on base-rich soils associated with rocky slopes (priority habitat). |
| | *Taxus baccata* woods of the British Isles (priority habitat)<br><br>Lesser horseshoe bat |
| Wye Valley and Forest of Dean Bat Sites SAC | Lesser horseshoe bat |
| | Greater horseshoe bat |
| Mendip Limestone Grasslands SAC | Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*); dry grassland and scrublands on chalk or limestone (important orchid sites). |
| | European dry heaths |
| | Caves not open to the public |
| | *Tilio-Acerion* forests of slopes, screes and ravines; mixed woodland on base-rich soils associated with rocky slopes (priority habitat). |
| | Greater horseshoe bat |
| | Greater horseshoe bat |

| | |
|---|---|
| Bath and Bradford-on-Avon Bats SAC | Bechstein's bat (*Myotis bechsteinii*) |
| | Lesser horseshoe bat |
| Mells Valley SAC | Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*); dry grassland and scrublands on chalk or limestone (important orchid sites). |
| | Caves not open to the public |
| | Greater horseshoe bat |

# Annex 3: Conservation objectives for sites considered in the appropriate assessment

The conservation objectives reproduced below are available from http://publications.naturalengland.org.uk/category/6490068894089216[11]

NB. In the case of all European sites identified below, the Conservation Objectives are to be read in conjunction with the accompanying Supplementary Advice documents, which provides more detailed advice and information to enable the application and achievement of the Objectives set out.

## Avon Gorge Woodlands SAC (Site Code UK0012734)

With regard to the SAC and the natural habitats and/or species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

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

**Qualifying Features:**

H6210. Semi-natural dry grassland and scrubland facies: on calcareous substrates (*Festuco-Brometalia*); Dry grasslands and scrublands on chalk or limestone

H9180. *Tilio-Acerion* forests of slopes, screes and ravines; Mixed woodland on base-rich soils associated with rocky slopes*

*denotes a priority natural habitat or species.

## North Somerset and Mendip Bats SAC (Site Code: UK0030052)

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change:

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- The extent and distribution of qualifying natural habitats and habitats of qualifying species;
- The structure and function (including typical species) of qualifying natural habitats;
- The structure and function of the habitats of qualifying species;

[11] Accessed 17/08/2021

- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely;
- The populations of qualifying species; and
- The distribution of qualifying species within the site**.**

**Qualifying Features:**

- H6210. Semi-natural dry grassland and scrubland facies: on calcareous substrates (*Festuco-Brometalia*): Dry grasslands and scrublands on chalk or limestone.
- H8310. Caves not open to the public.
- H9180. *Tilio-Acerion* forests of slopes, screes and ravines; Mixed woodland on base-rich soils associated with rocky slopes*
- S1303. *Rhinolophus hipposideros*; Lesser horseshoe bat
- S1304. *Rhinolophus ferrumequinum*; Greater horseshoe bat

*denotes a priority natural habitat or species

# Annex 4: The Secretary of States for Environment, Food and Rural Affairs opinion

Department for Environment Food & Rural Affairs

**The Rt Hon George Eustice MP**
Secretary of State for Environment,
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The Rt Hon Grant Shapps MP
Secretary of State for Transport

Your ref: Portishead Branch Line 1B DCO Application
Our ref: IROPI Opinion

07 March 2022

Dear Grant

On 15th October 2021 you sought my opinion as to whether imperative reasons of overriding public interest apply to the proposed Development Consent Order (DCO) for a passenger branch line between Portishead and Pill/central Bristol.

This is the first case of its kind in the UK. Forming an opinion requires considerable due diligence, including the need to consult the Joint Nature Conservation Committee, the Devolved Administrations and any other bodies considered necessary. In the course of forming my opinion I sought more detail about certain aspects of this case, in particular in relation to the rare whitebeam tree species which may require coppicing or removal. I also visited the site to see the issues for myself. This resulted in more time being required for me to provide an opinion than the two months provided when the request was received. This illustrates the need for the decision maker to alert Defra at the earliest opportunity where there is a likelihood of a need to seek an opinion, to recognise the possibility further information may be needed and to allow sufficient time for determination.

The proposed work would have an adverse effect upon the integrity of the Avon Gorge Woodlands Special Area of Conservation. This would involve the loss of priority woodland, related rare species of whitebeam tree which contribute to the unique character of the site and the loss of a small area of grassland.

In providing my opinion I must balance the case for overriding public interest of reducing major traffic congestion on the A369 which is affecting economic growth and productivity, against the impact upon the site and the priority woodland in a national context and assess whether the coherence of the national site network can be maintained despite the damage which could be caused. In assessing the impact on nature, I have drawn on the expertise of the Joint Nature Conservation Committee and thoroughly explored the issues with Natural England. I also sought the views of the Devolved Administrations given the national site network context. I have looked carefully at the case presented for allowing the scheme to proceed and the adequacy of the compensatory habitat which is proposed to offset the potential harm caused to the site. I sought additional information about the individual rare whitebeam trees which

may need to be removed or coppiced I wanted to fully understand the reasons for the proposed coppicing/removals and to assure myself that there are no feasible less damaging alternatives.

Similarly, I sought to satisfy myself that the compensation measures will suitably compensate the losses to be incurred. I note the commitment to re-plant tree species at a minimum ratio of 2:1 for each tree to be lost and the 10-year monitoring and evaluation period agreed with Natural England to ensure this level of planting is reached and maintained. I understand that whitebeam trees mature relatively quickly and should form a functioning part of the habitat from 2-3 years. I believe the agreed compensatory measures, including re-planting as set out in the Avon Gorge Vegetation Management Plan, are legally enforceable through the DCO. Having considered all this information it is my opinion that that there is an imperative reason of overriding public interest for this project despite the adverse impact on the integrity of priority habitat in the Avon Gorge Woodlands SAC.

I have provided this opinion based on the worst possible impact of the scheme on the SAC, including the need to remove or coppice up to 27 whitebeam trees, some of which are very rare. Whilst I have not taken this into account in giving my formal opinion, I note North Somerset District Council (NSDC) (together with Network Rail and the West of England Combined Authority) are subject to the duties under section 40 Natural Environment and Rural Communities Act 2006, regulation 9(3) of the Conservation of Habitats and Species Regulations 2017 and sections 28G to 28I of the Wildlife and Countryside Act 1980. Further to these duties I note NSDC intend to work with Natural England and other stakeholders, to minimise the impact on the trees and other features of the SAC, when preparing detailed design proposals.

My full opinion is attached and will be published in due course.

**RT HON GEORGE EUSTICE MP**

# Portishead Branch Line Development Consent Order: Opinion

## Secretary of State for Environment Food and Rural Affairs' opinion on the imperative reasons of overriding public interest for the passenger branch line from Portishead to Bristol, December 2021.

### 1. Legal framework

Regulation 63 of The Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations') requires that before authorising any plan or project not directly connected with or necessary to the management of a European site (Special Area of Conservation (SAC) or Special Protection Area (SPA)) that is likely to have a significant effect upon that site, either individually or in combination with other plans or projects, a competent authority should undertake an appropriate assessment of the implications for the site in view of the site's conservation objectives. The competent authority may only agree to the plan or project after taking account of the conclusions of the appropriate assessment and having ascertained that it will not adversely affect the integrity of the site concerned.

Regulation 64 of the Habitats Regulations provides an exemption to a negative assessment subject to three tests: no feasible alternatives; imperative reasons of overriding public interest, including those of a social or economic nature; and that compensatory measures can be secured. Where there are impacts on a priority natural habitat type or a priority species, the public interest test is limited to human health, public safety, or beneficial consequences of primary importance to the environment. Other reasons of overriding public interest, such as social or economic benefits, are subject to an opinion from the appropriate authority (in England the Secretary of State for Environment, Food and Rural Affairs - Defra). The competent authority must have due regard to that opinion.

### 2. Request from the Department for Transport

On 15 October 2021, Defra received a request for such an opinion from the Secretary of State for Transport in respect of the Development Consent Order (DCO) for the proposed Portishead Branch Line MetroWest phase 1 development.

### 3. The project

North Somerset District Council propose a rail route between Portishead and Pill and central Bristol which includes upgrading the existing freight line through the Avon Gorge to meet required standards for passenger trains.

### 4. The site

The site is designated as a Special Area of Conservation (SAC): Avon Gorge Woodlands SAC (UK0012734) and forms part of the national protected site network. It is a good example of *Tilio-Acerion* forests in south-west England (an annex I priority habitat). It is important because of the high concentration of Small-leaved lime (*Tilia cordata)* and the presence of rare whitebeams (*Sorbus spp.)*, including at least two species which are unique to the Avon Gorge (*S. bristoliensis* and *S. wilmottiana*), and other nationally scarce plants, such as Angular Solomon's-seal (*Polygonatum odoratum)*.

### 5. Effects of the project on the site

To upgrade the freight line to the standards required for passenger use would require the installation of fencing, access steps, repair/strengthening works to bridges and tunnels, upgrading of signalling infrastructure and geotechnical works to avoid the risk of rock falls. These works would require vegetation clearance leading to the direct loss of 0.73 hectares (ha) of the woodland qualifying feature and (in the worst case scenario) 27 rare whitebeam trees across six species. These trees are part of the various species which make up the habitat. Some are unique to the Avon Gorge. For example, the removal of the 12 Avon Whitebeams (*Sorbus avonensis*) would constitute a loss of 29% of the UK and world population, and removal of 6 Leigh Wood's Whitebeam (*Sorbus leighensis*), a loss of 12% of the UK and world population.

### 6. Alternative solutions

The applicant considered various alternative solutions, such as:

- alternative transport modes
- alternative railway alignments
- frequency of train services
- a 'do nothing' scenario
- opportunities (in design and operation) to avoid or have a lesser effect on the SAC.

The Secretary of State for Transport identified the objectives of the Project and considered alternative solutions that could provide a means of fulfilling these objectives and is satisfied that no feasible alternative solution exists that would have a lesser effect on the site.

## Imperative Reasons of Overriding Public Interest (IROPI)

DfT believe the need for the project is imperative because transport options between Portishead and Bristol are mainly limited to the A369, causing major congestion and affecting economic growth and productivity. The project is a key component of the Metrowest programme which will help address transport challenges in the Joint Local Transport Plan 4 for the West of England. It would also deliver on the objectives of the National Networks National Policy Statement (NPS) which identifies a critical need to improve national road and rail networks. The NPS recognises the importance of modal shift from road to rail and recognises that as demand pressures continue to rise there will be a need for new or re-opened rail alignments.

DfT argues the project overrides any likely harm to the site and the problems of congestion are likely to become more acute given the demand for housing in the sub-region. The situation on the A369 between Portishead and Bristol is particularly severe and the project would represent a cost-effective way of ameliorating traffic congestion on this route by using an existing rail line. As part of the wider MetroWest programme it would increase access to the rail network within the region and beyond with associated social benefits from improved access to education, health services and employment.

The project objectives are designed to support long term economic growth in the West of England, to improve the resilience of the transport network and to provide social and environmental improvements. It would also contribute to the achievement of

national policy objectives. It is therefore considered to be in the public interest and DfT consider it overrides the significant damage to the site.

## 8. Impact mitigation

If the project is approved routine monitoring of areas where positive management is undertaken will be carried out for five years post construction as part of the implementation of the Avon Gorge Vegetation Management Plan ("AGVMP"). Where positive management is undertaken on Network Rail land each site will be monitored subsequently in year 1, 3 and 5 after management. This will entail survey of vegetation composition, including % scrub cover, identification and frequency of invasive species, locations of whitebeams and presence of any rare or notable grassland species. This will allow comparison with survey findings before and after management was undertaken to assess the effectiveness of the management measures. North Somerset District Council will be responsible for monitoring the sites in year 1, 3 and 5 after management. Where positive management is undertaken on Forestry Commission land, monitoring will be undertaken as set out in Section 9 of Woodland Management Plan. As undertaker, NSDC will be responsible for ensuring that the AVGMP measures are undertaken. Activities completed will be reported to Natural England annually during the monitoring period.

Monitoring and management of the planted rare whitebeam trees will be undertaken for ten years post construction. A specialist contractor will be employed to plant, manage and maintain the whitebeam trees. A contract will be written to specify e.g. plant protectors, handling plants, frost protection, timing of planting, planting depth, type of stakes and watering. It will also cover the maintenance of the plants for ten years after initial planting,

## 9. Compensatory measures

The competent authority has proposed a number of compensatory measures to be undertaken on land owned and managed by the Forestry Commission and Network Rail. These include:

- woodland management measures
- replacement of the whitebeam trees which need to be removed following the detailed design stage on a minimum 2:1 ratio (for example initial planting of Round leaved whitebeam will be at a ratio of 5:1 and Bristol whitebeam 3.5:1 for each of the six species using seed collected at various times since 2016 and propagated at four nurseries- monitoring and maintenance of plantings will be undertaken for 10 years after planting, with additional stock propagated to replace any trees lost
- improvement of the existing grassland through scrub control of native species and removal of invasive non-native species
- replacement of Bristol rock cress on a 2:1 ratio.

## 10. Secretary of State for Environment Food and Rural Affairs opinion

It is the Secretary of State's view that according to the information submitted and additional enquiries undertaken, the project to provide passenger rail services between Portishead and Pill/central Bristol utilising the existing freight line represents an important project of public interest for which there are no less damaging alternatives.

The project will have a significant effect on the Avon Gorge Woodlands SAC through the loss of 0.73ha of woodland habitat, 0.06 of grassland habitat and a worst-case

scenario loss of 27 rare whitebeam trees which contribute to the assemblage of the priority habitat. The Secretary of State notes from the additional information provided that the detailed design of the scheme in terms of possible impacts on trees will involve Natural England with the aim of minimising the loss of rare trees. Additionally, he notes that assent for removal or coppicing of any whitebeam trees will be sought from Natural England in line with requirements of section 28H of The Wildlife and Countryside Act 1981 .

Despite the significant effect on the site it is the Secretary of State's view that the damage is overridden by the imperative need for this project in the public interest.

**11. Compensation**

The habitat lost would be replaced by at least twice as much compensatory habitat and each species of whitebeam tree will be compensated at a minimum ratio of 2:1. Nevertheless, the Secretary of State understands that there are some risks to delivery including the uncertainty of success of propagating whitebeam species in the compensatory areas. Therefore, a specialist contractor will be employed and a contract agreed for the management and monitoring of the replacement trees and will be in place for 10 years to maximise certainty of delivery. The Secretary of State understands that the compensatory measures and their delivery will be secured as part of the DCO Protection of the overall coherence of the national protected site network should therefore be safeguarded.

**Based on the detailed information and explanations provided and taking account of the issues in this document the Secretary of State for Environment, Food and Rural Affairs is of the opinion that, notwithstanding the adverse effects caused by the work to provide a passenger rail service between Portishead and Pill/central Bristol, there are imperative reasons of overriding public interest for this work.**

**The Secretary of State for Environment Food and Rural Affairs' opinion is conditional on the following:**

- the mitigation and compensatory measures must be implemented and monitored as described in the Avon Gorge Vegetation Management Plan.
- the competent authority must put in place a legally enforceable framework (which the Secretary of State understands will be via the DCO if granted) for the delivery of the compensatory measures and their management for their duration.
- At the detailed design stage, all operations identified as potentially damaging the identified whitebeam species will be further assessed and less damaging options pursued where feasible (e.g. re-positioning of rock bolts). The Secretary of State accepts that in some cases, less damaging options may not be feasible e.g. where leaving whitebeams in-situ create a health and safety risk (e.g. destabilising tunnel infrastructure).
- North Somerset District Council will provide Natural England with an annual report on the delivery and management of the compensatory measures. This should also be made available to Defra, so we may assess progress or any risks, noting the need to ensure that the overall coherence of the national site network is protected.