MetroWest

Portishead Branch Line (MetroWest Phase 1)

TR040011

Applicant: North Somerset District Council
8.11 Planning Statement
The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009, regulation 5(2)(q)
Planning Act 2008

Author: CH2M
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Notice

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CHAPTER 1

Introduction

1.1 Overview

1.1.1 This Planning Statement (“Statement”) has been prepared by CH2M and supports an application by North Somerset District Council (“NSDC”) to the Secretary of State under the Planning Act 2008 (“PA 2008”) for the Portishead Branch Line (MetroWest Phase 1) Development Consent Order Scheme (“the DCO Scheme”), which would grant powers to construct a new railway on the trackbed of the former branch line from Bristol to Portishead.

1.1.2 The part of the DCO Scheme comprising the Nationally Significant Infrastructure Project (“NSIP”), under the PA 2008, is a section of works to the railway between Portishead to Pill (where the new railway meets the existing freight-only railway to Royal Portbury Dock), to enable the line to be re-opened.

1.1.3 Development consent is also sought for the ‘Associated Development’ works to support the re-opening of the DCO Scheme, including a new station and car parking at Portishead, a refurbished station and new car park at Pill and also a series of works along the existing operational railway between Pill and Ashton Vale Road in Bristol.

1.1.4 The NSIP and the Associated Development are collectively referred to as the “DCO Scheme” in this Statement. The DCO Scheme is a key part of the MetroWest Phase 1 package of rail improvements for the Bristol Sub Region.

1.1.5 The application for a Development Consent Order (“DCO”) in respect of the DCO Scheme ("the DCO Application") has been prepared by NSDC on behalf of the West of England Local Authorities, comprising: NSDC; Bristol City Council (“BCC”); Bath and North East Somerset Council (“B&NES”); and South Gloucestershire Council (“SGC”). The West of England Combined Authority (“WECA”) is supporting the DCO Scheme, and now co-ordinates the input of its constituent members, having been formed by BCC, B&NES and SGC since the inception of the MetroWest project. The DCO Application has also been prepared with the assistance of Network Rail Infrastructure Limited (“Network Rail”).

1.1.6 This Statement has been prepared in accordance with Regulation 5(2)(q) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (“the APFP Regulations”) and forms part of a suite of documents forming the Application. As such this Statement should be read in conjunction with those documents and in particular the associated Environmental Statement (“ES”).

1.1.7 This Statement gives particular consideration to the National Policy Statement for National Networks (“NPSNN”), published on 17 December 2014, and sets out the planning policy context at national, regional and local levels and considers how the DCO Scheme accords with this planning policy and other legislative considerations.

1.2 Background

1.2.1 MetroWest is a major cross-authority-boundary rail scheme for improving passenger rail services in the Bristol Sub Region. MetroWest is promoted by the West of England Local Authorities and supported by WECA (as detailed in section 1.1.5). MetroWest is also supported by the West of England Local Enterprise Partnership ("LEP"). There are two MetroWest Phases.

1.2.2 MetroWest Phase 1 comprises the delivery of infrastructure and passenger train operations to provide:

i) a half hourly service for the Severn Beach line (hourly for St. Andrews Road station and Severn Beach station);

ii) a half hourly service for Keynsham and Oldfield Park stations on the Bath Spa to Bristol line; and

iii) an hourly service (or an hourly service plus) for a reopened Portishead Branch Line with stations at Portishead and Pill.

1.2.3 Parts i) and ii) of MetroWest Phase 1 are collectively MetroWest Phase 1A. Part iii) is MetroWest Phase 1B.

1.2.4 The Portishead Branch Line was originally built in the 1860s, opening to Portishead in 1867. Passenger services continued between Portishead and Bristol until 1964, and freight services continued until 1981. In 2002 the part of the former Portishead Branch Line was re-opened between Parson Street Junction and Portbury Dock Junction and a new section of line (approximately half a kilometre long) was built from Portbury Dock Junction into the port for use for freight services. The remaining disused section of the railway between Portbury Dock Junction and Portishead has not been maintained and has become heavily overgrown with self-seeded trees, shrubs and scrub.

1.2.5 The DCO Scheme will follow the existing railway corridor, comprising the disused railway section between Portishead and Pill, and then with associated works along the operational railway line from Pill to the existing Ashton Junction before joining the Bristol to Exeter main line at Parson Street Junction.

1.2.6 Under the provisions of the PA 2008, the DCO Scheme is being pursued by NSDC as the applicant. Related works required on the operational railway, between Ashton Junction and Parson Street Junction, will be undertaken by Network Rail exercising their permitted development rights under the Town and Country Planning (General Permitted Development) (England) Order 2015 (“GPDO”) where appropriate.

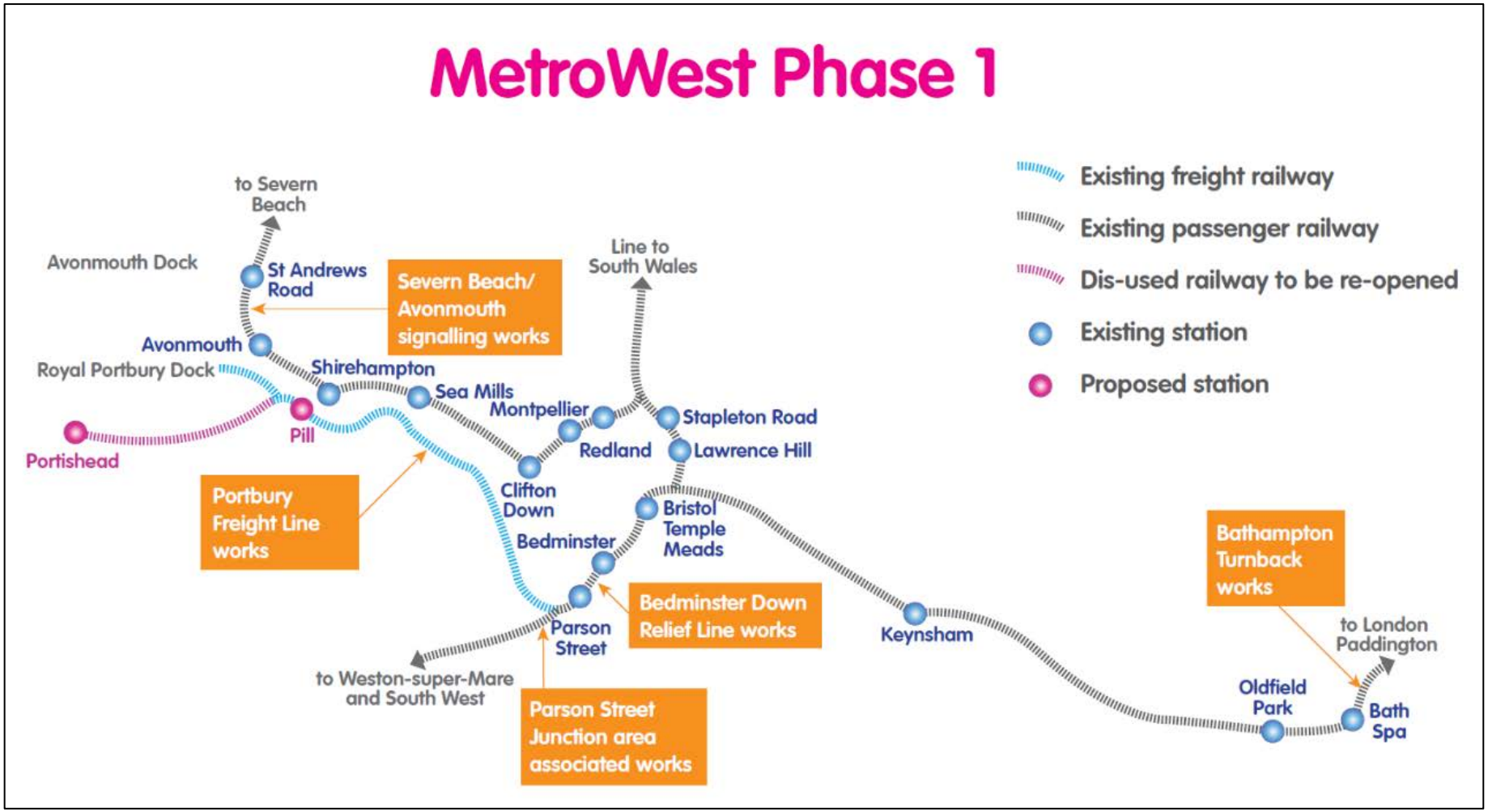

Figure 1.1 MetroWest Phase 1

1.3 Application Works

1.3.1 The DCO Scheme extends over a 13.7 km section of railway, between Portishead and Ashton Junction in Bristol (DCO Document Reference 2.4 General Arrangement Plans). The NSIP comprises of works to the 5.633 km section of former railway between Portishead to Portbury Dock Junction, to enable it to be re-opened. At Portbury Dock Junction it would connect into the existing Portbury Freight Line with a new junction (Pill Junction), near Pill Viaduct.

1.3.2 There are also a series of Associated Development works including: new stations; bridges; highway works; temporary haul roads; compounds and minor works in the Avon Gorge. These works are further detailed in section 3.3.

1.4 Other Works Required for MetroWest Phase 1

1.4.1 Other construction works are required on the operational rail network to ensure that the DCO Scheme can operate. These works are entirely on operational railway land and will be undertaken by Network Rail under their permitted development rights, and therefore will not form part of the DCO Application. These works are:

- Parson Street Junction: modifications to the junction (including at Liberty Lane Sidings) to connect the Portishead Branch Line with the Mainline between Bristol and Exeter;
- Parson Street Station: minor modifications to platform 3 to accommodate the new service; and
- Bedminster Down Relief Line: partial reinstatement of the down relief line at Bedminster to provide additional capacity for recessing freight trains on the Bristol to Exeter Main Line.

1.4.2 Other MetroWest Phase 1 permitted development works, but which are not necessary for the DCO Scheme to operate, are:

- Severn Beach / Avonmouth Signalling: minor signalling works to enable additional trains to reverse and enable a longer layover period for passenger trains at Avonmouth and Severn Beach Station. The works to facilitate increased services on this line have now been implemented through the Filton Four Track Project; and
- Bathampton Turnback: a facility to allow trains to turn back toward Bristol at Bath, off the main line.

1.5 Planning Policy Framework Considerations

1.5.1 Section 104(2) of the PA 2008 provides the basis for determining an application for development consent. It requires that in deciding an application for development consent the Secretary of State must have regard to:

a) Any relevant National Policy Statement (“NPS”);

b) Any Local Impact Report;

c) Any matters prescribed in relation to development of the description to which the application relates; and

d) Any other matter that the decision maker thinks is both important and relevant to its decision.

1.5.2 The PA 2008 also provides, at Section 104(3), that the Secretary of State must decide the application in accordance with the relevant NPS except to the extent he/she is satisfied that to do so would:

- Lead to the UK being in breach of its international obligations;
- Be in breach of any statutory duty that applies to the Secretary of State;
- Be unlawful;
- Result in adverse impacts from the development outweighing the benefits; or
- Be contrary to regulations about how its decisions are to be taken.

1.5.3 The DCO Application is subject to the process of Environmental Impact Assessment (“EIA”). This is because the DCO Scheme is a type of development listed in Schedule 2 (10)(d) to The Infrastructure Planning (Environmental Impact Assessment) Regulations ("EIA Regulations") 2009 and 2017 that is likely to have significant effects on the environment by virtue of factors such as its nature, size, or location.

1.5.4 Although the scoping of the ES for the DCO Scheme was undertaken under The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 ("the EIA Regulations 2009"), NSDC has decided to submit the DCO Application under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ("the EIA Regulations 2017").

1.5.5 The EIA process is intended to ensure that development consent for public and private projects which are likely to have significant effects on the environment should be granted only after an assessment of the likely significant environmental effects of those projects has been carried out. The assessment should be conducted on the basis of the appropriate information supplied by the developer, which may be supplemented by the authorities and by the public likely to be concerned by the project in question. The decision-maker can refuse consent or grant consent conditionally or unconditionally.

1.5.6 The information that NSDC is required to provide in the ES submitted with the DCO Application is specified in Schedule 4 to the EIA Regulations. The process of identifying and assessing environmental effects is iterative and has been undertaken in parallel with the development of the engineering design. This approach has allowed the incorporation of measures into the project design to avoid or reduce adverse effects.

1.5.7 The ES presents the information required under the EIA Regulations to be provided by the applicant with the DCO Application to inform all stakeholders in the decision-making process for the DCO Scheme, in particular the Secretary of State for Transport who will determine the DCO Application, the Examining Authority, statutory consultees and members of the public.

1.6 Supporting Documentation and Drawings

1.6.1 In preparing the DCO Application, regard has been taken to relevant PINS guidance, including PINS Advice Note 6 *Preparation and submission of application documents*, February 2016 ("AN6").

1.6.2 In addition to this Planning Statement (DCO Document Reference 8.11), a series of documents and drawings have therefore been prepared to support the DCO Application and are listed in the DCO Scheme covering letter. Documents and drawings of most relevance to Land Use Planning considerations are listed in Table 1.1.

Table 1.1 Supporting Documents

Document Reference	Application Document Name
1.1	Covering Letter
1.2	Application Form
2.1	Location Plan
2.2	Land Plan
2.3	Works Plans
2.4	General Arrangement Plans
2.5	Special Category Land Plan
2.53	Environmental Masterplan
3.1	The draft proposed Portishead Branch Line (MetroWest Phase 1) Development Consent Order
4.1	Statement of Reasons
5.1	Consultation Report
5.3	Consents and Licences required under Other Legislation
5.5	Report to Inform the Habitats Regulations Assessment
5.6	Flood Risk Assessment
6.1	EIA Scoping Opinion
6.2-6.25,	Environmental Statement Volume 1: The Non-Technical Summary Volume 2: The Main Report (including Transport Assessment) Volume 3: The Book of Figures Volume 4: Supporting Appendices
6.26	Surface Water Management Strategy for Portishead and Pill Stations, Haul Roads and Compounds
6.31	Schedule of Mitigation
8.1	Design and Access Statement

Table 1.1 Supporting Documents

Document Reference	Application Document Name
8.4	Business Case 2017
8.12	Avon Gorge Vegetation Management Plan
8.14	Construction Environmental Management Plan
8.15	Code of Construction Practice

1.7 Purpose of the Planning Statement

1.7.1 The purpose of this Statement is to describe the DCO Scheme, set out the relevant planning policy context provide a planning scheme assessment, and outline the justification for the DCO Scheme and for making the DCO.

1.7.2 This Statement accompanies the DCO Application and has been informed by other application documents, and in particular draws on the findings of the associated EIA, to demonstrate the planning merits of the DCO Scheme and its compliance with relevant policy.

1.7.3 Notwithstanding this, whilst the submission of a Planning Statement is not a mandatory requirement under the PA 2008 or the APFP Regulations, it has been prepared to accompany the DCO Application to provide a valuable means of considering the relevant planning context. This context includes national, regional and local planning and transport policy and other legislative considerations that have influenced the DCO Scheme, and will be applied when determining the acceptability of the DCO Scheme. It also enables consideration to be given to any potential conflicts and presents the overall planning balance and justification for the DCO Scheme.

1.7.4 The DCO Application will be determined in accordance with the PA 2008 and in particular, Section 104 of the PA 2008, which provides for the decision in cases where an NPS has effect. Section 104(2) (a) requires the Secretary of State, when deciding the DCO Application, to have regard to

> "*any national policy statement which has effect in relation to development of the description to which the application relates (a "relevant national policy statement")*".
>
> In addition, Section 104(3) requires the Secretary of State to decide the DCO Application: "*in accordance with any relevant policy statement*" (except where the exceptions in subsections (4) and (8) apply).

1.7.5 The relevant NPS will therefore provide the primary policy reference for the Secretary of State and has therefore been appropriately considered in this Statement and accompanying ES (regarding particular impacts and effects).

1.8 Structure of the Statement

1.8.1 This Statement contains the following information:

- The site's location and context (Chapter 2);
- Description of the proposed DCO Scheme (Chapter 3);
- The need for the scheme, its justification and development (Chapter 4);

- Consideration of the legislative and planning framework (Chapter 5);
- Policy assessment using the provision of the NPSNN (Chapter 6);
- Conclusions (Chapter 7); and
- References and Abbreviations.

CHAPTER 2

DCO Scheme Context

2.1 DCO Scheme Location and Surroundings

2.1.1 The DCO Scheme is located along an existing partially disused former branch line between Portishead and Bristol in the west of England. Portishead, at the western end of the scheme, is situated on the North Somerset coast, about 3km south west, and downstream, from the confluence of the River Avon with the Severn Estuary. From Portishead the railway corridor passes eastwards towards the settlement of Pill and eventually follows the River Avon through the Avon Gorge, and then towards Bristol, where the branch line joins the main railway line (between Bristol and Exeter) at Parson Street Junction. (The DCO Scheme is shown in Figure 2.1 and on the Location plan - Document Ref: 2.1).

2.1.2 Portishead town has undergone considerable redevelopment and expansion over the last two decades with several thousand new homes built at The Vale, The Village Quarter and Port Marine. The whole area was formerly dominated by heavy industry, but this was all closed by the late 1980s. The development since has been typically high density with a modern urban design layout and appearance. The population of Portishead is now over 27,000 and is forecast to exceed 30,000 before a permitted scheme would open. Portishead is a successful and vibrant town with an active high street. Portishead has strong socio-economic links with Bristol, which serves as the main centre of employment.

2.1.3 Pill is an historic village, with Easton-in-Gordano to the south west and Ham Green to the east. The three villages effectively form one urban settlement. The population of Pill, Easton-in-Gordano and Ham Green s about 6,180 (Census, 2011).

2.1.4 Bristol is the largest city in the south west, with a population of 428,100 at the time of the Census in 2011, and is projected to reach 500,000 by 2029. Bristol is a major centre of economic growth and employment in the region, with a strong and rapidly growing economy, characterised by high productivity, a skilled work-force, diverse industrial base and a strong sense of enterprise and academic excellence. Constraints to growth include infrastructure and poor connectivity. Improvements in public transport within Bristol itself, and between Bristol and the outer lying settlements, would help to unlock development potential in Bristol, encourage a modal shift in traffic from the roads to the railway and help relieve congestion on the local highway network.

2.1.5 The topography of North Somerset and Bristol comprises the low-lying coastal plain along the southern shore of the Severn Estuary backed by alternating ridges and broad river valleys. The Mendip Hills lies to the south of Bristol and the Cotswolds to the north. The terrain between Portishead and Pill comprises a low-lying coastal plain crossed by a number of land drains and small rivers. A broad ridge of higher land extends from Clevedon, along Tickenham Ridge and through Failand and continues across the River Avon through Clifton and the northern suburbs of Bristol towards the Cotswolds. The River Avon has cut a valley through this ridge of high land, creating the Avon Gorge, separating Bristol to the east from the wooded

slopes and valleys to the west. Much of the countryside lies in the designated Green Belt. The agriculture on the coastal plains is based on pasture for livestock, with arable farmland above the scarps. There are also patches of woodland throughout the study area.

2.1.6 The area is important for its nature conservation value. The Severn Estuary Special Area of Conservation ("SAC"), Special Protection Area ("SPA"), Ramsar and Site of Special Scientific Interest ("SSSI") lies along the North Somerset coast and the lower River Avon. The Avon Gorge Woodlands SAC is designated because of its woodland and grassland habitats. The Avon Gorge SSSI is co-incident in area with the SAC designation and also includes the Leigh Woods National Nature Reserve ("NNR"), both of which are designated for their nature conservation interest. The woods and gorge have an exceptional diversity of whitebeams, including two species which are unique to the gorge. There are six European protected sites within 30 km of the DCO Scheme that have bats as a qualifying feature.

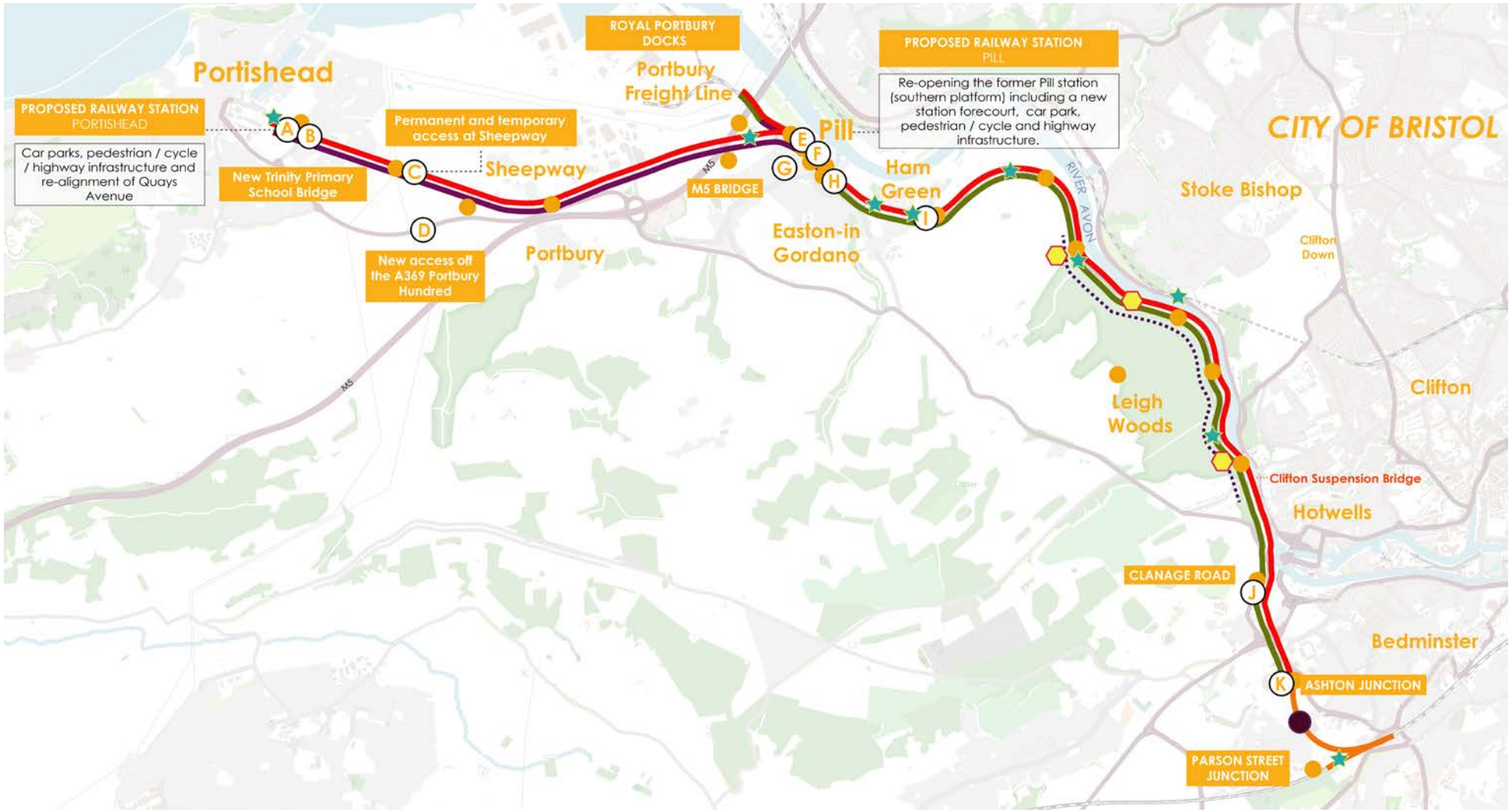

Figure 2.1: Portishead Branch Line DCO (MetroWest Phase 1) Scheme and Accompanying Key

KEY

The Line

- The Portishead Branch Line DCO Scheme (the indicative red line boundary)
- The Nationally Significant Infrastructure Project (NSIP) works
- The Associated Development works
- General Permitted Development works

Main Works along the Route

- (A) New railway station at Portishead
- (B) Trinity Primary School bridge (new combined pedestrian and cycle overbridge)
- (C) New permanent and temporary access off Sheepway
- (D) New temporary construction access off the A369 Portbury Hundred
- (E) New car park at Pill
- (F) New railway station at Pill
- (G) Proposed bus stop works near the Pill Memorial Club
- (H) Pill Viaduct
- (I) Pill Tunnel Eastern Portal (new permanent vehicular access)
- (J) New permanent and temporary construction access off Clanage Road
- (K) Highway and pedestrian improvements to the Ashton Vale Road level crossing junction area with the A370

- Temporary construction compounds between Portishead and Ashton Junction
- (1) Geotechnical works on slopes within Network Rail land (see Appendix 4.4 of the Portishead Branch Line DCO Scheme Environmental Statement)
- (1) Geotechnical works on slopes on third party land (see Appendix 4.4 of the Portishead Branch Line DCO Scheme Environmental Statement)
- Location of GSM-R communications masts
- New permanent stepped access points from the Avon Gorge Tow Path to the railway line to facilitate maintenance
- Level crossing
- Indicative location of geotechnical works in the Avon Gorge

2.1.7 There are three other SSSIs designated for their nature conservation value within 2 km of the project, namely Weston Big Wood SSSI, Horseshoe Bend, Shirehampton SSSI, and Ashton Court SSSI. There is also one SSSI designated specifically for its geological interest, which comprises a railway cutting at Ham Green, whilst the Avon Gorge SSSI also includes the geological interest of the gorge as part of the citation.

2.1.8 There are three Scheduled Monuments ("SM") within 0.5 km of the DCO Scheme in the Avon Gorge and a fourth SM, comprising a hill fort at Portbury, approximately 550 m south of the DCO Scheme. Conservation Areas ("CA") are designated for their special architectural or historic interest.

- There are six CAs on the eastern side of the River Avon within 0.5 km of the DCO Scheme;
- Shirehampton CA lies to the north of the River Avon on the opposite shore from Pill;
- Five CAs lie contiguously north to south through Bristol comprising, Sea Mills, Sneyd Park, The Downs, Clifton and Hotwells and the City Docks. The western extent of the first four mentioned CAs is the local authority boundary between Bristol City Council and NSDC, which lies close to the alignment of the operational railway on the western shore of the River Avon. The western boundary of the City Docks conservation area extends across the River Avon; and
- The CAs of Leigh Woods and Bower Ashton lie on the western side of the Avon Gorge and the DCO Scheme. Leigh Woods CA, which is located in North Somerset, lies on elevated ground on the western side of the Avon Gorge, well above the operational railway which lies along the western footslopes of the Avon Gorge. Bower Ashton conservation area is centred on the Ashton estate and its eastern boundary partly follows the railway boundary.

2.1.9 There are listed buildings within the CAs, particularly in Bristol, but only a few lie within 500 m of the DCO Scheme. Clifton Suspension Bridge, a Grade I listed structure, crosses the Avon Gorge at a location where the Portbury Freight Line lies in tunnel. The DCO Scheme passes along the edge of the Leigh Court Registered Park and Garden ("RP&G") and close to Ashton Court RP&G. There are also numerous non-designated heritage features within 50 m of the DCO Scheme including old rail related structures.

2.1.10 The main highway network in the area is dominated by the M5. Junctions 18a and 18, near Avonmouth, connect to the M49 north through Avonmouth/Severnside to the M4. The A4 into Bristol along the north side of the River Avon and at Junction 19 near Easton-in-Gordano connects with the A369 between Portishead and the centre of Bristol along the south side of the River Avon. The B3128 and B3130 provide more circuitous routes into the Bristol via the A370 from Long Ashton and the Park and Ride to the south west of Bristol. There are also several public rights of way ("PRoW") along the railway corridor, including:

- National Cycle Network ("NCN") 26, which uses part of the railway corridor between the M5 Bridge and the Royal Portbury Dock Road Bridge; and

- the NCN 41 along the western shore of the River Avon following the River Avon Tow Path close to the Portbury Freight Line.

2.1.11 Towards the southern end of the Portbury Freight Line, the railway passes through the urban areas of Ashton Gate and Ashton Vale, before joining the main line at Parson Street Junction.

CHAPTER 3

The Proposed DCO Scheme

3.1 Introduction

3.1.1 The DCO Scheme comprises the NSIP works and its Associated Development. The reconstruction of the disused section of the railway line between Portishead and Pill falls within the definition of an NSIP for the purposes of Section 25 of the PA 2008, being "*the construction of a railway over 2 km in length*". Other works required for the DCO Scheme, such as the new stations, works to the highway at Portishead and the alterations to the railway between Pill and Ashton Junction are Associated Development, in accordance with the provisions of Section 115 of the PA 2008.

3.1.2 The DCO Scheme forms part of the wider MetroWest Phase 1 project, which includes certain works on the national rail network that will be carried out under Network Rail's permitted development rights. These other works are also described in this chapter.

3.1.3 The proposed works for which development consent is sought are described in detail in Schedule 1 of the draft proposed DCO (Document 3.1) and shown on the General Arrangement Plans (Document 2.4). The land that will have the benefit of the DCO is delineated in the Land Plan (Document 2.2).

3.2 Optioneering

3.2.1 Chapter 3 of the accompanying ES describes how the DCO Scheme was established. It describes the development of the design and the alternatives considered for elements of the DCO Scheme. Plans for the re-instatement and use of the Portishead Branch Line were first proposed in 1986, though in the absence of reasonable alternatives to the proposed route, the DCO Scheme was developed through an iterative process of alternatives including environmental and other factors.

3.2.2 In the early 1990s the possibility of Light Rail Transit ("LRT") along the Portishead line was investigated and also an alternative Guided Light Transit ("GLT"), a type of guided bus system, was considered as an alternative to LRT along the Portishead line.

3.2.3 Later in the1990s a Transport and Development Modelling Study, Bristol North East and South West Sectors, looked at a possible park and ride at Portbury, whilst The Portishead to Bristol Corridor Study Stage 1 looked at light and heavy rail options for the route. It concluded that the passenger scheme would be an incremental development of the rail freight scheme.

3.2.4 In 2001, The Portishead to Bristol Corridor Study Stage 2 examined three heavy rail options versus a light rail option and five bus options. The study concluded that when comparing bus versus heavy rail, it was not possible to achieve journey times between Portishead and Bristol equal to the rail options, though buses would have a considerable advantage in respect of route and frequency enhancements and in 'penetration' of Portishead and Bristol. In terms of light rail versus heavy rail, it was estimated that marginally more passengers would use a light rail scheme, but that the capital investment would be higher for light rail than heavy rail, so the cost-benefit analysis suggested a light rail scheme would not be commercially viable.

3.2.5 In 2002 part of the Portishead Branch Line (as far as Pill) was re-opened for freight trains, along with a new half kilometre section of railway from Pill to Royal Portbury Dock, so heavy rail was then the only realistic option for the Portishead branch line rail corridor.

3.2.6 In 2006 the Greater Bristol Strategic Transport Study further explored the potential for a bus rapid transit system to Portishead and also considered the introduction of a rail line. The outputs informed the Joint Local Transport Plan 2 ("JLTP2"), which, after the necessary consultation, promoted the reintroduction of a Bristol to Portishead passenger rail service to tackle congestion and not light rail or bus rapid transit.

3.2.7 The JLTP2 provided a policy basis and stakeholder support for taking forward the proposals to open the Portishead Branch Line. The A369 was included as proposed Greater Bristol Bus Network key corridor 9, but this did not include significant infrastructure improvements. In 2007, the North Somerset Adopted Replacement Local Plan Policy T/1 safeguarded the disused railway alignment between Portishead and Pill while Policy T/3 safeguarded a site for Portishead station at the rear of Waitrose, close to the former station site in 1964.

3.2.8 In 2011, the West of England Joint Local Transport Plan 3 ("JLTP3") provided a policy basis, programme prioritisation and stakeholder support for taking Portishead rail project forward. In 2012 the West of England Joint Transport Executive Committee resolution accepted recommendations from a 2011 Rail Study to combine the Portishead Branch Line re-opening project into the Greater Bristol Metro project with delivery through a phased approach.

3.2.9 In 2013 the project was named MetroWest and public consultation was undertaken on NSDC's Sites and Policies Development Plan Document (Consultation Version) which included three options for the site of Portishead station. In 2014 public consultation was undertaken on the location for Portishead rail station.

3.2.10 Environmental baseline studies of the proposed DCO Scheme were undertaken in 2014-2015.

3.2.11 In 2015 the Planning Inspectorate was notified of NSDC's intention to submit an ES on the DCO Scheme while requesting a Scoping Opinion, together with copies of the Environmental Scoping Report and Baseline Report.

3.2.12 The Planning Inspectorate provided a Scoping Opinion in August 2015. Statutory and non- statutory consultation continued between 2015 and 2017 on aspects of the DCO Scheme including the access to Pill station and an alternative highway access into the Ashton Vale Industrial Estate in early 2016.

3.2.13 Following the completion of the scheme's outline design including in accordance with Network Rail's Governance for Railway Investment Projects ("GRIP") Stage 3 (Option Selection) for two trains per hour in March 2017, along with an updated scheme capital cost estimate, the amount of works (and the associated costs) required for a half hourly hour service were considerably higher than estimates made at GRIP Stage 2 (Project Feasibility), and thus made the half hourly scheme unaffordable.

3.2.14 The key drivers for the cost increasing were:

- The amount of works required through the Avon Gorge in order to meet modern safety standards to deliver the necessary line speeds to achieve the two trains per hour aspiration, compounded by the poor access in the Avon Gorge, reducing construction productivity;
- The impact on the Ashton Vale Level crossing of two passenger trains per hour all day alongside existing freight services, resulting in the need to consider an alternative highway access from the A370 to the rear of the Ashton Vale Road industrial estate;
- The consequential impact from the above on the amount of land, DCO (planning) requirements and environmental mitigation needed for the scheme; and
- The increased risks associated with the DCO Scheme following the expanded works and their constraints.

3.2.15 Value engineering in spring 2017 resulted in a reduced scope of one train per hour, as by reducing the frequency, the capital costs were much lower for the Portishead Branch Line. This formed the basis of the Outline Business Case 2017 (“OBC”) for the DCO Scheme which was completed and endorsed by the West of England Joint Committee in November 2017, as part of a funding bid to the Department for Transport "DfT"). The Secretary of State for Transport set out in a letter in October 2018, the circumstances in which he would consider further funding assistance for the delivery of the DCO Scheme. The letter directed the promoting authorities to further consider ‘light rail and tram-train options’ for the Portishead Line.

3.2.16 The promoting authorities commissioned Network Rail in late 2018 to undertake a light rail / tram-train feasibility study of the Portishead Line. The study was completed in March 2019 using Network Rail’s recent expertise from the Sheffield to Rotherham tram-train project.

3.2.17 The study concluded that the opportunity to de-scope infrastructure from the current heavy rail design was limited and where for instance lighter components could be used, the unit costs are generally higher, and savings could not be achieved. Furthermore, light rail / tram-train could not be delivered without a depot, stabling, power supply and traction and the West of England does not have any of this infrastructure. Consequently, the cost of delivering light rail / tram-train for the Portishead Branch Line would be considerably higher than the heavy rail project scope and therefore heavy rail was accepted, and it is the subject of this DCO Application.

3.3 Proposed DCO Scheme

NSIP Works

3.3.1 The NSIP works required for the Portishead Branch Line comprise the reconstruction of 4.762 km of disused railway from Quays Avenue in Portishead to the existing operational railway at Portbury Dock Junction, on the opposite/eastern side of the M5 Motorway. A further 871 metres of new track will be laid through Pill village, parallel to the existing operational railway line from Portbury Dock, which will be slewed over to allow separation between passenger trains and freight trains coming out of the port. A new junction east of Pill Viaduct (Pill Junction) will be constructed, where the new line from Portishead and the operational railway from the Port will converge into a single line.

3.3.2 The disused section of the railway between Portbury Dock Junction and Portishead has become heavily overgrown, with self-seeded trees, shrubs and scrub. The railway, whilst it is largely intact, is in a poor state of repair and needs to be entirely replaced in order to meet current railway engineering standards.

3.3.3 As the railway track bed is already in existence, the principal elements of the NSIP works are:

- Removal of existing rails, sleepers and ballast;
- New rails, sleepers and ballast; and
- A new railway switch and associated point motor at Pill Junction.

3.3.4 In summary, these works fall into the thresholds described in Section 25 of the PA 2008 for NSIP works for the following reasons:

- For the construction of a new railway in excess of 2 km in length,
- The scheme is wholly in England, which will become part of a railway operated by a network licence holder; and
- The railway is not on existing operational railway land (save for the section between Portbury Dock Junction and Pill Junction).

3.3.5 These works are within the DCO Application.

Associated Development

3.3.6 The DCO Scheme includes a number of elements that are classed as Associated Development for the purposes of the PA 2008. These works are shown on the General Arrangement Plans (DCO Document Reference 2.4) and comprise:

- realignment of Quays Avenue to the west of its existing position to create space for the new station and car park at Portishead, with an additional car park along the disused railway corridor between Quays Avenue and Portbury Ditch;
- a new combined pedestrian and cycle bridge and associated paths west of Trinity Primary School in Portishead;
- a new permanent maintenance compound with a road rail access point on the west side of Sheepway and north of the railway;
- minor repairs to bridges along the disused line, including the road bridges over the railway and partial reconstruction of the Cattle Creep accommodation bridge;
- modifications to the National Cycle Network route 26 (“NCN26”) and bridleway, including an extension of the bridleway under the M5 Avonmouth Viaduct;
- the replacement the Avon Road Bridge and the widening, steepening and strengthening of the embankments on the west side of the bridge to accommodate the new line from Portishead and the existing operational railway servicing Royal Portbury Dock;

- modifications to the signalling equipment along the spur into the Royal Portbury Dock;
- reconstruction of the former Pill station (southern platform) including:
  - demolition of the No. 7 Station Road to create a new station forecourt and access,
  - steepening and stabilisation of Hardwick cutting slope to create sufficient room for the new railway line,
  - a new ramp and stairs between the station entrance and the platform,
  - reconstruction of the southern platform with a shelter and lighting,
  - a new emergency refuge area,
  - a separate main car park,
  - a permanent maintenance compound with a road rail access point, and
  - pedestrian / cycle and highway infrastructure modifications in Pill.
- repairs to Pill Viaduct and widening, steepening and strengthening of Mount Pleasant Embankment to accommodate the two lines between Pill Viaduct and Pill Junction;
- minor works to Pill Tunnel;
- new permanent maintenance compound at Pill Tunnel Eastern Portal (including minor works within the highway at Ham Green to improve access);
- partial reconstruction of Quarry Bridge No. 2;
- minor works along the operational railway line between Pill Junction and the Clifton Suspension Bridge including:
  - works to improve the existing track geometry to provide a more comfortable passenger experience;
  - minor works to tunnels along the operational freight line;
  - minor works to bridges and retaining walls;
  - geotechnical stabilisation works in the Avon Gorge including stone picking, rock bolting, and erection of catch fences; and
  - construction of permanent pedestrian maintenance access points;
- a permanent maintenance compound at Clanage Road, Bower Ashton;highway modifications on Winterstoke Road to reduce the highway traffic impact from the increased use of the Ashton Vale level crossing:
  - extension of the left turn lane on Winterstoke Road,
  - optimisation of the Ashton Vale Road signals (now that South Bristol Link is open) and upgrade of signals to a Microprocessor Optimised Vehicle Actuation (“MOVA”) system, and
  - provision of a pedestrian and cycle ramp from Ashton Vale Road to Ashton Road;

- formal closure of the Barons Close pedestrian level crossing (also called the Ashton Vale Containers Crossing).
- various other railway engineering works including signalling works, telecommunication works, maintenance works to structures and other railway assets, drainage and culverts, replacement fencing, landscaping works, new ponds for ecological mitigation and floodplain compensation, and acoustic barriers;
- temporary construction compounds and haul roads between Portishead and Ashton Junction, with the principal construction compounds at Portishead station and car parks, Sheepway, the Portbury Hundred, Lodway Farm, a site under the M5 Avonmouth Viaduct, Pill station car park site off Monmouth Road, Ham Green and Clanage Road, and a number of smaller satellite compounds to support the works.

3.4 Other Related Works

3.4.1 Other works are required on the operational rail network as part of the wider MetroWest Phase 1 project, some of which are necessary so that the proposed DCO Scheme can be implemented. These works are highlighted (for information) in the following sub-sections and would be undertaken by Network Rail using their permitted development rights so therefore do not form part of the DCO Application.

Liberty Lane Sidings

3.4.2 A buffer stop and trap points are required at the depot entrance, within the sidings to enable the continuation of the existing freight train shunting movements from the depot across Parson Street Junction onto the Up Relief Line. These works are within Network Rail's operational boundary and will be implemented using their general permitted development rights. These works must be completed before the Portishead Branch Line DCO Scheme starts operating.

Parson Street Junction

3.4.3 Part of the existing junction (switches and crossovers) needs to be renewed which entails replacement of the track across the junction, replacement of signalling equipment and associated works. These works are within Network Rail's operational boundary and will be implemented using its general permitted development rights. These works must be completed before the Portishead Branch Line DCO Scheme starts operating.

Parson Street Station

3.4.4 Minor platform works are required to use platform 3, including adjustment to the platform copers, works to improve track drainage and associated works. These works are within Network Rail's operational boundary and will be implemented using its general permitted development rights. These works must be completed before the Portishead Branch Line DCO Scheme starts operating.

Bedminster Down Relief Line

3.4.5 The Down Carriage Line running from Bristol Temple Meads will be extended past Bedminster station to a new turnout on to the Down Main

between Bedminster Station and Parson Street Station. The new turnout is required to enable freight trains returning to Royal Portbury Dock to be held in the southbound direction, allowing passenger trains to pass. The works will include the construction of a new turnout, renewal of approximately 1 km of track on the Down Carriage Line and associated signalling. These works are within Network Rail's operational boundary and will be implemented using its general permitted development rights. These works must be completed before the Portishead Branch Line DCO Scheme starts operating.

Severn Beach / Avonmouth Signalling

3.4.6 Minor signalling works are required on the Severn Beach line. These works are within Network Rail's operational boundary and have been implemented using its general permitted development rights as part of the Filton Four Track scheme. These works are not required for the operation of the Portishead Branch Line DCO Scheme.

Bathampton Turnback

3.4.7 The Bathampton Turnback will comprise a new crossover between the existing Up line to London and the Down line to Bristol. A short walkway (unsurfaced path) will be provided on the existing Up loop for train drivers to walk from one end of a train to the other end. All the works will be confined to Network Rail's existing land holding and will be undertaken by Network Rail under its general permitted development rights. These works are not required for the operation of the Portishead Branch Line DCO Scheme.

3.4.8 As these above works will be carried out by Network Rail using its general permitted development rights, these elements were not consulted upon for the DCO Scheme.

3.5 DCO Scheme Construction Phase

Land Ownership

3.5.1 Most of the DCO Scheme will be constructed on land already owned by NSDC or Network Rail. NSDC owns the former trackbed from Quays Avenue, Portishead to the Old Portbury Station. Network Rail retained ownership of the trackbed from Old Portbury Station to Portbury Dock Junction, whilst the remainder of the route to Ashton Junction forms part of the national rail network also owned and managed by Network Rail.

3.5.2 Additional land is required from third parties for the temporary construction compounds, some of the permanent new accesses to the railway and for some of the highway works. NSDC is currently negotiating with landowners to purchase land required for the DCO Scheme. Where agreements with landowners cannot be reached, NSDC proposes to use compulsory acquisition powers enabled as part of the DCO process.

3.5.3 Land required for the new highway works will become highway maintainable at the public expense and will be owned and maintained by the relevant local highway authority. Land temporarily required for construction purposes will be returned to its owner in a condition to allow it to revert to its former use.

Other Consents

3.5.4 The draft DCO also includes provisions to alter, divert or provide alternatives to the public rights of way ("PRoW") network and lists those PRoWs affected.

3.5.5 Certain environmental consents, for example to handle and translocate protected species and undertake works in or near rivers, will be the subject of separate applications to the relevant consenting authority. A full list of such required consents are included in the Consents and Licences required under Other Legislation document submitted with the DCO Application (DCO Document 5.3).

Site Access during Construction

3.5.6 Access points and construction compounds will be required at intervals along the DCO Scheme. The proposed locations are shown in the Compounds, Haul Roads and Access to Works Plan (DCO Document 2.29).

3.5.7 Compounds will be established in Portishead on the two proposed car park sites and there will also be a small compound and lay down area at Tansy Lane.

3.5.8 Along the disused section of railway, two main construction sites have been identified on currently agricultural land, being:

a) Between the A369 Portbury Hundred highway and the disused line; and
b) Lodway Farm.

These are supplemented with smaller compound sites in and between Portishead and Pill.

3.5.9 There is limited space along the Avon Gorge for access and working areas. The main construction site has therefore been identified off Clanage Road at the southern end of the gorge. The constraints on access and construction compound areas have contributed to construction sequencing and methodologies that depend on train access where possible, with the added benefit of reducing heavy goods vehicles ("HGV") traffic on the local road network. An assessment of construction traffic is provided in the ES Appendix 16.1 Transport Assessment ("TA"), including an outline Construction Traffic Management Plan ("CTMP").

Highway and Utility Works

3.5.10 Highway works will be required to divert Quay's Avenue in Portishead for the station, around Pill station and car park to extend the existing flare lane on Winterstoke Road prior to turning into Ashton Vale Road across Ashton Vale Level Crossing and other minor highway works such as highway accesses.

3.5.11 Information on utilities has been sought from the utility companies and mapped. These include drinking water, wastewater, telecommunications, oil pipelines, and high pressure gas mains. It will be necessary to divert utilities in a number of locations prior to the commencement of the main construction works.

Environmental Considerations

3.5.12 During the construction mobilisation phase existing vegetation in the construction footprint will be removed, and therefore pre-construction ecological surveys will be undertaken to finalise the proposed mitigation measures. Ecological mitigation measures will be implemented for protected species, where required under licence from Natural England.

3.5.13 Environmental management during construction, is set out in the Code of Construction Practice (“CoCP”) and the Master Construction Environmental Management Plan ("CEMP") for the highways and the railway works, which are provided in the ES Appendices 4.1 and 4.2.

3.6 DCO Scheme Operational Phase

Train Services

3.6.1 A new passenger train service will be provided between Portishead, Pill and Bristol Temple Meads over the likely operational hours of 0600 to 2400, subject to further development of the business case and contractual arrangements with the train operator. It is anticipated that the train service will operate hourly between 0600 and 2400, Monday to Saturday. On Sundays an hourly service is envisaged from 0900 to 1900.

3.6.2 The hourly service for the Portishead Branch Line entails passenger trains operational hourly all day between Portishead and Bristol Temple Meads, calling at Pill, Parson Street, and Bedminster. This provides up to 18 passenger trains in each direction per day (Monday to Saturday), with approximately 10 passenger trains in each direction on Sundays. An alternative ‘hourly service plus’ option, for the Portishead Branch Line, entails passenger trains operating every 45 minutes during the am and pm peak and hourly off peak, between Portishead and Bristol Temple Meads, calling at Pill, Parson Street, and Bedminster. This ‘hourly service plus’ option provides up to 20 passenger trains in each direction per day (Monday to Saturday), with approximately 10 passenger trains in each direction on Sundays.

3.6.3 The proposed passenger service will take 23 minutes between Portishead and Bristol Temple Meads. The proposed dwell times will be 3 minutes in Portishead and 30 seconds in Pill. Between Parson Street Junction and Pill, the passenger trains will operate at about 30 mph. the design speed for the new section of railway between Portishead and Pill is 75 mph, although trains would only approach that speed for a short section, as they will be accelerating out of and decelerating into the stations.

3.6.4 The service would be operated with either class 165/6 trains or class 150/3 trains, initially in three-car formations (three carriages). The platforms at the new stations and the platforms at the existing stations between Portishead and Bristol Temple Meads will also be long enough for five-car trains in the future.

3.6.5 Freight trains will continue to operate although their operation will be pathed to reflect the passenger service timetable. Trains to Royal Portbury Dock will continue to have their existing agreed train paths. Where necessary freight trains will be required to wait on the line leading up from the Dock to Pill Junction for clearance prior to despatch in the ‘Up’ direction (to Bristol); or

be held on the Bedminster Down Relief Line in the ‘Down’ direction to Portbury Dock before joining the Portishead Branch Line. Freight trains will be limited to a maximum of 30 mph on the branch line between Parson Street and Portbury Dock.

CHAPTER 4

The need for the Scheme and its Development

4.1 Introduction

4.1.1 Rail travel across the West of England has doubled in the last ten years and this marks a very clear public appetite to opt increasingly for rail. While the West of England benefits from good long distance rail routes, the local rail network is relatively underdeveloped. Many of the local rail routes do not have a basic peak frequency. There are also a number of strategically important disused rail lines and reopening these lines is a key part of the West of England authorities' strategy to uplift the local rail network, through the MetroWest programme.

4.1.2 The MetroWest proposals are being taken forward at a time of considerable investment in the Western Route, led by Network Rail in Control Period 5 ("CP5") 2014-2019. The Western Route is being transformed through the delivery of electrification of the Great Western Main Line; strategic enhancement projects to deal with bottlenecks and to increase capacity such as many platform extensions to facilitate new longer trains; and renewal projects to modernise infrastructure. The CP5 programme of committed schemes focused on the high volume main lines and various strategic investments spread across the rest of the Western Route. Control Period 6 ("CP6"), which commenced in April 2019 and runs to 2024, includes major third party schemes such as MetroWest Phases 1 and 2.

4.2 Scheme Background

4.2.1 The former Portishead Branch Line was built in the 1860s, opening to Portishead in 1867, with an extension to the port in Portishead in 1869. Initially four stations were built along the route serving Portishead, Portbury, Pill and Clifton Bridge. The original railway was built as a single line to broad gauge standards. The line was converted to standard gauge in 1880 and a section of double tracking was constructed from Clifton Bridge station to the junction with the mainline in 1883. New stations were built in the early part of the 20th century at Ashton Gate, Ham Green, and Nightingale Valley Halt.

4.2.2 Passenger services continued between Portishead and Bristol until 1964, and freight services continued to 1981. With the cessation of passenger and freight services, the railway corridor was largely abandoned, with many of the railway features, including the ballast, rails, and sleepers, left in place. Several of the station buildings were demolished, including Portishead station.

4.2.3 The Royal Portbury Dock opened in 1978 and in 2002 part of the former Portishead Branch Line was re-opened to service the port. In order for the line to be reopened and go into Royal Portbury Dock, a substantial renewal of the existing permanent way between Parson Street Junction on the mainline and Portbury Dock Junction west of Pill was undertaken and a completely new section of line (approximately half a kilometre long) was built from Portbury Dock Junction into the port. These works were

undertaken by Railtrack using their permitted development rights to remove vegetation and renew track through the Avon Gorge and Pill, and then the Port made a planning application for the new railway line on their land.

4.2.4 The owner of the Royal Portbury Dock, Bristol Port Company, has permission to run up to 20 freight trains per day in each direction along the operational railway line. Paths have been allocated to freight operating companies. At the moment there are significantly fewer trips than this using the operational railway line each day. There are currently no scheduled passenger services on this line. In recent years the main freight traffic has comprised the import and export of new vehicles, dry bulk (including coal, animal feeds and grain), containers and the import of aviation fuel direct to pipeline.

4.3 The MetroWest Programme

4.3.1 WECA has powers in relation to strategic transport, housing and adult skills for BCC, B&NES, and SGC, but does not include those powers within NSDC.

4.3.2 WECA and NSDC are therefore working together to promote schemes to deliver investment up to £200 million in improvements to the local rail network over the next ten years. Their joint proposals comprise the MetroWest Programme. NSDC and WECA are also working with Network Rail, Great Western Railway and the freight train operators to deliver the MetroWest Programme.

4.3.3 The principal business objectives of the MetroWest programme are to support economic growth, improve transport network resilience, improve accessibility to the rail network, and to make a positive contribution to social well-being. Supporting objectives are to contribute to reducing traffic congestion, contribute to enhancing the capacity of the local rail network and to contribute to reducing the overall environmental impact of the transport network.

4.3.4 The MetroWest Programme comprises:

- MetroWest Phase 1, for the delivery of rail infrastructure and passenger train operations, is being led jointly by NSDC and WECA (as a third party promoted rail project), funded by the authorities, the LEP and devolved funding from central government;
- MetroWest Phase 2, for the delivery of rail infrastructure and passenger train operations, is being led by SGC on behalf of the West of England authorities (as a third party promoted rail project), funded by those authorities, the LEP and devolved funding from central government; and in addition:
- A range of station re-opening and new station projects; and
- Smaller scale enhancement projects for the West of England local rail network.

4.3.5 The MetroWest Phases 1 and 2 passenger train services overlap between Bristol Temple Meads and Narroways Junction (where the Severn Beach Line connects onto the Bristol to Birmingham Mainline).

4.3.6 A network plan for MetroWest Phases 1 and 2 is shown in Figure 4.1.

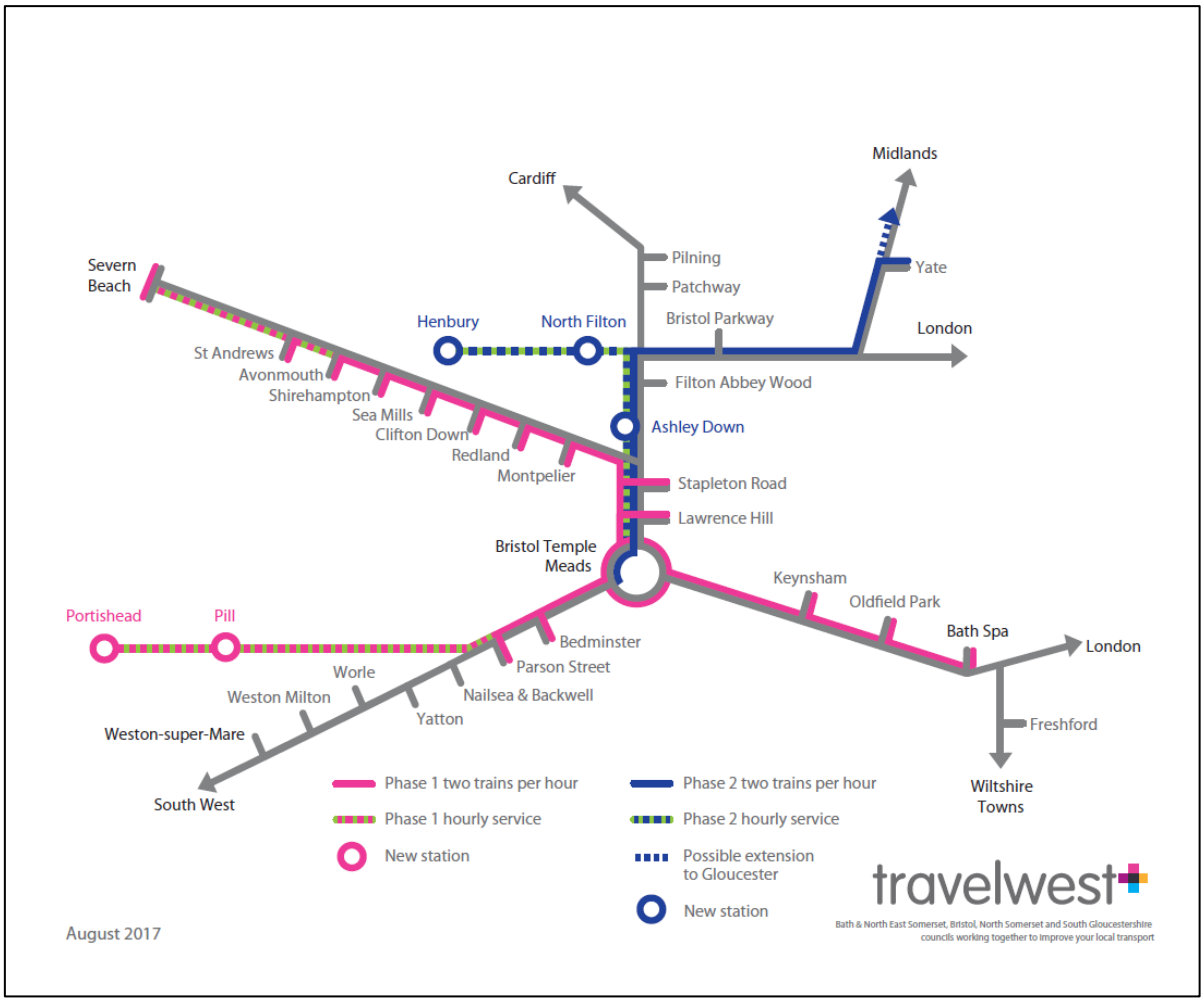

Figure 4.1: MetroWest Phases 1 and 2

MetroWest Phase 1

4.3.7 MetroWest Phase 1 augments committed CP5 and CP6 investment through a modest but strategically important expansion of capacity of the existing local rail network, in parallel with extending the accessibility of the local rail network.

4.3.8 The MetroWest Phase 1 proposals for which development consent is required comprise the re-opening of the disused line between Portishead and Pill. In addition, Associated Development works are proposed in connection with the restoration of passenger services from Pill to Bristol. The works between Portishead and Ashton Junction are the subject of the DCO Application under the provisions of the PA 2008.

4.3.9 The works required to the Severn Beach and Bristol to Bath lines are within Network Rail's operational railway and will be implemented under Network Rail's permitted development rights.

4.3.10 MetroWest Phase 1 is the largest third party promoted rail scheme in England and is the foundation for the MetroWest programme over the next decade.

4.4 MetroWest Phase 1 Objectives

4.4.1 The principal objectives of MetroWest Phase 1, as set out in the MetroWest Phase 1 OBC are as follows:

- 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; and
- 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.

4.4.2 In addition, the OBC sets out the following 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; and
- To contribute to reducing the overall environmental impact of the transport network.

4.4.3 In summary, the MetroWest Phase 1 requires the following physical works:

- Portishead Branch Line DCO Scheme (for which development consent is being sought);
- Modifications to Parson Street Junction including Liberty Lane Sidings and Parson Street Station to connect the Portishead Branch Line with the Mainline between Bristol and Exeter, to be delivered through Network Rail's general permitted development rights;
- Partial reinstatement of the down relief line at Bedminster to provide additional capacity for recessing freight trains on the Bristol to Exeter Mainline, to be delivered through Network Rail's general permitted development rights; and
- Minor signalling works near Severn Beach/Avonmouth to enable additional trains to reverse and enable a longer layover period for passenger trains at Avonmouth and Severn Beach station, to be delivered through Network Rail's general permitted development rights, and a facility at Bathampton to allow trains to return from Bath back to Bristol, to be delivered through Network Rail's general permitted development rights.

4.5 The Need for the DCO Scheme

4.5.1 The need for MetroWest Phase 1 is demonstrated in the MetroWest Phase 1 Outline Business Case Report, which identifies that the project is an ambitious programme of works that will transform the provision of local rail services across the West of England.

4.5.2 The benefits of the scheme are identified in this report as:

- *"an increased local economy by generating £264M of Gross Value Added (GVA) in first ten years from opening) and creating 514 net new permanent jobs*
- *enhanced rail capacity by delivering over 800 additional seats per hour for the local rail network, which in turn will extend the benefits of Network Rail's Western Route Modernisation Programme*
- *a reliable and more frequent public transport service, directly benefitting 180,000 people within 1km of 16 existing stations, with enhanced train service frequency*
- *an increased number of people living within 30 minutes travel time of key employment areas, such as TQEZ,*
- *reduce highway congestion on arterial corridors, including A369 between Portishead and Bristol, significantly improving network resilience*
- *competitive journey times from Portishead and Pill to Bristol Temple Meads (around 23 minutes)*
- *improved accessibility to sites for new homes and employment development in proximity to the rail corridors and bring an additional 50,000+ people within the immediate catchment of the rail network with new stations at Portishead and Pill*
- *reduced overall environmental impact, resulting in improved air quality, on key arterial highway routes*
- *an attractive mode choice and capacity for journeys to work (alternatives to single occupancy car-based travel) addressing long-term car dependency*
- *wide ranging social/health benefits".*

4.5.3 The wider scheme outputs include:

- *"high value for money with a Benefit to Cost Ratio of 3.61 with wider economic impacts, giving £3.61 of quantified benefits for every £1 invested to implement the scheme*
- *forecast revenue surplus every year from year 6 onwards*
- *supporting the delivery of the 105,000 new homes and 82,500 new jobs identified in the WoE Joint Transport Study and WoE Joint Spatial Plan"*

4.5.4 It identifies that the City Region's population is expected to exceed 1.1 million by 2026 and therefore the City Region needs to make sure that its transport infrastructure is fit for purpose and can respond to increasing demand to maximise the economic growth potential. It identifies that MetroWest Phase 1 will:

"play a key role in supporting economic growth and major employment areas including Temple Quarter Enterprise Zone and the five Enterprise Areas across the West of England".

4.5.5 MetroWest Phase 1 is intended to address a number of problems relating to constrained economic growth, congestion, resilience and accessibility that would continue and ultimately detrimentally impact on the economic potential of the city region. The report outlines that the project has clear objectives that will address these problems, which are aligned with the objectives of the JLTP, spatial planning policies, and the vision and objectives of the LEP.

4.6 Consultation

4.6.1 The details of the DCO Scheme have been included in sub-regional and local transport policy for many years. Therefore, it has been subject to a series of strategic engagements and consultations including:

- West of England Joint Transport Study ("JTS") and Joint Spatial Plan ("JSP") consultation;
- Local authority planning including Core Strategies; Local Plans; Sites and Policies Plans; Supplementary Planning documents; and Neighbourhood Development Plans;
- JLTP3 consultation;
- Draft Joint Local Transport Plan 4 ("JLTP4") consultation;
- Strategic Economic Plan ("SEP") consultation;
- West of England Multi-Area Agreement, Local Economic Assessment, LEP Business Plan; and
- MetroWest Stakeholder meetings (including engagement with rail interest groups).

4.6.2 Specific DCO Scheme consultations have also been undertaken and have informed the design and technical development of the DCO Scheme. To date the following public consultations have taken place:

- Portishead station location consultations - 2013, 2014 and 2015;
- Formal Stage 1 Scheme Consultation - June 2015;
- Pill Station Consultation - February 2016;
- Ashton Vale Road Consultation Round 1 - February 2016;
- Ashton Vale Road Consultation Round 2 - November 2016;
- Formal Stage 2 Scheme Consultation - October to December 2017;
- Supplementary Stage 2 Scheme Consultation in 2018 and 2019.

4.6.3 The Applicant carried out their formal consultation in three main stages, being:

- Stage 1 Consultation: from 22 June 2015 to 3 August 2015, compliant with Section 47 of the 2008 Act (as shown in Chapter 8 of the DCO Consultation Report), and was supported by informal consultation. The Statement of Community Consultation (SOCC) was published June 2015 (see Chapter 5 of the DCO Consultation Report);
- Stage 2 Consultation: from 23 October 2017 to 4 December 2017, also compliant with Section 47 of the 2008 Act, and support by informal consultation (as shown in Chapter 5 of the DCO Consultation Report).

However, Stage 2 Consultation was the stage of formal consultation at which the Applicant in parallel complied with the requirements of Sections 42 and 48 of the 2008 Act (shown in Chapters 7 and 9 of the DCO Consultation Report); and

- Additional Stage 2 Consultation: being several further periods of consultation at different times following Stage 2 consultation. These were compliant with Sections 42 and 47 of the 2008 Act (as shown in Chapters 7 and 8 of the DCO Consultation Report), being further periods of consultation on specific topics.

4.6.4 Full detail of these consultation stages is contained in the Consultation Report (DCO Document 5.1). The response to the consultations was very high with almost 2,000 separate responses received over both stages and the level of support for the DCO Scheme is also very high with 95% of community respondents fully or mainly in support of the proposals

4.6.5 Following the formal consultation periods, the DCO Scheme proposals have been refined in the light of feedback and wider engagement with statutory bodies, land owners, government agencies and departments, and parties directly affected by the proposals. Key refinements to the DCO Scheme proposals in summary are:

- Provision has been included for works to the bus stop at Pill Memorial Club, Heywood Road/Lodway in Pill, to allow for mobility impaired customers to access the local connecting bus network and rail replacement bus services;
- Provision has been made for easier access to drains, rhynes and culverts for maintenance purposes;
- Proposals for relocating and protecting underground utilities have been amended;
- Engineering works and lineside equipment through the Avon Gorge have been designed alongside engagement with bodies such as Historic England and Natural England to minimise impacts during both the construction and operational phases;
- Revisions to the proposed restrictions to on-street parking around the station sites in both Portishead and Pill to reduce the extent of the restrictions;
- Agreement in principle for the provision of parking permits to offset displaced on-street parking for the Marina Healthcare Centre, Harbour Road, Portishead;
- Revisions to the design of the DCO Scheme to reduce the impact on Bristol Port, particularly to reduce the extent of temporary and permanent land required from Bristol Port;
- A combined design with the National Grid for the Hinkley Connection DCO Scheme in relation to temporary compounds, access and haul roads at Sheepway to co-ordinate land and timescale interfaces;
- Retained headroom for Quarry Bridge No. 2 for National Trust vehicles in the Avon Gorge through a revised design of works to the bridge;

- Refinements to Trinity Bridge and the surrounding area in Portishead including footpath works;
- Extension of the bridleway under the M5 Avonmouth Bridge, improving the network by creating a new link; and
- Changes to construction compounds to reduce land required from third parties.

CHAPTER 5

Legislative and Planning Framework

5.1 Introduction

5.1.1 In determining the DCO Application, the Secretary of State is required to comply with the UK's international obligations, statutory duties and within the law. The relevant legal framework comprises instruments at International, European and National level.

5.1.2 Under the PA 2008 the principal policy considerations that are to be applied are contained in the NPSNN.

5.1.3 This section identifies key International and European guidance and provides an overview of the key relevant planning policies and other guidance at a national, regional and local level. As the DCO Scheme involves substantial physical works, most consideration is given to the relevant planning policies of NSDC and BCC through which the DCO Scheme passes.

5.2 International and European Framework

Convention on Wetlands of International Importance especially as Waterfowl Habitat (the "Ramsar Convention")

5.2.1 The UK ratified the Ramsar Convention in 1976 and as a contracting party is required to formulate and implement planning to promote the conservation of wetlands included in the Ramsar List and as far as possible the wise use of wetlands in the territory of the UK.

EU Directive 92/43/EEC on habitats and Directive 2009/147/EC on birds

5.2.2 European Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora ("the Habitats Directive") and Directive 2009/147/EC on the conservation of wild birds ("the Birds Directive") form the cornerstone of Europe's nature conservation policy. The policy is built around two pillars: the Natura 2000 network of protected sites and the strict system of species protection.

5.3 National Legal Framework

5.3.1 The national legal framework relevant to the DCO Scheme sets out:

- the procedures that are required to be followed in the determination of the DCO Application;
- the obligations placed on competent authorities, including the Secretary of State, which must be complied with in the determination of the DCO Application; and
- the regulatory frameworks within which activities to be undertaken in the construction and operation of the DCO Scheme will be regulated.

The Planning Act 2008

5.3.2 The PA 2008 introduced a new consenting procedure for NSIPs relating to energy, transport, water, wastewater and waste, including the construction or alteration of a railway. Section 14 lists types of projects which can constitute an NSIP, including at Section 14(1)(k) the construction or alteration of a railway. Section 25(1) and (2) further defines railways NSIPs as including the construction and alteration of projects, where the railway when constructed (or altered) will be wholly within England, is part of a network operated by an approved operator, and where the construction does not benefit from permitted development rights.

5.3.3 The Highway and Railway (Nationally Significant Infrastructure Project) Order 2013 amended Section 25 of the Planning Act 2008 on railways to insert the requirement for a railway NSIP to also comprise:

5.3.4 "*a stretch of track that is a continuous length of more than 2 kilometres" which "is not on land that was operational land of a railway undertaker immediately before the construction work began or is on land that was acquired at an earlier date for the purpose of constructing the railway*".

5.3.5 Section 104 of the PA 2008 provides for the determination of applications for development consent where a National Policy Statement ("NPS") is in force. The Secretary of State must, in determining an application, have regard to the relevant NPS together with any Local Impact Report and such other matters as are relevant to the determination. The decision must be made in accordance with the relevant NPS unless one of the exceptions described in S104 (4)-(8) apply. These include if the approval in accordance with the NPS would place in contravention of international treaty obligations or would otherwise be unlawful, or where the harm caused by a project outweighs its benefits.

5.3.6 The relevant NPS that the DCO Scheme will be assessed against is the National Policy Statement for National Networks (NPSNN) (Dec 2014).

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 and 2017

5.3.7 The DCO Application is subject to the process of EIA. This is because the DCO Scheme is a type of development listed in Schedule 2 (10)(d) to The Infrastructure Planning (Environmental Impact Assessment) Regulations ("EIA Regulations") 2009 and 2017 that is likely to have significant effects on the environment by virtue of factors such as its nature, size, or location and NSDC (by letter dated 23 June 2015) which notified The Planning Inspectorate under Regulation 6(1)(b) of the EIA Regulations 2009 of its intention to provide an ES in support of the DCO Application. As provided in Regulation 4(1) of the EIA Regulations 2009, this notification determined the status of the DCO Application as EIA development. Details of the approach to the preparation of the EIA and the drafting of the ES is described in Chapter 5: *Approach to the Environmental Statement*, in the ES.

The Conservation of Habitats and Species Regulations 2010 (as amended)

5.3.8 The Conservation of Habitats and Species Regulations 2010 (as amended) ("the Habitat Regulations") transpose the Habitats Directive and the Birds Directive in England and Wales and territorial seas.

5.3.9 The Habitat Regulations provide protection for 'European sites', which comprise Special Areas of Conservation (“SAC”), Special Protection Areas (“SPA”) and candidate SACs (“cSAC”). Together, these sites provide a network of sites known as Natura 2000. As a matter of policy, the UK Government also treats as European sites potential SPAs (“pSPA”), possible SACs, listed or proposed Ramsar sites, and sites identified as required as compensatory measures for adverse effects on such European sites.

5.3.10 PINS Advice Note 10: Habitat Regulations Assessment relevant to nationally significant infrastructure projects (November 2017) confirms that the Secretary of State is the competent authority for the purposes of the Habitats Regulations. Where any NSIP proposal is likely to have a significant effect upon a European site, either individually or in combination with other plans or projects, an appropriate assessment must be undertaken by the Secretary of State. Consent cannot be granted if the Secretary of State concludes that the development will adversely affect a European site, despite any proposed avoidance or mitigation measures, or if uncertainty remains, unless there are no alternative solutions, there are Imperative Reasons of Overriding Public Interest (“IROPI”) for the development and compensatory measures have been secured.

5.3.11 The Habitat Regulations also confer protection on European Protected Species(“EPS”), providing a framework within which controls are placed on activities that may cause harm to EPS and defining the circumstances under which licences may be granted to permit specified activities to take place.

Natural Environment and Rural Communities Act 2006

5.3.12 The Natural Environment and Rural Communities Act 2006 ("NERC") extended the biodiversity duty set out in the Countryside and Rights of Way ("CRoW") Act 2000 to public bodies and statutory undertakers to ensure due regard to the conservation of biodiversity. Section 40 of the Natural Environment and Rural Communities (“NERC”) Act 2006 imposes a duty on every public authority to have regard to the purpose of conserving biodiversity insofar as it is consistent with the proper exercise of its functions.

Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended)

5.3.13 Schedule 2 Part 18 of the Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended) (“GPDO”) sets out permitted development allowed under a local or private Act or Order:

“which designates specifically the nature of the development authorised and the land upon which it may be carried out"

5.3.14 subject to certain prior approval conditions. Schedule 2 Part 8 Class A allows permitted development for:

"development by railway undertakers on their operational land, required in connection with the movement of traffic by rail" but this does not permit the construction of a railway, railway station or bridge.

5.3.15 Article 3(1) of the GPDO grants deemed planning permission for the classes of development in Schedule 2, subject to the provisions of the GPDO and Regulations 73 to 75 of the Habitat Regulations. Article 3(10) provides that development is not permitted where it is Schedule 1 or 2 development under the EIA Regulations unless it has been screened out of EIA. However, Article 3(12)(b) provides that Article 3(10) does not apply to development for which permission is granted by Class A of Part 18 of Schedule 2, which is development under local or private Acts or Order.

5.3.16 The original railway to Portishead and Portbury was authorised by the Bristol and Portishead Pier and Railway Acts 1863, which is a private Act of Parliament. The development proposed to be undertaken by Network Rail within its operational land as part of MetroWest Phase 1 is within the scope of the development authorised by the 1863 Act. As such, Network Rail proposes to undertake those works using its permitted development rights.

5.4 Planning Policy Framework

Introduction

5.4.1 This section sets out the planning policy relevant to the determination of DCO Scheme. Paragraph 1.2 of the NPSNN confirms its status as the primary policy document for national networks NSIPs:

5.4.2 *“The Secretary of State will use this NPS as the primary basis for making decisions on development consent applications for national networks nationally significant infrastructure projects in England”.*

5.4.3 A detailed assessment of how the DCO Scheme conforms with the NPSNN is therefore included in Chapter 6 of this Statement.

5.4.4 The NPSNN also confirms at paragraphs 1.3 and 1.18 that the relevant development plan and the National Planning Policy Framework ("NPPF") are also likely to be: *“an important and relevant”* matters.

5.4.5 The policy framework for the DCO Scheme is set out in the following sections and therefore includes the NPSNN, the NPPF, National Planning Policy for Waste, National Planning Practice Guidance and the local development plans for NSDC and BCC.

National Policy Statement for National Networks (December (December 2014)

5.4.6 The NPSNN was published by the DfT in December 2014 and designated in January 2015. The NPSNN sets out the Government’s vision and policy against which the Secretary of State will make decisions on applications for development consent.

5.4.7 Paragraph 1.1 of NPSNN states that the purpose of the document is to establish:

"the need for, and Government's policies to deliver, development of nationally significant infrastructure projects (NSIPs) on the national road and rail networks in England. It provides planning guidance for promoters of nationally significant infrastructure projects on the road and rail networks, and the basis for the examination by the Examining Authority and decisions by the Secretary of State".

5.4.8 The NPSNN is not scheme-specific and does not set out a programme of road and rail schemes, but instead deals with road and rail at a strategic level. It also sets out the principles by which applications for road and rail schemes should be assessed. NPSNN paragraph 2.2 states that:

"There is a critical need to improve the national networks to address road congestion and crowding on railways to provide safe, expeditious and resilient networks that better support social and economic activity; and to provide a transport network that is capable of stimulating and supporting economic growth."

5.4.9 The NPSNN sets out general policies in accordance with which applications relating to national networks infrastructure are to be decided. Paragraph 4.2 states that:

"Subject to the detailed policies and protections in this NPS, and the legal constraints set out in the Planning Act, there is a presumption in favour of granting development consent for national networks NSIPs that fall within the need for infrastructure established in this NPS. The statutory framework for deciding NSIP applications where there is a relevant designated NPS is set out in Section 104 of the Planning Act"

5.4.10 Paragraph 4.3 states that:

5.4.11 "*In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the Examining Authority and the Secretary of State should take into account*:

- *its potential benefits including the facilitation of economic development, including job creation, housing and environmental improvement, and any long-term or wider benefits; and*
- *its potential adverse impacts, including any longer-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts."*

5.4.12 The DCO Scheme has therefore been developed to be in conformity with the NPSNN.

National Planning Policy Framework (February 2019)

5.4.13 The revised NPPF, published by the Ministry of Housing, Communities and Local Government in July 2018 and updated in February 2019, sets out Government planning policies for England to achieve sustainable development and details how the policies are expected to be applied. The overarching aim of the NPPF is the achievement of sustainable development, with the planning system expected to contribute to this goal. Within this context, the NPPF places emphasis on contributing to a strong economy by ensuring that development supports growth and innovation,

creating a high quality built environment that supports strong, vibrant and healthy communities, and development that protects and enhances the natural, built and historic environment.

5.4.14 Paragraph 1.18 of the NPSNN notes that the NPPF is likely to be an important and relevant consideration in decisions on NSIPs, but only to the extent relevant to that project. Paragraph 1.19 of the NPSNN states that the NPPF is not intended to contain specific policies for NSIPs where quite particular considerations can apply. The following paragraphs summarise the relevant provisions of the NPPF.

5.4.15 Section 8: "*Promoting healthy and safe communities*", identifies that development has a role in contributing to the promotion of healthy communities by providing safe integrated environments free from crime, deliver high levels of accessibility, and seek to protect and enhance public rights of way.

5.4.16 Section 9: "*Promoting sustainable transport",* and in particular paragraphs 103 and 104 support development that reduces greenhouse gases and reduces congestion, facilitates the use of sustainable modes of transport and develops strategies for the provision of viable infrastructure. Local planning authorities are required to identify and protect sites and routes which could be critical in developing infrastructure to widen transport choice. There is also a requirement to ensure that, during the decision-making process, consideration has been given to maximising the use of sustainable modes of transport.

5.4.17 Section 12: "*Achieving well-designed places*", establishes that good design should be seen as a key aspect of sustainable development and integral to making development acceptable to communities. Good design applies not only to individual buildings, public and private spaces, but also to wider area development schemes. The provisions in this section and particularly paragraph 127 seek to ensure that development is not only aesthetically attractive in appearance, but also that it functions well, optimises the potential of the site, and supports local facilities and transport networks. Whilst it is recognised that the visual appearance of development is important, during the decision-making process consideration will need to be given to the connections between people and places and the integration of new development into the natural, built and historic environment. Paragraph 128 identifies that design quality should be considered throughout the evolution and assessment of a proposals development and seek proactive input from the local planning authority and local community. Further, it identifies that applicants who work closely with stakeholders and the local community to gain their input and allow them to influence the design process should be looked upon more favourably.

5.4.18 Section 13: "*Protecting Green Belt land*", seeks to define and enhance the beneficial use of Green Belt land. ‘Inappropriate development’ should not be approved except in ‘very special circumstances’ where any harm is clearly outweighed by other considerations. Paragraph 145 identifies certain forms of development that are not considered inappropriate in the Green Belt provided they preserve openness and do not conflict with the purposes of the Green Belt, including local transport infrastructure which can demonstrate a requirement for a Green Belt location.

5.4.19 Section 14: "*Meeting the challenge of climate change, flooding and coastal change*", provides more detailed guidance on the topic. Paragraph 155 details the required consideration to be given in relation to development and flood risk. It states;

5.4.20 "*Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere*".

5.4.21 The NPPF advocates local planning authorities to adopt the sequential test to ensure that development is focused away from flood risk areas. Paragraphs 157 and 161 of the NPPF outline this approach along with the exception test, should a location outside of flood risk not be feasible. Subsequently, paragraph 163 of the NPPF goes on to state that:

5.4.22 "*When determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood risk assessment*".

5.4.23 Section 15: "*Conserving and enhancing the natural environment*", sets out the principles and requirements to protect and enhance the natural and local environment. In particular, paragraph 170 seeks to conserve and enhance valued landscapes, minimise the impacts on biodiversity, including providing net gains in biodiversity where possible; and remediating and mitigating unstable land.

5.4.24 Paragraph 175 identifies that when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying a number of principles. Relevant principles from this Paragraph include:

- If significant harm to biodiversity cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- Development whose primary objective is to conserve or enhance biodiversity should be supported; and
- Opportunities to incorporate biodiversity improvements in and around developments should be encouraged.

5.4.25 Paragraph 178 details how planning policies and decisions should also ensure that a site is suitable for its new use taking account of ground conditions and land instability. Consideration should also be given to:

5.4.26 "*natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation)".*

5.4.27 Paragraph 180 states that:

5.4.28 "*Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural*

environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development and avoid noise giving rise to significant adverse impacts on health and the quality of life;

b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and

c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation."

5.4.29 Section 16: "*Conserving and enhancing the historic environment*", specifically paragraph 189 states that in determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting.

National Planning Policy for Waste (October 2014)

5.4.30 The National Planning Policy for Waste sets out detailed waste planning policies and is intended to be read in conjunction with the NPPF, the Waste Management Plan for England and National Policy Statements for Waste Water and Hazardous Waste. Paragraph 8 includes provisions which requires local planning authorities to ensure that applicants who propose non-waste related development have given appropriate consideration to the implications of their proposal on existing waste management facilities, and on sites and areas allocated for waste management. Applicants should ensure that their proposals are acceptable and will not prejudice the implementation of the waste hierarchy and/or the efficient operation of such facilities. In addition, proposals should ensure that the handling of waste arising from the construction and operation of development maximises reuse / recovery opportunities, and minimises off-site disposal.

5.4.31 The assessment of waste management has been integral to the development of the DCO Scheme and its compliance with the National Planning Policy for Waste and other statutory waste regulations has been given full consideration. The assessment provided in Chapter 12 of the ES demonstrates that where impacts have been identified these will be addressed through ensuring that the construction of the DCO Scheme responds to national regulatory standards, national and local policy requirements and that mitigation measures will promote positive development outcomes.

National Planning Practice Guidance (March 2014)

5.4.32 On 6 March 2014 DCLG launched the National Planning Practice Guidance (“NPPG”) as a web-based resource to provide up-to-date practical planning guidance on a range of categories covering issues such as the Green Belt, flood risk, housing and employment and transport and infrastructure, along with guidance to assist with the preparation of local plans, determining planning applications, and EIA. This guidance recognises the importance of local infrastructure planning in the development of sustainable communities.

5.5 Regional Planning Framework

5.5.1 NSDC, BCC, B&NES and SGC are jointly producing the West of England JSP, which will provide a strategic planning framework for the West of England. It will be used to inform local plan reviews and set out objectives for the overall quantum of housing and jobs to be delivered within the West of England, including their distribution across the sub-region, the overall spatial strategy, strategic priorities, and strategic infrastructure necessary to support the deliver the strategy. The JSP was submitted for Examination in Public on 13 April 2018. The plan is still currently going through the examination process. Once adopted the JSP will form a statutory development plan document.

5.5.2 The JSP is accompanied by the JTS, which establishes a set of integrated proposals for future transport investment to address existing deficiencies as well as the future impact of development supported by the JSP.

5.5.3 The JSP establishes a vision and four strategic priorities which seek to deliver a more integrated and reliable transport network, to support sustainable economic growth and healthy and sustainable lifestyles for all communities, whilst addressing a series of critical issues:

“The form and function of development in some parts of the West of England has resulted in significant pressure on infrastructure and settlement patterns which are over-reliant on the private car. This inhibits wealth creation and productivity and contributes to climate change and poor health.”

5.5.4 The outcome of the Strategic Priorities and Policy framework is to address these critical issues and deliver:

- *"Sustainable growth of homes and jobs, supported by necessary infrastructure.*
- *Reduction in car dependency and improved public transport access to opportunity, jobs and services.*
- *Contribution to mitigating impacts of climate change.*
- *Delivery of Communities in which people want to live and work.*
- *Improved health and wellbeing outcomes.”*

5.5.5 Subsequently, consideration is then given to likely mitigation and infrastructure that would be required to support the strategy. It recognises the issues faced in terms of an increasing volume of travel, which contributes to increased journey times and congestion and has resulting implications for sustainable economic growth. It identifies the importance that transport investment can have in terms of addressing this trend, mitigating existing deficiencies and supporting future development aspirations. Key to this is prioritising and maximising the effectiveness of sustainable travel choices and encouraging a modal shift to more sustainable means, with improved reliability of service and access to rail, MetroBus (bus rapid transit), park and ride, bus, cycling and walking provisions. Paragraph 32 identifies that rail will have a key role to access facilities in urban centres, but will need investment to increase capacity, improve access to stations with sufficient parking and support the creation of interchanges.

5.5.6 Chapter 4 sets out the Policy Framework, establishing policies for a spatial strategy and other requirements, including housing, employment and strategic infrastructure. Policy 2 – The Spatial Strategy seeks to deliver on existing Local Plan commitments, whilst Policy 4 – The Employment Land Requirement seeks to improve accessibility to employment, including for residents in south Bristol, which will be supported through investment in sustainable transport infrastructure. Policy 5 – Place Shaping Principles identifies that all new development must contribute towards the delivery of high quality and sustainable places and a key principle of this is to provide and ensure access to infrastructure including public transport to reduce the reliance on car usage. Policy 6 – Strategic Infrastructure Requirements details the transport infrastructure requirements and priorities, which include:

"Working with delivery partners, the strategic transport infrastructure identified on the Key Diagram and in the West of England Joint Infrastructure Delivery Programme will be provided within the period 2016-2036.

5.5.7 Priority will be given to schemes which support the delivery of the spatial strategy as set out in Policy 2.

5.5.8 Provision will be made in the Local Transport Plan and local plans for an integrated corridor-based approach to transport improvements which supports sustainable and active travel choices and maximises the effectiveness of non-car modes."

5.5.9 The JTS builds on the provisions within the JSP and sets out a transport vision for the West of England, which reflects the existing and future challenges on the transport network. It reflects on recent and planned improvements to both the strategic road network and the rail network, including proposals for the redevelopment of Bristol Temple Meads station. In particular, it identifies that there is a clear programme of investment for further schemes including MetroWest and MetroBus, which aim to provide stronger links to the West of England's priority development sites within the Enterprise Zone and Enterprise Areas.

5.6 Local Planning Framework Overview

5.6.1 The local planning framework comprises a number of key adopted documents which form the statutory development plan for each authority, against which proposals seeking planning permission are assessed. These policy documents comprise saved policies from extant Local Plans as well as new emerging policy documents.

5.6.2 Whilst emerging plans and the policies and proposals contained within them do not form part of the development plan until adopted, depending on the stage at which such documents have reached in the plan preparation process they may be held as material considerations in the determination of applications for development. The further advanced such documents are, the more weight they carry.

5.6.3 Whilst the MetroWest Phase 1 affects all four West of England Authorities, the DCO Scheme only passes within the jurisdiction of the NSDC and BCC planning authorities. The following subsections therefore only summarise the local planning frameworks for NSDC and BCC.

North Somerset District Council

5.6.4 The statutory development plan for North Somerset comprises the following documents:

- North Somerset Council Core Strategy (Adopted January 2017);
- Sites and Policies Plan Part 1: Development Management Policies (Adopted July 2016);
- Sites and Policies Plan Part 2: Site Allocations (Adopted 10 April 2018); and
- West of England Joint Waste Core Strategy (Adopted 2011).

5.6.5 Of particular importance to the DCO Scheme is Policy DM22 Existing and Proposed Railway Lines from the NSDC Sites and Policies Plan Part 1: Development Management Policies document. This safeguards land between Portishead to Pill for the Portishead to Bristol railway line including railway stations, associated car parking and highways works, protecting the railway corridor from inappropriate development.

5.6.6 Core Strategy Policy CS24 and Development Management Policies Policy DM49: Royal Portbury Dock state that the role of the Royal Portbury Dock will be maintained and enhanced. Land at Court House Farm, Easton-in-Gordano/Portbury is safeguarded for port-related development, subject to remonstrating that development would not prejudice proposals for a station and associated parking facilities off Royal Portbury Dock Road.

5.6.7 There are also the following adopted Supplementary Planning Documents ("SPD")

- Creating Sustainable Buildings and Places SPD (March 2015);
- Parking Standards SPD (November 2013);
- Travel Plans SPD (November 2010);
- Biodiversity and Trees SPD (December 2005); and
- Landscape Character Assessment SPD (September 2018).

5.6.8 Other material planning considerations include the following Planning Guidance:

- Forest of Avon – A Guide for Developers (October 2005); and
- North Somerset and Mendip Bats Special Area of Conservation (SAC).

5.6.9 There is one Neighbourhood Development Plan ("NDP") of relevance, the Long Ashton Neighbourhood Development Plan 2013-2033.

5.6.10 There are also two emerging NDPs, though which consequently currently have little material weight:

- Portbury NDP: NSDC approved an application from Portbury Parish Council to designate Portbury as a neighbourhood area. A future NDP is intended to be prepared for this area; and
- Pill/Easton-in-Gordano and Abbots Leigh NDP: NSDC approved a joint application from Pill/Easton-in-Gordano and Abbots Leigh Parish Councils to designate the two parishes as a combined neighbourhood area. A future NDP is intended to be prepared for this area.

Bristol City Council

5.6.11 The statutory development plan for BCC is the Bristol Local Plan comprising the following suite of documents, which are used alongside the NPPF to guide development in the city:

- Bristol Core Strategy (Adopted June 2011);
- Site Allocations and Development Management Policies (Adopted July 2014);
- Bristol Central Area Plan (Adopted March 2015); and
- West of England Joint Waste Core Strategy (Adopted March 2011).

5.6.12 There are also the following material considerations:

- Planning Obligations SPD (September 2012); and
- PAN 2 - Conservation Area Enhancement Statements (November 1993).

5.6.13 Other emerging planning documents that will have increasing weight, include the new Local Plan which will detail how Bristol develops over the next 20 years and establish a strategy, policies, designations and allocations to deliver new homes and jobs and safeguard environmental assets. It will ultimately replace the current suite of adopted plans. Consultation has been undertaken on a Local Plan Review consultation document: The Draft Policies and Development Allocations (March 2019) between March and May 2019.

5.7 Other Relevant Strategies and Plans

West of England LEP Strategic Economic Plan 2015-2030

5.7.1 The Strategic Economic Plan ("SEP") prepared by the LEP, outlines how the region will achieve sustainable economic growth over the plan period. Specifically, the SEP was prepared to support the West of England's attempts to secure government funding to assist economic development in the region between 2015 and 2021, via the Local Growth Deals initiative. Within this context, the SEP aims to facilitate the creation of more than 25,000 jobs and develop an economy worth around £25bn per year (which also contributes some £10bn to the Treasury annually).

5.7.2 The SEP positions the West of England as: '*the city region of choice for a sustainable future'*, based on the region's legacy of innovation, world class university and research facilities, strong visitor economy and high quality of life. This positioning is supported by a focus on five priority sectors: creative and digital media, low carbon, high tech industries, advanced engineering and aerospace, and professional services. The SEP highlights that expansion of these sectors will be driven by a number of: '*levers of growth'*, including investment and promotion, and places and infrastructure. In particular, infrastructure is presented as a key enabler of growth in the region, with MetroWest rail improvements phase 1 and phase 2 emphasised as key cross-boundary infrastructure interventions in the SEP.

5.7.3 The SEP also predicts that MetroWest Phase 1 could generate around 1150 direct jobs leading to a contribution to the region's economy of around £110m per year (measured in terms of gross value added ("GVA")). These economic outputs will be achieved by increasing the connectivity between

TQEZ and the West of England's various Enterprise Areas, including Bath City Riverside, Avonmouth Severnside, J21, Filton and Emerson Green, improving connectivity to these major employment sites for the skilled workforce residing in the region.

West of England Joint Local Transport Plan 3 (2011-2026) (March 2011)

5.7.4 The West of England Joint Local Transport Plan, published by the West of England Partnership, outlines the transport strategy for the sub-region going forward. The transport strategy for the West of England revolves around five aspirational goals: reducing carbon emissions, supporting economic growth, improving accessibility, providing for a safe, healthy and secure population, and enhancing quality of life.

5.7.5 The plan describes the West of England as one of the fastest growing economies in the UK and a critical hub for the South-West's economy. The West of England is home to many major employment sites, the majority of which are located in proximity to Bristol City Centre or the North Fringe. Forecast growth in economic output for Bristol is estimated at 3.4% between 2010 and 2020, compared to 3.2% across the UK. Similarly, Bristol is regarded as the most competitive large city outside London. Within this context, the wider sub-region is expected to deliver 95,000 new jobs over the next 20 years which will assist local economic growth and national economic recovery. To support these ambitions, the plan highlights major transport improvements as a key priority for businesses. The plan aims to synchronise transport investment with major development and regeneration areas, such as Bristol's TQEZ.

5.7.6 The plan suggests that residents in North Somerset would be primary beneficiaries of any investment in transport infrastructure. Currently, residents in the district have the worst accessibility to major employment sites of any residents across the West of England. Only 21% of residents can access major employment sites by public transport within 20 minutes, compared to a regional average of 31%. At the same time, only 55% of residents have access within 40 minutes, compared to 73% for the West of England.

5.7.7 The key strategy of the plan is to support economic growth by providing an affordable, low carbon, accessible, integrated, healthy, safe and reliable transport network. Provision of reliable public transport infrastructure is considered to be a vital mechanism for achieving this strategy. In particular, the plan acknowledges a range of major transport schemes that were prioritised through the DfT's Regional Funding Allocation in 2010. These major schemes include significant investment in rail infrastructure such as MetroWest Phase 1. The DCO Scheme, as part of MetroWest Phase 1, aims to reinstate rail connections between Portishead and Bristol, to provide enhanced accessibility to the city centre for Portishead's 23,699 residents (2011 census). Currently, the plan suggests there is significant out-commuting from Portishead to Bristol via car, meaning the Portishead Rail Corridor will provide a more sustainable, alternative mode of transport for many workers and will also improve network resilience.

West of England Joint Local Transport Plan 4 (2011-2026)

5.7.8 The Draft JLTP4 was published in January 2019 for consultation between 6 February 2019 and 20 March 2019. MetroWest is confirmed as a committed project (Phase 1 and Phase 2), which will deliver by 2021/22:

- *"Half hourly services on the Severn Beach to Bath Spa and Westbury Lines. This is forecast to generate 0.6 million passengers a year*
- *Reopening of the Portishead Line, with initially an hourly service (half hourly aspiration) to Bristol Temple Meads and new stations at Portishead and Pill. This is forecast to generate 0.4 million passengers a year*
- *Re-opening of the Henbury Line with new stations at Henbury and North Filton to serve Cribbs Patchway New Neighbourhood (5,700 new homes) and the new Bristol Arena. This is forecast to generate 0.4 million new passengers a year*
- *New station at Ashley Down on the Filton Bank l Half hourly services between Bristol Temple Meads and Yate (3,000 new homes) by 2021, with possible extension to Gloucester. This is forecast to generate 0.25 million new passengers a year*
- *Stations to be brought up to a new MetroWest high standard of passenger facilities, with step free access*
- *New station at Portway, part funded by the New Station Fund, to serve the adjacent Park & Ride site".*

CHAPTER 6

NPSNN Policy Assessment

6.1 Introduction

6.1.1 This section provides an analysis of the key planning issues and other material considerations of particular relevance to the DCO Scheme, further to the consideration of national, regional and local policy in the previous chapter, and the consideration of environmental, social and economic effects in the ES. Specifically, this section follows the format of the sections of the NPSNN, as it is the primary policy document for decisions on NSIPs.

6.2 The need for National Networks Development

6.2.1 The Government's vision and strategic objectives for the national networks are described in the Summary of Need in Chapter 2 of the NPSNN as follows:

"The Government will deliver national networks that meet the country's long-term needs; supporting a prosperous and competitive economy and improving overall quality of life, as part of a wider transport system. This means:

- *Networks with the capacity and connectivity and resilience to support national and local economic activity and facilitate growth and create jobs.*
- *Networks which support and improve journey quality, reliability and safety.*
- *Networks which support the delivery of environmental goals and the move to a low carbon economy.*
- *Networks which join up our communities and link effectively to each other." (page 9)*

6.2.2 The DCO Scheme will contribute towards achieving this vision and the associated objectives through the delivery of an NSIP, which will support the delivery of sustainable economic growth and social development across the region.

6.2.3 The NPSNN identifies that travel demand for road and rail is expected to increase in the foreseeable future with economic and population growth (paragraph 2.4). Without action, this growth will in turn lead to a worsening in congestion and crowding, safety issues, constraining economic growth, and worsening quality of life and environmental objectives (paragraph 2.9). Transportation networks can unlock regional economic growth and regeneration, by improving connectivity and performance, particularly in disadvantaged areas (paragraph 2.6), which is a key driver behind the delivery of the DCO Scheme.

6.2.4 Paragraph 2.29 of the NPSNN refers to the Government's vision for the transport system as a driver for economic growth and social development. It states the railway must:

- *“offer a safe and reliable route to work;*
- *facilitate increases in both business and leisure travel;*
- *support regional and local public transport to connect communities with public services, with workplaces and with each other, and*
- *provide for the transport of freight across the country, and to and from ports, in order to help meet environmental goals and improve quality of life.”*

6.2.5 Paragraph 2.33 of the NPSNN identifies that passenger demand on the rail network is predicted to continue its current trend of significant growth. This is supported in Table 2 of the NPSNN (*Growth in Passenger km (in %) since 2011 including HS2 Phase 1),* which identifies that by 2033 it is estimated that there will be a total average growth of 50.1%.

6.2.6 At paragraphs 2.35-2.36 the NPSNN goes on to confirm that it is the Government's view that rail transport has a crucial role to play in delivering significant reduction in pollution and congestion and concludes that there is a compelling need to develop the national networks.

6.2.7 At paragraph 2.37, it states:

"the Government's policy is to improve the capacity, capability, reliability and resilience of the rail network at key locations for both passenger and freight movements to reflect growth in demand, reduce crowding, improve journey times, maintain or improve operational performance and facilitate modal shift from road to rail…".

6.2.8 The other emphasis of the Government is to encourage modal shift to rail in the light of the need to reduce significantly national CO_2 emissions from the transport sector (paragraph 2.40).

6.2.9 The DCO Scheme seeks to help address the future predicted passenger demand on the rail network in the West of England, whilst providing a viable, efficient, accessible and affordable alternative to road transport. The overall vision for the DCO Scheme is to provide support for sustainable economic growth and social development and inclusion across the region.

6.2.10 The ES provides an assessment of the DCO Scheme's socio-economic effects and economic regeneration in Chapter 14, and it states that the DCO Scheme is anticipated to result in positive effects on a range of socio-economic indicators. The assessment demonstrates that the DCO Scheme will result in positive effects for local residents via their role as commuters, labour market participants, retail and leisure consumers; local businesses through expanded labour supply and consumer markets; land owners and developers through increased land values and development viability; and investors through increased attractiveness to business relocation.

6.2.11 The key socio-economic benefits arising from the DCO Scheme are:

- beneficial effect of direct job creation and direct Gross Value Added ("GVA") uplift in the construction stage;
- beneficial effect of indirect job creation and indirect GVA uplift for local businesses in the construction stage;
- beneficial effect of direct job creation in the operational stage;
- major beneficial effect of improved journey time savings in the operational stage; and
- major beneficial effect of wider regeneration during the operational stage, specifically relating to contributions to planning policy, enabling and unlocking of development land, increasing accessibility and connectivity and potential transformation of the study area's socio-economic profile.

6.3 Wider Government Policy on National Networks

6.3.1 Chapter 3 of the NPSNN provides further guidance on the Government's wider policies for national networks. The need to improve transport networks should be considered within the wider context of the Government's policy on economic performance, the environment, safety, technology, sustainable transport and accessibility, as well as journey reliability and the experience of road/rail users (Paragraph 3.1).

Environmental and Social Impacts

6.3.2 NPSNN paragraph 3.3 states:

"In delivering new schemes, the Government expects applicants to avoid and mitigate environmental and social impacts in line with the principles set out in the NPPF and the Government's planning guidance. Applicants should also provide evidence that they have considered reasonable opportunities to deliver environmental and social benefits as part of schemes."

6.3.3 The DCO Scheme as a public transport scheme is considered to deliver considerable environmental and social benefits, including the reduction of car trips by promoting modal shift and providing the access to population groups to employment opportunities and other services (e.g. education, health, leisure/tourism, religious activities etc.) in the region.

6.3.4 The need to deliver social and economic benefits has driven the need for the DCO Scheme and certain details in its design, such as multi-modal accessibility for users, has been influenced by the stakeholder engagement and public consultation, as set out in the Consultation Report (Document 5.1).

6.3.5 To limit the environmental impact, the DCO Scheme has been largely kept within the footprint of the former railway line, utilising previously developed land as opposed to greenfield land.

6.3.6 During construction, the successful contractors will be required to comply with the CoCP and the Master CEMP to control the adverse effects of construction activities on local communities and the environment (see the ES Appendices 4.1 and 4.2).

6.3.7 Various potential adverse effects will be managed through the licensable activities, including:

- Ecological licences from Natural England to handle protected species (bats and great crested newts) and to close badger setts.
- If required, Section 28 consents for the works in the Avon Gorge SSSI from Natural England (in addition to the Habitat Regulations Assessment ("HRA") process) for works in the Avon Gorge Woodlands SAC. The boundaries of the SSSI and the SAC are co-incident.
- Environmental permits for activities in or near watercourses under the Environmental Permitting Regulations 2016 from the Environment Agency, such as replacement of culverts, track works close to a Main River, and within a floodplain.
- Land drainage consents from the lead local flood authority either North Somerset Levels Inland Drainage Board ("NSLIDB"), NSDC or BCC.

- Water abstraction and discharge licences from the Environment Agency and utility companies.
- Waste handling, storage and disposal from the Environment Agency.
- Section 61 consents for noise nuisance.

6.3.8 Opportunities to mitigate environmental effects and opportunities for enhancement measures have been taken where possible and where compatible with the efficient operation and maintenance of the railway. The environmental mitigation proposals are set out in the ES in the relevant topic assessment chapters and are summarised in the Schedule of Mitigation in Appendix 4.3. Examples of environmental mitigation include the following:

- A Written Scheme of Investigation ("WSI"), to include an archaeological watching brief of top soil stripping at greenfield construction compounds;
- Implementation of the Avon Gorge Vegetation Management Plan ("AGVMP") to include positive management of SAC woodland and grassland habitats, replacement of rare whitebeam trees lost during construction with saplings grown off site from seed collected in the gorge, and strategies to conserve Bristol rock-cress and pale St John's wort;
- Landscape planting scheme along the disused railway to recreate a mosaic of habitats suitable for a range of species (nesting birds, reptiles, amphibians);
- Replant lost sections of hedgerow with a mix of native woodland species;
- Various measures to mitigate impacts on bats between Portishead and Pill including maintaining a dark corridor along the railway through a mix of retained and new planting, maintain an existing structure used as a bat roost, install new bat boxes, and reduce the effects of lighting at Pill station on the bat roost and flight corridor;
- Along the operational corridor, exclude bats from the tunnels during construction work, provide new bat boxes, and secure a cave in the woods from human interference;
- Implement a reptile strategy, including translocation during construction;
- Construct three new ponds and enhance the habitat of two existing pond for great crested newts;
- Incorporate a reptile / great crested newt tunnel under Quays Avenue to mitigate fragmentation of habitat;
- Management of potentially contaminated ballast during excavations and temporary storage on site;
- Manage of top soils at construction sites and the restoration of those sites to agricultural land;
- Design evolution of Portishead station and the Trinity Primary School Bridge location, layout and appearance;
- Acoustic barriers on the south side of the railway between Portishead Station and Trinity Primary School and by the old Portbury Station House;

- Design considerations for people with reduced mobility including step free access to Portishead and Pill stations, and low gradients for the pedestrian and cycle ramps on Trinity Primary School Bridge, at Pill station and for the ramp between Avon Vale Road and Avon Road;
- Implementation of a CTMP;
- Temporary drainage of construction compounds and haul roads and new drainage and pollution control on the highway modifications; and
- Provision of floodplain compensation by the Easton-in-Gordano stream and at the proposed Clanage Road permanent maintenance compound.

6.3.9 There is limited scope for environmental enhancement, though this includes the provision of new public rights of way in Portishead to provide for non-motorised journeys to the new station.

6.3.10 The social benefits of the DCO Scheme include those associated with the introduction of the DCO Scheme itself, which would help to ease existing levels of traffic congestion, providing an opportunity for modal change to a more sustainable mode of transport, which should also act as a catalyst to improved social and economic activity within the wider region.

Emissions

6.3.11 Paragraph 3.6 of the NPSNN sets the Government's policy on national networks regarding emissions that:

6.3.12 "*Transport will play an important part in meeting the Government's legally binding carbon targets and other environmental targets. As part of this there is a need to shift to greener technologies and fuels, and to promote lower carbon transport choices".*

6.3.13 Chapter 7 of the ES presents the assessment of the potential for the DCO Scheme to affect air quality. Some construction activities are likely to generate dust, which will be mitigated through the implementation of Best Practicable Means during construction. The DCO Scheme will add diesel multiple unit trains in the area which will add to local and regional CO_2 emissions, though these effects on air quality are not considered to be significant. It is also considered, that the DCO Scheme represents an enhancement to the local transport network and will promote modal shift away from motor vehicle use. Chapter 7 of the ES concludes that the new railway services are expected to reduce emissions per passenger kilometre travelled compared with equivalent road transport through modal shift from car to rail.

Safety

6.3.14 Paragraph 3.12 of the NPSNN deals with safety matters associated with the rail network and states:

"It is the Government's policy, supported by legislation, to ensure that the risks of passenger and workforce accidents are reduced so far as reasonably practicable. Rail schemes should take account of this and seek to further improve safety where the opportunity exists and where there is value for money in doing so by focussing domestic efforts on the achievement of the European Common Safety Targets."

6.3.15 NSDC has sought to apply this policy in its treatment of level crossings over the railway, whether private or publicly accessible. No new level crossings will be created and existing level crossings on the branch line are proposed to be closed, with the exception of the Ashton Vale Road Level Crossing. This all-purpose highway crossing has been modelled for traffic impacts with an increase in train services (and subsequent barrier down time) and can remain operational with only minor amendments to the junction to retain acceptable traffic flows. The existing level crossing is already equipped with full barriers and CCTV, giving the level crossing a very high safety rating.

6.3.16 The reinstatement of the railway at Portishead will include the provision of a new foot and cycle bridge over the railway to secure a formal pedestrian route between Galingale Way and Tansy Lane, but without users having to cross the railway on the level.

6.3.17 Works are proposed in the Avon Gorge, consisting of rock bolting, rock picking and catch fences, to protect the railway from the potential risk of rock fall from the adjacent rock faces of the Avon Gorge. In addition, the existing fencing will be replace with new fencing to prevent trespass.

Technology

6.3.18 Paragraphs 3.13 and 3.14 of the NPSNN note that new and emerging technologies have the potential to make a significant difference to travel, improving safety and journey reliability. However, it is noted that:

"Whilst advances in technology are important, they are not expected, in the foreseeable future, to have a significant impact on the need for development of the national networks. We need to address current congestion pressures and this will include utilising current technology".

6.3.19 The DCO Scheme will entail upgrading an existing freight line and the reinstatement of the disused line between Portbury Dock Junction and Portishead. It is proposed to run diesel multiple unit trains, which are considered to be the only viable option at present, whilst providing a resilient transport network and not precluding the use of new technologies that are under development by the rail industry.

Sustainable Transport

6.3.20 Paragraph 3.1 of the NPSNN states that the Government is:

"committed to providing people with options to choose sustainable modes and making door-to-door journeys by sustainable means an attractive and convenient option. This is essential to reducing carbon emissions from transport".

6.3.21 Paragraph 3.18 of the NPSNN details that on the rail network Station Travel Plans are a means of engaging with station users to encourage them to change the ways they travel to stations.

6.3.22 The DCO Scheme will deliver a sustainable mode of public transport, which will encourage a modal shift away from car journeys, as stated in the OBC. To encourage and reinforce sustainable, 'door-to-door' journeys, Outline Station Travel Plans have been prepared to identify a range of measures for the new stations and ensure they are maintained. The Outline Station Travel Plans for Portishead and Pill are contained at Appendix M of the TA (DCO Document 6.25). Bus stops at Portishead and Pill will allow onward travel using public transport and bicycle parking will also facilitate sustainable trips to and from the station.

Accessibility

6.3.23 Paragraph 3.19 of the NPSNN states that the Government is:

6.3.24 *"committed to creating a more accessible and inclusive transport network that provides a range of opportunities and choices for people to connect with jobs, services and friends and family".*

6.3.25 Applicants are expected to comply with any obligations under the Equality Act 2010, and where appropriate applicants should seek to deliver improvements that reduce community severance and improve accessibility.

6.3.26 The DCO Application is accompanied by the Equality Impact Assessment ("EqIA") (ES Appendix 14.1) and the Health Impact Assessment ("HIA") (ES Appendix 14.2), which detail how regard has been had when designing the DCO Scheme to relevant legislation including the Equality Act 2010.

6.3.27 The DCO Scheme has been designed to deliver improvements to community severance, improve accessibility and provide benefits by providing a safe and reliable means of transport. The DCO Scheme has been designed to be fully accessible, for example with the design of the urban realm around Portishead to facilitate pedestrian movements, the step-free access to the station, the low gradient of the ramps for Trinity Primary School Bridge, the ramp at Pill station, the modifications for the bus stop near Pill station to give step-free access between bus and train, and the pedestrian and cycle ramp at Ashton Vale. The new stations at Portishead and Pill provides positive opportunities for all groups to access sites, services and activities by public transport.

6.4 Assessment Principles

General Principles of Assessment

6.4.1 Chapter 4 of the NPSNN sets out the assessment principles and general policies against which applications relating to national networks infrastructure are to be determined (paragraph 4.1).

6.4.2 Paragraph 4.2 states:

"Subject to the detailed policies and protections in this NPS, and the legal constraints set out in the Planning Act, there is a presumption in favour of granting development consent for national networks NSIPs that fall within the need for infrastructure established in this NPS."

6.4.3 In considering any proposed development, paragraph 4.3 advises that the Examining Authority and the Secretary of State should take into account:

"its potential benefits, including the facilitation of economic development, including job creation, housing and environmental improvement, and any long-term or wider benefits; its potential adverse impacts, including any longer-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts."

6.4.4 Subsequently paragraph 4.4 notes that:

"environmental, safety, social and economic benefits and adverse impacts, should be considered at national, regional and local levels". This information is presented throughout the ES.

6.4.5 Paragraph 4.5 requires that:

"Applications for road and rail projects (…) will normally be supported by a business case prepared in accordance with Treasury Green Book principles".

6.4.6 The NPSNN requires an application for a transportation project to be accompanied by a transport business case, based on the Transport Business Case guidance and WebTAG guidance published by the DfT. WebTAG combines the economic, environmental, and social appraisal of the development which is taken into consideration when deciding whether to finance the project. Paragraph 4.5 also states that:

"This information will be important for the Examining Authority and the Secretary of State's consideration of the adverse impacts and benefits of a proposed development."

6.4.7 Paragraph 4.6 advises that:

"Applications for road and rail projects should usually be supported by a local transport model to provide sufficiently accurate detail of the impacts of a project. The modelling will usually include national level factors around the key drivers of transport demand such as economic growth, demographic change, travel costs and labour market participation, as well as local factors. The Examining Authority and the Secretary of State do not need to be concerned with the national methodology and national assumptions around the key drivers of transport demand. We do encourage an assessment of the benefits and costs of schemes under high and low growth scenarios, in addition to the core case. The modelling should be proportionate to the scale of the scheme and include appropriate sensitivity analysis to consider the impact of uncertainty on project impacts."

6.4.8 Paragraph 4.7 advises that as defined in section 120 of the PA 2008 the Secretary of State should only impose requirements in relation to a development consent, that are:

"necessary, relevant to planning, relevant to the development to be consented, enforceable, precise, and reasonable in all other respects".

6.4.9 Further paragraph 4.10 advises that:

"Planning obligations should only be sought where they are necessary to make the development acceptable in planning terms, directly related to the proposed development and fairly and reasonably related in scale and kind to the development."

6.4.10 NPSNN paragraph 4.11 details that the NPS deals predominantly with linear infrastructure, such as rail development, as this differs to other types of infrastructure covered by the PA 2008 due to the following reasons:

- *"These networks are designed to link together separate points. Consequently, benefits are heavily dependent on both the location of the network and the improvement to it.*
- *Linear infrastructure is connected to a wider network, and any impacts from the development will have an effect on pre-existing sections of the network.*
- *Improvements to infrastructure are often connected to pre-existing sections of the network. Where relevant, this may minimise the total impact of development, but may place some limits on the opportunity for alternatives."*

6.4.11 Consequently, Paragraph 4.12 advises that decision-makers need to appreciate the design restrictions of such linear developments and the generic impacts detailed in the NPS have therefore been prepared to take account of these differences.

6.4.12 Paragraph 4.13 notes that the NPS does not identify the locations where rail network development should be delivered, but states that:

"the location of development will usually be determined by economic activity and population and the location of existing transport networks."

Environmental Impact Assessment

6.4.13 NPSNN Paragraph 4.15 details that an EIA will be required for projects likely to result in significant effects on the environment in accordance with the EIA Regulations. It states that the EIA Directive specifically requires an EIA to:

"identify, describe and assess effects on human beings, fauna and flora, soil, water, air, climate, the landscape, material assets and cultural heritage, and the interaction between them".

6.4.14 The DCO Scheme is an EIA development and the ES (DCO Document References 6.2 – 6.25 submitted with the DCO Application, covers the identification and assessment of likely significant environmental, social and economic effects arising from the construction, operation and maintenance of the DCO Scheme.

Habitats Regulations Assessment

6.4.15 The NPSNN includes obligations on the Secretary of State to consider whether the project is likely to have a significant effect on a European site under the Habitats Regulations (Paragraph 4.22). The applicant is required to provide sufficient information to the Secretary of State to carry out an appropriate assessment if required (Paragraph 4.23). If the appropriate assessment concludes that an adverse effect on site integrity cannot be ruled out, it is possible to apply for a derogation from the Habitats Directive following a three step process: that no feasible, less-damaging alternatives are available; that there are IROPI; and that adequate compensation measures will be put in place to safeguard the overall coherence of the network of protected sites (paragraph 4.24).

6.4.16 The Applicant has submitted a Habitat Regulations Assessment Report which forms Appendix 9.12 to the ES (DCO Document Reference 5.5) to ensure that the Examining Authority and the Secretary of State have the information necessary in order to comply with the Habitat Regulations. The Habitat Regulations Assessment Report covers the following stages.

- Stage 1: Screening. Two European sites were screened into the appropriate assessment, the Avon Gorge Woodlands SAC and the North Somerset and Mendip Bats SAC (bat qualifying features only).
- Stage 2: Appropriate Assessment:
  - The DCO Scheme has been designed to minimise habitat loss and other ecological impacts on the Avon Gorge Woodlands SAC. The preventative measures set out in the AGVMP (ES Appendix 9.11) will avoid and reduce some adverse impacts during construction. However, it is not possible to mitigate fully the impact of the DCO

Scheme on qualifying features. An estimated 0.73 ha of qualifying woodland habitat will be lost, comprising *Tilio-Acerion* Priority habitat, of which about 55% (0.4 ha) is semi-natural ancient woodland and considered to be irreplaceable habitat. The DCO Scheme will also result in the loss of 0.06 ha of *Festuco-Brometalia* a SAC-qualifying grassland, some of which is considered to be temporary, but will need intervention to re-establish the grassland habitat over a number of years. The DCO Scheme will also result in the loss of up to 27 rare whitebeam trees, which are a key species of the SAC qualifying woodland habitat. The losses include 12 Avon whitebeams out of a population of c. 42 trees, approximately 29% of the world population. The loss of whitebeams are expected to be reduced through further refinement of the construction activities. The loss of both the woodland and grassland habitats is considered to be an adverse effect on site integrity.

  - The DCO Scheme lies within and at the outer extent of Zones B and C of the North Somerset Bat Consultation Zone for the North Somerset and Mendips Bat SAC. Two bats trapped along the disused railway were tracked back to the Brockley Hall Stables SSSI, one of the sites making up the North Somerset and Mendip Bats SAC. However, not all the bats using the disused railway corridor will be SAC population bats and it is considered that only very small numbers are likely to be affected. Proposed mitigation to maintain a dark corridor near Royal Portbury Dock and at Pill Station will reduce the potential impacts. It is concluded that there will be no adverse effects on the integrity of the SAC either alone or in combination with other plans or projects.

- Stage 3: Assessment of Alternatives. The HRA presents alternatives for the Portishead to Bristol transport corridor mode selection (DCO Scheme railway vs existing highways) and the selection of the railway alignment (existing alignment vs other options). An assessment of these alternatives all point to the creation of a new service along the existing railway line as providing the only feasible alternative to improve transport links between Portishead and Bristol given the existing congestion on highway routes and the costs of building a railway along a new alignment. The alternatives for the service provision (half hourly vs hourly) have a material effect on the potential environmental impact, as the half hourly scheme would require substantially more engineering works through the Avon Gorge Woodlands SAC. Consequently, the proposed DCO Scheme provides an opportunity to have a lesser effect on the European site.
- Stage 4: IROPI; The Habitats Regulations state that IROPI may be of a social or economic nature, unless the site concerned hosts a priority natural habitat type or a priority species, in which case, the reasons must be either (a) reasons relating to human health, public safety or beneficial consequences of primary importance to the environment; or (b) any other reasons which the competent authority, having due regard to the opinion of the European Commission, considers to be IROPI.

- The DCO Scheme does provide social and economic benefits, which can be used as IROPI for non-priority habitats which are summarised in Table 6.1.

Table 6.1. MetroWest Phase 1 & DCO Scheme Summary of Quantified Benefits

Description	Whole of MetroWest Phase 1 Severn Beach Line, Bath Spa Line & Portishead Line	Portishead Line (DCO Scheme)
Modal Shift	Reduction of 580 car trips per day in the opening year, increasing to 890 less car trips per day by 2036	Reduction of 294 car trips per day in the opening year, increasing to 415 less car trips per day by 2036
Car Use	Reduction of 7,552,018 car kilometres in the opening year	Reduction of 3.9M pcu-km car kilometres in the opening year
Air Quality & Greenhouse Gases	Reduction of 7100 tonnes of CO_2 over 60 years	N/A- The traffic model can't isolate these benefits for the DCO Scheme
Reduction in Road Traffic Accidents	A reduction of 130 accidents over the appraisal period resulting in £5,845,450 of benefits to society	N/A- The traffic model can't isolate these benefits for the DCO Scheme
Job Creation	514 net new direct permanent jobs + temporary jobs during construction	207 net new direct permanent jobs + temporary jobs during construction
Gross Value Added ("GVA") to the economy	£31.87M PA in the opening year, totalling £271M discounted GVA during the first 10 years. Plus a further £59.27M during construction	£12.95M PA in the opening year, totalling £139M discounted GVA during the first 10 years. Plus a further £54.78M during construction
Forecast Rail Passenger demand & number of train sets	2021: 958,980 passenger trips 2036: 1,295,103 passenger trips 6 train sets (including 2 existing train sets on the Severn Beach Line)	2021: 377,021 passenger trips 2036: 509,167 passenger trips 1 train set
Population Benefiting	Will upgrade the existing train service at 16 existing stations across three rail corridors, directly benefiting 180,000 people within a 1km catchment and bring an additional 50,000 people within the catchment of the 2 new stations. The total population benefiting from the project is 230,000.	Will bring an additional 50,000 people within the immediate catchment of the 2 new stations at Portishead and Pill

- As the Avon Gorge Woodlands SAC does host a priority natural habitat, IROPI depend on the more stringent criteria of human health, public safety and wider environmental benefits.
  - *Human health*. The DCO Scheme would remove vehicles from the highway network, potentially encouraging modal shift (from car to rail) which in turn would make a contribution towards improving air quality in Bristol city centre as part of an integrated transport network and associated health benefits from cleaner air. Both Portishead and Pill Stations have been designed to encourage healthier life styles through walking and cycling to the station. Improving accessibility for residents in these towns, particularly for disadvantaged groups such as children, the elderly, and deprived households, offers potential improvements in well-being associated with greater opportunities for work and leisure activities in a wider catchment.
  - *Public safety*. The DCO Scheme offers the opportunity for modal shift from vehicle to train journeys. This could potentially reduce congestion, which would in turn reduce accident rates and facilitate attendance of emergency vehicles (police, ambulance, fire brigade) at incidents. The DCO Scheme promotes a safer mode of transport compared with vehicle journeys, given the much lower accident rates. The DCO Scheme requires various measures to improve the safety of railway maintenance staff and passengers, by replacing the security fencing along the railway to avoid trespass and undertaking geotechnical works for cliff stabilisation in the Avon Gorge.
  - *Beneficial consequences of primary importance to the environment*. While the DCO Scheme would result in an increase of greenhouse gas emissions in the short term, comparing the new services with current vehicle use, the DCO Scheme offers the opportunity for a more sustainable form a transport. In the medium term, technological developments in hybrid engines (electricity, battery, and diesel) would reduce greenhouse gas emissions compared with current technology.
- The securing of necessary compensation measures. The HRA presents a package of measures to compensate for the loss of *Tilio-Acerion* woodland, *Festuco-Brometalia* grassland and the loss of whitebeam species in the Avon Gorge Woodlands SAC. Further details are presented in the AGVMP (ES Appendix 9.11, DCO Document Reference 8.12). The compensation measures primarily apply to land within Network Rail ownership. However, an option has been included to carry out positive management on Forestry Commission (“FC”) land, outside the boundary of the Avon Gorge Woodlands SAC, because Natural England has suggested that this would help the DCO Scheme deliver greater benefit in terms of improving the integrity of the SAC. These measures include:
  - positive management of 1.45 ha of woodland (more than double the area lost);
  - positive management of 0.15 ha of SAC grassland (more than double the area lost);
  - compensation for the loss of whitebeam species by planting out 54 Whitebeam saplings which have been grown off site from seed collected in the Avon Gorge; and
  - a strategy for the conservation of Bristol rock-cress.

6.4.17 These measures have been discussed and will be further developed with Natural England.

6.4.18 The decision to go ahead with a plan or project must meet the conditions and requirements of Article 6(4) of the Habitat Directive. In particular, it must be documented that:

- the alternative put forward for approval is the least damaging for habitats, for species and for the integrity of the Natura 2000 site(s), regardless of economic considerations, and that no other feasible alternative exists that would not adversely affect the integrity of the site(s);
- there are imperative reasons of overriding public interest, including 'those of a social or economic nature' (for non-priority habitats) and human health, public safety and wider environmental benefits for the priority habitat (the *Tilio-acerion* woodland); and
- all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected are taken.

6.4.19 For the reasons set out above it is considered that all three tests are met in the case of the DCO Scheme and that the adverse impact on the integrity of the Avon Gorge Woodland SAC predicted at Stage 2 is adequately compensated. It is concluded that the overall coherence of the Natura 2000 network is maintained.

Alternatives

6.4.20 The NPSNN (Paragraph 4.26) advises that applicants should comply with all legal requirements and any policy requirements set out in this NPS on the assessment of alternatives. In particular:

- The EIA Directive requires projects with significant environmental effects to include an outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects;
- There may also be other specific legal requirements for the consideration of alternatives, for example, under the Habitats and Water Framework Directives and
- There may also be policy requirements in this NPS, for example the flood risk sequential test.

6.4.21 Paragraph 4.27 goes on to explain that

"all projects should be subject to an options appraisal. The appraisal should consider viable modal alternatives and may also consider other Options. Where projects have been subject to full options appraisal in achieving their status within Road or Rail Investment Strategies or other appropriate policies or investment plans, option testing need not be considered by the examining authority or the decision maker. For national road and rail schemes, proportionate option consideration of alternatives will have been undertaken as part of the investment decision making process. It is not necessary for the Examining Authority and the decision maker to reconsider this process, but they should be satisfied that this assessment has been undertaken."

6.4.22 Chapter 3 of the accompanying ES gives full details on the assessment of alternatives and explains why the project design was selected where realistic alternatives existed to be considered. The following scheme options were examined: the choice of the transport corridor, the mode of transport, and the 'Do Nothing'.

Transport corridor

6.4.23 There are three transport corridors between Portishead and Bristol, the A369, the railway corridor which is currently only used for freight to Royal Portbury Dock, and the NCN41 cycle path and River Avon Tow Path.

6.4.24 Given these existing options, the dominant mode of choice is the road vehicle, despite congestion during peak times, especially at Junction 19 and in Ashton. At present the journey time from Portishead to Bristol city centre during the morning peak by bus is over an hour and by car is about 50 minutes. This compares unfavourably with the proposed rail service of 23 minutes between Portishead and Bristol Temple Meads.

6.4.25 There are limited alternatives to the A369 when congestion or disruption occurs, for example due to an incident on the M5. Traffic from Portishead to Bristol may divert to the B3128 or the B3130.

6.4.26 The existing railway line is an under-used asset. The Bristol Port Company is allowed 20 movements in each direction every day but is only operating a small number of train movements. An alternative railway corridor was considered by Brunel in the 1840s, but the steep gradients, need for a long tunnel and available traction technology at that time meant that the route was not feasible. However, building a new railway along another alignment is not feasible, given the topography, environmental and social impacts, and costs.

6.4.27 The cycle/footpath is an unlit, unmetalled route, which is difficult to cycle in winter. It does not provide a suitable alternative route other than for leisure use and for comparatively small numbers of cyclists who commute into Bristol.

6.4.28 In summary, for compelling geographic, topographical, technological, social, environmental and economic reasons, there is no viable alternative railway alignment between Portishead and Bristol, that can be identified as a credible alternative solution to the DCO Scheme. The existing railway corridor for the DCO Scheme is the only feasible option because:

- NSDC and Network Rail between them own the land forming the former railway corridor;
- all the principal structures required for the railway are already in place;
- the railway is on a relatively straight alignment between Portishead and the connection to the existing rail network at Portbury Dock Junction, thereby reducing the land potentially affected by the scheme;
- since the 1860s the physical presence of the railway corridor has influenced the pattern of development in Portishead and Pill; and
- the corridor has been reserved for transport proposals in the relevant planning policy documents.

Transport mode

6.4.29 As described in Section 3.2, previous studies over the last two decades have considered heavy rail, light rail, tram-train, bus services, and a park and ride scheme. The preferred option is to provide a heavy rail service.

Do Nothing

6.4.30 The long term trend of traffic growth along the Portishead to Bristol corridor would continue into the future. As congestion increases journey times would also increase and journey time reliability would worsen. Given the lack of a major alternative mode to the car, increasing congestion would constrain access to employment, education and leisure for residents and business, leading to suppression of the sub-regional economy. The continued dependency on the car as the major mode of transport for the corridor would also affect human health and public safety.

Alternatives for Specific Elements of the DCO Scheme

6.4.31 Alternatives have been considered for the location and layout of features associated with the DCO Scheme and its operation including Portishead Station and Pill Station. The main alternatives considered are detailed in Chapter 3 of the ES and summarised below.

- *The location of Portishead Station*: Three options and several sub-options were considered and were the subject of informal public consultation. The option with the fewest constraints and greatest public support was taken forward;
- *Platform lengths*: Although it is planned to commence services with a three-car train, it was decided to design the platform stations for a five-car train to allow for future expansion of the service;
- *Trinity Primary School Bridge*: Consideration was given to closing the existing informal at grade crossing over the disused railway by Trinity Primary School or replacing it with a pedestrian and cycle bridge. Consultations with the local communities favoured the proposed bridge;
- *Farm Access*: The existing accommodation crossings over the disused railway will have to be closed. A private bridge was discussed with one farm owner, who did not want the bridge due to its size and visual impact. Instead the farmer will be provided with an improved access off Sheepway highway to the field on the south side of the railway;
- *Cattle Creep Bridge*: The bridge deck needs to be improved. Consideration was given to infilling the bridge and enlarging the culvert on the Easton-in-Gordano stream to offset flood flows or replacing the bridge deck. The preferred option is to replace the bridge deck;
- *Pill Station*: Four options for the configuration of Pill station entrance were considered and presented at a micro-consultation. There was very strong support for the option to demolition No. 7 Station Road (the old Station House) and create a new forecourt and station entrance which was taken forward in the design;
- *Location of the Principal Supply Point building (for signalling electrical connections):* Two options were considered for this building, the proposed Ham Green maintenance compound to Pill Tunnel Eastern Portal and the Pill station maintenance compound. The latter was selected, being an urban location outside the Green Belt;

- *Pill Tunnel Eastern Portal maintenance compound*: The initial solution was to provide a maintenance compound on the south side of the railway. Following further technical assessment, it became apparent that locating the compound on the northern side would provide a less constrained access for large vehicles;
- *Avon Gorge Line Speed*: Initial technical work (for the half hourly service) identified the need for a line speed through the gorge to be increased from 30 to 55 mph. However, the engineering works required to increase the line speed were not affordable, so the proposed design for the hourly (or hourly plus) service is based on a 30 mph line speed;
- *Fencing in the Avon Gorge*: Network Rail's fencing policy is based on health and safety risks. For the 55 mph design, it would have been necessary to replace the existing fencing with palisade fencing along both sides of the railway. However, for the lower line speed, the existing fencing will be replaced with paladin fencing;
- *Quarry Bridge No. 2*: Several options were considered to strengthen Quarry Bridge No. 2. The National Trust use the bridge to access their land in the quarry and objected to options which would reduce headroom. The preferred option involves partial dismantling and rebuilding of the bridge and a temporary earth ramp from the railway embankment to a small construction site on the west side of the bridge;
- *Location of signals*: The final design for the signals will be completed during the detailed design phase. If required, minor adjustments to the location of signals will be made to reduce the impact on the Ham Green SSSI and priority habitats and rare species in the Avon Gorge SAC; and
- *Ashton Vale Road highway access*: During the development of the outline design for the half hourly scheme, it became apparent that the traffic impact of the increased operation of the Ashton Vale Road level crossing would be severe. Consequently, various options for an alternative access into the Ashton Vale Industrial Estate were considered and consulted upon with affected parties. Following the adoption of the revised scheme for an hourly (or hourly plus) service, the impact on the level crossing is much less, and it was decided to keep the level crossing open, extend the left hand turn on Winterstoke Road and improve the traffic signals to reduce the impact of barrier closures on traffic.

Criteria for "good design" for National Network Infrastructure.

6.4.32 The development of the project and the assessment of effects needs to take account of good design principles as set out in paragraphs 4.28 to 4.35 of the NPSNN.

6.4.33 Paragraph 4.28 advises that applicants should include design as an integral consideration from the outset of a proposal. Paragraph 4.29 goes on to further advise that visual appearance should be a key factor in considering the design of new infrastructure, as well as functionality, fitness for purpose, sustainability and cost.

6.4.34 Chapter 3 of the ES describes how the DCO Scheme was identified, the development of the design, and the alternatives considered for elements of the DCO Scheme. A detailed description of the DCO Scheme is presented in Chapter 4 of the ES and the accompanying Design and Access

Statement. Together, these documents give full details of the scheme design and demonstrate how the design process was conducted, how the proposed design evolved and how it has had regard to 'good design'.

6.4.35 The DCO Scheme will re-use the existing railway corridor, which was first laid out in the 1860s. This approach minimises the need for additional land-take. There are no feasible alternatives for alternative routes for the railway outside the existing railway corridor, which is safeguarded in local policy. The design of the DCO Scheme has taken into account railway design standards, highways design standards, sustainability principles, environmental principles and landscape character and the setting of heritage assets such as the Clifton Suspension Bridge.

6.4.36 The design process has looked at alternative options for the proposed Portishead station and the re-opening of Pill station, and for the access points along the line.

6.4.37 The new Portishead Station will be constructed on the north side of the railway corridor and between the re-aligned Quays Avenue and the existing Wessex Water pumping station. A number of options for the location of the station were modelled and tested based on the existing baseline. These options were presented at public consultation in 2013 and 2014, and the final design details of Portishead Station and surrounding public realm was developed in close consultation with the Local Planning Authority. Portishead Station will comprise a canopy structure sheltering the station building and a section of the single platform. The station will form a gateway feature as an entry point into Portishead.

6.4.38 Pill station is located within a cutting bordered by Monmouth Road to the north and the houses and gardens off Hardwick Road and Sambourne Lane to the south. The original Pill station was opened in 1867 and closed in 1964. The platforms along the southern and northern side of the railway line are still visible, but are in a poor state of repair. The DCO Scheme proposes a station located at the site of the former station at Pill on the southern side of the railway as opposed to a new site, with a new station forecourt on the site of No. 7 Station Road. Consultation with the local community and statutory bodies shaped the final design of the station.

Climate change adaptation

6.4.39 Adaptation to climate change is detailed in paragraphs 4.36 to 4.47 of the NPSNN. These paragraphs set out how Government policy on climate change adaptation should be put into practice, and in particular how applicants and the Secretary of State should take the effects of climate change into account when developing and consenting infrastructure.

6.4.40 In accordance with paragraph 4.42, the Applicant has considered the potential impacts of climate change using the UK Climate Projections available as described in the ES Appendix 7.5 Climate (DCO Document reference 6.25). Appropriate measures for drainage design are provided in the ES Chapter 4 (DCO Document Reference 6.7) and the Surface Water Drainage Strategy annexed to the FRA (DCO Document Reference 6.26).

6.4.41 In summary, the DCO Scheme is anticipated to result in a small overall increase in CO_2 emissions within the region. The net increase is estimated to be 1,196 tonnes per year which corresponds to 0.005% of the total CO_2 emitted nationally from the transport sector, which is over 30,000 kilotonnes/year. The impact of the DCO Scheme on climate is therefore considered as negligible.

6.4.42 The DCO Scheme is potentially vulnerable to the effects of a climate change due to its coastal / tidal location, however this is not considered to be significant, as the sensitivity of receptors is generally considered to be moderate. The resilience of the DCO Scheme to projected climate change has been assessed in the Flood Risk Assessment ("FRA") and taken into consideration in the drainage design. The most significant flood risk to the DCO Scheme is River Avon tidal flooding near Bower Ashton. The modelling undertaken for the FRA indicates that at Bower Ashton the DCO Scheme would be flooded during tidal River Avon floods approximately once every 5 to 10 years for the current (2015) scenario, once every year (at Bower Ashton) for the 2075 scenario, and more than once every year for the 2115 scenario.

Pollution control and other environmental protection regimes

6.4.43 The separate, but complimentary natures of the planning and pollution control systems are recognised in NPSNN (Paragraph 4.48).

6.4.44 The Examining Authority and the Secretary of State:

"should focus on whether the development itself is an acceptable use of the land, and on the impacts of that use, rather than the control of processes, emissions or discharges themselves. They should assess the potential impacts of processes, emissions or discharges to inform decision making, but should work on the assumption that in terms of the control and enforcement, the relevant pollution control regime will be properly applied and enforced." (Paragraph 4.50).

6.4.45 The Applicant has engaged with all relevant pollution control and other environmental protection authorities, including the Environment Agency, Natural England, the NSLIDB, sewerage undertakers, and the highways authorities, in accordance with the NPSNN, paragraph 4.55, which states:

"The Secretary of State should be satisfied that development consent can be granted taking full account of environmental impacts. This will require close cooperation with the Environment Agency and/or the pollution control authority, and other relevant bodies, such as… Natural England, Drainage Boards, and water and sewerage undertakers, to ensure that in the case of potentially polluting developments:

- *the relevant pollution control authority is satisfied that potential releases can be adequately regulated under the pollution control framework; and*
- *the effects of existing sources of pollution in and around the project are not such that the cumulative effects of pollution when the proposed development is added would make that development unacceptable, particularly in relation to statutory environmental quality limits".*

6.4.46 Pollution control measures for temporary construction drainage along haul roads and at construction compounds and permanent highway drainage are provided in the Surface Water Drainage Strategy annexed to the FRA (ES Appendix 17.1, DCO Document Reference 6.26).

6.4.47 The Environment Agency has requested its standard protective provisions be included in the Order and the draft DCO incorporates those provisions. The Environment Agency has been provided with various reports covering drainage and pollution control, including the Surface Water Drainage Strategy, the Rail Drainage Strategy (both annexed to the FRA), ES Chapter

4 Description of the Preferred Works, the Master CEMP, the design for Portishead station, and a Land Contamination Summary Report (ES Appendix 10.2, DCO Document Reference 6.25).

6.4.48 Modifications to the highway and car parks in Portishead will include attenuation, and oil and silt pollution control, prior to discharge to Portbury Ditch (a Main River) and The Cut (an Ordinary watercourse which drains to the Portbury Ditch). Stormwater drainage from the station roof and platform will drain to The Cut. At Pill, stormwater drainage from the car park, station and new track will drain into the highway drainage, pending detailed design. The drainage of the rail track will be similar to present, passive drainage through the ballast. The attenuation and pollution controls will result in no significant effect on the receiving waters. The Environment Agency has not formally responded on these proposals to date.

6.4.49 The Land Contamination Summary Report describes the historic land uses along the DCO Scheme, known locations of contamination based on site investigations and trackbed investigations, and gaps in the site investigation where further work is required. The report shows that there are several sources of contamination in the area that may present a risk to humans and or the environment. However, most of these risks are considered to be low, and while in most cases further investigation is required to inform the assessment of such risks, the majority can be mitigated through good construction practice.

6.4.50 Network Rail will follow their internal procedures to remove ballast, some of which is contaminated with organic matter and heavy metals. Based on the concentrations of contaminants encountered, the works are considered unlikely to cause contamination of local groundwater or surface water. It is likely that the ballast will need to be stored temporarily within the Order limits prior to transport off site to one of Network Rail's national treatment centres. This temporary storage will require management of runoff and drainage control. The Applicant is in discussion with the Environment Agency on the permitting requirements for temporary storage of ballast. The draft DCO includes a requirement for a written scheme to address the contamination of any land, including groundwater, within the Order limits, which will include an investigation and assessment report. The written scheme and assessment reports will require approval by the Local Planning Authority after consultation with the Environment Agency and Local Authorities.

6.4.51 Consultations have been held with the NSLIDB and the drainage engineers at the Local Planning Authorities to discuss the design standards and proposed approaches to temporary drainage during construction and permanent drainage during operation.

Common law nuisance and statutory nuisance

6.4.52 Consideration must also be given to possible sources of nuisance under section 79 of the Environmental Protection Act 1990, such as noise, and the means for mitigation (paragraph 4.57 to 4.59). Paragraph 4.58 of the NPSNN states:

"It is very important that during the examination of a nationally significant infrastructure project, possible sources of nuisance under section 79(1) of the 1990 Act, and how they may be mitigated or limited are considered by the Examining Authority, so they can recommend appropriate requirements

that the Secretary of State might include in any subsequent order granting development consent. More information on the consideration of possible sources of nuisance is at paragraphs 5.81-5.89."

6.4.53 The CoCP and the Master CEMP (ES Appendices 4.1 and 4.2) set out over-arching principals and guidance on the control of environmental impacts during construction, including the management of air quality, noise and vibration, working hours, and lighting. A Schedule of Mitigation lists the measures embedded in the DCO Scheme and environmental mitigation to address environmental aspects of the construction and operation of the DCO Scheme and how they are to be secured (ES Appendix 4.3). The Environmental Protection Statement of Engagement (DCO Document Reference 5.2) summarises potential nuisances. The only statutory nuisance would be from noise and therefore acoustic barriers will be provided along the southern boundary of the railway between Portishead station and Trinity Primary School Bridge and at the former Portbury station (which is now a private residence) in accordance with requirements contained in Schedule 2 of the Draft DCO.

Safety Considerations

6.4.54 The design of the railway and associated facilities should also take account of other safety regulations, industry guidance and regulatory guidance (paragraph 4.67 to 4.73 of the NPSNN). Although, railways are one of the safest forms of transport, paragraph 4.67 highlights the need to introduce the most modern and effective safety measures.

6.4.55 Paragraphs 4.69 – 4.73 discuss the measures that the Secretary of State will expect the applicant to have undertaken in relation to safety. The applicant is expected to have:

- complied with all relevant regulations, industry guidance and regulatory guidance from the ORR;
- undertaken a safety assessment which has considered the safety implications during the construction, commissioning and operational phases of the development; and
- taken all reasonable steps to minimise the risk of deaths or injury arising from the scheme; contribute to an overall improvement in societal safety levels; and note that railway developments can influence risk levels both on and off the railway networks.

6.4.56 Details of potential disasters and hazards that may occur during the construction and operation of the DCO Scheme are provided in ES Appendix 4.5 Major Accidents and Disasters, together with measures to reduce the risk and mitigate the consequences. Overall, the construction and operation of the DCO Scheme is not considered to pose a risk of major accident or be potentially vulnerable to accident.

6.4.57 Safety measures within the DCO Scheme include the following:

- In the event of an incident on the railway, the site of the incident could be accessed along the railway itself or from permanent access points along the railway. A new emergency access will be provided to Pill Tunnel Eastern Portal, the longest tunnel on the scheme. Road rail access points are also located at the maintenance compounds at Sheepway, Pill station car park, and Clanage Road;

- Flood Plans (see the ES, Appendix 17.1 FRA, DCO Document Reference 6.25) have been prepared, which set out protocols to be followed in the event of a risk of flooding during the construction and operation phases. The Flood Plan for the construction phase is concerned with the Clanage Road construction compound, which is the only proposed compound within Flood Zone 3b. The Plan sets out the rationale for selecting this site, the flood risk, the proposed use of the compound, and the need for floodplain compensation. The successful contractor will be required to prepare a detailed Flood Plan, to take into account the findings of the FRA and the Flood Plan for the Clanage Road construction compound. In order to construct the scheme, a construction compound is needed south of the Avon Gorge to access work sites along the railway in the southern part of the gorge, in the Bower Ashton area and at Parson Street Junction. The Clanage Road site is the only suitable location of the compound, which needs to be accessed from the highway by a 44 tonne articulated low loader. While the site is in Flood Zone 3b, the risk and impact associated with flooding at this site is not considered to be significant and the smaller permanent compound will include flood compensation. The use of this site as a construction compound will be controlled by the Environment Agency through the Environmental Permitting Regulations. The operational phase Flood Plan is based on Network Rail's procedures on operations in the event of extreme weather. Once the scheme is built, it would be included in Network Rail's Extreme Weather procedure;
- Pill Tunnel is the longest tunnel along the DCO Scheme at 609 metres. A fire strategy has been developed to address the requirements of the Regulatory Reform (Fire Safety) Order 2005;
- The Applicant has also sought to remove level crossings along the Portishead Branch Line in accordance with ORR policy to remove level crossings from the railway wherever possible. At Portishead, Quays Avenue is being diverted west and the railway will terminate on the eastern side of the diverted Quays Avenue, avoiding the need for a level crossing at this location. At Trinity Primary School a new pedestrian and cycle bridge will replace the current walking and cycling route over the disused trackbed. All historic accommodation and occupation crossings will be extinguished;
- Powers are also sought to extinguish the Barons Close Container Crossing footpath level crossing in Bristol with pedestrians being routed along the currently permissive path provided as part of the MetroBus works parallel to the railway (to become a PRoW), then crossing the railway at the existing Ashton Vale Road level crossing. The Ashton Vale Road Level Crossing is a full barrier crossing equipped with CCTV.

Health

6.4.58 The EIA Directive (2014/52/EU), which came into effect in mid May 2014 and was transposed into UK law in May 2017, requires the assessment of potential human health impacts, and is now a more significant part of EIA.

6.4.59 Health and well-being and quality of life of the population is discussed in paragraph 4.79 to 482 of the NPSNN. Paragraph 4.79 explains that rail networks have the potential to affect the health, well-being and quality of life

of the population. It advises that there may be impacts such as; traffic, noise, vibration, air quality and emissions, light pollution, community severance, dust, odour, polluting water, hazardous waste and pests.

6.4.60 Paragraph 4.81 explains that where the proposed project has likely significant environmental impacts that would have an effect on human beings, any ES should identify and set out the assessment of any likely significant adverse health impacts.

6.4.61 In accordance with paragraph 4.82, the applicant has submitted a full HIA as a standalone document at Appendix 14.2 of the ES, which identifies measures to avoid, reduce or compensate for adverse health impacts as appropriate.

6.4.62 The HIA identifies the following significant temporary health effects during construction:

- short term peak construction noise levels, especially when occurring at night;
- potential effect of vibration on humans in residential receptors within 15 m of line works due to vibratory compaction and within 20 m of the works at the Avon Road Bridge piling site;
- safety of pedestrians and cyclists using footpath / cycling diversions during the construction of Trinity Primary School Bridge; and
- access to services and safety of pedestrians and cyclists in Pill during construction.

6.4.63 The HIA identifies no significant adverse effects for the operation of the DCO Scheme and a significant benefit of the DCO Scheme is to open up access by public transport to a wider range of services and leisure activities in Portishead and Bristol.

6.5 Generic Impacts

6.5.1 Chapter 5 of the NPSNN identifies generic impacts associated with transport schemes, which will need to be assessed as part of the EIA process (paragraph 5.3 to 5.231). The impacts listed of relevance include air quality; carbon emissions; biodiversity and ecological conservation; waste management; flood risk; the historic environment; landscape and visual impacts; land use including open space, green infrastructure and Green Belt; noise and vibration; transport networks; and water quality and resources.

6.5.2 This Statement provides a broad overview confirming the DCO Scheme's compliance with the NPSNN. In addition, each topic chapter of the ES, accompanying the DCO Application, addresses the particular provisions of the NPSNN which are applicable to that chapter.

Air Quality and Carbon Emissions

6.5.3 The NPSNN requires the impacts of projects to be assessed as part of an ES where a scheme is likely to have significant air quality effects in relation to meeting EIA requirements and / or affect the UK’s ability to comply with the Air Quality Directive (paragraph 5.6).

6.5.4 Paragraph 5.7 requires an ES to describe:

- *"existing air quality levels;*
- *forecasts of air quality at the time of opening, assuming that the scheme is not built (the future baseline) and taking account of the impact of the scheme; and*
- *any significant air quality effects, their mitigation and any residual effects, distinguishing between the construction and operation stages and taking account of the impact of road traffic generated by the project."*

6.5.5 Paragraph 5.10 details the decision making considerations for the Secretary of State in relation to air quality and states:

"The Secretary of State should consider air quality impacts over the wider area likely to be affected, as well as in the near vicinity of the scheme. In all cases the Secretary of State must take account of relevant statutory air quality thresholds set out in domestic and European legislation. Where a project is likely to lead to a breach of the air quality thresholds, the applicant should work with the relevant authorities to secure appropriate mitigation measures with a view to ensuring so far as possible that those thresholds are not breached."

Assessment

6.5.6 The assessment of air quality and carbon emissions is provided in Chapter 7 of the ES and is summarised below in relation to its compliance with the NPSNN.

Construction

6.5.7 There is the potential for a short-term impact during construction from dust nuisance. Emissions from plant and machinery are typically too low to affect compliance with air quality objectives and are very low in comparison to heavily trafficked roads such as the M5. The implementation of the practices outlined in the CoCP (ES Appendix 4.1, DCO Document Reference 8.15) and Master CEMP (ES Appendix 4.2, DCO Document Reference 8.14) will reduce the risk of significant impacts of dust arising from the construction activities to not significant.

Operation

6.5.8 Annual mean NO_2 and PM_{10} were both predicted to be below 75% of the air quality assessment level (40 µg m^{-3}) at all modelled receptors in Portishead and Pill in the Do Minimum ("DM") scenario. This is considered to be the level at which the degree of harm to human health is likely to be small. The largest predicted change in NO_2 concentration was a change of 5% of the Air Quality Assessment Level ("AQAL") for a residential property within 10 m of the proposed Portishead Branch Line.

6.5.9 The cumulative impact assessment found that the annual mean NO_2 was predicted to be higher around Parson Street Junction and Bedminster, which are within the BCC Air Quality Management Area ("AQMA") but no exceedances are predicted in the Opening Year 2021 and the impact at all selected 'worse-case' receptors are classified as negligible. The impact results from the additional frequency of passenger trains. These moderate changes are approximately 1% of the AQAL for annual mean NO_2.

6.5.10 The modelled impacts on the Avon Gorge Woodlands SAC resulted in a small increase of less than 1 µg m^{-3} at the closest point to the DCO Scheme. Results show that NO_X concentration decreases with distance and is imperceptible at 100 m from the railway line. Similar impacts were observed for nitrogen deposition rates.

6.5.11 Overall, the impacts for the operation of the DCO Scheme are assessed as not significant.

Air Quality and Carbon Emissions Conclusions

6.5.12 The Applicant has considered the DCO Scheme and the implications for air quality and greenhouse gases on nearby receptors within the influence of the DCO Scheme. In summary, it has been identified that the DCO Scheme has potential to cause some air quality impacts during construction and operation, however the significance of any effects is determined to be not significant.

6.5.13 In terms of carbon emissions, one of the DCO Scheme's supporting objectives is to contribute to reducing the growth in traffic congestion on the Portishead, Bath and Avonmouth, and Severn Beach arterial corridors. The new railway services are expected to reduce emissions per passenger kilometre travelled compared with equivalent road transport through modal shift from car to rail.

6.5.14 Overall, the DCO Scheme is considered to be compliant with the NPSNN in terms of air quality and carbon emissions impacts.

Biodiversity and Ecological Conservation

6.5.15 The NPSNN requires an ES to establish any likely significant effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, including on protected species and habitats and those of principal importance for the conservation of biodiversity (Paragraph 5.22). In addition, Paragraph 5.23 of the NPSNN requires applicants to show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.

6.5.16 Paragraph 5.25 identifies the general principles that will be considered as part of the decision making process. It states that:

"development should avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives…Where significant harm cannot be avoided or mitigated, as a last resort, appropriate compensation measures should be sought."

6.5.17 The Secretary of State should ensure that appropriate weight is attached to designated sites, protected species, habitats and other species of principal importance, and to biodiversity and geological interests within the wider environment (paragraph 5.26).

6.5.18 Guidance regarding mitigation is detailed in Paragraph 5.36, which requires mitigation measures to form an integral part of the proposed development, including identifying where and how these will be secured. Mitigation measures that may have been agreed with Natural England will need to form part of the Secretary of State's consideration.

Assessment:

6.5.19 Biodiversity and ecological conservation and the DCO Scheme's compliance with NPSNN requirements are considered in Chapter 9 of the ES and is summarised below in relation to its compliance with the NPSNN.

6.5.20 The importance of the area for nature conservation is evidenced by the European, nationally and locally designated sites, the presence of species of flora and fauna protected by European and national legislation, and areas of ancient woodland.

6.5.21 The Severn Estuary is designated as a SAC, Special Protection Area ("SPA"), Ramsar site and a SSSI. Designated areas include the sub-tidal and inter-tidal areas of the Severn Estuary and the lower reaches of the River Avon. The designated areas lie along the North Somerset coast within 1 km north of the DCO Scheme in the vicinity of Portishead and Sheepway and comes within 80 m of the permanent works for the DCO Scheme in the vicinity of Pill. Of relevance to the DCO Scheme are the large populations of over-wintering wildfowl and waders, including protected species, which feed and roost on the foreshore along the Severn Estuary and the River Avon.

6.5.22 There are six European sites within 30 km of the DCO Scheme which have bats as a qualifying feature, the North Somerset and Mendip Bats SAC, the Mendips Limestone Grassland SAC, the Bath and Bradford-on-Avon Bats SAC, the Mells Valley SAC, the Wye Valley Woodlands SAC, and the Forest of Dean Bat Sites SAC.

6.5.23 The Avon Gorge Woodlands SAC is designated for its *Tilio-Acerion* forests of slopes, screes and ravines and semi-natural dry grasslands and scrubland facies on calcareous substrate *Festuco-Brometalia*.

6.5.24 The Avon Gorge SSSI is co-incident in area with the SAC designation and includes the Leigh Woods National Nature Reserve ("NNR"), both of which are designated for their nature conservation interest. Leigh Wood and Rownham Woods are also listed on Natural England's ancient woodland inventory. The Avon Gorge SSSI exhibits natural cliffs and quarry exposures of Carboniferous limestone, which are of great geological interest and, together with the scree, scrub, pockets of grassland and adjacent woodland, support an exceptional number of nationally rare and scarce plant species. The SSSI citation notes that the woods and gorge have an exceptional diversity of whitebeams *Sorbus spp* including at least two which are unique to the Avon Gorge, *Sorbus bristoliensis* and *S. wilmottiana*. National rarities are *S. anglica* and *S. eminens*, and the nationally scarce *S. porrigentiformus* occurs.

6.5.25 There are three other SSSIs designated for their nature conservation value within 2 km of the DCO Scheme, Weston Big Wood SSSI, Horseshoe Bend, Shirehampton SSSI and Ashton Court SSSI.

6.5.26 There are a numerous locally designated wildlife sites ("WS") within 500 m of the DCO Scheme, of which six adjoin the disused railway corridor between Portishead and Pill and ten adjoin the operational railway between Pill Junction and Ashton Junction. These include the Portbury Wharf Nature Reserve and WS on the outskirts of Portishead.

6.5.27 A variety of protected species of fauna are known to occupy the habitats along and adjoining the railway corridor. There are records of amphibians, including great crested newts, smooth newt, common frog and common toad. Reptiles are widespread, including grass snake and slow worm, as well as invertebrates. The mammals badger, otter, water vole, and various species of bat are present. Dormice are recorded in the ancient woodlands in the Avon Gorge. Habitat present throughout the area is suitable for nesting birds.

6.5.28 The invasive plant species Japanese knotweed has been found in isolated patches along the railway corridor and the biodiversity of the Avon Gorge Woodlands SAC and Avon Gorge SSSI is also affected by invasive non-native plant species.

6.5.29 A number of specialist surveys have been commissioned and are presented in the following appendices to the ES.

- Appendix 9.1: Extended Phase 1 Habitat Survey
- Appendix 9.2: Bat surveys
- Appendix 9.3: Ornithological Surveys (9.3c Schedule 1 species CONFIDENTIAL)
- Appendix 9.4: Amphibians
- Appendix 9.5: Reptiles
- Appendix 9.6: Badgers CONFIDENTIAL
- Appendix 9.7: Dormice
- Appendix 9.8: Otters
- Appendix 9.9: Water Voles
- Appendix 9.10: Flora
- Appendix 9.14: Hedgerow Survey, Lodway Compound

6.5.30 The Applicant has carried out ecological impact assessments in accordance with the advice in the NPSNN.

6.5.31 The embedded measures forming part of the DCO Scheme include the implementation of the Master CEMP (ES Appendix 4.2) and the shadow protected species licences for badger, bats, and great crested newts. Ecological mitigation measures to address significant adverse effects are set out in the Schedule of Mitigation (ES Appendix 4.3) and further supported by the following appendices.

- Appendix 9.11: Avon Gorge Vegetation Management Plan
- Appendix 9.12: Habitats Regulations Assessment
- Appendix 9.13: Reptile Mitigation Strategy
- Appendix 9.15: Network Rail Site Management Statement, Vegetation Management Plan and HRA for the Avon Gorge
- Appendix 9.16: The Portbury Hundred proposed tree planting
- Appendix 9.17: Lighting survey

  Appendix 9.18: Lux lighting plans for Pill Station car park and highways

6.5.32 The results of the ecological impact assessment are presented in the ES Chapter 9 Ecology and Biodiversity.

6.5.33 The DCO Scheme passes two conservation sites with geological interests, the Ham Green SSSI and the Avon Gorge SSSI. The assessment of the DCO Scheme on these sites is covered in the ES Chapter 10 Geology, Hydrogeology, Ground Conditions and Contaminated Land.

6.5.34 The Applicant has liaised extensively with Natural England, as chronicled in ES Chapter 9, to agree on survey and assessment methodologies, the results of the impact assessment and appropriate mitigation.

6.5.35 The Applicant has carried out ecological impact assessments in accordance with the advice in the NPSNN.

Construction

6.5.36 The clearance of habitat along the alignment of the railway and geotechnical works on third party land through the Avon Gorge Woodlands SAC, Avon Gorge SSSI, Leigh Woods NNR, Leigh Woods / Oak Woods Ancient Woodland and Rownham Woods Ancient Woodland is predicted to have significant adverse effects on habitat loss, removal and potential damage to rare and important plant species, and potential spread of invasive species and pathogens. However, the implementation of the package of mitigation, preventative and compensatory measures as described in the Avon Gorge Vegetation Management Plan (ES Appendix 9.11) is predicted to reduce the effects to slight adverse, which is not considered to be significant.

6.5.37 The partial loss of the bat navigational route and foraging habitat along the current disused section of the line, particularly between Royal Portbury Dock and Pill is predicted to be large adverse, and significant. The navigational route is considered to be of regional importance because horseshoe bats commuting and foraging along the disused line have been radio-tracked to the North Somerset and Mendip Bats SAC. The partial loss of habitat will be mitigated by retaining as much vegetation as possible along the railway, replanting vegetation within the railway corridor and strengthening planting along the A369 Portbury Hundred, reducing the impact to slight adverse and not significant. The disturbance from construction lighting, noise and vibration on the bat roost at Pill Station and flight line will be mitigated through actions set out in the Master CEMP, resulting in no significant impact. A permanent screen to mitigate the impacts of operational lighting on Pill Station Arches bat roost and flight lines shall be installed on the northern platform or Network Rail will modify the lighting design for Pill Station platform, steps and ramp during the detailed design stage. The preliminary design of the highway lighting on Monmouth Road and Pill Station car park lighting has been revised to include louvres and other measures to reduce light spill. To retain the roost resource when Pill Station is reopened, a wooden door with dedicated bat access will be fitted to Arch 1 and Arch 2 will be partially bricked up. These activities will be implemented through the shadow bat licence, resulting in no significant effects.

6.5.38 The impact of the loss of bat roosts in tunnels along the operating railway line will be managed through the mitigation set out in the shadow bat licence, including measures to exclude bats during construction works, providing artificial bat boxes, and restricting human disturbance to a natural cave - The Adit, which is used by bats. These activities are predicted to result in no significant effects on bats.

6.5.39 No evidence of roosting bats was found in the trees inspected during the bat surveys (ES, Appendix 9.2) although some trees have been identified as having bat roosting potential. Pre-construction surveys and measures to mitigate impacts on tree roosts are detailed in the Master CEMP (ES Appendix 4.2, DCO Document Reference 6.25).

6.5.40 While there may be slight adverse effects on adjoining locally designated sites, with minimal permanent land-take or temporary occupation during construction, and the implementation of the Master CEMP and Landscaping Plans along the disused railway (DCO Document Reference 2.10), the effects are not considered to be significant.

6.5.41 The loss of habitat, including woodland and trees and a section of important hedgerow at Lodway will be mitigated through mitigation measures set out in the Master CEMP, the planting proposals along the currently disused railway, and planting along the A369 Portbury Hundred.

6.5.42 Along the disused line, the loss of terrestrial habitat and fragmentation of habitat will affect protected species great crested newts, other amphibians, and reptiles. Mitigation proposals are set out in a shadow licence for great crested newts (DCO Document Reference 8.10) including the creation of three new ponds and improvement of another two ponds. The DCO Scheme design includes amphibian/reptile tunnels under Quays Avenue and the bridges along the rebuilt line between Portishead and Marsh Lane. The Master CEMP and Reptile Mitigation Strategy (ES Appendix 9.13) set out proposals for habitat manipulation and translocation for reptiles. With the mitigation in place the effects on amphibians and reptiles are not significant.

6.5.43 The moderate effects on badgers due to sett closure and disturbance to setts during construction be mitigated through the implementation of the shadow badger licence, resulting in no significant effects.

6.5.44 The impacts on other protected fauna found along the DCO Scheme, such as breeding birds, Schedule 1 birds (barn owl and peregrine falcon), water vole, dormice, and otter will be mitigated through actions set out in the Master CEMP. The proposed mitigation will be revised as appropriate following pre-construction surveys and the need for further licences will be discussed with Natural England regarding potential disturbance to protected species.

Operation

6.5.45 It is considered that there will be no significant effects on statutory and non-statutory designated sites during operation.

6.5.46 The AGVMP allows for ongoing management and inspection of the mitigation works for up to ten years following the opening of the DCO Scheme to 2033. Key features are minimising the loss of habitat as much as possible, positive management of woodland by removal of non-native species, clearance of scrub in small areas of grassland, conservation of the rare whitebeams and other rare plants by appropriate management for particular situations. A catalogue of management actions is provided for each area where positive management is proposed. The implementation of the plan will be monitored and reported on annually to Natural England.

6.5.47 As a separate activity, Network Rail is required to implement a Site Management Statement ("SMS") and Vegetation Management Plan ("VMP") approved by Natural England for the management of vegetation through the Avon Gorge SSSI. This includes removal of woody vegetation within 3 m of the running rail and the area vertically above this for the safe running of the railway. The current plans are valid for the five year period 2018 to 2023.

6.5.48 After completion of the actions set out in the current SMS and VMP and the activities of DCO Scheme, Network Rail will reassess its activities to develop a new SMS. A new SMS will be drafted in 2023 based on an assessment of the Avon Gorge vegetation at the time and will ensure that the vegetation is managed appropriately and in agreement with Natural England. With this mitigation in place no significant effects on the designation, habitats and flora are predicted.

6.5.49 Trees and scrub will re-establish within the linear corridor post construction, although replanting is only possible along the rural section between Portishead and Pill. However, on the whole there will be no long term significant negative impact on ecology and protected species and the magnitude of potential adverse impacts should be reduced following the implementation of proposed mitigation.

Summary

6.5.50 Overall, the ecological impact assessment completed to date indicates that the DCO Scheme, if unmitigated, will have a significant effect on some ecology and biodiversity features with respect to the EIA Regulations, particularly on horseshoe bats from the North Somerset and Mendip Bats SAC foraging /commuting along the Portishead to Pill section, the corridor of woodland and trees along the Portishead to Pill section, the horseshoe bat roost at Pill Station Arches, the horseshoe bat navigational route at Pill Station and the Avon Gorge Woodlands SAC.

6.5.51 Measures to mitigate likely significant adverse effects and, as appropriate, effects of lesser significance have been identified and mitigation and compensation measures have been developed.

6.5.52 Mitigation by retaining as much vegetation as possible and undertaking new planting on the Portishead to Pill section and infill planting within land owned by NSDC alongside the A369 Portbury Hundred will be undertaken. This will mitigate for the partial loss of woodland, trees and scrub on the Portishead to Pill section used as a navigational route by horseshoe bats, linked to the North Somerset and Mendips Bats SAC. The residual effect on the ecological feature of regional importance is considered to be slight adverse and not significant in terms of the EIA Regulations.

6.5.53 The HRA (ES Appendix 9.12) has identified mitigation measures that address some effects on the Avon Gorge Woodlands SAC and compensation by positive management of areas of the SAC within Network Rail's ownership affected by invasive non-native species and scrub (or on FC land outside of the Avon Gorge Woodlands SAC as an alternative) and planting rare whitebeam trees is proposed. Following mitigation, the magnitude of impact is negligible and the residual effect is considered to be slight adverse and not significant in terms of the EIA Regulations.

6.5.54 The residual effects are not significant for all other ecological features. Overall, the completed ecological impact assessment demonstrates that with the extensive package of mitigation, preventative and compensatory measures proposed, the DCO Scheme will not have a significant effect on ecology and biodiversity.

Waste Management

6.5.55 The NPSNN details the requirements for assessing waste production, its management and disposal. Paragraph 5.42 states that:

"The applicant should set out the arrangements that are proposed for managing any waste produced. The arrangements described should include information on the proposed waste recovery and disposal system for all waste generated by the development. The applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that the alternative is the best overall environmental outcome."

6.5.56 Paragraph 5.43 details the process that should be followed and will be considered by the Secretary of State to ensure the proposed development includes for the effective management of hazardous and non-hazardous waste arising from the construction and operation of the proposed development, including:

- "*any such waste will be properly managed, both on-site and off-site;*
- *the waste from the proposed facility can be dealt with appropriately by the waste infrastructure which is, or is likely to be, available. Such waste arisings should not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area; and*
- *adequate steps have been taken to minimise the volume of waste arisings, and of the volume of waste arisings sent to disposal, except where an alternative is the most sustainable outcome overall.*"

Assessment

6.5.57 Chapter 12 of the ES considers the potential environmental effects associated with the use and consumption of materials and the production and management of waste, during the construction of the DCO Scheme.

Construction

6.5.58 The construction of the DCO Scheme will require the use and consumption of material resources and hence will result in potential impacts on the environment through the depletion of natural resources and the embodied carbon associated with extraction, manufacturing and any pre-distribution transportation. The construction phases of the DCO Scheme will also result in surplus materials and waste, leading to potential impacts on the available waste management infrastructure (i.e. through the permanent use of landfill void space and/or the short-term use of waste treatment capacity).

6.5.59 No likely significant effects have been identified and therefore further mitigation measures have not been proposed.

6.5.60 Where non-significant adverse effects have been identified impacts will be addressed through ensuring that the construction of the DCO Scheme responds to national regulatory standards and local policy advice and will include: carrying out a responsible sourcing assessment covering the key material elements used to construct the DCO Scheme; facilitating the prevention, reuse, recycling and recovery of waste on the DCO Scheme and ensuring that all materials and waste are stored, transported, treated, reprocessed and disposed of safely without harming the environment in accordance with the Waste Duty of Care requirements.

6.5.61 The detailed arrangements for managing waste produced during the construction of the DCO Scheme will be documented in a Site Waste Management Plan ("SWMP") to be prepared and implemented to ensure waste will be stored, transported, treated, reprocessed and disposed of safely without harming the environment, or other suitable resources, will be used where practicable to identify potential sources of secondary or recycled materials for use in the DCO Scheme. A CoCP (ES Appendix 4.1, DCO Document Reference 6.25) and a Master CEMP (ES Appendix 4.2, DCO Document Reference 6.25) have been submitted with the DCO Application setting out how and when the SWMP will be prepared during the design and construction phases.

Operation

6.5.62 The use of material resources and the generation of waste is predicted to be negligible during operations

Summary

6.5.63 The applicant has carried out assessments in accordance with the NPSNN. The assessment identifies that during the operation of the DCO Scheme, the use of material resources and the generation of waste is likely to be negligible. Operational materials use and waste have therefore been scoped out of this assessment. Paragraph 3.28 of the Scoping Opinion (DCO Document Reference 6.1), provided by the Secretary of State, supports this approach.

6.5.64 No likely significant effects have been identified in the context of the EIA Regulations, and therefore no further related mitigation measures are proposed. Notwithstanding, the adoption of those Best Practicable Means detailed in the Master CEMP (ES Appendix 4.2, DCO Document 6.25) and compliance with legislative and policy requirements, will ensure that any residual environmental effects are minimised during the construction of the DCO Scheme.

Flood Risk and Water Quality and Resources

6.5.65 The NPSNN establishes the assessment requirements for projects when considering flood risk. Paragraph 5.92 details when applications for projects should be accompanied by a FRA, with Paragraph 5.94 detailing the requirements when preparing an FRA, which is consistent with NPPF guidance. The provision of an FRA and the application of the Sequential Test, in accordance with NPPF guidance, will be determining factors for the Secretary of State where flood risk may influence a project. Further the

Secretary of State should be satisfied that flood risk will not be increased elsewhere and where proposals are located within areas at risk of flooding, it should be demonstrated that:

- "*within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location; and*
- *development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed, including by emergency planning; and priority is given to the use of sustainable drainage systems*."

6.5.66 Paragraphs 5.102 - 5.104 identify that the Secretary of State should expect the proposal to incorporate reasonable provisions to avoid, limit and reduce the risk of flooding to the proposed infrastructure and others; and to ensure that the infrastructure remains functional in the event of predicted flooding.

6.5.67 With regard to the mitigation of flood risk, Paragraph 5.110 states:

"To satisfactorily manage flood risk and the impact of the natural water cycle on people, property and ecosystems, good design and infrastructure may need to be secured using requirements or planning obligations. This may include the use of sustainable drainage systems but could also include vegetation to help to slow runoff, hold back peak flows and make landscapes more able to absorb the impact of severe weather events."

6.5.68 Further requirements on the use of Sustainable Drainage Systems ("SuDS") for mitigation is provided in Paragraphs 5.111 to 5.115.

6.5.69 Assessment: The assessment of flood risk; water quality and resources, and its compliance with NPSNN requirements is provided in Chapter 17 of the ES and summarised in Table 17.1: Summary of relevant NPSNN advice regarding flood risk and water resources.

6.5.70 Chapter 17 of the ES assesses the implications of the DCO Scheme on water quality and water quantity relating to surface water features such as rivers, streams, ponds, lakes, estuaries and coastal waters, and to groundwater bodies. The physical impacts upon surface water features (e.g. river morphology) have also been considered. The main features of the surface water environment for the DCO Scheme comprise the River Avon, which is tidal throughout the study area and several watercourses and drains which form tributaries of the river. There is also an extensive network of small drains and ditches, with a number of culverts under the existing railway track, particularly through the section between Portishead and Pill.

6.5.71 Flood risk to the DCO Scheme and the impact of the scheme on flood risk elsewhere is assessed in detail in the FRA. The most significant source of flood risk to the DCO Scheme is tidal River Avon flooding in the Bower Ashton area. The risk of flooding to the DCO Scheme will be mitigated by applying Network Rail's Emergency Weather Plan procedures, including the use of Environment Agency flood warnings. The potential for the DCO Scheme to increase flood risk elsewhere will be mitigated by providing floodplain compensation storage in the Bower Ashton area (within the scheme Clanage Road maintenance compound) and in the Easton-in-Gordano Stream floodplain.

Construction

6.5.72 The water quality of surface water features could be affected through runoff of contaminants, including silt in surface water or accidental spillages of contaminating substances such as fuel and cement. However, impacts are likely to be temporary and localised, and can be mitigated through adhering to the mitigation measures outlined in the Master CEMP (ES Appendix 4.2) and the Surface Water Drainage Strategy (DCO Document Reference 6.26). To manage flood risk, the contractor will be required to prepare a Surface Water Management Plan as part of their CEMP, which will address issues related to discharges from works sites that could lead to increased downstream contamination and flood risk. Compounds and other works areas will also be sited off the undefended flood plain to minimise any impacts related to the loss of flood plain storage. The exceptions are Clanage Road compound (Flood Zone 3b) and Pill Underbanks compound (Flood Zone 3a), where the use of the site will be agreed with the Environment Agency through the environmental permitting requirements. An indication of the use of the Clanage Road site is provided in the outline construction stage Flood Plan for Clanage Road construction compound (ES Appendix 17.1, FRA Appendix T) provided in the DCO Application.

Operation

6.5.73 During operation runoff rates from the railway line would be no higher than from the existing footprint of the DCO Scheme, as there would be no increase in impermeable area (see the Surface Water Drainage Strategy – DCO Document Reference 6.26). Where impermeable surfaces are proposed, such as at the station car parks and forecourts, measures to manage drainage discharges have been incorporated into the design and therefore this is likely to result in no material effect on runoff. With regard to flood risk, the adoption of appropriate maintenance practices, particularly ensuring that culverts beneath the railway remain free from blockage will ensure that the impacts during the operational phase will be of neutral effect and therefore not significant. As a result of the renewal of existing track drainage, incorporation of an improved track drainage system and the use of SuDS in the drainage design for the car parks at Portishead Station, the impacts of drainage from the track, stations, car parks and highways to surface and groundwaters during the operational phase are anticipated to have a neutral effect on water quality and therefore are not significant.

6.5.74 The FRA identifies that the DCO Scheme is partly within Flood Zones 2 and 3 (including 3a and 3b). The DCO scheme is considered to be classified as Essential Infrastructure, and so compatible with all Flood Zones, including 3a and 3b, subject to passing of the Exception Test. In accordance with the Exception Test the DCO Scheme:

- Has been designed and will be constructed to remain operational and safe for users in times of flood as far as can be achieved realistically without impacting on flood risk elsewhere. An Outline Flood Plan has been developed to support the DCO Application. It provides an indication of the key issues required for consideration, and the general approach that will be taken, for flooding issues when the scheme is operational. Network Rail manages flood risk at a route level, producing Extreme Weather Plans which incorporate flood responses across the route network. Once the DCO Scheme reaches the operational stage any relevant flood response issues pertaining to the line will fall under the auspices of the route-wide plan and any subsequent updates applied to it.

- Will result in no net loss of floodplain storage. Floodplain compensation will be provided to mitigate the impacts of the DCO scheme on floodplain storage in the tidal River Avon floodplain at Bower Ashton, and the Easton-in-Gordano Stream floodplain.
- Has been designed so as not to impede water flows and not increase flood risk elsewhere.

6.5.75 The DCO Scheme is considered to pass the Sequential Test as the DCO Scheme is a regional aspiration that has the support of local planning policy and there are no realistic alternative locations for the railway line.

6.5.76 The most significant flood risk to the DCO Scheme is River Avon tidal flooding near Bower Ashton. For the present day (2015) scenario, modelling undertaken for this FRA indicates the DCO Scheme (i.e. post-development) would be flooded during tidal River Avon floods approximately once every 5 to 10 years for the current (2015) scenario, approximately once every year (at Bower Ashton) for the future (2075) scenario, and more frequently than once a year on average in 2115 (sensitivity test to longer climate change horizon).

6.5.77 Coastal flood risk between Portishead and Pill is not significant for the present day (2015) and future (2075) scenarios as modelling undertaken for this FRA indicates flooding of the DCO Scheme occurs less than once every 1000 years on average. For the future (2115) scenario (sensitivity test to longer climate change horizon) the DCO Scheme will experience coastal flooding once every 200 to 1000 years on average.

6.5.78 Fluvial flood risk from Portbury Ditch, Drove Rhyne and Easton-in-Gordano Stream is not considered to be significant for the present day (2015) and future (2075 and 2115) scenarios.

6.5.79 For the present day (2015) scenario the DCO Scheme is outside of the Colliter's Brook and Longmoor/Ashton Brook 100-year return period flood extent, and within the 1000-year return period flood extent. For the design life scenario (2075) and a sensitivity scenario (2115) the DCO Scheme is shown to be outside of the Colliter's Brook and Longmoor/Ashton Brook 50-year return period flood extent, and within the 75-year return period flood extent.

6.5.80 Portishead station and carpark are in the defended floodplain and so the impact of flooding on access and egress is considered insignificant for the present day (2015) scenario. For the future (2075) scenario, Portishead station and car parks, and the pedestrian crossing of Portbury ditch (providing a pedestrian route from the station to Portishead) will be outside of the 1000-year coastal flood extents. For the future (2115) scenario (sensitivity test to longer climate change horizon), Portishead station and car parks, and the pedestrian crossing of Portbury ditch (providing a pedestrian route from the station to Portishead) will be above the 200-year coastal flood level.

6.5.81 Pill station, car park and adjacent roads are several metres higher than River Avon flood levels and so access/egress is considered safe from River Avon tidal flooding.

6.5.82 The scheme does not result in an increase in flood risk elsewhere.

Summary

6.5.83 The applicant has carried out assessments in accordance with the advice in the NPSNN. The DCO Scheme is considered to be compliant.

6.5.84 With regard to the water environment, an FRA and Water Framework Directive Assessment have been prepared to accompany the DCO Application.

6.5.85 The Water Framework Directive Assessment considers the hydromorphological, water quality and ecological impacts of the DCO Scheme and concludes that no deterioration to water bodies would occur as a result of the proposed works and therefore no further assessment would be required.

6.5.86 The FRA concludes that the DCO Scheme passes the Sequential and Exception tests, and flood risks to the scheme will be managed by Network Rail's operating procedures and Extreme Weather Plan, including the use of flood warnings. The DCO Scheme does not increase flood risk elsewhere.

6.5.87 The DCO Scheme is considered to provide benefits that outweigh the flood risk, provided that the residual flood risk after mitigation is addressed through the use of flood warnings, Network Rail's operating procedures and Extreme Weather Plan.

Land instability

6.5.88 The NPSNN advises on geology and geomorphological importance, land instability and contaminated land in the context of NSIPs on road and rail networks.

6.5.89 Paragraph 5.20 refers to sites that are designated for their geology and / or their geomorphological importance. Paragraph 5.21 notes that there is a range of international and national legislation that can impact on planning decisions that affect geological conservation issues set out in Government Circular: *Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System* (ODPM 06/2005).

6.5.90 Paragraphs 5.116 to 5.119 advise on land instability. Paragraph 5.117 states that new developments need to be appropriate for the location and if land instability is likely to be an issue the applicant should seek appropriate expert advice. Paragraph 5.118 requires the Applicant to assess land instability. Mitigation measures to address land instability are identified in Paragraph 5.119.

6.5.91 Paragraph 5.168 states that for developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination and how it is proposed to address this. Reference is made to *Model Procedures for Management of Land Contamination* (CLR11) (Environment Agency, 2004).

Assessment

6.5.92 The applicant has carried out assessments in accordance with the advice in the NPSNN. The NPSNN requires the applicant to assess and address significant land contamination issues as part of the development.

6.5.93 Chapter 10 of the ES assesses the potential for impacts from the construction of the DCO Scheme on the underlying geology and associated groundwaters, and also any potential for impacts arising from ground conditions, such as the presence of contamination or mineral workings.

6.5.94 The existing railway passes through the two SSSIs designated for their geology; Ham Green SSSI located in a railway cutting exposing an interesting sequence of rocks and the Avon Gorge. Historic industrial land uses in Portishead resulted in land contamination, much of which has been cleaned up as brownfield sites have been redeveloped. There are historical landfill sites at Priory Farm near Portbury and in the Ashton Vale area of Bristol. In Pill, the proposed station car park may be contaminated due to the past use of the site as railway sidings.

Construction

6.5.95 The assessment identifies that the majority of impacts related to ground conditions would be during the construction phase, however the majority of impacts will be mitigated as part of the DCO Scheme design. If contamination is encountered, it will be assessed and remediated as part of the works if required. Following construction, there will be no material changes in the underlying soils and geology. Any effects on the underlying geology from pollutants entering the ground arising from contaminants the trains discharging onto the track would be managed through standard maintenance practices, as is the case for all railways.

6.5.96 Any impacts that could arise from the underlying ground conditions will be dealt with at the construction phase. Such impacts may arise from contaminants within the underlying soils or from the chemical nature of the soils themselves.

6.5.97 Ham Green SSSI is unlikely to be affected as the existing rail corridor is wide enough to accommodate the planned services and no excavations of the existing cutting are currently envisaged. There will be no change to the geological interest of the Avon Gorge SSSI.

Operation

6.5.98 During the operational life of the DCO Scheme there will be some incidental contamination of the underlying track bed from leaks and spillages, however this is not anticipated to be significant.

Summary

6.5.99 Chapter 10 of the ES finds that no likely significant effects are predicted in relation to geology and geomorphological importance, land instability and contaminated land.

Historic Environment

6.5.100 The NPSNN directs applicants to undertake an assessment of any likely significant heritage impacts of the proposed project where development is subject to EIA. Paragraph 5.127 details the requirements of the assessment and states:

"The applicant should describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the asset's importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant Historic Environment Record should have been consulted and the heritage assets assessed using appropriate expertise. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, the applicant should include an appropriate desk-based assessment and, where necessary, a field evaluation."

6.5.101 In determining applications, the Secretary of State will seek to consider the particular significance of any heritage asset that may be affected by the proposed development, taking account of the available evidence and any necessary expertise provided (Paragraph 5.128). The considerations associated with any harmful impact, including the partial and full loss of a heritage asset is provided in subsequent paragraphs (5.132 to 5.138).

6.5.102 Where the loss of the whole or part of a heritage asset's significance is justified, the Secretary of State will require the applicant to record and advance understanding of the significance of the heritage asset before it is lost (wholly or in part) (Paragraph 5.140). Further requirements associated with the documenting and recording evidence is provided in subsequent paragraphs 5.141 and 5.142.

Assessment

6.5.103 The assessment of DCO Scheme's effect on the historic environment is provided in Chapter 8 of the ES and its compliance with NPSNN requirements regarding historic environment is summarised below.

Construction

6.5.104 There are three scheduled monuments, eight conservation areas, numerous listed buildings (including Clifton Suspension Bridge, Grade I), Leigh Court and Ashton Court Registered Parks and Gardens and many non-designated heritage features within 500 m of the DCO Scheme. The only remaining features within the railway corridor are those associated with the historical railway, such as Pill Viaduct, the four tunnels, and the remains of some of the railway stations.

6.5.105 The DCO Scheme is assessed to have a direct slight adverse effect on non-designated cultural heritage assets during the enabling works and construction through the removal of known and currently unknown archaeological remains along the railway corridor, which can be adequately mitigated to neutralise the impact through preservation by record. In addition, there will be an ongoing archaeological watching brief to be ready to respond to any such finds.

6.5.106 With regard to the effect of the DCO Scheme on the setting of the designated cultural heritage assets along the route during construction and operation it has been assessed as being not significant due to the lack of inter-visibility between the DCO Scheme and many heritage assets or the long distance views between the asset and the railway, which already exists as a feature in the landscape, although it will become a more prominent feature in the landscape due to removal of vegetation along the railway corridor.

6.5.107 The assessment identifies that the construction impacts for the DCO Scheme were determined in terms of their likely scale and nature and were evaluated in terms of the likelihood of physical damage, their proximity, inter-visibility, and change in the setting of each relevant asset in relation to the DCO Scheme. Potential impacts include the buried archaeological environment relating to the creation of construction compounds and associated haul roads and the impacts on the setting of designated sites within 500m of the DCO Scheme from construction plant and traffic and the removal of vegetation.

Operation

6.5.108 The assessment identifies that the main impact during the operational phase is the effect of the DCO Scheme will be on the setting of designated and non-designated heritage assets both in terms of visual changes and the effects of noise from the operating trains.

6.5.109 The views from Clifton Suspension Bridge north and south would be similar to present with some localised vegetation removal along the railway corridor.

Summary

6.5.110 An assessment has been made on the direct and indirect impacts of the DCO Scheme on statutory and non-statutory designations in addition to non-designated cultural heritage assets during construction and the operation phases. No likely significant effects are predicted during construction, subject to whether there is discovery of archaeological finds during earthworks and agreement with the local planning authority on appropriate mitigation. No likely significant effects are predicted on heritage assets during operation.

Landscape and visual impacts

6.5.111 Paragraph 5.143 advises that the landscape and visual effects of proposed projects will vary on a case by case basis according to the type of development, its location and the landscape setting of the proposed development.

6.5.112 The Secretary of State's decision will reflect on all aspects of the design and the visual effects on sensitive receptors. Paragraph 5.157 identifies that the following considerations will be taken into account:

"the environmental effects on the landscape and siting, operational and other relevant constraints, to avoid adverse effects on landscape or to minimise harm to the landscape, including by reasonable mitigation."

Assessment

6.5.113 The applicant has carried out assessments in accordance with advice in the NPSNN. Chapter 11 of the ES considers the DCO Scheme's impact on landscape character relating to changes to the elements, features and patterns that make up the landscape character. The visual assessment carried out identifies the impact on receptors from changes in the view from particular locations created by the DCO Scheme. Mitigation measures have then been proposed and included as part of the design where required.

6.5.114 The topography in North Somerset and Bristol comprises the low-lying coastal plain backed by alternating ridges and broad river valleys. Portishead itself is built on an area of higher land, surrounded by the coastal plains. The River Avon has cut a valley through a ridge of high land, creating the Avon Gorge.

6.5.115 The railway corridor crosses two natural character areas defined by Natural England, the Severn and Avon Vales Natural Area and Bristol, Avon Valleys and Ridges Natural Area. There are no national or local landscape designations in the study area, though there are extensive areas of open countryside between Portishead and Pill, much of which is designated Green Belt.

6.5.116 The urban land uses include residential, commercial and industrial uses in Portishead, Pill and the outskirts of Bristol, and the Royal Portbury Dock.

6.5.117 In summary, the disused railway line between Portishead and Pill and the operational freight line from Royal Portbury Dock to the Bristol to Exeter main line are existing features in the landscape. Freight trains are a common sight along the operational railway. The disused railway line between Portishead and Pill and the freight line from Royal Portbury Docks to the southwest mainline are existing features in the landscape and are not new elements being introduced.

Construction

6.5.118 The assessment identifies that the most significant effects on landscape and views have been identified as likely to occur during construction. At Portishead the effects would be screened from the wider landscape by buildings, but more immediate to those people who live around the area. In the open area of Sheepway, the construction compound and the movement of construction traffic on the haul roads would be visible in the wider landscape. The buildings and highway infrastructure adjacent to the docks and M5 would also screen the construction activity from the wider landscape.

6.5.119 Trees and planting would need to be removed, both as a safety requirement but also during construction to create working space to rebuild the track, for ditches and to install new fencing. Removal of vegetation along the disused section of the railway between Portishead and Pill will result in a permanent change in linear planting along the railway and open up views of the railway, which will result in a change in landscape character and the views impacting visual receptors in the vicinity. Where possible, vegetation will be maintained along the railway corridor to screen views and mitigate the impact. Works in construction areas will have a temporary detrimental impact on the landscape and views. The Master CEMP (ES Appendix 4.2) sets out guidance on measures to manage the effects of construction on landscape and views, including the management of compounds, protection of vegetation to be retained, and the use of temporary night-time lighting.

Operation

6.5.120 The railway is an existing feature in the landscape. Some new elements will be introduced into the landscape, such as the stations and upstanding features such as new signals and GSM-R masts. The removal of vegetation during construction would make the DCO Scheme most visible in the early years of operation although this effect would soften as replacement planting and natural vegetation regrowth occurs.

6.5.121 Vegetation will be replanted along the railway between Portishead and Pill following Network Rail’s guidelines for suitable species near railway lines.

6.5.122 In Portishead, the sympathetic design of the station, car parks and urban realm would complement the ongoing development around the new Portishead station. In Pill, the new station and car park, and the removal of vegetation on Avon Road and Mount Pleasant embankments would contribute to changes in landscape and views.

6.5.123 The passenger service will result in more movement in the landscape. The railway itself is difficult to see in the open landscape of field boundaries between Portishead and Pill and is obscured by sections in cutting and through tunnels. The railway would be more pronounced through the Avon Gorge due primarily to the removal of vegetation for fencing and geotechnical works.

6.5.124 The Avon Gorge is an existing transport corridor, with an operational railway on both sides of the River Avon and the heavily trafficked A4 Portway. The number of train movements will increase along west bank and train passes during dark winter mornings and evenings would introduce a new source of lighting.

6.5.125 The setting of listed buildings, conservation areas, scheduled monuments and other designated landscapes would be unaffected as the disused line and freight line are already part of the setting to these. The views from the Clifton Suspension Bridge would be similar to present with some localised vegetation removal along the railway corridor. There are no views of the DCO Scheme from the Leigh Woods Conservation Area.

Summary

6.5.126 During the construction period, a temporary likely significant effect is predicted for residents in Portishead, at Sheepway, through Pill and along the Avon Gorge due to construction activities such as site clearance, laying track and installing signals, lighting and structures. Where possible, during construction between Portishead and Pill, vegetation will be maintained along the railway corridor to screen views and mitigate the impact.

6.5.127 During operation, a likely significant effect is predicted at Pill due to the change in landscape character and views around Pill Station and car park. Notwithstanding this, the freight line is already a feature of this area, and although the DCO Scheme would involve the re-introduction of passenger trains and the rebuilt station at Pill which would add new elements to the landscape, these would fit with the existing townscape features.

Land use including open space, green infrastructure and Green Belt

6.5.128 With regard to land use including open space, green infrastructure and the Green Belt, paragraph 5.163 details the NPSNN requirements. It states that applicant should:

“The re-use of previously developed land for new development can make a major contribution to sustainable development by reducing the amount of countryside and undeveloped greenfield land that needs to be used. However, this may not be possible for some forms of infrastructure, particularly linear infrastructure such as roads and railway lines. Similarly, for SRFIs, brownfield land may not be economically or commercially feasible.”

6.5.129 Paragraph 5.165 states that the applicant should identify nearby land uses, the effect of replacing such uses and also assess the effects of precluding development because of the proposed scheme.

6.5.130 Paragraph 5.1.66 states that existing open space and recreational buildings/land should not be developed unless there is suitable/ necessary replacement.

6.5.131 Paragraph 5.170 recognises that there is a general presumption against 'inappropriate development' within the Green Belt and such development should not be approved except in 'very special circumstances'. Applicants are therefore required to demonstrate that their proposal does not constitute inappropriate development within the meaning of Green Belt policy or that there are very special circumstances.

6.5.132 Paragraph 5.171 acknowledges that linear infrastructure will often have to pass through Green Belt land as a means of connecting locations. It states that:

"The identification of a policy need for linear infrastructure will take account of the fact that there will be an impact on the Green Belt and as far as possible, of the need to contribute to the achievement of the objectives for the use of land in Green Belts."

6.5.133 It is therefore recognised that national networks infrastructure projects located in the Green Belt may comprise inappropriate development (paragraph 5.178). Consequently, the Secretary of State, as part of the decision making process, will sometimes need to consider whether very special circumstances exist that would justify such inappropriate development and would outweigh the harm caused.

6.5.134 Paragraph 5.175 states:

"*Where networks of green infrastructure have been identified in development plans, they should normally be protected from development, and, where possible, strengthened by or integrated within it. The value of linear infrastructure and its footprint in supporting biodiversity and ecosystems should also be taken into account when assessing the impact on green infrastructure*."

6.5.135 Paragraph 5.179 identifies that the direct effects of a project on existing uses or proposed uses near the site can be mitigated through the application of good design principles, including the layout of the project and the protection of soils during construction. Further, where green infrastructure is affected, paragraph 5.180 identifies that the project should be designed to:

"ensure the functionality and connectivity of the green infrastructure network is maintained and any necessary works are undertaken, where possible, to mitigate any adverse impact and, where appropriate, to improve that network and other areas of open space, including appropriate access to new coastal access routes, National Trails and other public rights of way."

6.5.136 Paragraph 5.184 recognises that public rights of way are important recreational facilities for walkers, cyclists and equestrians and as such appropriate measures should be taken to mitigate adverse effects on public rights of way and where possible improve access. Further, it is noted that when considering revisions to an existing right of way the impact on its use, character, attractiveness and convenience should be considered.

Green Belt Assessment

6.5.137 The NPSNN requires applicants to determine whether the proposal may be considered: *"inappropriate development within the meaning of Greenbelt policy"* (Paragraph 5.170). This section of the Statement therefore assesses the 'appropriateness' of the Proposed DCO Scheme in the Green Belt and also includes a consideration of what measures have been taken to minimise any harm from the Proposed DCO Scheme.

6.5.138 The policy test for whether development can be appropriate in the Green Belt is set out in NPPF paragraphs 145 and 146. Paragraph 146 lists development that is:

"not inappropriate in Green Belt provided they preserve the openness of the Green Belt and do not conflict with the purposes of including land within it".

6.5.139 As the route of the DCO scheme is safeguarded in local planning policy, it can reasonably be categorised as 'local transport infrastructure', which is one part of the developments listed in NPPF paragraph 146. Therefore, the test for whether the proposed scheme represents 'appropriate development' in the Green Belt as set out by NPPF Paragraph 146, is:

a) *Whether the local transport infrastructure scheme can 'demonstrate a requirement for a Green Belt Location?'*

b) *Whether the proposed scheme preserves the openness of the Green Belt?*

c) *Whether the proposed scheme conflicts with the purposes of including land in the Green Belt?*

6.5.140 The DCO Scheme has therefore been assessed against these criteria in turn below.

A) Requirement for Green Belt Location:

6.5.141 The proposed re-use of the existing railway corridor is the only feasible route for the DCO Scheme. This is because:

- the DCO Scheme follows the alignment of the former railway line;
- all the principal structures required for the railway in the Green Belt are already in place;
- since the 1860s the physical presence of the railway corridor has influenced the pattern of development in Portishead and Pill; and
- the corridor has been reserved for transport proposals in the relevant local planning policy documents.

6.5.142 Consequently, it is considered that a Green Belt location is unavoidable and necessary for the DCO Scheme and it can therefore demonstrate a requirement for a Green Belt location.

B) Protecting the Openness of the Green Belt:

6.5.143 The DCO Scheme would involve the reinstatement of a former railway line. The disused railway line is an existing feature in the landscape and is not a new element being introduced. Although the scheme would involve development on Green Belt land, the nature of the scheme as the reinstatement of a former linear track with limited new development, would be in character and would not change the perceptions of openness when compared to the existing situation in terms of prominence and appearance.

6.5.144 Chapter 11 of the ES, Landscape and Visual Impacts Assessment (DCO Document Reference 6.14) does acknowledge that the DCO Scheme will alter the landscape character and views due to the removal of existing vegetation during construction, particularly for the installation of the security fencing and the geotechnical works, resulting in a less wooded appearance to the western side of the Avon Gorge in the short to medium term. The

proposed landscape mitigation measures, mainly along the disused section of the railway will be designed to be in keeping with local landscape character and will help ensure the openness of the Green Belt is maintained.

6.5.145 It is therefore considered that the DCO Scheme is unlikely to undermine the openness of the Green Belt as it would only involve the reintroduction of a former linear feature and be landscaped to fit into the surrounding landscape.

C) Purposes of including Land within the Green Belt:

The NPPF sets out the five purposes of including land within the Green Belt:

1. to check the unrestricted sprawl of large built-up areas;
2. to prevent neighbouring towns merging into one another;
3. to assist in safeguarding the countryside from encroachment;
4. to preserve the setting and special character of historic towns; and
5. to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.

6.5.146 This section of the Statement therefore considers the proposed scheme against these identified purposes of including land within the Green Belt.

Purpose 1: To check the unrestricted sprawl of large built-up areas

6.5.147 The DCO Scheme involves the reinstatement of the former railway line, along with new stations and other associated works. Whilst the works represent a major linear development, the nature and scale of the DCO Scheme does not result in or set the precedent for urban sprawl. The permanent development, where it is located with the Green Belt, is almost entirely confined within the existing physical boundary of the former railway alignment and does not, save for small access and maintenance compounds, require any significant widening or encroachment onto greenfield land.

6.5.148 Overall the DCO Scheme would not encourage unrestricted sprawl in the surrounding area.

Purpose 2: To prevent neighbouring towns from merging into one another

6.5.149 It is not considered that the proposed development would encourage the merging of settlements into one another. Although the DCO Scheme adjoins and passes through a number of urban settlements along its route and through the creation of the two new stations at Portishead and Pill will provide new connectivity and a linkage between the settlements, it does not facilitate a perceivable merger of the settlements.

Purpose 3: To assist in safeguarding the countryside from encroachment

6.5.150 The footprint of the former railway line largely defines the extent of the DCO Scheme within the Green Belt. The outward expansion of development mainly comprises works outside of the Green Belt, including the works associated with the new stations, Trinity Primary School Bridge and other access improvements. The new permanent works in the Green Belt comprise new accesses and maintenance compounds, essential for the safe and efficient operation of the railway, at Sheepway, Ham Green, and Clanage Road, as well as new fencing required to safely secure the railway. The temporary construction compounds at Sheepway, the Portbury

Hundred, Lodway Farm, Ham Green and Clanage Road are also in the Green Belt. Based on the purpose and extent of the DCO Scheme and its relationship to former rail infrastructure, this does not represent unacceptable encroachment into the countryside.

Purpose 4: To preserve the setting and special character of historic towns

6.5.151 The ES has considered the landscape and visual implications of the DCO Scheme. The assessments undertaken along the route of the railway line have not identified any impacts as a consequence of the DCO Scheme in relation to the setting and special character of any historic towns.

Purpose 5: To assist in urban regeneration by encouraging the recycling of derelict and other urban land

6.5.152 The DCO Scheme is along the line of an existing (partially closed) route and there is development associated with DCO scheme located at strategic points e.g. a new station on vacant urban land within Portishead, along with the re-opening and re-use of the vacant station at Pill. It is considered that the scheme as a whole will not only improve the physical environment and provide sustainable accessibility for both settlements, but will contribute towards enhancing the local economy and the encouragement of future investment.

'Appropriate Development' Summary

6.5.153 Overall, it is therefore considered that the local transport scheme demonstrates a requirement for a Green Belt location; preserves the openness of the Green Belt and does not conflict with the purposes of including land within the Green Belt. The proposed scheme is therefore considered to be 'not inappropriate' for this Green Belt location.

Very Special Circumstances

6.5.154 Notwithstanding whether the development is considered to be 'Appropriate Development', it is also considered that it can be demonstrated that any actual or perceived harm to the Green Belt is outweighed by other material considerations which would justify the application of 'very special circumstances.' In this regard, the relevant policy restrictions in Paragraph 5.178 of the NPSNN on development in the Green Belt are to be weighed against the other policy considerations which inform the planning balance put forward in this Planning Statement.

6.5.155 The need for the DCO Scheme is an important consideration, which should also be attributed significant weight. The rationale behind the DCO Scheme has been set out in Chapter 4 of this Statement. The principle objectives of MetroWest Phase 1 are as follows.

- To support economic growth, through enhancing the transport links to the 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 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; and
- 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.

6.5.156 In addition, MetroWest Phase 1 has the following 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; and
- To contribute to reducing the overall environmental impact of the transport network.

6.5.157 The DCO Scheme is intended to address a number of problems relating to constrained economic growth, congestion, resilience and accessibility that would continue and ultimately detrimentally impact on the economic potential of the city region. The project objectives will address these problems which are aligned with the objectives of the spatial planning policies, and the vision and objectives of bodies such as the LEP and WECA.

6.5.158 The DCO scheme will help to encourage a modal shift towards more sustainable forms of transport. The railway is generally recognised as being a more sustainable transport system than the private car. To achieve a modal shift primarily from the private car to trains, the railway system needs to be made more attractive to users in terms of reliability, and capacity.

6.5.159 Funding for MetroWest Phase 1 has been allocated, in accordance with the assessment of costs as set out in the OBC. The DCO Scheme is the culmination of extensive assessment and has been included as a priority infrastructure investment for the Government, e.g. in April 2019 MetroWest Phase 1 received funding from the DfT.

6.5.160 Overall the Applicant is confident it will be able to draw down the funds both for compensation to landowners and for the construction of the DCO Scheme, and there is no reason to believe that, if the Order is made, the DCO Scheme will not proceed due to funding.

6.5.161 Support is also provided for the DCO Scheme in specific local plan policies for both host local authorities. NSC's Proposals map also explicitly designates and safeguards the route for the Portishead to Pill Proposed Railway Line.

Green Belt Summary

6.5.162 On the basis of the assessment carried out in this section, it is considered that the DCO Scheme is not inappropriate development within the Green Belt. In addition, if the scheme is found to be inappropriate development in the Green Belt, the analysis demonstrates that ‘very special circumstances’ exist which justifies the need for the DCO Scheme, namely its support from local planning policy and the economic, local transport, social and environmental benefits. It is considered that the potential harm to the Green Belt will not be significant, and is clearly outweighed by the other important and relevant considerations in relation to the need for the DCO Scheme.

Open Space, Land Use and PROWs

6.5.163 Some areas of open space land are required for the construction and operation of the DCO Scheme. Open space land holds special status under the Planning Act 2008 with additional procedures required, under sections 131 and 132. The Statement of Reasons (Document 4.1) details all instances of where open space land is required. This includes on the north and south side of the railway in the vicinity of Trinity Primary School to accommodate a pedestrian footpath and cycleway, at Portbury Wharf Ecology Park where a new pond is proposed, in addition to temporary construction compounds and diversions to public rights of way. The use of open space land for the DCO Scheme is either temporary or not substantial so as to trigger the requirements to provide exchange land under sections 131 and 132 of the Planning Act 2008. As such, no exchange land is proposed.

6.5.164 A number of PRoWs need alteration as a result of the proposals for the DCO Scheme. The DCO Scheme will require the permanent closure of a PRoW at Barons Close, Bristol (Footpath BCC/422/10) which crosses west from Barons Close, Ashton, on a level crossing before proceeding over the neighbouring MetroBus route dedicated bus way. This closure is required for safety reasons. It is proposed to divert the existing PRoW across the railway at the Ashton Vale level crossing and then southwards using the newly laid footway along Winterstoke Road.

Noise and Vibration

6.5.165 NPSNN Paragraph 5.189 states that where a development is subject to EIA and significant noise impacts are likely to arise from the proposed development, the applicant should include a noise assessment as part of the environment statement. It details a list of requirements that should be complied with when preparing an assessment, including:

- "*a description of the noise sources including likely usage in terms of number of movements, fleet mix and diurnal pattern. For any associated fixed structures, such as ventilation fans for tunnels, information about the noise sources including the identification of any distinctive tonal, impulsive or low frequency characteristics of the noise.*
- *identification of noise sensitive premises and noise sensitive areas that may be affected.*
- *the characteristics of the existing noise environment.*
- *a prediction on how the noise environment will change with the proposed development:*
  - in the shorter term such as during the construction period;
  - in the longer term during the operating life of the infrastructure;
  - at particular times of the day, evening and night as appropriate.
- *an assessment of the effect of predicted changes in the noise environment on any noise sensitive premises and noise sensitive areas.*
- *measures to be employed in mitigating the effects of noise.*
- *Applicants should consider using best available techniques to reduce noise impacts*."

6.5.166 Paragraph 5.193 identifies that as part of the Secretary of State's decision making process, developments must be undertaken in accordance with statutory requirements for noise, including the Noise Policy Statement for England, NPPF and the associated planning guidance on noise.

6.5.167 Good design should be demonstrated, including through the optimisation of the layout to minimise noise and through the use of landscaping, bunds or noise barriers as a means of reducing or mitigating noise (paragraph 5.194). As part of the Secretary of State's decision making process consideration will be given to whether mitigation measures are required during both construction and operation over and above any proposed part of the scheme (paragraph 5.197). Paragraph 5.198 details such measures as including one or more of the following:

- "*engineering: containment of noise generated;*
- *materials: use of materials that reduce noise, (for example low noise road surfacing);*
- *lay-out: adequate distance between source and noise-sensitive receptors; incorporating good design to minimise noise transmission through screening by natural or purpose built barriers;*
- *administration: specifying acceptable noise limits or times of use (e.g., in the case of railway station PA systems)*."

Assessment

6.5.168 Chapter 13 of the ES considers the potential of the DCO Scheme to give rise to significant effects on noise and vibration. The chapter considers the relevant legal and policy framework which will inform the undertaking of the assessment and describes the methodology proposed for the identification and assessment of likely significant noise and vibration effects.

Construction

6.5.169 The assessment identifies the potential impact from construction activities at locations along the route on ambient noise levels and the expected noise levels at the closest sensitive receptors. These construction activities include the construction of the stations, car parks, road realignment and the works along the line. During construction, there is the potential for likely significant effects at a small number of receptors, but overall the impact should be slight or neutral on the majority of receptors. Use of Best Practicable Means ("BPM") in the selection and operation of equipment would help to mitigate the impact. Such measures will be managed through the Master CEMP.

Operation

6.5.170 During operation, potentially significant noise levels have been identified at dwellings to the south of Portishead station along Peartree Field and also at the Old Station House, Portbury. Therefore, mitigation has been included within the design in the form of noise barriers which will reduce the significant effect to slight adverse. No further mitigation has been identified as being required and therefore overall the residual effects are not considered to be significant. Overall a slight adverse noise impact is expected during the operation of new rail services utilising new sections of track.

Summary

6.5.171 The DCO Scheme is considered to be compliant with the NPSNN, which seeks to ensure that development will not generate unacceptable levels of noise or where significant noise would be generated the impacts can be appropriately mitigated.

6.5.172 The noise impacts of the DCO Scheme have been assessed and accords with the requirements of the NPSNN. Overall, it is anticipated that the most significant impact will be prevalent during construction with a potentially large adverse effect on a small number of receptors, but overall a slight or neutral impact on the majority of receptors. However, the use of Best Practicable Means is generally considered to reduce the level of noise and provide an appropriate level of mitigation. During operation however, given that a new train service will utilise new sections of track that do not currently exist, this new noise generation is likely to result in an overall slight adverse noise effect.

Impacts on Transport Networks

6.5.173 The NPSNN requires applicants to have regard to the policies set out in local plans (paragraph 5.203) and should consider reasonable opportunities to support other transport modes in developing infrastructure (paragraph 5.205). In relation to rail development Paragraph 5.206 states that:

"if a development is subject to EIA and is likely to have significant environmental impacts arising from impacts on transport networks, the applicant's environmental statement should describe those impacts and mitigating commitments."

6.5.174 As part of the proposal, measures should be incorporated which seek to improve access by public transport and sustainable modes, reduce the need for associated parking and mitigate transport impacts (paragraph 5.208). Further, applicants are required to prepare a travel plan that includes measures to mitigate transport impacts and provide details of proposed measures to improve public transport accessibility and by other more sustainable modes.

6.5.175 Paragraph 5.212 requires schemes to be developed reflecting on the provisions of relevant local policies and local plans, and should utilise local models where appropriate. Notwithstanding this, it states that:

"the scheme must be decided in accordance with the NPS except to the extent that one or more of sub-sections 104(4) to 104(8) of the Planning Act 2008 applies."

6.5.176 With regard to mitigation measures, paragraph 5.215 requires such measures to be proportionate and reasonable, and should be focussed on promoting sustainable development. Mitigation measures in relation to rail development may be associated with the design, layout or operation of the scheme (paragraph 5.217).

Assessment

6.5.177 Chapter 16 of the ES considers the potential transport impacts of the DCO Scheme in accordance with the methodology detailed in the TA, which is provided at ES Appendix 16.1.

Construction

6.5.178 During construction some transport impacts would be expected, such as the impact of HGVs and other construction vehicles on the highway network, abnormal loads deliveries, the requirement for partial or full highway closures and localised impacts around construction compounds. However, such impacts are short term and limited to the construction period and the supporting CTMP incorporates measures which once implemented will have the effect of managing the adverse impacts on local residents, businesses and services.

Operation

6.5.179 As a public transport scheme, the DCO Scheme represents a major enhancement to the local transport network and will promote modal shift away from motor vehicle use. The DCO Scheme will improve access to employment opportunities such as the TQEZ and will provide further benefits to those without access to a private car.

6.5.180 The calculation of the trips to and from Pill and Portishead stations have been informed by the output of the passenger Rail Demand Model. For Portishead station, the data show that, in the 10-year period assessed (2021 to 2031), demand at the station will increase across all modes of transport. The local assessment of the DCO Scheme indicates that the network will be operating within capacity at the majority of locations. The proposed station parking would meet demand at both Portishead and Pill stations.

6.5.181 The number of walking and cycling trips are forecast to increase and improvements to infrastructure is included in the vicinity of the stations. With public transport, it is estimated that the DCO Scheme will lead to a reduction in demand of 25% to 40% from existing bus services.

6.5.182 Proposed infrastructure measures integral to the DCO Scheme will improve access to and in and around the stations and would underpin the level of sustainable trips. The proposed parking controls (through double yellow lines on local roads) would have the beneficial effect of reinforcing the use of the station car parks and prevent adverse impacts on neighbouring properties.

6.5.183 Specific impacts on transport infrastructure have been considered in the TA, along with appropriate measures to mitigate against potential detrimental impacts. A Transport Implementation Strategy has been prepared as part of the TA which identifies all the measures required, including Station Travel Plans, which will identify measures that will be implemented to reduce the number of vehicle trips to and from the stations.

Summary

6.5.184 The applicant has carried out assessments in accordance with the provisions of the NPSNN. Overall, the DCO Scheme is considered to be compliant and seeks to encourage more integrated and sustainable means of transport, improving connectivity within North Somerset and beyond and seeking to reduce traffic congestion on the road network.

6.5.185 The DCO Scheme represents a major enhancement to the local public transport network and would permit modal shift away from vehicle use and provide further benefits to those without access to a private car. New

stations will be accessible and in particular will facilitate walking, cycling and other public transport trips to and from the stations. A TA has been prepared and included as Appendix 16.1 to the ES, which outlines a Transport Implementation Strategy that identifies measures required, including physical improvements and the implementation of a CTMP and Station Travel Plans.

6.5.186 The DCO Scheme will deliver enhanced infrastructure and supporting facilities providing major beneficial effects in terms of improved connectivity within North Somerset and beyond, delivering journey time savings during the DCO Scheme's operation and reducing traffic congestion.

CHAPTER 7

Conclusion

7.1 The Application

7.1.1 This Planning Statement relates to the DCO Application, made by NSDC to the Secretary of State pursuant to the PA 2008, for the Portishead Branch Line (MetroWest Phase 1) DCO Scheme, which would grant development consent authorising the construction, operation and maintenance of the DCO Scheme, along with the compulsory acquisition of all land necessary to enable this.

7.2 The DCO Scheme

7.2.1 The DCO Scheme extends 13.7 km between Portishead and Ashton Junction in Bristol. The actual NSIP comprises works to the 5.633 km section of former railway between Portishead and a new junction (Pill Junction), between Pill Viaduct and Pill Tunnel. The NSIP also includes the slewing of the operational railway from Royal Portbury Dock between a location near the Portbury Dock Junction and the new Pill Junction, where the two lines will combine into a single line.

7.2.2 There are also a series of Associated Development works including: a new station at Portishead and associated car parks; a re-developed station at Pill, forecourt and new car park; a new pedestrian and cycle bridge by Trinity Primary School in Portishead; highway works; temporary haul roads; temporary compounds and four permanent maintenance compounds; and minor works in the Avon Gorge.

7.2.3 The scheme constitutes EIA development, which has been undertaken to understand the DCO Scheme's impact on the environment and to inform mitigation. The details of the assessment are reported in the ES, which accompanies the DCO Application. Significant environmental effects are likely during the construction period of the DCO Scheme on the landscape in the Avon Gorge, the visual impact for residents in Portishead, Sheepway and Pill and from the impact of construction traffic on the local road network. During operation there is likely to be a significant effect on the landscape in Pill due to the re-introduction of the railway station.

7.2.4 A package of environmental measures has also been developed to mitigate, prevent and compensate for the effects of the DCO Scheme.

7.3 Key Objectives

7.3.1 The DCO Scheme is a key element of the MetroWest programme - improving railway passenger capacity on the Great Western railway network with a re-established connection between Portishead and Bristol by reinstating existing rail infrastructure.

7.3.2 The principal business case objectives of the MetroWest programme are to support economic growth, improve transport network resilience, improve accessibility to the rail network, and to make a positive contribution to social well-being. Supporting objectives are to contribute to reducing traffic congestion, contribute to enhancing the capacity of the local rail network and to contribute to reducing the overall environmental impact of the transport network.

7.4 National Policy Statement for National Networks

7.4.1 In December 2014, the DfT published the NPSNN, which sets out the Government's priorities and policy direction for the national road and rail networks. Consequently, the NPSNN is the primary basis for making decisions on applications for a Development Consent Order for NSIPs.

7.4.2 The NPSNN sets out the need for substantial further investment in the rail network as a result of sustained increasing demand for both passenger and freight train services over the last two decades. The NPSNN states that delivering NSIPs will play a key part of the strategy for ensuring the national road and rail networks have sufficient capacity to meet the increasing demand.

7.4.3 The DCO Scheme has been appraised against the various polices contained in the NPSNN, particularly having regard to the generic impact and assessment matters identified in the document and associated environmental effects.

7.4.4 Development within the Green Belt is a key issue within the national Planning policy. It is considered that the DCO Scheme does not represent 'inappropriate' development in the Green Belt, given the strategic benefit of the DCO Scheme and its limited impact on the openness of the Green Belt, by its utilising previously developed land. In addition, no major structures are proposed in the Green Belt. To ensure that there is full compliance with Green Belt policy, a full assessment of the DCO Scheme against the NPSNN has been carried out, which also demonstrates that 'very special circumstances' exist for the development to be located within sections of the Green Belt. The DCO Scheme complies with the aim to maintain openness and the five purposes of the Green Belt.

7.4.5 The assessments undertaken within the ES address a range of environmental issues and determine the effects of the DCO Scheme along with the benefits derived from managing potential impacts and delivering appropriate mitigation where feasible. The impact on the environment from an ecological, biodiversity and visual perspective is limited as a result of re-using the existing railway alignment.

7.4.6 The Applicant submits, based on the analysis contained in Part 6 of this Statement, that the DCO Scheme accords with the relevant parts of the NPSNN in all material respects.

7.5 Other Policy Considerations

7.5.1 The DCO Scheme is considered to provide a high level of compliance with the key aims of the NPPF, supporting its core land-use planning principles by delivering sustainable transport infrastructure, enhancing sustainable accessibility, facilitating a modal shift from the private car to a more sustainable means and supporting sustainable economic growth.

7.5.2 Support is also provided for the DCO Scheme in specific local plan policies for both the relevant local authorities and the DCO Scheme's alignment is safeguarded and allocated in local planning policy. The MetroWest Phase 1 project is identified in the JLTP3 and North Somerset's Core Strategy as a priority for early delivery.

7.6 Overall Planning Balance

7.6.1 This Statement has been prepared to provide an appraisal of applicable planning policy and to demonstrate how other environmental issues, assessed in the ES, form important and relevant considerations for the DCO Scheme. These issues predominantly relate to Green Belt, air quality, noise, flood risk, ecology, landscape, heritage and transportation. This Statement supported by the ES therefore comprehensively considers the relevant planning and environmental matters that have influenced the DCO Scheme and details how it complies with or satisfactorily mitigates against particular conflicts.

7.6.2 It has been demonstrated that the DCO Scheme is in accordance with the NPSNN in all material aspects and is supported by and compliant with national, regional and local planning policy, and all other relevant material considerations.

7.6.3 Where there is potential for the DCO Scheme to have an adverse impact from an environmental perspective or conflict with planning policy, mitigation has been proposed to reduce the level of impact where feasible. In addition, where such impacts have been identified, these should be considered against the overriding need for the DCO Scheme that has been demonstrated, including the following overriding factors:

- the DCO Scheme will deliver a sustainable transport solution contributing towards the Government's aspirations for transport, society, the economy and environment; and
- the DCO Scheme is linear in nature, contained within the existing discontinued railway corridor, re-using previously developed land that has been safeguarded specifically for the DCO Scheme in the applicable local development plans.

7.6.4 Therefore, in conclusion, this Statement has identified the DCO Scheme's strong level of national and local policy support and compliance, particularly with regard to the provisions of the NPSNN. This, in combination with manageable environmental effects, provides strong support for granting consent for the DCO Scheme, which will reopen rail infrastructure to passenger travel.

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Abbreviations

APFP Regulations	Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009
B&NES	Bath and North East Somerset Council
BCC	Bristol City Council
BREEAM	Building Research Establishment Environmental Assessment Method
CA	Conservation area
CEMP	Construction Environmental Management Plan
CIA	Cumulative impact assessment
CO_2	Carbon dioxide
CoCP	Code of Construction Practice
CSR	Comprehensive spending review
CTMP	Construction Traffic Management Plan
DCLG	Department for Communities and Local Government
DCO	Development Consent Order
DfT	Department for Transport
EIA	Environmental impact assessment
ES	Environmental Statement
FRA	Flood Risk Assessment
GOSW	Government Office for the South West
GRIP	Governance for Railway Investment Projects
GVA	Gross value added
HCA	Homes and Communities Agency
HIA	Health Impact Assessment
HRA	Habitat Regulations Assessment
IROPI	Imperative Reasons of Overriding Public Interest
JSP	Joint Spatial Plan
JTS	Joint Transport Study
LEP	Local Enterprise Partnership
MAA	Multi-Area Agreement
MOVA	Microprocessor Optimised Vehicle Actuation
NDP	Neighbourhood Development Plan
NPPF	National Planning Policy Framework
NPPG	National Planning Policy Guidance
NPSNN	National Policy Statement for National Networks
NSDC	North Somerset Council
NSLIDB	North Somerset Levels Internal Drainage Board

NSIP	Nationally Significant Infrastructure Project
OBC	Outline Business Case 2017
PA 2008	Planning Act 2008
PINS	Planning Inspectorate
RUS	Route utilisation strategy
SAC	Special Area of Conservation
SEP	Strategic Economic Plan
SGC	South Gloucestershire Council
SPD	Supplementary Planning Documents
SuDS	Sustainable Drainage System
SWRDA	South West Regional Development Agency
TA	Transport Assessment
TQEZ	Temple Quarter Enterprise Zone
WEP	West of England Partnership
WS	Wildlife Site

Appendix A
NPS Policy Tracker

Appendix A – NPS Policy Tracker

National Policy Statement for National Networks (December 2014)

Introduction

1. In accordance with Section 104 of the Planning Act 2008 in determining the DCO Application, provided the decision maker is satisfied that the adverse impact of the proposed development would not outweigh its benefits, the Secretary of State must decide the DCO Application in accordance with any relevant National Policy Statement ("NPS").
2. In this case the relevant NPS is the National Policy for National Networks ("NPSNN"), which was designated by the Secretary of State on 14 January 2015. The DCO Application has been structured around the NPSNN and the NPSNN Accordance Table has been prepared to ensure regard has been had to the NPSNN as the scheme proposal evolved.
3. The NPSNN requires scheme promoters to meet the particular legal and policy tests identified in the NPSNN and provide specified information in the DCO. The NPSNN provides the principal basis for the Secretary of State's decision-making relating to the DCO Application.
4. The NPSNN is not scheme-specific and does not set out a programme of railway improvement schemes, but instead deals with road and rail at a strategic level. It also sets out the principles by which applications for road and rail schemes should be assessed. The NPSNN sets out general policies in accordance with which applications relating to national networks infrastructure are to be decided.
5. Paragraph 4.3 of the *NPSNN* states that:

   "In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the Examining Authority and the Secretary of State should take into account:

   - *its potential benefits including the facilitation of economic development, including job creation, housing and environmental improvement, and any long-term or wider benefits;*
   - *its potential adverse impacts, including any longer-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts."*

6. In the '*Summary of Need'* on page 9 of the NPSNN the following vision and strategic objectives are set out:

   "The Government will deliver national networks that meet the country's long-term needs; supporting a prosperous and competitive economy and improving overall quality of life, as part of a wider transport system. This means:

   - *Networks with the capacity and connectivity to support national and local economic activity and facilitate growth and create jobs.*
   - *Networks which support and improve journey quality, reliability and safety.*
   - *Networks which support the delivery of environmental goals and the move to a low carbon economy.*
   - *Networks which join up our communities and link effectively to each other."*

NPSNN Accordance Table

1. Tables showing how the DCO Scheme accords with the NPSNN (The Accordance Tables) have therefore been prepared and are included after this introductory chapter.

Table 1: National Networks National Policy Statement Chapter 2

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks	Compliance with the NPSNN
2	***THE NEED FOR DEVELOPMENT OF THE NATIONAL NETWORKS AND GOVERNMENT'S POLICY***	
2.1	The national road and rail networks that connect our cities, regions and international gateways play a significant part in supporting economic growth, as well as existing economic activity and productivity and in facilitating passenger, business and leisure journeys across the country. Well-connected and high-performing networks with sufficient capacity are vital to meet the country's long-term needs and support a prosperous economy.	The DCO Scheme will help encourage a modal shift towards more sustainable forms of transport. The railway is generally recognised as being a more sustainable transport system than the private car. To achieve a modal shift primarily from the private car to trains, the railway system needs to be made more attractive to users in terms of reliability and capacity. The DCO Scheme will be an important contributor to economic growth in the region providing improved connectivity to jobs and businesses.
2.2	There is a critical need to improve the national networks to address road congestion and crowding on the railways to provide safe, expeditious and resilient networks that better support social and economic activity; and to provide a transport network that is capable of stimulating and supporting economic growth. Improvements may also be required to address the impact of the national networks on quality of life and environmental factors.	The DCO Scheme will help encourage a modal shift towards more sustainable forms of transport. The improved rail network will see additional passenger trains. The railway is generally recognised as being a more sustainable transport system than the private car. To achieve a modal shift from the private car, the alternatives need to be attractive to users, as well as provide key journey opportunities and offer reliable services. New rail services between communities will support modal shift as a result of the new services providing attractive and reliable non-car alternatives.
2.4	The pressure on our networks is expected to increase even further as the long term drivers for demand to travel - GDP and population - are forecast to increase substantially over coming years. Under central forecasts, road traffic is forecast to increase by 30% and rail journeys by 40%, rail freight has the potential to nearly double by 2030.	The DCO Scheme seeks to improve the rail connectivity in the vicinity, making travelling by rail more attractive to current car users. The DCO Scheme will contribute to enhancing the capacity of the local rail network, resulting in additional seats per hour in the morning and afternoon peaks.
2.6	There is also a need for development on the national networks to support national and local economic growth and regeneration, particularly in the most disadvantaged areas. Improved and new transport links can facilitate economic growth by bringing businesses closer to their workers, their markets and each other. This can help rebalance the economy.	The DCO Scheme seeks to support economic growth, through enhancing the transport links to the TQEZ and into and across Bristol City Centre, from the Portishead, Bath and Avonmouth / Severn Beach arterial corridors. The DCO Scheme takes into account the redevelopment and expansion of Portishead town over the last decade (the construction of several thousand new homes). Portishead has strong socio-economic links with Bristol, which serves as the main centre of employment. The DCO Scheme provides reliable transport service for the town's growing population.
2.7	In some cases, there may be a need for development to improve resilience on the networks to adapt to climate change and extreme weather events rather than just tackling a congestion problem.	The design of the DCO Scheme reflects this sensitive environment. An FRA has been undertaken and the risks associated with climate change have been included in the modelling. A short section of the scheme crosses the flood plain in the Bower Ashton area. Detailed modelling was undertaken to assess the impact of the DCO Scheme on the flood risk on third parties. The proposed design to raise the railway by c150 to 300 mm would increase the flood risk to third parties, and the modelling also demonstrated that given the topography and availability of undeveloped land it was not feasible to provide floodplain compensation in this area. Consequently, the proposed design is to maintain the scheme at the same elevation within given build tolerances, which will not significantly change the flood risk to the scheme or third parties. In the longer term, the scheme is vulnerable to sea level rise and tidal flooding in this area, which will result in more frequent closure of the line. The DCO Scheme does not include new flood defences.

Table 1: National Networks National Policy Statement Chapter 2

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks	Compliance with the NPSNN
2.9	Broader environment, safety and accessibility goals will also generate requirements for development. In particular, development will be needed to address safety problems, enhance the environment or enhance accessibility for Non-Motorised Users. In their current state, without development, the national networks will act as a constraint to sustainable economic growth, quality of life and wider environmental objectives.	The DCO Scheme seeks to improve the connectivity between the Portishead, Pill and Bristol Temple Meads which together with an upgrade service for the Severn Beach line to Avonmouth and local stations between Bristol and Bath would improve local rail services across the wider Bristol Region under MetroWest Phase 1. The improved service will encourage more individuals to travel by train rather than car.
2.10	The Government has therefore concluded that at a strategic level there is a compelling need for development of the national networks - both as individual networks and as an integrated system. The Examining Authority and the Secretary of State should therefore start their assessment of applications for infrastructure covered by this NPS on that basis.	The DCO Scheme will provide a more attractive and guaranteed (future proofed) journey times for commuters, businesses and residents into and across Bristol through better use of strategic rail corridors from Portishead to Bristol, Avonmouth / Severn Beach, and Bath. The DCO Scheme will contribute to enhancing the capacity of the local rail network, resulting in additional seats per hour in the morning and afternoon peaks.
2.28	Railways are vital part of the country's transport infrastructure. In 2013/14, the rail network in Great Britain consisted of 15,753 km (9,788 miles) of route open to traffic and 2,559 stations. A total of 60 billion journeys were undertaken by rail passengers on the network in 2013/14. Around 60% of these journeys were for business and commuting/education purposes. Approximately 9% of 'freight kilometres' in Great Britain are carried by rail and the amount of freight moved by rail on 2013/14 was 23 billion net tonne kilometres.	The DCO Scheme will contribute to enhancing the capacity of the local rail network, resulting in additional seats per hour in the morning and afternoon peaks.
2.29	In the context of the Government's vision for the transport system as a driver of economic growth and social development, the railway must: Offer a safe and reliable route to work Facilitate increases in both business and leisure travel Support regional and local public transport to connect communities with public services, with workplaces and with each other, and Provide for the transport of freight across the country, and to and from ports, in order to meet environmental goals and improve quality of life	The DCO Scheme will provide reliable journey times for commuters, businesses and residents into and across Bristol through better utilisation of strategic heavy rail corridors from Portishead, Bath and Avonmouth / Severn Beach. The DCO Scheme will contribute to enhancing the capacity of the local rail network, resulting in additional seats per hour in the morning and afternoon peaks. The DCO Scheme would improve accessibility to the rail network with new and re-opened rail stations and reduce the cost of travel for commuters, businesses and residents.
2.36	The government has therefore concluded that at strategic level there is a compelling need for development of the national rail network to meet the need set out in paragraphs 2.28 and 2.29.	The DCO Scheme will provide reliable journey times for commuters, businesses and residents into and across Bristol through better utilisation of strategic heavy rail corridors from Portishead, Bath and Avonmouth / Severn Beach. The DCO Scheme will contribute to enhancing the capacity of the local rail network, resulting in additional seats per hour in the morning and afternoon peaks. The DCO Scheme will improve accessibility to the rail network with new and re-opened rail stations and reduce the cost of travel for commuters, businesses and residents.
2.37	In the short to medium term, the Government's policy is to improve the capacity, capability and resilience of the rail network at key locations for both passenger and freight movements to reflect growth in demand, reduce crowding, improve journey times, maintain or improve operational performance and facilitate modal shift form road to rail. The rail network is predominantly a mixed traffic network and the provision of capacity for both freight and passenger service is core to the network.	The DCO Scheme will significantly improve the capacity, capability and resilience of the rail network at key locations to reflect growth in demand, reduce crowding, improve journey times, maintain or improve operational performance and facilitate modal shift from road to rail.
2.38	As demand pressure rises, this incremental approach will no longer be sufficient to maintain the desired levels of service in the longer term. Substantial investment and infrastructure	The DCO Scheme seeks to reconstruct the disused section of railway line between Portishead and Pill together with Associated Development comprising a new station at

Table 1: National Networks National Policy Statement Chapter 2

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks	Compliance with the NPSNN
	capacity – particularly on interurban routes between our key cities, London and South East routes and major city commuter routes – will be needed. The maintenance of a competitive and sustainable economy against a background of continued economic globalisation will mean that there is a need to support measures that deliver step change improvements in capacity and connectivity between key centres, by speeding up journey times and encouraging further modal shift to rail. The government will therefore consider new or re-opened alignments to improve capacity, speed connectivity and reliability. Rail is safer, greener and faster mode of transport for larger passenger volumes and for long distance, including inter-city journeys.	Portishead and rebuilt station at Pill, works to the highway at Portishead and the alterations to the railway between Pill and Ashton Junction. Rail travel across the West of England has increased by more than two-thirds in the last ten years. Whilst the West of England benefits from good long-distance rail routes, the local rail network is relatively underdeveloped. Some of the local rail routes do not have a particularly frequent, or even regular peak, service. There are also a number of strategically important disused rail lines and reopening these lines is a key part of the West of England Combined Authorities' strategy to uplift the local rail network, through the MetroWest programme.
2.40	Modal shift from road and aviation to rail can help reduce transport's carbon emissions, as well as providing wider transport and economic benefits. For these reasons the Government seeks to accommodate an increase in rail travel and rail freight where it is practice and affordable by providing for extra capacity.	The DCO Scheme will assist the modal shift from road to rail by providing a reliable resilient service. The shift from aviation is not applicable to the DCO Scheme.
2.42	The logistic industry which directly employs over two million people across more than 190.000 companies generates over £90 billion annually, underpins the efficient operation of most sectors of the wider national economy. Over recent years, rail freight has started to play an increasingly significant role in logistics and has become an important driver of economic benefits.	The proposed development seeks to maintain the existing freight paths to Royal Portbury Dock.
2.47	A network of SRFI's is a key element in aiding the transfer of freight from road to rail, supporting sustainable distribution and rail freight growth and meeting the changing needs of the logistic industry, especially the ports and retail sector. SRFIs also play an important role in reducing trip mileage of freight movements on the national and local road networks. The siting of many existing rail freight interchanges in traditional urban locations means that there are no opportunities to expand, that they lack warehousing and they are not conventionally located for modern logistics and supply chain industry.	Noted, the DCO Scheme seeks to maintain the existing freight paths to Royal Portbury Dock.
2.49	The industry working with Network Rail, has produced unconstrained rail freight forecasts to 2023 and 2033. These forecasts, and the method used to produce them, are considered to be robust and the Government has accepted them for planning purposes. These forecasts will change over time as our understanding improves and circumstances change.	Noted, the DCO Scheme seeks to maintain the existing freight paths to Royal Portbury Dock.

Table 2: National Networks Policy Statement Chapter 3

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks	Compliance with the NPSNN
3	***WIDER GOVERNMENT POLICY ON THE NATIONAL NETWORKS***	
Environment and Social Impacts		
3.1	The need for development of the national networks, and the Government's policy for addressing that need, must be seen in the context of the Government's wider policies on economic performance, environment, safety, technology, sustainable transport and accessibility, as well as journey reliability and the experience of road/rail users. This section sets out the Government's wider policies, both as they relate to projects for the national networks that are nationally significant infrastructure projects and more generally.	The MetroWest Phase 1 seeks to contribute to reducing the overall environmental impact on the transport network. The railway is generally recognised as being a more sustainable transport system than the private car. To achieve a modal shift from the private car, the alternatives need to be attractive to users, as well as provide key journey opportunities and offer reliable services. The DCO Scheme seeks to support economic growth, through enhancing the transport links to the TQEZ and into and across Bristol City Centre, from the Portishead, Bath and Avonmouth / Severn Beach arterial corridors.
3.2	The Government recognises that for development of the national road and rail networks to be sustainable these should be designed to minimise social and environmental impacts and improve quality of life.	The DCO Application is supported by a detailed EIA which includes details of mitigation measures where applicable. The DCO Scheme seeks to reduce the overall environmental impact of the transport network. Making positive contributions to social well-being, life opportunities and improving quality of life across the three arterial corridors (Portishead, Bath and Avonmouth / Severn Beach) remains one of MetroWest Phase 1's principal objectives.
3.3	In delivering new schemes, the Government expects applicants to avoid and mitigate environmental and social impacts in line with the principles set out in the NPPF and the Government's planning guidance. Applicants should also provide evidence that they have considered reasonable opportunities to deliver environmental and social benefits as part of schemes.	An EIA has been undertaken to assess the potential benefits and adverse impacts of the DCO Scheme and this is reported in the ES that was submitted with this DCO Application. Consideration has been given to reasonable opportunities to deliver benefits, for example, in the design of the urban realm around Portishead station and modifications to bridleways and cyclepaths between Portishead and Pill.
3.4	The Appraisal of Sustainability accompanying this NPS recognises that some developments will have some adverse local impacts on noise, emissions, landscape/visual amenity, biodiversity, cultural heritage and water resources. The significance of these effects and the effectiveness of mitigation is uncertain at the strategic and non-locationally specific level of this NPS. Therefore, whilst applicants should deliver developments in accordance with Government policy and in an environmentally sensitive way, including considering opportunities to deliver environmental benefits, some adverse local effects of development may remain.	The DCO Scheme has sought to minimise the impact of the proposal and where possible mitigation has been developed as part of the EIA process to further reduce the impact of the scheme. These are reported in the ES. Key mitigation measures include: • The Avon Gorge Vegetation Management Plan to provide positive management of railway land through the Avon Gorge Woodlands Special Area of Conservation, • measures for protected species such as bats, badgers, great crested newts, other amphibians, reptiles, Schedule 1 birds, and nesting birds, and water vole, otter and dormice if found on site prior to construction; • landscape planting along the railway between Portishead and Pill • two acoustic barriers at Portishead station and by the old Portbury station • an archaeological watching brief during earthworks on green field sites • a CEMP to reduce the impacts arising from construction activities such as reduced air quality including dust; archaeology; ecology; soils and ballast containing contaminants; landscape/visual impacts; use of materials and disposal of waste; noise and vibration; protection of farmland, community assets, utilities and nearby development land, ted protection of vegetation to be retained and other, handling of contaminated ballast, noise and vibration, management of soil stockpiles on agricultural land.

Table 2: National Networks Policy Statement Chapter 3

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks	Compliance with the NPSNN
Emissions		
3.6	Transport will play an important part in meeting the Government's legally binding carbon targets and other environmental targets. As part of this there is a need to shift to greener technologies and fuels, and to promote lower carbon transport choices. Over the next decade, the biggest reduction in emissions from domestic transport is likely to come from efficiency improvements in conventional vehicles, specifically cars and vans, driven primarily by EU targets for new vehicle CO_2 performance. Electrification of the railway will also support reductions in carbon.	The DCO Scheme will promote a modest modal shift in transport and as a result there would be a very small reduction in carbon emissions from vehicles. There are no proposals to electrify the line.
Sustainable Transport		
3.15	The Government is committed to providing people with options to choose sustainable modes and making door-to-door journeys by sustainable means an attractive and convenient option. This is essential to reducing carbon emissions from transport.	The DCO Scheme will improve opportunities for people to choose a more sustainable mode of transport by providing a rail link for local communities to reach employment and social facilities.
3.16	As part of the Government's commitment to sustainable travel it is investing in developing a high-quality cycling and walking environment to bring about a step change in cycling and walking across the country.	Noted, cycle parking will be provided at Portishead and Pill stations in order to promote links for these sustainable transport modes. Various existing public rights of way will be affected by the DCO Scheme, these will be mitigated with the majority resulting in an improvement to provision, including safety at uncontrolled crossing points.
Accessibility		
3.19	The Government is committed to creating a more accessible and inclusive transport network that provides a range of opportunities and choices for people to connect with jobs, services and friends and family.	The DCO Scheme will improve the accessibility to the rail network with new and re-opened rail stations and reduces the cost of travel for commuters, businesses and residents. By providing this additional rail link between Portishead and Bristol there is improved connectivity for employment, services and amenity.
3.20	The Government's strategy for improving accessibility for disabled people is set out in Transport for Everyone: an action plan to improve accessibility for all. In particular: The Government will continue to work to ensure that the bus and train fleets comply with modern access standards by 2020, and to improve rail station access for passengers with reduced mobility. The private car will continue to play an important role, providing disabled people with independence where other forms of transport are not accessible or available.	An EqIA forms part of the DCO suite of documents. Portishead and Pill stations will be wheelchair accessible and car parks will have disabled parking spaces. The gradient of the new Trinity Primary School Bridge ramps and the pedestrian and cycle ramp at Ashton Vale are all designed to be compliant with equality legislation. The modifications to the bus station in Pill will improve accessible for people with reduced mobility. While platform 3 at Parson Street Station will be improved by Network Rail under its permitted development rights, it will still not be accessible to people with reduced mobility.
3.20 cont.	The Government expects applicants to improve access, wherever possible, on and around the national networks by designing and delivering schemes that take account of the accessibility requirements of all those who use, or are affected by, national networks infrastructure, including disabled users. All reasonable opportunities to deliver improvements in accessibility on and to the existing national road network should also be taken wherever appropriate.	Portishead and Pill stations will be wheelchair accessible and car parks will have disabled parking spaces. The gradient of the new Trinity Primary School Bridge ramps and the pedestrian and cycle ramp at Ashton Vale are all designed to be compliant with equality legislation. The modifications to the bus station in Pill will improve accessible for people with reduced mobility. While platform 3 at Parson Street Station will be improved by Network Rail under its permitted development rights, it will still not be accessible to people with reduced mobility.
3.21	Applicants are reminded of their duty to promote equality and to consider the needs of disabled people as part of their normal practice. Applicants are expected to comply with any obligations under the Equalities Act 2010.	An EqIA forms part of the DCO suite of documents. Portishead and Pill stations will be wheelchair accessible and car parks will have disabled parking spaces. The gradient of the new Trinity Primary School Bridge ramps and the pedestrian and cycle

Table 2: National Networks Policy Statement Chapter 3

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks	Compliance with the NPSNN
		ramp at Ashton Vale are all designed to be compliant with equality legislation. The modifications to the bus station in Pill will improve accessible for people with reduced mobility.
3.22	Severance can be a problem in some locations. Where appropriate applicants should seek to deliver improvements that reduce community severance and improve accessibility.	The DCO Scheme lies along an existing railway corridor. The DCO will seek to close formally 11 historic crossings between Portishead and Pill, most of which are no longer in use. Three informal agricultural crossing points have developed along the disused section between Portishead and Pill, which will be cut and replaced by one improved access off Sheepway highway and another improved access off the A369 Portbury Hundred highway. The at grade informal crossing in Portishead near Trinity Primary School will be replaced with a pedestrian and cycle bridge. The Avon Vale Road Level Crossing will remain open and a pedestrian and cycle ramp between Avon Vale Road and Avon Road will provide an alternative crossing when the barrier is down. Barons Close Container Crossing is currently closed following construction of MetroBus (route m2) and it is proposed to close this crossing formally as part of the DCO Scheme. The National Cycle Network ("NCN") Nos. 26 and 41 near Pill will be retained, although NCN41 will be diverted slightly during construction and NCN 26 will be modified slightly under the bridges. There will be slight improvements to the bridleway crossing of Royal Portbury Dock Road and an extension of the bridleway under the M5 Avonmouth Viaduct. There will be impacts on existing routes between communities, including on public rights of way. All adverse impacts will be mitigated and in many locations there will be improvements to these routes, particularly where there are uncontrolled crossings of the railway.

Table 3: National Networks Policy Statement Chapter 4

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPSNN)	Compliance with the NPSNN
4	***ASSESSMENT PRINCIPLES***	
General principles of assessment – Business Case		
4.3	In considering any proposed development, and in particular, when weighing its adverse impacts against its benefits, the Examining Authority and the Secretary of State should take into account: • its potential benefits, including the facilitation of economic development, including job creation, housing and environmental improvement, and any long-term or wider benefits • its potential adverse impacts, including any longer-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts.	The DCO Scheme will increase the capacity and resilience of this part of the rail network; it will support the housing and economic growth of this part of south west England by providing better access to jobs, including those in Bristol. The socio-economic benefits are reported in the ES Chapter 14. The development has sought to minimise adverse impacts and where possible mitigation has been developed as part of the EIA process to further reduce the impact of the scheme. This is reported in the ES, and includes extensive mitigation to protect and conserve designated ecological sites, protected species, and habitats, provide acoustic barriers, and undertake an archaeological watching brief during earthworks at green field sites. The cumulative effects of the DCO Scheme are considered in the ES Chapter 18 and Appendices 18.1 and 18.2. In particular, the Applicant has liaised extensively with National Grid to manage the potential cumulative effects of the construction of the Portishead Branch Line in the vicinity of Sheepway where National Grid is building the transmission lines from Hinckley C power station, which is also a DCO project.
4.4	In this context, environmental, safety, social and economic benefits and adverse impacts, should be considered at national, regional and local levels. These may be identified in this NPS, or elsewhere.	The ES has considered the benefits and adverse impacts of the DCO Scheme at the relevant level. For example, for ecology the potential effects on international/ European and UK and protected sites, habitats and species have been considered. Each environmental discipline has been assessed in accordance with standard EIA methodologies, which include study areas beyond the boundaries of the development. The socio-economics of the DCO Scheme are reported in Chapter 14 of the ES and safety has been a key as part of the scheme design.
4.5	Applications for road and rail projects (with the exception of those for SRFIs, for which the position is covered in paragraph 4.8 below) will normally be supported by a business case prepared in accordance with Treasury Green Book principles. This business case provides the basis for investment decisions on road and rail projects. The business case will normally be developed based on the Department's Transport Business Case guidance and WebTAG guidance. The economic case prepared for a transport business case will assess the economic, environmental and social impacts of a development. The information provided will be proportionate to the development. This information will be important for the Examining Authority and the Secretary of State's consideration of the adverse impacts and benefits of a proposed development. It is expected that NSIP schemes brought forward through the development consent order process by virtue of Section 35 of the Planning Act 2008 should also meet this requirement.	The Applicant prepared the 2017 MetroWest Phase 1: Outline Business Case Report (DCO Document Reference 8.4. The environmental and social impacts of the scheme are presented in the ES.
Local Transport Model		
4.6	Applications for road and rail projects should usually be supported by a local transport model to provide sufficiently accurate detail of the impacts of a project. The modelling will usually include national level factors around the key drivers of transport demand such as economic growth, demographic change, travel costs and	A transport model was produced as part of the development of the DCO Scheme. Chapter 16 – Transport, Access and Non-Motorised Users of the ES sets out information regarding this model. The TA is provided in Appendix 16.1.

Table 3: National Networks Policy Statement Chapter 4

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPSNN)	Compliance with the NPSNN
	labour market participation, as well as local factors. The Examining Authority and the Secretary of State do not need to be concerned with the national methodology and national assumptions around the key drivers of transport demand. We do encourage an assessment of the benefits and costs of schemes under high and low growth scenarios, in addition to the core case. The modelling should be proportionate to the scale of the scheme and include appropriate sensitivity analysis to consider the impact of uncertainty on project impacts.	In addition, an Outline Business Case 2017 has been prepared which provides detailed information about the quantified scheme benefits and their calculation.
4.9	The Examining Authority should only recommend, and the Secretary of State should only impose, requirements in relation to a development consent, that are necessary, relevant to planning, relevant to the development to be consented, enforceable, precise, and reasonable in all other respects. Guidance on the use of planning conditions or any successor to it, should be taken into account where requirements are proposed.	Noted.
4.10	Planning obligations should only be sought where they are necessary to make the development acceptable in planning terms, directly related to the proposed development and fairly and reasonably related in scale and kind to the development.	The Applicant does not consider there to be a requirement for a Section 106 Agreement in respect of the DCO Scheme, due to the nature of the scheme; infrastructure enhancement on an existing transport corridor.
4.12	In considering applications for linear infrastructure, decision-makers will need to bear in mind the specific conditions under which such developments must be designed. The generic impacts section of this NPS has been written to take these differences into account.	Noted.
4.13	This NPS does not identify locations at which development of the road and rail networks should be brought forward. However, the road and rail networks provide access for people, business and goods between places and so the location of development will usually be determined by economic activity and population and the location of existing transport networks.	The need for the MetroWest Programme has been identified at a sub-regional level for many years and is set out in the West of England Joint Transport Study and Joint Spatial Plan as well as relevant local plans.
Environmental Impact Assessment		
4.15	All proposals for projects that are subject to the European Union's Environmental Impact Assessment Directive and are likely to have significant effects on the environment, must be accompanied by an ES, describing the aspects of the environment likely to be significantly affected by the project. The Directive specifically requires an EIA to identify, describe and assess effects on human beings, fauna and flora, soil, water, air, climate, the landscape, material assets and cultural heritage, and the interaction between them. Schedule 4 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 sets out the information that should be included in the ES including a description of the likely significant effects of the proposed project on the environment, covering the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the project, and also the measures envisaged for avoiding or mitigating significant adverse effects. Further	Noted. An EIA has been undertaken and the findings are set out in the ES that has been submitted with the DCO Application. This ES describes the potential benefits and adverse effects of the DCO Scheme, as well as setting out the mitigation measures that have been employed to minimise adverse effects.

Table 3: National Networks Policy Statement Chapter 4

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPSNN)	Compliance with the NPSNN
	guidance can be found in the online planning portal. When examining a proposal, the Examining Authority should ensure that likely significant effects at all stages of the project have been adequately assessed. Any requests for environmental information not included in the original ES should be proportionate and focus only on significant effects. In this NPS, the terms 'effects', 'impacts' or 'benefits' should accordingly be understood to mean likely significant effects, impacts or benefits.	
4.16	When considering significant cumulative effects, any ES should provide information on how the effects of the applicant's proposal would combine and interact with the effects of other development (including projects for which consent has been granted, as well as those already in existence).	Chapter 18 – In-combination and Cumulative Effects Assessment of the ES supported by Appendices 18.1 and 18.2 set out the potential significant cumulative effects of the DCO Scheme.
4.17	The Examining Authority should consider how significant cumulative effects and the interrelationship between effects might as a whole affect the environment, even though they may be acceptable when considered on an individual basis with mitigation measures in place.	Noted. These are set out in Chapter 18 – In-combination and Cumulative Effects Assessment of the ES supported by Appendices 18.1 and 18.2.
4.18	In some instances, it may not be possible at the time of the application for development consent for all aspects of the proposal to have been settled in precise detail. Where this is the case, the applicant should explain in its application which elements of the proposal have yet to be finalised, and the reasons why this is the case.	Noted. Chapter 4 – Description of the Proposed Works of the ES sets out the details of the DCO Scheme. The DCO Scheme design is based on Network Rail's GRIP Stage 3 (Option Selection), which was completed in early 2017. Some further design work usually undertaken in GRIP Stage 4 (Single Option Development) and GRIP Stage 5 (Detailed Design) was also brought forward to GRIP Stage 3. The remaining design work for GRIP Stage 4 was completed in early 2019 and the remaining design work required for GRIP Stage 5 will be undertaken between winter 2019/20 and winter 20/21. The type of detailed design work still to be completed will not materially affect the understanding of the scheme in terms of the potential impacts and need for further mitigation. The development proposed is described in sufficient detail to understand the potential benefits and adverse effects of the DCO Scheme.
4.19	Where some details are still to be finalised, applicants are advised to set out in the ES, to the best of their knowledge, what the maximum extent of the proposed development may be (for example in terms of site area) and assess the potential adverse effects which the project could have to ensure that the impacts of the project as it may be constructed have been properly assessed.	The worst-case scenario has been considered in the EIA where there are any details still to be finalised, in particular in relation to aspects on construction programme and methodology, and some aspects of design such as the final location of fencing, signals and GSM-R masts through the Avon Gorge.
4.20	Should the Secretary of State decide to grant development consent for an application where details are still to be finalised, this will need to be reflected in appropriate development consent requirements in the development consent order. If development consent is granted for a proposal and at a later stage the applicant wishes for technical or commercial reasons to construct it in such a way that it is outside the terms of what has been consented, for example because its extent will be greater than has been provided for in terms of the consent, it will be necessary to apply for a change to be made to the development consent. The application to change the consent may need to be accompanied by environmental information to supplement that which was included in the original ES.	Noted.

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4.21	In cases where the EIA Directive does not apply to a project, and an ESis not therefore required, the applicant should instead provide information proportionate to the project on the likely environmental, social and economic effects	The Portishead Branch Line (MetroWest Phase 1) scheme is EIA development and an ES has been produced and submitted with the DCO Application.
(Habitats Regulations Assessment)		
4.22	The applicant should seek the advice of Natural England and, where appropriate, for cross-boundary impacts, Natural Resources Wales and Scottish Natural Heritage to ensure that impacts on European sites in Wales and Scotland are adequately considered.	The applicant has consulted with Natural England with respect to the potential effects of the DCO Scheme on European Sites. A Habitat Regulations Assessment has been undertaken and is submitted with the DCO Application.
4.23	Applicants are required to provide sufficient information with their applications for development consent to enable the Secretary of State to carry out an Appropriate Assessment if required. This information should include details of any measures that are proposed to minimise or avoid any likely significant effects on a European site. The information provided may also assist the Secretary of State in concluding that an Appropriate Assessment is not required because significant effects on European sites are sufficiently unlikely that they can be excluded.	An HRA has been undertaken and is submitted with the DCO Application (ES Appendix 9.12). The detail included within the HRA is considered sufficient to enable the Secretary of State to carry out an Appropriate Assessment.
4.24	If a proposed national network development makes it impossible to rule out an adverse effect on the integrity of a European site, it is possible to apply for derogation from the Habitats Directive, subject to the proposal meeting three tests. These tests are that no feasible, less-damaging alternatives should exist, that there are imperative reasons of overriding public interest for the proposal going ahead, and that adequate and timely compensation measures will be put in place to ensure the overall coherence of the network of protected sites is maintained.	The Appropriate Assessment stage of the HRA concluded that it was not possible to rule out an adverse effect on the integrity of the Avon Gorge Woodlands SAC. The HRA report demonstrates that there is no feasible, less-damaging alternative, that there are imperative reasons of overriding public interest and that a package of compensation measures put together in the Avon Gorge Vegetation Management Plan (ES Appendix 9.11) is adequate and can be put in place in a timely manner to ensure the overall coherence of the Natura 2000 site.
4.25	Where a development may negatively affect any priority habitat or species on a site for which they are a protected feature, any IROPI case would need to be established solely on one or more of the grounds relating to human health, public safety or beneficial consequences of primary importance to the environment.	The DCO Scheme results in the loss of up to 0.73 ha of *Tilio-Acerion* woodland, which is priority habitat and a qualifying feature of the Avon Gorge Woodlands SAC. The HRA report presents an IROPI case for human health, public safety and beneficial consequences of primary importance to the environment.
Alternatives		
4.26	Applicants should comply with all legal requirements and any policy requirements set out in this NPS on the assessment of alternatives. In particular: • The EIA Directive requires projects with significant environmental effects to include an outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects. • There may also be other specific legal requirements for the consideration of alternatives, for example, under the Habitats and Water Framework Directives. • There may also be policy requirements in this NPS, for example the flood risk sequential test and the assessment of alternatives for developments in National Parks, the Broads and Areas of Outstanding Natural Beauty (AONB).	Chapter 3 – Scheme Development and Alternatives Considered, of the ES sets out the alternatives that were considered during the development of the DCO Scheme and the reasons for selecting the preferred option. The main alternatives to improve transport between Portishead and Bristol were the subject of numerous studies (including technical, cost, and environmental issues) over two decades. The main alternatives to the DCO Scheme were: alternative transport corridors (busy highway or under-used railway), alternative modes of transport along the railway corridor (heavy rail, light rail, tram-train, bus and mix of rail and park and ride), levels of service provision (hourly or half hourly) and the Do Nothing Scenario. A number of alternatives of specific aspects of the DCO Scheme were identified and assessed. Alternatives for Portishead Station, Pill Station and an alternative highway into the Ashton Vale Industrial Estate were the subject of micro-consultations with the public and affected parties. The

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		alternatives were also subject to formal Stage 2 consultation in autumn 2017 based on information provided in the preliminary environmental information. A Habitats Regulations Assessment and Water Framework Directive Assessment have been undertaken and are presented in the ES in Appendices 9.12 and 17.2 respectively.
4.27	All projects should be subject to an options appraisal. The appraisal should consider viable modal alternatives and may also consider other options (in light of the paragraphs 3.23 to 3.27 of this NPS). Where projects have been subject to full options appraisal in achieving their status within Road or Rail Investment Strategies or other appropriate policies or investment plans, option testing need not be considered by the examining authority or the decision maker. For national road and rail schemes, proportionate option consideration of alternatives will have been undertaken as part of the investment decision making process. It is not necessary for the Examining Authority and the decision maker to reconsider this process, but they should be satisfied that this assessment has been undertaken.	Chapter 3 – Scheme Development and Alternatives Considered, of the ES gives details of the assessment of alternatives and explains why the project design was selected.
Criteria for "good design" for national network Infrastructure		
4.28 - 4.29	Applicants should include design as an integral consideration from the outset of a proposal. Visual appearance should be a key factor in considering the design of new infrastructure, as well as functionality, fitness for purpose, sustainability and cost. Applying "good design" to national network projects should therefore produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction, matched by an appearance that demonstrates good aesthetics as far as possible.	The DCO Scheme will re-use the existing railway corridor which was first laid out in the 1860s. This approach minimises the need for additional land-take. There are no feasible alternative routes for the railway outside the existing railway corridor, which is safeguarded by local policy. The design of the DCO Scheme has taken into account railway design standards, highway design standards, sustainability principles, environmental principles and landscape character and the setting of heritage assets such as the Clifton Suspension Bridge.
4.31	A good design should meet the principal objectives of the scheme by eliminating or substantially mitigating the identified problems by improving operational conditions and simultaneously minimising adverse impacts. It should also mitigate any existing adverse impacts wherever possible, for example, in relation to safety or the environment. A good design will also be one that sustains the improvements to operational efficiency for as many years as is practicable, taking into account capital cost, economics and environmental impacts.	The DCO Scheme will re-use the existing railway corridor which was first laid out in the 1860s. This approach minimises the need for additional land-take. There are no feasible alternative routes for the railway outside the existing railway corridor, which is safeguarded by local policy. The design of the DCO Scheme has taken into account railway design standards, highway design standards, sustainability principles, environmental principles and landscape character and the setting of heritage assets such as the Clifton Suspension Bridge.
4.32	Scheme design will be a material consideration in decision making. The Secretary of State needs to be satisfied that national networks infrastructure projects are sustainable and as aesthetically sensitive, durable, adaptable and resilient as they can reasonably be (having regard to regulatory and other constraints and including accounting for natural hazards such as flooding).	The DCO Scheme will re-use the existing railway corridor which was first laid out in the 1860s. This approach minimises the need for additional land-take. There are no feasible alternative routes for the railway outside the existing railway corridor, which is safeguarded by local policy. The design of the DCO Scheme has taken into account railway design standards, highway design standards, sustainability principles, environmental principles and landscape character and the setting of heritage assets such as the Clifton Suspension Bridge. The FRA (ES Appendix 17.1) describes the current and future flood risk in the study area, and demonstrates that there will be no worsening of the flood risk as a consequence of the scheme. A short section near Bower Ashton crosses the River Avon floodplain, which currently floods every 5-

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		10 years due to tidal flooding. With climate change and sea level rise projections, the frequency of flooding in the Bower Ashton area will increase in the future.
4.33	The applicant should therefore take into account, as far as possible, both functionality (including fitness for purpose and sustainability) and aesthetics (including the scheme's contribution to the quality of the area in which it would be located). Applicants will want to consider the role of technology in delivering new national networks projects. The use of professional, independent advice on the design aspects of a proposal should be considered, to ensure good design principles are embedded into infrastructure proposals.	The DCO Scheme will re-use the existing railway corridor which was first laid out in the 1860s. This approach minimises the need for additional land-take. There are no feasible alternative routes for the railway outside the existing railway corridor, which is safeguarded by local policy. The design of the DCO Scheme has taken into account railway design standards, highway design standards, sustainability principles, environmental principles and landscape character and the setting of heritage assets such as the Clifton Suspension Bridge.
4.34	Whilst the applicant may only have limited choice in the physical appearance of some national networks infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting and design measures relative to existing landscape and historical character and function, landscape permeability, landform and vegetation.	The DCO Scheme will re-use the existing railway corridor which was first laid out in the 1860s. This approach minimises the need for additional land-take. There are no feasible alternative routes for the railway outside the existing railway corridor, which is safeguarded by local policy. The design of the DCO Scheme has taken into account railway design standards, highway design standards, sustainability principles, environmental principles and landscape character and the setting of heritage assets such as the Clifton Suspension Bridge.
4.35	Applicants should be able to demonstrate in their application how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected.	Chapter 3 – Scheme Development and Alternatives Considered, of the ES sets out how the design of the scheme evolved. However, it should be noted that the route for DCO Scheme was guided by the presence of the existing line. The design evolution is described in the Design and Access Statement (DCO Document Reference 8.1).
Climate change adaptation		
4.36	Section 10(3)(a) of the Planning Act requires the Secretary of State to have regard to the desirability of mitigating, and adapting to, climate change in designating an NPS.	Noted.
4.38	Adaptation is therefore necessary to deal with the potential impacts of these changes that are already happening. New development should be planned to avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the provision of green infrastructure.	The DCO Scheme has taken into account the potential impact of climate change using the latest UK climate change allowances for FRAs. The ES Appendix 17.1 Flood Risk Assessment confirms that most of the DCO Scheme lies outside flood risk areas over the 60 year design life, with the exception of the section through Bower Ashton and the Clanage Road maintenance compound which lies in the River Avon floodplain. The area around Bower Ashton currently floods on average once every 5-10 years and this is projected to fall to approximately once a year in 60 years' time. The FRA identifies appropriate mitigation measures, these include incorporating the DCO Scheme into Network Rail's Extreme Weather procedure; siting most of the permanent maintenance compounds outside flood risk areas; prohibiting buildings, plant and stockpiles at the Clanage Road that would constitute obstacles to flooding; and stopping services during floods. The Surface Water Drainage Strategy (DCO Document Reference 6.26) presents the climate change assumptions for permanent drainage design for the highway modifications and car parks. The ES Appendix 7.5 Climate Change summarises the implications of climate change on the DCO Scheme.

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4.40	New national networks infrastructure will be typically long-term investments which will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the impacts of climate change when planning location, design, build and operation. Any accompanying environment statement should set out how the proposal will take account of the projected impacts of climate change.	The DCO Scheme has taken into account the potential impact of climate change using the latest UK climate change allowances for FRA. The ES Appendix 17.1 Flood Risk Assessment confirms that most of the DCO Scheme lies outside flood risk areas over the 60 year design life, with the exception of the section through Bower Ashton and the Clanage Road maintenance compound which lies in the River Avon floodplain. The area around Bower Ashton currently floods on average once every 5-10 years and this is projected to fall to approximately once a year in 60 years' time. The FRA identifies appropriate mitigation measures, these include incorporating the DCO Scheme into Network Rail's Extreme Weather procedure; siting most of the permanent maintenance compounds outside flood risk areas; prohibiting buildings, plant and stockpiles at the Clanage Road that would constitute obstacles to flooding; and stopping services during floods. ES Appendix 7.5 Climate Change summarises the implications of climate change on the DCO Scheme. The ES Chapter 3 Scheme Development and Alternatives Considered explains that there are no route options to the existing railway corridor.
4.41	Where transport infrastructure has safety-critical elements and the design life of the asset is 60 years or greater, the applicant should apply the UK Climate Projections 2009 (UKCP09) high emissions scenario (high impact, low likelihood) against the 2080 projections at the 50% probability level.	Noted, the DCO Scheme has taken account of the UK climate change allowances for FRA and the design includes mitigation and adaptation measures. The FRA assumes a design life of 60 years, and further analysis is provided for a 100 year design life as a sensitivity check.
4.42	The applicant should take into account the potential impacts of climate change using the latest UK Climate Projections available at the time and ensure any environment statement that is prepared identifies appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure…	Noted, the scheme has taken account of the UK Climate Projections and the design includes mitigation and adaptation measures as identified above.
4.43	The applicant should demonstrate that there are no critical features of the design of new national networks infrastructure which may be seriously affected by more radical changes to the climate beyond that projected in the latest set of UK climate projections. Any potential critical features should be assessed taking account of the latest credible scientific evidence on, for example, sea level rise (e.g. by referring to additional maximum credible scenarios such as from the Intergovernmental Panel on Climate Change or Environment Agency) and on the basis that necessary action can be taken to ensure the operation of the infrastructure over its estimated lifetime through potential further mitigation or adaptation.	The DCO Scheme has taken into account the potential impact of climate change using the latest UK climate change allowances for FRA. The ES Appendix 17.1 Flood Risk Assessment confirms that most of the DCO Scheme lies outside flood risk areas over the 60 year design life, with the exception of the section through Bower Ashton and the Clanage Road maintenance compound which lies in the River Avon floodplain. The area around Bower Ashton currently floods on average once every 5-10 years and this is projected to fall to approximately once a year in 60 years' time. The FRA identifies appropriate mitigation measures, these include incorporating the DCO Scheme into Network Rail's Extreme Weather procedure; siting most of the permanent maintenance compounds outside flood risk areas; prohibiting buildings, plant and stockpiles at the Clanage Road that would constitute obstacles to flooding; and stopping services during floods. The Surface Water Drainage Strategy (DCO Document Reference 6.26) presents the climate change assumptions for permanent drainage design for the highway modifications and car parks. The ES Appendix 7.5 Climate Change summarises the implications of climate change on the DCO Scheme.
4.44	Any adaptation measures should be based on the latest set of UK Climate Projections, the Government's national Climate Change Risk Assessment and	The DCO Scheme will lower the risks of vulnerability to climate change by largely siting the route along the existing corridor which lies predominantly outside flood risk zones. Floodplain

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	consultation with statutory consultation bodies. Any adaptation measures must themselves also be assessed as part of any EIA and included in the environment statement, which should set out how and where such measures are proposed to be secured.	compensation for the DCO Scheme will be provided by the Easton-in-Gordano stream and at the Clanage Road maintenance compound by localised ground lowering within the Order limits. This mitigation is based on the UK climate change allowances adopted for the FRA. Where the DCO Scheme crosses the flood plain at Bower Ashton, it has been designed to avoid changing the flood risk, although the risk of flooding is currently once every 5 to ten years, rising to approximately once every year in 60 years' time. The service will be halted during flood events. The impact of floodplain compensation has been considered in the EIA. The permanent highway drainage design is based on a 60 year design life, a 1:30 year return period storm, an allowance of 40% for climate change and potential tidal locking (see the Surface Water Drainage Strategy, DCO Document Reference 6.26), based on the requirements of North Somerset Council. These measures have been discussed with the Environment Agency, the NSLIDB, and the highway drainage engineers at the Local Planning Authorities.
4.45	If any proposed adaptation measures themselves give rise to consequential impacts the Secretary of State should consider the impact in relation to the application as a whole and the impacts guidance set out in this part of this NPS (e.g. on flooding, water resources, biodiversity, landscape and coastal change).	Noted, the scheme will take full account of the UK Climate Projections and the design will include mitigation and adaptation measures, these will be assessed through the FRA and the ES.
4.46	Adaptation measures can be required to be implemented at the time of construction where necessary and appropriate to do so.	Noted, the scheme will take full account of the UK Climate Projections and the design will include mitigation and adaptation measures.
4.47	Where adaptation measures are necessary to deal with the impact of climate change, and that measure would have an adverse effect on other aspects of the project and/or surrounding environment (e.g. coastal processes), the Secretary of State may consider requiring the applicant to ensure that the adaptation measure could be implemented should the need arise, rather than at the outset of the development (e.g. reserving land for future extension, increasing the height of an existing sea wall, or requiring a new sea wall).	The DCO Scheme is designed to take full account of climate change projections for the 60 year design life. Where the DCO Scheme crosses the flood plain at Bower Ashton, it has been designed to avoid changing the flood risk, although the risk of flooding is currently once every 5 to ten years, rising to approximately once every year in 60 years' time. The service will be halted during flood events. To address tidal flooding of the DCO Scheme in the Bower Ashton area will require the implementation of strategic defences to defend the city of Bristol. Such works are outside the scope of the DCO.
Pollution control and other environmental protection Regimes		
4.50	In deciding an application, the Examining Authority and the Secretary of State should focus on whether the development itself is an acceptable use of the land, and on the impacts of that use, rather than the control of processes, emissions or discharges themselves. They should assess the potential impacts of processes, emissions or discharges to inform decision making, but should work on the assumption that in terms of the control and enforcement, the relevant pollution control regime will be properly applied and enforced. Decisions under the Planning Act should complement but not duplicate those taken under the relevant pollution control regime.	Noted.
4.52	There is a statutory duty on applicants to consult the Marine Management Organisation (MMO) on nationally significant projects which would affect, or would	The DCO Scheme does not impact on any marine areas.

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	be likely to affect, any relevant marine areas as defined in the Planning Act (as amended by section 23 of the Marine and Coastal Access Act 2009).	
4.53	When an applicant applies for an Environmental Permit, the relevant regulator (the Environment Agency) requires that the application demonstrates that processes are in place to meet all relevant Environmental Permit requirements.	No environmental permits are required for the operation of the DCO Scheme. Any requirements for permits or licences for the construction stage will be applied for at the appropriate time where not included in the draft DCO powers. The ES sets out the measures taken to ensure necessary compliance with regulations. Shadow ecological licences have been prepared for Bats, Badgers and Great crested newts.
4.54	Applicants are encouraged to begin pre-application discussions with the Environment Agency as early as possible. It is however expected that an applicant will have first thought through the requirements as a starting point for discussion. Some consents require a significant amount of preparation; as an example, the Environment Agency suggests that applicants should start work towards submitting the permit application at least 6 months prior to the submission of an application for a Development Consent Order, where they wish to parallel track the applications. This will help ensure that applications take account of all relevant environmental considerations and that the relevant regulators are able to provide timely advice and assurance to the Examining Authority.	There has been ongoing consultation with statutory stakeholders including the Environment Agency as part of the design development to identify what permits would be required and allow early planning of these. The scope of the FRA was agreed with the Environment Agency and the results have been discussed with them. A summary of consultations is provided in the ES Chapter 17 Water Resources, Drainage and Flood Risk.
4.55	The Secretary of State should be satisfied that development consent can be granted taking full account of environmental impacts. This will require close cooperation with the Environment Agency and/or the pollution control authority, and other relevant bodies, such as the MMO, Natural England, Drainage Boards, and water and sewerage undertakers, to ensure that in the case of potentially polluting developments: the relevant pollution control authority is satisfied that potential releases can be adequately regulated under the pollution control framework; and the effects of existing sources of pollution in and around the project are not such that the cumulative effects of pollution when the proposed development is added would make that development unacceptable, particularly in relation to statutory environmental quality limits.	An EIA has been undertaken for the DCO Scheme and this is reported in the ES that has been submitted with the DCO Application. Formal and informal consultations have been undertaken with the Environment Agency, the Drainage Boards, Natural England, and utility undertakers. A full summary of the consultation process is presented in the Consultation Report submitted with the DCO Application (DCO Document Reference 5.1). Areas for consultation include: • Environment Agency: discharges to Main Rivers, access for maintenance, treatment of culverts and railway drainage, Environmental Permitting Regulations for works near watercourses, temporary storage of old track formation on site, historic contamination. • NSLIDB: discharges to Ordinary Rivers, access for maintenance. • Natural England: impacts on designated sites, flora and fauna. • Utility Companies: water supply and sewerage connections at the stations, identification of assets crossing and close to the DCO Scheme and any requirements during construction. A description of pollution control on temporary drainage from haul roads and construction compounds and permanent highway drainage is provided in the Surface Water Drainage Strategy (DCO Document Reference 6.26). A summary of the consultation undertaken together with commentary on where the issues raised have been addressed in the ES is provided in the relevant topic chapters. A separate tracker on consultation with utility companies has been prepared.
Common Law Nuisance and Statutory Nuisance		
4.58	It is very important that during the examination of a nationally significant infrastructure project, possible sources of nuisance under section 79(1) of the 1990 Act, and how they may be mitigated or limited are considered by the Examining	An EIA has been undertaken for the DCO Scheme and this is reported in the ES that has been submitted with the DCO Application. The assessment of potential noise impacts is set out in Chapter 13 – Noise and Vibration of the ES. This concludes that some construction activities and night-time

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	Authority, so they can recommend appropriate requirements that the Secretary of State might include in any subsequent order granting development consent. More information on the consideration of possible sources of nuisance is at paragraphs 5.81-5.89.	works may result in significant noise levels requiring mitigation through Best Practicable Means. The contractors are likely to apply for a Section 61 consent with the local planning authorities.
Safety		
4.65	They will also wish to demonstrate that: • they have considered the safety implications of their project from the outset; and • they are putting in place rigorous processes for monitoring and evaluating safety.	The Applicant and Network Rail have considered the safety of the DCO Scheme design. The project has clear safety objectives which influenced the design, in addition the DCO Scheme will be assessed to demonstrate safety and mitigation measures in accordance with railway design standards.
4.66	The Secretary of State should not grant development consent unless satisfied that all reasonable steps have been taken and will be taken to: • minimise the risk of road casualties arising from the scheme; and • contribute to an overall improvement in the safety of the Strategic Road Network.	Noted. A TA has been undertaken for the DCO Scheme which includes consideration of highway safety (see the ES Appendix 16.1).
4.72	The Secretary of State should not grant consent unless satisfied that all reasonable steps have been taken, and will be taken to: • Minimise the risk of deaths or injury arising from the scheme; and • Contribute to an overall improvement in societal safety levels. Noting that railway developments can influence risk levels both on and off the railway networks.	The Applicant and Network Rail have considered the safety of the DCO Scheme design. Powers are sought to close a number of historic level crossings on the Portishead Branch Line. At Trinity Primary School a new pedestrian and cycle bridge will be provided to replace an existing flat crossing established after the railway ceased to be operational. It is proposed to close formally the existing Barons Close Container Crossing, which has remained closed following the construction of the MetroBus (route m2) in Bristol. Pedestrians would be diverted to the nearby Ashton Vale Road Level Crossing. The existing level crossing already consists of the highest level of safety rating with CCTV and full barriers.
Security Considerations		
Health		
4.81 - 4.82	As described in the relevant sections of this NPS, where the proposed project has likely significant environmental impacts that would have an effect on human beings, any ES should identify and set out the assessment of any likely significant adverse health impacts. The applicant should identify measures to avoid, reduce or compensate for adverse health impacts as appropriate. These impacts may affect people simultaneously, so the applicant, and the Secretary of State (in determining an application for development consent) should consider the cumulative impact on health.	The DCO Scheme has been subject to an HIA which is presented in the ES Appendix 14.2. The HIA considers the effects of noise and vibration, air quality and emissions, light pollution, access to services, access to green spaces, and crime and safety on local communities during construction and operation. Principles of good design have been applied to reduce health risks to commuters and lineside neighbours including: design of the urban realm to avoid conflicts between vehicle, cyclist and pedestrians' movements; appropriate lighting at the stations; replacement crossings at Trinity Bridge and Ashton Vale; and new fencing along the railway boundary.

Table 4: National Networks Policy Statement Chapter 5

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPSNN)	Compliance with the NPSNN
5	***GENERIC IMPACTS***	
Air Quality		
5.6 - 5.9	Where the impacts of the project (both on and off-scheme) are likely to have significant air quality effects in relation to meeting EIA requirements and / or affect the UK's ability to comply with the Air Quality Directive, the applicant should undertake an assessment of the impacts of the proposed project as part of the ES. The ES should describe: • existing air quality levels; • forecasts of air quality at the time of opening, assuming that the scheme is not built (the future baseline) and taking account of the impact of the scheme; and • any significant air quality effects, their mitigation and any residual effects, distinguishing between the construction and operation stages and taking account of the impact of road traffic generated by the project. Defra publishes future national projections of air quality based on evidence of future emissions, traffic and vehicle fleet. Projections are updated as the evidence base changes. Applicant's assessment should be consistent with this but may include more detailed modelling to demonstrate local impacts. In addition to information on the likely significant effects of a project in relation to EIA, the Secretary of State must be provided with a judgement on the risk as to whether the project would affect the UK's ability to comply with the Air Quality Directive.	The effect of the DCO Scheme on air quality is presented in the ES Chapter 7 Air Quality and Greenhouse Gases. The ES describes the existing air quality levels, air quality forecasts for the year of opening with and without the scheme, and discusses the effects of the scheme on air quality. The air quality modelling was based on the latest Defra guidance at the time of the assessment. Most of the DCO Scheme crosses areas where the air quality lies well below the Air Quality Objectives. The scheme crosses a short section of the Bristol Air Quality Management Area in the vicinity of Brunel Way, Bristol. The services on the DCO Scheme would pass into the Bristol AQMA on the Mainline between Parson Street and Bristol Temple Meads. The air quality modelling predicts that the DCO Scheme would not result in significant increases in NO_2 and PM_{10} and would not cause new exceedances.
5.10	The Secretary of State should consider air quality impacts over the wider area likely to be affected, as well as in the near vicinity of the scheme. In all cases the Secretary of State must take account of relevant statutory air quality thresholds set out in domestic and European legislation. Where a project is likely to lead to a breach of the air quality thresholds, the applicant should work with the relevant authorities to secure appropriate mitigation measures with a view to ensuring so far as possible that those thresholds are not breached.	Noted.
5.12	The Secretary of State must give air quality considerations substantial weight where, after taking into account mitigation, a project would lead to a significant air quality impact in relation to EIA and / or where they lead to a deterioration in air quality in a zone/agglomeration.	Noted.
5.13	The Secretary of State should refuse consent where, after taking into account mitigation, the air quality impacts of the scheme will: result in a zone/agglomeration which is currently reported as being compliant with the Air Quality Directive becoming non-compliant; or affect the ability of a non-compliant area to achieve compliance within the most recent timescales reported to the European Commission at the time of the decision.	Noted. The overall operational impacts from rail and road traffic emissions are assessed in Chapter 7 of the ES. Annual mean NO_2 and PM_{10} were both predicted to be below 75% of the air quality assessment level (40 µg m^{-3}) at all modelled receptors in Portishead and Pill in the Do Minimum scenario. This is considered to be the level at which the degree of harm to human health is likely to be small. The largest predicted change in NO_2 concentration was a change of 5% of the Air Quality Assessment Limit (AQAL) for a residential property within 10 m of the proposed Portishead Branch Line. Annual mean NO_2 was predicted to be higher around Parson Street Junction and Bedminster, which are within the Bristol City Council AQMA, but no exceedances are

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		predicted in the Opening Year 2021 and the impact at all selected 'worse-case' receptors are classified as negligible. The impact results from the additional frequency of passenger trains. These moderate changes are approximately 1% of the AQAL for annual mean NO_2.
5.14 - 5.15	The Secretary of State should consider whether mitigation measures put forward by the applicant are acceptable. A management plan may help codify mitigation at this stage. The proposed mitigation measures should ensure that the net impact of a project does not delay the point at which a zone will meet compliance timescales. Mitigation measures may affect the project design, layout, construction, operation and/or may comprise measures to improve air quality in pollution hotspots beyond the immediate locality of the scheme. Measures could include, but are not limited to, changes to the route of the new scheme, changes to the proximity of vehicles to local receptors in the existing route, physical means including barriers to trap or better disperse emissions, and speed control. The implementation of mitigation measures may require working with partners to support their delivery.	Noted. No mitigation measures are proposed for operational air emissions.
Carbon Emissions		
5.19	Evidence of appropriate mitigation measures (incorporating engineering plans on configuration and layout, and use of materials) in both design and construction should be presented. The Secretary of State will consider the effectiveness of such mitigation measures in order to ensure that, in relation to design and construction, the carbon footprint is not unnecessarily high. The Secretary of State's view of the adequacy of the mitigation measures relating to design and construction will be a material factor in the decision making process.	The Applicant has considered the DCO Scheme and the implications for air quality and greenhouse gases on nearby receptors within the influence of the DCO Scheme. In summary, it has been identified that the DCO Scheme has potential to cause some air quality impacts during construction and operation. However, the significance of any effects is determined to be not significant. In terms of carbon emissions, one of the supporting objectives of MetroWest Phase 1 (including the DCO Scheme) is to contribute to reducing the growth in traffic congestion on the Portishead, Bath and Avonmouth, and Severn Beach arterial corridors. The new railway services are expected to reduce emissions per passenger kilometre travelled compared with equivalent road transport through modal shift from car to rail.
Biodiversity and ecological conservation		
5.20	Biodiversity is the variety of life in all its forms and encompasses all species of plants and animals and the complex ecosystems of which they are a part. Government policy for the natural environment is set out in the Natural Environment White Paper (NEWP). The NEWP sets out a vision of moving progressively from net biodiversity loss to net gain, by supporting healthy, well-functioning ecosystems and establishing more coherent ecological networks that are more resilient to current and future pressures. Geological conservation relates to the sites that are designated for their geology and/or their geomorphological importance.	Noted.
5.22 - 5.23	Where the project is subject to EIA the applicant should ensure that the ES clearly sets out any likely significant effects on internationally, nationally and locally designated sites of ecological or geological conservation importance (including those outside England) on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity and that the statement considers the full range of potential impacts on ecosystems.	Biodiversity and ecological conservation and the DCO Scheme's compliance with NPSNN requirements have been considered in Chapter 9 Ecology and Biodiversity of the ES. The conservation of geological sites is considered in Chapter 10: Geology, Hydrogeology, Ground Conditions and Contaminated Land. Ecological surveys of the study area have been undertaken to identify habitats, flora and fauna, including protected species. The ES sets out the potential impacts on these ecological features and describes the required mitigation where appropriate, and the residual effects.

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	The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.	In addition to various ecological sites including SACs, SPAs, Ramsar sites, SSSIs, NNRs and WS the following protected species were identified as being present within the study area: amphibians; badgers; bats; breeding birds; Schedule 1 birds – barn owl and peregrine falcon; dormice; reptiles; invertebrates; otters; and water voles. With mitigation measures in place there are no significant adverse effects on any protected species.
5.25	As a general principle, and subject to the specific policies below, development should avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives. The applicant may also wish to make use of biodiversity offsetting in devising compensation proposals to counteract any impacts on biodiversity which cannot be avoided or mitigated. Where significant harm cannot be avoided or mitigated, as a last resort, appropriate compensation measures should be sought.	The DCO Scheme is the only feasible route for a railway passenger service, as it uses an existing railway corridor. Construction of a new railway along another corridor route would be prohibitively expensive and result in extensive social and environmental impacts. The only other transport corridor is the A369 between Portishead and Bristol, where the car is the dominant mode of transport. This route suffers from congestion during the peak hour when the journey time between Portishead and Bristol is about 50 minutes, compared with a train journey of 23 minutes. The DCO Scheme crosses or lies close to several internationally, nationally and locally designated ecological sites and two sites designated for their geology. The DCO Scheme directly affects the Avon Gorge Woodlands SAC. The Avon Gorge Vegetation Management Plan (ES Appendix 9.11) sets out a package of mitigation, prevention, and compensation measures to address the adverse effects of the construction of the DCO Scheme on the site and early years of operation. Key features are positive management of woodland through the removal of invasive non-native species, clearance of scrub in small areas of grassland, conservation of the rare whitebeams and other rare plants by appropriate management for particular species, and planting out whitebeam saplings grown on from seed collected in the Avon Gorge. A catalogue of management actions is provided for each area where positive management is proposed. The implementation of the plan will be monitored up to five years for the positive management areas and up to ten years for the whitebeam saplings and an annual report will be prepared for Natural England up to ten years from planting. Other measures to protect biodiversity and geological sites are included in the Master CEMP, shadow draft licences for bat, badger and great crested newts, and a reptile mitigation strategy. With these measures in place, no significant effects on biodiversity and geological conservation interests are predicted.
5.26	In taking decisions, the Secretary of State should ensure that appropriate weight is attached to designated sites of international, national and local importance, protected species, habitats and other species of principal importance for the conservation of biodiversity, and to biodiversity and geological interests within the wider environment.	Noted. Part of the DCO Scheme runs through the Avon Gorge Woodlands SAC. The DCO Scheme lies within 80 m of the Severn Estuary SAC, SPA and Ramsar site in Pill and about 1 km from these sites near Sheepway on the outskirts of Portishead. The DCO Scheme lies within 30 km of six SACs with bats as a qualifying feature. There are numerous locally designated wildlife sites along the DCO Scheme, including 6 adjoining the disused section of the railway and 10 adjoining the operational railway line. The DCO Scheme crosses two SSSIs designated for their geological value, the Ham Green SSSI, an exposed sequence of stratigraphy in a railway cutting, and the Avon Gorge SSSI. With the proposed embedded measures, environmental mitigation and compensation in place, there are no significant impacts on statutory or non-statutory designated sites during construction and operation.

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5.27	The most important sites for biodiversity are those identified through international conventions and European Directives. The Habitats Regulations provide statutory protection for European sites (see also paragraphs 4.22 to 4.25). The National Planning Policy Framework states that the following wildlife sites should have the same protection as European sites: • Potential Special Protection Areas and possible Special Areas of Conservation; • listed or proposed Ramsar sites; and • sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation and listed or proposed Ramsar sites.	Part of the DCO Scheme runs through the Avon Gorge Woodlands SAC. The DCO Scheme lies within 80 m of the Severn Estuary SAC, SPA and Ramsar site in Pill and about 1 km from these sites near Sheepway on the outskirts of Portishead. The DCO Scheme lies within 30 km of six SACs with bats as a qualifying feature. An HRA has been undertaken for the DCO Scheme and is presented in the ES Appendix 9.12. • Stage 1 Screening. Two European sites were screened into the appropriate assessment, the Avon Gorge Woodlands SAC and the North Somerset and Mendip Bats SAC. • Stage 2 Appropriate Assessment. It was concluded that there will be no adverse effects on the integrity of the North Somerset and Mendip Bats SAC, but that there would be adverse effects on the integrity of the Avon Gorge Woodlands SAC due to the loss of *Tilio-Acerion* woodland (a Priority habitat), *Festuco-Brometalia* grassland (a SAC qualifying feature), and the loss of up to 27 rare species of whitebeam trees. The loss of both the woodland and grassland habitat is considered to be an adverse effect on integrity • Stage 3 Alternatives. All possible alternatives, from transport mode through railway alignment through train service frequency and opportunities to avoid having a lesser effect on the Avon Gorge Woodlands SAC have been identified, evaluated and discounted. No feasible alternatives to the DCO Scheme have been identified. • Stage 4 IROPI. As the DCO Scheme affects the *Tilio-Acerion* woodland priority habitat, IROPI was considered in relation to health, safety and wider environmental benefits. IROPI was also considered in relation to socio-economic effects for the non-priority habitat *Festuco-Brometalia* grassland. • Securing the necessary compensation measures. The HRA presents a package of measures to compensate for the loss of *Tilio-Acerion* woodland, *Festuco-Brometalia* grassland and the loss of whitebeam species in the Avon Gorge Woodlands SAC. Further details are presented in the Avon Gorge Vegetation Management Plan (ES Appendix 9.11). It is considered that the adverse impact on the integrity of the Avon Gorge Woodland SAC predicted at Stage 2 is adequately compensated. Overall, it is concluded that the coherence of the Natura 2000 network is maintained.
Biodiversity - SSSIs		
5.28	Many Sites of Special Scientific Interest (SSSIs) are also designated as sites of international importance and will be protected accordingly. Those that are not, or those features of SSSIs not covered by an international designation, should be given a high degree of protection. All National Nature Reserves are notified as SSSIs.	Noted. The DCO Scheme affects the Ham Green SSSI (geological interest) and the Avon Gorge SSSI (biodiversity and geological interest). The Avon Gorge SSSI is co-incident with the Avon Gorge Woodlands SAC. The Avon Gorge Vegetation Management Plan (ES Appendix 9.11) sets out a suite of mitigation, prevention, and compensation measures to reduce the adverse impacts of the construction of the DCO Scheme on this site. The DCO Scheme passes through the Ham Green SSSI. No works are required to the cutting slopes and the proposed signal and cabinet will be located to avoid impacting on the SSSI.
5.29	Where a proposed development on land within or outside a SSSI is likely to have an adverse effect on an SSSI (either individually or in combination with other developments), development consent should not normally be granted. Where an adverse effect on the	The DCO Scheme affects the Ham Green SSSI (geological interest) and the Avon Gorge SSSI (biodiversity and geological interest).

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	site's notified special interest features is likely, an exception should be made only where the benefits of the development at this site clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSIs. The Secretary of State should ensure that the applicant's proposals to mitigate the harmful aspects of the development and, where possible, to ensure the conservation and enhancement of the site's biodiversity or geological interest, are acceptable. Where necessary, requirements and/or planning obligations should be used to ensure these proposals are delivered.	The main habitats in the Avon Gorge SSSI adjacent to the rail corridor consist of the extensive woodlands, along with some scrub, grassland, cliffs and rocky outcrops. There are also the railway cuttings, embankments, walls and a small amount of saltmarsh along the River Avon. The site also supports many rare plants, including many endemic whitebeams found nowhere else in the world. The Avon Gorge Vegetation Management Plan (ES Appendix 9.11) sets out a suite of mitigation, prevention, and compensation measures to reduce the adverse impacts of the construction of the DCO Scheme on this site. Overall, the completed ecological impact assessment demonstrates that the DCO Scheme will not have a significant effect on ecology and biodiversity. The DCO Scheme passes through the Ham Green SSSI. No works are required to the cutting slopes and the proposed signal and cabinet will be located to avoid impacting on the SSSI.
5.31	Sites of regional and local biodiversity and geological interest (which include Local Geological Sites, Local Nature Reserves and Local Wildlife Sites and Nature Improvement Areas) have a fundamental role to play in meeting overall national biodiversity targets, in contributing to the quality of life and the well-being of the community, and in supporting research and education. The Secretary of State should give due consideration to such regional or local designations. However, given the need for new infrastructure, these designations should not be used in themselves to refuse development consent.	There are numerous locally designated wildlife sites within 500 m of the centreline of the DCO Scheme, including six adjoining the disused section of the railway and ten adjoining the operational railway line. With the embedded measures set out in the Master CEMP (ES Appendix 4.2), the proposed landscaping along the disused section of the railway between Portishead and Pill (DCO Document Reference 2.10), habitat enhancement measures for great crested newts at the Field East of Court House North Somerset Wildlife Site), grassland planting around the M5 bridleway extension within the Fields East of M5 motorway, and Lodway North Somerset Wildlife Site (DCO Document Reference 2.53) and specific planting measures for the DCO Scheme sites within and adjoining local wildlife sites such as at Sheepway Bridge maintenance compound (DCO Document Reference 2.49) and Clanage Road compound aka Bower Ashton Playing Fields Bristol Wildlife Network Site (DCO Document Reference 2.52), no significant impacts on locally designated wildlife sites are predicted. There are no direct or indirect impacts on the regionally important geological and geomorphological sites near the Avon Gorge (see ES Chapter 10 Geology, Hydrogeology, Ground Conditions and Contaminated Land.
Biodiversity - Irreplaceable habitats including ancient woodland and veteran trees		
5.32	Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. The Secretary of State should not grant development consent for any development that would result in the loss or deterioration of irreplaceable habitats including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the national need for and benefits of the development, in that location, clearly outweigh the loss. Aged or veteran trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided. Where such trees would be affected by development proposals, the applicant should set out proposals for their conservation or, where their loss is unavoidable, the reasons for this.	The DCO Scheme passes through the Avon Gorge Woodlands SAC, Avon Gorge SSSI, Leigh Woods NNR, and two woods identified on Natural England's ancient woodland inventory, Leigh Woods/Oak Wood and Rownham Wood. The DCO Scheme will result in the loss of 0.73 ha of *Tilio-Acerion* woodland, of which about 55% or 0.4 ha is ancient woodland. Ancient woodland is considered to be irreplaceable habitat and the loss of this woodland cannot be fully mitigated. The impact of the DCO Scheme on the Avon Gorge Woodlands SAC is fully considered in the HRA (ES Appendix 9.12). The Avon Gorge Vegetation Management Plan (ES Appendix 9.11) sets out a suite of mitigation, prevention, and compensation measures to reduce the adverse impacts of the construction of the DCO Scheme on this site. Network Rail will implement their own SMS and VMP, approved by Natural England, for ongoing maintenance works along the railway through the Avon Gorge SSSI. This will

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		include measures to keep the railway corridor free from vegetation up to 3 m from the running rail for the safe operation of trains.
5.33	Development proposals potentially provide many opportunities for building in beneficial biodiversity or geological features as part of good design. When considering proposals, the Secretary of State should consider whether the applicant has maximised such opportunities in and around developments. The Secretary of State may use requirements or planning obligations where appropriate in order to ensure that such beneficial features are delivered.	The Avon Gorge Vegetation Management Plan (ES Appendix 9.11) sets out a package of mitigation, prevention, and compensation measures to address the adverse effects of the construction of the DCO Scheme on the site and early years of operation. Key features are positive management of woodland through the removal of invasive non-native species, scrub clearance in small areas of grassland, conservation of the rare whitebeams and other rare plants by appropriate management for particular situations, and planting out rare whitebeam saplings grown on from seed collected in the Avon Gorge. A catalogue of management actions is provided for each area where positive management is proposed. The implementation of the plan will be monitored up to five years for the positive management areas and up to ten years for the rare whitebeam saplings and an annual report will be prepared for Natural England up to ten years from planting. The management plans for protected species also include: bat and bird boxes on trees within the railway corridor; protection works for the bat roost in Pill station; increasing protection for bat roosting in The Adit cave in the Avon Gorge by placing a grille over the entrances; three new ponds and restoration of two existing ponds for great crested newts; hibernacula and basking site for reptiles. The locations of these features are shown on the Environmental Masterplan (DCO Document Reference 2.53).
Biodiversity - Protection of other habitats and species		
5.35	Other species and habitats have been identified as being of principal importance for the conservation of biodiversity in England and Wales and therefore requiring conservation action. The Secretary of State should ensure that applicants have taken measures to ensure these species and habitats are protected from the adverse effects of development. Where appropriate, requirements or planning obligations may be used in order to deliver this protection. The Secretary of State should refuse consent where harm to the habitats or species and their habitats would result, unless the benefits of the development (including need) clearly outweigh that harm.	The assessment set out in Chapter 9 – Ecology and Biodiversity of the ES considered non-statutory designated sites and other habitats and species. Measures to control the adverse effects of construction are set out in the Master CEMP (ES Appendix 4.2). The Landscape Plans for the disused railway (DCO Document Reference 2.10) and the Environmental Masterplan (DCO Document Reference 2.53) include measures to provide a mosaic of habitats to protect and conserve wildlife. No significant adverse effects were identified.
Biodiversity Mitigation		
5.36	Applicants should include appropriate mitigation measures as an integral part of their proposed development, including identifying where and how that: • during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works; • during construction and operation, best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised (including as a consequence of transport access arrangements); • habitats will, where practicable, be restored after construction works have finished; • developments will be designed and landscaped to provide green corridors and minimise habitat fragmentation where reasonable; • opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site landscaping proposals, for example through	Measures incorporated into the DCO Scheme include good practice measures as set out in the Master CEMP (ES Appendix 4.2) and the protected species licences for badgers, bats, and great crested newts (DCO Document Reference 5.3). A full list of environmental mitigation measures are captured in the Schedule of Mitigation (Appendix 4.3 to the ES). Detailed descriptions of mitigation proposals are presented in the Avon Gorge Vegetation Management Plan (ES Appendix 9.11) and the Reptile Mitigation Strategy (ES Appendix 9.13). Mitigation measures are also presented in the Landscape Plans (DCO Document Reference 2.10) and the Environmental Masterplan (DCO Document Reference 2.53).

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	techniques such as the 'greening' of existing network crossing points, the use of green bridges and the habitat improvement of the network verge.	
5.37	The Secretary of State should consider what appropriate requirements should be attached to any consent and/or in any planning obligations entered into in order to ensure that mitigation measures are delivered.	Noted.
Waste Management		
5.42	The applicant should set out the arrangements that are proposed for managing any waste produced. The arrangements described should include information on the proposed waste recovery and disposal system for all waste generated by the development. The applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that the alternative is the best overall environmental outcome.	Chapter 12 - Materials and Waste of the ES considers the potential environmental effects associated with the use and consumption of materials and the production and management of waste, during the construction of the DCO Scheme. The waste arising from the construction sites will be managed by the contractor(s) who will be responsible for preparing and implementing a Site Waste Management Plan (SWMP) as part of their CEMP. The waste ballast will be transported by train to one of Network Rail's National Track Materials Recycling Centres for treatment, reuse or disposal.
5.43	The Secretary of State should consider the extent to which the applicant has proposed an effective process that will be followed to ensure effective management of hazardous and non-hazardous waste arising from the construction and operation of the proposed development. The Secretary of State should be satisfied that the process sets out: • any such waste will be properly managed, both on-site and off-site • the waste from the proposed facility can be dealt with appropriately by the waste infrastructure which is, or is likely to be, available. Such waste arisings should not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arising's in the area; and • adequate steps have been taken to minimise the volume of waste arisings, and of the volume of waste arisings sent to disposal, except where an alternative is the most sustainable outcome overall.	Noted. Appendix 10.2 Land Contamination Summary Report, of the ES (DCO Document Reference 6.25) brings together available information on known contamination along the DCO Scheme, identifies gaps for further site investigations, and presents a desk-based risk assessment on contamination. The desk study and ground investigation has shown there to be several sources of contamination in the area of the DCO Scheme that may present a risk to humans and /or the environment. Most of these risks are considered low, and in most cases further investigation is required to inform the assessment of such risks. The majority of the risks identified can be mitigated through good construction practice. The DCO permission will contain a requirement for a written scheme to address the contamination of any land, and including groundwater, within the Order limits, which will include an investigation and assessment report. These written scheme and assessment reports will require approval by the planning authority after consultation with the Environment Agency and Local Authorities. The removal of ballast, including ballast containing pollutants, will be removed following Network Rail's standard procedures which are applied nation-wide. The ballast will be transferred to one of Network Rail's national centres for processing. The ES Chapter 12 Materials and Waste identifies the potential construction waste streams and available waste disposal facilities in the region. The contractor will be required to prepare and implement a Site Waste Management Plan (SWMP) which is carried into the CEMP (ES Appendix 4.2).
5.44	Where necessary, the Secretary of State should use requirements or planning obligations to ensure that appropriate measures for waste management are applied.	Noted.
5.45	Where the project will be subject to the Environment Agency's environmental permitting regime, waste management arrangements during operations will be covered by the permit and the considerations set out in paragraphs 4.48 to 4.56 will apply.	Noted. During operations, waste management at the stations and on the trains will be managed by the training operating company. In the Scoping Opinion, the Secretary of State agreed to scope out the generation of waste during operations.

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Civil and military aviation and defence interests		
5.49	The certified safeguarding maps depicting the OLS and other criteria (e.g. to minimise "birdstrike" hazards) are deposited with the relevant local planning authorities. Circular 1/200384 provides advice to planning authorities on the official safeguarding of aerodromes and includes a list of the aerodromes which are officially safeguarded. The Circular and CAA guidance also recommends that the operators of aerodromes which are not officially safeguarded should take steps to protect their aerodrome from the effects of possible adverse development by establishing an agreed consultation procedure between themselves and the local planning authority or authorities.	There are no nearby airfields or aerodromes.
5.55 - 5.58	Where the proposed development may have an effect on civil or military aviation and/or other defence assets, an assessment of potential effects should be carried out. The applicant should consult the MoD, CAA, National Air Traffic Services (NATS) and any aerodrome – licensed or otherwise – likely to be affected by the proposed development in preparing an assessment of the proposal on aviation or other defence interests. Any assessment on aviation or other defence interests should include potential impacts during construction and operation of the project upon the operation of CNS infrastructure, flight patterns (both civil and military), other defence assets and aerodrome operational procedures. If any relevant changes are made to proposals for an NSIP during the pre-application period or before the end of the examination of an application, it is the responsibility of the applicant to ensure that the relevant aviation and defence consultees are informed as soon as reasonably possible.	Noted. The Ministry of Defence ("MoD"), Civil Aviation Authority ("CAA"), and National Air Traffic Services ("NATS") were consulted by the Secretary of State during the scoping stage, but none replied.
5.59	The Secretary of State should be satisfied that effects on civil and military aviation and other defence assets have been addressed by the applicant and that any necessary assessment of the proposal on aviation or defence interests has been carried out. In particular, it should be satisfied that the proposal has been designed to minimise adverse impacts on the operation and safety of aerodromes and that reasonable mitigation is carried out. It may also be appropriate to expect operators of the aerodrome to consider making reasonable changes to operational procedures. The Secretary of State will have regard to the necessity, acceptability and reasonableness of operational changes to aerodromes, and the risks or harm of such changes when taking decisions. When making such a judgement in the case of military aerodromes, the Secretary of State should have regard to interests of defence and national security.	Noted. The DCO Scheme does not directly impact on civil or military aviation.
5.60	If there are conflicts between the Government's national networks policies and military interests in relation to the application, the Secretary of State expects the relevant parties to have made appropriate efforts to work together to identify realistic and pragmatic solutions to the conflicts. In so doing, the parties should seek to protect the aims and interests of the other parties as far as possible.	Noted. The DCO Scheme does not adversely impact or conflict with national military interests.
5.61	There are statutory requirements concerning lighting to tall structures. Where lighting is requested on structures that go beyond statutory requirements by any of the relevant aviation and defence consultees, the Secretary of State should be satisfied of the necessity	The DCO Scheme does not include any tall structures that would impact adversely on aviation.

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	of such lighting taking into account the case put forward by the consultees. The effect of such lighting on the landscape, local residents and ecology may be a relevant consideration, depending on the particular circumstances be a relevant consideration.	
5.62	Where, after reasonable mitigation, operational changes and planning obligations and requirements have been proposed, development consent should not be granted if the Secretary of State considers that: • a development would prevent a licensed aerodrome from maintaining its licence; • the benefits of the proposed development are outweighed by the harm to aerodromes serving business, training or emergency service needs; or • the development would significantly impede or compromise the safe and effective use of defence assets or significantly limit military training.	Noted.
Coastal Change		
5.71- 5.74	Applications for development in a Coastal Change Management Area (CCMA) should make it clear why there is a need for it to be located in a CCMA. For developments in a CCMA, applicants should undertake an assessment of the vulnerability of the proposed development to coastal change, taking account of climate change, during the project's operational life. For any projects involving dredging or disposal into the sea, the applicant should consult the Marine Management Organisation (MMO), and where appropriate, for cross-boundary impacts, Natural Resource Wales and Scottish Natural Heritage, at an early stage. The applicant should also consult the MMO on projects which could impact on coastal change, since the MMO may also be involved in considering other projects which may have related coastal impacts. The applicant should examine the broader context of coastal protection around the proposed project, and the influence in both directions, i.e. coast on project, and project on coast. The applicant should be particularly careful to identify any effects of physical changes on the integrity and special features of Marine Conservation Zones, candidate marine Special Areas of Conservation (SACs), coastal SACs and candidate coastal SACs, coastal Special Protection Areas (SPAs) and potential coastal SPAs, Ramsar sites, Sites of Community Importance (SCIs) and potential SCIs and sites of Special Scientific Interest. For any projects affecting the above marine protected areas, the applicant should consult Natural England and where appropriate, for cross-boundary impacts, Natural Resource Wales and Scottish Natural Heritage, at an early stage.	The DCO Scheme is not within a Coastal Change Management Area. The DCO Scheme does not involve dredging or disposal at sea. The broader context of coastal protection around the DOC Scheme is discussed in the FRA (ES Appendix 17.1), as the scheme passes through the defended flood plain between Portishead and Pill and crosses the River Avon floodplain in the vicinity of Bower Ashton which is tidal in this location. The DCO Scheme lies close to the Severn Estuary SAC, SPA, Ramsar site and SSSI. The potential impact of the DCO Scheme on these designations is considered in the ES Chapter 9 Ecology and Biodiversity and in the HRA in the ES Appendix 9.12. The HRA concludes that the DCO Scheme does not affect the integrity of these sites. These sites have been included in ongoing consultations with Natural England about the DCO Scheme.
5.75	When assessing applications in a CCMA, the Secretary of State should not grant development consent unless it is demonstrated that the development: • will be safe over its planned lifetime and will not have an unacceptable impact on coastal change; • will not compromise the character of the coast covered by designations; • provides wider sustainability benefits; and	The DCO Scheme is not within a Coastal Change Management Area.

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	• does not hinder the creation and maintenance of a continuous signed and managed route around the coast.	
5.79	Applicants should propose appropriate mitigation measures to address adverse physical changes to the coast in consultation with the MMO, the Environment Agency, Natural England, Natural Resource Wales, Scottish Natural Heritage, Local Planning Authorities, other statutory consultees, Coastal Partnerships and other coastal groups, as it considers appropriate. The Secretary of State should consider whether the mitigation requirements put forward by an applicant are acceptable and will be delivered and whether requirements should be attached to any grant of development consent in order to secure their delivery.	The DCO Scheme is not within a Coastal Change Management Area.
Dust, odour, artificial light, smoke, steam		
5.82	Because of the potential effects of these emissions [dust, odour, artificial light, smoke, steam] and in view of the availability of the defence of statutory authority against nuisance claims s.104 of the Planning Act 2008 described previously, it is important that the potential for these impacts is considered by the applicant in their application, by the Examining Authority in examining applications and by the Secretary of State in taking decisions on development consents.	During construction, the emission of dust and artificial light will be managed through the implementation of the contractor's CEMP. A Master CEMP is provided in the ES Appendix 4.2 which illustrates the types of controls to be implemented. During operation, new artificial light will be required at the new stations and car parks at Portishead and Pill. These will be designed to minimise glare and light spill. Proposals for lighting Portishead station, Pill station and car park are provided in DCO Document References 2.38 and 2.42 and the impact of night-time lighting is considered in the ES Chapter 11 Landscape and Visual Impacts Assessment (DCO Document Reference 6.14). No significant emissions of dust, smoke or steam are predicted for the operations phase.
5.83	For nationally significant infrastructure projects of the type covered by this NPS, some impact on amenity for local communities is likely to be unavoidable. Impacts should be kept to a minimum and should be at a level that is acceptable.	The impact of construction and operation on amenity for local communities is assessed in Chapter 15 Soils, Agriculture, Land Use and Assets. Construction-related issues would be mitigated through the implementation of the contractor's CEMP. The effects of new lighting would be mitigated through design to reduce glare and light spill.
5.84 - 5.86	Where the development is subject to an Environmental Impact Assessment, the applicant should assess any likely significant effects on amenity from emissions of odour, dust, steam, smoke and artificial light and describe these in the Environmental Statement. In particular, the assessment provided by the applicant should describe: • the type and quantity of emissions; • aspects of the development which may give rise to emissions during construction, operation and decommissioning; • premises or locations that may be affected by the emissions; • effects of the emission on identified premises or locations; and • measures to be employed in preventing or mitigating the emissions. • The applicant is advised to consult the relevant local planning authority and, where appropriate, the Environment Agency about the scope and methodology of the assessment.	The ES assesses the impact of emissions arising from the DCO Scheme during construction and operation. Construction emissions: • Construction dust • Emissions from construction plant • Temporary lighting Operation emissions: • Night-time lighting at the new stations and car parks at Portishead and Pill • Emissions from the train diesel multiple units and road vehicles to and from the train stations. The impacts of construction dust, vehicle emissions and train emissions are assessed in the ES, Chapter 7 Air Quality and Greenhouse Gases. The impacts of lighting are assessed in the ES Chapter 11 Landscape and Visual Impacts Assessment (DCO Document Reference 6.14).

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		Construction-related issues would be mitigated through the implementation of the contractor's CEMP. The effects of new lighting would be mitigated through design to reduce glare and light spill.
5.87	The Secretary of State should be satisfied that all reasonable steps have been taken, and will be taken, to minimise any detrimental impact on amenity from emissions of odour, dust, steam, smoke and artificial light. This includes the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.	The ES provides a full assessment of the likely environmental effects and any mitigation measures required. The requirements set out in this paragraph of the NPSNN have been assessed. The implementation of the practices outlined in the Master CEMP (ES Appendix 4.2) will reduce the risk of significant impacts of dust arising from the construction activities to not significant. The effects of new lighting would be mitigated through design to reduce glare and light spill.
5.88	If development consent is granted for a project, the Secretary of State should consider whether there is a justification for all of the authorised project (including any associated development) being covered by a defence of statutory authority against nuisance claims. If the Secretary of State cannot conclude that this is justified, then the defence should be disapplied, in whole or in part, through a provision in the Development Consent Order.	Noted.
5.89	The Secretary of State should ensure the applicant has provided sufficient information to show that any necessary mitigation will be put into place. In particular, the Secretary of State should consider whether to require the applicant to abide by a scheme of management and mitigation concerning emissions of odour, dust, steam, smoke, artificial light from the development to reduce any loss to amenity which might arise during the construction and operation of the development. A construction management plan may help codify mitigation.	Chapter 7 Air Quality and Greenhouse Gases of the ES sets out the potential adverse impacts from dust associated with the DCO Scheme. Chapter 9 Ecology and Biodiversity and Chapter 11 Landscape and Visual Impacts Assessment (DCO Document Reference 6.14) have considered the potential impacts associated with lighting.
Flood Risk		
5.91	The National Planning Policy Framework (paragraphs 100 to 104) makes clear that inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk. But where development is necessary, it should be made safe without increasing flood risk elsewhere. The guidance supporting the National Planning Policy Framework explains that essential transport infrastructure (including mass evacuation routes), which has to cross the area at risk, is permissible in areas of high flood risk, subject to the requirements of the Exception Test.	An FRA and Water Framework Directive Assessment have been prepared to accompany the DCO Application. The Water Framework Directive Assessment considers the hydromorphological, water quality and ecological impacts of the DCO Scheme and concludes that no deterioration to water bodies would occur as a result of the proposed works and therefore no further assessment would be required. The FRA identifies that the DCO Scheme is partly within flood zones 2 and 3. The DCO Scheme is considered to be classified as Essential Infrastructure, and so compatible with all Flood Zones, including 3a and 3b, subject to passing of the Exception Test. The DCO Scheme is considered to pass the Exception Test (as detailed in the FRA at ES Appendix 17.1). The DCO Scheme will also provide benefits that are considered to outweigh the flood risk, provided that the residual flood risk after any mitigation is addressed through the use of flood warnings, operating procedures and a flood plan. The DCO Scheme is also considered to pass the Sequential Test as the DCO Scheme is a regional aspiration that has the support of local planning policy and there are no realistic alternative locations for the railway line.
5.92 - 5.93	Applications for projects in the following locations should be accompanied by an FRA: • Flood Zones 2 and 3, medium and high probability of river and sea flooding;	An FRA has been carried out for the DCO Scheme, at ES Appendix 17.1.

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	• Flood Zone 1 (low probability of river and sea flooding) for projects of 1 hectare or greater, projects which may be subject to other sources of flooding (local watercourses, surface water, groundwater or reservoirs), or where the Environment Agency has notified the local planning authority that there are critical drainage problems. • This should identify and assess the risks of all forms of flooding to and from the project and demonstrate how these flood risks will be managed, taking climate change into account.	The FRA concludes that the DCO Scheme passes the Sequential and Exception tests, and flood risks to the scheme will be managed by Network Rail's operating procedures and Extreme Weather Plan, including the use of flood warnings. The DCO Scheme does not increase flood risk elsewhere.
5.94	In preparing an FRA the applicant should: • consider the risk of all forms of flooding arising from the project (including in adjacent parts of the United Kingdom), in addition to the risk of flooding to the project, and demonstrate how these risks • will be managed and, where relevant, mitigated, so that the development remains safe throughout its lifetime; • take the impacts of climate change into account, clearly stating the development lifetime over which the assessment has been made; • consider the vulnerability of those using the infrastructure including arrangements for safe access and exit; • include the assessment of the remaining (known as 'residual') risk after risk reduction measures have been taken into account and demonstrate that this is acceptable for the particular project; • consider if there is a need to remain operational during a worst case flood event over the development's lifetime; • provide the evidence for the Secretary of State to apply the Sequential Test and Exception Test, as appropriate.	The FRA (ES Appendix 17.1) has been undertaken and is submitted in support of the DCO Application. This considers all sources of flood risk to the DCO Scheme: • Fluvial • Tidal • Surface water • Groundwater • Reservoir failure • Sewers • Water supply infrastructure • Flood defence failure The assessment of flood risk and potential mitigation has taken the impact of climate change into account in accordance with national guidance which considers the proposed design life of the DCO Scheme. Safe access and use will be considered by demonstrating in the FRA how the railway will continue to operate during times of flood and how it will respond to a 'worst-case' flood over its lifetime. The FRA concludes that the DCO Scheme passes the Sequential and Exception tests. The projected future increase in flood risk to the DCO Scheme at Bower Ashton, due to the projected increase in sea levels, will be managed by Network Rail's operating procedures and Extreme Weather Plan, including the use of flood warnings and cessation of services during flood events.
5.96	Applicants for projects which may be affected by, or may add to, flood risk are advised to seek sufficiently early pre-application discussions with the Environment Agency, and, where relevant, other flood risk management bodies such as lead local flood authorities, Internal Drainage Boards, sewerage undertakers, highways authorities and reservoir owners and operators. Such discussions can be used to identify the likelihood and possible extent and nature of the flood risk, to help scope the FRA, and identify the information that will be required by the Secretary of State to reach a decision on the application once it has been submitted and examined. If the Environment Agency has concerns about the proposal on flood risk grounds, the applicant is encouraged to discuss these concerns with the Environment Agency and look to agree ways in which the proposal might be amended, or additional information provided, which would satisfy the Environment Agency's concerns, preferably before the application for development consent is submitted.	An FRA (ES Appendix 17.1) has been submitted as part of the DCO Application. Discussions with the Environment Agency, Lead Local Flood Authority and NSLIDB have taken place and have informed the design process. This has included consultation on access and maintenance requirements of flood risk management authorities, and in response to discussions with the Environment Agency, amendments to the design at Bower Ashton to avoid offsite impacts on flood risk due to development of the DCO Scheme.
5.97	For local flood risk (surface water, groundwater and ordinary watercourse flooding), local flood risk management strategies and surface water management plans provide useful	The FRA (ES Appendix 17.1) has made use of existing documents pertaining to flood risk when assessing risk to the DCO Scheme, including Flood Risk Management Strategies,

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	sources of information for consideration in Flood Risk Assessments. Surface water flood issues need to be understood and then account of these issues can be taken, for example flow routes should be clearly identified and managed.	Strategic Flood Risk Assessments, Local Flood Risk Management Plans, Surface Water Management Plans. Surface water flood risk to and from the railway has been considered during the design process and is documented in the FRA. The FRA concludes that where the railway is close to surrounding ground levels there is the potential for surface water flooding during intense rainfall events (e.g. at low points where the railway passes under roads). Surface water flooding could occur quickly (e.g. in less than an hour). After an intense storm any surface water flooding of the railway would be drained by the DCO Scheme surface water drainage.
5.98	Where flood risk is a factor in determining an application for development consent, the Secretary of State should be satisfied that, where relevant: • the application is supported by an appropriate FRA; • the Sequential Test (see the National Planning Policy Framework) has been applied as part of site selection and, if required, the Exception Test (see the National Planning Policy Framework).	Noted.
5.99	When determining an application, the Secretary of State should be satisfied that flood risk will not be increased elsewhere and only consider development appropriate in areas at risk of flooding where (informed by a flood risk assessment, following the Sequential Test and, if required, the Exception Test), it can be demonstrated that: • within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location; and • development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed, including by emergency planning; and priority is given to the use of sustainable drainage systems.	Noted.
5.100	For construction work which has drainage implications, approval for the project's drainage system will form part of any development consent issued by the Secretary of State. The Secretary of State will therefore need to be satisfied that the proposed drainage system complies with any National Standards published by Ministers under Paragraph 5(1) of Schedule 3 to the Flood and Water Management Act 2010.93 In addition, the development consent order, or any associated planning obligations, will need to make provision for the adoption and maintenance of any SuDS, including any necessary access rights to property. The Secretary of State, should be satisfied that the most appropriate body is being given the responsibility for maintaining any SuDS, taking into account the nature and security of the infrastructure on the proposed site. The responsible body could include, for example, the applicant, the landowner, the relevant local authority, or another body such as the Internal Drainage Board.	An FRA has been submitted as part of the DCO Application, at ES Appendix 17.1. The scheme drainage design is based on national standards in compliance with the Flood and Water Management Act 2010 and the design of sustainable drainage systems.
5.102	The Secretary of State should expect that reasonable steps have been taken to avoid, limit and reduce the risk of flooding to the proposed infrastructure and others. However, the nature of linear infrastructure means that there will be cases where: • upgrades are made to existing infrastructure in an area at risk of flooding; • infrastructure in a flood risk area is being replaced; • infrastructure is being provided to serve a flood risk area; and	Noted. The assessment of flood risk and water quality and resources and its compliance with NPSNN requirements is provided in Chapter 17 Water Resources, Drainage and Flood Risk of the ES. The DCO Scheme follows an existing railway alignment, with most significant flood risk (River Avon tidal flooding) in the Bower Ashton area. The FRA (ES Appendix 17.1)

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	• infrastructure is being provided connecting two points that are not in flood risk areas, but where the most viable route between the two passes through such an area.	concludes that flood risks to the scheme will be managed by Network Rail's operating procedures and Extreme Weather Plan, including the use of flood warnings. The DCO Scheme does not increase flood risk elsewhere.
5.103	The design of linear infrastructure and the use of embankments in particular, may mean that linear infrastructure can reduce the risk of flooding for the surrounding area. In such cases the Secretary of State should take account of any positive benefit to placing linear infrastructure in a flood-risk area.	Noted. An FRA has been submitted as part of the DCO Application, at ES Appendix 17.1. The DCO Scheme has been designed to result in no increase in flood risk elsewhere due to e.g. obstructing floodplain flow paths. To achieve this the DCO Scheme design retains existing railway levels in the Bower Ashton area.
5.104	Where linear infrastructure has been proposed in a flood risk area, the Secretary of State should expect reasonable mitigation measures to have been made, to ensure that the infrastructure remains functional in the event of predicted flooding.	Noted. An FRA has been submitted as part of the DCO Application (ES Appendix 17.1). The DCO Scheme follows an existing railway alignment, with most significant flood risk (River Avon tidal flooding) in the Bower Ashton area. The DCO Scheme does not increase flood risk elsewhere. To avoid offsite flood risk impacts, the DCO Scheme design has retained existing railway levels in the Bower Ashton area (it was found that raising railway levels resulted in offsite impacts that could not be mitigated by e.g. floodplain compensation). The FRA concludes that flood risks to the scheme will be managed by Network Rail's operating procedures and Extreme Weather Plan, including the use of flood warnings. The scheme drainage design is based on national standards in compliance with the Flood and Water Management Act 2010 and the design of sustainable drainage systems.
5.109	In addition, any project that is classified as 'essential infrastructure' and proposed to be located in Flood Zone 3a or b should be designed and constructed to remain operational and safe for users in times of flood; and any project in Zone 3b should result in no net loss of floodplain storage and not impede water flows.	The DCO Scheme follows an existing railway alignment, with most significant flood risk (River Avon tidal flooding) in the Bower Ashton area. The DCO Scheme does not increase flood risk elsewhere. To avoid offsite flood risk impacts, the DCO Scheme design has retained existing railway levels in the Bower Ashton area (it was found that raising railway levels resulted in offsite impacts that could not be mitigated by e.g. floodplain compensation). The FRA (ES Appendix 17.1) concludes that flood risks to the scheme will be managed by Network Rail's operating procedures and Extreme Weather Plan, including the use of flood warnings.
Flood Risk Mitigation		
5.112 - 5.115	Site layout and surface water drainage systems should cope with events that exceed the design capacity of the system, so that excess water can be safely stored on or conveyed from the site without adverse impacts. The surface water drainage arrangements for any project should be such that the volumes and peak flow rates of surface water leaving the site are no greater than the rates prior to the proposed project, unless specific off-site arrangements are made and result in the same net effect. It may be necessary to provide surface water storage and infiltration to limit and reduce both the peak rate of discharge from the site and the total volume discharged from the site. There may be circumstances where it is appropriate for infiltration attenuation storage to be provided outside the project site, if necessary through the use of a planning obligation. The sequential approach should be applied to the layout and design of the project. Vulnerable uses should be located on parts of the site at lower probability and residual risk	The FRA (ES Appendix 17.1) has been submitted as part of the DCO Application. This includes details of the proposed surface water drainage system and how it will incorporate measures to safely store or convey water for storm events beyond its design standard. The surface water drainage system has been designed to include attenuation of runoff to ensure it is discharged at Greenfield Rates matching the current rate and volume. Details of such measures are included in the FRA. The use of SuDS and the dual use of open space will be considered through the ongoing design process.

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	of flooding. Applicants should seek opportunities to use open space for multiple purposes such as amenity, wildlife habitat and flood storage uses. Opportunities can be taken to lower flood risk by improving flow routes, flood storage capacity and using SuDS.	
Land Stability		
5.116	The effects of land instability may result in landslides, subsidence or ground heave. Failing to deal with this issue could cause harm to human health, local property and associated infrastructure, and the wider environment. They occur in different circumstances for different reasons and vary in their predictability and in their effect on development.	Chapter 10 Geology, Hydrogeology, Ground Conditions and Contaminated Land has identified baseline features in land instability.
5.117 - 5.118	Where necessary, land stability should be considered in respect of new development, as set out in the National Planning Policy Framework and supporting planning guidance. Specifically, proposals should be appropriate for the location, including preventing unacceptable risks from land instability. If land stability could be an issue, applicants should seek appropriate technical and environmental expert advice to assess the likely consequences of proposed developments on sites where subsidence, landslides and ground compression is known or suspected. Applicants should liaise with the Coal Authority if necessary. A preliminary assessment of ground instability should be carried out at the earliest possible stage before a detailed application for development consent is prepared. Applicants should ensure that any necessary investigations are undertaken to ascertain that their sites are and will remain stable or can be made so as part of the development. The site needs to be assessed in context of surrounding areas where subsidence, landslides and land compression could threaten the development during its anticipated life or damage neighbouring land or property. This could be in the form of a land stability or slope stability risk assessment report.	Chapter 10 Geology, Hydrogeology, Ground Conditions and Contaminated Land has identified baseline features in land instability. The main risk is cliff instability through the Avon Gorge. Chapter 4 Description of the Proposed Works and Appendix 4.4 Summary of works in the Avon Gorge summarise the geotechnical works required to stabilise cliff faces on Network Rail land and third party land through the Avon Gorge. The measures include vegetation removal and light scaling (stone picking) of cliff faces, rock bolting and controlled movement of blocks downslope. Catch fences will be erected to the foot of the cliff faces at three locations. There are historic coal mining works in the Bower Ashton and Ashton Vale area (see Chapter 10 Geology, Hydrogeology, Ground Conditions and Contaminated Land and Appendix 10.2 Land Contamination Summary Report). However, these are not considered likely to affect the design of the DCO Scheme. Any impacts that could arise from the underlying ground conditions would be dealt with during the construction phase.
5.119	Applicants have a range of mechanisms available to mitigate and minimise risks of land instability. These include: • Establishing the principle and layout of new development, for example avoiding mine entries and other hazards. • Ensuring proper design of structures to cope with any movement expected, and other hazards such as mine and/or ground gases; or • Requiring ground improvement techniques, usually involving the removal of poor material and its replacement with suitable inert and stable material. For development on land previously affected by mining activity, this may mean prior extraction of any remaining mineral resource.	There are historic coal mining works in the Bower Ashton and Ashton Vale area (see Chapter 10 Geology, Hydrogeology, Ground Conditions and Contaminated Land and Appendix 10.2 Land Contamination Summary Report). However, these are not considered likely to affect the design of the DCO Scheme. Any impacts that could arise from the underlying ground conditions would be dealt with during the construction phase.
Historic Environment		
5.124	Non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to Scheduled Monuments, should be considered subject to the policies for designated heritage assets. The absence of designation for such heritage assets does not indicate lower significance.	ES Chapter 8 Cultural Heritage and Appendix 8.1 Cultural Heritage Gazetteer describe the baseline environment in respect of non-designated heritage assets of archaeological interest. Much of the heritage assets along the railway corridor were removed during the construction of the original railway in the 1860s. Walkover surveys along the railway corridor identified features of low or negligible value, mostly associated with the original railway. These have

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		been mitigation by the preservation by record presented in Appendix 8.1. No non-designated heritage assets equivalent to scheduled monuments were found.
5.125	The Secretary of State should also consider the impacts on other non-designated heritage assets (as identified either through the development plan process by local authorities, including 'local listing', or through the nationally significant infrastructure project examination and decision making process) on the basis of clear evidence that the assets have a significance that merit consideration in that process, even though those assets are of lesser value than designated heritage assets.	ES Chapter 8 Cultural Heritage sets out the potential effects of the DCO Scheme on cultural heritage assets and describes any mitigation measures required. The main mitigation measures proposed are: a watching brief during top soil stripping of green field sites, fencing of the non-designated archaeological site at Lodway Compound, and repair of structures associated with the original railway.
5.126 - 5.127	Where the development is subject to EIA the applicant should undertake an assessment of any likely significant heritage impacts of the proposed project as part of the Environmental Impact Assessment and describe these in the environmental statement. The applicant should describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the asset's importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant Historic Environment Record should have been consulted and the heritage assets assessed using appropriate expertise. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, the applicant should include an appropriate desk-based assessment and, where necessary, a field evaluation.	An assessment of the likely significant heritage impacts of the DCO Scheme has been undertaken and is presented in Chapter 8 Cultural Heritage, and supported by Appendices 8.1 Cultural Heritage Gazetteer and 8.2 Level 1 Historic Building Record for Station House, 7 Station Road, Pill While there are many heritage assets within 500 m of the DCO Scheme, there are few within the railway corridor as those predating the railway were destroyed during railway construction in the 1860s. The remaining heritage assets are those associated with the original railway, such as structures (bridges, Pill Viaduct, retaining walls), which will be repaired as part of the DCO Scheme or features of low or negligible value which may be removed or left *in situ* (such as buffer stops, decaying signal boxes). The main impact of the DCO Scheme construction would be potential loss or damage to heritage features where earthworks are required on greenfield sites (construction compounds, floodplain compensation sites, two new ponds for Great crested newts). A watching brief will be undertaken during top soil stripping. The old station house in Pill will be demolished and replaced with a new station forecourt. The proposed mitigation is preservation by record. A Level 1 Historic Building Record is presented in Appendix 8.2 and no further mitigation is required for the Station house. A non-designated heritage feature in the proposed Lodway construction site will be fenced off during construction. The setting of heritage assets close to the disused line between Portishead and Pill will not be significantly affected by the DCO Scheme due to lack of inter-visibility. Many heritage assets along the operational railway have views towards the DCO Scheme. Views from the conservation areas, and Leigh Court and Ashton Court Registered Parks and Gardens, generally only occur on the edge of these designations (and no views from Leigh Woods CA) and the change in views along the railway would only represent a slight change in view primarily due to vegetation removal for new fencing and geotechnical stabilisation works on the cliffs of the Avon Gorge. There are also direct and oblique views from many listed buildings on the edge of Bristol and in the Bower Ashton towards the DCO Scheme and again the change in view is small in relation to the whole view and are not considered to be significant. The views from Clifton Suspension Bridge (see ES Appendix 8.1, Plate 2) north and south would be similar to present with some localised vegetation removal along the railway corridor. Overall, the change in setting of heritage assets is not considered to be significant.

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NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPSNN)	Compliance with the NPSNN
5.128	In determining applications, the Secretary of State should seek to identify and assess the particular significance of any heritage asset that may be affected by the proposed development (including by development affecting the setting of a heritage asset), taking account of the available evidence and any necessary expertise from: • relevant information provided with the application and, where applicable, relevant information submitted during examination of the application; • any designation records; • the relevant Historic Environment Record(s), and similar sources of information; • representations made by interested parties during the examination; and • expert advice, where appropriate, and when the need to understand the significance of the heritage asset demands it.	The value of heritage assets is provided in the ES Chapter 8 Cultural Heritage based on DfT guidance in the Design Manual for Roads and Bridges.
5.129	In considering the impact of a proposed development on any heritage assets, the Secretary of State should take into account the particular nature of the significance of the heritage asset and the value that they hold for this and future generations. This understanding should be used to avoid or minimise conflict between their conservation and any aspect of the proposal.	Noted.
5.130	The Secretary of State should take into account the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, the contribution of their settings and the positive contribution that their conservation can make to sustainable communities - including their economic vitality. The Secretary of State should also take into account the desirability of new development making a positive contribution to the character and local distinctiveness of the historic environment. The consideration of design should include scale, height, massing, alignment, materials, use and landscaping (for example, screen planting).	Noted.
5.131	When considering the impact of a proposed development on the significance of a designated heritage asset, the Secretary of State should give great weight to the asset's conservation. The more important the asset, the greater the weight should be. Once lost, heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Given that heritage assets are irreplaceable, harm or loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II Listed Building or a grade II Registered Park or Garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including World Heritage Sites, Scheduled Monuments, grade I and II* Listed Buildings, Registered Battlefields, and grade I and II* Registered Parks and Gardens should be wholly exceptional.	Noted.
5.132	Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset, the greater the justification that will be needed for any loss.	Noted.

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5.133	Where the proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, the Secretary of State should refuse consent unless it can be demonstrated that the substantial harm or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm, or alternatively that all of the following apply: • the nature of the heritage asset prevents all reasonable uses of the site; and • no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and • conservation by grant-funding or some form of charitable or public ownership is demonstrably not possible; and • the harm or loss is outweighed by the benefit of bringing the site back into use.	Noted.
5.134	Where the proposed development will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.	Noted.
5.135	Not all elements of a World Heritage Site or Conservation Area will necessarily contribute to its significance. The Secretary of State should treat the loss of a building (or other element) that makes a positive contribution to the site's significance either as substantial harm or less than substantial harm, as appropriate, taking into account the relative significance of the elements affected and their contribution to the significance of the Conservation Area or World Heritage Site as a whole.	Noted.
5.136	Where the loss of significance of any heritage asset has been justified by the applicant based on the merits of the new development and the significance of the asset in question, the Secretary of State should consider imposing a requirement that the applicant will prevent the loss occurring until the relevant development or part of development has commenced.	Noted.
5.137	Applicants should look for opportunities for new development within Conservation Areas and World Heritage Sites, and within the setting of heritage assets, to enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset should be treated favourably.	Noted.
5.138	Where there is evidence of deliberate neglect of or damage to a heritage asset the Secretary of State should not take its deteriorated state into account in any decision.	Noted.
Landscape and visual impacts		
5.144 - 5.146	Where the development is subject to EIA the applicant should undertake an assessment of any likely significant landscape and visual impacts in the EIA and describe these in the ES. A number of guides have been produced to assist in addressing landscape issues. The landscape and visual impacts assessment should include reference to any landscape character assessment and associated studies, as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take	The ES Chapter 11 Landscape and Visual Impacts Assessment (DCO Document Reference 6.14) sets out the baseline environment along with an assessment of the potential adverse effects of the DCO Scheme. The measures to be undertaken during construction to manage potential effects on landscape and views are set out in the Master CEMP (ES Appendix 4.2) and the mitigation measures are summarised in the Schedule of Mitigation (ES Appendix 4.3). The Railway Landscape Plans (Disused Line) (DCO Document Reference 2.10) illustrate the planting proposals of vegetation to be retained along the currently disused

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	account of any relevant policies based on these assessments in local development documents in England. The applicant's assessment should include any significant effects during construction of the project and/or the significant effects of the completed development and its operation on landscape components and landscape character (including historic landscape characterisation). The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include any noise and light pollution effects, including on local amenity, tranquillity and nature conservation.	section of the railway between Portishead and Pill, and planting proposals. Various plans also illustrate the proposed planting at Portishead Station (DCO Document Reference 2.8.1 and 2.8.2), Trinity Primary School Bridge (DCO Document Reference 2.8.3, 2.16), Sheepway compound (DCO Document Reference 2.49), Pill station and car park (DCO Document Reference 2.8.8) and Clanage Road compound (DCO Document Reference 2.55) The Landscape and Visual Impacts Assessment has broadly followed the procedures set out in Guidelines for Landscape and Visual Impact Assessment (GLVIA) 3rd Edition (2013). The GLVIA was produced under the joint auspices of the Landscape Institute and the Institute of Environmental Management and Assessment. The assessment includes landscape character at the regional and local scale. The Landscape and Visual Impacts Assessment covers both the construction and operation phases of the DCO Scheme.
5.147- 5.148	Any statutory undertaker commissioning or undertaking works in relation to, or so as to affect land in a National Park or Areas of Outstanding Natural Beauty, would need to comply with the respective duties in section 11A of the National Parks and Access to Countryside Act 1949 and section 85 of the Countryside and Rights of Way Act 2000.	There are no national or local landscape designations in the study area.
5.149	Landscape effects depend on the nature of the existing landscape likely to be affected and nature of the effect likely to occur. Both of these factors need to be considered in judging the impact of a project on landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints, the aim should be to avoid or minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.	The assessment took into account the nature of the existing landscape, assessing the impact of the construction and operation of the DCO Scheme at the national, local authority and site-specific scales. The assessment found no significant effects on the National Character Areas during the construction and operation phases. At the local authority level, significant effects were predicted for the Avon Gorge character area during construction, largely due to the potential removal of vegetation along the fence-lines and the geotechnical works on the cliff faces resulting in a less wooded appearance. There is no scope to mitigate the effects on landscape, due to the lack of land within the railway boundary for new planting. However, over time, vegetation will re-grow and soften the effect of the DCO Scheme on the landscape of the Avon Gorge. No significant effects were predicted on local authority areas for the operation phase. At the site-specific character areas, significant effects are predicted during construction in residential Portishead, Sheepway, Pill, and the Avon Gorge. The effects on landscape character in Portishead and Pill reflect the removal of vegetation and the extensive engineering works in relatively restricted urban areas. At Sheepway, the scale of engineering works is extensive, including the works along the railway corridor, the construction compounds at Sheepway and Portbury Hundred, and the haul roads. There is also the cumulative effect with the Hinkley C Connection DCO Scheme which crosses the Portishead Branch Line in the vicinity of Sheepway. The effect on the landscape of the Avon Gorge is as described above for the local authority scale. During operation, a significant effect on landscape character is predicted for the site-specific area in Pill, given the extent of new engineering works in a predominantly residential area.
5.150 - 5.151	Great weight should be given to conserving landscape and scenic beauty in nationally designated areas. National Parks, the Broads and Areas of Outstanding Natural Beauty have the highest status of protection in relation to landscape and scenic beauty. Each of	There are no national or local landscape designations in the study area.

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	these designated areas has specific statutory purposes which help ensure their continued protection and which the Secretary of State has a statutory duty to have regard to in decisions. The Secretary of State should refuse development consent in these areas except in exceptional circumstances and where it can be demonstrated that it is in the public interest. Consideration of such applications should include an assessment of: • the need for the development, including in terms of any national considerations, and the impact of consenting, or not consenting it, upon the local economy; • the cost of, and scope for, developing elsewhere, outside the designated area, or meeting the need for it in some other way; and • any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated. There is a strong presumption against any significant road widening or the building of new roads and strategic rail freight interchanges in a National Park, the Broads and Areas of Outstanding Natural Beauty, unless it can be shown there are compelling reasons for the new or enhanced capacity and with any benefits outweighing the costs very significantly. Planning of the Strategic Road Network should encourage routes that avoid National Parks, the Broads and Areas of Outstanding Natural Beauty.	
5.154 - 5.155	The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The aim should be to avoid compromising the purposes of designation and such projects should be designed sensitively given the various siting, operational, and other relevant constraints. This should include projects in England which may have impacts on designated areas in Wales or on National Scenic Areas in Scotland. The fact that a proposed project will be visible from within a designated area should not in itself be a reason for refusing consent.	Noted
5.156	Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England has policies based on landscape character assessment, these should be given particular consideration. However, local landscape designations should not be used in themselves as reasons to refuse consent, as this may unduly restrict acceptable development.	Noted. The assessment set out in the ES Chapter 11 Landscape and Visual Impacts Assessment (DCO Document Reference 6.14) describes the value of the local landscape and considers the potential adverse impacts on this. Measures embedded in the DCO Scheme comprise the development of the designs for Portishead and Pill stations and permanent maintenance compounds and the implementation of the Master CEMP (ES Appendix 4.2 and DCO Document Reference 6.25) to manage the effects of construction on landscape and views. Environmental mitigation measures comprise landscaping schemes for permanent features including Portishead station and surrounds (DCO Document Reference 2.38), Trinity Primary School Bridge (DCO Document Reference 2.16), the railway between Portishead and Pill (DCO Document Reference 2.10), Pill station and car park (DCO Document Reference 2.8.8 and 2.42), Pill Tunnel Eastern Portal maintenance compound (DCO Document Reference 2.46), and Clanage Road maintenance compound (DCO Document Reference 2.52). There is no land within the railway corridor along the operational railway between Pill and Ashton Junction for landscape planting.

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5.157	In taking decisions, the Secretary of State should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to avoid adverse effects on landscape or to minimise harm to the landscape, including by reasonable mitigation.	Noted
5.158	The Secretary of State will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the development. Coastal areas are particularly vulnerable to visual intrusion because of the potential high visibility of development on the foreshore, on the skyline and affecting views along stretches of undeveloped coast, especially those defined as Heritage Coast.	The ES Chapter 11 Landscape and Visual Impacts Assessment (DCO Document Reference 6.14) considers the DCO Scheme's impact on landscape character relating to changes to the elements, features and patterns that make up the landscape character. The visual assessment carried out identifies the impact on receptors from changes in the view from particular locations created by the DCO Scheme. Measures embedded in the DCO Scheme comprise the development of the designs for Portishead and Pill stations and permanent maintenance compounds and the implementation of the Master CEMP (ES Appendix 4.2 and DCO Document Reference 6.25) to manage the effects of construction on landscape and views. Environmental mitigation measures comprise landscaping schemes for permanent features including Portishead station and surrounds (DCO Document Reference 2.38), Trinity Primary School Bridge (DCO Document Reference 2.16), the railway between Portishead and Pill (DCO Document Reference 2.10), Pill station and car park (DCO Document Reference 2.8.8 and 2.42), Pill Tunnel Eastern Portal maintenance compound (DCO Document Reference 2.46), and Clanage Road maintenance compound (DCO Document Reference 2.52). There is no land within the railway corridor along the operational railway between Pill and Ashton Junction for landscape planting. Although located near the coast, the DCO Scheme does not result in visual intrusion near the foreshore or skyline. The DCO Scheme is not located near Heritage Coast.
5.159	Reducing the scale of a project or making changes to its operation can help to avoid or mitigate the visual and landscape effects of a proposed project. However, reducing the scale or otherwise amending the design or changing the operation of a proposed development may result in a significant operational constraint and reduction in function. There may, be exceptional circumstances, where mitigation could have a very significant benefit and warrant a small reduction in scale or function. In these circumstances, the Secretary of State may decide that the benefits of the mitigation to reduce the landscape effects outweigh the marginal loss of scale or function.	Noted
5.160	Adverse landscape and visual effects may be minimised through appropriate siting of infrastructure, design (including choice of materials), and landscaping schemes, depending on the size and type of proposed project. Materials and designs for infrastructure should always be given careful consideration.	Noted
5.161	Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off site, although if such landscaping was proposed to be consented by the development consent order, it would have to be included within the order limits for that application. For example, filling in gaps in existing tree and hedge lines would mitigate the impact when viewed from a more distant vista.	Noted. Subject to the constraints relating to the safe operation of the railway network, mitigation measures including planting are proposed. The landscape plans along the railway corridor between Portishead and Pill (DCO Document Reference 2.10) have been designed to meet ecological, rather than screening, objectives, given the relatively limited inter-visibility of the DCO Scheme with landscape / visual receptors due to the low lying terrain and widespread field hedgerows and trees. The

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		planting schedules follow Network Rail's guidance on species suitable for railway land, such as shrubs and small trees, that do not pose a hazard or undue maintenance liability. Planting in gaps along the A369 Portbury Hundred is proposed for ecological reasons to strengthen an alternative route to the railway corridor for bats (see ES Appendix 9.16). The Avon Gorge Vegetation Management Plan (ES Appendix 9.11) provides proposals for positive woodland management through the Avon Gorge Woodlands SAC to meet nature conservation objectives. The loss of trees on land within Bristol City Council's jurisdiction will be mitigated through tree planting around the Clanage Road maintenance compound.
Land use including open space, green infrastructure and Green Belt		
5.165 - 5.167	The applicant should identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan. The assessment should be proportionate. Existing open space, sports and recreational buildings and land should not be developed unless the land is surplus to requirements or the loss would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location. Applicants considering proposals which would involve developing such land should have regard to any local authority's assessment of need for such types of land and buildings. During any pre-application discussions with the applicant, the local planning authority should identify any concerns it has about the impacts of the application on land-use, having regard to the development plan and relevant applications, and including, where relevant, whether it agrees with any independent assessment that the land is surplus to requirements. These are also matters that local authorities may wish to include in their Local Impact Report which can be submitted after an application for development consent has been accepted.	It is acknowledged that some open space will be lost due to the construction of the proposed pedestrian / cycle paths in the vicinity of Trinity Primary School, Portishead. Replacement land will be provided to the owner and there will be no net loss of publicly accessible land.
5.168	Applicants should take into account the economic and other benefits of the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification). Where significant development of agricultural land is demonstrated to be necessary, applicants should seek to use areas of poorer quality land in preference to that of a higher quality. Applicants should also identify any effects, and seek to minimise impacts, on soil quality, taking into account any mitigation measures proposed. Where possible, developments should be on previously developed (brownfield) sites provided that it is not of high environmental value. For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination and how it is proposed to address this.	The DCO Scheme uses an existing railway link and there would not be any significant permanent impacts on grade 1, 2 or 3a agricultural land. The only soil map of the area is the 1:250,000 scale Soil Map of South West England published by the Soil Survey of England and Wales in 1983. Newchurch soils are assumed to be Grade 4 (poor quality land) and are found in the Sheepway / Portbury area. The proposed Sheepway construction compound and permanent maintenance compound, the Portbury Hundred construction compound, and associated haul roads lie in this area. The Whimple soils are Grade 3a (good quality land) and found in the around Pill / Ham Green / Chapel Pill area. The temporary construction compound at Lodway Farm and the temporary construction compound and permanent maintenance compound at Ham Green (Pill Tunnel Eastern Portal) lie in this area.

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5.169	Applicants should safeguard any mineral resources on the proposed site as far as possible.	The DCO Scheme does not affect areas identified for mineral resources.
5.170 - 5.171	The general policies controlling development in the countryside apply with equal force in Green Belts but there is, in addition, a general presumption against inappropriate development within them. Such development should not be approved except in very special circumstances. Applicants should therefore determine whether their proposal, or any part of it, is within an established Green Belt and, if so, whether their proposal may be considered inappropriate development within the meaning of Green Belt policy. Metropolitan Open Land, and land designated as Local Green Space in a local or neighbourhood plan, are subject to the same policies of protection as Green Belt, and inappropriate development should not be approved except in very special circumstances. Linear infrastructure linking an area near a Green Belt with other locations will often have to pass through Green Belt land. The identification of a policy need for linear infrastructure will take account of the fact that there will be an impact on the Green Belt and as far as possible, of the need to contribute to the achievement of the objectives for the use of land in Green Belts.	It is considered that a Green Belt location is unavoidable and necessary for the DCO Scheme. On the basis of the assessment carried out in the Planning Statement, it is considered that the DCO Scheme is not inappropriate development within the Green Belt. Notwithstanding this, the analysis demonstrates that 'very special circumstances' exist which justifies the need for the DCO Scheme, namely the economic, local transport, social and environmental benefits. It is considered that the potential harm to the Green Belt will be limited, and is clearly outweighed by the other important and relevant considerations in relation to the need for the DCO Scheme.
5.173	Where the project conflicts with a proposal in a development plan, the Secretary of State should take account of the stage which the development plan document has reached in deciding what weight to give to the plan for the purposes of determining the planning significance of what is replaced, prevented or precluded. The closer the development plan document is to being adopted by the local plan, the greater the weight which can be attached to the impact of the proposal on the plan.	Noted. No development proposal is detrimentally affected by the proposed scheme
5.174	The Secretary of State should not grant consent for development on existing open space, sports and recreational buildings and land, including playing fields, unless an assessment has been undertaken either by the local authority or independently, which has shown the open space or the buildings and land to be surplus to requirements, or the Secretary of State determines that the benefits of the project (including need) outweigh the potential loss of such facilities, taking into account any positive proposals made by the applicant to provide new, improved or compensatory land or facilities.	No areas of existing open space, sports or recreational buildings or land will be lost as a result of the DCO Scheme.
5.175	Where networks of green infrastructure have been identified in development plans, they should normally be protected from development, and, where possible, strengthened by or integrated within it. The value of linear infrastructure and its footprint in supporting biodiversity and ecosystems should also be taken into account when assessing the impact on green infrastructure.	Noted. The DCO Scheme makes use of an existing railway corridor.
5.176	The decision-maker should take into account the economic and other benefits of the best and most versatile agricultural land. The decision maker should give little weight to the loss of agricultural land in grades 3b, 4 and 5, except in areas (such as uplands) where particular agricultural practices may themselves contribute to the quality and character of the environment or the local economy.	Noted. The DCO Scheme makes use of an existing railway corridor.
5.178	When located in the Green Belt national networks infrastructure projects may comprise inappropriate development. Inappropriate development is by definition harmful to the	On the basis of the assessment carried out in the Planning Statement, it is considered that the DCO Scheme is not inappropriate development within the Green Belt. Notwithstanding

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	Green Belt and there is a presumption against it except in very special circumstances. The Secretary of State will need to assess whether there are very special circumstances to justify inappropriate development. Very special circumstances will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations. In view of the presumption against inappropriate development, the Secretary of State will attach substantial weight to the harm to the Green Belt, when considering any application for such development.	this, the analysis demonstrates that 'very special circumstances' exist which justifies the need for the DCO Scheme, namely the economic, local transport, social and environmental benefits. It is considered that the potential harm to the Green Belt will be limited, and is clearly outweighed by the other important and relevant considerations in relation to the need for the DCO Scheme.
5.180	Where green infrastructure is affected, applicants should aim to ensure the functionality and connectivity of the green infrastructure network is maintained and any necessary works are undertaken, where possible, to mitigate any adverse impact and, where appropriate, to improve that network and other areas of open space, including appropriate access to new coastal access routes, National Trails and other public rights of way.	Noted. The DCO Scheme makes use of an existing railway corridor.
5.181	The Secretary of State should also consider whether mitigation of any adverse effects on green infrastructure or open space is adequately provided for by means of any planning obligations, for example, to provide exchange land and provide for appropriate management and maintenance agreements. Any exchange land should be at least as good in terms of size, usefulness, attractiveness, quality and accessibility. Alternatively, where Sections 131 and 132 of the Planning Act 2008 apply, any replacement land provided under those sections will need to conform to the requirements of those sections.	Noted. The Applicant does not consider there to be a need for mitigation measures in respect of green infrastructure or open space.
5.182	Where a proposed development has an impact on a Mineral Safeguarding Area (MSA), the Secretary of State should ensure that the applicant has put forward appropriate mitigation measures to safeguard mineral resources.	Noted. The DCO Scheme does not lie within a Mineral Safeguarding Area.
5.184	Public rights of way, National Trails, and other rights of access to land (e.g. open access land) are important recreational facilities for walkers, cyclists and equestrians. Applicants are expected to take appropriate mitigation measures to address adverse effects on coastal access, National Trails, other public rights of way and open access land and, where appropriate, to consider what opportunities there may be to improve access. In considering revisions to an existing right of way consideration needs to be given to the use, character, attractiveness and convenience of the right of way. The Secretary of State should consider whether the mitigation measures put forward by an applicant are acceptable and whether requirements in respect of these measures might be attached to any grant of development consent.	Chapter 16 – Transport, Access and Non-Motorised Users of the ES sets out the assessment of impacts on public rights of way and access to open access land.
Noise and Vibration		
5.187	Noise resulting from a proposed development can also have adverse impacts on wildlife and biodiversity. Noise effects of the proposed development on ecological receptors should be assessed in accordance with the Biodiversity and Geological Conservation section of this NPS.	The ES Chapter 9 Ecology and Biodiversity and the HRA (ES Appendix 9.12) consider the potential effect of noise and vibration on ecological receptors, including the integrity of European sites. This assessment is informed by the assessment undertaken to inform ES Chapter 13 Noise and Vibration. The only potential likely significant effects of the DCO Scheme on wildlife and biodiversity due to noise are: the impact of construction noise on wildfowl and waders associated with the Severn Estuary SAC, SPA and Ramsar site and SSSI at Pill Marshes and the displacement

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		of qualifying species of birds from the Portbury Wharf Nature Reserve pools to the Severn Estuary SAC, SPA, Ramsar Site and SSSI further north. At Pill Marshes, construction noise could potentially disturb wildfowl and waders. However, wintering bird surveys (ES Appendix 9.3b) show very low numbers of qualifying species, probably due to existing levels of disturbance from freight trains, dog walkers along the sea front and traffic on the M5 Avonmouth Viaduct. No likely significant effects are predicted. At Portbury Nature Reserve pools, calculated construction noise (without mitigation) could raise ambient noise levels by about 5 dB(A) to c51 dB(A). Research suggests that noise levels below 55 dB(A) and construction activities more than 250 m distant are unlikely to have a significant effect. Furthermore, Best Practicable Means can reduce construction noise levels by 5-10 DB(A). Consequently, no significant effects are predicted.
5.189	Where a development is subject to EIA and significant noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment, which should form part of the environment statement: • a description of the noise sources including likely usage in terms of number of movements, fleet mix and diurnal pattern. For any associated fixed structures, such as ventilation fans for tunnels, information about the noise sources including the identification of any distinctive tonal, impulsive or low frequency characteristics of the noise. • identification of noise sensitive premises and noise sensitive areas that may be affected. • the characteristics of the existing noise environment. • a prediction on how the noise environment will change with the proposed development: - In the shorter term such as during the construction period; - in the longer term during the operating life of the infrastructure; - at particular times of the day, evening and night as appropriate. • an assessment of the effect of predicted changes in the noise environment on any noise sensitive premises and noise sensitive areas. • measures to be employed in mitigating the effects of noise. Applicants should consider using best available techniques to reduce noise impacts. The nature and extent of the noise assessment should be proportionate to the likely noise impact.	Chapter 13 – Noise and Vibration of the ES sets out details of the assessment that has been undertaken. It identifies any potential adverse impacts and describes the mitigation measures to be employed. Most construction works are not expected to result in significant noise impacts. Significant increases in noise levels may occur for specific activities and for construction works undertaken at night where these take place near sensitive receptors. The appointed contractor would seek to obtain prior consent from the relevant Local Authority under Section 61 of the Control of Pollution Act 1974 for the proposed construction works. The consent application would set out the final Best Practicable Means measures to minimise construction noise and vibration, including control of working hours, and also provide a further assessment of construction noise. The Section 61 application will also describe the procedures for the monitoring of noise and vibration during construction. Significant increases in operational noise levels were identified at two locations, property on the south side of the railway in Portishead between the station and Trinity Primary School Bridge and old Portbury Station House which is now a residential dwelling. Noise barriers 2 m high are proposed at both locations. With mitigation, there are no likely significant adverse effects due to noise.
5.190	The potential noise impact elsewhere that is directly associated with the development, such as changes in road and rail traffic movements elsewhere on the national networks, should be considered as appropriate.	Noted. The scope of the assessment undertaken for noise and vibration has had due regard to all potential adverse effects arising from the DCO Scheme. Significant increases in operational noise levels were identified at two locations, property on the south side of the railway in Portishead between the station and Trinity Primary School Bridge and old Portbury Station House which is now a residential dwelling. Noise barriers 2 m high are proposed at both locations. With mitigation, there are no likely significant adverse effects due to noise.
5.192	The applicant should consult Natural England with regard to assessment of noise on designated nature conservation sites, protected landscapes, protected species or other	Noted. Consultation with Natural England has been undertaken in respect of the assessment of effects on designated nature conservation sites, in particular on the scope of the winter

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	wildlife. The results of any noise surveys and predictions may inform the ecological assessment. The seasonality of potentially affected species in nearby sites may also need to be taken into account.	bird survey on the qualifying interests of the Severn Estuary SAC/SPA/Ramsar/SSSI at Pill (ES Appendix 9.3b), the need to consider the effect of the DCO Scheme on the potential displacement of qualifying interests in the Portbury What Nature Reserve pools to the Severn Estuary SAC/SPA./Ramsar/SSSI, and the scope of the HRA (ES Appendix 9.12) in relation to effects on the Severn Estuary SAC/SPA/Ramsar site.
5.194	The project should demonstrate good design through optimisation of scheme layout to minimise noise emissions and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission. The project should also consider the need for the mitigation of impacts elsewhere on the road and rail networks that have been identified as arising from the development, according to Government policy.	Noted. As described above, the DCO Scheme is routed along an existing railway corridor which constraints opportunities for the location of permanent features to limit noise. The ES sets out the potential adverse impacts and benefits of the DCO Scheme and describes the mitigation measures that will be employed. A noise barrier is proposed along the southern boundary of the railway between Portishead Station and Trinity Primary School Bridge. A second noise barrier is proposed along old Portbury Station House.
5.195	The Secretary of State should not grant development consent unless satisfied that the proposals will meet, the following aims, within the context of Government policy on sustainable development: • avoid significant adverse impacts on health and quality of life from noise as a result of the new development; • mitigate and minimise other adverse impacts on health and quality of life from noise from the new development; and • contribute to improvements to health and quality of life through the effective management and control of noise, where possible.	Noted
5.196	In determining an application, the Secretary of State should consider whether requirements are needed which specify that the mitigation measures put forward by the applicant are put in place to ensure that the noise levels from the project do not exceed those described in the assessment or any other estimates on which the decision was based.	Noted
5.197	The Examining Authority and the Secretary of State should consider whether mitigation measures are needed both for operational and construction noise over and above any which may form part of the project application. The Secretary of State may wish to impose requirements to ensure delivery of all mitigation measures.	Noted
5.198	Mitigation measures for the project should be proportionate and reasonable and may include one or more of the following: • engineering: containment of noise generated; • materials: use of materials that reduce noise, (for example low noise road surfacing); • lay-out: adequate distance between source and noise-sensitive receptors; incorporating good design to minimise noise transmission through screening by natural or purpose built barriers; • administration: specifying acceptable noise limits or times of use (e.g., in the case of railway station PA systems).	Noted
5.199	For most national network projects, the relevant Noise Insulation Regulations will apply. These place a duty on and provide powers to the relevant authority to offer noise mitigation through improved sound insulation to dwellings, with associated ventilation to deal with	Noted

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	both construction and operational noise. An indication of the likely eligibility for such compensation should be included in the assessment. In extreme cases, the applicant may consider it appropriate to provide noise mitigation through the compulsory acquisition of affected properties in order to gain consent for what might otherwise be unacceptable development. Where mitigation is proposed to be dealt with through compulsory acquisition, such properties would have to be included within the development consent order land in relation to which compulsory acquisition powers are being sought.	
5.200	Applicants should consider opportunities to address the noise issues associated with the Important Areas as identified through the noise action planning process.	Noted
Impacts on transport networks		
5.202	Development of national networks can have a variety of impacts on the surrounding transport infrastructure including connecting transport networks. Impacts may include economic, social and environmental effects. The consideration and mitigation of transport impacts is an essential part of Government's wider policy objectives for sustainable development.	The DCO Scheme will provide reliable journey times for commuters, businesses and residents into and across Bristol through better utilisation of strategic heavy rail corridors from Portishead, Bath and Avonmouth / Severn Beach. The DCO Scheme will contribute to enhancing the capacity of the local rail network, resulting in additional seats per hour in the morning and afternoon peaks. Chapter 14 – Socio-economics and Economic Regeneration of the ES sets this out in more detail. The main socio-economic effects are: • Moderate beneficial effect of direct job creation and direct GVA uplift in the construction stage, • Moderate beneficial effect of indirect job creation and indirect GVA uplift for local businesses in the construction stage, • Minor beneficial effect of direct job creation in the operational stage, • Major beneficial effect of improved journey time savings in the operational stage, • Major beneficial effect of wider regeneration during the operational stage, specifically relating to contributions to planning policy, enabling and unlocking of development land, increasing accessibility and connectivity and potential transformation of the study area's socioeconomic profile.
5.203 - 5.205	Applicants should have regard to the policies set out in local plans, for example, policies on demand management being undertaken at the local level. Applicants should consult the relevant highway authority, and local planning authority, as appropriate, on the assessment of transport impacts. Applicants should consider reasonable opportunities to support other transport modes in developing infrastructure. As part of this, consistent with paragraph 3.19-3.22 above, the applicant should provide evidence that as part of the project they have used reasonable endeavours to address any existing severance issues that act as a barrier to non-motorised users.	Noted.
5.206	For road and rail developments, if a development is subject to EIA and is likely to have significant environmental impacts arising from impacts on transport networks, the applicant's environmental statement should describe those impacts and mitigating	Noted.

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	commitments. In all other cases the applicant's assessment should include a proportionate assessment of the transport impacts on other networks as part of the application.	
5.211	The Examining Authority and the Secretary of State should give due consideration to impacts on local transport networks and policies set out in local plans, for example, policies on demand management being undertaken at the local level.	Noted.
5.212	Schemes should be developed and options considered in the light of relevant local policies and local plans, taking into account local models where appropriate, however the scheme must be decided in accordance with the NPS except to the extent that one or more of sub-sections 104(4) to 104(8) of the Planning Act 2008 applies.	Noted. Detailed assessment of the local development plan has informed the selection for the preferred option and will form the policy context for the EIA.
5.215	Mitigation measures for schemes should be proportionate and reasonable, focused on promoting sustainable development.	The EIA has been reported through an ES which contains mitigation measures where appropriate and in proportion to the impacts assessed.
5.216	Where development would worsen accessibility, such impacts should be mitigated so far as reasonably possible. There is a very strong expectation that impacts on accessibility for non-motorised users should be mitigated.	Noted. Accessibility would be improved as a result of the DCO Scheme.
5.217	Mitigation measures may relate to the design, lay-out or operation of the scheme	Noted.
Water quality and resources		
5.220	Where applicable, an application for a development consent order has to contain a plan with accompanying information identifying water bodies in a River Basin Management Plan.	Noted. A plan has been provided in the DCO Application ES Appendix 17.2 Water Framework Directive Assessment.
5.221	Applicants should make early contact with the relevant regulators, including the Environment Agency, for abstraction licensing and with water supply companies likely to supply the water. Where a development is subject to EIA and the development is likely to have significant adverse effects on the water environment, the applicant should ascertain the existing status of, and carry out an assessment of the impacts of the proposed project on water quality, water resources and physical characteristics as part of the environmental statement.	The applicant has consulted with the relevant environmental regulators (Environment Agency, Natural England) and water companies about the DCO Scheme. An assessment of the DCO Scheme on the water environment is presented in the ES Chapter 17 Water Resources, Drainage and Flood Risk. The permanent water supply and sewerage connections for Portishead Station will be agreed with Bristol Water and Wessex Water plc. The construction of the DCO Scheme is not predicted to require surface or groundwater abstraction for construction purposes. No likely significant effects on the water environmental are predicted.
5.223	Any environmental statement should describe: • the existing quality of waters affected by the proposed project; • existing water resources affected by the proposed project and the impacts of the proposed project on water resources; • existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project, and any impact of physical modifications to these characteristics; • any impacts of the proposed project on water bodies or protected areas under the Water Framework Directive and source protection zones (SPZs) around potable groundwater abstractions; and	Noted. Chapter 17 – Water Resources, Drainage and Flood Risk sets out the effect on these features.

Table 4: National Networks Policy Statement Chapter 5

NPSNN Paragraph Number	Requirement of the National Policy Statement for National Networks (NPSNN)	Compliance with the NPSNN
	• any cumulative effects.	
5.224	Activities that discharge to the water environment are subject to pollution control. The considerations set out in paragraphs 4.48-4.56 on the interface between planning and pollution control therefore apply. These considerations will also apply in an analogous way to the abstraction licensing regime regulating activities that take water from the water environment, and to the control regimes relating to works to, and structures in, on, or under a controlled water.	Noted.
5.225	The Secretary of State will generally need to give impacts on the water environment more weight where a project would have adverse effects on the achievement of the environmental objectives established under the Water Framework Directive.	Noted.
5.226	The Secretary of State should be satisfied that a proposal has had regard to the River Basin Management Plans and the requirements of the Water Framework Directive (including Article 4.7) and its daughter directives, including those on priority substances and groundwater. The specific objectives for particular river basins are set out in River Basin Management Plans. In terms of Water Framework Directive compliance, the overall aim of projects should be no deterioration of ecological status in watercourses, ensuring that Article 4.7 of the Water Framework Directive Regulations does not need to be applied.	Noted.
5.227	The Examining Authority and the Secretary of State should consider proposals put forward by the applicant to mitigate adverse effects on the water environment and whether appropriate requirements should be attached to any development consent and/or planning obligations. If the Environment Agency continues to have concerns and objects to the grant of development consent on the grounds of impacts on water quality/resources, the Secretary of State can grant consent, but will need to be satisfied before deciding whether or not to do so that all reasonable steps have been taken by the applicant and the Environment Agency to try to resolve the concerns, and that the Environment Agency is satisfied with the outcome.	Noted.
5.229	The Secretary of State should consider whether the mitigation measures put forward by the applicant which are needed for operation and construction (and which are over and above any which may form part of the project application) are acceptable. A construction management plan may help codify mitigation.	Noted
5.230	The project should adhere to any National Standards for sustainable drainage systems (SuDs). The National SuDs Standards will introduce a hierarchical approach to drainage design that promotes the most sustainable approach but recognises feasibility, and use of conventional drainage systems as part of a sustainable solution for any given site given its constraints.	Noted.