



MetroWest+

Portishead Branch Line (MetroWest Phase 1)

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Applicant: North Somerset District Council

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1. INTRODUCTION

1.1 Purpose of this document

- 1.1.1 This document has been prepared by North Somerset District Council (the Applicant) for submission to the Examining Authority (ExA) under Deadline 1 of the Examination of the Portishead Branch Line (MetroWest Phase 1) Development Consent Order (DCO) application. The document provides the Applicant's response to Relevant Representations submitted to the ExA by Interested Parties.

1.2 Structure of the document

- 1.2.1 In total, 129 Relevant Representations were submitted to the ExA by the stated deadline for responses. An additional 6 Relevant Representations were accepted at the discretion of the ExA after this deadline had passed. In total, therefore, 135 Relevant Representations have been received and considered by the Applicant.
- 1.2.2 The applicant has reviewed all of the relevant representation received and considered their content.
- 1.2.3 Tables 1 and 2 provide:
- (a) the Planning Inspectorate reference number for each Relevant Representation received;
 - (b) the name of the individual, party or organisation which made the representation (the Interested Party);
 - (c) the representation itself; and
 - (d) the Applicant's response or comment on the content of the Relevant Representation.
- 1.2.4 In some instances, the Applicant has provided a response to a Relevant Representation directly to the Interested Party prior to submission of this document. This has occurred through ongoing engagement and correspondence with such parties. In such cases, a copy of this correspondence is provided in an Appendix to this document.
- 1.2.5 Similarly, the Applicant's continued discussion and engagement with parties has in some cases resulted in a substantial change in the position between the Interested Party and the Applicant since the submission of the Relevant Representation. This has been captured in a 'Statement of Common Ground' (SoCG). A progress update on SoCGs is to be submitted to the ExA on or before 2 October 2020 and copies of the latest drafts will be submitted directly to the ExA prior to Deadline 1. Where this has occurred, reference is made to the relevant submission and document reference number on the Planning Inspectorate website.

2. THE APPLICANT'S RESPONSE TO RELEVANT REPRESENTATIONS

Table 1 - The Applicant's response to Relevant Representations

PINS Ref No. with issue ref	Organisation /Person	Relevant Representation	Key Issues	Applicant's Response to Relevant Representation
1-1	North Somerset Council	The Council fully supports the proposal to re-open the rail line between Portishead and Bristol and believes it will reduce traffic movements with attendant carbon reduction and air quality benefits and reduction of congestion on the network including the M5 and A369 and increase the resilience of the sub-regional transport network. It considers there are potentially significant economic benefits to the region, improving accessibility to the Temple Quarter growth hub in Bristol and providing access to job opportunities in this location. The Council, which has declared a Climate Emergency, will also wish to make representations concerning matters including: The Planning statement gives a thorough overview of the issues that arise from the proposal. We are the Unitary authority for the area through which most of the line passes through. North Somerset Council has responsibility for Local Planning policies and making decisions on planning applications. We are currently preparing a new Local Plan for the period up to 2036. We therefore have considerable knowledge of committed development within the locality and its relationship with the proposed rail line. We also have a responsibility for Highways and Transport including roads, travel and parking. Our role extends to being Lead Flood and Public Health Authority, provider of social care, children, young people and families' services and education	Various	All matters raised in this Relevant Representation are dealt with in a Statement of Common Ground with North Somerset Council (Document Reference 9.3.1 ExA.SoCG-NSC.D1.V1) that is envisaged will be submitted to the ExA prior to Deadline 1.

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		authority. We also have an important role in community safety, crime prevention and emergency management. The Council is a Waste Management Authority. We have partnerships with other bodies in the area including the Avon Fire and Rescue Service, the NHS and Ambulance service, the Police, WECA and work closely with neighbouring authorities, Town and Parish Councils and other organisations such as the Environment Agency, and North Somerset Levels Internal Drainage Board to deliver services to our communities. Consequently, we will have interests in matters including traffic generation, highways, parking, accessibility for all groups, equal opportunities, living conditions of our residents, quality of design and landscape, the historic environment, air quality, biodiversity and ecology(there are several national and international designations), flood risk and drainage, contamination, materials and waste, noise and vibration. These include construction and operational phases. Importantly much of the area through which the line passes is Green Belt. Key locations include proposed stations, road re-alignment, and the Avon Gorge. Our Local Impact Report will detail these matters. We will continue to work with the applicant over these matters and a Statement of Common Ground. In addition, we have a vision for our four main towns and are committed to delivering economic regeneration in Portishead. Together with our close neighbour Bristol City Council we are aware of interests immediately outside our administrative boundaries such as the		

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		Conservation Areas and designations of national significance such as the Avon Gorge that straddle the boundary. As a Local Authority we have a responsibility to use our resources wisely and in a financially prudent way and the arrangements for discharge of Requirements and other procedural matters that form part of the Development Consent Order will be of significance to the Council.		
2-1	Portishead Town Council	1. Areas of agreement 1.1. We support the plan to re-open the railway to improve the connectivity of Portishead and the associated economic, environmental and accessibility benefits that it will provide. 1.2. We agree with the diversion and widening of Quays Avenue to link with Harbour Road to the West of the existing roundabout intersection with Harbour Road and Phoenix Way. 1.3. Portishead has gone through massive change in the past ten years, it is one of the fastest growing towns in the UK and is lacking the infrastructure to support its population increase. Space for infrastructure and commercial development to support the population is now constrained and so it is important that the potential amenity land around the station is used efficiently and supports wider regeneration.	Support for the scheme	The Applicant's response to all matters raised in this Relevant Representation is detailed in correspondence with Portishead Town Council, which is provided at Appendix A of this document. The detailed response from the Applicant has been discussed with Portishead Town Council and the parties will continue to work together.
2-2		1.4. Against this background we agree with the location of the railway station (Work No.5) as this will foster economic development of the area to the East of Quays Avenue and South of Harbour Road, including the existing Portishead and Gordano Gate Business parks. It may be envisaged that the station will encourage further business, retail and residential regeneration of this strategically important area of	Portishead rail station design & facilities	

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		Portishead with higher density mixed use development. 1.5. However, it is important that public access and transport links are comprehensive and integrated with the station to assist and align with the future development of this strategically important area. The station should also be linked with the largely residential areas to its North, East and South.		
2-3		2. Areas of comment for further consideration Portishead has a vision to be a sustainable town for the future and we believe that amendments are needed to the plans to help meet that vision: 2.1. Portishead does not currently have a bus terminus and travel to the station by public transport must be part of an integrated transport solution. If car parking density can be increased it is suggested that consideration is given to a bus terminus in the area of the proposed Car Park to the North of the station (Work No.6) that would serve the residential area around the station and act as an interchange for feeder services from around the town.	Portishead rail station - bus terminus	
2-4		2.2. Space in that area should also be made available for adequate taxi and passenger pick up and drop off.	Portishead rail station – access by taxis	
2-5		2.3. Adequate car parking is also vitally important, but it is arguably an inefficient use of prime land in this strategically important area. To increase parking density, it is suggested that thought be given to the use of a multi-story car park to improve land utilisation.	Portishead rail station – car parking provision	
2-6		2.4. Traffic to the station is likely to increase particularly along Harbour Road and Phoenix Way	Portishead rail station –	

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		which already have congestion problems. Accordingly, access to car parking from both Harbour Road and Quays Avenue is recommended, with perhaps the consideration of a multi-storey car park on land to the West of the diverted Quays Avenue (Work No.2) and Harbour Crescent.	highway access	
2-7		2.5. With better utilisation of the areas around Work No.6 and Work No.2 it may be possible for land to the South of Harbour Road (Work No.4) particularly at the West end of that strip abutting the Portbury Ditch to be retained for mixed-use.	Portishead rail station – medium to long term land uses	
2-8		2.6. Phoenix Way to the East of the station suffers from congestion and parking problems, it is suggested that consideration is given to providing more off-street parking and/or introducing parking restrictions along the length of Phoenix Way to Fennel Road.	Portishead rail station – parking restrictions	
2-9		2.7. We support the provision for cycle access, but the following suggestions are made: • To better utilise land a shared pedestrian and cycle path to the South side of Harbour Road may offer a better solution to that proposed on the Southern side of area Work No.4. This would better connect to the Marina area and provide more space in the Work No.4 area for mixed-use development. • Consideration should be given to extending the cycle path to the West of Portbury Ditch to provide an off-road connection with the Portishead Library and High Street area. A path that utilises the route of the old railway line and connects to Harbour Road at the intersection with Portbury Ditch is suggested. • Dedicated off-road cycle or mixed-use pavement provision is required along the whole of Quays	Portishead rail station – cycle & pedestrian access	

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		Avenue to the interchange with Wyndham Way, given increases in traffic volumes along Quays Avenue. • An off road/shared space cycle path should be provided along the whole of the length of Phoenix way to the station. • To facilitate cycle and pedestrian access from the Portbury Common and Sheepway areas it is suggested the cycle way provision to the South of the railway line (Work 7 and 7B) is extended to run Eastwards (to the South of the railway line) to better connect with the housing area to the South East of the station. A cycle pathway running East and then South around the perimeter of that area of housing to connect with Moor Gate would improve off-road access from the Sheepway and Portbury Common area. • Provision should be made for electric bicycles (and cars) with secure charging points provided.		
3-1	South Gloucestershire Council	These representations are made by South Gloucestershire Council as an 'adjacent' planning authority, and are entirely separate to this Council's West of England role as project promoter. This is a delegated officer response following consultation with the Cabinet Member for Planning, Transportation and the Strategic Environment. Planning and Transport Policy Context The MetroWest Phase 1 project can be expected to contribute to delivery on the following adopted transport policy and spatial plans for both the West of England and South Gloucestershire: The West of England Joint Local Transport Plan 3: including for example the following goals: Goals Sub-goals Reduce carbon emissions Reduce greenhouse gas emissions Provide a resilient and adaptable	Support	Support noted.

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		transport network Promote walking, cycling, and public transport Support economic growth Implement the programme of major transport schemes Tackle congestion Promote use of alternatives to the car – walking, cycling, public transport and smarter choices Support delivery of and access to houses and jobs Increase capacity and reliability of transport networks Contribute to better safety, security and health Encourage more physically active travel – walking, cycling and public transport Promote accessibility Improve access to ... employment Figure 6.2: the Vision for the West of England Rail Network. This illustrates how the Portishead Phase 1 scheme fits with the wider vision for the West of England including South Gloucestershire, as does paragraph 9.5.2 relating to rail passenger Journey Experience. South Gloucestershire Adopted Core Strategy 2013: Chapter 7: Tackling Congestion and Improving Accessibility: • Objective: Completing delivery of the Greater Bristol Metro Project (the previous name for the MetroWest Project) • Policy CS7: Strategic Transport Infrastructure: includes point 3. 'Improvements to rail services, including.... the Greater Bristol Metro Project', and • Policy CS8 Improving Accessibility: provision of non-car sustainable travel options South Gloucestershire Adopted Policies Sites and Places Plan 2017: Chapter 5 Tackling Congestion and Improving Accessibility: • PSP11 Transport Impact Management: supporting para. 5.18 regarding the promotion of sustainable transport access. Also of relevance is the Council's climate change agenda, including the: • South Gloucestershire Council		

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		Climate Change Strategy 2018 – 2023 (updated 2019) This confirms that transport represents 33% of South Gloucestershire's CO2 emissions, and highlights the need to address this. • South Gloucestershire Climate Change Emergency Declaration (17 July 2019), resolves to enable carbon neutrality for South Gloucestershire by 2030, and to work with the West of England Combined Authority and West of England partners to help deliver this. Effects of the MetroWest Phase 1 project As an 'adjacent' authority for the MetroWest project, South Gloucestershire (SG) is not directly affected by the proposed construction of the MetroWest DCO works associated with the Portishead line. However, as an integral part of the MetroWest Phase 1 project, it is agreed that SGC and its communities will benefit from improvement to 30 minute services on the Severn Beach line as well as indirect in combination and cumulative beneficial impacts resulting from enhancement of transport infrastructure in the wider West of England area. The MetroWest Phase 1 project forms part of a package of wider improvements across the WoE transport network can be expected to support: • economic growth and regeneration across the WoE, including at the Enterprise Areas (including Avonmouth Severnside that straddles the Bristol / South Gloucestershire boundary), and • reduced journey times and modal shift to sustainable commuting and travel - diverting journeys from road to rail, contributing to combatting: o climate change and o congestion – a very significant challenge for the West of England area. Conclusions: 1. No negative		

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		impacts have been identified to arise in South Gloucestershire from the MetroWest Phase 1 project. a. The MetroWest Phase 1 proposals should make a positive contribution to the delivery of a range of transport, planning and climate change policies in the wider WoE area (of which SGC is part), and 2. It is agreed that positive socio-economic and environmental effects are expected to arise from the delivery of this first phase of the wider MetroWest project, for the wider West of England area including South Gloucestershire. We also consider that it will be beneficial for South Gloucestershire Council to be registered as an 'Interested Party' for the MetroWest Phase 1 Examination to enable this Council to respond to any issues arising during proceedings that are relevant to this Council as planning authority. If you have any questions, please do not hesitate to contact the officer named above		
4-1	Avon and Somerset Constabulary	Thank you for the details for the propose Portishead Branch Line (MetroWest Phase 1) Order. Below is the response from the Traffic Management Unit of the Avon & Somerset Constabulary. Unfortunately, having been out of the office for a number of months, I only received the documents at the tail end of last week, so my response is slightly 'off the top of my head' in order to meet tonight's deadline for responding. Reference is made in 6.19ES Chapter 16 Transport, Access and non-Motorised Users (Issues, p19) of earlier consultation with the emergency services about access to emergency vehicles during the development and that 'they had not raised any	Various	All matters raised in this Relevant Representation are dealt with in the updated Statement of Common Ground with Avon and Somerset Constabulary (Document Reference 9.3.11 ExA.SoCG-ASP.D1.V1) that is envisaged will be submitted to the ExA prior to Deadline 1.

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		concerns'. I am not able to recall any previous consultation and was wondering whether you could advise when this was made and, if possible, with whom? In all developments/TROs (whether temporary or permanent), we would always look for access for emergency vehicles where possible or, at a minimum, a suitable diversion with the ability to reach all areas. I note that an area adjacent to Clanage Rd is to be used as one of the storage compounds for equipment, vehicles etc. Although it is unclear exactly size/weight this will entail, I just wanted to confirm your awareness of a 4 tonne weight restriction on Clanage Rd/Rownham Hill? This is for both structural and environmental reasons. Should you require a copy of the TRO, I have one available. Throughout many of the documents, the issue over parking runs as a common thread. I raise the following observations, based on this topic: • I note that there are 2 proposed car park; one of 67 spaces and one of 209 spaces. As a number are being restricted to parking for the disabled, employees of the railway, staff at the Health Centre (potentially) and an undisclosed number for car share users, this effectively brings down the numbers of spaces for general use. Although there may be enough for the 171 projected users in 2021, it will not meet the projected requirement of 235 by 2031 (6.19 ES Chapter 16 Transport, Access and		

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		non- Motorised Users pt 16.6.5). This will result is an increase in parking on the carriageways around the station, so is not 'futureproof'. I acknowledge the local resident consultation which has taken place in relation to the possibility of parking restrictions to tackle to predicted use of the free carriageway parking as opposed to the cost of parking in the designated car parks. I would suggest that this number could be significant but, as highlighted by a number of the residents themselves, the introduction of Double Yellow Lines or similar restricted parking would impact on the spaces available for them too. In practice, our preference would be for a Residents Parking Zone scheme, which would minimise the impact on the local residents. I accept that there is a potential cost to the residents, but is there any possibility of this being subsidised – at least in the earlier stages, to ease the process in? I have grave concerns about the over spill/avoidance of the car parks and the impact on the already restricted roads around the Portishead station area. Any further vehicles would simply displace local residents – or lead to parking in inappropriate locations. With enforcement of parking infringements now decriminalised, the Police are no longer able to deal with such offences, which now fall to the Local Authority. As with any offence, if it is not enforced, it becomes the norm and is routinely ignored, so it may be the Council will need to dedicate resources to this area. • Many of the documents mention the off street parking available to the residents but, for the vast		

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		majority of houses in the Portishead area, this is restricted to one space; the fact that all available on road space is taken indicates that the majority of premises have more than one vehicle associated with them. While the vehicles parked on the road do, indeed, act as a traffic calming measure, the congestion has an impact on larger vehicles accessing the area. I am aware that the Recycling vans and Refuse lorries are occasionally unable to complete their rounds, as they are unable to navigate around some of the corners. The holds true for the local busses too, with the bus operator First West of England recently announcing the reduction in service to Portishead Marina because of the ongoing issues with routes being blocked by parked cars (Bristol Live 24th February 2020). The potential for an increase in parked vehicles in the surrounding area could also have an impact on abnormal loads. This is identified in point 6.25 of 6.19ES Chapter 16 Transport, Access and non-Motorised users, which mentions the increased problem of HGV manoeuvrability. However, this seems to relate to construction traffic involved in the project. However, increased congestion could have an impact on the regular Abloads attending the area, notably those requiring access to the Marina along Newfoundland Way when moving larger boats, and Harbour Rd, giving access to the Blue Fuchs yard. I note that, despite some potential short term closures, there will be little/no impact of the cycle		

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		and pedestrian routes in the construction areas, and that the proposed footbridge in Portishead linking to Trinity School will be suitable for disabled access. I may have missed it amongst the documentation (my apologies) but is there a proposed diversion during the construction of the new roundabout at Phoenix Way/Quays Ave/Harbour Rd? I suppose the 'obvious' way is into the Town Centre along Wyndham Way, then Harbour Rd and Newfoundland Way? Could I please have a copy of the Construction Traffic Management Plan, once prepared? And I assume that all Traffic Regulation Orders relevant to the project will be forwarded from the Council to the Police for consultation in the usual manner?		
5-1	Colin Crossman	Our representation will consist of the following points: Severance of access rights over 2 level crossings that we have historical rights over	Individual - Land, access, property	The DCO scheme proposal to re-open the railway line between Portishead and Pill will result in the closure of the crossing used to access approximately 97.6 acres of agricultural land to the south of Shipway Gate Farm, Sheepway, Portbury, Bristol, BS20 7TB. The Compensation Code provides the mechanism for assessing and claiming compensation for losses of property value resulting from the construction and operation of works authorised by a DCO. The Applicant offered heads of terms for an option agreement including compensation.

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				The offer reserved out for later determination some heads of claim when the DCO scheme is implemented, by reference to the Upper Tribunal if not agreed. The Applicant remains willing to consider terms for the permanent acquisition of land as well as a lease in respect of temporary possession of land during construction. The Applicant continues to engage in discussions and it is hoped that positive discussions will enable agreement to be reached.
5-2		Improper use of the dco to provide a third party with an easement over our land to provide access rights.		Alternative access is required to be provided to National Grid Electricity Transmission PLC to provide access for NGET maintain its proposed transmission overhead lines. NGET's Order contains powers for NGET to use the accommodation crossing at Shipway Gate Farm but this will be closed by the Applicant, if the Order is made as proposed. NGET can use the nearby Sheepway overbridge to cross the railway but requires access to be provided from Sheepway to its transmission cables, to the north and the south of the Portishead Branch Line. The proposed access routes are a direct consequence of the closure of the accommodation crossing and therefore there is both justification and a compelling case for the proposed new rights sought.
6-1	Gareth Jones	As a resident of Portishead I am generally very supportive of the plans. I have no issues as presented	Support	Support noted.

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7-1	Osborne Clarke LLP on behalf of Western Power Distribution (South West) plc (Western Power Distribution (South West) plc)	We act for Western Power Distribution (South West) plc ('WPD') whose registered office is at Avonbank, Feeder road, Bristol, BS2 0TB. Please accept this as WPD's representation consisting of a holding objection to the application by North Somerset Council for an order granting development consent for the Portishead Branch Line – MetroWest Phase 1 (the 'Scheme'). Assets and interests in land are comprised in the proposed Scheme which are held by WPD for the purposes of its undertaking. The objection is made on the grounds that discussions with North Somerset Council as to the protection of WPD assets affected by the proposed Scheme are ongoing. No formal agreement has yet been concluded and accordingly we are lodging this objection to protect our position pending conclusion of an appropriate agreement. When an agreement is signed and completed, we will notify the Planning Inspectorate promptly and withdraw the objection.	Objection – formal agreement required	The Applicant has been engaging with Western Power Distribution (WPD) since 2016 and has submitted C3 utility enquiries for all interactions with WPD's apparatus. WPD has responded to the C3 enquiries and indicated the works required to either protect and leave the apparatus in situ or if the apparatus is required to be moved / diverted. Where the apparatus is required to be moved, the Applicant has included the land and rights within the Order to facilitate these works. Draft Protective Provisions for WPD have been included in the Order and a draft agreement relating to the apparatus affected by the proposed Order is in the process of negotiation with the Applicant. The Applicant is working with WPD's legal representatives to understand if any amendments are required to the Protective Provisions and draft agreement. It is the intention to reach agreement on the form of the Protective Provisions and agreement with WPD as soon as possible.
8-1	Aston and Co. Ltd.	Support for the project on the following grounds by relieving the traffic at peak flows from Portishead to the local employment centre of Bristol; Providing the real opportunity for more sustainable mode of commuting; The timing of delivery of this aligns with the proposed completion of the Weston-Clevedon-Portishead Greenway enabling cycle access and a realistic sustainable access point to the railway and	Support	Support noted.

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		Bristol employment market by cyclist and pedestrians.		
9-1	John Burke	I want to be able to illustrate all the positive benefits that this will bring to the wider Bristol community. In particular how it will reduce commuting time and reduce the amount of traffic coming in and out of Bristol. Thanks You	Support	Support noted.
10-1	Luke Bonham	The introduction of old diesel trains is now at odds with NSC declaration of a climate emergency and could be open to a legal challenge. Plans are being put in place to migrate away from fossil fuels to achieve net carbon and therefore all new projects must now take this into account. The only course of action would be for the new line to be electrified.	Operational – electrification Operational - climate change impacts	The DCO Scheme is not proposing electrification of the rail line because a viable business case could not be achieved. The West of England Authorities commissioned a report in 2015 called the "Extending electrification study" (See Appendix G) looking at the feasibility of extending rail electrification to Weston-super-Mare, Yate and the Severn Beach, Portishead and Henbury lines. The study's main findings were to take a longer term view with the best business case following wider national electrification schemes in the West of England area. The business case in the shorter term concluded that there are no benefits to be gained from selective electrification. However the future electrification of the Branch Line is not prevented by the DCO Scheme. The DCO Scheme builds on the region's significant investment programme in the West of England's transport network that aims to cut congestion, improve air quality, provide

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				network resilience and ultimately reduce carbon emissions from the transport network.
11-1	Tony Coughlan	I live close to the railway line and cycle/walk on the routes affected by it's redevelopment.	General - accessibility	Following consultation, both of the proposed stations have been designed to provide step free access from the pedestrian approach to the station, through to the platform. Specifically, feedback from the Stage 2 Section 47 consultation resulted in changes to accessibility to Pill station to enable step free access from the nearest bus stops on Heywood Road to the platform. The scheme design has been developed to consider the access by all modes and users with mobility or sensory impairments and has been assessed in the Equalities Impact Assessment (EqIA) (ES Appendix 14.1, DCO Application Document Reference 6.25). The new infrastructure will comply with Equality Act 2010 and has been designed to enable attractive access by non-car modes. The approach to the DCO Scheme design is set out in the DAS (DCO Document Reference 8.1) and will accord with rail and highway industry guidance and technical requirements as shown in the Railway Alignment, Design and Engineering Plans (DCO Document References 2.7 – 2.28).
11-2		As a neighbour, I am also interested in the environmental impact of the line.	Operational - environmental	The environmental impacts were developed in more detail to take on board comments raised during the consultation stages, and have been considered: • as part of the Environmental Impact Assessment which assesses the impacts of

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				the infrastructure works that require consent and considers the cumulative impacts of the wider DCO Scheme; • in the Environmental Statement (DCO Document References 6.1 – 6.31) which set out in detail how we will implement measures to mitigate environmental impacts and accompany the DCO Application - a non-technical summary is included; and • in the Master Construction Environmental Master Plan (ES Appendix 4.2, DCO Application Document Reference 8.14) which sets out a framework for Environmental Management Consents during construction. For the specific environmental impacts during operation, the following have been addressed: • The lighting has been designed to be sympathetic to the surrounding area and will use energy efficient technology. Light-Emitting Diode (“LED”) lights can be dimmed overnight. • Air quality monitoring has not been undertaken specifically for the DCO Scheme. However, air quality monitoring is being carried out by the host planning authorities and these are considered to be sufficient for the purposes of model verification. The ambient air quality has been combined with the modelled diesel emissions to assess the with and without scheme scenarios. This is included in the ES Appendix 7.2, Air Quality Modelling Methodology Appendix (DCO

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				Application Document Reference 6.25). • The increase in noise from individual passing trains and noise generated from the station has been assessed and determined that additional noise barriers are not required to the east beyond Trinity Primary School in Portishead. This is addressed within the ES Chapter 13 – Noise and Vibration (DCO Application Document Reference 6.16.
12-1	Mrs Jane Fear on behalf of Mr Michael James LEE	Dear Sir I am representing my father Mr Michael James Lee. [.....] [REDACTED] So I would draw your attention to the small track, owned by my father, to the old railway line that is currently accessed via the Portbury 100 road. Land Registry Title [REDACTED]. This is to be compulsory purchased by MetroWest. The track is the only means of access to the field adjacent to it, which is also owned by my father. Land Registry Title [REDACTED]. I now ask that some sort of legal 'right of way' into that field can be retained when the purchase of the track proceeds. Or, alternatively a suitable new access from the Portbury 100 is provided otherwise the field will be rendered completely inaccessible. If, however, this order goes ahead with no such 'right of way' or access in place it will significantly reduce the value of the field and consequently I would want to ensure that significant compensation were granted in order to reflect the resultant devaluation of this land. Yours faithfully Jane Fear (Mrs)	Individual - Land, access, property	the Applicant's proposal to re-open the railway line between Portishead and Pill will require improvements to be made to the existing access and parking area, necessitating the Applicant's acquisition of that land. At a meeting held on 25th March 2019 between Ardent Management Limited ("Ardent"), The Applicant's land agents and Mr Lee's property agent, draft land plans were presented showing the extent of the Applicant's proposed land requirements. Discussion between the parties covered matters including the Applicant's proposed land requirement, land values, and the Applicant's preference to enter into option agreements with landowners affected by proposals, including Mr Lee, to document agreed terms for the Applicant's temporary occupation, and permanent acquisition of land. Following the meeting, Ardent issued draft heads of terms and an individual land plan that set out the Applicant's proposals in relation to Mr Lee's land. The draft heads of terms included confirmation that following the

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				Applicant's acquisition of land, a right of access would be retained by Mr Lee to enable vehicles and pedestrians to cross the land to enable continued access to other land owned by Mr Lee.. Having looked into this matter again, the Applicant has confirmed that existing access rights will be retained, ensuring provision of access to land. The Applicant remains open and willing to discuss terms for an option agreement.
13-1	Andrew Watt	I fully proposed [SIC] the proposed scheme. It will substantially improve rail services in the area, and therefore provide significant economic and social benefits. It will reduce road usage and associated carbon emissions	Support	Support noted.
14-1	Peter Kirschen	reference 06/566 This indicates a potential compulsory purchase. I would like to have an informal discussion with a surveyor regarding a more amicable and less costly alternative. UPDATED SUBMISSION MADE ON 22 nd JANUARY 2022: I previously made a representation concerning the above application in relation to land plot 06/566. I now wish to withdraw that representation as the matter has been amicably resolved	Individual - Land, access, property	Plot 06/566 is currently identified as land subject to compulsory acquisition of permanent new Rights in the DCO documentation, at this stage in the Project, Western Power Distribution (WPD) do not envisage that the overhead lines will have any works done except minimal alterations and as the low voltage pole between the houses will already have a wayleave agreement in place, they will potentially not need any new grants from the landowner for re-positioning the overhead lines as minimal works to the overhead lines will be required. The landowner will be engaged with and updated in relation to the current position regarding their land.

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				It is understood the relevant representation has now been withdrawn.
15-1	North Somerset Levels Internal Drainage Board	The North Somerset Levels Internal Drainage Board is a flood risk management authority, and under the Land Drainage Act 1991 has a duty to “exercise a general supervision over all matters relating to the drainage of land within their district”. To assist with carrying out this duty, a set of byelaws have been made. These byelaws are to secure the efficient working of the drainage system, regulating the effects on the environment of a drainage system and securing the effectiveness of flood risk management work. The applicant is seeking to dis-apply seven of the Board’s byelaws. The byelaws that are proposed to be dis-applied are: Byelaw 3 (control of introduction of water and increases in flow or volume of water); Byelaw 7 (detrimental substances not to be put in watercourses); Byelaw 10 (no obstructions within 9 metres of the Edge of the Watercourse); Byelaw 14 (vehicles not to be driven on banks); Byelaw 15 (banks not to be used for storage); Byelaw 17 (fences, excavations, pipes, etc.); Byelaw 24 (damage to property of the Board). Three of these byelaws are “without prior consent” byelaws and four are to prevent damage to watercourses and the aquatic environment. The byelaws are not intended to restrict the authorised development in any way but to ensure that reasonable oversight and regulation is in place to ensure that the land drainage network is not adversely affected by the proposals. The Board would have no objection to these byelaws being dis-applied if there was sufficient information within the application to provide comfort that the Board’s	Various	All matters raised in this Relevant Representation are dealt with in the updated Statement of Common Ground with North Somerset Council (Document Reference 9.3.7 ExA.SoCG-NSLIDB.D1.V1) that is envisaged will be submitted to the ExA prior to Deadline 1.

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		interests have been fully taken into account in the formulation of the proposals. Unfortunately, the drawings that accompany the application do not have sufficient detail for this to be determined. Therefore, the Board does not agree with the dis-application of the byelaws for this Development Consent Order. The Board will make further written representation regarding the proposals during the examination.		
16-1	Andrew Youngs	I am concerned about arrangements for pedestrians and cyclists crossing Royal Portbury Dock Road once the off-road cycle route is diverted from under the road bridge to climb up the embankments to cross the road. Royal Portbury Dock Road is extremely busy and carries a high proportion of heavy lorries. Such high traffic levels present a significant danger to foot and bike users wishing to cross the road. Particularly a danger to children on bikes. Liaison with the highway authority to provide a suitable controlled crossing is essential.	General - NCN	The DCO Scheme is proposing to retain the existing cycle path NCN Route 26 (part of which is a bridleway) next to the railway, under Royal Portbury Dock Road bridge, for both pedestrians and cyclists, post the completion of the construction works. During the construction phase it will be necessary to temporarily close the section of the NCN26 next to the railway, under the Royal Portbury Dock Road bridge, as this space is needed for the construction works. Therefore, it will be necessary for pedestrians and cyclists to use the formal public right of way network via the crossing point on Royal Portbury Dock Road, which is to be upgraded. The temporary closure of the licensed route will be sign posted and will be advertised before it is introduced. Upon completion of the construction works the licenced route will be reinstated including the sections of route under the railway bridges that provide an alternative route to

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				cross the highway. The sections of the NCN26 / bridleway that meet the highway on either side of Royal Portbury Dock Road and Marsh Lane will also be retained, post completion of the construction works. Further details of the proposed alterations and enhancements to the NCN Route 26 / bridleway are included on the National Cycle Network Temporary and Permanent Work Plans (DCO document reference 2.37). The wider connectivity of the pedestrian and cycle path network has been considered as part of the TA (ES Appendix 16.1) of the ES Chapter 16.
17-1	W J Hall	I am a user of NCN26, the cycle way from Pill to Portishead. My representation will relate to the effects of the railway on NCN26 1. Introducing an extra dog leg into NCN26, so making it more dangerous.	General - NCN	The current NCN route occupies sections of the disused railway and consequently the route must be adjusted to accommodate the reopening of the railway. In one location, the diversion of the cycle route results in a 'T' junction (the dogleg) to the north east of Marsh Lane bridge. This has been designed to improve visibility at this junction and for the safety of users of this junction, bollards are proposed to slow cyclists and prevent vehicular access. The proposed outline design for the changes to the NCN route have had a Stage 1 Road Safety Audit and the final design will also be subject to further Road Safety Audits to ensure the safety of users.

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17-2		2. Failure to take advantage of the works being done on NCN26 to remove the existing doglegs under the bridge by smoothing the alignment to improve visibility	NCN - alignment	Some improvements to the alignment of the NCN26 under the bridges to improve visibility will be undertaken. The suggested additional works would be difficult to justify seeking powers for under the Order.
17-3		3. The inconsistent level of detail in the application, with a major system level item like an NCN26 gradient up to a road left undetermined, and hence the proposed route also undetermined. For comparison, the cattle creep has been drawn to a level of detail even including catch pits.	NCN - gradient	The DCO scheme is at an outline design stage for the DCO application and the detailed design will not be completed until contractors have been appointed. The railway design and non-railway design (such as cycle paths) were separate work streams, with the railway design needing to meet a higher level of design detail at this stage than the non-railway design, due to Network Rail's standard GRIP design and approvals process. It was also known at the time of submission that a new traffic light controlled crossing was about to be installed at Marsh Lane and it was felt best to leave detailed design until as built drawings for that crossing could be referred to.
17-4		4. Routing of the diversion route through minor lane through the bridge under the railway to Lodway Close in Pill, without at least temporarily removing the restriction on cycling	NCN - diversion	For the safety of all users, cyclists must currently dismount if passing beneath the railway bridge at Lodway Close. The safety issues still exist during construction and therefore the requirement to dismount for the short section of lane under the bridge is set out on the relevant DCO plan (Document

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				reference 2.34 Diversion Routes for Pedestrians and Cyclists Part 1 of 2)
18-1	Tony Stanley	1. What else is being done to prevent users of the train station parking in the village quarter for free? The roads are already busy and impacts bus routes and waste collections? (Look at Nailsea & Backwell and Yatton stations, good car parks but people still park for free in the back roads)	Portishead - parking Portishead - traffic flows	Changes to parking resulting from the DCO Scheme have been assessed and reported in the Transport Assessment (TA) (ES Appendix 16.1, DCO Application Document Reference 6.25). Mitigations proposed to minimise impacts include a number of permanent and temporary TROs in identified locations. Following feedback from Stage 1 Section 47 consultation these were amended and consulted on again during the Stage 2 period. Views were considered at both consultation stages and shaped the TRO proposals for construction and operation in the DCO Application. These are shown on the Permanent Traffic Regulation Order Plans (DCO Document Reference 2.31). There will be post-implementation monitoring of parking provision, and the Applicant is both the DCO Scheme promoter and the local Highway Authority and therefore has powers to control on-street parking. The design provides adequate parking for the demand forecasts reported in the Preliminary Business Case 2014 and Outline Business Case 2017 (DCO Document References 8.3 and 8.4 respectively), and these were continually reviewed as the DCO Scheme progressed due to the number of concerns

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				raised about parking at Stage 1 Section 47 consultation. The final car park tariffs are yet to be determined, however there will be short stay and all-day tariffs and season permits. Further consideration of wider parking issues have been reported in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25).
18-2		2. The location of the 2 hour parking bays opposite the proposed entrance to the station will result in people doing U-turns on the road to get back out to the Quays Avenue or force them further into the village quarter and completing U-turns in these junctions causing further obstructions and delays to traffic flows.		The proposed two- hour bays are unlikely to be used by rail passengers given the restricted length of time. Should there be any issues with vehicles making U-turns at this location, this will be a matter for the North Somerset Council as local Highway Authority, who will have various options including consideration of the removal of the parking bays. Any cars looking to return to Quays Avenue could use the station forecourt car park to drive through (as drop-off's will be) to turn around. This would avoid any need to U-turn in Phoenix Way. Changes to traffic flows resulting from the DCO Scheme have been assessed and reported in the Transport Assessment (TA) (ES Appendix 16.1, DCO Application Document Reference 6.25). Mitigations proposed to minimise impacts include a number of permanent and temporary TROs in identified locations. Following feedback from

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				Stage 1 Consultation these were amended and consulted on again during the Stage 2 period. Views were considered at both consultation stages and shaped the TRO proposals for construction and operation in the DCO Application. These are shown on the Permanent Traffic Regulation Order Plans (DCO Document Reference 2.31). There will be post-implementation monitoring of parking provision, and the Applicant is both the DCO Scheme promoter and the local Highway Authority and therefore has powers to control on-street parking.
19-1	Dr Bob Langton	Whilst I am strongly in favour of the reopening of a passenger service on the Bristol-Portishead railway line I have severe reservations about the detailed plans for the necessary work in the Pill & Easton-in-Gordano area. My comments at this stage are bound to be provisional - the very nature of the detailed proposals provided by MetroWest make understanding them a lengthy and time-consuming process.	Lodway compound - consultation	Communities, stakeholders, land owners, statutory bodies and affected parties are required to be consulted during the pre-application stage. The project took the opportunity to undertake two stages of consultation, as set out in two Statements of Community Consultation. The Statements of Community Consultation were consulted on twice and adhered to during both Stages 1 and 2 of Community Consultation. Stage 1 consultation was undertaken between June and August 2015 and Stage 2 consultation was undertaken between October and December 2017, with an extension of time for a small number of statutory bodies into 2018. Wider stakeholders including local community groups, non-statutory bodies and the wider public etc, were formally consulted in both Stage 1 and Stage 2, whilst the Stage 2 period was also the formal DCO consultation

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				for statutory bodies, land owners, government agencies and departments, and parties directly affected by the proposals. The majority of consultees were able to view the material and respond in the given consultation periods, the minimum of which is 28 days; we allowed 6 weeks. This is reflected in the number of responses received with almost 2,000 separate responses received over both stages. The level of support for the scheme is also very high with 95% of community respondents fully or mainly in support of the proposals. All known queries and requests were responded to within the consultation period, which was organised via a dedicated set of contact details to ensure queries were handled adequately. Further information on the project consultation is set out in the DCO Consultation Report (DCO Application Document Reference 5.1).
19-2		However, my predominant concern relates to the work needed to modify the bridge the carries the line over the footpath between the end of Avon Road and Lodway Close in Pill. It appears that the plan for this work involves the creation of a large area of hard-standing to create a compound for the storage of materials and a hard-standing access road on the open area north-west of Lodway Close and The and an inevitable consequent loss of habitat for wildlife. It	Lodway compound - ecology	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement

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		appears that the environmental impact assessment of this area judges it to be of limited habitat value when in fact it is well-known locally to provide key habitat for a variety of mammals (foxes, badgers and the endangered hedgehog) as well as key ponds that support a large number of amphibians. Serious [sic] damage to this habitat will lead to an inevitable and longterm loss of wildlife which is already in severe decline [sic] locally as well as nationally.		(DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the

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				Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. Hedgehogs have not been considered specifically in the Environmental Statement because the mitigation for reptiles is considered appropriate for the protection of hedgehogs e.g. appropriate vegetation removal, appropriate clearance of hibernacula and provision of new hibernacula.

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				The Master CEMP proposes the contractor consult with the local Toad Patrol group at Pill and develop procedures to reduce the impact of construction activities on toad migrations across construction sites and haul roads. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25). On completion of the construction phase, the Lodway construction compound would be restored to farming in a condition equivalent to its original state.
19-3		A further concern is the extent of the movement of heavy goods vehicles through the villages of Pill and Easton-in-Gordano on roads that are totally unsuited to such traffic movement.	Lodway compound - construction traffic Lodway compound - short term use Lodway compound - access	The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of the Port from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton In Gordano via St George's Hill, Priory Road, Lodway, The Poplars,

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			routes	Stoneyfields and Trinder Road. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents and stakeholders in advance. There may also be a one-off crane movement through the village via Marine Parade to its destination at Avon Road. This will be an abnormal load and further details communicated in advance. Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13)

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				specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the strategic road network and the local road network; • Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and public rights of way do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting.

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				A compound at Lodway Farm is required for the duration of the scheme construction period. Alternative sites were examined but this location is ideally suited for the amount of construction work required in the vicinity. It will support works through Easton In Gordano including track works, station, earthworks and other structural works. It will be used for both storage following the removal of old material such as railway ballast and track, and for bringing in new material to build the railway. This compound will also be used to store materials such as railway ballast or track before onward disposal or use by the scheme. For the removal of the former railway track and ballast, it is anticipated that the old ballast will be taken from the disused line to the Lodway Farm compound ready to be transferred to a Network Rail recycling facility elsewhere in the country. It is currently proposed it will be transferred via HGV to Avonmouth or Portbury Docks (subject to agreement with the Port) ready to be loaded onto freight trains for removal out of the area. Should storage at the Docks not be possible, material would be removed by rail directly from the Lodway Farm compound by using a short section of relaid track on the dis-used line with a connection onto the freight line (by reinstating Portbury Junction).

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				For the construction of the new railway it is currently anticipated that the new track and ballast will be brought into the rail sidings at Avonmouth or Portbury Docks (subject to agreement with the Port). It will then be transferred by HGV via an access route off Marsh Lane. Should the dock sidings or alternative storage location not be available, the material would be brought in by rail directly to the Lodway Farm compound, by reinstating Portbury Junction as described above.
20-1	Martin Berry	Portishead Branch line DCO scheme environmental statement, volume 2. Chapter 4. Description of the proposed works. Pages 4-18 to 4-21. Construction of the railway Works Numbers 1 and 1A 3 Options are proposed: Option 1, Option 2. Sub options a, b, c, d. Option 3 I request consideration the options proposed and rejection of Option 2 and sub options a, b, c and d; where the use of Lodway construction compound is proposed;	Lodway compound - general	As stated in the ES Chapter 4 (DCO Application document reference 6.7), the preferred option at Lodway compound will be determined ahead of construction and may include a combination of options. This will be discussed and determined when a contractor is appointed, and within the confines of the options discussed. A compound at Lodway Farm is required for the construction period. Alternative sites were examined but this location is ideally suited for the amount of construction work required in the vicinity. It will support works happening through Pill including track works, station, earthworks and other structural works. It will be used for both the removal of old material such as railway ballast and track, and for bringing in new material to build the railway. This compound will also be used to store

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				materials such as railway ballast or track before onward disposal or use by the scheme. The Applicant accepts that the use of the compound at Lodway is likely to affect nearby residents as is indicated in the ES Chapter 18 Cumulative Effects (DCO Application reference 6.21), however with the mitigations proposed it is intended that disruption will be kept to a minimum. For the removal of the former railway track and ballast, it is anticipated that the old ballast will be taken from the disused line to the Lodway Farm compound ready to be transferred to a Network Rail recycling facility. It will be transferred via HGV to Avonmouth or Portbury Docks (subject to agreement with the Port) ready to be loaded onto freight trains for removal out of the area. Should storage at the Docks not be possible, material would be removed by rail directly from the Lodway Farm compound by relaying a short section of track on the dis-used line with a connection onto the freight line (by reinstating Portbury Junction). For the construction of the new railway it is currently anticipated that the new track and ballast will be brought into the rail sidings at Avonmouth or Portbury Docks (subject to agreement with the Port). It will then be

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				transferred by HGV via an access route off Marsh Lane. Should the dock sidings or alternative storage location not be available, the material would be brought in by rail directly to the Lodway Farm compound, by reinstating Portbury Junction as described above.
20-2		due the close proximity to the residential area, potentially 24 hours a day 7 days a week operations, the impact of noise, light, dirt pollution,	Lodway compound - noise impacts Lodway compound - light impacts Lodway compound - air quality impacts Lodway compound - visual impacts	Management and monitoring processes will be introduced to ensure that the effects of construction noise and vibration are controlled and that best practicable means are planned and employed during the construction period. The contractor will be required to produce a noise and control plan as part of their detailed Construction Environmental Master Plan (CEMP) (Document reference 8.14). Some examples of management and monitoring processes the plan will include are: • noise control measures will be included in all method statements for the works; • details and locations of site hoardings, screens or bunds that will provide noise screening during construction; and • the procedures for installation of any noise insulation. Further information and examples of noise and vibration management can be found in section 10 of the Master CEMP (DCO Application reference 8.14).

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				The compound will need to have temporary lighting in place. It will be designed, positioned and directed so as not to intrude unnecessarily on adjacent buildings, sensitive ecological receptors, structures used by protected species and other land uses. This will prevent unnecessary disturbance to local residents, light-sensitive species such as bats, railway operations, and passing motorists. This has been detailed in Section 3 of the Master Construction Environmental Master Plan (DCO Application reference 8.14). There will be a requirement for the Local Planning Authority to approve proposed lighting plans once a contractor has been appointed. Air quality impacts which may result from the compound have been carefully considered and include activities such as the management of plant vehicles and equipment; transportation, storage and handling of materials; management of excavations and earthworks; and conveying, processing, crushing, cutting and grinding activities. The contractor will be required to incorporate effective measures into an Air Quality and Dust Management Plan. Some examples the plan may include are: • The site layout will be planned so that machinery (construction plant) and dust-causing activities are located away from

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				residential properties, where reasonably practicable; • Damping down of dust generating vehicles and equipment and roads, with access routes to be kept clean by methods such as brushing and provision of dust suppression; • Any material stored on site will be in such a way as to reduce dust entrainment, for example by erecting temporary hoarding or sheeting as appropriate depending on the height and area of the stockpiles. Further information and examples of air quality management can be found in section 4 of the Master CEMP (DCO Application reference 8.14). The temporary compound will have a visual impact to the local landscape during its use, however these impacts will be kept to a minimum where possible and mitigations put in place. Section 8 of the Master Construction Environmental Master Plan (DCO Application reference 8.14) details the mitigations proposed, specifying that the height of the offices, workshops, plant, stockpiles, and storage elements within the vicinity of residential areas will need to be designed to ensure minimal visual disruption on the adjacent residential properties.
20-3		HGV traffic on residential streets, restricted parking,	Lodway compound -	Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a

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			construction traffic Lodway compound - access routes	minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network; • Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate

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				due to the construction traffic, including monitoring arrangements with local highway authorities. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting. The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of the Port from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton in Gordano. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North

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				Somerset Council's role as highway authority. These will be communicated to residents in advance.
20-4		the destruction of green belt land (although this is noted as temporary) at Lodway Farm (9.128 hectares); and what appears to little attention or recognition of the environment impacts of such activity.	Lodway compound - short term use Lodway compound - long term use Lodway compound - ecology	The use of Lodway Farm as a construction compound will not change the status of this land from agricultural land in the green belt. At the end of construction the compound will be reinstated to its previous condition and use as committed to in the Master Construction Environmental Master Plan (CEMP) (DCO Document Reference 8.14). Ownership will remain with the freehold owner and it will not become land owned by the Council or Network Rail. Additionally, part of the area is for reptile translocation and there are constraints on after use. Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are:

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				• Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34);

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				• There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. The Master CEMP also proposes the contractor consult with the local Toad Patrol group at Pill and develop procedures to reduce the impact of construction activities on toad migrations across construction sites and haul roads. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO

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				Application reference 8.14) and Ecology appendices (DCO Application reference 6.25).
20-5		Options 1 and 3 should be considered as the preferred solutions; or, Option 2 without the development of the Lodway construction compound; or, a combination of all 3 options again without the development of the Lodway construction compound.	Lodway compound – location and size	The compound location at Lodway Farm has been determined by a number of important factors. Multiple compounds are required across the length of the railway, and the site at Lodway in particular provides good access to the disused section of the railway and the existing freight line. It is close to the bridge over the footpath between Avon Road and Lodway Close which needs to be completely rebuilt and for which a large compound area is needed. It is also close to the M5 and accessible via Royal Portbury Dock Road, Marsh Lane and along the railway. This location is the only place where a large enough compound can be located that has access to the existing railway on the Pill side of the Avon Gorge. The compound will be temporary and only needed for the construction period. It will use most of the farm's fields.
21-1	Pill & Easton-in-Gordano Parish Council	Concerns about the impact of the MetroWest DCO Scheme on the residents of Pill & Easton-in-Gordano Parish,	Pill – impacts to residents	The Applicant's response to all matters raised in this Relevant Representation is detailed in correspondence with Pill & Easton-in-Gordano Parish Council, which is provided at Appendix B of this document. The detailed response from the Applicant has been discussed with Pill & Easton-in-Gordano

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				Parish Council and the parties will continue to work together.
21-2		the local environment and its wildlife, during both the construction and operational phases of the Project. Primarily, but not exclusively, these will centre around mitigations for nuisances, such as noise, pollution, traffic congestion etc. and the potential loss of habitat and species to the development.	Pill – ecology Pill – environmental impacts	
21-3		At present my biggest concern is the unfeasibly short time that has been made available for review of the 20,000 plus pages contained in the DCO Scheme Plan.	General - consultation	
22-1	Somerset County Council	This representation is made by Somerset County Council as an 'adjacent' planning authority. Planning and Transport Policy Context The MetroWest Phase 1 project will contribute to delivery on our adopted and emerging transport policy, business growth and other plans for Somerset County Council. As a nearby authority for the MetroWest project, Somerset County Council (SCC) is not directly affected by the proposed construction of the MetroWest DCO works associated with the Portishead line. But it is agreed that SCC and its communities, particularly in the north of the county, will benefit from MetroWest Phase 1 project and the new and improved commuter services on the Severn Beach line where they will reduce car usage on the M5 and neighbouring roads through that part of our county. We also appreciate the indirect beneficial impacts resulting from enhancement of transport	Support	All matters raised in this Relevant Representation are dealt with in the updated Statement of Common Ground with Somerset County Council (Document Reference 9.3.9 ExA.SoCG-SCC.D1.V1) that is envisaged will be submitted to the ExA prior to Deadline 1.

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		infrastructure in the wider West of England and Peninsula areas. The MetroWest Phase 1 project can also be expected to support economic growth along the M5 economic corridor, including the Hinkley Housing and Gravity Enterprise Zone around the Bridgwater area. The scheme will support modal shift to sustainable commuting and travel - diverting journeys from road to rail, contributing to combatting climate change and congestion – a significant challenge for the north of the county Conclusions: 1. No negative or cumulative impacts have been identified to arise in Somerset from the MetroWest Phase 1 project. 2. It is agreed that positive socio-economic and environmental effects are expected to arise from the delivery of this first phase of the wider MetroWest project both for Somerset and the wider Peninsula area. These should make a positive contribution to the delivery of a range of transport, planning and climate change policies in Somerset and the wider Peninsula area (of which SCC is part). We consider that it will be beneficial for Somerset County Council to be registered as an 'Interested Party' for the MetroWest Phase 1 Examination to enable this Council to respond to any issues arising during proceedings that are relevant to this Council as planning and highway authority. If you have any questions, please do not hesitate to contact the officer named above.		
23-1	Mike Richards on behalf of Nine of Bristol	1) We support the application to reuse an existing route and provide energy efficient, public transport. But the time line to completion considering the climate crisis should dictate electrification of rolling stock.	Operation - electrification	The DCO Scheme is not proposing electrification of the rail line; because a viable business case could not be achieved. The West of England Authorities commissioned a report in 2015 called the "Extending

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				electrification study" (See Appendix G) looking at the feasibility of extending rail electrification to Weston-super-Mare, Yate and the Severn Beach, Portishead and Henbury lines. The study's main findings were to take a longer term view with the best business case following wider national electrification schemes in the West of England area. The business case in the shorter term is weak due to high capital costs (£175m), small fleet size, depot requirements, modest passenger numbers and low journey time savings (0% to 10%). It concluded that there are no benefits to be gained from selective electrification. However passive provision has been provided with any new infrastructure required for the reopening of the Portishead Line designed to allow future electrification. Furthermore, train traction technology is currently advancing and while the initial train service will be diesel powered, it is possible that in the medium term some form hybrid power systems could be introduced. This upgrade could be retro-fitted to existing diesel trains in the medium term or could be included in the future long term replacement of the existing diesel trains. The DCO Scheme builds on the region's significant investment programme in the West of England's transport network that aims to

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				cut congestion, improve air quality, provide network resilience and reduce carbon emissions from the transport network.
23-2		2) The frequency of service is too low and more passing places should be accommodated	Operation - frequency / capacity	The forecast passenger demand is set out in detail in the Forecasting Report which is appendix 2.1 of DCO document 8.4 Outline Business Case 2017, Part 3 of 3, Appendix 1.1 to 5.1. The forecast passenger demand has been benchmarked against actual passenger volumes at similar sized existing stations. The Outline Business Case including the forecast passenger demand was subject to technical scrutiny by the Department for Transport. Section 3.6 Capacity Analysis of the report states that, in the opening year on the Portishead Line, 220 of the 263 seats (of a three carriage Class 166 train) will be occupied in the morning peak, and 201 in the evening peak. By year seven after opening, there will be standing room only in the morning peak, at which point additional carriages will be sourced to form five carriage trains (subject to contractual arrangements), see figure 3.7 and figure 3.8.
23-3		3) A station at Ashton Gate should be provided to accommodate the needs of local residents, Bower Ashton Campus of University of the West of England i) Ashton Park School ii) The Create Centre iii) Ashton Court conference, visitors centre, events and theatre iv) Ashton Park (leisure and festivals) v)	General – business case Ashton Vale - Ashton Gate Station	A station at Ashton Gate is out of scope of MetroWest Phase 1 and would require its own business case, funding, land assembly and formal consents. The DCO Scheme design has ensured that no lineside equipment is being proposed on the site of

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		Bristol City, and Bristol Rugby Club football ground Transport routes also converge on Ashton Gate with the potential for interchange:- vi) Guided bus fast route vii) Bristol ferry viii) Airport bus service ix) South Bristol outer circular route and Portway to Avonmouth x) Festival Way and other cycle routes 4) The Ashton Gate station, road, pedestrian and cycle access should be integrated with the proposed removal of the Plimsoll Bridge and new road, pedestrian and cycle routes 5) Objection to provision of additional rolling stock and upgrading of the whole line to accommodate peaks in demand at Ashton Gate run contrary to the stated aim of application 6) The the additional costs should be in part or all offset by the improved functionally, access and service resulting in extra revenue and capital cost offsets by joint improvements associated with the Plimsoll Bridge works.		where a future Ashton Gate station could be located. The DCO Scheme's scope was determined early in the project and has been outlined in the Business Cases to date. The scheme's scope had to be clearly justified and agreed through the scheme's governance processes early on in the scheme's development for all the impacts and interfaces to be determined. For example additional stations would impact on train pathing and timetable and likely require additional infrastructure requirements, resulting in additional land and additional environmental impact assessment.
23-4		7) It is a false economy to not fully plan new transport infrastructure without anticipation of a low carbon future.	Operation – low carbon	The DCO Scheme builds on the region's significant investment programme in the West of England's transport network that aims to cut congestion, improve air quality, provide network resilience and reduce carbon emissions from the transport network.
24-1	Rob Harvey	I have grave concerns about the creation of work depots in Pill and Ham Green re the Metrowest reinstatement of the Portishead to Bristol rail line. Though the presence of toads, newts and reptiles at both the Lodway Farm and Ham Green depot sites has been confirmed in the literature; no reference has been made to this in the proposals re access	Individual - Chapel Pill Lane compound Lodway compound - toads	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have

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		and laying down hard standing over the bulk of Lodway Farm and also re access at the Ham Green depot site. Both sites are right in the middle of amphibian migration routes, both populations of significant size, particularly the population that migrates across the Lodway Farm site and over the old railway to access the breeding pond (estimates between 1500 and circa 5000 individual toads - the bulk of which cross Lodway farm). Surely some mitigation efforts should be put in place to protect this population, maybe even look at alternative compound sites and access points, both during the construction process and in the future, once the rail line has been completed	Lodway compound - ecology excl. toads Lodway compound - concrete base	been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary:

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				• No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. The Master CEMP (DCO Application reference 8.14 also proposes the contractor consult with the local Toad Patrol group at Pill and develop procedures to reduce the impact of construction activities on toad migrations across construction sites and haul roads.

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				More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25). Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor is obliged to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with Pill Toad Patrol group before a Contractor is appointed and discuss mitigation measures that the Contractor should employ. Whilst in use as a compound, the base will not be made of concrete but compacted aggregate, enabling the land to be reinstated

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				to its previous condition. Alternatively, a geobind solution may be used where the product is mixed with the soil, transforming the site into a load bearing surface. During reinstatement, the surface is broken up and sodium bicarbonate added into the soil to correct the pH and return the land to its original state. Whichever option is used the Master Construction and Environmental Master Plan (CEMP) (DCO Document Reference 8.14), commits the Applicant to reinstate the land to its previous condition. The specific ecological surveys undertaken at Ham Green (Pill Tunnel eastern portal compound) are: • Extended Phase 1 Habitat survey – 2016 • Great Crested Newt survey – 2015 • Dormouse survey – 2015 • Otter survey – 2015 Badger surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction badger survey. Ham Green Lakes will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Pill Tunnel eastern portal compound. In summary:

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				• Ham Green Lake Habitat Suitability Index for Great Crested Newts was poor (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • No evidence of dormouse presence (section 9.4.140); • Confirmation of presence of otters and mitigation by woodland planting at the eastern side between the compound and Ham Green Lakes to reduce disturbance of otters (section 9.5.10); • Reptiles will be displaced prior to construction. (See Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25). This activity will also ensure that any amphibians within the site compound area are displaced from the construction site into retained habitat, which is also suitable terrestrial habitat for amphibians. This will be managed as detailed in the Master CEMP.
25-1	William Ovel	Concerns relating to disruption caused to Pill & Easton-in-Gordano residents by DCO Scheme. These include, but are not limited to: 1. Location of Construction Compound at Lodway Farm with attendant noise, lighting and traffic nuisances. Work should be relocated to spare land under M5 Avonmouth Bridge	Lodway compound concerns	The compound location at Lodway Farm has been determined by a number of important factors. Multiple compounds are required across the length of the railway, and the site at Lodway in particular provides good access to the disused section of the railway and the existing freight line. It is close to the bridge over the footpath between Avon Road and Lodway Close which needs to be completely rebuilt and for which a large compound area

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				is needed. It is estimated that up to 40% of construction staff would use this compound and 30-40% of ballast and other materials would be stored here. The area under the M5 is a much smaller area and so is wholly unsuitable to take this quantity of staff and materials. Furthermore, Highways England require a substantial area to be kept clear beneath the M5 to enable them to lower and maintain large gantries that are used to constantly check and maintain the M5 Avonmouth bridge. The compound at Lodway Farm is close to the M5 and accessible via Royal Portbury Dock Road, Marsh Lane and along the railway. This location is the only place where a large enough compound can be located that has access to the existing railway on the Pill side of the Avon Gorge. The compound will be temporary and only needed for the construction period. It will use most of the farm's fields. Management and monitoring processes will be introduced to ensure that the effects of construction noise and vibration are controlled and that best practicable means are planned and employed during the construction period. The contractor will be required to produce a noise and control plan as part of their detailed Construction Environmental Master Plan (CEMP). Some

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				examples of management and monitoring processes the plan will include are: • noise control measures will be included in all method statements for the works; • details and locations of site hoardings, screens or bunds that will provide noise screening during construction; and • the procedures for installation of any noise insulation. Further information and examples of noise and vibration management can be found in section 10 of the Master CEMP (DCO Application reference 8.14). The compound will need to have temporary lighting in place. It will be designed, positioned and directed so as not to intrude unnecessarily on adjacent buildings, sensitive ecological receptors, structures used by protected species and other land uses. This will prevent unnecessary disturbance to local residents, light-sensitive species such as bats, railway operations, and passing motorists. This has been detailed in Section 3 of the Master Construction Environmental Master Plan (DCO Application reference 8.14). There will be a requirement for the Local Planning Authority to approve proposed lighting plans once a contractor has been appointed.
25-2		2. HGV traffic through Pill, Easton-in-Gordano and Ham Green - narrow streets leading to road safety concerns for pedestrians & cyclists, conflict with bus	Construction traffic	Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to

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		services, congestion, damage from vibration, noise etc.		produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network; • Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate due to the construction traffic, including

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				monitoring arrangements with local highway authorities. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting.
25-3		3. Cycle Route Diversions.	Cycle routes	The DCO Scheme is proposing to retain the existing cycle path NCN Route 26 (part of which is a bridleway) under the bridges between Portishead and Pill, for both pedestrians and cyclists, post the completion of the construction works. Refer to the Transport Assessment (TA) (EA Appendix 16.1, DCO Application Document Reference 6.25) for further information. During the construction phase it will be necessary to temporarily close the section of the NCN26 / bridleway between Marsh Lane and Avon Road, Pill. This section of the NCN26 / bridleway forms part of the haul route for HGV to access the Lodway Compound. As it would not be safe for pedestrians and cyclists to share the route with HGVs given the limited width of the track, it will be necessary to temporarily divert pedestrians and cyclists via the Marsh Lane bridge over the M5 to and from Pill village. The diversion will be signposted. The

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				diversion route will include a short section of lane beneath the railway bridge (cyclists must demount here), however during the works to replace the railway bridge this section of diversion route will not be available and an alternative route will be provided. The proposed diversion routes are shown on DCO Application Document Reference 2.34 Diversion Routes for Pedestrians and Cyclists (Part 1 and 2). Upon completion of the construction works the NCN 26 / bridleways will be reinstated including the sections of route under the railway bridges that avoid the need to cross the highway. The sections of the NCN26 / bridleways that cross the highway at Marsh Lane and Royal Portbury Dock Road will also be retained, post completion of the construction works, At the M5 bridge a new alternative route is proposed to be provided by extending the existing bridleway, as well as retaining the existing licenced route parallel to the railway running under the M5. Further details of the proposed alterations and enhancements to the NCN Route 26 / bridleway are included on the National Cycle Network Temporary and Permanent Work Plans (DCO document reference 2.37). The wider connectivity of the pedestrian and

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				cycle path network has been considered as part of the TA (ES Appendix 16.1) of the ES Chapter 16.
25-4		4. Impact on local wildlife at Lodway Farm Pond and ponds at N. Somerset Wildlife Site beside M5 Avonmouth Bridge.	Lodway compound - ecology	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would

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				be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area

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				are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. There will be no direct impact on ponds and temporary indirect construction impacts on the Field east of M5 motorway, Lodway, NSW to be managed by adherence to the Master CEMP. The Master CEMP also proposes the contractor consult with the local Toad Patrol group at Pill and develop procedures to reduce the impact of construction activities on toad migrations across construction sites and haul roads. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25).
25-5		5. Access road through Victoria Park - potential dangers posed by vehicles to park users 6. Marsh Lane Traffic.	Access routes	In order to access the tunnel portal adjacent to Victoria Park / Watch House Hill an existing access route will be used. There are no significant works planned here and access will likely be infrequent and by transit van type vehicles.

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				The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of the Port from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton in Gordano via the A369, St Georges Hill, Priory Road, The Poplars, Stoneyfields and Trinder Rd to access the Lodway compound. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents and stakeholders in advance. In addition to this, a road crane may be required to replace the railway bridge at Avon Road. The Crane will enter Pill via the A369 and likely follow Ham Green, Mount Pleasant, Underbanks and Marine Parade to Avon

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				Road. Where necessary an urban clearway order will be applied for to ensure that there is a clear route.
25-6		7. Primary method for trans-shipping waste and construction materials should be by train.		The method of transferring material and waste is determined by a number of factors, however both rail and road remain options. For the removal of the former railway track and ballast, it is anticipated that the old ballast will be taken from the disused line to the Lodway Farm compound ready to be transferred to a Network Rail recycling facility elsewhere in the country. It will be transferred via HGV to Avonmouth or Portbury Docks (subject to agreement with the Port) ready to be loaded onto freight trains for removal out of the area. Should storage at the Docks not be possible, material would be removed by rail directly from the Lodway Farm compound by relaying a short section of track on the disused line with a connection onto the freight line (by reinstating Portbury Junction). For the construction of the new railway it is currently anticipated that the new track and ballast will be brought into the rail sidings at Avonmouth or Portbury Docks (subject to agreement with the Port). It will then be transferred by HGV via a new access route off Marsh Lane. Should the dock sidings or alternative storage location not be available, the material would be brought in by rail

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				directly to the Lodway Farm compound, by reinstating Portbury Junction as described above.
26-1	Charles Money	My wife, Sarah-Jane Money, and I are the owners of (Redacted). We have been notified that this is subject to a DCO as part of the works preparing the railway line. We rent this property out to tenants. Whilst we are fully supportive of the railway, we are concerned about the impact of the DCO, which is requesting access to the property for potentially significant amounts of time over a three year period. We have not been provided with any details of what the access would be potentially used for. We are concerned that there may be a detrimental impact on our tenants, to the point that they may decide to move out, or ask for a potentially significant reduction in rent, and indeed if they did decide to move out we would not be able to rent the house out in the meantime. This outlines why we are interested parties at this stage and must be kept engaged in the programme going forwards.	Individual - Land, access, property	Mr and Mrs Money were sent a S42 consultation letter on 19 October 2017 (DCO Application Document 5.1, Appendix E4). An information letter in relation to the scheme was sent on 30 May 2018, a confirmation schedule was sent on 17 September 2019, a S56 letter on 14 January 2020 and an additional S56 letter was sent on 20 January 2020. In addition, Heads of Terms (HoTs) have been issued and Mr and Mrs Money were advised to appoint a Surveyor to advise and act for them. This appointment has recently been confirmed. Details of the works to the viaduct were provided to Mr Money on 29 January 2020, but construction level information was not available at this stage to be able to offer the level of assurance relating to access sought. As further details are available they will be shared with Mr and Mrs Money and their Agent.
27-1	Eleanor Blaney	My concerns are that there has been a lack of specific information about works to be carried out. Access has been requested to a portion of our land but we do not know for how long, at what times, what sort of equipment will be used etc etc. We seek clarification on these questions and so are	Individual - Land, access, property	Heads of Terms (HoTs) for the temporary use of land were sent to the joint property owners on 10 December 2019. Ms Blaney has advised that she has appointed an Agent.

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		registering ourselves as an interested party to reflect that.		As further construction level details are available to the project they will be shared with Ms Blaney and her Agent.
28-1	Deborah Burton	concerned about the use of Lodway farm as a construction compound as this will make it a brown site afterwards with the potential for houses to be built there	Lodway compound - long term use	The use of Lodway Farm as a construction compound will not change the status of this land from agricultural land in the green belt. At the end of construction the compound will be reinstated to its previous condition and use as committed to in the Master Construction Environmental Master Plan (CEMP) (DCO Document Reference 8.14). Ownership will remain with the freehold owner and it will not become land owned by the Council or Network Rail. Additionally, part of the area is for reptile translocation and there are constraints on after use.
29-1	Kathryn Wring	The plan to access a compound via The Breaches and therefore also Trinder Road, The Poplars & the village of Easton in Gordano is totally inappropriate for the relevant traffic and size of the roads. The area is full of families and elderly people and there are cars parked on the narrow roads at all times. It will be a serious hazard to all concerned to allow access through these small residential roads. I do not believe that the current infrastructure can support the additional traffic in a safe and appropriate way.	Lodway compound - construction traffic Lodway compound - access routes	The main HGV access route will via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of the Port from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton in Gordano via the A369, St Georges Hill, Priory Road, The Poplars, Stoneyfields and Trinder Rd to access the Lodway compound. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided

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				where possible to reduce traffic impact on local roads. In addition to this, a road crane may be required to replace the railway bridge at Avon Road. The Crane will enter Pill via the A369 and likely follow Ham Green, Mount Pleasant, Underbanks and Marine Parade to Avon Road. Where necessary an urban clearway order will be applied for to ensure that there is a clear route. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents and relevant stakeholders in advance. Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO

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				Application Document Reference 8.13) specifically: • Ensure that of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent improvement of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; Limit the impacts on the Strategic Road Network and the Local Road Network • Limit the impacts on the natural and built environment. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting.
30-1	John Mccann	My home and garden backs onto this land. I feel the possible 24hr, 7 day a week works will impact on myself and family life and health. The noise and light pollution, dirt and dust will I feel affect the health and wellbeing of local residents.	Lodway compound - noise impacts Lodway	Management and monitoring processes will be introduced to ensure that the effects of construction noise and vibration are controlled and that best practicable means are planned and employed during the

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			compound - light impacts Lodway compound - air quality	construction period. The contractor will be required to produce a noise and control plan as part of their detailed Construction Environmental Master Plan (CEMP). Some examples of management and monitoring processes the plan will include are: • noise control measures will be included in all method statements for the works; • details and locations of site hoardings, screens or bunds that will provide noise screening during construction; and • the procedures for installation of any noise insulation. Further information and examples of noise and vibration management can be found in section 10 of the Master CEMP (DCO Application reference 8.14). The compound will need to have temporary lighting in place. It will be designed, positioned and directed so as not to intrude unnecessarily on adjacent buildings, sensitive ecological receptors, structures used by protected species and other land uses. This will prevent unnecessary disturbance to local residents, light-sensitive species such as bats, railway operations, and passing motorists. This has been detailed in Section 3 of the Master Construction Environmental Master Plan (DCO Application reference 8.14). There will be a requirement for the Local Planning Authority to approve proposed lighting plans once a contractor has been appointed.

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				Air quality impacts which may result from the compound have been carefully considered and include activities such as the management of plant vehicles and equipment; transportation, storage and handling of materials; management of excavations and earthworks; and conveying, processing, crushing, cutting and grinding activities. The contractor will be required to incorporate effective measures into an Air Quality and Dust Management Plan. Some examples the plan may include are: • The site layout will be planned so that machinery (construction plant) and dust-causing activities are located away from residential properties, where reasonably practicable; • Damping down of dust generating vehicles and equipment and roads, with access routes to be kept clean by methods such as brushing and provision of dust suppression; • Any material stored on site will be in such a way as to reduce dust entrainment, for example by erecting temporary hoarding or sheeting as appropriate depending on the height and area of the stockpiles. Further information and examples of air quality management can be found in section 4 of the Master CEMP (DCO Application reference 8.14).

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30-2		Also the planned routes for lorries and workers arriving at all hours will be too much for our local residential streets. Many of which are used by school children walking to and from school. But these streets have no pavements and poor street lighting.		The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of the Port from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton in Gordano. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents and stakeholders in advance. Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted

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				with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network ; • Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities. The contractor will also be required to follow their own detailed CEMP based on the

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				Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting.
30-3		I am concerned the Lodway Farm construction compound is the not the best option for the planned works. I feel the other options would be more suitable. Especially the proposed use of the Bristol Port coal yard. This yard is no longer used for coal but does have access for cargo trains and HGV's to the local industrialised road network and motorway. Also a weigh bridge for keeping track of lorry weights. Plus the Bristol Port company have experience of loading and unloading bulk and heavy cargoes to and from trains and lorries. With all the method statements, policies, procedures, experienced personnel and machinery already in place. Hopefully the needs and profits of the local industry, Bristol Port company and Plasterboard company are not being put ahead of the local residents in the area. As I believe a joint venture between these two companies for major works to build new buildings on the coal yard is in hand. Plus the Port is I believe struggling for space on its land due to major demands from its customers. Hopefully these factors will not put pressure on council planners into deciding the Lodway compound is the easy option	Lodway compound - short term use Lodway compound - construction traffic Lodway compound - access routes	A compound at Lodway Farm is required for the construction period. Alternative sites were examined but this location is ideally suited for the amount of construction work required in the vicinity. It will support works happening through Pill including track works, station, earthworks and other structural works. It will be used for both the removal of old material such as railway ballast and track, and for bringing in new material to build the railway. This compound will also be used to store materials such as railway ballast or track before onward disposal or use by the scheme. The Applicant accepts that the use of the compound at Lodway is likely to affect nearby residents as is indicated in the ES Chapter 18 Cumulative Effects (DCO Application reference 6.21), however with the mitigations proposed it is intended that disruption will be kept to a minimum. Regarding the use of the Port's coal yard, discussions have taken place and will continue subject to commercial terms and the site being available. For the removal of the former railway track and ballast, it is anticipated that the old

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				ballast will be taken from the disused line to the Lodway Farm compound ready to be transferred to a Network Rail recycling facility elsewhere in the country. It will be transferred via HGV to Avonmouth or Portbury Docks (subject to agreement with the Port) ready to be loaded onto freight trains for removal out of the area. Should storage at the Docks not be possible, material would be removed by rail directly from the Lodway Farm compound by relaying a short section of track on the dis-used line with a connection onto the freight line (by reinstating Portbury Junction). For the construction of the new railway it is currently anticipated that the new track and ballast will be brought into the rail sidings at Avonmouth or Portbury Docks (subject to agreement with the Port). It will then be transferred by HGV via a new access route off Marsh Lane. Should the dock sidings or alternative storage location not be available, the material would be brought in by rail directly to the Lodway Farm compound, by relaying Portbury Junction as described above.
31-1	Mrs Mollie Young	Of paramount importance to me is as a resident of TRINDER ROAD and I feel that the issues with allowing such traffic with resulting dust, noise and pollution to come down this road and into Lodway Farm Yard make it totally unacceptable and should most definitely not be permitted. Also the access into the village either via Ham Green Hill and from the	Lodway compound - construction traffic Lodway compound -	The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of the Port from Marsh Lane. This section of the NCN26 will be closed with local diversions in

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		village centre along Lodway, or worse, access from St. George's Hill, along a very narrow road and then into Lodway from the other direction	access routes	place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton in Gordano. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents and stakeholders in advance. Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically:

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				• Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent improvement of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network ; • Limit the impacts on the natural and built environment. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting.
32-1	Susan Adamson	Portishead Branch line DCO scheme environmental statement, volume 2. Chapter 4. Description of the proposed works. Pages 4-18 to 4-21. Construction of the railway Works Numbers 1 and 1A 3 Options are proposed: Option 1, Option 2. Sub options a, b, c, d. Option 3 I request consideration the options proposed and rejection of Option 2 and sub options	Lodway compound - general	As stated in the ES Chapter 4 (DCO Application document reference 6.7), the preferred option at Lodway compound will be determined ahead of construction and may include a combination of options. This will be discussed and determined when a contractor is appointed, and within the confines of the options discussed.

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		a, b, c and d; where the use of Lodway construction compound is proposed;		A compound at Lodway Farm is required for the construction period. Alternative sites were examined but this location is ideally suited for the amount of construction work required in the vicinity. It will support works happening through Pill including track works, station, earthworks and other structural works. It will be used for both the removal of old material such as railway ballast and track, and for bringing in new material to build the railway. This compound will also be used to store materials such as railway ballast or track before onward disposal or use by the scheme. The Applicant accepts that the use of the compound at Lodway is likely to affect nearby residents as is indicated in the ES Chapter 18 Cumulative Effects (DCO Application reference 6.21), however with the mitigations proposed it is intended that disruption will be kept to a minimum. For the removal of the former railway track and ballast, it is anticipated that the old ballast will be taken from the disused line to the Lodway Farm compound ready to be transferred to a Network Rail recycling facility. It will be transferred via HGV to Avonmouth or Portbury Docks (subject to agreement with the Port) ready to be loaded onto freight trains for removal out of the area.

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				Should storage at the Docks not be possible, material would be removed by rail directly from the Lodway Farm compound by reinstating a short section of track on the dis-used line with a connection onto the freight line (by relaying Portbury Junction). For the construction of the new railway it is currently anticipated that the new track and ballast will be brought into the rail sidings at Avonmouth or Portbury Docks (subject to agreement with the Port). It will then be transferred by HGV via a new access route off Marsh Lane. Should the dock sidings or alternative storage location not be available, the material would be brought in by rail directly to the Lodway Farm compound, by relaying Portbury Junction as described above.
32-2		due the close proximity to the residential area, potentially 24 hours a day 7 days a week operations, the impact of noise, light, dirt pollution,	Lodway compound - noise impacts Lodway compound - light impacts Lodway compound - air quality impacts	Management and monitoring processes will be introduced to ensure that the effects of construction noise and vibration are controlled and that best practicable means are planned and employed during the construction period. The contractor will be required to produce a noise and control plan as part of their detailed Construction Environmental Master Plan (CEMP). Some examples of management and monitoring processes the plan will include are: • noise control measures will be included in all method statements for the works; • details and locations of site hoardings,

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			Lodway compound - visual impacts	screens or bunds that will provide noise screening during construction; and • the procedures for installation of any noise insulation. Further information and examples of noise and vibration management can be found in section 10 of the Master CEMP (DCO Application reference 8.14). The compound will need to have temporary lighting in place. It will be designed, positioned and directed so as not to intrude unnecessarily on adjacent buildings, sensitive ecological receptors, structures used by protected species and other land uses. This will prevent unnecessary disturbance to local residents, light-sensitive species such as bats, railway operations, and passing motorists. This has been detailed in Section 3 of the Master Construction Environmental Master Plan (DCO Application reference 8.14). There will be a requirement for the Local Planning Authority to approve proposed lighting plans once a contractor has been appointed. Air quality impacts which may result from the compound have been carefully considered and include activities such as the management of plant vehicles and equipment; transportation, storage and handling of materials; management of excavations and earthworks; and conveying,

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				processing, crushing, cutting and grinding activities. The contractor will be required to incorporate effective measures into an Air Quality and Dust Management Plan. Some examples the plan may include are: • The site layout will be planned so that machinery (construction plant) and dust-causing activities are located away from residential properties, where reasonably practicable; • Damping down of dust generating vehicles and equipment and roads, with access routes to be kept clean by methods such as brushing and provision of dust suppression; • Any material stored on site will be in such a way as to reduce dust entrainment, for example by erecting temporary hoarding or sheeting as appropriate depending on the height and area of the stockpiles. Further information and examples of air quality management can be found in section 4 of the Master CEMP (DCO Application reference 8.14). The temporary compound will have a visual impact to the local landscape during its use, however these impacts will be kept to a minimum where possible and mitigations put in place. Section 8 of the Master Construction Environmental Master Plan (DCO Application reference 8.14) details the mitigations

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				proposed, specifying that the height of the offices, workshops, plant, stockpiles, and storage elements within the vicinity of residential areas will need to be designed to ensure minimal visual disruption on the adjacent residential properties.
32-3		HGV traffic on residential streets, restricted parking,	Lodway compound - construction traffic Lodway compound - access routes	Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP

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				(DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network; • Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting. The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of the Port from Marsh Lane . This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton in Gordano. The access route

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				will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents in advance.
32-4		the destruction of green belt land (although this is noted as temporary) at Lodway Farm (9.128 hectares); and what appears to little attention or recognition of the environment impacts of such activity.	Lodway compound - short term use Lodway compound - long term use Lodway compound - ecology	The use of Lodway Farm as a construction compound will not change the status of this land from agricultural land in the green belt. At the end of construction the compound will be reinstated to its previous condition and use as committed to in the Master Construction Environmental Master Plan (CEMP) (DCO Document Reference 8.14). Ownership will remain with the freehold owner and it will not become land owned by the Council or Network Rail. Additionally, part of the area is for reptile translocation and there are constraints on after use. Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and

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				compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application

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				reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. The Master CEMP also proposes the contractor consult with the local Toad Patrol group at Pill and develop procedures to

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				reduce the impact of construction activities on toad migrations across construction sites and haul roads. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25).
32-5		Options 1 and 3 should be considered as the preferred solutions; or, Option 2 without the development of the Lodway construction compound; or, a combination of all 3 options again without the development of the Lodway construction compound.	Lodway compound – location and size	The compound location at Lodway Farm has been determined by a number of important factors. Multiple compounds are required across the length of the railway, and the site at Lodway in particular provides good access to the disused section of the railway and the existing freight line. It is close to the bridge over the footpath between Avon Road and Lodway Close which needs to be completely rebuilt and for which a large compound area is needed. It is also close to the M5 and accessible via Royal Portbury Dock Road, Marsh Lane and along the railway. This location is the only place where a large enough compound can be located that has access to the existing railway on the Pill side of the Avon Gorge. The compound will be temporary and only needed for the construction period. It will use most of the farm's fields.

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33-1	Colin Howells	Portishead is town with nearly 30,000 residents with only one main road, the A369, leading in and out of the town. This road leads to a motorway junction, Jct 19 of the M5. Any serious incident on the motorway or the A369 can cause tailbacks back into the town High Street. An alternative travel route out of Portishead is essential. The railway line is in place and rebuilding the track to take passenger traffic is vital both for the improvement of the environment and to connect Portishead to the national rail network.	Support	Support noted.
34-1	Health and Safety Executive	Please find HSE's Relevant Representation below: • HSE's overall land use planning advice (Reference: 'HSE's Land Use Planning Methodology'), in relation to the aforementioned Major Hazard Installation and Major Accident Hazard Pipelines, is to not advise against the proposed development. • With reference to drawings contained within document 'Portishead Branch Line (MetroWest Phase 1), TR040011, Applicant: North Somerset District Council 2.4 – General Arrangement Plans, The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009, regulation 5(2)(o), Planning Act 2008 Author: CH2M Date: November 2019', the proposed development area falls within HSE public safety zones associated with a Major Hazard Installation & Major Accident Hazard Pipeline(s). • The Major Hazard Installation is the former Coleman UK site at Gordano Gate, Portishead. Although the route of the proposed Portishead Branch Line (MetroWest Phase 1) lies outside the HSE consultation distance of the former	Health and safety	Noted.

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		Coleman UK site at Gordano Gate, Portishead, the proposed changes to the road and footpath in Quays Avenue lie within the middle and outer zones of the consultation distance. • As these proposals involves a single carriageway road, the sensitivity level (SL) of the proposed development is SL1. As HSE does not advise against SL1 developments within any zone, we therefore would not advise against the granting of planning permission for this element of the proposed development. • HSE has identified two Major Accident Hazard Pipelines (Natural Gas), Operator Wales and West Utilities, which traverse the proposed railway development in the vicinity of Lodwey: - Hallen / Nailsea (Duplicate, Ref:HD) [Transco ref: 1479, HSE ref 7210] - Hallen / Nailsea (Ref:HN) [Transco ref: 1494, HSE ref 7224] The route of the proposed Portishead Branch Line (MetroWest Phase 1) lie within the Inner, middle and outer zones of the consultation distances at this location. • As the proposed development involves a railway, the sensitivity level (SL) of the proposed development is SL1. As HSE does not advise against SL1 developments within any zone, we therefore would not advise against the granting of planning permission for this element of the proposed development, providing appropriate separation distances/protection measures are put in place for pipelines, which either run parallel with any proposed track routing and/or which the railway transverses. • Please note that, should a new Major Accident Hazard Pipeline be introduced or existing Pipeline modified prior to the determination of the present application, then HSE reserves the right to revise its		

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		advice. • Likewise, if prior to the determination of the present application, a Hazardous Substances Consent be granted for a new Major Hazard Installation or a Hazardous Substances Consent is varied for an existing Major Hazard Installation in the vicinity of the proposed project, then HSE reserves the right to revise its advice.		
35-1	Duncan Day	As a regular user of the Sheepway to Pill cycle path, part of National Cycle Network Route 26, I am concerned about the temporary diversion planned for the section of the path between Marsh Lane and Pill, and also the temporary closing of the path using the underbridge on Network Rail land for the Royal Portbury Road crossing. The diversion along Marsh Lane and through the local roads of Easton in Gordano to Pill is somewhat tortuous and will require many signs over a lengthy period so that cyclists not familiar with the area will be able to navigate the route with confidence. These signs will need to be almost of a permanent nature fixed to existing street furniture so that they survive effectively throughout the period of the diversion. The section along Marsh road itself is narrow and there should be warning signs for motorists to highlight the fact that that section of Marsh Lane will be carrying an increased amount of cycle traffic in both directions. Measures should be put in place to ensure that the access from the cycle path on to Marsh Lane is both signed and maintained to an adequate standard both in terms of hard surfaceing and regular cutting back of vegetation to maintain the full width of the path. Regarding the diversion from the path on to Royal Portbury Dock Road, the same signage and	General - NCN	The DCO Scheme is proposing to retain the existing cycle path NCN Route 26 (part of which is a bridleway) under the bridges between Portishead and Pill, for both pedestrians and cyclists, post the completion of the construction works. Refer to the Transport Assessment (TA) (EA Appendix 16.1, DCO Application Document Reference 6.25) for further information. During the construction phase it will be necessary to temporarily close the section of the NCN26 / bridleway between Marsh Lane and Avon Road, Pill. This section of the NCN26 / bridleway forms part of the haul route for HGV to access the Lodway Compound. As it would not be safe for pedestrians and cyclists to share the route with HGV's given the limited width of the track, it will be necessary to temporarily divert pedestrians and cyclists via the Marsh Lane bridge over the M5 to and from Pill village. The diversion will be sign posted and will be advertised before it is introduced.

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		maintenance requirements referred to above for Marsh Lane should apply. In addition, cyclists pedestrians and horse riders will need to cross Portbury Dock Road which is very heavily trafficked with limited vision and I would expect there to be provision made for a temporary crossing, preferably with a half way refuge, markings on the road surface and possibly a traffic light controlled crossings operated by button or sensors for users of the cycle path. Signs warning traffic of the crossing and possible a speed limit reduction would assist path users in negotiating this dangerous road crossing.		The existing crossing at Royal Portbury Dock Road will be permanently improved prior to the start of main construction works. The improvements include the clearance of vegetation to improve sightlines and enlarged waiting areas at either side of the road. A separate waiting area and fencing will be provided for equestrians. The outline design has had a Stage 1 Road Safety Audit. Similarly, the detailed design and construction will be subject to road safety audits. Upon completion of the construction works the NCN 26 / bridleway will be reinstated including the sections of route under the railway bridges that avoid the need to cross the highway. The sections of the NCN26 / bridleway that cross the highway at Marsh Lane and Royal Portbury Dock Road will also be retained, post completion of the construction works, At the M5 bridge an alternative route will be provided by extending the existing bridleway, as well as retaining the existing route parallel to the railway running under the M5. Further details of the proposed alterations and enhancements to the NCN Route 26 / bridleway are included on the National Cycle Network Temporary and Permanent Work Plans (DCO document reference 2.37).

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				The wider connectivity of the pedestrian and cycle path network has been considered as part of the TA (ES Appendix 16.1) of the ES Chapter 16.
36-1	Huw James	This project will bring in the green inclusive growth North Somerset needs, and make a commute via public transport to Bristol and beyond feasible for Portishead residents. With a 20 minute journey to Bristol connecting to a 70 minute journey to London, this scheme makes intercity travel much easier from Portishead. The railway is vital for cutting congestion, given that our town is cut off completely whenever the roads out of it face problems. I hope and believe that this project will be very successful and will support a future business case to provide an increased frequency service. An area under examined by the business case is the potential for increased tourism within Portishead upon the construction of the railway. The port marine development already draws in day trip tourists to our Rivera scene, to examine the port of Bristol from the comfort of coffee shops. This railway will unlock the potential for more frequent visitors and will be a catalyst for future placemaking in Portishead. As a Portishead district councillor I heavily endorse this project.	Support	Support noted.
37-1	Ian Pearce	Whilst I am in favour of the development and reopening of the Portishead to Bristol line, I have real concerns about the proposed development of Lodway Farm for use as a construction compound. My key concerns are: - increased traffic (both freight	Lodway compound - construction traffic	The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of the

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		and no freight) on residential streets (Redacted) I am concerned about the impact on the road surfaces which are already in poor repair, on safety as all roads have a relatively high pedestrian footfall (particularly children at the start and end of the school day) and on parking as there are no on street parking restrictions and I suspect that parking on site will be limited for workers, contractors and visitors and that spill over on to residential streets is inevitable. I would like clarity on what will be put in place to mitigate any impact in all areas outlined above and what % of all traffic will be accessing the site from The Breaches	Lodway compound - access routes Lodway compound - impact on road surfaces Lodway compound - mitigation for construction impacts	Port from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton in Gordano. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents and stakeholders in advance. Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO

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				Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network; • Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities.
37-2		- noise, light and air pollution impact for local residents/ How ill the impact of this be factored in to all activity on the site and the proposed timeline for development - impact of the work on the local environment	Lodway compound - noise impacts	The Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) provides a framework for environmental management during construction and specifies the over-arching

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			Lodway compound - light impacts Lodway compound - air quality impacts Lodway compound - duration and users	approach taken to manage adverse impacts. A more detailed CEMP is required from the contractor which will need to be approved before construction starts. The compound will be required from the start of the construction period for the duration of the project construction (approximately 24 months). Daytime working will be undertaken where possible, but periods of 24-hour working may be necessary. The Applicant and Network Rail have agreed to propose to the Local Planning Authority an amendment to the proposed working hours to 0630 (rather than 0600) to 1800 Mondays to Saturdays and no working on Sundays or Bank Holidays except as agreed with the LPA is proposed for works along the disused railway line. The construction workers will be permitted enter the construction compounds from 0600 Mondays to Saturdays and no working on Sundays or Bank Holidays, to undertake safety briefings and make preparations before the works commence from 0630. No plant will be operated between 0600 and 0630, but vehicles will be operated into and out of the compounds. The contractor will put in place specific 'considerate contractor' measures between 0600 and 0630 including no shouting by workers, no radios, no door slamming

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				etc, We expect to use S61s for construction noise. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting. Management and monitoring processes will be introduced to ensure that the effects of construction noise and vibration are controlled and that best practicable means are planned and employed during the construction period. The contractor will be required to produce a noise and control plan as part of their detailed Construction Environmental Master Plan (CEMP). Some examples of management and monitoring processes the plan will include are: • noise control measures will be included in all method statements for the works; • details and locations of site hoardings, screens or bunds that will provide noise screening during construction; and • the procedures for installation of any noise insulation. Further information and examples of noise and vibration management can be found in section 10 of the Master CEMP (DCO Application reference 8.14).

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				The compound will need to have temporary lighting in place. It will be designed, positioned and directed so as not to intrude unnecessarily on adjacent buildings, sensitive ecological receptors, structures used by protected species and other land uses. This will prevent unnecessary disturbance to local residents, light-sensitive species such as bats, railway operations, and passing motorists. This has been detailed in Section 3 of the Master Construction Environmental Master Plan (DCO Application reference 8.14). There will be a requirement for the Local Planning Authority to approve proposed lighting plans once a contractor has been appointed. Air quality impacts which may result from the compound have been carefully considered and include activities such as the management of plant vehicles and equipment; transportation, storage and handling of materials; management of excavations and earthworks; and conveying, processing, crushing, cutting and grinding activities. The contractor will be required to incorporate effective measures into an Air Quality and Dust Management Plan. Some examples the plan may include are: • The site layout will be planned so that machinery (construction plant) and dust-causing activities are located away from residential properties, where reasonably

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				practicable; • Damping down of dust generating vehicles and equipment and roads, with access routes to be kept clean by methods such as brushing and provision of dust suppression; • Any material stored on site will be in such a way as to reduce dust entrainment, for example by erecting temporary hoarding or sheeting as appropriate depending on the height and area of the stockpiles. Further information and examples of air quality management can be found in section 4 of the Master CEMP (DCO Application reference 8.14).
37-3		- what action will be taken to offset the impact of the development of green belt land I would also want clarity on when a decision will be made as to whether this compound is a temporary development as currently proposed or a permanent fixture. If temporary, what will be done to restore the land used? If permanent, what is the day to day, 'business as usual' activity likely to look like in the context of all the concerns raised above.	Lodway compound - short term use Lodway compound - long term use	The use of Lodway Farm as a construction compound will not change the status of this land from agricultural land in the green belt. At the end of construction the compound will be reinstated to its previous condition and use as committed to in the Master Construction Environmental Master Plan (CEMP) (DCO Document Reference 8.14). Ownership will remain with the freehold owner and it will not become land owned by the Council or Network Rail. Additionally, part of the area is for reptile translocation and there are constraints on after use.
38-1	Lands Improvement Holdings Ltd	Our representation will be in support of the proposed Portishead Branch Line – MetroWest Phase 1. There is a known shortage of housing throughout the country and a perceived concern relating to local traffic congestion and associated pollution	Support	Support noted.

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		contributing to public health and environmental issues. The Portishead Branch Line will provide a significant improvement to the local sustainable transport provision and should help to reduce dependency on private cars. This should lead to a reduction in congestion / pollution and ultimately facilitate the provision of new homes in the area whilst mitigating the effects on public health and the environment.		
39-1	National Grid Electricity Transmission PLC and National Grid Gas	Representation by National Grid Electricity Transmission Plc Application by North Somerset District Council for an Order Granting Development Consent for the Portishead Branch Line - MetroWest Phase 1 Order ("the Project") National Grid wishes to make a relevant representation to the Project in order to protect its position in relation to rights and interests it enjoys in land within and in close proximity to the proposed Order Limits. National Grid is the owner of the electricity transmission network and a statutory undertaker. National Grid enjoys rights and powers to extend its undertaking by virtue of the National Grid (Hinkley Point C Connection Project) Order 2016 and Correction Order (2017) (the "Order"). Pursuant to those rights and powers, National Grid is embarking upon the construction of a new transmission line in excess of 55 kilometres in length. The new transmission line runs through Somerset. The documentation and plans submitted for the Project have been reviewed in relation to impacts on National Grid's rights and interests located within this area. National Grid is concerned that the proposals contained with the application will result in serious detriment to its undertaking within	Interaction with NGET DCO Scheme	All matters raised in this Relevant Representation are dealt with in the updated Statement of Common Ground with National Grid Electricity Transmission PLC and National Grid Gas (Document Reference 9.3.8 ExA.SoCG-NGET.D1.V1) that is unlikely to be submitted to the ExA before Deadline 2.

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		the meaning of section 127 of the Planning Act 2008. National Grid will require protective provisions to be included within the DCO to ensure that its interests are adequately protected and to ensure compliance with relevant safety standards. As a responsible statutory undertaker, National Grid's primary concern is to meet its statutory obligations and ensure that any development does not impact in any adverse way upon those statutory obligations. National Grid reserves the right to make further representations as part of the examination process but in the meantime will seek to negotiate with the promoter with a view to reaching a satisfactory agreed position.		
40-1	Philip Virden	1. The scheme is outdated. In 2019 the Council declared a climate emergency and pledged to do all it could to cut North Somerset's carbon footprint. Running 36 diesel trains a day, most carrying very few passengers, can only raise emissions.	Business case - mode	The DCO Scheme builds on the region's significant investment programme in the West of England's transport network that aims to cut congestion, improve air quality, provide network resilience and reduce carbon emissions from the transport network. DCO document 6.6, Environmental Statement, Volume 2, Chapter 3 Scheme Development and Alternatives Considered explains the history of the development of the project including the options considered. A rail based scheme remains the most appropriate mode to achieve the stated aims and objectives.
40-2		2. Predicted passenger numbers show that over 80% of the trains will be more than 80% empty (under 20% seat occupancy); on average, trains will run at 12% of seat-capacity (88% empty). By 2036, this will only improve to 16% (84% empty). Only two	Business case – passenger demand	The forecast passenger demand is set out in detail in the Forecasting Report which is appendix 2.1 of DCO document 8.4 Outline Business Case 2017, Part 3 of 3, Appendix 1.1 to 5.1.

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		trains each weekday will run at anywhere near capacity, i.e., just 10 of the scheduled 236 trains per week, while only six other weekday trains will carry 50 or more passengers (20% of capacity). 3. Inconvenience: very few potential passengers will start their journey or reach their destination within only a few minutes' walk of a station, and 4. One train an hour is a grotesque schedule: no extra trains for rush hours, most other trains nearly empty.		. The forecast passenger demand has been benchmarked against actual passenger volumes at similar sized existing stations. The Outline Business Case including the forecast passenger demand was subject to technical scrutiny by the Department for Transport. Section 3.6 Capacity Analysis of the report states that in the opening year on the Portishead Line 220 of the 263 seats (of a three carriage Class 166 train) will be occupied in the morning peak, and 201 in the evening peak. By year seven after opening, there will be standing room only in the morning peak, at which point additional carriages will be sourced to form five carriage trains (subject to contractual arrangements), see figure 3.7 and figure 3.8. Figures 3.9 and 3.10 shows the demand curve through over a whole day, with demand reducing in the off peak, flattening around lunchtime before increasing into the evening peak. This demand curve is typical of the demand curve for any local/regional rail service in the west of England.
40-3		5. High environmental costs: burning carbon, pollution and unnecessary land use, especially since most trains will be almost empty and most passengers will have to get some distance to or from a station - probably by car, requiring a big new carpark at Portishead.	Operation – air quality	The air quality impacts of the scheme have been assessed. The ambient air quality has been combined with the modelled diesel emissions to assess the with and without scheme scenarios. This is included in the ES Appendix 7.2, Air Quality Modelling

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				Methodology Appendix (DCO Application Document Reference 6.25).
40-4		6. The official report estimates total running costs for the first three years up to £5m higher than revenues, but claims the trains 'could break even after 5 years'. However, passenger numbers are not expected to rise dramatically, and nothing is offered to support this optimism.	Business case – running costs	The forecast financial profile is set out in detail in the Forecasting Report which is appendix 2.1 of DCO document 8.4 Outline Business Case 2017, Part 3 of 3, Appendix 1.1 to 5.1. This is based on the forecast passenger demand and other variables including fare tariffs and estimated train operator costs. This work is presented as a range of scenarios, in light of the number of variables. In some of these scenarios the scheme breaks even after the first three years of operation, while for some of the scenarios, the break-even point is several years later. The Outline Business Case including the forecast revenue profile was subject to technical scrutiny by the Department for Transport.
40-5		Therefore, 7. Fares will always be expensive and/or massively subsidised.	Operation - fares	The final fare tariff for the re-opened Portishead line is yet to be determined and falls outside the control of the Scheme promotor. It will be set by the Department for Transport in conjunction with the scheme promoters (NSC & WECA) and the train operator in due course.
40-6		8. There was no investigation of other possible solutions to Portishead's peak traffic problems: no alternatives to trains were ever considered (e.g., a busway, or even new bus-lanes).	Business case - mode	DCO document 6.6, Environmental Statement, Volume 2, Chapter 3 Scheme Development and Alternatives Considered explains the history of the development of the project including the options considered. A

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		9. Taking account of capital and running costs, research finds diesel buses at least twice as efficient as trains, so 10. A busway would have much lower environmental costs, substantially mitigating rather than worsening the climate crisis. 11. There could be even higher efficiency/lower economic and carbon costs by running eco-buses (e.g., renewables-electric, biogas). 12. A busway would deliver a far superior service: after coming off the line, buses circulating routes at each end and using normal roadway stops would pass close to the starting points or destinations of most travellers. 13. A busway with a reversible one-way flow to serve each 'rush-hour' (actually three hours) could be scheduled for a bus every few minutes at peak times. Off-peak, Portbury Docks trains would be able to run as normal over a Strail busway. 14. Estimated capital outlay for a Strail busway: £40m; for trains: £116m. 15. With far lower capital and running costs, busway fares would be much lower than train fares.		rail based scheme remains the most appropriate mode to achieve the stated aims and objectives.
40-7		16. The public has never been informed of points 2, 5, 6, 7 and 8. That information has to be dug out from the very long and technical Funding Bid document.	General - consultation	Prior to the publication of the DCO application documents, communities, stakeholders, land owners, statutory bodies and affected parties are required to be consulted during the pre-application stage. The project took the opportunity to undertake two stages of consultation, as set out in two Statements of Community Consultation. The Statements of Community Consultation were consulted on twice (once for each stage) and

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				adhered to during both Stages 1 and 2 of Community Consultation. Stage 1 consultation was undertaken between June and August 2015 and Stage 2 consultation was undertaken between October and December 2017, with an extension of time for a small number of statutory bodies into 2018. Wider stakeholders including local community groups, non-statutory bodies and the wider public etc, were formally consulted in both Stage 1 and Stage 2, whilst the Stage 2 period was also the formal DCO consultation for statutory bodies, land owners, government agencies and departments, and parties directly affected by the proposals. Summaries of the works were provided in the consultation leaflets compiled for both consultation stages, and specifically prepared drawings that were easy to interpret. The ES also includes a non-technical summary - a useful starting point for non-specialists. The majority of consultees were able to view the material and respond in the given consultation periods, the minimum of which is 28 days; we allowed 6 weeks. This is reflected in the number of responses received with almost 2,000 separate responses received over both stages. The level of support for the scheme is also very high with 95% of community respondents fully or mainly in support of the proposals. All

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				known queries and requests were responded to within the consultation period, which was organised via a dedicated set of contact details to ensure queries were handled adequately. Further information on the project consultation is set out in the DCO Consultation Report (DCO Application Document Reference 5.1). The 'technical Funding Bid document' is the Outline Business Case and accompanying proforma for the Large Local Major Scheme bid that was submitted to the Department for Transport in December 2017. The Outline Business Case and accompanying proforma have been in the public domain via our travelwest website since December 2017 - https://travelwest.info/projects/MetroWest
41-1	Barry Cash	Response to Bristol MetroWest Phase 1 DCO. Feb 2020 by Barry Cash This DCO has been applied for without considering alternative proposals e.g. the Portishead Busway campaign plan to provide a peak time only bus service on the railway using "Strail" panels. The National Policy Statement for National Networks has 12 paragraphs setting out Government goals that this proposal does not help in meeting. The busway proposal does help in achieving them.	Business case - mode	The Applicant's response to all matters raised in this Relevant Representation is detailed in correspondence with Barry Cash, which is provided at Appendix C of this document.
41-2		The passenger forecast shows that only rush hour trains will be full. Initially only 12% of seats will be	Business case –	

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		occupied. Even after 15 years only 16.3% will be filled. Both Bristol and North Somerset Council's have declared a climate emergency. Running 120 tonne trains up and down the line with no one on them will not reduce our fossil fuel use.	passenger demand	
41-3		The cost is £116m for one train per hour. A further £55m will be required to provide two trains per hour. (Even more empty seats). The cost of the busway is £40m. A massive saving for the taxpayer. A busway will offer a better service to passengers. It could start from the far end of Portishead in the Redcliffe bay area and instead of stopping at Temple Meads could continue on to the central areas of Bristol. Alternatively the buses could join the 31 miles of dedicated Metrobus tracks at Ashton gate and serve many other areas of Bristol. A new station and car park will be required for the trains. The busway will not need this.	Business case – mode	
41-4		The official report estimates total running costs for the first three years up to £5m higher than revenues, but claims the trains 'could break even after 5 years'. However, passenger numbers are not expected to rise dramatically, and nothing is offered to support this optimism. Therefore, fares will always be expensive or massively subsidised.	Business Case – revenue & fares	
41-5		When the total fossil fuels used in both construction and use is taken account of research finds diesel buses much more efficient than trains. A busway would have much lower environmental costs,	Environment al Impact Assessment	

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		substantially mitigating rather than worsening the climate crisis. There could be even higher efficiency/lower economic and carbon costs by running buses on electricity, bio gas. LPG etc. Trains will be diesel unless a huge amount of extra money is spent to electrify the line and this is not even propose at present. A busway with a reversible one-way flow to serve each 'rush-hour' (actually three hours) could provide a bus every few minutes at peak times. Off-peak, Portbury Docks trains would be able to run as normal over a Strail busway. With far lower capital and running costs, busway fares would be much lower than train fares.		
42-1	Paul Kent	My concerns as a resident of Easton in Gordano relate to the construction period of the railway. The village is full of narrow roads and awkward areas many of which have been identified as routes for over 3000 HGV movements. The storage compounds are situated in places which are difficult to access	Lodway compound - access routes	The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of the Port from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton in Gordano. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include

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				temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents and stakeholders in advance. Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP

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				(DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network ; • Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting.
42-2		and could well result in the irretrievable loss of environmentally significant assets.	Lodway compound – long term impacts	The use of Lodway Farm as a construction compound will not change the status of this land from agricultural land in the green belt. At the end of construction the compound will be reinstated to its previous condition and use as committed to in the Master Construction Environmental Master Plan (CEMP) (DCO Document Reference 8.14). Ownership will remain with the freehold owner and it will not become land owned by the Council or Network Rail. Additionally, part of the area is for reptile translocation and there are constraints on after use..

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				Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians.

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				The Master CEMP also proposes the contractor consult with the local Toad Patrol group at Pill and develop procedures to reduce the impact of construction activities on toad migrations across construction sites and haul roads. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25). Other environmental assets such as heritage and soils have also been detailed in the relevant chapters of the ES.
42-3		The car parking implications for residents, visitors and workers have not been fully appreciated and the difficulties for the disabled and the very young at key movement times of the day - eg school times- could well cause unintended hazards and risks.	Lodway compound – construction traffic	See 42-1
42-4		These reasons as well as the environmental impact of up to 24 hour working would make the atmosphere of the village very different and certainly more pressurised	Lodway compound - mitigation for construction impacts	Daytime working will be undertaken where possible, but periods of 24-hour working may be necessary because it affects the existing operational railway . Facilities provided at this compound will include parking for staff, and temporary cabins for the on-site workers. The Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) provides a framework for

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				environmental management during construction and specifies the over-arching approach taken to manage adverse impacts. A more detailed CEMP is required from the contractor which will need to be approved before construction starts. The compound will be required from the start of the construction period for the duration of the project (approximately 24 months).
43-1	Greenslade Taylor Hunt on behalf of Stephen Bullock	My Client wished to register as an interested party as he is concerned about the impact of the scheme on the area of Easton in Gordona. He has land that is potential affected by the scheme and feels he has not be adequate consulted as he not sure how the scheme will affect his land now or in the future. Once we have the full facts on how my clients land is going to be affected we reserve the right to add further comments.	Land, access, property	There are three property owners and one of them has represented the others during discussions. During discussions with one of the property owners on 13 September 2019, the Applicant discussed the confirmed land requirements for and proposed acquisition types, ahead of finalising the Order limits ahead of DCO submission. During this conversation, the property owner's understanding was that they felt that they had not been consulted on proposals by the project and did not have the opportunity to respond. The Applicant discussed the previous S42 consultations dates and that a response had not been received by the three property owners. As agreed during this call, on 19 September 2019, the Applicant sent email correspondence enclosing; - S42 letter & notice served 19 October 2017 with relevant S42 Land Plan - S42 Letter & notice (for land changes following October 2017 consultation), served 12th June 2018 with relevant S42 Land Plan showing changes to acquisition type

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				Within the email sent on 19th September 2019, the Applicant advised the property owner that the project would extend the deadline to 1st October 2019, for feedback on the proposals from the three property owners. This was due to an ongoing S42 consultation during the tie of the conversation and was advised within a formal letter attached to the email. Following this email correspondence, the Applicant received an email on 21st September 2019 from the land agent representing the three property owners. Since the land agent has been appointed by the joint property owners, the Applicant has been in negotiations to acquire and lease land by agreement. Discussions regarding draft Heads of Terms from the Applicant are currently progressing. The draft Heads of Terms ("HoTs") set out the Applicant's offer for an option agreement to; (1) acquire land to the north of the M5 and (2) lease land to the south of the M5. An option agreement for freehold acquisition of land to north of the M5 comprises • Plot 05/85 – land required for new pond & associated ecological works • Plot 05/86 – land required for maintenance of embankment and to provide topographical adjustments to provide flood storage capacity.

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				An option agreement for an 8 year lease of land to south of the M5 • Plots 05/151 and 05a/05 – land required for temporary compound/storage, environmental mitigation and associated installations required for environmental mitigation purposes. The Applicant continues negotiations and hopes to reach an agreement.
44-1	Greenslade Taylor Hunt on behalf of Susan Freestone	The Client Mrs Freestone feels as though there has been a lack of communication on how the scheme will impact on her property and what her property is going to use for. She only found out late in the process that her land was going to be needed/ affected by the scheme. She feels she is back into a corner with knowing the full facts. She therefore wishes to raise an objection on not being properly consulted on how the scheme will affect her property now or in the future. We reserve the right to submit further information at a later date.	Land, access, property	The Applicant has been in contact with the joint property owner since 2015. The first point of contact was in 2015 to verify ownership information and confirmed by an RFI response from one of the property owners on behalf of the joint property owners and engagement with the property owner has progressed on that basis. An initial site meeting was held in late 2015 with their late brother to discuss land requirements at that stage of the project. During 2016 to 2017, due to the nature of the access and engineering results for drainage, the project design works for this bridge caused the land requirements in this area to change. Initially, the design proposed a replacement of the underbridge. A proposal was then brought forward to infill the bridge. However, this proposal had significant impact on the utilities running under the bridge and so the design reverted to the original; replacement of the bridge deck. As the project design developed and land requirements were confirmed

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				among the wider project team, these changes to design impacted the amount of land required from the three property owners. All three joint property owners were formally notified of S42 consultation in October 2017. Between late 2017 and early 2018, the project discussed the requirements for the extent of the land and the associated acquisition type. These discussions were held in conjunction with discussions with Natural England regarding environmental mitigation factors. On 22nd February 2018, a letter and plan was sent to the property owner from the Applicant, inviting her to meet and discuss the latest land requirements. A further additional consultation was held in March 2018 following changes to land requirements. During both consultations, all three property owners were given the opportunity to provide feedback on the proposals of the Applicant. During the March 2018 consultation individual plans were enclosed with the notice and cover letter; including the reason for the additional consultation. No responses from the joint property owners were received following the two consultations.

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				Following the consultation held in March 2018 the Applicant discussed the latest proposals with the property owner during a telephone call in July 2018. The Applicant advised that a proposal for acquisition of the full land title would be discussed among the wider project team. During discussions with the property owner on 13th September 2019, the Applicant confirmed the requirements for, and proposed acquisition types, ahead of finalising the Order limits ahead of DCO submission. During this conversation, the property owner's understanding was that she felt she had not been consulted on proposals by the project and did not have the opportunity to respond. The Applicant sent email correspondence enclosing; - S42 letter & notice served 19th October 2017 with relevant S42 Land Plan - S42 Letter & notice (for land changes following October 2017 consultation), served 12th June 2018 with relevant Land Plan showing changes to the proposed acquisition. Within the email sent on 19th September 2019, the Applicant advised the property that the project would extend the deadline to 1st October 2019, for feedback on the proposals from the three property owners. Following this email correspondence, the Applicant received an email on 21st September 2019

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				from the land agent representing the three property owners. Since then the Applicant has been in negotiations to acquire and lease land by agreement. Discussions regarding draft Heads of Terms from the Applicant are currently progressing. Mrs Freestone made further representations to the Planning Inspectorate on 20 September 2020. A copy of Mrs Freestone's representation and the Applicant's response to this, dated 14 October 2020, is included at Appendix F. Mrs Freestone attended the Open Floor Hearing on Monday 19 October and made representations to the ExA. The Applicant's response to Mrs Freestone's oral representation is contained in Document 9.5 ExA.OFH.D1.V1. The Applicant continues to discuss negotiations with the agent and Mrs Freestone and hopes to reach an agreement.
45-1	Adam Simon Jacklin	I am interested in the local impacts and benefits this proposal and service will bring to the village of Pill. I am interested in working with our community leaders to develop the best solution that serves delivery partners, NR, franchise owner, users and the local community.	Support	Support noted.

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46-1	Bristol City Council	Bristol City Council has received notification from North Somerset Council (the Applicant) of the acceptance of this application for a Development Consent Order. Bristol City Council is a Host Authority and as such is registering as an 'Interested Party' for the MetroWest Phase 1 Examination. In summary, Bristol City Council as Local Planning Authority supports the principle of the proposals put forward for the re-opening of the Portishead Branch Line and the associated improvements as set out within our Policy BCS10 'Transport and Access Improvements'. We would however like the opportunity to comment on the following main issues given the potential impacts upon the built and natural environment of the City of Bristol and its people. Discussions are ongoing between the Applicant and Bristol City Council as Host Authority regarding the proposals and proposed mitigation. The points below largely accord with our representations made during the Section 42 Consultation, which are included within the Applicant's Consultation Report: • Transport, including the proposed highway improvements on Winterstoke Road and management of Construction Traffic. • Ecology and biodiversity, in particular the loss of trees within Bristol and the potential impact on designated sites including: the Avon Gorge	Various	All matters raised in this Relevant Representation are dealt with in the updated Statement of Common Ground with Bristol City Council (Document Reference 9.3.2 ExA.SoCG-BCC.D1.V1) that is envisaged will be submitted to the ExA prior to Deadline 1.

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		Woodlands SAC; the Severn Estuary SPA; and Severn Estuary Ramsar site. • Flood risk, in particular the requirement for flood plain compensation and for a positive drainage system at the Clanage Road compound given its location within Flood Zone 3, and the risk of damage to watercourses, including culverts. • Land contamination, in relation to the baseline data/information, risk to controlled waters and groundwater, the potential remediation of ballast and the operational impacts upon the environment. • Landscape and visual impact; in relation to the impact upon the setting of designated heritage and natural environment assets. • Construction impacts including the measures proposed within the Framework Construction Environmental Management Plan and the Construction Traffic Management Plan. • Schedule 2 Part 3 of the Draft DCO concerning arrangements for the discharge of Requirements. A full assessment of proposals will be included within the Council's Local Impact Report and the Council is proactively working with the Applicant to agree a Statement of Common Ground which will confirm the position regarding these matters. Bristol City Council will continue to work with the Applicant and other stakeholders to ensure the proposals meets its objectives to support economic growth and improve the accessibility to the rail network whilst mitigating potential negative effects.		

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47-1	Christine Weidner	I live very close to Lodway Farm and have only in the past week or so heard that there are plans to use the farm land to complete sections of the Metrowest line to Portishead 24 hours a day,	Lodway compound - consultation	Communities, stakeholders, land owners, statutory bodies and affected parties are required to be consulted during the pre-application stage. The project took the opportunity to undertake two stages of consultation, as set out the Statement of Community Consultation (as revised). Stage 1 consultation was undertaken between June and August 2015 and Stage 2 consultation was undertaken between October and December 2017, with an extension of time for a small number of statutory bodies into 2018. Wider stakeholders including local community groups, non-statutory bodies and the wider public etc, were formally consulted in both Stage 1 and Stage 2, whilst the Stage 2 period was also the formal DCO consultation for statutory bodies, land owners, government agencies and departments, and parties directly affected by the proposals. Almost 2,000 separate responses were received over both stages. The level of support for the scheme is also very high with 95% of community respondents fully or mainly in support of the proposals. All known queries and requests were responded to within the consultation period, which was organised via a dedicated set of contact details to ensure queries were handled adequately. Further information on the project

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				consultation is set out in the DCO Consultation Report (DCO Application Document Reference 5.1).
47-2		and that heavy goods vehicles will be travelling along The Poplars to access the farm. I am concerned about the traffic, noise and light pollution the proposed plans will create.	Lodway compound - construction traffic Lodway compound - access routes Lodway compound - noise impacts Lodway compound - light impacts	The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of the Port from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton in Gordano. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents and stakeholders in advance. Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before

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				construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent improvement of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network; • Limit the impacts on the natural and built environment. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be

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				developed and approved prior to works starting.
47-3		I am also concerned that these more detailed plans have not been made widely known to the community of Pill and Easton-in-Gordano.	Lodway compound - consultation	See 47-1.
48-1	Craig Thomson	In favour	Support	Support noted.
49-1	Daphne Havercroft	As a volunteer who has helped toads to cross the cycle path at Lodway I am concerned that their needs have not been properly considered in planning by Metrowest so that they can continue to safely access their breeding sites.	Lodway compound - toads	Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor is obliged to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with Pill Toad Patrol group before a Contractor is appointed and agree mitigation measures that the Contractor should employ.
50-1	David Mason	I live in close proximity to the railway line and have already received planning notifications. I wish to continue to receive any information which becomes available and have the opportunity to comment on it.	Land, access, property	Noted.
51-1	Dominic Fatchen	I support the reopening of the line between Portishead to Bristol, and I am registering an interest as a private citizen.	Support	Support noted.

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51-2		There are several issues that have yet to be resolved with the link with regards to Pill and its proposed station, predominantly with regards access routes within its catchment area	Pill - station access	General concerns were raised at the Stage 1 Consultation regarding the new pedestrian bridge entrance and related footway changes, and the car park layout. These comments were reviewed and new designs were considered and consulted on during the Pill Station and Ashton Vale Road alternative access Micro-consultation (informal consultation) (Appendix I5 of DCO Application document reference 5.1). Feedback led to the creation of a new entrance, station forecourt and disabled parking from the acquisition and demolition of No. 7 Station Road, Pill. This also meant the new pedestrian bridge and related footway were no longer required, and the moving of disabled parking bays to the new forecourt meant changes could be made to the car park layout and entrance/exit. The preferred design from the Micro-consultation was consulted on during the Stage 2 Consultation, and the final designs are shown in the S050 Pill Station Proposed Station Layout plan (DCO Application Document Reference 2.19) and Pill Station Car Park and PSP Layout, Landscaping, Lighting and Access Plan (DCO Document Reference 2.42). In addition to these design changes, the route between the bus stops on Heywood Road and the platforms will be upgraded to allow a step free route.
51-3		and car parking arrangements.	Pill - parking	The impacts on parking provision are discussed within Section 16.6 of the

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				Environmental Statement Chapter 16 – Transport, Access and Non-Motorised Users (DCO Application Document Reference 6.19), and Section 7 of the Transport Assessment (ES Appendix 16.1, DCO Application Document Reference 6.25). Specifically for Pill, a combination of the following factors will limit the impacts as much as possible: • the provision of a new car park; • the provision of a forecourt area and disabled parking at the station entrance; • TROs on Station Road, Heywood Road and Myrtle Hill to mitigate for an increase in traffic flows as described in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25). The design provides adequate parking for the demand forecasts reported in the Preliminary Business Case 2014 and Outline Business Case 2017 (DCO Document References 8.3 and 8.4 respectively), and these were continually reviewed as the DCO Scheme progressed due to the number of concerns raised about parking at Stage 1 Section 47 consultation. The Applicant is both the DCO Scheme promoter and the local Highway Authority and therefore has powers to control on-street parking, and will also manage the car parks, already agreeing to short stay and all-day tariffs and season permits, and will monitor its use. Residents' parking was

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				considered after the Stage 1 Consultation but required discussion at Local Authority level as part of a wider parking strategy, which is currently under review and may be implemented in other areas before a possible wider roll-out. There will be post-implementation monitoring of parking provision within Portishead and Pill, detailed in Table 16.8 of the ES Chapter 16 – Transport, Access and Non-Motorised Users (DCO Application Document Reference 6.19). Further consideration of wider parking issues have been reported in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25).
51-4		I am also interested in seeing the eventual level of service the route will provide in both directions as a replacement for my car journeys.	Operation - frequency / capacity	Technical assessment work has been undertaken to quantify the rail passenger demand, for the proposed hourly train service. The assessment indicates 3 car units (3 train carriages) will provide adequate passenger capacity in the early years of operation, providing up to 270 seats. In the medium to long term additional carriages could be introduced and the platforms at Portishead and Pill stations will be sufficient for 5 train carriages, providing up to 450 seats. Further information has been reported in more detail in the Outline Business Case 2017 (DCO Document Reference 8.4).
52-1	Elizabeth Milner	Over the last 10 years I have helped with migrating toads as part of Pill Toad Patrol, in an area adjacent to the M5 Avonmouth Bridge. They travel to the ponds near the bridge in early spring every year,	Lodway compound - toads	Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the

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		crossing the land on Lodway Farm nearby (that is I believe now under threat from development into a storage compound for the railway works) and their final obstacle before they can reach the ponds is the high-kerbed, concrete surfaced cycle path that provides access to the foot/cycleway across the bridge. It's at this location that we assist the toads towards their destination as they are often thwarted by the height of the kerb, or fall through the drain covers set into the roadway. The ponds they are aiming for are only a few meters from here so lifting them off the road or out of the drains and placing them on the edge of the field where the ponds are sited, gives them a better chance of reaching their destination. In 45 minutes on just one night recently over 200 toads were escorted across this hazardous pathway, similar numbers are being recorded each night in damp weather over several weeks. It's a very important breeding site. I understand it's this same cycleway that is the proposed route for HGVs to access the storage compound. This will have devastating impact on the toad (and other amphibian, there are also frogs and newts) population. I sincerely hope that some form of mitigation will be put in place for this important wildlife location.		cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor is obliged to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed and agree mitigation measures that the Contractor should employ.
53-1	Francesca Milner	I am extremely concerned about plans to concrete an area which is a prime habitat for endangered toads. I would like to understand how this damage could be mitigated or what considerations have been made with regard to this.	Lodway compound - toads	Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road,

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				Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor will be asked to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed to discuss mitigation measures that the Contractor should employ.
54-1	Graham Hopkins	I want to see the railway built but am concerned about the possible impact on wildlife of some aspects of the construction phase - for example, the use of land at Lodway Farm for a compound, given the use of the land by many creatures, including amphibians.	Lodway compound - ecology	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA

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				– 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and

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				the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. The Master CEMP also proposes the contractor consult with the local Toad Patrol group at Pill and develop procedures to reduce the impact of construction activities on toad migrations across construction sites and haul roads. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25).
54-2		I am also worried about the traffic generated by the construction phase and want to see plans that minimise its impact on both the village (of Pill) and other roads locally.	Lodway compound - construction traffic	Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before

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			Lodway compound - access routes	construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network ; • Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities.

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				The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting. The main access route is likely to be via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of the Port from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton In Gordano. The access route will be confirmed ahead of construction and will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents in advance.

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55-1	Helen Sherborne	I am concerned that toads, frogs and newts, were not fully considered in the environmental survey. I would like to be assured that they will be able to continue their migration over the Breeches, across the entirety of Lodway Farm fields, over the rail track, across the cyclepath and into the breeding pond.	Lodway compound - ecology	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey.

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				The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also

PINS Ref No. with issue ref	Organisation /Person	Relevant Representation	Key Issues	Applicant's Response to Relevant Representation
				suitable terrestrial habitat for amphibians. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25). Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor will be asked to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed to discuss mitigation measures that the Contractor should employ.
56-1	Hollye Kirkcaldy	reinstatement of the train line from Portishead through Pill and on to Bristol is vital to alleviate some of the major traffic congestion on the A369 currently.	Pill - parking	The impacts on parking provision are discussed within Section 16.6 of the Environmental Statement Chapter 16 –

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		- consideration must be made to parking arrangements in the vicinity of the new Pill station in order to avoid residents being left without any on-street parking spaces due to commuters driving to the area and leaving their car to get on the train. A resident permit scheme must be considered		Transport, Access and Non-Motorised Users (DCO Application Document Reference 6.19), and Section 7 of the Transport Assessment (ES Appendix 16.1, DCO Application Document Reference 6.25). Specifically for Pill, a combination of the following factors will limit the impacts as much as possible: • the provision of a new car park; • the provision of a forecourt area and disabled parking at the station entrance; • TROs on Station Road, Heywood Road and Myrtle Hill to mitigate for an increase in traffic flows as described in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25). The design provides adequate parking for the demand forecasts reported in the Preliminary Business Case 2014 and Outline Business Case 2017 (DCO Document References 8.3 and 8.4 respectively), and these were continually reviewed as the DCO Scheme progressed due to the number of concerns raised about parking at Stage 1 Section 47 consultation. The Applicant is both the DCO Scheme promoter and the local Highway Authority and therefore has powers to control on-street parking, and will also manage the car parks. The final car park tariffs are yet to be determined, however there will be short stay and all-day tariffs and season permits. There will be post-implementation monitoring of parking provision within Portishead and

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				Pill, detailed in Table 16.8 of the ES Chapter 16 – Transport, Access and Non-Motorised Users (DCO Application Document Reference 6.19). Further consideration of wider parking issues have been reported in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25).
57-1	Ian Davey	I'm concerned about the impacts on wildlife at lodway farm	Lodway compound - ecology	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site)

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				• Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for

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				individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. The Master CEMP also proposes the contractor consult with the local Toad Patrol group at Pill and develop procedures to reduce the impact of construction activities on toad migrations across construction sites and haul roads. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25).
58-1	Ian Mcdade	I wish to offer my support for the Railway project with ideas that may help.	Support	Support noted.
59-1	Janet Epplestone	This is an important development for the village and community as a whole and will affect all of us in many ways. I am very much in favour.	Support	Support noted.
60-1	Jill Coleman	I am concerned for local wildlife along the tracks in Easton-in-Gordano and Pill especially the toads. Metrowest have put in mitigation measures for wildlife in a number of locations but not the proposed depot at Lodway Farm. Have Metrowest missed out	Lodway compound - ecology	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway

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		the toads due to an oversight in their environmental surveying and will they allow mitigation measures that will allow the toads to continue their migration over the Breeches, across the entirety of Lodway Farm fields, over the rail track, across the cyclepath and into the breeding pond? This is a very important site for the toads.		have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at

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				Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application

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				reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25). Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor will be asked to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed to discuss mitigation measures that the Contractor should employ.
61-1	John Norval	Commuter parking in Ham Green and Pill	Pill - parking	The impacts on parking provision are discussed within Section 16.6 of the Environmental Statement Chapter 16 – Transport, Access and Non-Motorised Users (DCO Application Document Reference 6.19), and Section 7 of the Transport Assessment (ES Appendix 16.1, DCO Application Document Reference 6.25). Specifically for Pill, a combination of the following factors will limit the impacts as

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				much as possible: • the provision of a new car park; • the provision of a forecourt area and disabled parking at the station entrance; • TROs on Station Road, Heywood Road and Myrtle Hill to mitigate for an increase in traffic flows as described in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25). The design provides adequate parking for the demand forecasts reported in the Preliminary Business Case 2014 and Outline Business Case 2017 (DCO Document References 8.3 and 8.4 respectively), and these were continually reviewed as the DCO Scheme progressed due to the number of concerns raised about parking at Stage 1 Section 47 consultation. The Applicant is both the DCO Scheme promoter and the local Highway Authority and therefore has powers to control on-street parking, and will also manage the car parks, already agreeing to short stay and all-day tariffs and season permits, and will monitor its use. Residents' parking was considered after the Stage 1 Consultation but required discussion at Local Authority level as part of a wider parking strategy, which is currently under review and may be implemented in other areas before a possible wider roll-out. There will be post-implementation monitoring of parking provision within Portishead and Pill, detailed in Table 16.8 of the ES Chapter 16 –

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				Transport, Access and Non-Motorised Users (DCO Application Document Reference 6.19). Further consideration of wider parking issues have been reported in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25). Ham Green is sufficiently far from Pill station that commuter parking is not anticipated to be an issue in this area.
61-2		Adding Ham Green Halt as a stop	Business case - scope	The DCO Scheme's scope was determined early in the project and has been outlined in the Business Cases to date. The scheme's scope had to be clearly justified and agreed through the scheme's governance processes early on in the scheme's development for all the impacts and interfaces to be determined. For example additional stations would impact on train pathing and timetable and likely require additional infrastructure requirements, resulting in additional land and additional environmental impact assessment.
61-3		Reserved seating for Pill residents who commute	Operation	This will be a matter for the operator at the time.
61-4		Effect on cycle path along river	General - NCN	The DCO Scheme is anticipates some short duration closures of the River Avon Tow Path during the construction phase. These closures will be advertised and diversions will be sign posted before the closures are introduced. The details of the diversions routes are set out in the Diversion Routes for Pedestrians and Cyclists (DCO Document Reference 2.34). The wider connectivity of

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				the pedestrian and cycle path network has been considered as part of the TA (ES Appendix 16.1) of the ES Chapter 16. Details of the proposed alterations and enhancements to the NCN Route 26 / bridleway are included on the NCN Temporary and Permanent Works Plans (DCO Document Reference 2.37).
61-5		Are the trains going to be big enough to cope with the large number of people who will want to use them especially as First Bus are reducing Pill services against the will of residents	Operation - frequency / capacity	Technical assessment work has been undertaken to quantify the rail passenger demand. The assessment indicates 3 car units (3 train carriages) will provide adequate passenger capacity in the early years of operation, providing up to 270 seats. In the medium to long term additional carriages could be introduced and the platforms at Portishead and Pill stations will be sufficient for 5 train carriages, providing up to 450 seats. Further information has been reported in more detail in the Outline Business Case 2017 (DCO Document Reference 8.4).
61-6		Pill Road and Ham Green hill will struggle to cope with increased commuter traffic wanting to park - parking restrictions will be need as with Leigh Woods area	Pill - parking	See 61-1.
62-1	Josh Arnold	Benefits to Pill itself as trains will be full by the time they make it to the village.	Operation - frequency / capacity	The forecast passenger demand is set out in detail in the Forecasting Report which is appendix 2.1 of DCO document 8.4 Outline Business Case 2017, Part 3 of 3, Appendix 1.1 to 5.1. The forecast passenger demand has been benchmarked against actual passenger

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				volumes at similar sized existing stations. The Outline Business Case including the forecast passenger demand was subject to technical scrutiny by the Department for Transport. Section 3.6 Capacity Analysis of the report states that in the opening year on the Portishead Line 220 of the 263 seats (of a three carriage Class 166 train) will be occupied in the morning peak, and 201 in the evening peak. By year seven after opening, there will be standing room only in the morning peak, at which point additional carriages will be sourced to form five carriage trains (subject to contractual arrangements), see figure 3.7 and figure 3.8.
63-1	Judy Copeland	Please consider the welfare of the hundreds of Toads which annually in Feb and March cross the Cycle Path leading from Pill to the Avon Bridge to get to their breeding ponds. Any development over this path will prevent them from reaching their breeding area near the River Avon. This would be disastrous for their future conservation.	Lodway compound - toads	Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor will be asked to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill

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				Toad Patrol group before a Contractor is appointed to discuss mitigation measures that the Contractor should employ.
64-1	Julia Davis	Train is vital for Pill which has an ageing population and has recently had its bus service slashed by up to 50% off peak. The A369 is congested as is junction 19 of the M5 so it is uncomfortable for elderly drivers to negotiate their way into Bristol and onwards. Roads into Portishead, the nearest place for supermarket shopping is also very busy so any easing of the busy roads is gratefully received.	Support	Support noted.
65-1	Julian Eley	Infrastructure	General - infrastructure	The infrastructure planned will be adequate to run the service and is described in detail in the DCO application documents.
65-2		services	Operation - frequency / capacity	Technical assessment work has been undertaken to quantify the rail passenger demand. The assessment indicates 3 car units (3 train carriages) will provide adequate passenger capacity in the early years of operation, providing up to 270 seats. In the medium to long term additional carriages could be introduced and the platforms at Portishead and Pill stations will be sufficient for 5 train carriages, providing up to 450 seats. Further information has been reported in more detail in the Outline Business Case 2017 (DCO Document Reference 8.4).
65-3		Supporting bus services	Operation - public transport integration	Local bus services have been considered within the Transport Assessment (TA) (EA Appendix 16.1, DCO Application Document Reference 6.25), and bus stops provided outside Portishead station on Quays Avenue and modification to the bus stop nearest Pill

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				Station. However there are no plans for new bus services as this is outside the scope of the DCO Scheme.
65-4		car parking	Pill - parking	The impacts on parking provision are discussed within Section 16.6 of the Environmental Statement Chapter 16 – Transport, Access and Non-Motorised Users (DCO Application Document Reference 6.19), and Section 7 of the Transport Assessment (ES Appendix 16.1, DCO Application Document Reference 6.25). Specifically for Pill, a combination of the following factors will limit the impacts as much as possible: • the provision of a new car park; • the provision of a forecourt area and disabled parking at the station entrance; • TROs on Station Road, Heywood Road and Myrtle Hill to mitigate for an increase in traffic flows as described in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25). The design provides adequate parking for the demand forecasts reported in the Preliminary Business Case 2014 and Outline Business Case 2017 (DCO Document References 8.3 and 8.4 respectively), and these were continually reviewed as the DCO Scheme progressed due to the number of concerns raised about parking at Stage 1 Section 47 consultation. The Applicant is both the DCO Scheme promoter and the local Highway

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				Authority and therefore has powers to control on-street parking, and will also manage the car parks, already agreeing to short stay and all-day tariffs and season permits, and will monitor its use. Residents' parking was considered after the Stage 1 Consultation but required discussion at Local Authority level as part of a wider parking strategy, which is currently under review and may be implemented in other areas before a possible wider roll-out. There will be post-implementation monitoring of parking provision within Portishead and Pill, detailed in Table 16.8 of the ES Chapter 16 – Transport, Access and Non-Motorised Users (DCO Application Document Reference 6.19). Further consideration of wider parking issues have been reported in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25).
65-5		access	General - accessibility Operation - public transport integration	Portishead rail station will include a multi-modal interchange forecourt to enable physical integration across all mainstream modes of transport, and new bus stops close to the station on Quays Avenue. Pill station will also include modal integration within the constraints due to the station location. The nearest bus stops are a short distance away on Heywood Road. The route between the station and bus stops will be upgraded to enable step free access. Through ticketing will be available from

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				Portishead and Pill stations to anywhere on the UK passenger rail network. The integration of public transport and other modes has been considered in more detail in the Transport Assessment (TA) (ES Appendix 16.1, DCO Application Document Reference 6.25). The scheme design has been developed to consider the access by all modes and users with mobility or sensory impairments and has been assessed in the Equalities Impact Assessment (EqIA) (ES Appendix 14.1, DCO Application Document Reference 6.25). The new infrastructure will comply with Equality Act 2010 and has been designed to enable attractive access by non-car modes. The approach to the DCO Scheme design is set out in the DAS (DCO Document Reference 8.1) and will accord with rail and highway industry guidance and technical requirements as shown in the Railway Alignment, Design and Engineering Plans (DCO Document References 2.7 – 2.28). Both of the proposed stations have been designed to provide step free access from the pedestrian approach to the station, through to the platform. Specifically, feedback from the Stage 2 Section 47 consultation resulted in changes to accessibility in Pill to enable a step free route from the nearest bus stops on Heywood Road to the station platform.
65-6		Pill stop	Operation – Pill Station	It is envisaged that all passenger services will stop at Pill Station.

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65-7		time table.	Operation - frequency / capacity	See 65-2
66-1	Julie Grindal	I am very concerned about what will happen to the toads if the proposal for concreting over 22 acres of Lodway Farm fields takes place. I also understand that the HGV's will access Pill but the cycle path road .I have patrolled this cycle path for several years at this time when the toads are making their way to the nearby ponds to mate, and then return. It is dangerous enough now for them with bicycles and motorbikes whizzing through. It would mean almost total annihilation if measures are not put in place to protect them. It is also used by frogs and newts many of which I have also rescued and carried to safety. It seems Metrowesr have put in wildlife protection measures in a number of other locations but not here. As there has been a dramatic fall in the number of toads countrywide they are classified as seriously "threatened " . This must be rectified	Lodway compound - toads Lodway compound - concrete base	Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor will be asked to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed to discuss mitigation measures that the Contractor should employ. Whilst in use as a compound, the base will not be made of concrete but compacted aggregate, enabling the land to be reinstated to its previous condition. Alternatively, a geobind solution may be used where the product is mixed with the soil, transforming the site into a load bearing surface. During reinstatement, the surface is broken up and

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				sodium bicarbonate added into the soil to correct the pH and return the land to its original state. Whichever option is used the Master Construction and Environmental Master Plan (CEMP) (DCO Document Reference 8.14), commits the Applicant to return the land to its previous condition.
67-1	Julie Harris	I am concerned about the building on land at Lodway Farm and the adjoining cycle path which follows the bank of the river - and the impact this will have on the toad population in that area. Currently this wildlife is healthy and thriving - this population has been monitored and recorded for several years. This year newts also have been identified. There will be significant impact on the toads with the development of the railway - especially on this part of land. There must be provision for the protection of this population so that wildlife is not destroyed. This is a valuable environment and with current interest in climate and the impact development has on our creatures it would be relevant to put plans in place before the railway building begins	Lodway compound - toads Lodway compound - ecology excl. toads	Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor will be asked to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed to discuss mitigation measures that the Contractor should employ. Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and

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				compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be

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				in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology

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				appendices (DCO Application reference 6.25).
68-1	Keith Smallwood	As a resident of a road very near to the propped [sic] station, my prime interest is around parking measures both during and after completion as this is already a very narrow and vastly over populated street.	General - construction traffic / parking	The design provides adequate parking for the demand forecasts reported in the Preliminary Business Case 2014 and Outline Business Case 2017 (DCO Document References 8.3 and 8.4 respectively), and these were continually reviewed as the DCO Scheme progressed due to the number of concerns raised about parking at Stage 1 Section 47 consultation. The Applicant is both the DCO Scheme promoter and the local Highway Authority and therefore has powers to control on-street parking, and will also manage the car parks, already agreeing to short stay and all-day tariffs and season permits, and will monitor its use. Residents' parking was considered after the Stage 1 Consultation but required discussion at Local Authority level as part of a wider parking strategy, which is currently under review and may be implemented in other areas before a possible wider roll-out. There will be post-implementation monitoring of parking provision within Portishead and Pill, detailed in Table 16.8 of the ES Chapter 16 – Transport, Access and Non-Motorised Users (DCO Application Document Reference 6.19). Further consideration of wider parking issues have been reported in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25).

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				Consideration of the impacts from construction have been considered and limited where possible. Traffic and parking impacts have been assessed in the Transport Assessment (TA) (EA Appendix 16.1, DCO Application Document Reference 6.25), and mitigation measures implemented through the Construction Traffic Management Plan (CTMP) (DCO Application Document Reference 8.13) and Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14)
69-1	Kirsty Andres	We live opposite the proposed car park in Pill. We have (redacted) and have an allocated disabled bay outside our house for (redacted) wheelchair accessible vehicle. We have recently had a platform lift installed to ensure safe access for (redacted) from the kerb to our front door. Our major concern will be commuters parking on surrounding roads, including ours, and using our disabled bay (which I'm aware we do not "own"). Our interest will be in how this will be avoided/resolved and if we will have a residents parking scheme. We need 3 meters behind the vehicle to safely get (redacted) in and out which is currently possible as the ramp opens into the area over our drive and if we can't park outside the house this will cause great stress and concern.	Pill - parking	There are no proposals to remove this allocated disabled parking bay. There will be 3 dedicated disabled parking spaces at the station forecourt for station users. The allocated disabled bay should be sufficient to ensure that you have access to and from your house. However, should issues arise, the Applicant is also the local highway authority and has powers to control on-street parking. These powers include the option of introducing a residents' parking scheme in the event that other options do not adequately address any issues and should there be support for such a scheme. The impacts on parking provision are discussed within Section 16.6 of the Environmental Statement Chapter 16 – Transport, Access and Non-Motorised Users (DCO Application Document Reference

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				6.19), and Section 7 of the Transport Assessment (ES Appendix 16.1, DCO Application Document Reference 6.25).
70-1	Lesley Davey	I wish to talk or write about traffic problems, noise and light pollution. (Redacted)	General - construction traffic General - noise impacts General - light impacts	Impacts from construction traffic have been considered to ensure construction traffic will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent improvement of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road

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				Network and the Local Road Network ; • Limit the impacts on the natural and built environment. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents and stakeholders in advance. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting. Management and monitoring processes will be introduced to ensure that the effects of construction noise and vibration are controlled and that best practicable means are planned and employed during the construction period. The contractor will be required to produce a noise and control plan as part of their detailed Construction Environmental Master Plan (CEMP). Some examples of management and monitoring processes the plan will include are: • noise control measures will be included in all method statements for the works;

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				• details and locations of site hoardings, screens or bunds that will provide noise screening during construction; and • the procedures for installation of any noise insulation. Further information and examples of noise and vibration management can be found in section 10 of the Master CEMP (DCO Application reference 8.14). Compounds will need to have temporary lighting in place. It will be designed, positioned and directed so as not to intrude unnecessarily on adjacent buildings, sensitive ecological receptors, structures used by protected species and other land uses. This will prevent unnecessary disturbance to local residents, light-sensitive species such as bats, railway operations, and passing motorists. This has been detailed in Section 3 of the Master Construction Environmental Master Plan (DCO Application reference 8.14). There will be a requirement for the Local Planning Authority to approve proposed lighting plans once a contractor has been appointed.
71-1	Linda O'Hara	Our property is only meters from the railway line and will directly affect us with regards to noise, parking, privacy amongst others. I have attempted to discuss issues with the agent but to date have received no details or appropriate communications	Land, access, property	Heads of Terms (HoTs) for the temporary use of land were issued by the Applicant's Agent.. Discussions took place shortly thereafter and

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				the property owners were advised to appoint a Surveyor. Details of the works to be undertaken to Pill Viaduct were provided in March 2020 to the property owners setting out initial details for temporary and permanent access requirements and noise assessments of the new train passenger service and requesting a site meeting. As further details become available to the project they will be shared with the property owners.
72-1	Liz Beacon	As a local resident I support the development of the railway	Support	Support noted.
73-1	Liz Hill	As a local resident I am generally supportive of the opening of the Portishead branch line, with a station at Pill, as it will improve transport links. My concerns are around the impact of the works on the popular River Avon towpath, part of national cycle route 41 and a popular commuter/ walking / running / cycling route.	General - NCN	The Avon Gorge towpath will be largely unaffected by the DCO Scheme however there may be closures required during construction. Diversions will be signposted in advance of any works.
74-1	Mandy Trotham	I am a person of interest due to living in close proximity of the railway line. (Redacted) near the proposed station.	Land, access, property	Noted.
75-1	Mark Roper	I would like to register my support for this application. While I realise there will be some disruption throughout the village, I believe the benefits of reopening this railway line are huge and outweigh any disruption.	Support	Support noted.
76-1	Martin Smart	Our property is only meters from the railway line and will directly affect us with regards to noise, parking, privacy amongst others. I have attempted to discuss	Land, access, property	Heads of Terms (HoTs) for the temporary use of land were sent in December 2019 by The Applicant's Agent Ardent. The property owners were advised to appoint a Surveyor

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		issues with the agent but to date have received no details or appropriate communications		to advise them. Details of the works to be undertaken to Pill viaduct were provided in March 2020 setting out initial details for temporary and permanent access requirements and noise assessments of the new train passenger service and requesting a site meeting. As further details are available to the project they will be shared with the property owners.
77-1	Matt Brierley	Your work will disrupt the annual inward and outward migration of hundreds of amphibians. You must therefore undertake mitigation measures allowing the toads and newts to continue their migration over the Breeches, across the entirety of Lodway Farm fields, over the rail track, across the cyclepath and into the breeding pond.	Lodway compound - toads	Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor will be asked to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed to discuss mitigation measures that the Contractor should employ.
78-1	Miss Sian Jones	I request that all plans be made public and that ALL those affected by noise, light, mess and traffic issues be contacted for their views. Notification of the planned compound at Lodway Farm was not given to	Lodway compound - consultation	A full suite of documents explaining the Applicant's understanding of the DCO Scheme are publicly available at www.travelwest.info/metrowest The likely

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		those whose properties (ie What in development was Lodway Farm Estate) will be most affected. More transparency is needed in future. Consideration and cooperation is vital for this development.		significant effects of the scheme have been assessed in the Environmental Statement (DCO Application Documents 6.1 – 6.31) as part of the suite of documents. The details provided for the formal consultation included the identification of the Lodway Farm area as a potential compound site, and the Applicant has identified mitigation measures for the impacts on local residents.
79-1	Monica Ovel	My concerns are about the movement of HGVs through the village of Easton-in-Gordano and Pill, where there are several areas with no pavements. I take children to school, and dog walk and traffic is already a concern.	Lodway compound - construction traffic Lodway compound - access routes	The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of the Port from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton in Gordano. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority.

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				These will be communicated to residents and stakeholders in advance. Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road

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				Network and the Local Road Network ; • Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting.
80-1	Mr Trevor Cook	Recently with two friends and join a group along the cycle path rescuing toads and putting them on the safe side. It became obvious from the 50 toads that the group collected that this is a major site for these amphibians. Although I did not find any frogs or newts I was told that they too inhabit the area. In a time when amphibians are under threat around the world, and particularly in our country, the development would cause significant damage to the amphibian's migration route as they make their way to the nearby breeding ponds, I believe that there is a case to ameliorate the situation and that any development should take into account the potential impact on wildlife in general and amphibians in particular	Lodway compound - toads	Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor will be asked to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill

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				Toad Patrol group before a Contractor is appointed to discuss mitigation measures that the Contractor should employ.
81-1	Phil Loomes	My view is that the train line would be a great additional to the village of Pill and the wider area as will allow people to travel into Bristol via public transport and get cars off the road	Support	Support noted.
82-1	Poppy Coley	I fully support the Portishead branchline project and appreciate that any infrastructure project of its type will have impacts on the communities which will ultimately receive the benefit. I believe that the long term gain will outweigh the short term pain.	Support	Support noted.
82-2		I do however have concerns about management of traffic throughout the village and particularly access to Lodway Farm as a compound. As a mother who walks (redacted) to school most days, we have struggled to find a safe place to cross the main road through the village. Cars often do not stop at the crossing by the NewAvon Arms, so we end up crossing by Lodway Service Station, but we often have extended waits to get across the road safely. My concern is that this may prove impossible once construction traffic is added in.	Lodway compound - construction traffic	The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) (with diversions in place for pedestrians and cyclists) which runs along the southern edge of the Port from Marsh Lane. There will also be a secondary access route through Easton In Gordano. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. This route would be from the A369, along St George's Hill and Priory Road then The Poplars, Stoneyfields and Trinder Road. Construction traffic should not therefore impact on the part of Lodway where the NewAvon Arms crossing is located.
82-3		The Lodway Farm compound is of particular concern because of the access, I appreciate that the main	Lodway compound -	The secondary access route through Easton In Gordano will mainly be used for personal

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		access will be via Marsh Lane, but the planning allows for cars, minibuses and HGVs to access via Trinder Road. I would like reassurance that the volume of these will be minimised and that there will be safety measures in place. The turning into The Poplars is already the site of numerous near misses due to it being a blind bend with parked cars on one side of the road and all these roads are residential streets with lots of parked cars that are difficult enough to cross with small children with the current levels of traffic. Residents mostly drive with caution around here, but an increase in traffic, especially of commercial traffic, will increase the risk.	access routes	vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents and stakeholders in advance.
82-4		I also have concerns about a lack of condition to return the whole compound to agricultural land. I would ask for; 1- confirmation that the land will be returned to its original use	Lodway compound - long term use	The use of Lodway Farm as a construction compound will not change the status of this land from agricultural land in the green belt. At the end of construction the compound will be reinstated to its previous condition and use as committed to in the Master Construction Environmental Master Plan (CEMP) (DCO Document Reference 8.14). Ownership will remain with the freehold owner.
82-5		2- enforceable conditions are imposed to limit the use of the Trinder road access, not merely guidance 3- enforceable safety conditions are detailed for the use of the roads leading to the Trinder road access	Lodway compound - construction traffic	See 82-2 and 82-3
83-1	Public Health England	Thank you for your consultation regarding the above development. Public Health England (PHE) welcomes the opportunity to comment on your proposals at this stage of the project and can confirm	Support	Support noted.

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		that: With respect to Registration of Interest documentation, we are reassured that earlier comments raised by us on 4th December 2017 have been addressed. In addition, we acknowledge that the Environmental Statement (ES) has not identified any issues which could significantly adversely affect public health. We are satisfied with the methodology used to undertake the environmental assessment. On the basis of the documentation as reviewed we have no additional comments to make at this stage and can confirm that we have chosen NOT to register an interest with the Planning Inspectorate on this occasion. Reducing public exposures to non-threshold pollutants (such as particulate matter and nitrogen dioxide) below air quality standards has potential public health benefits. We support approaches which minimise or mitigate public exposure to non-threshold air pollutants, address inequalities (in exposure), and maximise co-benefits (such as physical exercise) and encourage their consideration during development design, environmental and health impact assessment, and development consent. New rail developments, such as the Portishead branch line, if served by electric rather than diesel trains would contribute to such reductions in air pollution. We are aware that electrification is not part of the current proposal but would encourage the applicant to ensure that the development was undertaken in manner that would allow electrification at the earliest possible opportunity. Please do not hesitate to contact us if you have any questions or concerns.		

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84-1	Ross Adamson	I have serious concerns for the effects that Lodway construction compound will have on the wild animals in and around this green corridor. There are many large mammals which use this area and also many toads living in and around the field which use the area to travel to the nearby pond to spawn.	Lodway compound - ecology	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey.

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				The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also

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				suitable terrestrial habitat for amphibians. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25). Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor will be asked to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed to discuss mitigation measures that the Contractor should employ.
84-2		Whilst in favour of the railway, is there not an alternative which will reduce the potential devastating effects to local wildlife?	Lodway compound - location	A compound at Lodway Farm is required for the construction period. Alternative sites were examined but this location is ideally suited for

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				the amount of construction work required in the vicinity. It will support works happening through Pill including track works, station, earthworks and other structural works. It will be used for both the removal of old material such as railway ballast and track, and for bringing in new material to build the railway. This compound will also be used to store materials such as railway ballast or track before onward disposal or use by the scheme. For the removal of the former railway track and ballast, it is anticipated that the old ballast will be taken from the disused line to the Lodway Farm compound ready to be transferred to a Network Rail recycling facility elsewhere in the country. It will be transferred via HGV to Avonmouth or Portbury Docks (subject to agreement with the Port) ready to be loaded onto freight trains for removal out of the area. Should storage at the Docks not be possible, material would be removed by rail directly from the Lodway Farm compound by reinstating a short section of track on the dis-used line with a connection onto the freight line (by reinstating Portbury Dock Junction). For the construction of the new railway it is currently anticipated that the new track and ballast will be brought into the rail sidings at Avonmouth or Portbury Docks (subject to

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				agreement with the Port). It will then be transferred by HGV via a new access route off Marsh Lane. Should the dock sidings or alternative storage location not be available, the material would be brought in by rail directly to the Lodway Farm compound, by reinstating Portbury Dock Junction as described above.
85-1	BNP Paribas Real Estate on behalf of Royal Mail Group Limited	Under section 35 of the Postal Services Act 2011 (the "Act"), Royal Mail has been designated by Ofcom as a provider of the Universal Postal Service. Royal Mail is the only such provider in the United Kingdom. The Act provides that Ofcom's primary regulatory duty is to secure the provision of the Universal Postal Service. Ofcom discharges this duty by imposing regulatory conditions on Royal Mail, requiring it to provide the Universal Postal Service. The Act includes a set of minimum standards for Universal Service Providers, which Ofcom must secure. The conditions imposed by Ofcom reflect those standards. Royal Mail is under some of the highest specification performance obligations for quality of service in Europe. Its performance of the Universal Service Provider obligations is in the public interest and should not be affected detrimentally by any statutorily authorised project. Royal Mail's postal sorting and delivery operations rely heavily on road communications. Royal Mail's ability to provide efficient mail collection, sorting and delivery to the public is sensitive to changes in the capacity of the highway network. Royal Mail is a major road user nationally. Disruption to the highway network and traffic delays can have direct consequences on	Statutory duties	Noted. The Royal Mail will be notified in advance of any proposed road closures / diversions / alternative access arrangements, hours of working, and will be able to review the content of the final Construction Traffic Management Plan (CTMP). The final CTMP will include a mechanism to inform major road users about works affecting the local network.

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		Royal Mail's operations, its ability to meet the Universal Service Obligation and comply with the regulatory regime for postal services thereby presenting a significant risk to Royal Mail's business. Portishead Delivery Office is 0.8 miles from the proposal site. There are three other operational facilities within 9 miles: • Nailsea Delivery Office BS21 7RW • Nailsea Vehicle Park BS48 1RD • Clifton Delivery Office BS8 1BJ The construction phase of the Portishead Branch Line comprising a temporary compound and railway station may present risk of impact / delays to Royal Mail's road based operations on the surrounding road network. In particular Portbury One Hundred and Wyndham Way. Every day, in exercising its statutory duties Royal Mail vehicles use all the main roads that may potentially be affected by additional traffic arising from the construction of the proposed Portishead Branch Line. Any periods of road disruption / closure, night or day, have the potential to impact operations. Royal Mail supports the Portishead Branch Line – MetroWest as these works, once completed, will improve traffic flows in and around Portishead. However, Royal Mail wishes to ensure the protection of its future ability to provide an efficient mail sorting and delivering service to the public in accordance with its statutory obligations that may be adversely affected by the construction of this proposed scheme. Royal Mail requests that the final DCO includes a specific requirements that that: 1. Royal Mail is pre-consulted by North Somerset Council or its contractors on any proposed road closures / diversions / alternative access		

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		arrangements, hours of working, and the content of the final Construction Traffic Management Plan (CTMP)., and 2. the final CTMP includes a mechanism to inform major road users about works affecting the local network. Royal Mail reserves its position to object to the DCO application if the above requests are not adequately addressed.		
86-1	Severnside Community Rail Partnership cic	Representation from the Severnside Community Rail Partnership cic- a Department for Transport Accredited Community Rail Partnership. Established in 2006 as Community Interest (not for profit) Company, we work with local communities to encourage the use of local trains, to ensure that access to local stations is easy, and to enhance these stations so they provide a safe and welcoming environment. Our station improvement projects are delivered with the assistance of volunteers, schools, youth groups and the Community Payback scheme. Our principal partners and funders are Bath and North East Somerset Council, Bristol City Council, North Somerset Council, Somerset Council, South Gloucestershire Council, Great Western Railway and Cross Country Trains. Details of our work can be found https://www.severnside-rail.org.uk/ We fully support the Metro West project and recognise the immediate, and indeed, wider benefits which will arise from the extension of rail services to Portishead The transport benefits are set out in the business case and are well understood. However, we would like to highlight our experience and work in supporting the wider, unquantified benefits which we believe will arise from this project. The integration of this town into the rail network will give a boost to its	Support	Support noted.

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		economy, as well as allowing residents to access jobs and services in Bristol, with important connections elsewhere. Our experience shows that railway stations can become an important focus for the community. We have demonstrated in our work the wide range of ways communities will actively support local stations and work to improve and maintain them. Our annual reports, available from the link above, detail the range of initiatives from art work, reducing graffiti, to the creation of community gardens and litter patrols to keep stations clean. While there will obviously be costs and some adverse impact of this project, we believe that the benefits will be significant and out-way the dis-benefits. As a result we fully support the project and hope it is given approval without delay Yours sincerely Keith Walton Chairman, Severnside Community Rail Partnership c/o GWR, Temple Meads Station, Bristol BS1 6QF (Redacted)		
87-1	Thomas Weidner	I'm concerned about the affected wildlife (lodway farm), in particular the toad population.	Lodway compound - ecology	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are:

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				• Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34);

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				• There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25). Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges

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				that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor will be asked to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed to discussed mitigation measures that the Contractor should employ.
88-1	Tracy Walker	I fully support this plan. I live right next to the train line, have done all my life. Would like to make it known I am in support of this.	Support	Support noted.
89-1	Vicki Merrin	I am in full support of the railway returning to our village of Pill and believe it will only create positive change to the residents of the area. Less traffic on the roads can only be a good thing, I will certainly use the service to commute to Bristol. My only concern is how much room there will be on the trains once they reach Pill after leaving Portishead and what the planners will do about this to ensure Pill is served as well as Portishead.	Operation - frequency / capacity	Technical assessment work has been undertaken to quantify the rail passenger demand. Section 3.6 Capacity Analysis of the report states that in the opening year on the Portishead Line 220 of the 263 seats (of a three carriage Class 166 train) will be occupied in the morning peak, and 201 in the evening peak. By year seven after opening, there will be standing room only in the morning peak, at which point additional carriages will be sourced to form five carriage trains (subject to contractual arrangements), see figure 3.7 and figure 3.8.

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				Further information has been reported in more detail in the Outline Business Case 2017 (DCO Document Reference 8.4).
90-1	William Wright	I frequently have to travel to Bristol city center or Portishead by road, fortunately I can take my travel outside of busy ("rush") hours however, no matter what time I select the A369 always has some congestion and a travel connection by rail will obviously ease this personal problem and no doubt, for similar 'forced' road users	Support	Support noted.
91-1	Woodland Trust	The Trust holds significant concerns with regards to the impact that this scheme is proposing to have on areas of ancient woodland that are part of the Avon Gorge SAC/SSSI. The ancient woods within the Avon Gorge are a key element of the site's Site of Special Scientific Interest (SSSI) designation, with the woods containing many nationally rare and scarce plant species, including a number of whitebeam species unique to Avon Gorge. Furthermore, the ancient woodlands of the Avon Gorge are recognised as an intrinsic part of the reason that this site is designated as a Special Area of Conservation (SAC). The priority qualifying features of the SAC designation given to Avon Gorge relate to the species composition within the woodland (H9180) due to its populations of nationally rare whitebeam species and small-leaved limes. It is recognised that there will be direct losses of ancient woodland from this scheme, however it is also vitally important that indirect impacts are fully considered during the assessment of the scheme's	Avon Gorge – ancient woodland	All matters raised in this Relevant Representation are dealt with in the updated Statement of Common Ground with the Woodland Trust that has not yet been drafted as the notification of the ExA's request for a SoCG was the first time that a SoCG was contemplated by the Applicant. The Applicant will seek to continue to progress discussion with the Woodland Trust through the course of the examination.

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		impact on ancient woodland. Construction impacts such as noise, light, vibration and dust pollution will all impact on the ancient woodland and its wildlife, with similar indirect impacts also likely to occur during the operational phase of the project. The combination of direct and indirect impacts will likely be highly detrimental to the SAC/SSSI designated ancient woodland, leading to losses in local biodiversity. In summary, the Woodland Trust objects to the proposed development on the grounds of impact to irreplaceable ancient woodland that holds a number of nationally and internationally significant designations. We consider it critical that this development does not result in the direct loss of the ancient woodland, as this will affect the overall integrity of the site and is contrary to the conservation objectives of the Avon Gorge site. We therefore request that a Habitat Regulations Assessment is undertaken to its full extent to determine if the proposed development will have a Likely Significant Effect on this internationally designated site. The Trust intends to provide fuller comments as part of a written representation later in the process and hope that these comments are sufficient at present.		
92-1	Zac Coley	I fully support the Portishead branchline project and appreciate that any infrastructure project of its type will have impacts on the communities which will ultimately receive the benefit. the long term gain outweighs the short term pain.	Support	Support noted.

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92-2		I do however have concerns about the approach in using lodway farm as a compound. to be clear it is not the use of the compound per se, more that I am yet to be convinced that there are adequate controls in place to safe guard the residents and property of those on the Trinder road side of the compound. whilst appreciating this is not intended as the primary access route, no firm conditions have been imposed.	Lodway compound - construction traffic Lodway compound - access routes	Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network ; • Limit the impacts on the natural and built environment.

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				• Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting. The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of Royal Portbury Dock from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton In Gordano from the A369 to Priory Road, the Poplars, Stoneyfields and Trinder Road.. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic

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				management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents and stakeholders in advance.
92-3		I also have grave concerns about a lack of condition to return the whole compound to agricultural land I would ask for; 1- confirmation that the land will be returned to its original use	Lodway compound - long term use	The use of Lodway Farm as a construction compound will not change the status of this land from agricultural land in the green belt. At the end of construction the compound will be reinstated to its previous condition and use as committed to in the Master Construction Environmental Master Plan (CEMP) (DCO Document Reference 8.14). Ownership will remain with the freehold owner and it will not become land owned by the Council or Network Rail. Additionally, part of the area is for reptile translocation and there are constraints on after use.
92-4		2- enforceable conditions are imposed to limit the use of the Trinder road access, not merely guidance 3- enforceable safety conditions are detailed for the use of the roads leading to the Trinder road access	Lodway compound - construction traffic Lodway compound - access routes	See 92-2
93-1	Alex Milton	Metrowest have put in mitigation measures for wildlife in a number of locations but not as far as I can see in the proposed depot (they propose concreting over the 22 acres of Lodway Farm fields	Lodway compound – ecology	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects

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		and accessing Pill for HGV's by the cyclpath road that we patrol) around Lodway Farm and the cyclepath. I wonder if they have just missed out the toads due to an oversight in their environmental surveying and am hopeful that they will allow mitigation measures that will allow the toads to continue their migration over the Breeches, across the entirety of Lodway Farm fields, over the rail track, across the cyclepath and into the breeding pond.	Lodway compound - concrete base	from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the

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				Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. More information on mitigations can be found in the Schedule of Mitigation (DCO

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				Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25). Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor will be asked to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed and discuss mitigation measures that the Contractor should employ.
94-1	Anna McClumpha	As a local resident and someone that lives next to the railway line I have a vested interest in ensuring the planning is suitable for the local area. This includes the provision of a permit parking solution (rather than just a removal of all on street parking) for the residents of and near Station Road and Monmouth road who will be most directly impacted by the building and creation of a Pill train station.	Pill - parking	The impacts on parking provision are discussed within Section 16.6 of the Environmental Statement Chapter 16 – Transport, Access and Non-Motorised Users (DCO Application Document Reference 6.19), and Section 7 of the Transport Assessment (ES Appendix 16.1, DCO Application Document Reference 6.25).

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				Specifically for Pill, a combination of the following factors will limit the impacts as much as possible: • the provision of a new car park; • the provision of a forecourt area and disabled parking at the station entrance; • TROs on Station Road, Heywood Road and Myrtle Hill to mitigate for an increase in traffic flows as described in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25). The design provides adequate parking for the demand forecasts reported in the Preliminary Business Case 2014 and Outline Business Case 2017 (DCO Document References 8.3 and 8.4 respectively), and these were continually reviewed as the DCO Scheme progressed due to the number of concerns raised by local residents about parking at Stage 1 Section 47 consultation. The Applicant is both the DCO Scheme promoter and the local Highway Authority and therefore has powers to control on-street parking, and will also manage the car parks, already agreeing to short stay and all-day tariffs and season permits, and will monitor its use. Residents' parking was considered after the Stage 1 Consultation but required discussion at Local Authority level as part of a wider parking strategy, which is currently under review and may be implemented in other areas before a possible wider roll-out. There will be post-implementation monitoring of

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				parking provision within Portishead and Pill, detailed in Table 16.8 of the ES Chapter 16 – Transport, Access and Non-Motorised Users (DCO Application Document Reference 6.19). Further consideration of wider parking issues has been reported in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25). Consideration of the impacts from construction have been considered and limited where possible. Traffic and parking impacts have been assessed in the Transport Assessment (TA) (EA Appendix 16.1, DCO Application Document Reference 6.25), and mitigation measures implemented through the Construction Traffic Management Plan (CTMP) (DCO Application Document Reference 8.13) and Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14)
95-1	Osborne Clarke LLP on behalf of Babcock Integrated Technology Limited	Application by North Somerset District Council for an Order Granting Development Consent for Portishead Branch Line – MetroWest Phase 1 ("the DCO") MetroWest Phase 1 ("the Project") North Somerset District Council ("the Applicant") 1. This Relevant Representation is submitted on behalf of Babcock Integrated Technology Limited ("Babcock"). Babcock is a leading provider of critical, complex engineering services which support national defence, delivering vital services and managing assets in the UK and Internationally. Babcock carries out a number of these activities at their site on Ashton Vale Road, Bristol ("the Site"). The Site is bordered by the	Land, access, property	Following the representation made by Osbourne Clarke LLP on behalf of Babcock Integrated Technology Limited, the Applicant attended a meeting with the property owner on 23rd March 2020. The purpose of this meeting was to discuss and advise on the concerns raised within the representation. During the meeting, the following topics were discussed; the impacts to the property owners' premises, the impacts of highway works surrounding Ashton Vale Industrial Estate, the reasoning behind Babcock Integrated Technology Limited's being

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		existing Portishead Branch Line to the east and Ashton Road to the north. 2. The current Works Plans (Sheet 15 and Sheet 16) indicate that Work No. 27 (Public Foot & Cycle Ramp) is to the immediate east of the Site and the Order Limits extend along the Site's northern and eastern boundaries. The current Land Plans (Sheet 15 of 17 and Sheet 16 of 17) indicate that the Site is bordered by Plots 15/84, 15/83, 15/82, 15/86, 15/87 & 15/85 to the north and 15/125 & 16/05 to the east. The main vehicle and pedestrian entrance and exit to the Site is bordered by Plot 16/20. The rear access road to the Site is adjacent to the south eastern corner of Plot 15/87. All the Plots listed as adjacent to the Site are subject to the compulsory acquisition of all estates and interests. 3. Babcock does not object to the principle of the underlying Project sought by the DCO in terms of the benefits it is seeking to deliver from Bristol to Portishead and region beyond. However, it is concerned with the impact of the Project detrimentally affecting Babcock's on-going operations specifically at the Site. This includes the impact caused by the Project on Babcock's access and egress from the Site during the course of the Project's construction and operation. 4. Babcock objects to the DCO on the basis that it has not been proven by the Applicant that the construction and operation of the Project will not cause a detrimental impact to Babcock operations, including by assessment of transport impacts and how access and egress to the Site will be affected by the compulsory acquisition of Plots 15/81, 15/85, 15/87 & 16/20. 5. Babcock is seeking expert advice to		scheduled in the Book of Reference and the current DCO programme. As agreed during this meeting, the Applicant collated a formal response addressing concerns raised during the meeting, along with the original agenda. This formal correspondence was sent 7th April 2020. The Applicant is currently awaiting feedback on this correspondence.

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		consider the material within the DCO documentation and is seeking a meeting with the Applicant to confirm whether any adverse impact to Babcock operations can be satisfactorily addressed and mitigated as part of the DCO. 6. Babcock therefore requests to be registered as an Interested Party to the examination of the DCO and to make submissions on the topics of transport impact and compulsory acquisition affecting the Site.		
96-1	Charles Exley	My objection concerns Access AW5.2 to Lodway Farm Depot. The AW5.1 Access is totally unsuitable for anything other than cars , The access through the village and down Trinder Road is completely unsuitable for goods vehicles and would only add to the chaos that we as residents endure everyday in the deliveries to the shopping outlets of the village. Such is the concern of NSC that they have signposted the unsuitability of the road through the village to heavy transport. Access through to Lodway Depot for all should be via AW 5.1 which is through a designated industrial zone and not a residential zone.	Lodway compound - access routes Lodway compound - construction traffic	The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of Royal Portbury Dock from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton in Gordano. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council in their role as highway authority. These will be communicated to residents and stakeholders in advance.

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				Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent improvement of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network; • Limit the impacts on the natural and built

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				environment. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting.
97-1	Crockerne C of E School	Concerns that increased traffic movements and people will have potential for adverse safety effect on pupils commuting to and from school	Lodway compound - access routes Lodway compound - construction traffic Pill - Traffic impacts (general)	The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of Royal Portbury Dock from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton In Gordano. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents and stakeholders in advance.

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				Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network ;

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				• Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting. Following the Stage 1 Consultation, new designs for Pill Station and car park were produced and consulted on during the Pill Station and Ashton Vale Road alternative access Micro-consultation (informal consultation) (Appendix I5 of DCO application document reference 5.1). Feedback lead to the creation of a new entrance, station forecourt and disabled parking from the acquisition and demolition of No. 7 Station Road, Pill. This will reduce traffic movements along Monmouth Road as the forecourt will become a drop off location instead of the car park at the end of Monmouth Road. The final designs are shown in the S050 Pill Station Proposed Station Layout plan (DCO

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				Application Document Reference 2.19) and Pill Station Car Park and PSP Layout, Landscaping, Lighting and Access Plan (DCO Application Document Reference 2.42). Changes to parking and traffic flows resulting from the revised designs are assessed and reported in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25), with appropriate Temporary Traffic Restriction Orders (TTROs) included on Station Road to mitigate from the resultant increase in traffic volume. These have been included on the Permanent Traffic Regulation Order Plans (DCO Document Reference 2.31).
98-1	Debbie O'Grady	Portishead Branch line DCO scheme environmental statement, volume 2. Chapter 4. Description of the proposed works. Pages 4-18 to 4-21. Construction of the railway Works Numbers 1 and 1A 3 Options are proposed: Option 1, Option 2. Sub options a, b, c, d. Option 3 I request consideration the options proposed and rejection of Option 2 and sub options a, b, c and d; where the use of Lodway construction compound is proposed;	Lodway compound - general	As stated in the ES Chapter 4 (DCO Application document reference 6.7), the preferred option at Lodway compound will be determined ahead of construction and may include a combination of options. This will be discussed and determined when a contractor is appointed, and within the confines of the options discussed. A compound at Lodway Farm is required for the construction period. Alternative sites were examined but this location is ideally suited for the amount of construction work required in the vicinity. It will support works happening through Pill including track works, station, earthworks and other structural works. It will be used for both the removal of old material such as railway ballast and track, and for

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				bringing in new material to build the railway. This compound will also be used to store materials such as railway ballast or track before onward disposal or use by the scheme. The Applicant accepts that the use of the compound at Lodway is likely to affect nearby residents as is indicated in the ES Chapter 18 Cumulative Effects (DCO Application reference 6.21), however with the mitigations proposed it is intended that disruption will be kept to a minimum. For the removal of the former railway track and ballast, it is anticipated that the old ballast will be taken from the disused line to the Lodway Farm compound ready to be transferred to a Network Rail recycling facility. It will be transferred via HGV to Avonmouth or Portbury Docks (subject to agreement with the Port) ready to be loaded onto freight trains for removal out of the area. Should storage at the Docks not be possible, material would be removed by rail directly from the Lodway Farm compound by reinstating a short section of track on the dis-used line with a connection onto the freight line (by reinstating Portbury Dock Junction). For the construction of the new railway it is currently anticipated that the new track and ballast will be brought into the rail sidings at

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				Avonmouth or Portbury Docks (subject to agreement with the Port). It will then be transferred by HGV via a new access route off Marsh Lane. Should the dock sidings or alternative storage location not be available, the material would be brought in by rail directly to the Lodway Farm compound, by reinstating Portbury Dock Junction as described above.
98-2		due the close proximity to the residential area, potentially 24 hours a day 7 days a week operations, the impact of noise, light, dirt pollution,	Lodway compound - noise impacts Lodway compound - light impacts Lodway compound - air quality impacts Lodway compound - visual impacts	Management and monitoring processes will be introduced to ensure that the effects of construction noise and vibration are controlled and that best practicable means are planned and employed during the construction period. The contractor will be required to produce a noise and control plan as part of their detailed Construction Environmental Master Plan (CEMP). Some examples of management and monitoring processes the plan will include are: • noise control measures will be included in all method statements for the works; • details and locations of site hoardings, screens or bunds that will provide noise screening during construction; and • the procedures for installation of any noise insulation. Further information and examples of noise and vibration management can be found in section 10 of the Master CEMP (DCO Application reference 8.14).

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				The compound will need to have temporary lighting in place. It will be designed, positioned and directed so as not to intrude unnecessarily on adjacent buildings, sensitive ecological receptors, structures used by protected species and other land uses. This will prevent unnecessary disturbance to local residents, light-sensitive species such as bats, railway operations, and passing motorists. This has been detailed in Section 3 of the Master Construction Environmental Master Plan (DCO Application reference 8.14). There will be a requirement for the Local Planning Authority to approve proposed lighting plans once a contractor has been appointed. Air quality impacts which may result from the compound have been carefully considered and include activities such as the management of plant vehicles and equipment; transportation, storage and handling of materials; management of excavations and earthworks; and conveying, processing, crushing, cutting and grinding activities. The contractor will be required to incorporate effective measures into an Air Quality and Dust Management Plan. Some examples the plan may include are: • The site layout will be planned so that machinery (construction plant) and dust-causing activities are located away from

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				residential properties, where reasonably practicable; • Damping down of dust generating vehicles and equipment and roads, with access routes to be kept clean by methods such as brushing and provision of dust suppression; • Any material stored on site will be in such a way as to reduce dust entrainment, for example by erecting temporary hoarding or sheeting as appropriate depending on the height and area of the stockpiles. Further information and examples of air quality management can be found in section 4 of the Master CEMP (DCO Application reference 8.14). The temporary compound will have a visual impact to the local landscape during its use, however these impacts will be kept to a minimum where possible and mitigations put in place. Section 8 of the Master Construction Environmental Master Plan (DCO Application reference 8.14) details the mitigations proposed, specifying that the height of the offices, workshops, plant, stockpiles, and storage elements within the vicinity of residential areas will need to be designed to ensure minimal visual disruption on the adjacent residential properties.
98-3		HGV traffic on residential streets, restricted parking,	Lodway compound -	Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a

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			construction traffic Lodway compound - access routes	minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network ; • Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate

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				due to the construction traffic, including monitoring arrangements with local highway authorities. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting. The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of Royal Portbury Dock from Marsh Lane . This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton In Gordano. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement

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				from North Somerset Council's role as highway authority. These will be communicated to residents in advance.
98-4		the destruction of green belt land (although this is noted as temporary) at Lodway Farm (9.128 hectares); and what appears to little attention or recognition of the environment impacts of such activity.	Lodway compound - short term use Lodway compound - long term use Lodway compound - ecology	The use of Lodway Farm as a construction compound will not change the status of this land from agricultural land in the green belt. At the end of construction the compound will be reinstated to its previous condition and use as committed to in the Master Construction Environmental Master Plan (CEMP) (DCO Document Reference 8.14). Ownership will remain with the freehold owner and it will not become land owned by the Council or Network Rail. Additionally, part of the area is for reptile translocation and there are constraints on after use. Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016,

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				and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway Farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13

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				Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. The Master CEMP also proposes the contractor consult with the local Toad Patrol group at Pill and develop procedures to reduce the impact of construction activities on toad migrations across construction sites and haul roads. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25).

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98-5		Options 1 and 3 should be considered as the preferred solutions; or, Option 2 without the development of the Lodway construction compound; or, a combination of all 3 options again without the development of the Lodway construction compound.	Lodway compound – location and size	The compound location at Lodway Farm has been determined by a number of important factors. Multiple compounds are required across the length of the railway, and the site at Lodway in particular provides good access to the disused section of the railway and the existing freight line. It is close to the bridge over the footpath between Avon Road and Lodway Close which needs to be completely rebuilt and for which a large compound area is needed. It is also close to the M5 and accessible via Royal Portbury Dock Road, Marsh Lane and along the railway. This location is the only place where a large enough compound can be located that has access to the existing railway on the Pill side of the Avon Gorge. The compound will be temporary and only needed for the construction period. It will use most of the farm's fields.
99-1	Dr John du Heaume	Concern that due consideration is given to the migration and breeding of amphibians in the vicinity of Lodway farm and the ponds adjoining the railway nearby, these are an important breeding site for newts frogs and toads..	Lodway compound - toads	Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor is obliged to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on

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				toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed and agree mitigation measures that the Contractor should employ. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist.

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				This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians.
100-1	Elizabeth Moore	I am very concerned about the harm that will be done to the toad population by the proposed work at Lodway Farm, Pill	Lodway compound - toads	Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor is obliged to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed and agree mitigation measures that the Contractor should employ.
101	Environment Agency	The Planning Inspectorate National Infrastructure Planning Temple Quay House 2 The Square Bristol BS1 6PN Our ref: WX/2019/133441/01-L02 Your ref: TR040011 Date: 26 February 2020 Dear Sir/Madam METROWEST DEVELOPMENT CONSENT ORDER ENVIRONMENT AGENCY – RELEVANT REPRESENTATION The Environment Agency remains fully supportive of the aims of the proposal,	Various	All matters raised in this Relevant Representation are dealt with in the updated Statement of Common Ground with the Environment Agency (Document Reference 9.3.3 ExA.SoCG-EA.D1.V1) that is unlikely to be submitted to the ExA before Deadline 2.

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		which is viewed as having considerable merit, as an integral element of a more extensive sustainable transport network. Notwithstanding the above, please find hereunder an outline of issues pertinent to the Environment Agency's interests, which will require clarification and resolution, in the interests of the protection and enhancement of the water environment: FLOOD RISK MANAGEMENT The Agency has, on numerous occasions, advised the Applicant in respect of its concerns regarding various aspects of flood risk management. The Agency's concerns have been compounded by the proposal's supporting Flood Risk Assessment (FRA), which is viewed as being deficient in a number of respects. The Agency has specifically advised in respect of the FRA's poor structure and lack of clarity, in addition to a number of noted repetitions and discrepancies/contradictions. Flood risk management Issues of particular concern to the Environment Agency include: • The potential high frequency of flooding of the proposed railway line. • The potential increase in flood risk to third parties, particularly in the vicinity of Portishead, Pill, Easton-in-Gordano and Clanage Road. • The climate change allowances adopted. • The provision of flood plain compensation i.e. is it adequate and is it provided on a hydraulically linked, level for level basis? • The use and understanding of the designated flood zones. • Details of works proposed in the vicinity of, and/or over main river culverts i.e. a 'no additional loading approach' has not been clarified, as previously requested. • The lack of confirmation that Environment Agency access		

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		requirements can be provided (there are noted contradictions within the FRA). • Details regarding associated development in Portishead. • The lack of confirmation the Environment Agency's Flood Risk Activity Permitting requirements are fully understood. It is noted The Planning Inspectorate's letter dated 24 January 2020 (Ref: TR040011) raised a number of the above concerns for the Applicant's attention. The Environment Agency would advise that an additional flood risk modelling submission has been received for review, which is ongoing. GROUNDWATER AND CONTAMINATED LAND With regard to the documents submitted in respect of the potential for historic contamination along the proposed route and at associated development sites that will support the rail infrastructure, the Environment Agency would advise as follows: The Environment Agency has, throughout the pre-application consultation process, advised the Applicant of its concerns regarding the approach adopted in respect of the investigation of potentially contaminated land. The information submitted does not give the Environment Agency confidence that the applicant has adequately understood the potential risks associated with the development from potential historic contamination. Additionally, because the applicant does not appear to have undertaken a detailed and open-minded interpretation of the desk-based information available, the proposals to further investigate potential areas of concern may not, in our view, be comprehensive enough to determine the risk to the water environment. The wording of the documents submitted is such that potential risks		

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		appear to have been dismissed, prior to being properly assessed. All areas of potential concern should be subject to an appropriately detailed site investigation to allow for an assessment of risk, based on data and the context in which it is acquired. ECOLOGY AND BIODIVERSITY Issues of particular relevance to the Environment Agency include the treatment of watercourses and wetlands, together with the species that are dependent on such habitats, in particular otter, water vole, eel and other fish species. It is acknowledged that extensive survey work has been undertaken to identify potential risks to these habitats and dependent species however, the Environment Agency must be satisfied in respect of the proposed mitigation measures, to ensure any impacts are minimal and short-term. Additionally, measures must be included for habitat re-creation and enhancement, which must result in a net gain in biodiversity from the proposal. Additionally, the Environment Agency will require full details of how it is proposed to treat and control invasive species. A commitment to long-term control of species, including Japanese knotweed, would therefore be required. LAND INTERESTS With reference to the Environment Agency's leasehold land and other land interests in the vicinity of the proposed route, the following comments must be noted: Full details are required in respect of how each of the parcels of land, where the Environment Agency is in occupation, or has an interest, will potentially be affected by the proposal and whether any impact will be on a temporary or permanent basis. Whether it is permanent or temporary, the		

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		Environment Agency will need to ensure suitable arrangements are in place, to enable it to continue to work operationally from the land in question. It is deemed essential to ensure that, if the proposal will affect any of the Agency's leaseholds or land interests, it does not put the Agency in breach of any of its obligations, under agreements associated with any land affected. WASTE AND ENVIRONMENTAL MANAGEMENT The Environment Agency has previously advised the Applicant regarding the measures required to prevent pollution of the water environment and the specific regulatory requirements pertinent to the proposal and associated works. Accordingly, the Agency must be satisfied in respect of all relevant proposals, particularly those concerning pollution prevention and incident control and waste management, including potentially hazard waste. PROTECTIVE PROVISIONS The Environment Agency's legal representative is still awaiting contact from the Applicant's legal representatives regarding outstanding concerns in respect of the submitted Protective Provisions pertinent to the Environment Agency's interests. STATEMENT OF COMMON GROUND A note from Womble Bond Dickinson dated 6 December 2019 (accessed through The Planning Inspectorate's meeting noted dated 14 January 2020) states the Applicant will continue to work with the Environment Agency on water related issues. The Agency would advise that it is currently awaiting a draft copy of the Statement of Common Ground, as previously requested. It is important to note that, following recent storm events, the		

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		Environment Agency is currently in 'Incident Mode', which necessitates the prioritisation and re-direction of resources to ensure the protection of people, property and infrastructure in the affected areas. Therefore, while staff are engaged in their respective incident management roles, normal workloads are likely to be subject to delays. Should you wish to discuss this matter further please contact the undersigned.		
102-1	Town Legal LLP on behalf of Freightliner Limited	1 Introduction 1.1 This is a relevant representation for and on behalf of Freightliner Limited ('Freightliner') in respect of the application ('the Application') for a Development Consent Order ('the Proposed Order') for the delivery of the Portishead Branch Line (MetroWest Phase 1) ('the Proposed Scheme'). The Application was submitted and is being promoted by North Somerset District Council ('the District Council') in consultation with Network Rail Infrastructure Limited ('Network Rail') and has been allocated Planning Inspectorate reference TR040011. The delivery of the Proposed Scheme includes works proposed to be carried out by Network Rail as particularised in Part 9 of the District Council's Explanatory Memorandum. 1.2 Freightliner is a private limited company (registration number 03118392) whose registered office is at 3rd Floor, 90 Whitfield Street, Fitzrovia, London W1T 4EZ. It is a major rail freight transport and logistics company operating in various locations across the UK including Bedminster, Bristol. 1.3 In the Proposed Order, the District Council are seeking temporary possession powers over part of Freightliner's Bristol terminal situated at South Liberty Lane, Bedminster,	Use of freight yard	The Applicant's response to all matters raised in this Relevant Representation is detailed in correspondence with Freightliner, which is provided at Appendix D of this document.

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		Bristol, BS3 2ST ('Bristol Terminal') 1.4 Freightliner has a long leasehold interest in the Bristol Terminal for a term of 125 years expiring on 31 May 2135. The freehold interest in the Bristol Terminal is owned by Network Rail. The Bristol Terminal is used by Freightliner as an intermodal rail freight terminal primarily for the import, export, and storage of shipping containers travelling to and from the ports of Felixstowe, Southampton and London Gateway. 1.5 For reasons including the uncertainty arising from the Proposed Scheme, Freightliner has recently agreed, in principle, heads of terms to sublet parts of the southern section of the Bristol Terminal site to two commercial tenants, on an interim use basis, including for use as a rail served depot for storing handling and distributing aggregates and as a containerised self-storage facility. 2 Summary of Freightliner's Position 2.1 While Freightliner does not object in principle to the Proposed Scheme, for the reasons set out below, it objects to the inclusion in the Proposed Order of powers to temporarily possess land forming part of the Bristol Terminal. 3 Relevant plots within the Proposed Order 3.1 The Proposed Order identifies the following plots of land relevant to the Bristol Terminal site as being subject to proposed powers of temporary possession, namely: 3.1.1 Plots 17/05, 17/15 and 17/20, in which Freightliner has a long leasehold interest; and 3.1.2 Plot 17/10 which forms part of South Liberty Lane adjacent to the Bristol Terminal and comprises the only access to it from the highway. 3.2 These plots of land are identified within the Proposed Order as being required by Network Rail for the following		

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		purposes: 3.2.1 Plots 17/05 and 17/20 for the purposes of temporary construction compounds for materials storage; and 3.2.2 Plots 17/10 and 17/15 for the purposes of access to and from works compounds at Plots 17/05 and 17/20. 4 Freightliner's outline grounds of objection 4.1 In summary, Freightliner objects to the inclusion of plots 17/05, 17/10, 17/15 and 17/20 in the Proposed Order for the following reasons:		
102-2		4.2 First, the proposed dimensions and location of the access route over plot 17/15, would have a serious and unacceptable adverse effect on Freightliner's commercial operations. The extent of Plot 17/15 is such that its exclusive occupation by the District Council and/or Network Rail would prevent access to the Bristol Terminal from South Liberty Lane or the wider highway network.		
102-3		4.3 Freightliner have no objection in principle to the District Council and/or Network Rail having a temporary access route by agreement over plot 17/15 for the purposes of the Proposed Scheme providing: 4.3.1 That the dimensions of any such access route are reconfigured to enable access to South Liberty Lane; and 4.3.2 That any such access route is flexibly located to minimise the disruption to Freightliner/ its proposed tenants commercial operations.		
102-4		4.4 Second, it is unnecessary and unjustified for temporary possession powers to be granted over plots 17/05, 17/15, and 17/20 in circumstances when Freightliner are agreeable in principle (subject to agreeing the details of these arrangements): 4.4.1 To the District Council and/or Network Rail		

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		temporarily occupying plots 17/05 and 17/20 for the purposes of temporary construction compounds for materials storage (the dimensions and locations of these work compounds having been agreed); and 4.4.2 To the District Council and/or Network Rail having a temporary access route over plot 17/15 for the purposes of access for works to alter the existing track layout close to that facility providing the dimensions and location of the access route protects Freightliner's commercial operations.		
102-5		4.5 Freightliner are currently in negotiations with Network Rail regarding agreeing heads of terms of a conditional agreement with Network Rail providing- in terms- for a short term subletting of the compound areas to Network Rail with associated access within Freightliner's long-lease area/ operational terminal.		
102-6		4.6 At the time of preparing these relevant representations, heads of terms for an agreement have been received from Network Rail in respect of Plot 17/20 but no heads of terms have been received from Network Rail in respect of Plot 17/05. In addition, no agreement, to date, has been reached with Network Rail on the dimensions and location of the proposed access route over Plot 17/15.		
102-7		4.7 Freightliner remain willing and able to continue negotiating with Network Rail and it is sincerely hoped on Freightliner's part that mutually agreeable commercial terms can shortly be reached in respect of suitable temporary occupation and access over the Bristol Terminal site.		
102-8		4.8 Thirdly, there are no details provided in the Proposed Order or supporting documents as to the length of time for which temporary possession		

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		powers are sought over part of the Bristol Terminal site. Reference is made in the Proposed Order that temporary possession powers are sought for up to 12 months following completion of the Proposed Scheme. Freightliner considers such an extended and uncertain period of temporary possession to be unnecessary and unjustified in circumstances when Network Rail have indicated that temporary occupation and access of the parts of the Bristol Terminal site is only required for short defined periods of time (e.g. 8 weeks has been proposed in negotiations for plot 17/20). Freightliner consider that such an uncertain and potentially open-ended period of temporary possession in the Proposed Order, as opposed to a short defined period in any agreement with Network Rail, causes an unacceptable level of uncertainty to Freightliner's commercial operations making it difficult if not impossible for Freightliner to forward plan its business when it is wholly unclear from the Proposed Order documents when the temporarily possessed land would be handed back.		
102-9		5 Conclusion 5.1 Among other things, for the reasons set out above, Freightliner considers that: 5.1.1 It is not necessary and/or justifiable for the Council to be granted temporary possession powers in relation to plots 17/05, 17/10, 17/15 and 17/20 because there is an alternative means of bringing about the purposes for which temporary possession powers are sought by means of agreement with Network Rail for temporary occupation and temporary access over part of the Bristol Terminal site; 5.1.2 The adverse operational impacts of the temporary possession powers, on Freightliner's		

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		business, in particular with respect to the current proposed dimensions and location of the access route over plots 17/10 and 17/15, are unacceptable; 5.1.3 Therefore, that there is no compelling case in the public interest for temporary possession powers to be granted over part of the Bristol Terminal; and 5.1.4 Accordingly, that the Proposed Order should not be made, and development consent should not be granted, unless and until the matters referred to above have been resolved/ 5.2 In the event that agreement with Network Rail and the District Council cannot be reached, Freightliner hereby fully reserves its position and the right to submit further detailed written representations for the purposes of the examination of the Proposed Order and to attend in person any compulsory acquisition hearing listed by the Examining Authority. 5.3 A copy of these relevant representations has been provided to the District Council.		
103-1	Hannah Price	There seems compelling evidence that a bus scheme run on the train line might prove more efficient, cost effective and produce less Carbon. I would like to hear the counter argument to this point.	Business case - alternative scheme options	DCO document 6.6, Environmental Statement, Volume 2, Chapter 3 Scheme Development and Alternatives Considered explains the history of the development of the project including the options considered. A rail based scheme remains the most appropriate mode to achieve the stated aims and objectives.
103-2		The plans for Lodway Farm are incredibly damaging to the wildlife that survives there, especially amphibians.	Lodway compound - ecology	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and

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				compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary:

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				• No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. The Master CEMP also proposes the contractor consult with the local Toad Patrol group at Pill and develop procedures to reduce the impact of construction activities on toad migrations across construction sites and

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				haul roads. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25).
104	Highways England	<i>(Due to its length and detailed content, the response below is the first part of the representation only. Please see the full representation here: https://infrastructure.planninginspectorate.gov.uk/projects/south-west/portishead-branch-line-metrowest-phase-1/?ipcsection=relreps&relrep=39311)</i> Highways England is unable to support the Portishead Rail DCO application at this time, on the grounds that further information and clarification is required in respect of the Transport Assessment and Construction Traffic Management Plan. We have undertaken a detailed review of the DCO submission and the supporting information which includes the review of Chapter 16 of the Environmental Statement (ES) Traffic and Transport and relevant appendices. Also, we have reviewed the documentation relating to the construction phase of the scheme and the location and use of compounds. We have undertaken a review of the relevant documents supporting the submission to ensure compliance with the current policies of the Secretary of State as set out in DfT Circular 02/2013 "The	Individual	All matters raised in this Relevant Representation are dealt with in the updated Statement of Common Ground with Highways England (Document Reference 9.3.4 ExA.SoCG-HECL.D1.V1) that is unlikely to be submitted to the ExA before Deadline 2.

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		Strategic Road Network and the Delivery of Sustainable Development” and the MHCLG National Planning Policy Framework (NPPF) 2019, in so far as it relates directly to the interests of Highways England. For the purposes of clarity, Highways England’s interests relate solely to the construction phase of the Portishead Branch Line reopening. Having reviewed the DCO documentation, we are satisfied that there are no significant adverse transport implications for the SRN once construction is complete and the scheme is operational. The following information/clarification is requested: • Further clarification and refinement of construction traffic generation, particularly ballast import/removal HGV movements (trip generation); • A clear distinction between HGV movements associated with ballast/spoil removal and delivery and the movements of ‘other construction materials’; • Clarity on which compounds will be used for the delivery and removal of ballast; • Clear presentation of the arrival and departures profile for all vehicle movements across the construction phase, disaggregated by vehicle type and construction activity, with the peak construction period (in terms of vehicle movements) clearly identified (including the duration of this peak); • Clarification and refinement of the methodology for deriving network peak hour construction traffic generation and a cumulative impact assessment for network peak hours, interpeak and 12-hour.; • Clarity on staff and personnel arrivals/departures with likely shift times/patterns clearly identified. Subject to the findings of the cumulative construction traffic impact		

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		assessment, undertake a capacity assessment of M5 J19; and/or: *The above should be provided within a Transport Assessment Addendum • Identify appropriate and proportionate construction traffic management measures (potentially including measures to restrict peak hour and interpeak construction traffic movements at M5 J19 (which should be set out in the Outline CTMP) with the Final CTMP and TMWG to be secured by requirement imposed by the DCO); and • A statement confirming the nature of the use of the compound located under the M5. On receipt of the further information/clarification requested, Highways England is likely to seek a number of Requirements to be imposed by the DCO to manage the impact of the construction phase, particularly at M5 J19. These requirements will be detailed in our Written Representations at the Examination stage. Highways England will seek to pursue a Statement of Common Ground with the applicant as expeditiously as possible to agree our requirements. This will be submitted to the Planning Inspectorate prior to Examination. Please see attached.		
105-1	Hilary Berry	Portishead Branch line DCO scheme environmental statement, volume 2. Chapter 4. Description of the proposed works. Pages 4-18 to 4-21. Construction of the railway Works Numbers 1 and 1A 3 Options are proposed: Option 1, Option 2. Sub options a, b, c, d. Option 3 I request consideration the options proposed and rejection of Option 2 and sub options a, b, c and d; where the use of Lodway construction compound is proposed;	Lodway compound - general	As stated in the ES Chapter 4 (DCO Application document reference 6.7), the preferred option at Lodway compound will be determined ahead of construction and may include a combination of options. This will be discussed and determined when a contractor is appointed, and within the confines of the options discussed.

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				A compound at Lodway Farm is required for the construction period. Alternative sites were examined but this location is ideally suited for the amount of construction work required in the vicinity. It will support works happening through Pill including track works, station, earthworks and other structural works. It will be used for both the removal of old material such as railway ballast and track, and for bringing in new material to build the railway. This compound will also be used to store materials such as railway ballast or track before onward disposal or use by the scheme. The Applicant accepts that the use of the compound at Lodway is likely to affect nearby residents as is indicated in the ES Chapter 18 Cumulative Effects (DCO Application reference 6.21), however with the mitigations proposed it is intended that disruption will be kept to a minimum. For the removal of the former railway track and ballast, it is anticipated that the old ballast will be taken from the disused line to the Lodway Farm compound ready to be transferred to a Network Rail recycling facility. It will be transferred via HGV to Avonmouth or Portbury Docks (subject to agreement with the Port) ready to be loaded onto freight trains for removal out of the area. Should storage at the Docks not be possible,

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				material would be removed by rail directly from the Lodway Farm compound by reinstating a short section of track on the dis-used line with a connection onto the freight line (by reinstating Portbury Dock Junction). For the construction of the new railway it is currently anticipated that the new track and ballast will be brought into the rail sidings at Avonmouth or Portbury Docks (subject to agreement with the Port). It will then be transferred by HGV via a new access route off Marsh Lane. Should the dock sidings or alternative storage location not be available, the material would be brought in by rail directly to the Lodway Farm compound, by reinstating Portbury Dock Junction as described above.
105-2		due the close proximity to the residential area, potentially 24 hours a day 7 days a week operations, the impact of noise, light, dirt pollution,	Lodway compound - noise impacts Lodway compound - light impacts Lodway compound - air quality impacts	Management and monitoring processes will be introduced to ensure that the effects of construction noise and vibration are controlled and that best practicable means are planned and employed during the construction period. The contractor will be required to produce a noise and control plan as part of their detailed Construction Environmental Master Plan (CEMP). Some examples of management and monitoring processes the plan will include are: • noise control measures will be included in all method statements for the works; • details and locations of site hoardings, screens or bunds that will provide noise

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			Lodway compound - visual impacts	screening during construction; and the procedures for installation of any noise insulation. Further information and examples of noise and vibration management can be found in section 10 of the Master CEMP (DCO Application reference 8.14). The compound will need to have temporary lighting in place. It will be designed, positioned and directed so as not to intrude unnecessarily on adjacent buildings, sensitive ecological receptors, structures used by protected species and other land uses. This will prevent unnecessary disturbance to local residents, light-sensitive species such as bats, railway operations, and passing motorists. This has been detailed in Section 3 of the Master Construction Environmental Master Plan (DCO Application reference 8.14). There will be a requirement for the Local Planning Authority to approve proposed lighting plans once a contractor has been appointed. Air quality impacts which may result from the compound have been carefully considered and include activities such as the management of plant vehicles and equipment; transportation, storage and handling of materials; management of excavations and earthworks; and conveying, processing, crushing, cutting and grinding

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				activities. The contractor will be required to incorporate effective measures into an Air Quality and Dust Management Plan. Some examples the plan may include are: • The site layout will be planned so that machinery (construction plant) and dust-causing activities are located away from residential properties, where reasonably practicable; • Damping down of dust generating vehicles and equipment and roads, with access routes to be kept clean by methods such as brushing and provision of dust suppression; • Any material stored on site will be in such a way as to reduce dust entrainment, for example by erecting temporary hoarding or sheeting as appropriate depending on the height and area of the stockpiles. Further information and examples of air quality management can be found in section 4 of the Master CEMP (DCO Application reference 8.14). The temporary compound will have a visual impact to the local landscape during its use, however these impacts will be kept to a minimum where possible and mitigations put in place. Section 8 of the Master Construction Environmental Master Plan (DCO Application reference 8.14) details the mitigations proposed, specifying that the height of the

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				offices, workshops, plant, stockpiles, and storage elements within the vicinity of residential areas will need to be designed to ensure minimal visual disruption on the adjacent residential properties.
105-3		HGV traffic on residential streets, restricted parking,	Lodway compound - construction traffic Lodway compound - access routes	Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP (DCO Application Document Reference 8.13)

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				and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network ; • Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting. The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of the Port from Marsh Lane . This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton In Gordano. The access route will mainly be used for personal

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				vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents in advance.
105-4		the destruction of green belt land (although this is noted as temporary) at Lodway Farm (9.128 hectares); and what appears to little attention or recognition of the environment impacts of such activity.	Lodway compound - short term use Lodway compound - long term use Lodway compound - ecology	The use of Lodway Farm as a construction compound will not change the status of this land from agricultural land in the green belt. At the end of construction the compound will be reinstated to its previous condition and use as committed to in the Master Construction Environmental Master Plan (CEMP) (DCO Document Reference 8.14). Ownership will remain with the freehold owner and it will not become land owned by the Council or Network Rail. Additionally, part of the area is for reptile translocation and there are constraints on after use. Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and

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				Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the

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				Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. The Master CEMP also proposes the contractor consult with the local Toad Patrol group at Pill and develop procedures to reduce the impact of construction activities on toad migrations across construction sites and haul roads. More information on mitigations can be found

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				in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25).
105-5		Options 1 and 3 should be considered as the preferred solutions; or, Option 2 without the development of the Lodway construction compound; or, a combination of all 3 options again without the development of the Lodway construction compound.	Lodway compound – location and size	The compound location at Lodway Farm has been determined by a number of important factors. Multiple compounds are required across the length of the railway, and the site at Lodway in particular provides good access to the disused section of the railway and the existing freight line. It is close to the bridge over the footpath between Avon Road and Lodway Close which needs to be completely rebuilt and for which a large compound area is needed. It is also close to the M5 and accessible via Royal Portbury Dock Road, Marsh Lane and along the railway. This location is the only place where a large enough compound can be located that has access to the existing railway on the Pill side of the Avon Gorge. The compound will be temporary and only needed for the construction period. It will use most of the farm's fields.
106-1	Jane Bonnick	1 Concern for the level of damage to farmland proposed to facilitate the development and the resulting impact on wildlife and the natural environment	Lodway compound - ecology	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects

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				from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at

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				Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. The Master CEMP also proposes the contractor consult with the local Toad Patrol group at Pill and develop procedures to reduce the impact of construction activities on

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				toad migrations across construction sites and haul roads. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25).
106-2		2 Concern about the potential congestion in the village with the proposed use of narrow & residential roads for transporting heavy or bulky supplies, equipment & machinery.	Lodway compound - access routes Lodway compound - construction traffic	The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of Royal Portbury Dock from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Pill. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be

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				communicated to residents and stakeholders in advance. Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road

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				Network and the Local Road Network; • Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting.
106-3		3 Very keen to have a train route through from Portishead but question whether these damaging measures necessary when there is a functioning rail route from Avonmouth to the sites in Pill, which has well established much easier acces for heavy and oversized vehicles?	Lodway compound	A compound at Lodway Farm is required for the construction period. Alternative sites were examined but this location is ideally suited for the amount of construction work required in the vicinity. It will support works happening through Pill including track works, station, earthworks and other structural works. It will be used for both the removal of old material such as railway ballast and track, and for bringing in new material to build the railway. This compound will also be used to store materials such as railway ballast or track before onward disposal or use by the scheme. For the removal of the former railway track

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				and ballast, it is anticipated that the old ballast will be taken from the disused line to the Lodway Farm compound ready to be transferred to a Network Rail recycling facility elsewhere in the country. It will be transferred via HGV to Avonmouth or Portbury Docks (subject to agreement with the Port) ready to be loaded onto freight trains for removal out of the area. Should storage at the Docks not be possible, material would be removed by rail directly from the Lodway Farm compound by reinstating a short section of track on the dis-used line with a connection onto the freight line (by reinstating Portbury Dock Junction). For the construction of the new railway it is currently anticipated that the new track and ballast will be brought into the rail sidings at Avonmouth or Portbury Docks (subject to agreement with the Port). It will then be transferred by HGV via a new access route off Marsh Lane. Should the dock sidings or alternative storage location not be available, the material would be brought in by rail directly to the Lodway Farm compound, by reinstating Portbury Dock Junction as described above. The use of Lodway Farm as a construction compound will not change the status of this land from agricultural land in the green belt. At the end of construction the compound will

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				be reinstated to its previous condition and use as committed to in the Master Construction Environmental Master Plan (CEMP) (DCO Document Reference 8.14). Ownership will remain with the freehold owner and it will not become land owned by the Council or Network Rail. Additionally, part of the area is for reptile translocation and there are constraints on after use.
107-1	Jo Smith	I am a resident of Pill and have a vested interest in developments of the railway, which I am anticipating eagerly.	Support	Support noted.
107-2		I am particularly interested in proposals for roads and parking around the station, which are currently at capacity with local cars. I understand by registering an interest I will have access to view and consider proposals as they are developed, and make representation with ideas and concerns.	Pill - parking	The impacts on parking provision are discussed within Section 16.6 of the Environmental Statement Chapter 16 – Transport, Access and Non-Motorised Users (DCO Application Document Reference 6.19), and Section 7 of the Transport Assessment (ES Appendix 16.1, DCO Application Document Reference 6.25). Specifically for Pill, a combination of the following factors will limit the impacts as much as possible: • the provision of a new car park; • the provision of a forecourt area and disabled parking at the station entrance; • TROs on Station Road, Heywood Road and Myrtle Hill to mitigate for an increase in traffic flows as described in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25).

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				The design provides adequate parking for the demand forecasts reported in the Preliminary Business Case 2014 and Outline Business Case 2017 (DCO Document References 8.3 and 8.4 respectively), and these were continually reviewed as the DCO Scheme progressed due to the number of concerns raised about parking at Stage 1 Section 47 consultation. The Applicant is both the DCO Scheme promoter and the local Highway Authority and therefore has powers to control on-street parking, and will also manage the car parks, already agreeing to short stay and all-day tariffs and season permits, and will monitor its use. Residents' parking was considered after the Stage 1 Consultation but required discussion at Local Authority level as part of a wider parking strategy, which is currently under review and may be implemented in other areas before a possible wider roll-out. There will be post-implementation monitoring of parking provision within Portishead and Pill, detailed in Table 16.8 of the ES Chapter 16 – Transport, Access and Non-Motorised Users (DCO Application Document Reference 6.19). Further consideration of wider parking issues have been reported in the TA (ES Appendix

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				16.1, DCO Application Document Reference 6.25).
108-1	Karen Beaumont-Wraith	There has been a huge amount of information released recently which interested parties will not have time to review and comment upon at such short notice.	General - consultation	Summaries of the works were provided in the consultation leaflets compiled for both consultation stages, and specifically prepared drawings that were easy to interpret. The ES also includes a non-technical summary - a useful starting point for non-specialists. The Applicant has tried to provide as much information as possible to inform interested parties of its proposals where the detail is available and known. The Applicant is very happy to provide further clarification if required.
109-1	Loni Hone	Portishead Branch line DCO scheme environmental statement, volume 2. Chapter 4. Description of the proposed works. Pages 4-18 to 4-21. Construction of the railway Works Numbers 1 and 1A 3 Options are proposed: Option 1, Option 2. Sub options a, b, c, d. Option 3 I request consideration the options proposed and rejection of Option 2 and sub options a, b, c and d; where the use of Lodway construction compound is proposed;	Lodway compound - general	As stated in the ES Chapter 4 (DCO Application document reference 6.7), the preferred option at Lodway compound will be determined ahead of construction and may include a combination of options. This will be discussed and determined when a contractor is appointed, and within the confines of the options discussed. A compound at Lodway Farm is required for the construction period. Alternative sites were examined but this location is ideally suited for the amount of construction work required in the vicinity. It will support works happening through Pill including track works, station, earthworks and other structural works. It will be used for both the removal of old material

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				such as railway ballast and track, and for bringing in new material to build the railway. This compound will also be used to store materials such as railway ballast or track before onward disposal or use by the scheme. The Applicant accepts that the use of the compound at Lodway is likely to affect nearby residents as is indicated in the ES Chapter 18 Cumulative Effects (DCO Application reference 6.21), however with the mitigations proposed it is intended that disruption will be kept to a minimum. For the removal of the former railway track and ballast, it is anticipated that the old ballast will be taken from the disused line to the Lodway Farm compound ready to be transferred to a Network Rail recycling facility. It will be transferred via HGV to Avonmouth or Portbury Docks (subject to agreement with the Port) ready to be loaded onto freight trains for removal out of the area. Should storage at the Docks not be possible, material would be removed by rail directly from the Lodway Farm compound by reinstating a short section of track on the dis-used line with a connection onto the freight line (by reinstating Portbury Dock Junction). For the construction of the new railway it is currently anticipated that the new track and

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				ballast will be brought into the rail sidings at Avonmouth or Portbury Docks (subject to agreement with the Port). It will then be transferred by HGV via a new access route off Marsh Lane. Should the dock sidings or alternative storage location not be available, the material would be brought in by rail directly to the Lodway Farm compound, by reinstating Portbury Dock Junction as described above.
109-2		due the close proximity to the residential area, potentially 24 hours a day 7 days a week operations, the impact of noise, light, dirt pollution,	Lodway compound - noise impacts Lodway compound - light impacts Lodway compound - air quality impacts Lodway compound - visual impacts	Management and monitoring processes will be introduced to ensure that the effects of construction noise and vibration are controlled and that best practicable means are planned and employed during the construction period. The contractor will be required to produce a noise and control plan as part of their detailed Construction Environmental Master Plan (CEMP). Some examples of management and monitoring processes the plan will include are: • noise control measures will be included in all method statements for the works; • details and locations of site hoardings, screens or bunds that will provide noise screening during construction; and • the procedures for installation of any noise insulation. Further information and examples of noise and vibration management can be found in section 10 of the Master CEMP (DCO Application reference 8.14).

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				The compound will need to have temporary lighting in place. It will be designed, positioned and directed so as not to intrude unnecessarily on adjacent buildings, sensitive ecological receptors, structures used by protected species and other land uses. This will prevent unnecessary disturbance to local residents, light-sensitive species such as bats, railway operations, and passing motorists. This has been detailed in Section 3 of the Master Construction Environmental Master Plan (DCO Application reference 8.14). There will be a requirement for the Local Planning Authority to approve proposed lighting plans once a contractor has been appointed. Air quality impacts which may result from the compound have been carefully considered and include activities such as the management of plant vehicles and equipment; transportation, storage and handling of materials; management of excavations and earthworks; and conveying, processing, crushing, cutting and grinding activities. The contractor will be required to incorporate effective measures into an Air Quality and Dust Management Plan. Some examples the plan may include are: • The site layout will be planned so that machinery (construction plant) and dust-causing activities are located away from

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				residential properties, where reasonably practicable; • Damping down of dust generating vehicles and equipment and roads, with access routes to be kept clean by methods such as brushing and provision of dust suppression; • Any material stored on site will be in such a way as to reduce dust entrainment, for example by erecting temporary hoarding or sheeting as appropriate depending on the height and area of the stockpiles. Further information and examples of air quality management can be found in section 4 of the Master CEMP (DCO Application reference 8.14). The temporary compound will have a visual impact to the local landscape during its use, however these impacts will be kept to a minimum where possible and mitigations put in place. Section 8 of the Master Construction Environmental Master Plan (DCO Application reference 8.14) details the mitigations proposed, specifying that the height of the offices, workshops, plant, stockpiles, and storage elements within the vicinity of residential areas will need to be designed to ensure minimal visual disruption on the adjacent residential properties.
109-3		HGV traffic on residential streets, restricted parking,	Lodway compound -	Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a

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			construction traffic Lodway compound - access routes	minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network; • Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate

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				due to the construction traffic, including monitoring arrangements with local highway authorities. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting. The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of Royal Portbury Dock from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton In Gordano. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement

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				from North Somerset Council's role as highway authority. These will be communicated to residents in advance.
109-4		the destruction of green belt land (although this is noted as temporary) at Lodway Farm (9.128 hectares); and what appears to little attention or recognition of the environment impacts of such activity.	Lodway compound - short term use Lodway compound - long term use Lodway compound - ecology	The use of Lodway Farm as a construction compound will not change the status of this land from agricultural land in the green belt. At the end of construction the compound will be reinstated to its previous condition and use as committed to in the Master Construction Environmental Master Plan (CEMP) (DCO Document Reference 8.14). Ownership will remain with the freehold owner and it will not become land owned by the Council or Network Rail. Additionally, part of the area is for reptile translocation and there are constraints on after use. Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are:

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				• Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on

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				important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. The Master CEMP also proposes the contractor consult with the local Toad Patrol group at Pill and develop procedures to reduce the impact of construction activities on toad migrations across construction sites and haul roads. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology

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				appendices (DCO Application reference 6.25).
109-5		Options 1 and 3 should be considered as the preferred solutions; or, Option 2 without the development of the Lodway construction compound; or, a combination of all 3 options again without the development of the Lodway construction compound.	Lodway compound – location and size	The compound location at Lodway Farm has been determined by a number of important factors. Multiple compounds are required across the length of the railway, and the site at Lodway in particular provides good access to the disused section of the railway and the existing freight line. It is close to the bridge over the footpath between Avon Road and Lodway Close which needs to be completely rebuilt and for which a large compound area is needed. It is also close to the M5 and accessible via Royal Portbury Dock Road, Marsh Lane and along the railway. This location is the only place where a large enough compound can be located that has access to the existing railway on the Pill side of the Avon Gorge. The compound will be temporary and only needed for the construction period. It will use most of the farm's fields.
110-1	Louise Hopkins	I am concerned that, in the planning for the above railway, due care has not been taken to mitigate the effects on wildlife around the Lodway Farm/ Cycle path area. This is a “toad corridor”, vitally important for the life cycle of toads. Metrowest seem to have put in mitigation measures for wildlife in a number of locations but not as far as I can see in the proposed depot around Lodway Farm and the cyclepath. I wonder if they have just missed out the	Lodway compound – ecology Lodway compound - concrete base	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement

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		toads due to an oversight in their environmental surveying and am hopeful that they will allow mitigation measures that will allow the toads to continue their migration over the Breeches, across the entirety of Lodway Farm fields, over the rail track, across the cyclepath and into the breeding pond. If this area is concreted over as the proposal suggests, the toads will suffer greatly. Toads, as a Biodiversity Action Plan priority species, should be protected from adverse affects of development. In 2007, the UK Biodiversity Action Partnership (UKBAP) listed the common toad as a species of conservation concern. In England this means that (under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006) all public bodies must have regard for Common Toads (specifically under 'biodiversity conservation') when carrying out their functions. Many thanks for your consideration		(DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the

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				Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25).

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				Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor is obliged to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed and agree mitigation measures that the Contractor should employ. Whilst in use as a compound, the base will not be made of concrete but compacted aggregate, enabling the land to be reinstated to its previous condition. Alternatively, a geobind solution may be used where the product is mixed with the soil, transforming the site into a load bearing surface. During reinstatement, the surface is broken up and sodium bicarbonate added into the soil to correct the pH and return the land to its original state. Whichever option is used the Master Construction and Environmental

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				Master Plan (CEMP) (DCO Document Reference 8.14), commits the Applicant to returning the land to its previous condition.
111-1	Lucie Broad	Firstly I am concerned that the area at Lodway Farm is to be concreted over and used to provide access to the railway for construction traffic.	Lodway compound - concrete base	Whilst in use as a compound, the base will not be made of concrete but compacted aggregate, enabling the land to be reinstated to its previous condition. Alternatively, a geobind solution may be used where the product is mixed with the soil, transforming the site into a load bearing surface. During reinstatement, the surface is broken up and sodium bicarbonate added into the soil to correct the pH and return the land to its original state. Whichever option is used the Master Construction and Environmental Master Plan (CEMP) (DCO Document Reference 8.14), commits the Applicant to reinstate the land to its previous condition.
111-2		Living very close to the entrance to the farm I am concerned about the increase in HGV and other traffic and the impact that this will have on a quiet residential road.	Lodway compound - construction traffic	Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically:

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				• Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised; • Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network ; • Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting.

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111-3		Secondly, I am also concerned about losing a very much wanted and used green space. We walk our dogs daily around these fields and would be very concerned to lose that amenity.	Lodway compound - long term use	The use of Lodway Farm as a construction compound will not change the status of this land from agricultural land in the green belt. At the end of construction the compound will be reinstated to its previous condition and use as committed to in the Master Construction Environmental Master Plan (CEMP) (DCO Document Reference 8.14). Ownership will remain with the freehold owner and it will not become land owned by the Council or Network Rail. Additionally, part of the area is for reptile translocation and there are constraints on after use. The Applicant understands the field is not accessible by right by the public.
111-4		We saw all sorts of wildlife that habit this space and are concerned about that loss to them and us.	Lodway compound - ecology	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound

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				area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13

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				Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. The Master CEMP also proposes the contractor consult with the local Toad Patrol group at Pill and develop procedures to reduce the impact of construction activities on toad migrations across construction sites and haul roads. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25).

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111-5		I welcome the upgrade to the railway system here and do think it is much needed, however, there are other alternative sites that have been earmarked for this construction traffic that do not have as much impact on either the environment or the families that live nearby. These should be considered a priority to use rather than concreting over more of our much needed green spaces.	Lodway compound - short term use	A compound at Lodway Farm is required for the construction period. Alternative sites were examined but this location is ideally suited for the amount of construction work required in the vicinity. This site is ideal as it lies next to the railway close to Pill (where there will be major engineering works) and also at the eastern end of the disused section so can also support the construction works along that part of the scheme. Land to the north of the railway line is more valuable ecologically and the land towards the River Avon is designated at the European and National level. The only other large area of undeveloped land near Pill is Watchhouse Hill, which is protected open space for recreational use and there is insufficient flat land close to the railway suitable for a construction site. Further east we propose a small construction compound at Ham Green, but it is too far from the main works in Pill to support those engineering works. The compound will support works happening through Pill including track works, station, earthworks and other structural works. It will be used for both the removal of old material such as railway ballast and track, and for bringing in new material to build the railway. This compound will also be used to store materials such as railway ballast or track before onward disposal or use by the scheme. The Applicant accepts that the use

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				of the compound at Lodway is likely to affect nearby residents as is indicated in the ES Chapter 18 Cumulative Effects (DCO Application reference 6.21), however with the mitigations proposed it is intended that disruption will be kept to a minimum. For the removal of the former railway track and ballast, it is anticipated that the old ballast will be taken from the disused line to the Lodway Farm compound ready to be transferred to a Network Rail recycling facility elsewhere in the country. It will be transferred via HGV to Avonmouth or Portbury Docks (subject to agreement with the Port) ready to be loaded onto freight trains for removal out of the area. Should storage at the Docks not be possible, material would be removed by rail directly from the Lodway Farm compound by reinstating a short section of track on the dis-used line with a connection onto the freight line (by reinstating Portbury Dock Junction). For the construction of the new railway it is currently anticipated that the new track and ballast will be brought into the rail sidings at Avonmouth or Portbury Docks (subject to agreement with the Port). It will then be transferred by HGV via a new access route off Marsh Lane. Should the dock sidings or alternative storage location not be available, the material would be brought in by rail

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				directly to the Lodway Farm compound, by reinstating Portbury Dock Junction as described above.
112-1	Sutherland PLS Limited on behalf of Manheim Auctions Limited, ETM Contractors Ltd, Flynn Ltd	Dear Sirs Metrowest DCO We are instructed by ETM Ltd, Manheim Auctions Limited and Flynn Ltd of Ashton Vale Business Park, a site adversely affected by the proposed DCO. The Site comprises an industrial estate with a variety of business users but ETM and Manheim Auctions in particular require appropriate road access to continue operating their respective businesses. ETM is a waste recycling company with up to 250 vehicle movements a day and Manheim Auctions in a car auction operation with similar high levels of vehicular movements. The DOC process proposes inserting regular train journeys across the only vehicular access to the estate creating an untenable situation for these existing occupiers. We have made submissions within the process for over three years and it was acknowledged at an earlier stage that these impacts would arise – at that stage the proposers entered into discussions to compulsory purchase land in order to create a new vehicular access to the rear of the estate. However, without discussion or explanation, the proposers determined not to continue this approach and have instead reverting to stating the highway data demonstrates the impact will not be significantly adverse. Our transport consultant engaged earlier in the process with significant comment on the paucity of and basis for the highway assessments created by the proposers and the errors therein.	Individual Ashton Vale - Traffic impacts	The traffic impact in this area has been examined in detail and reported in the Transport Assessment (TA) (ES Appendix 16.1, DCO Application Document Reference 6.25). Mitigations have been identified, including the extension of the left-hand turn lane from Winterstoke Road (to ensure it is adequate to mitigate any increase in queuing traffic during barrier down times as assessed in the TA) and upgrading of the traffic signals to MOVA to increase capacity. The proposed mitigations will ensure there will be no detriment to the existing highway level of service. The relevant evidence supporting the DCO is contained in the Document 6.25 Environmental Statement, Volume 4, Technical Appendices, Appendix 16.1: Transport Assessment (Part 18 of 18) – Appendix N, Ashton Vale Road Junction Assessments, prepared by CH2M (now Jacobs) and dated July 2018. CTC have made several comments in relation to this evidence which are set out in the following sections with responses which are mainly based on the evidence previously submitted.

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		We now make the following formal comments on the continued errors in the proposal that have not been addressed. We object strongly to the proposal on a highways impact basis and will wish to address the inquiry. Submission		
112-2		Further to the comments submitted by cTc on behalf of the businesses resident within the Ashton Vale Business Park, the concerns over the validity of the traffic data used to compile the Linsig and VISSIM models are acknowledged by ch2m on behalf of the scheme promoters. In an attempt to address the concerns raised, the expected response would comprise a repeat of the traffic surveys on which the traffic models were compiled and which had been a primary source of criticism, followed by a “re-run” of the models themselves using the newly acquired survey data. This does not appear to have happened and the latest submissions appear to provide little more than a “sticking plaster” approach to the problems evident with the models, which continue to rely on unreliable survey data.	Individual Ashton Vale - Validity of traffic models	Traffic data employed in the LinSig (LinSig is a software tool by JCT Consultancy which allows traffic engineers to model traffic signals and their effect on traffic capacities and queuing) modelling and the calibration of the VISSIM (Vissim is a microscopic multi-modal traffic flow simulation software package) model was based on a survey carried out on Tuesday 9 May 2017 as set out in DCO document ref: 6.25 ES Volume 4 Appendix 16.1 Transport Assessment Pt 18_Appendix N (Part 18 of 18). Further checks to confirm that these flows were representative of typical volumes at the site were carried out using flows from an automatic traffic count (ATC) carried out between 15-28 March 2018 inclusive. Transport Analysis Guidance (TAG) Unit M1.2 states (para 3.3.6) (the document can be accessed online here: https://www.gov.uk/government/publications/webtag-tag-unit-m1-2-data-sources-and-surveys) that Mondays to Thursdays are neutral and that May is a neutral month. There are therefore no issues with the date

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				and month on which the survey used in the analysis were carried out. TAG Unit M1.2 (para. 3.3.35) also states that "It is normal practice for Manual Classified Counts (MCCs) to be carried out a single day but ATCs should be conducted for at least two full weeks", and (para 3.3.36) states "Turning movement counts at junctions are normally single day MCCs". CTC appear to imply a concern over the 'validity' of the 9 May 2017 survey which is 'acknowledged' by Jacobs. This is not correct. Whilst it was noted in the evidence that the temporary closure of the Winterstoke Road northbound left turn filter lane at the time of survey might have affected the count, subsequent checks against the March 2018 ATC data confirm that this had no impact on traffic volumes at the site and that the 9 May 2017 was representative of traffic at the site. It is also worth noting that the VISSIM model was calibrated and validated with the left turn flare closed to fully reflect conditions on the day of the surveys. The analysis in Technical Memorandum: 'Ashton Vale Road Traffic Counts 3 July 2018 (DCO document ref: 6.25 ES Volume 4 Appendix 16.1 Transport Assessment Pt 18_Appendix N (Part 18 of 18) shows that the total junction in-flows from the 9 May 2017 survey were consistently higher throughout

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				the day in the count compared to the mean weekday (excluding Friday) 2018 ATC in-flows.
112-3		The Do Nothing models do not reflect traffic conditions experienced by occupiers of Ashton Vale Industrial Estate and the reports submitted acknowledge significant variation in traffic conditions on the estate from day to day.	Individual Ashton Vale – Do Nothing model	The 'base' VISSIM model was calibrated to junction turning movements from the 9 May 2017 traffic survey (DCO document ref: 6.25 ES Volume 4 Appendix 16.1 Transport Assessment Pt 18_Appendix N (Part 18 of 18). As noted above, this count is considered representative of typical conditions. Link and turning count calibration were carried out for every hour modelled in the AM and PM periods meeting criteria for model acceptability set out in Transport Analysis Guidance (TAG) Unit M3.1 (para. 3.2.8) (the document can be accessed online here: https://www.gov.uk/government/publications/webtag-tag-unit-m1-2-data-sources-and-surveys). Operational conditions in the base VISSIM model were validated to journey times collected via moving car surveys carried out on the 9 and 10 May 2017. A comparison of the observed and modelled journey times showed a good fit between the two data sets confirming that the model is accurately simulating condition in the local network, including Ashton Vale Road. Again, these checks met necessary acceptability criteria set out in national modelling standards Transport Analysis Guidance (TAG) Unit M3.1. (the document can be accessed

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				online here: https://www.gov.uk/government/publications/webtag-tag-unit-m1-2-data-sources-and-surveys). With regard to daily variation, whilst Technical Memorandum: 'Ashton Vale Road Traffic Counts (3 July 2018) (DCO document ref: 6.25 ES Volume 4 Appendix 16.1 Transport Assessment Pt 18_Appendix N (Part 18 of 18) acknowledges that daily variation occurs at the Ashton Vale Road junction, the analysis also shows that maximum profile recorded is very similar to the 9 May 2017 count used in the modelling. Additionally, as noted above, TAG states that it is typical practice to carry out a turning count on a single day and thus no requirement to survey multiple days to take account of potential variation.
112-4		The 2017 surveys on which the models continue to be based were undertaken on a day on which Manheim Auctions were inactive, hence wholly underestimate the traffic conditions. The modelling team have attempted to justify this by means of ATC surveys which do not present sufficiently detailed information to enable any acceptable validation of the model, which does not allow for the commercial activities of one of the estates largest and busiest occupiers.	Individual Ashton Vale - Traffic impacts of auctions	The examination of the 2018 ATC data in the Technical Memorandum: 'Ashton Vale Road Traffic Counts (3 July 2018) (DCO document ref: 6.25 ES Volume 4 Appendix 16.1 Transport Assessment Pt 18_Appendix N (Part 18 of 18) highlights certain hours when the outflow from Ashton Vale Road is very high at up to a maximum of 290 vehicles per hour (vph). Whilst this is clearly higher than the modelled volumes exiting the estate (some 204vph 4:00-5:00pm and 172vph 5:00-6:00pm), the difference from the flows used in the modelling is not significant.

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				Moreover, the analysis in the Technical Memorandum also shows that the hours when these high volumes of exiting traffic occur fall outside of the usual peak periods in the wider network. The data from the 2018 ATC (DCO document ref: 6.25 ES Volume 4 Appendix 16.1 Transport Assessment Pt 18_Appendix N (Part 18 of 18). suggests that associated volumes at such times are not significantly higher than those used in the modelling. And, critically, the associated spikes in outflow from the estate coincide with lower overall flows at the junction meaning that there is greater reserve capacity in the signals and an ability to move green time around when Ashton Vale Road flows are highest The proposed mitigation measures, including the introduction of computer controlled Microprocessor Optimised Vehicle Actuation (MOVA), will make the Winterstoke Road/Ashton Vale Road signals much more flexible with the ability to provide longer compensatory green times to Ashton Vale Road following a level crossing closure, particularly when competing demands at the junction are lower. MOVA is more responsive to traffic conditions than the current signal control system.
112-5		The impact of increased closures of the level crossing is illustrated in technical tables in the ch2m	Individual Ashton Vale -	The evidence presented in the MetroWest Phase 1 Ashton Vale Road: Transport

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		note, with raw numbers presented and little explanation or analyses of those numbers given, save to suggest that the impact of the increased frequency of closure is easily mitigated by the proposed minor improvement works. However, on investigating the values within the summarised model output it becomes clear that the proposals could potentially result in very substantial lost time available for traffic exiting Ashton Vale Industrial Estate. From cTc's preliminary review, even allowing for the proposed mitigation, the capacity for traffic exiting the Ashton Vale Industrial Estate is reduced by at least 30% and potentially more than 50%. It is acknowledged that the congestion may take more than one signal cycle to clear and cycle times of the order of 160 seconds are mentioned in the report. Assuming "more than one" means at least two, this comprises 320 seconds or more. Adding to that the signal closure of 105 seconds results in significantly increased congestion for at least 425 seconds, or a little over 7 minutes. The report identifies potentially up to 5 closures per hour, or one every 12 minutes in the unlikely best-case scenario that they are equally spaced, meaning, on average 7 minutes of substantially increased congestion will be following by 6 minutes of relatively free flowing conditions (as current). Such an impact will result in Ashton Vale Industrial Estate becoming unusable by its current occupiers for the business activities presently carried out there. The proposers are aware of but have ignored the occupiers concerns.	Traffic queues	Evidence Explanatory Note (23rd July 2018) provides ample commentary and explanation of the traffic modelling (LinSig and VISSIM) outputs. Section 5 summarises the LinSig analyses and states that, based on LinSig analyses, the maximum extent of the queue on Ashton Vale Road is only expected to increase from 12 to 20 vehicles with an increase in mean delay of circa 38 seconds when considering a short period immediately before, during and two cycles immediately after a closure (weekday PM peak hour). Further detailed real time analysis presented and discussed in the MetroWest Phase 1 Ashton Vale Road: Transport Evidence Explanatory Note (23rd July 2018) (DCO document ref: 6.25 ES Volume 4 Appendix 16.1 Transport Assessment Pt 18_Appendix N (Part 18 of 18) based on the micro-simulation traffic assessment confirms the findings from the LinSig analyses, with results from the two modelling approaches showing a high degree of correlation. With regard to the 30-50 percent reduction in 'capacity for Ashton Vale Road, it is unclear how CTC arrive at this figure, although it seems to ignore a number of factors, notably that (1) the green time for Ashton Vale Road is currently restricted anyway by the need for the signals to service other movements, and (2) that the signals will be able to provide longer green times and hence capacity for

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				this arm following a level crossing closure, particularly under proposed MOVA control. CTC also cites the potential for five closures an hour. It should be noted that this was presented as a sensitivity case and that the proposed MetroWest Phase 1 scheme would result only in a maximum of three closures per hour (assuming that a freight movement occurs) but more realistically only two closures per hour given that freight movements rarely occur (see Table 2.1 of MetroWest Phase 1: Winterstoke Road/Ashton Vale Road VISSIM Model Testing Report (July 2018) (DCO document ref: 6.25 ES Volume 4 Appendix 16.1 Transport Assessment Pt 18_Appendix N (Part 18 of 18)). The analysis given by CTC that the proposals will result in 'on an average 7 minutes of substantially congestion' on Ashton Vale Road exaggerates the likely extra delay that will be experienced by most vehicles exiting the Industrial Estate under the MetroWest proposals. The CTC analysis: assumes that all vehicles are already present in the queue or arrive just as the level crossing closes. In reality this will not be the case. Whilst a vehicle arriving the instant the level crossing closes will have to wait for an initial 105 seconds during the closure of the level crossing,

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				those arriving later than this will experience less delay and those arriving following the re-opening of the level crossing, possibly when Aston Vale Road receives its green, will suffer very little delay; ▪ does not take account of the fact the first vehicles at the head of the queue will be the first to receive a green signal when the level crossing re-opens. Consequently, it is unlikely that even in this worst case, that a vehicle would experience anywhere near seven minutes of delay. The maximum delay would be 105 seconds for the level crossing closure plus the time for the signals to cycle round to Ashton Vale Road following re-opening, say conservatively 60 seconds, so circa 165 seconds, or roughly two and a half minutes; ▪ ignores the fact that most of the traffic on Ashton Vale Road will discharge during the green period in the first cycle following a re-opening of the level crossing (including, as noted above, those at the head of the queue on Ashton Vale Road). Consequently, the number of vehicles unable to exit the Estate during the first green period is likely to be very few, and these vehicles will have arrived later than those who discharged during the first green and so

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				will not experience anywhere near 7 minutes of 'congestion'; and the statement by CTC that it is seven minutes of 'increased' congestion assumes that vehicles currently leaving Ashton Vale Road leave the Estate under free flow conditions and do not suffer any delay. However, LinSig modelling of the current situation suggests that on average traffic on Ashton Vale Road during the PM experiences approximately 70 seconds of delay. This would need to be deducted from the delay under the MetroWest scenario to obtain 'additional' delay as a result of the scheme. Taking all this into consideration, the absolute worst-case extra delay experienced by a vehicle on Ashton Vale Road would be circa a minute and a half (165 minus 70 seconds). This assumes that this vehicle is already in the queue or arrives just as the level crossing closes. However, the vast majority of vehicles will experience much less than this, since the level crossing will be open for circa 90 per cent of the time and many vehicles will exit with very little delay at other times, with the result that the average delay over the course of the PM peak hour would be significantly lower and nearer to the 10 seconds predicted by the micro-simulation modelling assessment.

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				The proposed introduction of MOVA control will provide significant betterment to the operation of the Winterstoke Road/Ashton Vale Road signals. At present green time is limited to 24 seconds in the PM peak period. MOVA would be set-up with a much more generous maximum limit which would not only enable the signals to provide a longer compensatory green time following a level crossing event, but would also generally assist egress from the Estate at other times.
113-1	Margaret Stowers	Plot ST353248 07/30 It is proposed to use the pathway alongside my house for access to the railway embankment. This pathway is very narrow and fragile and not suitable for heavy use by either personnel or equipment, therefore I would like its proposed use by Metrowest to be reconsidered. My property is next to the (redacted) which could provide more suitable and robust access to the railway embankment.	Land, access, property	The access constraints have been noted. Where possible personnel, equipment and materials will be brought to the railway embankment via the railway. However, it may be necessary to have access from the road. More detail will be available once a contractor has been appointed and they will consider the best options available for access. The Applicant will continue to update and engage with affected parties as more information is available
114-1	Mary Donaldson	I support the re-opening of the railway line from Portishead to Bristol. I am concerned that the planning has not taken into consideration the negative impact on wildlife, particularly toads, which the plans for concreting over 22 acres of Lodway Farm Fields would entail. This is a very important site for toad migration.	Lodway compound - ecology Lodway compound - concrete	Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road,

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			base	Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor is obliged to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed and agree mitigation measures that the Contractor should employ. Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn

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				owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and

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				search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25). Whilst in use as a compound, the base will not be made of concrete but compacted aggregate, enabling the land to be reinstated to its previous condition. Alternatively, a geobind solution may be used where the product is mixed with the soil, transforming the site into a load bearing surface. During reinstatement, the surface is broken up and sodium bicarbonate added into the soil to correct the pH and return the land to its

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				original state. Whichever option is used the Master Construction and Environmental Master Plan (CEMP) (DCO Document Reference 8.14), commits the Applicant to returning the land to its previous condition.
115-1	Michael Carrington	As someone living near the railway I would like to be made aware of any updates. Thanks.	Noted	Noted.
116-1	Mr Roger Geoffrey Fox	My objections in this representation is to improve the environment for the residents of Sheepway by reducing the impact for the residents of Sheepway by reducing the impact of work associated with the new railway. 1. Ref drg No. 467470BQ04-20-600. The new access of the north side of the A369, due west of the footbridge, is opposite a level crossing in the disused railway line. These two should be used during construction to access the field required north of the railway line to minimise use of access AW3.2 in Sheepway. This would be apricated by the residents of the hamlet, and the occupants of the mobile home site, that use Sheepway Road every day. Please find attached.	Sheepway impacts	The field north of the railway that is accessed from Sheepway access point AW3.2 is not a construction compound. The field is only to be used for the creation of a pond and associated ecological mitigation (Works No.12B). The construction compound is on the south side of the railway and is accessed from the A369 Portbury Hundred via access point AW3.1. Access points and compounds are shown on the DCO document reference 2.29 Compound, Haul Road and Access to Works Plan. The works are shown on DCO document reference 2.3 Works Plan.
116-2		Portishead Branch Line — Metrowest Phase 1 Registration and Representation. Section 2. Representation continued. 2. Safety from Aviation HP fuel line failure. Beneath the existing private access from Sheepway, contiguous to Priory Croft, now used for horse and rider purposes only, are very high pressure kerosene fuel lines. Will these lines remain safe when access Al 3.2 is in use by Metrowest ? My view is that it would be much safer to separate the envisaged	Fuel line impacts	Access point AW3.2 is not proposed to be an access to a construction compound. The field is only to be used for the creation of a pond and associated ecological mitigation (Works No.12B). Ground investigations and utilities surveys will be completed before the pond is dug and if necessary protection measures will be put in place to protect utilities during the creation

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		traffic whereby the existing traffic remain using the existing access and the Metrowest traffic use a relocated AW3.2 to be alongside AW3.3 since there are splayed twin accesses there already. This revised position for AW3.2 could then follow the original track diagonally across the field, as before, to the existing ditch underpass.		of the pond. Consultation continues with utility companies and separate agreements are being sought with them on working methods in the vicinity of underground assets. Access points and compounds are shown on the DCO document reference 2.29 Compound, Haul Road and Access to Works Plan. The works are shown on DCO document reference 2.3 Works Plan.
116-3		3. Weight, noise and quantity of Metrowest traffic. No mention of the type of traffic that Metrowest will be sending along the access. Will there be heavy construction/maintenance vehicles etc? The weight of such vehicles must travel over either Station Bridge or Tarr Bridge. Both of which are listed bridges from 1.K. Brunel railway. The planning inspectorate must be satisfied no damage will occur to the bridges or historic Sheepway road through the hamlet during construction or operation.	Access routes	Access points AW3.2 and AW3.3 are not proposed to be an access to a construction compound. The fields are only to be used for the creation of a pond and associated ecological mitigation (Works No.12B), which is a relatively minor work that, will require minimal construction traffic Access points and compounds are shown on the DCO document reference 2.29 Compound, Haul Road and Access to Works Plan. The works are shown on DCO document reference 2.3 Works Plan. The two road bridges over the railway (Sheepway bridge and Portbury Station bridge) have been surveyed and works will be done to repair and improve them prior to the start of the main construction phase to ensure that they are suitable for any

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				construction vehicles that are required to use them.
116-4		4. Sheepway road drainage. From Station Bridge to LA15/21 the underground road drainage is severely damaged. NSC is aware of this, they have inspected the problem, but no repair action yet. The quantity and weight of Metrowest construction/maintenance traffic will increase the risk of damage to the drainage system.	Highway drainage	The drainage of Sheepway road is outside the scope of the DCO Scheme. Access points AW3.2 and AW3.3 are not proposed to be an access to a construction compound. The fields are only to be used for the creation of a pond and associated ecological mitigation (Works No.12B), which is a relatively minor work that, will require minimal construction traffic. The main construction compound in this area is accessed from the A369 Portbury Hundred (AW3.1). Access points and compounds are shown on the DCO document reference 2.29 Compound, Haul Road and Access to Works Plan. The works are shown on DCO document reference 2.3 Works Plan
116-5		5. Land drainage of the Metrowest local development. In the area of Sheepway, this is an historic arrangement of open ditches and culverts. I know a new design is underway. The new scheme, particularly north of A369 and south of Sheepway must be serviceable and much better use made of the ditches. alongside A369 that feed drainage to Sandy Rhyne, Portbury Ditch and the sea. Sheepway is not on mains drainage despite a sewage works on Portbury Wharf nearby. END. Mr R G Fox 24 Feb 2020	Land drainage	The IDB (responsible for ordinary watercourse) and the Environment Agency (responsible for main rivers) have been extensively consulted and the DCO Scheme amended as necessary to ensure adequate drainage from the railway and maintenance of existing drainage channels. The railway drainage ditches will be de-silted and renovated. A Flood Risk Assessment has been undertaken for Drove Rhyne and the Easton-in-Gordano stream which shows that the

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				proposed scheme will not increase flood risk (DCO Document Reference 5.6.) The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting. This includes measures to control site drainage and protect nearby watercourses.
117-1	Natural England	Dear Sir/Madam Natural England is a statutory consultee for NSIPs, and will be submitting its Relevant Representations later today (26.02.2020). Our representations will focus on assessment of effects on protected wildlife sites and species, and the measures proposed to address them. Natural England has been engaged in pre-application discussions with the applicant and advised on key aspects of the submitted project, in particular the Habitats Regulations Assessment. Kind regards Simon Stonehouse Please see attached. The Metrowest project lies partly within Avon Gorge Woodlands Special Area of Conservation (SAC) and is close to several other nationally and internationally protected nature conservation sites. Natural England has had regular and constructive engagement with the applicant throughout the preapplication period. Our advice has focused on the	Individual	All matters raised in this Relevant Representation are dealt with in the updated Statement of Common Ground with Natural England (Document Reference 9.3.6 ExA.SoCG-NE.D1.V1) that is envisaged will be submitted to the ExA prior to Deadline 1.

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		national and European sites that could be affected and those protected species that may be subject to licensing requirements. Overall we are satisfied that the assessment of potential environmental effects in relation to designated sites and protected species undertaken by the applicant has been thorough and the findings are robust. Shadow Habitats Regulations Assessment (sHRA) At the screening stage the sHRA concluded that the likely significant effects on the the Severn Estuary, and a number of more distant sites could be ruled out on the basis of objective information. Effects on the Avon Gorge Woodlands SAC and the North Somerset & Mendip Bats SAC have been subject to an Appropriate Assessment. The assessment concludes that subject to mitigation identified being secured, an adverse effect on the integrity of the North Somerset & Mendip Bats SAC can be avoided. For the Avon Gorge Woodlands SAC it concludes that while some effects can be minimised, the direct loss of ancient woodland and rare grassland habitat cannot be fully mitigated and therefore the project will adversely affect the integrity of the SAC. Natural England supports these conclusions.		

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		The applicant has therefore, through the derogation provided for under article 6(4) of the Habitats Directive, sought to demonstrate that there are no feasible alternatives to the project, that there are imperative reasons of overriding public importance (IROPI) for the project to proceed, and that compensatory measures can be secured that maintain the overall coherence of the Natura 2000 network. Without prejudice, Natural England has considered the emerging package of compensatory measures, and while we are broadly content that the measures would be proportionate and effective in ecological terms, we do consider that further details and discussions are needed to ensure all locations and measures are appropriate and deliverable. We have also made sure that the applicant is aware that because the compensation package includes positive management measures to tackle invasive species on Network Rail land within the SAC, they must clearly show that the measures are additional to the management for favourable SAC condition that is considered 'normal practice' for site owner/public body under Article 6(1) of the Habitats Directive. As well as seeking to demonstrate this, the applicant has identified other options for positive habitat management enhancements outside of the SAC. Natural England's detailed advice		

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		1. Introduction 1.1. Natural England's advice in these relevant representations is based on information submitted by North Somerset Council in support of its application for a Development Consent Order ('DCO') in relation to construction of a new railway and passenger service, utilising the trackbed of the disused railway and the existing freight line to Portbury Dock. 1.2. Natural England has been working closely with North Somerset Council to provide pre-application over a number of years. Natural England has also discussed the project with other relevant parties, including Network Rail. 1.3. Natural England has held initial discussions with the applicant about a Statement of Common Ground and anticipates completion of the document in the coming weeks ahead of the Examination. 1.4. In recent pre-application discussions we have suggested to the applicant that key measures relating to European sites – mitigation measures and compensation - are drawn out into a single summary. The consideration of these issues rightly features in the Environmental Statement, the sHRA, the Avon Gorge Vegetation Management Plan and will be referred to in a mitigation schedule, Construction and Environment Management Plan and proposed DCO Requirements. It is therefore useful to have a clear and transparent summary of		

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		HRA measures in one place. The applicant has agreed that this would be helpful. 2. Natural environment interests potentially affected by this application 2.1. Part of the development footprint for the Metrowest project lies within Avon Gorge Woodlands Special Area of Conservation (SAC) and Site of special Scietific Interest (SSSI), and it is also in close proximity to the Severn Estuary Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar site, and North Somerset and Mendip Bats SAC, all of which are internationally and nationally protected nature conservation sites 2.2. A number of protected species are liley to be affected, some of of which will be subject to licensing requirements (see 2.24 below). Avon Gorge Woodlands SAC 2.3. As well as being a nationally and internationally protected wildlife asset, containing many rare plants, the Avon Gorge is recognised as being highly valued and important in landscape, geological and cultural terms. 2.4. Natural England agrees with the assessment of effects on qualifying features of the SAC and considers that a precautionary approach has been taken. 2.5. The Metrowest project involves the direct loss of 0.78ha of the Avon Gorge		

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		Woodlands SAC. This is due to the increased area need for maintenance of a passenger line over a freight line, and breaks down as 0.71ha of the ancient woodland qualifying feature and 0.07 ha of limestone grassland qualifying feature. The works will also result in the loss of 27 individual rare Whitebeam trees. 2.6. The range of mitigation and compensation measures that relate to the SAC are covered in the Avon Gorge Vegetation Management Plan (AGVMP). Natural England will continue to advise the applicant on this document and will need to agree the final version. Avoidance and mitigation 2.7. Some changes to the project, while not introduced with the purpose of addressing ecological impacts, have reduced the scale of likely effects. Primarily this relates to the lowering of speed and frequency of the rail service from that which was envisaged earlier in the pre-application phase, which means that less of an area is needed for construction and maintenance activity than was originally envisaged. 2.8. The Appropriate Assessment has also identified avoidance and mitigation measures than have been introduced to reduce and limit effects and which chiefly relate to the construction phase of te project. Natural England supports these measures. 2.9. Fencing needed to maintain safety on the line will have the incidental positive effect of limiting illegal and sometimes damaging public access to the site, as noted in Natural England's site Improvement Plan. That said the potential landscape and visual impacts of the fencing on the Gorge – an important environmental		

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		asset to local communities – should also be given weight in determining the design and operation of the project. Compensation 2.10. As mentioned in the summary above, after consideration of avoidance and mitigation measures the Appropriate Assessment (AA) has concluded that the project will result in an adverse effect on integrity of the SAC. Natural England supports this conclusion. Whilst, as identified in the AA, there is some scope for effects on the ancient woodland and limestone grassland habitat to be minimised, the direct loss of qualifying features for these habitats cannot be mitigated. 2.11. The applicant has developed a package of compensation measures aimed at maintaining the coherence of the Natura 200 network. While there are some details yet to be finalised and different options or choices that could be taken, Natural England has, without prejudice, given pre application advice and considers that the applicant is taking a thorough approach to considering a suitable package of measures. 2.12. The main features of the compensation measures involve areas of positive woodland and limestone grassland management and whitebeam planting. 2.13. Natural England supports the focus on planting whitebeams, a primary feature of the SAC woodland, many species of which are endemic to the Avon Gorge. We also support the principle of replacing lost whitebeam on at least a 2		

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		for 1 basis. 2.14. We have held pre-application discussions and recently visited the three proposed whitebeam planting sites. While we are reasonably confident that one of the sites is likely to be suitable, there are some questions to be resolved with the methodology and the other two sites in order to be sure that they are the appropriate locations for this type of compensation. We believe that there may be other more appropriate locations for planting within the SAC and outside of Network Rail ownership, however, we recognise that the applicant may find it more challenging to arrange. 2.15. The positive management proposed within the SAC to benefit woodland and grassland features will target invasive species removal – one of the major ecological issue affecting condition of the SAC – and involve removal of some large trees such as the non-native holm oak. This will undoubtedly have a positive ecological outcome and, like the whitebeam planting, will be done on at least a 2 for 1 basis by area, which Natural England supports. 2.16. As stated in our summary we have advised that positive habitat management must be over and above that which Network Rail is legally required to carry out as the site owner. The applicant has sought to demonstrate that this is the case in its submission, and held initial conversations with the Forestry Commission about alternative positive habitat management in undesignated ancient woodland adjacent to the SAC. 2.17. While there are details that to be added and changes that may be made to the compensation package, we recognise that the Inspectorate, Defra and other parties will need to be consider the		

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		derogation and compensatory measures in the lead up to the Examination. North Somerset and Mendip Bats SAC 2.18. Bat surveys involving radio tracking of greater horseshoe bats revealed that bats are moving between Avon Gorge and Brockley Hall Stables SSSI, a maternity roost protected as part of the North Somerset and Mendips Bats SAC. The disused line between Pill and Portishead provides an important corridor for bats, particularly in where it runs close to the M5 and development at Portbury Dock, and a day/night roost was found at the disused Pill station. Evidence presented in the Environmental Statement also confirms the importance of the existing line (including tunnels, bridges and surrounding woodland) through Avon Gorge for bat species, including socialising of horseshoe bat species. 2.19. In terms of effects on the SAC the main risks identified arise from vegetation clearance and increased lighting along the new section of line, including Pill station. Without mitigation this could cause habitat fragmentation and severance affecting foraging and commuting habitats, and by direct disturbance to lesser horseshoe bat roosts. 2.20. Mitigation measures will involve sensitive vegetation planting management and lighting control to ensure a dark corridor is maintained and strengthened for commuting bats. 2.21. Natural England considers that mitigation proposed has focused on the key risks and provided the the dark, vegetated corridor along the course of the disused line can be maintained and enhanced, will be effective and deliverable. 2.22. While it may not be able to reduce		

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		lighting levels needed for safe use of the platform at Pill station, the applicant has stated that it is possible to create a screen or shield that protects the day/night roost at the station from light and maintains the dark corridor that bats use to access it. In principle this appears to be a an effective and deliverable mitigation measure. Severn Estuary European site 2.23. We are satisfied that significant effects on the Severn Estuary European site (s) have been ruled out through the sHRA screening on the basis of objective information, including bird surveys that suggested qualifying species of the SPA/Ramsar do not occur in significant numbers within the survey area, and an assessment of noise that appears to show that noise levels within the Severn Estuary designated site and functionally linked will be largely unaffected by the construction or operation of the new passenger service. Existing recreational use of the bird survey area was also noted. Protected species licensing 2.24. The applicant has sought Letters of No Impediment (LONIs) to provide reassurance on the likely needs for protected species licenses for Great Crested Newts, Bats and Badgers. 2.25. We have issued LONIs for bats and badgers, which include some comments minor additions that would likely be included in an application. 2.26. We have advised		

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		the applicant that further information is needed to support on LONI (and a licence application) for Great Crested Newts. We do not believe that there is a significant barrier to reaching a favourable outcome for GCN but understand that the applicant is looking at options before submitting its proposals for this species. Other biodiveristry and landscape interests 2.27. Natural England is satisfied that wider biodiversity and landscape interests have been assessed thoroughly and suitable measures included to avoid or reduce impacts have been identified in the environmental statement. We have no significant concerns.		
118-1	Noel Ayling	I object to the plan that will create a storage facility during the construction of the railway in the area behind Lodway Farm. Access is planned to be via the residential streets (Redacted) neither of which are suitable for the heavy traffic involved. The alternative access is to be gained from Marsh Lane which is far more suitable.	Lodway compound - access routes Lodway compound - construction traffic	The main HGV access route will avoid Pill by coming from the M5 J19 onto Royal Portbury Dock Road and Marsh Lane, and then via the existing cycle and pedestrian route (NCN26) which runs along the southern edge of the Port from Marsh Lane. This section of the NCN26 will be closed with local diversions in place for pedestrians and cyclists during the construction phase. There will also be a secondary access route through Easton In Gordano. The access route will mainly be used for personal vehicles, small vans and minibuses. There may be a requirement for HGV access at times. When this is necessary peak hours will be avoided where possible to reduce traffic

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				impact on local roads. Traffic management may also be necessary from time to time; this may include temporary road closures and parking restrictions subject to agreement from North Somerset Council's role as highway authority. These will be communicated to residents and stakeholders in advance. Impacts from construction traffic have been considered to ensure construction traffic from use of the compound will be kept to a minimum. The contractor will be required to produce a Final Construction Traffic Management Plan (CTMP) before construction starts, which will need to be agreed with the Local Planning Authority. This will be based on the CTMP submitted with the application (DCO Application reference 8.13). The Applicant has sought to limit construction impacts by addressing the following concerns in the CTMP (DCO Application Document Reference 8.13) specifically: • Ensure that movement of people and materials are achieved in a safe, efficient, timely and sustainable manner; • Keep freight and construction traffic to a minimum during network peaks to reduce the impact on the highway network during the busy periods; • Ensure that the impact and disruption to the local communities and tourists is minimised;

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				• Minimise construction trips where possible; • Ensure the continued monitoring, review and subsequent final version of the CTMP (DCO Application Document Reference 8.13) and mitigation measures; • Limit the impacts on the Strategic Road Network and the Local Road Network; • Limit the impacts on the natural and built environment. • Measures to ensure that the maintenance and condition of public roads, cycle routes and Public Rights of Way do not deteriorate due to the construction traffic, including monitoring arrangements with local highway authorities. The contractor will also be required to follow their own detailed CEMP based on the Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) to keep impacts to a minimum, which will be developed and approved prior to works starting.
118-2		There are also wildlife and environmental concerns about the area behind Lodway Farm and these must be thoroughly examined and suitable mitigation put in place to minimise the damage to wildlife.	Lodway compound - ecology	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes

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				assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix

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				9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. The Master CEMP also proposes the contractor consult with the local Toad Patrol group at Pill and develop procedures to reduce the impact of construction activities on toad migrations across construction sites and haul roads. More information on mitigations can be found in the Schedule of Mitigation (DCO

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				Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25).
119-1	Patricia Grindon	As a life long member of this community I wish to follow all plans and discussions for the reinstatement of our train service. What disruption to village life is proposed during the reinstatement period until the completion of this long awaited service.	Pill - construction impacts	Consideration of the impacts from construction have been considered and limited where possible: • Traffic impacts have been assessed in the Transport Assessment (TA) (EA Appendix 16.1, DCO Application Document Reference 6.25), and mitigation measures implemented through the Construction Traffic Management Plan (CTMP) (DCO Application Document Reference 8.13) and Master Construction Environmental Management Plan (CEMP) (ES Appendix 4.2, DCO Application Document Reference 8.14) • Noise levels have been assessed in the ES Chapter 13 – Noise and Vibration (DCO Application Document Reference 6.16). The predicted noise levels in Pill are all above the night-time Unacceptable Adverse Effect Level of 65 dBLAeq,1h and would cause a temporary significant adverse environmental effect which would be significant in relation to the EIA regulations. An assessment to determine eligibility for noise insulation would need to be undertaken prior to any night working. • Lighting will be designed, positioned and directed so as not to intrude unnecessarily on

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				adjacent buildings, sensitive ecological receptors, structures used by protected species and other land uses. This will prevent unnecessary disturbance to local residents, light-sensitive species such as bats, railway operations, and passing motorists. This has been detailed in Section 3 of the Master CEMP (DCO Application reference 8.14). There will be a requirement for the Local Planning Authority to approve proposed lighting plans once a contractor has been appointed. The Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) sets out a framework for Environmental Management Consents during construction.
120-1	Patricia Langton	I am concerned about the proposal for the Lodway Farm site and the implications this would have for local flora and fauna, especially a nationally important toad population.	Lodway compound - ecology	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound

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				area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey. The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13

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				Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also suitable terrestrial habitat for amphibians. Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor is obliged to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads.

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				The project team will engage with the Pill Toad Patrol group before a Contractor is appointed and agree mitigation measures that the Contractor should employ. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25).
121-1	Peter Milner	I would like to be reassured that sufficient measures have been taken to preserve the breeding ponds and migratory routes for a significant toad population at Lodway Farm where I understand new works are proposed.	Lodway compound - toads	Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor is obliged to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed and agree mitigation measures that the Contractor should employ.

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122-1	Peter Stanley	1. Mitigation measures required around Lodway Farm and the cyclepath that will allow the toads to continue their migration over the Breeches, across the entirety of Lodway Farm fields, over the rail track, across the cyclepath and into the breeding pond. This is a very important wildlife site and I have a concern about Lodway farm and disruption to wildlife.	Lodway compound - ecology	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of effects from construction and operation of the railway have been completed and mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. The specific ecological surveys undertaken at Lodway compound are: • Extended Phase 1 Habitat survey – 2016, and some additional areas when compound area extended - 2018 • Preliminary Bat roost inspection survey of Lodway Farm buildings – 2018 • Survey of Lodway Farm buildings for barn owl – 2018 • Pond survey for Great Crested Newt eDNA – 2016 • Reptile survey – 2016 (site compound area) and 2018 (additional land parcels for reptile receptor site) • Hedgerow survey – 2018 Badger and fox surveys were undertaken during the Phase 1 habitat survey and would be updated by a pre-construction survey.

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				The pond at Lodway farm will not be directly impacted by construction. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) has assessed impacts at Lodway compound. In summary: • No Great Crested Newts were found to be in the pond at Lodway compound (see the Great Crested Newt Survey Report appendix 9.4 (DCO Application reference 6.25); • There will be a temporary slight adverse impact on barn owls (section 9.6.34); • There be a slight adverse impact on important hedgerow (section 9.7.20); • Reptiles will be affected and Appendix 9.13 Reptile Mitigation Strategy of the Environmental Statement (DCO Application reference 6.25) discusses how reptiles will be displaced by habitat manipulation and search, and shows the displacement area where the site compound will be located and the compensation area (referred to as the Lodway receptor site). Displacement involves phased cutting of the vegetation, stripping the topsoil and undertaking a search for individual animals supervised by an ecologist. This activity will also ensure that any amphibians within the site compound area are removed or displaced from the construction site into retained or compensatory reptile habitat, which is also

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				suitable terrestrial habitat for amphibians. More information on mitigations can be found in the Schedule of Mitigation (DCO Application reference 6.31), Chapter 9 Ecology and Biodiversity (DCO Application reference 6.12), Master CEMP (DCO Application reference 8.14) and Ecology appendices (DCO Application reference 6.25). Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor is obliged to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is appointed and agree mitigation measures that the Contractor should employ.
122-2		2. Insufficient parking is planned at Pill Station and local roads already full of parked cars. The nearby Memorial Club has a very large carpark and	Pill - parking	The impacts on parking provision are discussed within Section 16.6 of the Environmental Statement Chapter 16 –

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		arrangements should be made with the club to provide additional car parking		Transport, Access and Non-Motorised Users (DCO Application Document Reference 6.19), and Section 7 of the Transport Assessment (ES Appendix 16.1, DCO Application Document Reference 6.25). Specifically for Pill, a combination of the following factors will limit the impacts as much as possible: • the provision of a new car park; • the provision of a forecourt area and disabled parking at the station entrance; • TROs on Station Road, Heywood Road and Myrtle Hill to mitigate for an increase in traffic flows as described in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25). The design provides adequate parking for the demand forecasts reported in the Preliminary Business Case 2014 and Outline Business Case 2017 (DCO Document References 8.3 and 8.4 respectively), and these were continually reviewed as the DCO Scheme progressed due to the number of concerns raised about parking at Stage 1 Section 47 consultation. The Applicant is both the DCO Scheme promoter and the local Highway Authority and therefore has powers to control on-street parking, and will also manage the car parks, already agreeing to short stay and all-day tariffs and season permits, and will monitor its use.

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				Residents' parking was considered after the Stage 1 Consultation but required discussion at Local Authority level as part of a wider parking strategy, which is currently under review and may be implemented in other areas before a possible wider roll-out. There will be post-implementation monitoring of parking provision within Portishead and Pill, detailed in Table 16.8 of the ES Chapter 16 – Transport, Access and Non-Motorised Users (DCO Application Document Reference 6.19). Further consideration of wider parking issues have been reported in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25).
123-1	Rosaleen Thayer	Please would you put in mitigation measures to protect toads and their access to the breeding ponds. Thank you	Lodway compound - toads	Section 6.2.37 of the Master Construction Environmental Master Plan (CEMP) (DCO Application reference 8.14) acknowledges that there is registered toad crossing on the cycle path in Pill next to the DCO Scheme and other toad patrols are set up in the wider area, e.g. one centred on Fennel Road, Portishead which is close to Portishead Ecology Park. To reduce the impacts, the Contractor will be asked to consult with local Toad Patrol groups and develop procedures to reduce impact of construction activities on toad migrations across construction sites and haul roads. The project team will engage with the Pill Toad Patrol group before a Contractor is

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				appointed to discuss mitigation measures that the Contractor should employ.
124-1	Wedlake Bell LLP on behalf of The Bristol Port Company	FIRST CORPORATE SHIPPING LIMITED PORTISHEAD BRANCH LINE - METROWEST PHASE 1 RELEVANT REPRESENTATIONS 1. INTRODUCTION 1.1 The following representations are submitted by First Corporate Shipping Limited, which trades as The Bristol Port Company ("BPC"), in relation to the application by North Somerset Council ("NSC"). 1.2 BPC's overriding needs are: 1.2.1 to ensure the proposed temporary and permanent works have no negative impact upon its statutory undertaking, operations and the activities of its tenants and customers; and 1.2.2 to achieve an outcome which minimises the impact on its operations of land being lost to or sterilised by NSC's proposed development during the pre-construction, construction and operational phases. 1.3 Pursuant to the Bristol Dock Acts and Orders 1848–2010, BPC is the statutory undertaker (harbour and competent harbour authority) for Bristol and the owner and operator of the commercial port of Bristol ("Bristol Port"). As explored below, BPC questions the need for and extent of some of the works proposed and also the requirement for its land to be taken in connection with them. It disputes that a compelling case has, or can, be made that it is in the public interest for the compulsory acquisition powers proposed affecting its land to be granted. It further does not accept that the compulsory acquisition proposed can be achieved without serious detriment to its undertaking. It has various other concerns as amplified below. 1.4 The text below summarises the	Individual	The Applicant's response to all matters raised in this Relevant Representation is detailed in correspondence with the Bristol Port Company, which is provided at Appendix E of this document. The detailed response from the Applicant has been discussed with the Bristol Port Company and this will be incorporated into a Statement of Common Ground between both parties (Document reference 9.3.12 ExA.SoCG-BPC.D1.V1), that is unlikely to be submitted to the ExA before Deadline 2. The Bristol Port Company made further representations to the Planning Inspectorate on 21 September 2020. A copy of the Applicant's response to this, dated 14 October 2020 is included at Appendix E. The Applicant will continue to engage with the stakeholder on outstanding matters.

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		primary submissions BPC proposes making; BPC necessarily reserves its position to add to or amend these submissions as necessary or appropriate and insofar as further information becomes available and to make further written and oral representations. 1.5 BPC has identified a number of matters which require consideration by the Examining Authority at issue specific hearings, including the key issues of the need to preserve reliable and timely access for rail freight traffic to and from Bristol Port throughout the construction of the new railway and its future use, and how BPC's continued access between parts of its operational land across the railway close to Court House Farm is to be secured. In addition, BPC registers its objection to the proposed rights of compulsory acquisition over land in BPC's ownership and anticipates pursuing this objection at a compulsory acquisition hearing. It further reserves its position to appear at any open-floor hearing insofar as appropriate or necessary. 1.6 BPC has responded to NSC's earlier consultations in relation to this project: 1.6.1 stage 1 consultation (BPC letter of 31 July 2015); 1.6.2 first Section 42 consultation (BPC letter of 4 December 2017); and 1.6.3 further Section 42 consultation (BPC letter of 16 August 2019). 2. BPC'S POSITION 2.1 While BPC recognises the ambition to provide an alternative transport mode for commuters from Portishead travelling to the Greater Bristol Region, it is concerned about the impacts that the detail of the scheme now being considered will have on its undertaking. It is notable that the current scheme looks to provide only an hourly service for		

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		passengers but will have a significant and disproportionate impact upon BPC's undertaking during its construction and future operation and will involve the permanent loss of land in BPC's ownership held for the purpose of its statutory undertaking. 2.2 BPC therefore disagrees with elements of NSC's proposals in their current form because they will adversely affect the efficient and economic operation of Bristol Port now and in the future. 2.3 In formulating its proposals in their current form, NSC has failed to have sufficient regard to and/or fully to assess various matters, including: 2.3.1 the damaging effects of those proposals on the highly dynamic nature of BPC's business and statutory undertaking that must be able to deliver operational certainty to its customers and provide at all times a rapid, efficient link to inland transport, via the strategic road network (M5) and the national rail network; 2.3.2 the effect of those proposals on the continued availability of rail paths for freight trains to and from Royal Portbury Dock (during and after construction of the works) and the interaction between those trains and passenger services; 2.3.3 the adverse impact of those proposals on the use by BPC of the private crossing between its transit cargo storage areas on either side of the proposed railway; 2.3.4 alternatives to those proposals, including in relation to the proposed land take for the temporary and permanent works, in order to minimise the strategic and operational impacts on Bristol Port; 2.3.5 the effect of the construction activity on the day to day operation of Bristol Port and the other port-dependent businesses on the Royal Portbury Dock		

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		estate ("RPD Estate"); 2.3.6 the operational consequences of NCS's proposed restrictions during construction and NSC/Network Rail's future access rights; and 2.3.7 the effect on the future of Bristol Port of land which has been safeguarded for port development no longer being available for that purpose by virtue of its being taken compulsorily for purposes ancillary to the DCO scheme. 3. DEVELOPMENT CONSENT ORDER 3.1 The draft development consent order ("DCO") currently appears to contain inadequate controls over the nature and proposed method of execution of the works. 3.2 The DCO amongst other things does not: 3.2.1 provide adequate and acceptable protective provisions for BPC as operator of, and statutory undertaker for, Bristol Port; 3.2.2 justify the requirement for powers of compulsory acquisition which would affect BPC; and 3.2.3 state with sufficient clarity how NSC and third parties, including Network Rail, intend to exercise compulsory acquisition powers. 3.3 Further concerns in relation to the draft DCO, insofar as necessary or appropriate, will be provided at a later date following detailed consideration of its provisions and the related documentation, including the Book of Reference. These will include concerns about what appear from an initial review to be provisions which could affect private rights granted by BPC to National Grid Electricity Transmission PLC and Western Power Distribution (South West) PLC which are necessary for the delivery of the Hinkley Point C Connection Project. 3.4 BPC notes the inclusion of draft protective provisions in favour of BPC and its		

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		statutory undertaking in the draft DCO. However, these are currently inadequate in their scope and content. Without detracting from the other issues of principle raised in these representations, BPC will expect provisions to be added to cover a range of concerns, including appropriate controls over works or other activities on or affecting roads on and giving access to Bristol Port, over any proposed temporary, drainage or other ancillary works on any of BPC's land, over the temporary use of land and works programming, and restrictions on access during construction. Controls of this sort, and to delimit the location of all works and activities to the extent they affect BPC's land and/or operations, are necessary to provide the certainty required to ensure that the safe and efficient operation of Bristol Port can continue without interruption during construction of the DCO scheme. Further detail will be provided following detailed consideration of the DCO's provisions. 4. RAIL ACCESS 4.1 BPC has previously expressed concerns about the extent of the rights sought over its freight rail line and the works proposed there, and has sought assurances that both during the construction of the scheme and once the new passenger service is in operation, access for freight traffic between Bristol Port and the national rail network will not be restricted. 4.2 Documentation relating to the proposals states that access for freight traffic to and from Bristol Port will be adversely affected during construction of the various works, but BPC is unsure where details of the interruptions and the necessary assessment of their impact on port operations may be found. BPC		

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		will need to be provided with sufficient information about these matters and with adequate protections so as to ensure its service delivery to customers and its other port operations will not be impeded. 4.3 In relation to future operation of the railway, statements are made in the application documentation that the scheme has been designed to accommodate the existing freight rail paths, but, again, BPC has not been able to find the detailed evidence or analysis to support the statements. 4.4 BPC is also concerned that merely accommodating whatever is meant by 'existing' freight paths would be inadequate to avoid serious detriment to BPC's statutory undertaking: reliable and timely access for rail freight traffic to and from Bristol Port is critical, not only for efficient port operations within the RPD Estate but also for securing the necessary modal shift from HGV traffic to rail. 4.5 BPC will therefore expect suitable assurances to protect current and future freight traffic to be encapsulated in enforceable provisions of the DCO. 4.6 NSC's proposals include the creation of a permanent road-rail access point at the location where the perimeter track referred to in paragraph 7.2 below meets BPC's privately-owned railway within the RPD Estate. From the documentation provided, it appears that the proposals envisage NSC/Network Rail acquiring permanent rights over the perimeter track to bring road and rail vehicles to the access point, and further permanent rights for Network Rail's engineering and other works trains to pass over BPC's private railway for the benefit of the national rail network generally. Unspecified works are proposed to BPC's level		

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		crossing to create the access point and further (unspecified) works are suggested for the perimeter track. NSC also requires an area of BPC's land under the M5 bridge on a permanent basis in support of the use of the access point. These proposals cause BPC concern because of the interference they will cause to BPC's use of the track and its private rail link, and the damage to its infrastructure which will result, and their acceptability will need to be considered further. 5. LOSS OF RAIL CROSSING AND SAFEGUARDED LAND 5.1 BPC notes the intention to close its private crossing that connects operational land to the north and south of the disused railway in the vicinity of Court House Farm. The NSC proposals currently make no provision for any alternative access between the sites. In the absence of alternative provision, closure of the crossing will clearly constitute an unacceptable interference with BPC's operations and statutory undertaking. 5.2 BPC also notes the proposed compulsory acquisition of an area of land adjacent to its boundary (to the south of the railway and to the east of Marsh Lane) for Flood Mitigation and Pond with associated ecological works (Work Nos. 16B and 16D). NSC also proposes to take a permanent right of access from Marsh Lane over BPC's adjacent land. The land that NSC seeks is specifically safeguarded for port development within NSC's adopted planning policy in recognition of the need of Bristol Port for additional land for development at Royal Portbury Dock. Despite that designation, it appears no assessment has been made of the effect on Bristol Port of this land no		

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		longer being available for development, including by virtue of the access rights being sought over large parts of BPC's adjacent land. In the absence of any provision for alternative land being made available to meet the needs identified by the planning policy, BPC objects to this safeguarded land being taken and used for purposes ancillary to the DCO scheme. 6. COMPULSORY ACQUISITION 6.1 BPC objects to the nature and extent of the proposed compulsory acquisition powers to be conferred by the DCO and requests a compulsory purchase hearing, pursuant to section 92 of the Planning Act 2008. 6.2 So far as they affect BPC's land, the compulsory acquisition powers sought include those of outright purchase (of land, subsoil and/or airspace at NSC's option), of the imposition of rights and of restrictive covenants, of the extinguishment and overriding of rights and other interests and of possession during construction. All land affected by these compulsory acquisition powers forms part of BPC's operational land held by it for the purpose of its statutory undertaking. Therefore the Examining Authority will need to be satisfied that all the powers sought may be exercised without any serious detriment to BPC's statutory undertaking. On the basis of the DCO as currently drafted, BPC considers this condition cannot be met. 6.3 In particular, the extent of compulsory land acquisition powers sought over land which is part of or adjacent to public vehicular highways appears excessive, particularly at Marsh Lane and Royal Portbury Dock Road. Even if permanent works are needed as part of the scheme to these areas of highway and adjacent land, it has not been		

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		demonstrated satisfactorily why that necessitates BPC or anyone else being compulsorily deprived of its interests in the land or NSC acquiring any interest in any land beyond that normally vested in a local highway authority by dedication and adoption. 7. OTHER CONSTRUCTION ISSUES 7.1 No full and final details have been made available concerning NSC's proposed arrangements for HGV and other construction traffic movements in the vicinity of the RPD Estate. BPC will need to be satisfied that these and any associated works or measures will not have any detrimental effect on traffic and cargo resorting to and from, and moving around, the RPD Estate and will require appropriate protective provisions in relation to these issues and in relation to the regulation of all construction activities within the RPD Estate. 7.2 BPC notes the proposed use during construction of the track around the perimeter of part of the RPD Estate between Marsh Lane and the M5 overbridge for HGV traffic (ref Compounds, Haul Roads and Access to Works Plan Sheet 5 – Access Point AW 5.1). BPC is very concerned that this proposed use conflicts with other regular vehicular use of the track by BPC and others including CLH, Highways England and contractors working on the National Grid Hinkley C Connection project all of which access and use must be preserved. The effect of the use of the track on the security of the RPD Estate is also a significant concern. BPC is also unclear whether NSC's proposal includes carrying out any work to this track and, if so, what work is proposed. If BPC permits access over the track during construction, then it must be maintained and		

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		eventually left in the same or a better condition than when NSC's works commence and BPC would need the absolute right to approve any proposed works to the track. 7.3 The proposed location of a construction compound on BPC land beneath the M5 overbridge will interfere with the need for access (by BPC and others) and impair the security integrity of the RPD Estate (ref Compounds, Haul Roads and Access to Works Plan Sheet 5). 7.4 BPC has found no further detail of the proposals to deal with culverts that discharge surface water from south of the rail to the north. BPC's particular interest lies in the Easton-in-Gordano culvert (some 200 metres West of the M5 on the railway line route) and the unnamed culvert linking the Court House Farm site, beneath the north abutment to the Royal Portbury Dock Road, and eventually to the Drove Rhine. BPC will need to understand the current proposals and the protections proposed before it can express a view about their acceptability. 8. PUBLIC PATHS 8.1 BPC has previously expressed concern about the various works proposed affecting the network of public bridleways/cycleways which it has created in and around the RPD Estate, including proposals to add to that network by creating and imposing further public rights of way over BPC's land. The proposals include alterations to the existing infrastructure at Royal Portbury Dock Road and the creation of new public paths near Marsh Lane and close to the M5 bridge embankment, involving the compulsory acquisition of BPC land. BPC does not accept that a need for these works has been demonstrated, either at all or such that the works proposed can properly		

PINS Ref No. with issue ref	Organisation /Person	Relevant Representation	Key Issues	Applicant's Response to Relevant Representation
		constitute associated development. The existing dedicated public paths, the routes and specification of which were agreed with NSC, provide a complete public bridleway/cycleway route towards Pill. Even if the works to re-open the railway line proceed, once those works were complete, these paths will continue to be available as they are now, so no works to or to supplement them are necessary. 8.2 It is in any case inappropriate that BPC should be permanently and compulsorily deprived of land in order to provide additional public rights of way in substitution for routes which are currently only permissive and for which the existing (dedicated) public path network already provides an adequate alternative. 8.3 NSC proposals in relation to the various paths also go further than could ever be necessary or proportionate, in that NSC seeks to acquire the whole of the land over which the new works and/or paths may lie. All that would be necessary to secure public access would be the dedication as public highway of the route of any new work, as is the case with the existing dedicated network into which NSC seeks to connect the new paths. 9. ECOLOGY The Examining Authority will need further information on a number of issues, including: 9.1 BPC's environmental management plan for the Court House Farm development; and 9.2 the wider adverse environmental impacts on flora and fauna within BPC's established wildlife corridors and green areas on the southern boundary of the RPD Estate. First Corporate Shipping Limited trading as The Bristol Port Company 26 February 2020		

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125-1	The Coal Authority	The Coal Authority is pleased to note that the applicant is aware that parts of the proposed Portishead Branch Line fall within our defined Development High Risk Area. However, we note that Section 5.3.8 of the Environmental Statement (ES) Volume 2 identifies that the following matters have been scoped out of the ES, as agreed with the Planning Inspectorate: Ground Conditions: The impact of new and additional services on the railway lines on geology, as there will be no further significant impacts on the underlying ground conditions following construction. In light of the above, taking into consideration the areas which fall within the Development High Risk Area and the nature of development required in those areas to improve the existing railway line (pedestrian crossings / footway and cycleway / retaining walls) the Coal Authority has no objections to the above planning application.	No objection	Noted.
125-2		However, the Coal Authority does recommend that, should planning permission be granted for this proposal, the following wording is included as an Informative Note on any planning permission granted: The proposed development lies within an area that has been defined by the Coal Authority as containing potential hazards arising from former coal mining activity. These hazards can include: mine entries (shafts and adits); shallow coal workings; geological features (fissures and break lines); mine gas and previous surface mining sites. Although such hazards are seldom readily visible, they can often be present and problems can occur in the future, particularly as a result of development taking	Informative Note wording	Suggested text to be included in any Planning Permission has also been noted. Previous representations from the Coal Authority which has been addressed as below, and refers to their comments regarding development over or within the influencing distance of a mine entry: "The ground conditions were taken into account in the design of the highway works at Ashton Vale and included in the ES Chapter 10 - Geology, Hydrogeology, Ground Conditions and Contaminated Land (DCO Application Document Reference 6.13).

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		place. Any form of development over or within the influencing distance of a mine entry can be dangerous and raises significant safety and engineering risks and exposes all parties to potential financial liabilities. As a general precautionary principle, the Coal Authority considers that the building over or within the influencing distance of a mine entry should wherever possible be avoided. In exceptional circumstance where this is unavoidable, expert advice must be sought to ensure that a suitable engineering design is developed and agreed with regulatory bodies which takes into account of all the relevant safety and environmental risk factors, including gas and mine-water. Your attention is drawn to the Coal Authority Policy in relation to new development and mine entries available at: https://www.gov.uk/government/publications/building-on-or-within-the-influencing-distance-of-mine-entries Any intrusive activities which disturb or enter any coal seams, coal mine workings or coal mine entries (shafts and adits) requires a Coal Authority Permit. Such activities could include site investigation boreholes, digging of foundations, piling activities, other ground works and any subsequent treatment of coal mine workings and coal mine entries for ground stability purposes. Failure to obtain a Coal Authority Permit for such activities is trespass, with the potential for court action. Property specific summary information on past, current and future coal mining activity can be obtained from: www.groundstability.com or a similar service provider. If any of the coal mining features are unexpectedly encountered during development, this		The DCO Scheme design comprising highway works on Winterstoke Road in Bristol and a new pedestrian and cycle ramp between Ashton Vale Road and Ashton Road will not require further assessment for coal mining risk, included in the ES Chapter 10 - Geology, Hydrogeology, Ground Conditions and Contaminated Land (DCO Application Document Reference 6.13). The freight line crosses coal bearing strata the surface along the southernmost section around Ashton Gate (which lies within the Red Line Boundary for the DCO Scheme). An old coal pit is marked on the 1884 OS map, some 300 m to the west from the railway which survives on mapping editions up to 1955 when the area is developed as allotments. At Ashton Gate the earliest OS map dated 1886 shows Frayne's Colliery as being disused and a colliery associated with the Ashton Vale Ironworks to the north which remains until sometime in the 1940s. Given the long-established nature of the railway no impacts are considered from coal mining therefore intrusive site investigations were not necessary." Should any features be unexpectedly encountered the Applicant will report this immediately to the Coal Authority as instructed.

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		should be reported immediately to the Coal Authority on 0345 762 6848. Further information is available on the Coal Authority website at: www.gov.uk/coalauthority		
126-1	BNP Paribas Real Estate on behalf of The London Pensions Fund Authority c/o Knight Frank IM	Dear Sirs, APPLICATION BY NORTH SOMERSET DISTRICT COUNCIL FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR PORTISHEAD BRANCH LINE – METROWEST PHASE 1 (the 'DCO') METROWEST PHASE 1 ('the Project') NORTH SOMERSET DISTRICT COUNCIL ('the Applicant') (Redacted) (the 'Property') This Relevant Representation is submitted on behalf of The London Pensions Fund Authority ("TLPFA"). TLPFA is an Investment Fund which owns the Freehold interest in the above Property as an investment. The Property is multi-tenanted and occupied. The majority of the units on the estate are of Trade Counter nature and therefore visited by members of the public to purchase goods. Regular stock deliveries and pick-ups are made to and from the units, and staff also access the Property, The Property borders the existing public space provided by the recent MetroBus project which in turn borders the existing Portishead Branch Line to the east and the Ashton Vale Road to the north. The current Land Plans (Sheet 16 of 17) indicate that the Property is bordered by Plots 16/135, 16/136, 16/155 to the north and 16/156, 16/157, 16/100, 16/127 to the east. All the Plots listed as adjacent to the Property are subject to the compulsory acquisition of all estates and interests. It should be noted that Plot 16/155 appears to encroach onto the Freehold interest that TLPFA has in the land adjacent to the	Individual	Plot 16/155 has been drawn to reflect the project's requirements of land and drawn accurately to represent the current boundary for registered title BL153134, owned by Bristol City Council. Plot 16/155 is required on a permanent basis to enable works for shared footpath and cycleway works. If there is a discrepancy in registered ownership in the location of plot 16/155, the Applicant would advise the property owner to discuss directly with Bristol City Council and Land Registry to rectify any issues present on the current registration. Further to those discussions, the Applicant would be happy to meet with the representatives of the property owner to discuss any potential transport or land impacts to the property owner and their tenants as a consequence of the scheme.

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		walkway along Ashton Vale Road as seen in the current Land Plans (Sheet 16 of 17) and therefore may be subject to land take. TLPFA does not object to the principle of the underlying Project sought by the DCO in terms of the benefits it is seeking to deliver from Bristol to Portishead and region beyond. However, it is concerned with the impact of the Project detrimentally affecting Tenants' on-going operations specifically at the Property. This includes the impact caused by the Project on Tenants, their staff, delivery drivers and members of the public access and egress from the Property during the course of the Project's construction and operation. TLPFA objects to the DCO on the basis that it has not been proven by the Applicant that the construction and operation of the Project will not cause a detrimental impact to TLPFA and their Tenants' operations, including by assessment of transport impacts and how access and egress to the Property by the increased closure of the level crossing once the Project is operational. TLPFA is seeking expert advice to consider the material within the DCO documentation and is seeking a meeting with the Applicant to confirm whether any adverse impact to TLPFA's interests and their Tenants' operations can be satisfactorily addressed and mitigated as part of the DCO. TLPFA therefore requests to be registered as an Interested Party to the examination of the DCO and to make submissions on the topics of transport impact and compulsory acquisition relating to the Site. We look forward to hearing from you further in due course.		

PINS Ref No. with issue ref	Organisation /Person	Relevant Representation	Key Issues	Applicant's Response to Relevant Representation
127-1	The National Trust	The Proposed Portishead Branch Line (MetroWest Phase 1) Order Planning Inspectorate Ref: TR040011 The National Trust is Europe's largest conservation charity with nearly six million members. Established 125 years ago, its primary purpose is to promote the preservation of special places for the benefit of the nation. The Trust is the custodian of several historic properties in North Somerset and Bristol, including Leigh Woods, which is adjacent to the proposed rail scheme (see applicant's Land Plan). Close to the station at Pill, the Trust own a small estate at Failand, as well as the Victorian Tyntesfield Estate. Viewing the rail scheme from Bristol we own land at Shirehampton which overlooks the Avon Gorge. The Trust is aware of the longstanding challenges of managing traffic within Bristol and encouraging more sustainable travel opportunities. We broadly support the upgrading of the railway line to facilitate the passenger rail line subject to the following comments. As described in Section 4 Compulsory Acquisition Information, we hold land inalienably and have been having discussions over the necessary rock works for safety purposes and the risk matrix adaptations caused by the upgrade to a passenger line. The ongoing liability for managing rock fences is significant and we have agreed that where possible these should be placed on Network Rail land. The Trust acknowledges that MetroWest has agreed to leave us in no worse position as to access to our land through the works to Quarry Underbridge 2 The	Various	Any outstanding matters raised in this Relevant Representation are proposed to be dealt with in a Statement of Common Ground with The National Trust that has not yet been drafted as the notification of the ExA's request for a SoCG was the first time that a SoCG was contemplated by the Applicant. The Applicant will seek to continue to progress discussions with The National Trust through the course of the examination.

PINS Ref No. with issue ref	Organisation /Person	Relevant Representation	Key Issues	Applicant's Response to Relevant Representation
		proposed works will have an environmental effect on the flora and fauna that is endemic to the Avon Gorge. We are pleased to see mitigation works included within Section 6 and that whilst there are large losses of habitat on National Trust land, proportional to the scheme, the total area in the SAC is small. It is to be noted that no works can commence until agreed with Natural England. It is to note that within the compound area and haul road for the works to Quarry Underbridge 2 are Leigh Woods Whitebeams, unimproved calcareous grassland, Gloucester hawkweed, and fingered sedge, Bristol rockcress can be found close to the location of where materials will be stored. We expect the compound area within this location to be as small and possible and that loss of species caused by the ramp and these works are mitigated for. We would expect a survey of this specific area prior to works commencing and after works have finished to monitor ruderal species development and for non-native species. The National Trust do not expect these works to have a major impact on our visitor business. The Trust broadly supports the proposed upgrading of the railway line requests that the issues raised in this representation are given appropriate weight and attention through the DCO process, including through the use of Requirements where appropriate.		
128-1	Property on Hardwick Road	I am concerned that there is insufficient detail on the plans provided to show what proportion of my land is to be subject to compulsory purchase of a	Land, access, property	The Applicant issued a Request for Information ("RFI") form to the previous property owners on 23rd September 2015 to

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	[address redacted]	permanent interest and temporary right to use the land, nor what rent is to be paid in return for this land.		verify ownership details found when carrying out Land Registry searches. The Applicant was able to confirm ownership and occupation of the property owners on site, when carrying out a follow up exercise with property owners who had not confirmed ownership details. As the project design progressed, the Applicant invited the property owners to attend a consultation event to discuss the details of the current land requirements of the property, along with other property owners in the area. The letters inviting owners were sent on 11th July 2016, with the consultation meetings held on 28th July 2016. A further letter was sent to property owners on 28th July 2017, including an invitation to attend a further consultation event held on 8th August 2017. Following the two consultations, a formal S42 consultation was carried out by the project in October 2017. The property owners were both served with S42 notices on 19th October 2017. Initial letters were sent from Ardent updating property owners of the project and the current requirement of land for soil nailing in the area. The letters were sent on 21st September 2018 and with regard to [redacted], were addressed to the property owners at the time. The letter included an

PINS Ref No. with issue ref	Organisation /Person	Relevant Representation	Key Issues	Applicant's Response to Relevant Representation
				invitation to all property owners to discuss the contents of the letter during a consultation which took place on 8th October 2018. Full details of the land requirements (including a plan) and payments were included in the correspondence. During conversations between the Applicant and solicitors representing the previous property owners, the solicitors advised the Applicant that the sale of the property took place 28th June 2019. Draft agreements were sent to the property owners on 19th August 2019. Since issuing the initial bundle of draft documents, the Applicant has sent correspondence on a number of occasions being 10th September 2019, 22nd October 2019 and 3rd December 2019. The Applicant has not received any response to any of its correspondence. A confirmation schedule was issued to the current property owner on 13th September 2019, confirming details of ownership and occupation of the property, ahead of finalising the Book of Reference for the DCO application. Land comprised by plots 06/295 (hatched purple) and 06/300 (shaded green) on the

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				land plans, are required in order to carry out soil strengthening and stabilization works, known as soil nailing and to facilitate an access to undertake these works. Soil nailing is where the banks of earth supporting the railway line are stabilised by the insertion of reinforcing bars driven into the subsoil. They will be inserted from within the Network Rail land boundary. In addition, part of the land is required on a temporary basis for a temporary fence to be installed near the end of the garden, to ensure that residents are kept safe from the above soil nailing works. Network Rail intends that the works in the vicinity of the property should take approximately 12 months in total. The Applicant is working with Network Rail to reduce this length of time.
129-1	Trevor Wraith	I am concerned that while there has been discussions to date the documents recently issued are very large, almost 21000 pages, and contain a huge amount of detail that interested local residents and other parties will have difficulty to review and understand in time to be able to comment on the proposals.	General - consultation	Summaries of the works were provided in the consultation leaflets compiled for both consultation stages, and specifically prepared drawings. The Environmental Statement (DCO Application Documents 6.1 – 6.31) also includes a non-technical summary - a useful starting point for non-specialists (DCO Application Document 6.2). The Applicant has tried to provide as much information as possible to inform interested parties of its proposals where the detail is available and known.

PINS Ref No. with issue ref	Organisation /Person	Relevant Representation	Key Issues	Applicant's Response to Relevant Representation
				The Applicant is very happy to provide further clarification if required.

Table 2 - The Applicant's response to additional submissions received

PINS Ref No. with issue ref	Organisation/ Person	Relevant Representation	Key Issues	Applicant's Response to Relevant Representation
130-1	Burges Salmon on behalf of The Crown Estate	Re: Land on the South West side of Severn Road, Pill. Dear Sirs Thank you for your letter of 16 July 2020. We confirm that the Property is no longer subject to escheat pursuant to completion of the attached transfer dated 9 April 2018. In practical terms this means that The Crown Estate should not be considered an interested party moving forward. Yours faithfully Abi	Land	Noted.
131-1	Jonathan Rainey	Dear Sir/Madam I am a resident on [REDACTED] Portishead. My property backs directly onto the train line. Currently, there is an area of dense scrub that lies between us and the train line, as well as an intervening 6ft boundary fence in my ownership. I have previously raised representations to North Somerset Council regarding the noise survey that was carried out as part of the application's evidence base. The closest noise monitoring location was carried out on the other side of the track on the edge of the residential estate known as The Vale. No monitoring was carried out to the rear of the properties along Fennel Road.	Noise	The baseline noise surveys were undertaken to gain an understanding of the existing noise climate. It was considered that the existing noise level in the rear gardens of properties in The Vale would be similar to that in Fennel Road. For the assessment of possible impacts from the trains, the predicted noise level at Fennel Road was used, and not the predicted noise level where the baseline survey was undertaken. Using this approach, the predicted noise level from trains when the passing the rear gardens of Fennel Road has been used to determine the impact and therefore this takes into account the fact that the trains will be travelling faster than when passing The Vale. The assessment does consider what could be called an average noise level over a 16-hour period. However, the assessment also

PINS Ref No. with issue ref	Organisation/ Person	Relevant Representation	Key Issues	Applicant's Response to Relevant Representation
		Given that our back gardens lie within 10+metres of the train line, we are concerned that the levels of noise are not accurately represented for those living along Fennel Road, particularly as the noise impact for those residents have been based on a 24 hour average based on calculations undertaken at the Vale side of the railway line. This is of particular concern as trains are accelerating out of Portishead. We would request that the impact of noise on the Fennel Road residents whose properties back onto the trainline is examined, and whether there is a need for mitigation as currently none is proposed.		considers the impact from the passage of an individual train. Within the Environmental Statement, Chapter 13 (DCO Application Document 6.16) the impact using the averaged noise level is considered in paragraph 13.6.69 and the impact from the peak train noise is considered in paragraphs 13.6.70 to 13.6.72. Both of these assessments conclude that there is not expected to be a significant environmental effect at properties located along Fennel Road.
131-2		It is also worth mentioning that there are large trees on the opposite side of the track to Fennel Road (Moore Farm side) which overhand the track. All of which are poor quality and need some form of management. One came down in high winds in March and partly landed on the track. The trees appear to be a safety issue. I would be grateful if I could be kept in contact regarding progress.	Landscaping	We are aware of the large trees adjacent to the railway track along the disused section of the railway and refer you to The Railway Landscape Plans (Disused Line) (DCO Application Document Reference 2.10).
132-1	NATS Safeguarding	NATS anticipates no impact from the proposal and has no comments to make on the application. Please update the contact details you have for NATS as indicated below. NATS Safeguarding Office 4000 Parkway Whiteley Fareham PO15 7FL natssafeguarding@nats.co.uk 01489 444 687	Utilities	Noted.
133-1	Cardiff Council	With reference to the above, it has been resolved that the Planning Inspectorate and NSDC be advised that Cardiff Council has no adverse observations to make in respect	No adverse observations	Noted.

PINS Ref No. with issue ref	Organisation/ Person	Relevant Representation	Key Issues	Applicant's Response to Relevant Representation
		of the Metrowest Phase 1 proposals – Application Reference TR040011.		
134-1	Utility Assets	We are in receipt of 2 planning notices regarding Metrowest phase 1. We now have a reminder about them We have not responded to either notice because we do not wish to make any representation.	Utilities	Noted.
135-1	Cotswolds Conservation Board	Thank you for consulting the Cotswolds Conservation Board on the above consultation / request for further information. The Portishead Branch Line development lies approximately 12km, or more, beyond the boundary of the Cotswolds Area of Outstanding Natural Beauty (AONB), on the opposite side of Bristol. For these reasons, the Board does not have any further information to provide or additional comments to make	No further information to provide or additional comments to make.	Noted.

Appendix A

Response to Portishead Town Council

Response to Portishead Town Council Relevant Representation

PINS Ref No. with issue ref	Organisation /Person	Relevant Representation	Key Issues	MetroWest Phase 1 Response
2-1	Portishead Town Council	1. Areas of agreement 1.1. We support the plan to re-open the railway to improve the connectivity of Portishead and the associated economic, environmental and accessibility benefits that it will provide. 1.2. We agree with the diversion and widening of Quays Avenue to link with Harbour Road to the West of the existing roundabout intersection with Harbour Road and Phoenix Way. 1.3. Portishead has gone through massive change in the past ten years, it is one of the fastest growing towns in the UK and is lacking the infrastructure to support its population increase. Space for infrastructure and commercial development to support the population is now constrained and so it is important that the potential amenity land around the station is used efficiently and supports wider regeneration.	Support for the scheme	Support and comments noted.
2-2		1.4. Against this background we agree with the location of the railway station (Work No.5) as this will foster economic development of the area to the East of Quays Avenue and South of Harbour Road, including the existing Portishead and Gordano Gate Business parks. It may be envisaged that the station will encourage further business, retail and residential regeneration of this strategically important area of Portishead with higher density mixed use development. 1.5. However, it is important that public access and transport links are comprehensive and integrated with the station to assist and align with the future development of this	Portishead rail station design & facilities	Portishead rail station will be a multi-modal station accessible by pedestrians, cyclists, buses, taxis, motorcycles and cars. There will be step free access from the station forecourt and surrounding footpaths/highway into the station building and through to the station platform. The station building will have a ticket hall, a unisex toilet and space for a combined waiting room and retail offer. The first part of the platform will be covered with a canopy to protect customers from inclement weather. Access for pedestrians and cyclists – there will be three signal controlled pedestrian / cycle crossings outside the station. One conventional sized 'Toucan' type crossing on Phoenix Way and the same for Harbour Road. Immediately in front of the station on Quays Avenue there will be a

		strategically important area. The station should also be linked with the largely residential areas to its North, East and South.	wider 'Toucan' type crossing, that will link the station with the large car park on Harbour Road and through towards the town centre. The station forecourt will have covered cycle storage for up to 50 cycles. The pedestrian and cycle routes to the station will be enhanced in summary as follows. There will be a new 300 metre shared use boulevard linking the station towards the town centre. The boulevard will connect into existing paths at Portbury Ditch and there will be further opportunities to extend paths further into the town centre via the proposed redevelopment of Old Mill Road (subject to future decision making by the Local Planning Authority). Other pedestrian and cycle route enhancements to be provided by MetroWest Phase 1 include widening of the existing footpath on the southern side of Harbour Road to 3m, making it suitable for shared pedestrian and cycle use and on the northern side of Quays Avenue we will provide a new section of footpath (where there is currently no path) to provide a continuous path from Wyndham Way along the whole length of Quays Avenue on both sides. In addition, we will provide new shared use paths in parallel with the railway on both sides to link the station with a new shared pedestrian and cycle use ramped and stepped bridge near to Trinity Primary School. The new bridge will also include connecting paths to link into the existing wider network of paths across the surrounding 'Village Quarter' and 'The Vale' residential areas. Access by bus – two full length bus laybys will be provided immediately outside the station on Quays Avenue. In addition, the station forecourt has been designed to accommodate full size buses and includes space for a bus bay. Access by taxis – the station forecourt includes space for a taxi rank.

				Access by motorcycles – the station forecourt includes space for motorcycle parking. Access by cars – there will be an area in the station forecourt for dropping off /picking up railway station customers. In addition, there will be 6 on-street short stay parking bays immediately outside the entrance to the forecourt on the northern side of Phoenix Way. In respect of car parking provision, within the station forecourt there will be 13 mobility impaired spaces and a further 54 general parking spaces. The Harbour Road car park will provide a further 6 mobility impaired spaces and 200 general parking spaces. This gives a total of 273 parking spaces to be provided for Portishead station. The above description is a summary of the design of Portishead station, which is shown in DCO documents: 2.11 to 2.14 Portishead Station Plans and 2.38 Portishead Station Car Park Layout, Landscaping and New Boulevard Access Plan
2-3		2. Areas of comment for further consideration, Portishead has a vision to be a sustainable town for the future and we believe that amendments are needed to the plans to help meet that vision: 2.1. Portishead does not currently have a bus terminus and travel to the station by public transport must be part of an integrated transport solution. If car parking density can be increased it is suggested that consideration is given to a bus terminus in the area of the proposed Car Park to the North of the station (Work No.6) that would serve the residential area around the station and act as an interchange for feeder services from around the town.	Portishead rail station - bus terminus	The ambition of becoming a sustainable town for the future is noted. Portishead rail station has been designed as a multi-modal station as described in our response to point 1.4 and 1.5. Bus services will play a part of this multi-modal approach to ensure the station is accessible for local residents, businesses and visitors. The station forecourt therefore has to accommodate the needs of multiple modes of transport, within the available space. The proposed forecourt layout balances these multiple needs and ensures the forecourt is not overly dominated by one mode of transport. The station forecourt has been designed to accommodate full size buses and includes space for a bus bay within an area labelled 'taxi rank / drop off area drop-off area' on page 5 of DCO document

				2.38 Portishead Station Car Park Layout, Landscaping and New Boulevard Access Plan. Decisions on the provision and routing of bus services are mainly determined on a commercial basis by local bus operators. This decision making is influenced by a range of factors including bus operating costs. For instance, diverting a bus off the highway into a station forecourt will result in additional journey time, which sometimes means that in order to maintain a frequency of service, additional bus and driver resources are required. In light of these factors we have designed flexibility into our approach to catering for bus services at the station. For instance, should bus operators not be willing to divert their services into the station forecourt, we have provided two full sized bus lay-bys immediately outside the station on Quays Avenue. In the future should bus operators divert buses into the station forecourt and this results in a need for additional bus bay space, then it should be feasible make some changes to the forecourt layout to provide additional bus bays, by reducing car parking bays, subject to consideration at the time of the serving the overall public needs of the station. The station forecourt and car park will be owned and operated by North Somerset Council. Only the station building, the immediate area around the building and the railway corridor will be transferred into the ownership of Network Rail, along with associated railway infrastructure assets.
2-4		2.2. Space in that area should also be made available for adequate taxi and passenger pick up and drop off.	Portishead rail station – access by taxis	Access by taxis – the station forecourt includes space for a taxi rank. Access by cars – there will be an area in the station forecourt for dropping off /picking up railway station customers. In addition, there will be 6 on-street short stay parking bays immediately outside

				the entrance to the forecourt on the northern side of Phoenix Way. Refer to Page 5 of DCO document 2.38 Portishead Station Car Park Layout, Landscaping and New Boulevard Access Plan.
2-5		2.3. Adequate car parking is also vitally important, but it is arguably an inefficient use of prime land in this strategically important area. To increase parking density, it is suggested that thought be given to the use of a multi-story car park to improve land utilisation.	Portishead rail station – car parking provision	The proposed parking provision for Portishead station is sufficient as the 273 proposed parking spaces exceeds the forecast demand 10 years after the project opening. A multi storey car park is not seen necessary and has not being assessed as part of the application for development consent. However, as the car park land is owned by North Somerset Council, this does provide opportunities in the medium to long term for the Council to explore other land uses and potentially greater car parking density for the site, subject to future decision making by the North Somerset Local Planning Authority and wider community and commercial considerations. Within the 273 total car parking spaces we have made provision within our Harbour Road car park for some spaces to be used by the Marina Health Centre and provision for excess demand and long term parking capacity. We will also have a short stay (as well as a long stay) car parking tariff to cater for wider local needs, as the car park will be a public car park.
2-6		2.4. Traffic to the station is likely to increase particularly along Harbour Road and Phoenix Way which already have congestion problems. Accordingly, access to car parking from both Harbour Road and Quays Avenue is recommended, with perhaps the consideration of a multi-storey car park on land to the West of the diverted Quays Avenue (Work No.2) and Harbour Crescent.	Portishead rail station – highway access	Access to the station car parks from Quays Avenue is not possible as this would severely compromise engineering design (safety) standards. It would result in severe modal conflict between pedestrians and cars due to the close proximity of the main pedestrian crossing over Quays Avenue linking to the station entrance. It would also require the removal of the north bound bus lay-by on Quays Avenue. See our response to point 2.3 above regarding a multi-storey car park.
2-7		2.5. With better utilisation of the areas around Work No.6	Portishead rail station –	As set out in our response to point 2.3 above, the car park land is

		and Work No.2 it may be possible for land to the South of Harbour Road (Work No.4) particularly at the West end of that strip abutting the Portbury Ditch to be retained for mixed-use.	medium to long term land uses	owned by North Somerset Council. This provides opportunities in the medium to long term for the Council to explore other land uses and potentially greater density for the site, subject to future decision making by the North Somerset Local Planning Authority and wider community and commercial considerations.
2-8		2.6. Phoenix Way to the East of the station suffers from congestion and parking problems, it is suggested that consideration is given to providing more off-street parking and/or introducing parking restrictions along the length of Phoenix Way to Fennel Road.	Portishead rail station – parking restrictions	Permanent parking restrictions are proposed on Phoenix Way from the roundabout with Quays Avenue to Marjoram Way, see DCO document 2.31 Permanent Traffic Regulation Order Plans. Local residents have opposed extensive parking restrictions in this area. However, as highway authority North Somerset Council will review the parking situation following the opening of Portishead Station. Should there be a need to revise the parking restrictions in light of the actual operational situation, this can be achieved in relatively short timescales by the highway authority. Furthermore, an additional 6 parking spaces will be provided on Phoenix Way, see DCO document reference 2.38 Portishead Station Car Park Layout, Landscaping and New Boulevard and Access Plan.
2-9		2.7. We support the provision for cycle access, but the following suggestions are made: • To better utilise land a shared pedestrian and cycle path to the South side of Harbour Road may offer a better solution to that proposed on the Southern side of area Work No.4. This would better connect to the Marina area and provide more space in the Work No.4 area for mixed-use development. • Consideration should be given to extending the cycle path to the West of Portbury Ditch to provide an off-road connection with the Portishead Library and High Street area. A path that utilises the route of the old railway line and connects to Harbour Road at the	Portishead rail station – cycle & pedestrian access	Response to bullet point 1 - On Harbour Road we will widen a section of the existing pavement on the southern side of Harbour Road to provide a 3 metre wide shared pedestrian and cycle use pavement. We are also providing a new 300 metre shared use boulevard linking the station towards the town centre, parallel with Harbour Road. The boulevard will connect into existing paths at Portbury Ditch and there will be further opportunities to extend paths further into the town centre via the proposed redevelopment of Old Mill Road (subject to future decision making by the Local Planning Authority). Response to bullet point 2 – we are providing a pedestrian cycle / path connection west of Portbury Ditch. As set out in our response to bullet point 1 above, there will

		intersection with Portbury Ditch is suggested. • Dedicated off-road cycle or mixed-use pavement provision is required along the whole of Quays Avenue to the interchange with Wyndham Way, given increases in traffic volumes along Quays Avenue. • An off road/shared space cycle path should be provided along the whole of the length of Phoenix way to the station. • To facilitate cycle and pedestrian access from the Portbury Common and Sheepway areas it is suggested the cycle way provision to the South of the railway line (Work 7 and 7B) is extended to run Eastwards (to the South of the railway line) to better connect with the housing area to the South East of the station. A cycle pathway running East and then South around the perimeter of that area of housing to connect with Moor Gate would improve off-road access from the Sheepway and Portbury Common area. • Provision should be made for electric bicycles (and cars) with secure charging points provided.	be further opportunities to extend paths further into the town centre via the proposed redevelopment of Old Mill Road (subject to future decision making by the Local Planning Authority). Response to bullet point 3 – On the southern side of Quays Avenue the existing pavement is 3 metres wide and therefore will be signed as a shared use pedestrian and cycle path. On the northern side of Quays Avenue there is currently a section of no pavement provision. We are proposing to construct a new section of path to provide a continuous path from Wyndham Way along the whole length of Quays Avenue. Response to bullet point 4 – there is not sufficient space on Phoenix Way to add in an off road path. The width of the highway is relatively narrow and there is no space to fit an off road path (or widen the existing footpath) between the highway and the close proximity of residential properties. Phoenix Way is however a relatively low speed environment and therefore is more suitable for on road cycle use. Response to bullet point 5 – The residential area to the south and east of Portishead station known as The Vale has numerous traffic calming measures and traffic is relatively low speed and already has some connecting off road paths. Extending the pedestrian and cycle path (work 7 and 7B) further to the east along the ditch would raise safety issues due to the steep sides of the ditch. Fencing off the ditch would not be practical because the Internal Drainage Board requires several metres either side of the ditch for plant and equipment to maintain the ditch. Furthermore, the land is not owned by the Council. In summary these combined factors mean extending the path to the east is not feasible. Response to bullet point 6 - A new electric vehicle rapid charging hub with up to 10 charging bays is currently being promoted as separate project by North

				Somerset Council highways authority on Harbour Road, a short distance from the proposed site of Portishead Station (planning application reference: 18/P/3106/R3). Electric vehicle charging technology is evolving rapidly and the provision of electric vehicle charging points within the Portishead Station car parks will be reviewed at detailed design. Regarding bicycle charging there is no standard charging plug so it is not practical to provide charging points, however we are proposing to provide 50 covered cycle parking spaces. See DCO document 2.38 Portishead Station Car Park Layout, Landscaping and New Boulevard Access Plan.

Appendix B

Response to Pill and Easton-in-Gordano Parish Council

Response to Pill & Easton-in-Gordano Parish Council Relevant Representation

PINS Ref No. with issue ref	Organisation /Person	Relevant Representation	Key Issues	Applicant's Response to Relevant Representation
21-1	Pill & Easton-in-Gordano Parish Council	Concerns about the impact of the MetroWest DCO Scheme on the residents of Pill & Easton-in-Gordano Parish,	Pill – impacts to residents	Concerns raised during the consultation stages by residents helped develop the scheme during the development stages, with scheme changes made where possible. For example, general concerns were raised at the Stage 1 Consultation regarding the new pedestrian bridge entrance and related footway changes, and the car park layout. These comments were reviewed, and new designs were considered and consulted on during the Pill Station and Ashton Vale Road alternative access Micro-consultation (informal consultation) (Appendix I5 of DCO Application document reference 5.1). Feedback led to the creation of a new entrance, station forecourt and disabled parking from the acquisition and demolition of No. 7 Station Road, Pill. This also meant the new pedestrian bridge and related footway were no longer required, and the moving of disabled parking bays to the new forecourt meant changes could be made to the car park layout and entrance/exit. The preferred design from the Micro-consultation was consulted on during the Stage 2 Consultation, and the final designs are shown in the S050 Pill Station Proposed Station Layout plan (DCO Application Document Reference 2.19) and Pill Station Car Park and PSP Layout, Landscaping, Lighting and Access Plan (DCO Document Reference 2.42). In addition to these design changes, the route between the bus stops on Heywood Road and the platforms will be upgraded to allow a step free route. Other changes occurred following the Stage 1 Consultation, new designs for Pill Station and car park were produced and consulted on during the Pill Station and Ashton

				Vale Road alternative access Micro-consultation (informal consultation) (Appendix I5 of DCO application document reference 5.1). Feedback lead to the creation of a new entrance, station forecourt and disabled parking from the acquisition and demolition of No. 7 Station Road, Pill. This will reduce traffic movements along Monmouth Road as the forecourt will become a drop off location instead of the car park at the end of Monmouth Road. The final designs are shown in the S050 Pill Station Proposed Station Layout plan (DCO Application Document Reference 2.19) and Pill Station Car Park and PSP Layout, Landscaping, Lighting and Access Plan (DCO Application Document Reference 2.42). Changes to parking and traffic flows resulting from the revised designs are assessed and reported in the TA (ES Appendix 16.1, DCO Application Document Reference 6.25), with appropriate TTROs included on Station Road to mitigate from the resultant increase in traffic volume. These have been included on the Permanent Traffic Regulation Order Plans (DCO Document Reference 2.31). All comments were considered, and changes made were possible. Full details are recorded in the DCO Consultation Report (DCO Application reference 5.1).
21-2		the local environment and its wildlife, during both the construction and operational phases of the Project. Primarily, but not exclusively, these will centre around mitigations for nuisances, such as noise, pollution, traffic congestion etc. and the potential loss of habitat and species to the development.	Pill – ecology Pill – environmental impacts	Ecological impacts have been a key consideration during the scheme's development, with detailed ecological surveys undertaken. Assessment of the effects from the construction and operation of the railway have been completed. Proposals for mitigation and compensation for significant effects have been developed. Chapter 9, Ecology and Biodiversity of the Environmental Statement (DCO Application reference 6.12) includes assessment of impacts to the local area. Consideration of the impacts from construction have been considered and limited where possible: • Traffic impacts have been assessed in the Transport

		Assessment (TA) (EA Appendix 16.1, DCO Application Document Reference 6.25), and mitigation measures implemented through the Construction Traffic Management Plan (CTMP) (DCO Application Document Reference 8.13) and Master Construction Environmental Management Plan (CEMP) (ES Appendix 4.2, DCO Application Document Reference 8.14) • Noise levels have been assessed in the ES Chapter 13 – Noise and Vibration (DCO Application Document Reference 6.16). Some of the construction works at Pill will cause temporary adverse effects. Works in the vicinity of Avon Road Bridge and Mount Pleasant are likely to generate the highest levels of noise and could last for a period of months. However, these noisiest activities that cause the adverse effects would not be present on a daily basis. Other activities, such as vegetation clearance and track laying, will also generate high levels of noise that would cause adverse effects. However, such activities are transient and would only be present in one location for a matter of days. Mitigation measures have been proposed that will reduce the impact from these temporary adverse effects. Once the railway line is open, there is predicted to be no significant increase in the overall daily noise level. The passage of individual trains will be noticeable but these will be short in duration and should not generate a noise level higher than that of a passing freight train. • Lighting will be designed, positioned and directed so as not to intrude unnecessarily on adjacent buildings, sensitive ecological receptors, structures used by protected species and other land uses. This will prevent unnecessary disturbance to local residents, light-sensitive species such as bats, railway operations, and passing motorists. This has been detailed in Section 3 of the Master CEMP (DCO Application reference 8.14). There will be a requirement for the Local Planning Authority to approve proposed lighting plans once a

			contractor has been appointed. The Master CEMP (ES Appendix 4.2, DCO Application Document Reference 8.14) sets out a framework for Environmental Management Consents during construction.
21-3	At present my biggest concern is the unfeasibly short time that has been made available for review of the 20,000 plus pages contained in the DCO Scheme Plan.	General - consultation	Prior to the publication of the DCO application documents, two stages of formal consultation were undertaken, stage 1 in 2015 and stage 2 in 2017. In addition to the formal consultation, a process of engagement with the Parish Council has taken place over a number of years as the project proposal have developed to address concerns raised and consider changes to the scheme where possible. Points raised from each meeting with the Parish Council were recorded in meeting notes, which in turn were used to summarise the engagement and key issues in the DCO Consultation Report (DCO Application Document Reference 5.1). While this background, does show that the Parish Council have been involved in the development of the project, we acknowledge that 20,000+ pages is a lot of information for stakeholders to read. We do however point out that the time allowed for responses to the application was consistent with (and indeed longer than) the statutory time period required. The Applicant continues to welcome dialogue with the Parish Council and other consultees and will assist with further clarification regarding the contents of the application throughout the pre examination and examination processes.

Appendix C
Response to Barry Cash

Response to Mr Barry Cash Relevant Representation

PINS Ref No. with issue ref	Organisation/ Person	Relevant Representation	Key Issues	Applicant's Response to Relevant Representation
41-1	Barry Cash	Response to Bristol MetroWest Phase 1 DCO. Feb 2020 by Barry Cash This DCO has been applied for without considering alternative proposals e.g. the Portishead Busway campaign plan to provide a peak time only bus service on the railway using "Strail" panels. The National Policy Statement for National Networks has 12 paragraphs setting out Government goals that this proposal does not help in meeting. The busway proposal does help in achieving them.	Individual but covers the following: Business case - mode	Firstly, we have summarised your alternative proposal, to provide context for the rest of our response. Your alternative proposal entails operating bus services on top of the track formation of the existing section of operational freight railway line between Bristol and Pill, while continuing to operate freight trains on the line, with buses continuing from Pill onto Portishead using the dis-used section of railway. This would be achieved by fitting light weight rubber mats (Strail panels) in between the rails to enable buses to drive onto the track formation, at which point the tyres of the buses would travel over the top of the ends of the railway sleepers. We have also assumed that as an alternative to the above, you are suggesting that the rubber mats could also be placed on the outside edge of track at the ends of sleepers. Your suggested proposal would entail numerous fundamental technical, safety and legal issues which are highlighted in this response below. Our view is the issues we have highlighted are impediments that would prevent the authorisation of the operation of buses on the operational railway. <u>Brief Description of the Railway Line</u> The operational railway line between Bristol and Pill (Portbury Freight Line) is 9 kilometres, all of which is a single track except for a 1 kilometre section of double track in Bristol between Parson Street Junction and Ashton Junction. The line includes four single bore tunnels and 5 kilometres of the line passes through the Avon Gorge Woodlands Special Area of Conservation (SAC). Up to 20 freight trains per day in each direction are permitted to access Bristol Port Company's Royal Portbury Dock, although the current actual volume of freight trains operated is lower than this.

Technical Approval to Operate Buses on Railways

The Office of Rail and Road (ORR) is the primary regulatory body for railways in the UK. Further information about the role of the ORR is available from: www.orr.gov.uk. The ORR's role includes the approval of railway vehicles for operation on railways and this approval encompasses, passenger trains, freight trains, trams and various type of rail mounted construction and maintenance vehicles. The ORR do not currently approve the use of buses on railways (except at level crossings), due to the insurmountable technical and safety reasons set out below.

We believe the Railways and Other Guided Transport Systems (Safety) Regulations (ROGS) would have to be applied to the proposed operation of buses, at least in so far as the freight operations form part of the mainline railway operations to which the Regulations apply. Whilst guided busways are excluded from the Regulations, the interoperability of two different transport modes would have to be regulated by the railway aspect of the Regulations. It seems very difficult to contemplate how a safety case for running public buses on a freight railway through the Avon Gorge (and including through several tunnels) would be acceptable in any safety case that might be put forward. Further information about ROGS is available from the ORR website.

Alongside the ORR, the rail industry collectively co-ordinate safety and technical standards through the Rail Safety and Standards Board (RSSB). The RSSB also do not currently approve the use of buses on railways (except at level crossings). Further information about the RSSB is available from: www.rssb.co.uk

Permanent Way

Your suggested permanent way for buses is unfortunately flawed. Given that the standard gauge for railways in this country is 1.435m and the standard width of a concrete railway sleeper is 2.6m (but their size and material varies), the tyres of buses would travel over top of the ends of the railway sleepers, given the standard width of a bus axle is 2.4m

		(outer edge). This raises a number of technical issues, including ride comfort, load bearing and kerb guidance. Railway sleepers are generally spaced between 0.6m and 0.8m apart (this spacing is less on radiuses and transitions). The ballast in between sleepers is not uniformly level with the top of the sleepers, and would cause tyre to sleeper impact at speed, resulting in extremely poor ride quality for the occupants of the bus and high levels of wearing to critical suspension components. Furthermore, on the Portbury Freight Line there are a lot steel sleepers which are not flat like concrete sleepers, but curve down at each end. It would not be technically possible to contain ballast uniformly level with the top of sleeper without some form of ballast restraint (or in other words a kerb) and without replacing all the existing steel sleepers with concrete sleepers. Your representation is not clear about the surface on which bus tyres would run over (or whether physical or optical guidance is proposed), so we have assumed that as an alternative to the above, you are suggesting that the rubber mats could also be placed on the outside edge of track at the ends of sleepers. While this could deal with the ride quality issue, it raises major issues about the durability of the permanent way wearing surface and the ballast restraint would still be required. Furthermore, with the whole of the track formation covered with foam mats except for the top of the track, for the entire 9 kilometres of railway, it would not be possible for the safety critical routine inspections of track formation to be undertaken, nor for easy access to the railway for routine maintenance. Given that safety is the first priority in the railway industry, this is extremely unlikely to be acceptable to the railway infrastructure operator Network Rail, the freight operating companies or the Port. This leads into the next two major issues; load bearing and kerb guidance. Sleepers are not designed to take a load bearing at the very ends of the sleeper and this would likely lead to the failure of sleepers. As stated above with the sleepers covered by the foam mats this would cause an impediment for the inspection of sleepers which are a safety critical railway component. In respect of kerb guidance this would be required for two main reasons:

		a) a bus driver could not safely steer a standard full sized bus which has axle width of 2.4m, on an alignment that is only 2.6m in width, and b) some form ballast restraint would be required to maintain the ballast level with the top of the sleepers. Installing concrete kerbs either side of the track formation for the entire 9 kilometres of railway would not be practical for the following reasons: c) equipment is located at the side of and within the track formation including axle counters, switches, power supplies, communication cables etc. This equipment is designed to safety critical technical standards and it would not be possible to relocate this equipment without breaching these technical standards. d) In respect of installing concrete kerbs on the top of ballast, the depth of the ballast from top ballast to bottom ballast is usually over 1m. Consequently, in order to ensure no movement of the kerb it would be necessary to install a kerb foundation up to 1m in depth either side of the track formation for the entire 9 kilometres of railway. This would result in very significant cost. e) It would not be possible to operate safety critical maintenance equipment including track tamping machines and ballast replacement machines because the concrete kerbs would cause an obstruction. f) the additional infrastructure would have to be compatible with the constraints on activities within the Avon Gorge due to its designation as a Special Area of Conservation and Site of Special Scientific Interest. We believe that the MetroWest proposal has significantly less impact on the protected characteristics of the Avon Gorge and therefore is more likely to secure the required consent under the Conservation of Habitats and Species Regulations 2017. <u>Safety and Systems Integration</u> There are numerous fundamental issues here regarding the safety of railway staff, passengers and the wider public. Operating a single track railway with mixed vehicle types ranging from freight trains (up to 2300

			tonnes) with buses (of approx. 18 tonnes) could have very serious consequences in the event a signalling system failure or human error resulting in a collision of vehicles. A DMU train has inherent design characteristics that protect the occupants in the event of a collision that buses would not have unless specifically designed to withstand impacts with freight trains. Conventional buses are not designed to withstand an impact from another vehicle of up to 2300 tonnes. The maximum vehicle weight permitted on highways in the UK is 44 tonnes (excluding abnormal loads). A bespoke bus would be required, designed with additional crashworthiness and safety equipment to allow them to operate on operational railway. However, there would still be a large number of safety case issues to overcome before buses could be authorised for operation on an operational railway. In addition to all of the above fundamental technical and safety impediments, there would be numerous systems integration issues whereby buses would have to operate under railway signal control while on the railway. This would entail significant additional cost and regulatory approval, including a need to install GSMR communication equipment into the cab of every bus (as is required for every train) in order to have direct communications between the driver and the regional signal control centre. In summary, our conclusion is your suggested proposal has numerous fundamental technical and safety impediments that would prevent the authorisation of the operation of buses on operational railway. Consequently, you are unable to demonstrate how your proposal could be delivered.
41-2	The passenger forecast shows that only rush hour trains will be full. Initially only 12% of seats will be occupied. Even after 15 years only 16.3% will be filled. Both Bristol and North Somerset Councils have declared a climate emergency. Running 120 tonne trains up and down the line with no	Business case – passenger demand	In respect of your statement “The passenger forecast shows that only rush hour trains will be full. Initially only 12% of seats will be occupied. Even after 15 years only 16.3% will be filled”, our response is as follows. The forecast passenger demand is set out in detail in the Forecasting Report which is appendix 2.1 of DCO document 8.4 Outline Business Case 2017, Part 3 of 3, Appendix 1.1 to 5.1. The forecasting report sets out in detail the passenger demand modelling for the opening year and the first 15 years thereafter.

	one on them will not reduce our fossil fuel use	The forecast passenger demand has been benchmarked against actual passenger volumes at similar sized existing stations. The Outline Business Case including the forecast passenger demand was subject to technical scrutiny by the Department for Transport. Section 3.6 Capacity Analysis of the report states that in the opening year on the Portishead Line 220 of the 263 seats (of a three carriage Class 166 train) will be occupied in the morning peak, and 201 in the evening peak, which represents 84% and 76% occupancy respectively. By year seven after opening, there will be standing room only in the morning peak, at which point additional carriages will be sourced to form five carriage trains (subject to contractual arrangements), see figure 3.7 and figure 3.8. Figures 3.9 and 3.10 shows the demand curve through over a whole day, with demand reducing in the off peak, flattening around lunchtime before increasing into the evening peak. This demand curve is typical of the demand curve for any local/regional rail service in the west of England. MetroWest Phase 1 has compelling strategic and economic benefits along with a sound management, commercial and finance case. The key benefits of the project in summary include: • Value for Money: the project will provide over £3 of economic benefits for every £1 invested to deliver the project. This places the project in the 'high value for money' category used by the Department for Transport in its evaluation of transport investment proposals. • Modal Shift: Reduction of 580 car trips per day in the opening year, increasing to 890 less car trips per day by 2036. • Job Creation: 514 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.

		Forecast Rail Passenger demand: 2021: 958,980 passenger trips, 2036: 1,295,103 passenger trips. Population Benefiting: Will upgrade the existing train service at 16 existing stations across three rail corridors, directly benefiting 180,000 people within a 1 kilometres catchment and bring an additional 50,000 people within the catchment of the 2 new stations (Portishead and Pill). The total population benefiting from the project is 230,000.
41-3	The cost is £116m for one train per hour. A further £55m will be required to provide two trains per hour. (Even more empty seats). The cost of the busway is £40m. A massive saving for the taxpayer. A busway will offer a better service to passengers. It could start from the far end of Portishead in the Redcliffe bay area and instead of stopping at Temple Meads could continue on to the central areas of Bristol. Alternatively the buses could join the 31 miles of dedicated Metrobus tracks at Ashton gate and serve many other areas of Bristol. A new station and car park will be required for the trains. The busway will not need this.	Business case – mode As set out in detail in our response to 41-1, in summary our conclusion is your suggested proposal has numerous fundamental technical and safety impediments that would prevent the authorisation of the operation of buses on operational railway. Consequently, you are unable to demonstrate how your proposal could be delivered.
41-4	The official report estimates total running costs for the first three years up to £5m higher than revenues, but claims the trains 'could break even after 5 years'. However, passenger numbers are not expected to rise dramatically, and nothing is offered to support this optimism. Therefore, fares will always be expensive or massively subsidised.	Business case – revenue & fares The forecast financial profile is set out in detail in the Forecasting Report which is appendix 2.1 of DCO document 8.4 Outline Business Case 2017, Part 3 of 3, Appendix 1.1 to 5.1. This is based on the forecast passenger demand and other variables including fare tariffs and estimated train operator costs. This work is presented as a range of scenarios, in light of the number of variables. In some of these scenarios the scheme breaks even after the first three years of operation, while for some of the scenarios, the break even point is several years later. The Outline Business Case including the forecast revenue profile was subject to technical scrutiny by the Department for Transport.

41-5		When the total fossil fuels used in both construction and use is taken account of research finds diesel buses much more efficient than trains. A busway would have much lower environmental costs, substantially mitigating rather than worsening the climate crisis. There could be even higher efficiency/lower economic and carbon costs by running buses on electricity, bio gas. LPG etc. Trains will be diesel unless a huge amount of extra money is spent to electrify the line and this is not even propose at present. A busway with a reversible one-way flow to serve each 'rush-hour' (actually three hours) could provide a bus every few minutes at peak times. Off-peak, Portbury Docks trains would be able to run as normal over a Strail busway. With far lower capital and running costs, busway fares would be much lower than train fares.	Environmental Impact Assessment	You have made various statements that your bus based alternative proposal would have greater environmental benefits in comparison to Portishead Branch Line (MetroWest Phase 1). As outlined above our conclusion is suggested proposal has numerous technical and safety impediments that would prevent the authorisation of the operation of buses on operational railway. MetroWest Phase 1 has undertaken a detailed environmental impact assessment which is reported in our Environmental Statement (ES). The ES has been produced in connection with our application for a Development Consent Order to the Planning Inspectorate. The ES demonstrates the project has wide spread environmental benefits. The ES is available from: https://metrowestphase1.org/dco-application/ Chapter 3 Scheme Development and Alternatives Considered of the ES explains the history of the development of the project including the options considered: https://metrowestphase1.files.wordpress.com/2020/01/6.6-es-chapter-3-scheme-development.pdf In addition the project has had to comply with the Conservation of Species and Habitats Regulations 2017 and consult extensively with Natural England regarding impacts on the Avon Gorge. From our understanding of them, your proposals would appear to lead to more impacts on the protected characteristics of the Avon Gorge. As set out in detail in our response to 41-1, in summary our conclusion is your suggested proposal has numerous fundamental technical and safety impediments that would prevent the authorisation of the operation of buses on operational railway. Consequently, you are unable to demonstrate how your proposal could be delivered.

Appendix D
Response to Freightliner

THE PORTISHEAD BRANCH LINE (METROWEST PHASE 1) ORDER

Application Ref: TR040011

Response to Relevant Representation by
Town Legal LLP on behalf of **Freightliner Limited**

Status: First Draft

Date	
Applicant's doc ref:	RR Response XXXX
Author:	WBD UK LLP
Revision history:	v 1, 14 April 2020

THE PORTISHEAD BRANCH LINE (METROWEST PHASE 1) ORDER

Response to Relevant Representation by: Town Legal LLP on behalf of Freightliner Limited ("Freightliner")

Relevant Representation Date: 26 February 2020

Relevant Plot Nos. 17/05, 17/10, 17/15 17/20

1. Introduction

- 1.1 This is North Somerset District Council's ("Applicant") response to the relevant representation made to the application for the Portishead Branch Line (MetroWest Phase 1) Order ("draft Order").
- 1.2 Freightliner's representation was submitted by Town Legal LLP on 26 February 2020.
- 1.3 This response, **which contains undertakings to Freightliner Limited**, is given by the Applicant with the approval of Network Rail Infrastructure Limited ("Network Rail").
- 1.4 This response to the relevant representation in particular deals with the use by the Applicant of land at Freightliner's South Liberty Lane Freight Terminal, which is included in the Order land for temporary use during construction of the MetroWest Phase 1 project.
- 1.5 Defined terms used by Freightliner in its relevant representation are adopted in this response.

2. Undertakings Given

- 2.1 The Applicant confirms that it will not seek to exercise the powers in the draft Order, if the Order is made as currently drafted, so as to take exclusive possession of plots 17/10 and 17/15 of the Order lands, as referenced in the Land Plan and Book of Reference.
- 2.2 The Applicant will ask the Secretary of State to amend the draft DCO before it is made, so as to reflect the proposed drafting changes indicated (in tracked version and clean version respectively) in Parts 1 and 2 of Appendix 1 to this response to relevant representation.
- 2.3 Even if the requested amendment is not made by the Secretary of State the Applicant will only exercise its powers over plots 17/10 and 17/15 of the Order lands as if the proposed amendment had been made and will request that Network Rail accordingly does not seek exclusive possession of plots 17/10 and 17/15 save as may be agreed with Freightliner.

3. Detailed Responses

3.1 The Applicant responds in the table below to Freightliner Limited's detailed objections in Part 4 of its relevant representation.

Para No.	Freightliner's outline grounds	Applicant's response
4.1	In summary Freightliner objects to the inclusion of plots 17/05, 17/10, 17/15 and 17/20 in the proposed Order for the following reasons	-
4.2	First, the proposed dimensions and locations of the access route over plot 17/15 would have a serious and unacceptable adverse effect on Freightliner's commercial operations. The extent of plot 17/15 is such that it's exclusive occupation by the District Council and/or Network Rail would prevent access to the Bristol Terminal from South Liberty Lane or the wider highway network	This document confirms that exclusive possession of plot 17/15 is not intended. The Applicant will seek to amend the Order accordingly to provide for access only over plot 17/15.
4.3	Freightliner have no objection in principle to the District Council and/or Network Rail having a temporary access route by agreement over plot 17/15 for the purposes of the Proposed Scheme providing: 4.3.1 that the dimensions of any such access route are reconfigured to enable access to South Liberty Lane; and 4.3.2 that any such access route is flexibly located to minimise the disruption to Freightliner/its proposed tenants' commercial operations.	The Applicant is content to confirm that it will request Network Rail preserve access for Freightliner and its proposed tenants during the exercise of the proposed powers contained in the draft Order. Negotiations between Network Rail and Freightliner regarding the access route for Freightliner and its tenants are continuing and the Applicant hopes that agreement will be reached to satisfy the points of concern. The Applicant will work with the parties to facilitate such agreement.
4.4	Secondly, it is unnecessary and unjustified for temporary possession powers to be granted over plot 17/05, 17/15 and 17/20 in circumstances where Freightliner are agreeable in principle (subject to agreement with the details of these arrangements): 4.4.1 to the District Council and/or Network Rail to primarily occupying plot 17/05 and 17/20 for the purposes of temporary construction compounds and material storage	The Applicant is grateful to Freightliner for this indication. Negotiations between Freightliner and Network Rail are continuing and the Applicant will work with the parties to facilitate this agreement. The position will be reviewed at such time as an agreement is reached.

Para No.	Freightliner's outline grounds	Applicant's response
	(dimensions and locations of these where compounds haven't been agreed); and 4.4.2 to the District Council and/or Network Rail having a temporary access route over plot 17/15 for the purposes of access for works to alter the existing track layout close to that facility providing dimensions and location of the access route protects Freightliner's commercial operations	
4.5	Freightliner are currently in negotiations with Network Rail regarding agreeing Heads of Terms of a conditional agreement with Network Rail providing – in terms – for a short term subletting of the compound areas to Network Rail with associated access within Freightliner's long lease area/operational terminal	Noted
4.6	At the time of preparing these relevant representations, Heads of Terms or an agreement received from Network Rail in respect of plot 17/20 no Heads of Terms have been received from Network Rail in respect of plot 17/05. In addition, no agreement to date has been reached with Network Rail on the dimension and location of the proposed access route over plot 17/15	Noted
4.7	Freightliner will remain willing and able to continue negotiating with Network Rail and it is sincerely hoped on Freightliner's part that mutually agreeable commercial terms can shortly be reached in respect of suitable temporary occupation and access over the Bristol Terminal Site	Noted
4.8	Thirdly, there were no details provided in the proposed Order or supporting documents as to the length of time for which temporary possession powers are sought over part of the Bristol Terminal Site... Freightliner consider that such an uncertain and potentially open end period of temporary possession in the Proposed Order, as opposed to a short defined period in any agreement of Network Rail, causes an unacceptable level of uncertainty to Freightliner's commercial operations...	The Applicant hopes that agreement for a conditional arrangement, with a certain period for use and occupation of Freightliner's land may be agreed between Network Rail and Freightliner and the Applicant will work with the parties to facilitate this agreement. The position will be reviewed at such time as an agreement is reached.

Para No.	Freightliner's outline grounds	Applicant's response
		The Applicant will, if powers are exercised, look to exercise those powers for as short a period as is reasonably practicable and request that Network Rail uses the lands within the Bristol Terminal included in the Order accordingly. Freightliner would be entitled to compensation for the impacts on its The operations in accordance with the provisions of the Order.

Womble Bond Dickinson
For and on behalf of
North Somerset District Council

[] April 2020

Appendix 1

Part 1

Proposed amendments to Schedule 12 to Draft DCO – tracked version:

In the City and County of Bristol	17/05, ~~17/10,~~ ~~17/15,~~ 17/20	Temporary construction compound, materials storage and access to works	Work No. 29
In the City and County of Bristol	17/10, 17/15	Access to works	Work No. 29

Part 2

Proposed amendments to Schedule 12 to Draft DCO – clean version:

In the City and County of Bristol	17/05, 17/20	Temporary construction compound, materials storage and access to works	Work No. 29
In the City and County of Bristol	17/10, 17/15	Access to works	Work No. 29

Appendix E

Response to Bristol Port Company

Response to Bristol Port Company Relevant Representation

PINS Ref No. with issue ref	Organisation /Person	Relevant Representation	Key Issues	Applicant's Response
124-1	Bristol Port Company (BPC)	1. INTRODUCTION 1.1 The following representations are submitted by First Corporate Shipping Limited, which trades as The Bristol Port Company ("BPC"), in relation to the application by North Somerset Council ("NSC"). 1.2 BPC's overriding needs are: 1.2.1 to ensure the proposed temporary and permanent works have no negative impact upon its statutory undertaking, operations and the activities of its tenants and customers; and 1.2.2 to achieve an outcome which minimises the impact on its operations of land being lost to or sterilised by NSC's proposed development during the pre-construction, construction and operational phases. 1.3 Pursuant to the Bristol Dock Acts and Orders 1848–2010, BPC is the statutory undertaker (harbour and competent harbour authority) for Bristol and the owner and operator of the commercial port of Bristol ("Bristol Port"). As explored below, BPC questions the need for and extent of some of the works proposed and also the requirement for its land to be taken in connection with them. It disputes that a compelling case has, or can, be made that it is in the public interest for the compulsory acquisition powers proposed affecting its land to be granted. It further does not accept that the compulsory acquisition proposed can be achieved without serious detriment to its undertaking. It has various other concerns as amplified below.	Strategic needs and role of BPC	Noted The Applicant believes there will be no material permanent impacts on BPC, and will work with BPC and Network Rail Infrastructure Limited (NRIL) to minimise impacts during the construction period. Permanent land acquisition proposed in the draft Order and supporting documentation should have no material impact on BPC's operations. Construction phase impacts will be minimised. The Applicant has a compelling case for the powers sought in the draft Order and each of the plots in the Book of Reference and Land Plan. The Applicant does not agree that serious or indeed any detriment will be caused but will work with BPC to secure the land and rights over land required by agreement if possible.
124-2		1.4 The text below summarises the primary submissions BPC proposes making; BPC necessarily reserves its position to add to or amend these submissions as necessary or appropriate and insofar as further information becomes available and to make further written and oral representations. 1.5 BPC has identified a number of matters which require consideration by the Examining Authority at issue specific hearings, including the key issues of the need to preserve reliable and timely access for rail freight traffic to and from Bristol Port throughout the construction of the new railway and its future use, and how BPC's continued access between parts of its operational land across the railway close to Court House Farm is to be secured. In addition, BPC registers its objection to the proposed rights of compulsory acquisition over land in BPC's ownership and anticipates pursuing this objection at a compulsory acquisition hearing. It further reserves its position to appear at any open-floor hearing insofar as appropriate or necessary. 1.6 BPC has responded to NSC's earlier consultations in relation to this project: 1.6.1 stage 1 consultation (BPC letter of 31 July 2015); 1.6.2 first Section 42 consultation (BPC letter of 4 December 2017); and 1.6.3 further Section 42 consultation (BPC letter of 16 August 2019).	Specific strategic issues including access to the rail network, the Court House Farm crossing and the compulsory acquisition of land	Noted The Applicant will work with BPC and NRIL to preserve rail access from the National Rail network to Royal Portbury Dock although it is inevitable that there will be a number of possessions and blockades for the construction of MetroWest Phase 1 project. All of the Order Land over which BPC holds an interest falls outside of BPC's dock fence. In relation to land at Court House Farm, it is proposed that the existing agreement between BPC and NRIL will regulate any changes to how BPC accesses Court House Farm. In any event the use of Court House Farm is controlled by the planning permission for that site, as is further detailed below. Noted
124-3		2. BPC'S POSITION 2.1 While BPC recognises the ambition to provide an alternative transport mode for commuters from Portishead travelling to the Greater Bristol Region, it is concerned about the impacts that the detail of the scheme now being considered will have on its undertaking. It is notable that the current scheme looks to provide	General concerns about adverse impacts on	The responses provided in this document to specific issues raised by BPC later in their relevant representation (RR) show that the MetroWest proposals will not have a significant and disproportionate impact or adversely affect the efficient and economic operation of BPC during construction and future operation. All the land

		only an hourly service for passengers but will have a significant and disproportionate impact upon BPC's undertaking during its construction and future operation and will involve the permanent loss of land in BPC's ownership held for the purpose of its statutory undertaking. 2.2 BPC therefore disagrees with elements of NSC's proposals in their current form because they will adversely affect the efficient and economic operation of Bristol Port now and in the future.	the operation of BPC	permanently required for the MetroWest Phase 1 project held by BPC entirely falls outside of BPC's dock fence and is not used by BPC for its statutory purposes.
124-4		2.3 In formulating its proposals in their current form, NSC has failed to have sufficient regard to and/or fully to assess various matters, including: 2.3.1 the damaging effects of those proposals on the highly dynamic nature of BPC's business and statutory undertaking that must be able to deliver operational certainty to its customers and provide at all times a rapid, efficient link to inland transport, via the strategic road network (M5) and the national rail network;	Proposed changes to the railway and highway network causing impacts to BPC	Permanent Impacts MetroWest Phase 1 will provide permanent long term highway decongestion benefits through modal switch from road to rail. The transport multi-modal modelling forecasts a reduction of 580 car trips per day in the opening year, increasing to 890 trips per day by 2036, spread across the local highway network. This includes reduction in trips through Junction 19 of the M5 in the morning peak, interpeak and pm peak, directly benefiting access and egress via Royal Portbury Dock road which connects directly onto Junction 19 and forms the main highway route into Royal Portbury Dock. Rail access to the Portbury Freight Line for BPC will be maintained post opening of MetroWest Phase 1. Train path modelling undertaken by Network Rail includes an hourly freight train path in each direction (reflecting BPC's existing commercial arrangements with Network Rail). This modelling informed the development of a working timetable which includes both the proposed MetroWest Phase 1 hourly passenger train paths and the hourly freight train paths. The working timetable is based on the December 2019 national rail timetable, taking account of train path interfaces at Parson Street Junction. The working timetable was provided to BPC on 1st April 2020. Other benefits for BPC include renewal of railway infrastructure, between Royal Portbury Dock and Parson Street Junction, which will extend the asset life of the branch line and reduce the likelihood of asset failure and the need for unplanned asset remedial works. Furthermore, MetroWest Phase 1 is proposing additional permanent access points on the branch line which will enable a more rapid response for NRIL to deal with any faults or incidents arising on the branch line. <u>Temporary Impacts During Construction</u> The number of construction vehicle movements will fluctuate throughout the construction period. The number of construction vehicles on the road will also depend on the extent to which we are able to move ballast and other materials via the railway. It is our preference to use the railway to move the majority of ballast and materials and we have had discussions with BPC about the use of their rail head and storage areas at Royal Portbury Dock and Avonmouth to facilitate this. If we are unable to use BPC for storage of ballast and other materials, then the majority of ballast and materials will have to be moved by road. Presenting the realistic worst-case scenario at the very peak of construction activity where we are unable to reach an agreement with BPC for storage of ballast and materials, we estimate that approximately 25 HGVs per day will be accessing the Lodway compound via junction 19 of the M5, Royal Portbury Dock Road and Marsh Lane. These HGVs would return the same way resulting in approximately 50 HGV trips in total at the peak of construction activity. This represents approximately 0.5% of total daily traffic on Royal Portbury Dock Road (two way).

				In agreement with Highways England construction vehicles will avoid the peak time congestion at junction 19 of the M5 and Royal Portbury Dock Road. Consequently, there will be a negligible impact on the day to day operation of Bristol Port and other port-dependant businesses on the Royal Portbury Dock estate. We have assessed that at the peak of construction intensity the realistic worst case scenario for construction staff movements would be approximately 84 staff per day travelling to Lodway compound. It is likely that some staff will share vehicles, however even if all staff travel separately this would mean a maximum of approximately 168 total (2-way) movements per day travelling from junction 19 on the M5. Staff will use a different route to the construction vehicles and so will avoid the roads through Royal Portbury Dock entirely. Instead, staff will travel to Lodway compound via A369 (Portbury Hundred) and through Pill. In agreement with Highways England, staff shift patterns will be organised so that they avoid peak time traffic to minimise the impact on junction 19 of the M5. Where possible, staff will be split between two shifts per day which will spread the impact of staff movement throughout the day (estimated to be between 06:00 to 14:00 and 14:00 to 22:00). <u>Works to Royal Portbury Dock Road</u> No temporary works to Royal Portbury Dock Road are proposed. The permanent works to the carriageway of Royal Portbury Dock Road are limited to road markings, some coloured paving on the footway, some vegetation clearance and signage, and at the request of BPC proposals for a controlled bridleway crossing on Royal Portbury Dock Road were removed from the MetroWest Phase 1 proposals. No change to the highway status of Royal Portbury Dock Road is proposed. <u>Access to the Portbury Freight Line</u> Access to the Portbury Freight Line for BPC will be maintained throughout the construction phase. As discussed with BPC previously and set out in our letter of 15th October 2019, we propose the following approach. <i>Extract from 15th October 2019 letter – For the duration of the two year construction period we are proposing long weekend possessions of the line, every weekend. This ideally would include Fridays, Saturdays, Sundays and Mondays but is subject to further discussion between Network Rail, yourselves and the Scheme. In addition to this we are proposing a blockade of the freight railway line in each August during the two year construction period. In addition to this, specific possession arrangements will be needed for the renewal of Parson Street Junction given the interface with the Bristol to Taunton main line. Network Rail will confirm these arrangements in due course. End</i>
124-5		2.3.2 the effect of those proposals on the continued availability of rail paths for freight trains to and from Royal Portbury Dock (during and after construction of the works) and the interaction between those trains and passenger services;	Concern about freight train paths	As discussed with BPC previously and set out in our letter of 15th October 2019, we propose the following approach. <i>Extract from 15th October 2019 letter – For the duration of the two year construction period we are proposing long weekend possessions of the line, every weekend. This ideally would include Fridays, Saturdays, Sundays and Mondays but is subject to further discussion between Network Rail, yourselves and the Scheme. In addition to this we are proposing a blockade of the freight railway line in each August during the two year construction period. In addition to this, specific possession arrangements will be needed for the</i>

				<i>renewal of Parson Street Junction given the interface with the Bristol to Taunton main line. Network Rail will confirm these arrangements in due course.</i> <i>End</i> Access to the Portbury Freight Line for BPC will be maintained post opening of MetroWest Phase 1. Train path modelling undertaken by Network Rail includes an hourly freight train path in each direction (reflecting BPC's existing commercial arrangements with Network Rail). This modelling informed the development of a working timetable which includes both the proposed MetroWest Phase 1 hourly passenger train paths and the hourly freight train paths. The working timetable is based on the December 2019 national rail timetable, taking account of rail path interfaces at Parson Street Junction. The working timetable was provided to BPC on 1st April 2020.
124-6		2.3.3 the adverse impact of those proposals on the use by BPC of the private crossing between its transit cargo storage areas on either side of the proposed railway;	Concern about Court House Farm crossing	As set out in our letter of 15th October 2019, we propose the following approach. <i>Extract from 15th October 2019 letter – Court House Farm</i> <i>Bristol Port has planning permission for a bridge to cross the railway at Court House Farm. That permission has been implemented and no further planning permission is needed for the bridge included in that permission.</i> <i>As you have a proposed bridge designed to a reasonable level of clarity, agreed with the local planning authority, our including a bridge in our Scheme would seem an unnecessary expense and could cause confusion in terms of implementation. It might also be that timing for construction of the new bridge is a key issue for you and you would not want to be dependent on our Scheme timetable.</i> <i>We understand Bristol Port entered into an agreement with the Network Rail allowing the Port to install and operate a temporary crossing over the dis-used railway, subject to planning consent. We understand the terms of this agreement allow the land owner (Network Rail) to give notice to the Port to close this temporary crossing should the land be required for railway purposes, provided Network Rail gives you 12 months' notice.</i> <i>The planning consent for a temporary at-grade crossing over part of the dis-used railway lasts only while the railway remains dis-used. After the Portishead Branch Line is re-opened to railway traffic the at grade crossing must cease to be used.</i> <i>Planning condition 16 of the Decision Notice dated 21st December 2016 states:</i> <i>“The use of the site for the storage of cargo in transit (e.g. motor vehicles) shall not be commenced until full details of the temporary at-grade vehicle crossing have been submitted to and approved by the Local Planning Authority. Notwithstanding the submitted plan: 42075A, the security fencing/gates shall not be erected across the railway corridor owned by Network Rail. In addition, the use of the site for the storage of cargo in transit (e.g. motor vehicles) shall not be commenced until a programme of works (including timescales) for the introduction and removal of the temporary at-grade vehicle crossing and construction of the vehicular bridge across the railway line so as not to impede the re-opening of the Portishead Branch Line have been submitted (in consultation with MetroWest and Network Rail) to and approved by the Local Planning Authority.</i>

				<i>Details of the at-grade vehicle crossing, bridge and above programme of works, once approved, shall be implemented in accordance with the approved details to the satisfaction of the Local Planning Authority. The temporary at-grade vehicle crossing must not be used after the Portishead Branch Line is re-opened to railway traffic. Reason: To ensure that the safeguarded railway corridor is adequately protected in accordance with Policy CS10 of the North Somerset Core Strategy and Policy DM22 of the North Somerset Development Management Policies July 2016.”</i> <i>Network Rail’s consultation response of 17th November 2016 in connection with your planning application states:</i> <i>“With reference to the bridge over the railway, this will be subject to the necessary licence agreement between the applicant and Network Rail being reached before any works can take place. It should also be noted that the at grade “crossing” will not be acceptable when the Portishead section opens again and construction commences for MetroWest…….”</i> <i>Furthermore, your own ‘Bridleway/Cycle Path Crossing Management Plan’ dated June 2017 in connection with planning condition 18 states:</i> <i>“Prior to the intended reopening of the Portishead Branch line, TBPC will stop using this ‘at grade’ crossing and will be required to build a bridge across the railway and bridleway in order to access the site. This bridge will accommodate the bridleway and cycle path by means of an underpass to the north of the railway for pedestrians, cyclists and horse riders.”</i> <i>It would therefore appear that the Port already has a proposal for a suitable overbridge. We understand your current agreement has a 12 month notice period for termination of the easement. There is a clear commitment from the Project Team to keep the Port informed of progress with the Scheme which can also be picked up through the regular liaison meetings between the respective Chief Executives and Directors of North Somerset Council and Bristol Port.</i> <i>End</i> <i>Since our letter of 15th October 2019 we discussed this issue further with BPC at a meeting on 12th March 2020, where BPC agreed that BPC should deliver a bridge over the railway and this was recorded in the agreed meeting notes.</i> <i>Extract of the agreed meeting notes of 12th March 2020 -</i> <u><i>Court House Farm Bridge</i></u> <i>Jonathan M outlined that Bristol Port accepted that it will need to deliver a bridge, subject to the project securing the DCO and the funding for its construction.</i> <i>……Jonathan explained that Network Rail had to give 12 month notice to Bristol Port for closing the current at grade crossing over the dis-used railway. James took an action to follow up with Network Rail regarding the need for progress to be made for the arrangements between Network Rail and Bristol Port on the bridge agreement, the bridge design and related technical matters.</i> <i>There was some discussion about the programme interfaces. James outlined that based on currently known timescales the decision on the DCO is scheduled for June 2021. Following this, the project has to produce a Full Business Case for approval by NSC, WECA and DfT. The Full Business Case is scheduled for</i>

				<i>submission in autumn 2021. Approval of the Full Business Case follows in early 2022, with award of contracts shortly after. Allowing for initial discharge of planning conditions, construction is scheduled to commence around April 2022. There was some discussion about potential for integrating the two programmes together. End</i> Updated programme dates were provided to BPC on 1st April 2020, in the document titled 'Actions arising at meeting on 20th March 2020'.
124-7		2.3.4 alternatives to those proposals, including in relation to the proposed land take for the temporary and permanent works, in order to minimise the strategic and operational impacts on Bristol Port;	Concern about the proposed acquisition of land	The applicant has suggested 'with lawyer' meetings to progress drafting of voluntary agreements, but this has not been taken up by BPC. There are four main parcels of land which MetroWest Phase 1 is seeking to acquire the freehold, these in summary are: • 04/85 – this parcel comprises of the north east embankment of the highway overbridge on Royal Portbury Dock Road. It is outside of the Port's fence and supports the highway, forming part of the bridge approach enabling the highway to cross over the branch line. The Applicant seeks the freehold of the plot to ensure it is able to access the bridge approach for maintenance which would currently be possible by accessing the dis-used railway formation. The whole of the southern approach to the overbridge and the opposite side of the northern approach to the overbridge are already held by North Somerset Council as highway authority. • 05/50.– this parcel comprises of the south west embankment of Marsh Lane road over rail bridge. It is outside of the Port's fence and supports the highway, forming part of the bridge approach enabling the highway to cross over the branch line. • 05/27 – this parcel is required to permanently divert the NCN26 / bridleway because currently a section of it is located on top of part of the dis-used track formation from under the Marsh Lane overbridge. The cycle path is currently within the rails of the former railway and so needs to be realigned to allow the branch line to be reconstructed. The new cycle route will be realigned east bound for about 40 metres from Marsh Lane overbridge. The proposals will improve the alignment of the cycle route by utilising an area of currently overgrown and unused area of scrub held by the Port. This work could be constructed with the permission of BPC and made available for use by cyclists and pedestrians if BPC will consent to the new path being constructed and retained on its land. • 05/130, 05/131, 05/135 & 05/136 – this is effectively one parcel of land from under the M5 viaduct southern abutment south towards the railway. Most of this is marshy, being an area of wetland and ponds created by BPC. This is required to extend the existing bridleway which terminates under the M5 Avonmouth Bridge. The intention is to provide equestrians with a connection from Marsh Lane to Pill without using the railway tunnel under the M5. There is concern that horses should not be in the railway tunnel when trains are passing. Permanent new rights are sought for the benefit of NRIL from Marsh Lane along the public bridleway to BPC's private level crossing on its railway beneath the M5 Avonmouth Bridge. This permanent access is sought to enable maintenance of the new starter signal required for the Port's trains leaving Royal Portbury Dock and also for maintenance vehicle access for NRIL to maintain its railway. In addition rights to install signalling equipment and to run rail vehicles on BPC's railway to Portbury junction are also sought. If the relevant rights can be secured by agreement between BPC and NRIL then the proposed powers will not be

				exercised. NRIL believes however that the powers are essential for the installation and maintenance of signalling equipment and for the maintenance of the operational railway between Parson Street and Portishead. In addition to the new rights sought, temporary possession powers are sought over some areas of the BPC's freehold, principally for a construction compound underneath the M5 Avonmouth Bridge, working space along the fence line between the railway and the Port's land ownership and some working space within the vicinity of Royal Portbury Dock Road bridge and Marsh Lane bridge. A land acquisition plan showing (Bristol Port land only) was issued to BPC on 1st April 2020, reflecting the as DCO application red line.
124-8		2.3.5 the effect of the construction activity on the day to day operation of Bristol Port and the other port-dependent businesses on the Royal Portbury Dock estate ("RPD Estate");	Concern about temporary highway traffic impacts during construction	As set out in section 2.3.1, the realistic worst case scenario of construction vehicle movements at the very peak of construction would be approximately 50 movements per day using Royal Portbury Dock Road and Marsh Lane to access the Lodway compound. This is equivalent to approximately 0.5% of total daily traffic movements on Royal Portbury Dock Road and the compound at Lodway. In agreement with Highways England construction vehicles will avoid the peak time congestion at junction 19 of the M5 and Royal Portbury Dock Road. Consequently there will be a negligible impact on the day to day operation of BPC and other port-dependant businesses on the Royal Portbury Dock estate.
124-9		2.3.6 the operational consequences of NSC's proposed restrictions during construction and NSC/Network Rail's future access rights; and	Concern about temporary impacts to freight train paths during construction	With the exception of the last 500 metres of railway to/from Royal Portbury Dock, the Portbury Freight Line is owned and operated by Network Rail as part of the national rail network. Consequently, Network Rail manage access rights and possessions for the Portbury Freight Line, through national governance arrangements which are regulated by the Office of Rail and Road. The current volume of freight trains on the Portbury Freight Line has dropped to what appears to be an average of less than one train per week. Data recording the number of actual trains operated is publicly available from www.realtimetrains.co.uk, This online record indicates that the frequency of freight trains operated on the line is now very scarce with often weeks between freight trains operating. Given the very low frequency of freight trains operating on the Portbury Freight Line, the impact of the possession strategy on BPC is likely to be very limited. As set out above in our response to 2.3.2 the proposed possession strategy is as follows. <i>Extract from 15th October 2019 letter –</i> <i>For the duration of the two year construction period we are proposing long weekend possessions of the line, every weekend. This ideally would include Fridays, Saturdays, Sundays and Mondays but is subject to further discussion between Network Rail, yourselves and the Scheme. In addition to this we are proposing a blockade of the freight railway line in each August during the two year construction period. In addition to this, specific possession arrangements will be needed for the renewal of Parson Street Junction given the interface with the Bristol to Taunton main line. Network Rail will confirm these arrangements in due course.</i> <i>End</i>

				Schedule 4 (of the Track Access Contract held by a train operator) payments compensate passenger and freight train operators for the impact of planned service disruption due to possessions. Subject to the nature of the contractual arrangements between BPC and the freight train operators, BPC may be able to seek compensation from the freight train operators, require them to re-schedule the dates and times of the dispatch of freight trains or require them to transport the cargo via an alternative mode of transport. As set out above in our response to 2.3.1, access to the Portbury Freight Line for BPC will be maintained post opening of MetroWest Phase 1. Train path modelling undertaken by Network Rail includes an hourly freight train path in each direction (reflecting BPC's existing commercial arrangements with Network Rail). This modelling informed the development of a working timetable which includes both the proposed MetroWest Phase 1 hourly passenger train paths and the hourly freight train paths. The working timetable is based on the December 2019 national rail timetable, taking account of rail path interfaces at Parson Street Junction. The working timetable was provided to BPC on 1st April 2020.
124-10		2.3.7 the effect on the future of Bristol Port of land which has been safeguarded for port development no longer being available for that purpose by virtue of its being taken compulsorily for purposes ancillary to the DCO scheme.	Concern about land that has been zoned for future Port development	The Applicant is proposing to acquire the freehold of land (parcel 05/85 owned privately) to the east of Court House Farm and an access right from BPC (parcel 05/75). The freehold land is required for ecological mitigation work and contour reprofiling to reduce the risk of flooding impacting on BPC's land. Both the freehold private land and the BPC land was discussed at the meeting with BPC on 12th March 2020, including the reasons for the interface with BPC land. Extract of the agreed meeting notes of 12th March 2020 - <i>Plot 05/75 comprises of a proposed permanent access right to land owned by [REDACTED]. The project is proposing to replace the deck of 'Cattle Creep' bridge, install a permanent newt pond and undertake very minor flood mitigation which entails doing a scrape of top soil of a few centimetres. James took an action to provide further information about the flood mitigation proposals. John outlined this land is zoned in the Local Plan for Port development. James stated that part of it (the diamond shaped parcel) is designated as a local wildlife reserve. Jonathan M outlined that Bristol Port would like to develop at least the western parcel for car parking/storage but hadn't yet been able to agree terms with [REDACTED] (the owners). It was felt by all that there is potential for an amicable solution for the MetroWest and the Bristol Port proposals to proceed, which may entail some adaption of the MetroWest proposals.(JW to investigate). End</i> The Applicant needs to demonstrate that it can deliver its flood mitigation, which entails a scrape of land to a maximum depth of 20cm. The work is required to reduce the risk of flooding impacting BPC's land.
124-11		3. Development Consent Order 3.1 The draft development consent order ("DCO") currently appears to contain inadequate controls over the nature and proposed method of execution of the works. 3.2 The DCO amongst other things does not: 3.2.1 provide adequate and acceptable protective provisions for BPC as operator of, and statutory undertaker for, Bristol Port;	Concern about protective provisions	Draft Protective Provisions are included in the draft Order. The Applicant would welcome discussions with BPC on these but previous suggestions for a meeting between legal teams has not yet been taken up by BPC.

124-12		3.2.2 justify the requirement for powers of compulsory acquisition which would affect BPC; and	Concern about the proposed acquisition of land	See responses to 2.3.4 and 2.3.7 above.
124-13		3.2.3 state with sufficient clarity how NSC and third parties, including Network Rail, intend to exercise compulsory acquisition powers.	Concern about compulsory acquisition powers	See responses to 2.3.4 and 2.3.7 above.
124-14		3.3 Further concerns in relation to the draft DCO, insofar as necessary or appropriate, will be provided at a later date following detailed consideration of its provisions and the related documentation, including the Book of Reference. These will include concerns about what appear from an initial review to be provisions which could affect private rights granted by BPC to National Grid Electricity Transmission PLC and Western Power Distribution (South West) PLC which are necessary for the delivery of the Hinkley Point C Connection Project.	Concern about rights granted by BPC to utilities	The Applicant does not seek any rights over BPC freehold land that would be inconsistent with the rights held by other utilities. The Applicant will work with BPC and the relevant utilities to allow such rights to be exercised (or exercised as modified if modification is necessary) during and after the relevant works.
124-15		3.4 BPC notes the inclusion of draft protective provisions in favour of BPC and its statutory undertaking in the draft DCO. However, these are currently inadequate in their scope and content. Without detracting from the other issues of principle raised in these representations, BPC will expect provisions to be added to cover a range of concerns, including appropriate controls over works or other activities on or affecting roads on and giving access to Bristol Port, over any proposed temporary, drainage or other ancillary works on any of BPC's land, over the temporary use of land and works programming, and restrictions on access during construction. Controls of this sort, and to delimit the location of all works and activities to the extent they affect BPC's land and/or operations, are necessary to provide the certainty required to ensure that the safe and efficient operation of Bristol Port can continue without interruption during construction of the DCO scheme. Further detail will be provided following detailed consideration of the DCO's provisions.	Concern about the proposed highway works, acquisition of land and controls over the operation of BPC	The Applicant has offered to discuss the draft Order and Protective Provisions with BPC. No significant works to carriageway leading to Royal Portbury Dock are proposed in the draft Order and supporting documentation and no temporary possession or other powers is being sought over land within the Port fence. It is not anticipated that there will be any significant restrictions on access for BPC during construction. Also see responses to 2.3.4 and 2.3.7 above.
124-16		Rail Access 4.1 BPC has previously expressed concerns about the extent of the rights sought over its freight rail line and the works proposed there, and has sought assurances that both during the construction of the scheme and once the new passenger service is in operation, access for freight traffic between Bristol Port and the national rail network will not be restricted.	Concern about freight paths and on-going access to the rail network	MetroWest Phase 1 provided clarification on this point (along with other actions arising from the meeting of 12th March 2020) to BPC on 1st April 2020 as follows. Extract from note titled 'Actions arising at meeting of 12th March 2020' JW to ask Womble Bond Dickinson to provide clarification regarding the justification for the proposed permanent access right over Bristol Port's perimeter access track. NSC/WECA have liaised with Network Rail to provide a joint response as follows. <i>At present NR currently uses (on an ad hoc basis) through temporary agreements with the port the "level crossing" at the gated rail track entrance to the port for Road Rail machines (RRVs) to access the current freight line. Access to the level crossing from Marsh Lane is mainly along a public right of way, with the last few metres of the proposed new right being on a route separate from the PROW network. This demonstrates the benefit of RRV access at this location, simply based on current limited freight movements.</i> <i>Once the new passenger line is open the same crossing will be used to bring on equipment which will then run up to Pill Jcn and then down the Portishead branch. The passenger service will see a significant increase in movements on the branch line compared to the current level of operations. There is a compelling case for a right of access to the Port's level crossing to reduce perturbation to both</i>

				passenger and freight movements, which will be of significant advantage to the Port and the FOCS. Maintenance access is also needed for the signalling controlling freight movements from the Port on to the NR network. Specifically when the new line is open the M5 RRAP would become a key strategic access point for getting RRVs onto the Portishead line when maintenance is required. The other available access points towards Bristol are restricted by vehicle and physical size and geography (e.g. Ham Green, Monmouth Road, and even Clanage Road have geographic limitations or risks that make the case for the access right at the Port entrance a compelling one). NR also needs the certainty of permanent access to maintain the railway effectively going forward as currently the Port could refuse access without reason (given that NR has no formal property interest) and there is also a risk of possible changes to personnel or ownership in the future. Given the Port's previous expressed desire to retain ownership, and NSC and NR having no wish to own or control the level crossing, we have proposed a new right to accommodate the Port's request whilst meeting NR's operational requirement for protected access rights. It would be NSC's and NR's preference for the right to be granted by way of an agreed easement. Reaching agreement for the use of the access would also have the benefit of providing the Port more control over NR's activities, in terms of matters such as notice periods for planned use of the level crossing and mutual co-operation clauses between the Port and NR. End
124-17		4.2 Documentation relating to the proposals states that access for freight traffic to and from Bristol Port will be adversely affected during construction of the various works, but BPC is unsure where details of the interruptions and the necessary assessment of their impact on port operations may be found. BPC will need to be provided with sufficient information about these matters and with adequate protections so as to ensure its service delivery to customers and its other port operations will not be impeded.	Concern about freight train paths during construction	The proposed Order does not contain powers to impede access to the Port via the highway network. Only minor works are proposed at Royal Portbury Dock Road. Any traffic regulation measures sought by the Applicant (whether through the Order or through application to the local traffic authority) will be minor in extent and temporary in nature – such as brief periods of traffic control whilst the new works for the bridleway crossing Royal Portbury Dock Road are constructed. Disruption to rail traffic will be controlled by Network Rail in accordance with the standard procedures regulating work to the rail network.
124-18		4.3 In relation to future operation of the railway, statements are made in the application documentation that the scheme has been designed to accommodate the existing freight rail paths, but, again, BPC has not been able to find the detailed evidence or analysis to support the statements.	Concern about freight train paths post construction	The Draft Order does not contain any powers to control rail paths – this remains the responsibility of Network Rail. As set out in response to 2.3.1 above, access to the Portbury Freight Line for BPC will be maintained post opening of MetroWest Phase 1. Train path modelling undertaken by Network Rail includes an hourly freight train path in each direction (reflecting BPC's existing commercial arrangements with Network Rail). This modelling informed the development of a working timetable which includes both the proposed MetroWest Phase 1 hourly passenger train paths and the hourly freight train paths. The working timetable is based on the December 2019 national rail timetable, taking account of rail path interfaces at Parson Street Junction. The working timetable was provided to BPC on 1st April 2020.
124-19		4.4 BPC is also concerned that merely accommodating whatever is meant by 'existing' freight paths would be inadequate to avoid serious detriment to BPC's statutory undertaking: reliable and timely access for rail freight traffic to and from Bristol Port is critical, not only for efficient port operations within the RPD Estate but also for securing the necessary modal shift from HGV traffic to rail.	Further concern about freight train paths	Nothing in the draft Order gives the Applicant power to control the allocation of freight paths to Royal Portbury Dock. Construction impacts on freight paths will be controlled by Network Rail. The new rights sought in the draft Order are intended to install signalling and to improve Network Rail's ability to maintain the branch line. As such there is no reason to consider that serious detriment will arise.

			post construction	
124-20		4.5 BPC will therefore expect suitable assurances to protect current and future freight traffic to be encapsulated in enforceable provisions of the DCO.	Assurances regarding access to future freight train paths	The Applicant has no power to control current or future freight traffic.
124-21		4.6 NSC's proposals include the creation of a permanent road-rail access point at the location where the perimeter track referred to in paragraph 7.2 below meets BPC's privately-owned railway within the RPD Estate. From the documentation provided, it appears that the proposals envisage NSC/Network Rail acquiring permanent rights over the perimeter track to bring road and rail vehicles to the access point, and further permanent rights for Network Rail's engineering and other works trains to pass over BPC's private railway for the benefit of the national rail network generally. Unspecified works are proposed to BPC's level crossing to create the access point and further (unspecified) works are suggested for the perimeter track. NSC also requires an area of BPC's land under the M5 bridge on a permanent basis in support of the use of the access point. These proposals cause BPC concern because of the interference they will cause to BPC's use of the track and its private rail link, and the damage to its infrastructure which will result, and their acceptability will need to be considered further.	Concern about the proposed land right for maintenance access to the railway	In relation to the permanent rights sought, the applicant would request that Network Rail discuss use of the perimeter track with BPC including control over use of BPC's gate at the Marsh Lane Junction of the public bridleway with the highway of Marsh Lane. Permanent rights are sought in the draft Order to allow road rail vehicles to access the Port's level crossing and railway for maintenance of the Portishead branch line, as well as maintenance access to the signalling that will be installed on the Port's railway, controlling train movements towards Pill Junction. The works to the level crossing may entail the laying of light weight foam mats on the railway to enable vehicles to transfer from road wheels to rail wheels but would not impinge on the use of the railway or the level crossing once installed. A turning circle is required under the M5 Avonmouth Bridge for low loaders bringing the road rail vehicles to turn so they can exit the public bridleway onto Marsh Lane in forward gear. The Applicant will ask Network Rail to discuss the specification for the proposed works with BPC.
124-22		Loss of Rail Crossing and Safeguarded Land 5.1 BPC notes the intention to close its private crossing that connects operational land to the north and south of the disused railway in the vicinity of Court House Farm. The NSC proposals currently make no provision for any alternative access between the sites. In the absence of alternative provision, closure of the crossing will clearly constitute an unacceptable interference with BPC's operations and statutory undertaking.	Concern about the Court House Farm crossing and land zoned for future Port development	BPC on 12th March 2020 accepted that it will need to deliver a bridge, subject to the Applicant securing the DCO and the funding for the construction of MetroWest Phase 1. The Draft Order does not provide for any alternative provision for the crossing as the position is regulated by the planning permission for the development or BPC's Court House Farm land. As BPC already has planning permission for a bridge it was not seen as necessary for the Applicant to provide a design for a bridge at this location. See response to 2.3,3 above for full details.
124-23		5.2 BPC also notes the proposed compulsory acquisition of an area of land adjacent to its boundary (to the south of the railway and to the east of Marsh Lane) for Flood Mitigation and Pond with associated ecological works (Work Nos. 16B and 16D). NSC also proposes to take a permanent right of access from Marsh Lane over BPC's adjacent land. The land that NSC seeks is specifically safeguarded for port development within NSC's adopted planning policy in recognition of the need of Bristol Port for additional land for development at Royal Portbury Dock. Despite that designation, it appears no assessment has been made of the effect on Bristol Port of this land no longer being available for development, including by virtue of the access rights being sought over large parts of BPC's adjacent land. In the absence of any provision for alternative land being made available to meet the needs identified by the planning policy, BPC objects to this safeguarded land being taken and used for purposes ancillary to the DCO scheme.	Concern about proposed acquisition of land east of Marsh Lane	As set out in response to 2.3.7, above the Applicant seeks powers to acquire the freehold of land (parcel 05/85 in private ownership) to the east of Court House Farm and an access right from BPC (parcel 05/75). A new right of access is proposed over land owned by BPC. This would be exercised only occasionally and the Applicant would be willing to agree both an alternative route and "lift and shift" arrangements with BPC to further reduce impacts on BPC's use of its land. On this basis there is no justification for alternative land being provided to BPC. Both parcels of land were discussed at the meeting with BPC on 12th March 2020, including the reasons for the interface with BPC land. Extract of the agreed meeting notes of 12th March 2020 - <i>Plot 05/75 comprises of a proposed permanent access right to land owned by [REDACTED]. The project is proposing to replace the deck of 'Cattle Creep' bridge, install a permanent newt pond and undertake very minor flood mitigation which entails doing a scrape of top soil of a few centimetres. James took an action to provide further information about the flood mitigation proposals. John outlined this land is zoned in the Local Plan for Port development. James stated</i>

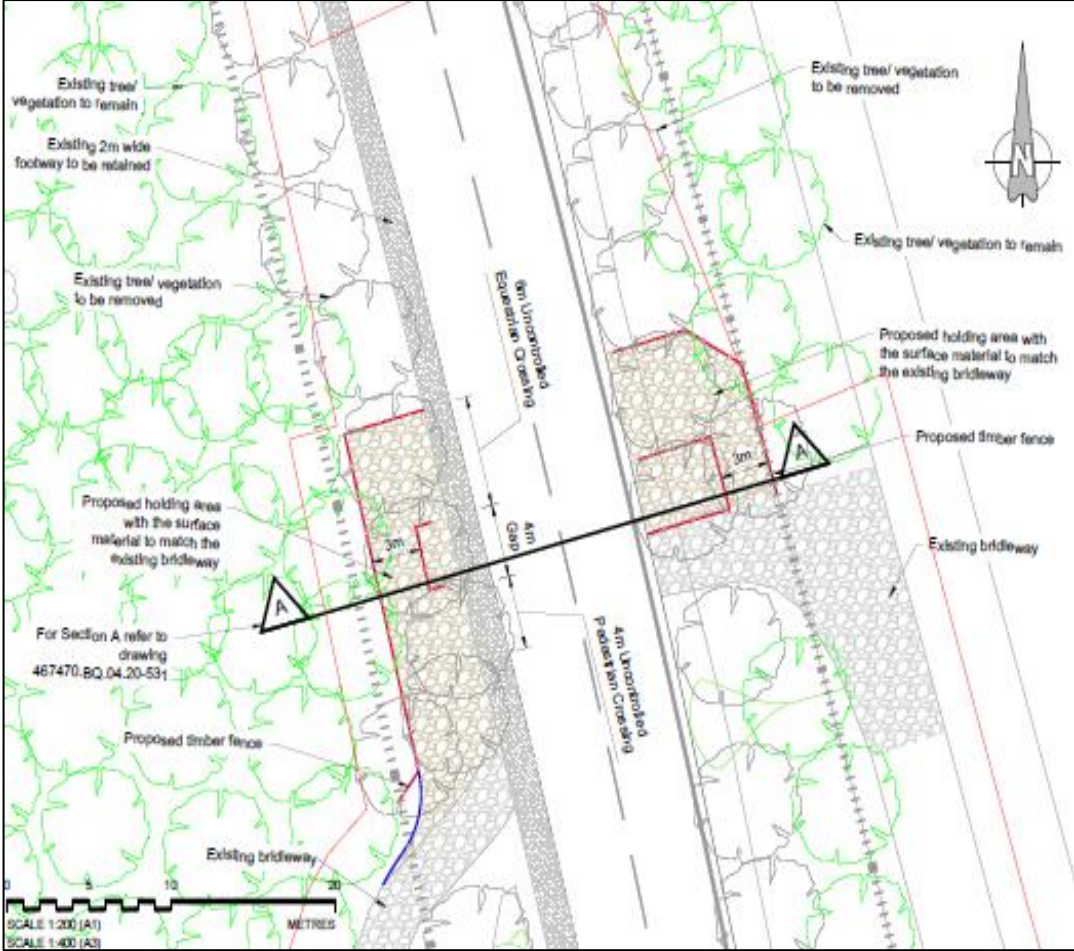
				<i>that part of it (the diamond shaped parcel) is designated as a local wildlife reserve. Jonathan M outlined that Bristol Port would like to develop at least the western parcel for car parking/storage but hadn't yet been able to agree terms with [REDACTED] (the owners). It was felt by all that there is potential for an amicable solution for the MetroWest and the Bristol Port proposals to proceed, which may entail some adaption of the MetroWest proposals.(JW to investigate). End</i> The Applicant is seeking powers for flood mitigation work, which entails a scrape of land to a maximum depth of 20cm to reduce the risk of flooding of the Port's land resulting from the Scheme.
124-24		Compulsory Acquisition 6.1 BPC objects to the nature and extent of the proposed compulsory acquisition powers to be conferred by the DCO and requests a compulsory purchase hearing, pursuant to section 92 of the Planning Act 2008.	Concern about general proposed acquisition of land	The Applicant has suggested 'with lawyer' meetings and to progress drafting of voluntary agreements, but this has not been taken up by BPC. There are four main parcels of land which MetroWest Phase 1 is seeking to acquire the freehold, these in summary are: • 04/85 – this parcel comprises of the north east embankment of the road over rail bridge on Royal Portbury Dock Road • 05/50.– this parcel comprises of the south west embankment of Marsh Lane road over rail bridge • 05/27 – this parcel is required to permanently divert the NCN26 / bridleway because currently a section of it is located on top of part of the dis-used track formation from under Marsh Lane bridge east bound for about 40 metres. This parcel comprises an area of currently overgrown and unused area of scrub held by the Port. • 05/130, 05/131,05/135 & 05/136 – this is effectively one parcel of land from under the M5 viaduct southern abutment south towards the railway. Most of this is marshy land and pond. This is required to extend an existing bridleway. The acquisition of BPC land, land rights and temporary use of land was discussed at the meeting with BPC on 12th March 2020, including the reasons for the interface with BPC land.
124-25		6.2 So far as they affect BPC's land, the compulsory acquisition powers sought include those of outright purchase (of land, subsoil and/or airspace at NSC's option), of the imposition of rights and of restrictive covenants, of the extinguishment and overriding of rights and other interests and of possession during construction. All land affected by these compulsory acquisition powers forms part of BPC's operational land held by it for the purpose of its statutory undertaking. Therefore the Examining Authority will need to be satisfied that all the powers sought may be exercised without any serious detriment to BPC's statutory undertaking. On the basis of the DCO as currently drafted, BPC considers this condition cannot be met.	Concern about the impact of proposed acquisition of land on the operation of BPC	As set out in response to 2.3.4 and 6.1 above, the proposed land and rights sought to be acquired are limited in extent and are not within the Port's dock fence nor occupied by the Port for its undertaking. Whilst the Applicant believes the powers it seeks would not give rise to any serious detriment to BPC's activities and are justified in nature and extent, the Applicant has been and remains very willing to discuss terms for agreement between the parties.
124-26		6.3 In particular, the extent of compulsory land acquisition powers sought over land which is part of or adjacent to public vehicular highways appears excessive, particularly at Marsh Lane and Royal Portbury Dock Road. Even if permanent works are needed as part of the scheme to these areas of highway and adjacent land, it has not been demonstrated satisfactorily why that necessitates BPC or anyone else being compulsorily deprived of its interests in the land or NSC acquiring any interest in any land beyond that normally vested in a local highway authority by dedication and adoption.	Concern about the justification for the proposed acquisition of land	In relation to the relevant plots: • 04/85 – this parcel comprises of the north east embankment of the road over rail bridge on Royal Portbury Dock Road. • 05/50.– this parcel comprises of the south west embankment of Marsh Lane road over rail bridge. The Applicant already owns the remainder of the land forming the approaches to the overbridges, which support the highway. The Applicant believes that the

				maintenance of the highway will be facilitated by the proposed acquisition as access will be restricted by the restoration of rail services. If BPC is willing to grant permanent access rights for maintenance by the highway authority then freehold acquisition will not be necessary. Both Plots will become part of the adopted highway and will be held by local highway authority. The acquisition of BPC land, land rights and temporary use of land was discussed at the meeting with BPC on 12th March 2020, including the reasons for the interface with BPC land. Extract of the agreed meeting notes of 12th March 2020 - <u>Acquisition of Land</u> At Royal Portbury Dock parcel 04/85 was discussed, which is proposed permanent acquisition. This parcel comprises of the north east embankment of the road over rail bridge. James explained that maintaining the bridge does not currently present any issues for the Council given the railway is not operational. However, NSC will have to enter into a Bridge Agreement with Network Rail, the terms that NR have outlined include a liability on NSC post opening of the railway and then ongoing. The liability is such that if the bridge becomes defective for whatever reason and this results in a need for a possession of the railway, NSC would be liable for all the train operator compensation costs arising. In such a situation time is of the essence and while Royal Portbury Dock Road is adopted highway, the highways department have advised that they need to own the subsoil of the embankments because it may be necessary to undertake works to the embankments in the future (typically embankment stability works etc). James explained that NSC currently owns the land for the other three embankments of the bridge but there is an unregistered strip of land which the project is seeking to also acquire. Plot 05/50 comprises of the south west embankment of Marsh Lane road over rail bridge. The proposal is to permanently acquire this plot for the same reasons outline above regarding the parcel for north east embankment of Royal Portbury Dock Road. Jonathan M stated that he thinks the Port have granted an easement to EE for a telecoms mast, but didn't think that would cause an issue. End
124-27		Other Construction Issues 7.1 No full and final details have been made available concerning NSC's proposed arrangements for HGV and other construction traffic movements in the vicinity of the RPD Estate. BPC will need to be satisfied that these and any associated works or measures will not have any detrimental effect on traffic and cargo resorting to and from, and moving around, the RPD Estate and will require appropriate protective provisions in relation to these issues and in relation to the regulation of all construction activities within the RPD Estate.	Concern about the temporary highway traffic impacts	The number of construction vehicle movements will fluctuate throughout the construction period. The number of construction vehicles on the road will also depend on the extent to which we are able to move ballast and other materials via the railway. It is our preference to use the railway to move the majority of ballast and materials and we have had discussions with BPC about the use of their rail head and storage areas at Royal Portbury Dock and Avonmouth to facilitate this. If we are unable to use BPC for storage of ballast and other materials, then the majority of ballast and materials will have to be moved by road. Presenting the realistic worst-case scenario at the very peak of construction activity where we are unable to reach an agreement with BPC for storage of ballast and materials, we estimate that approximately 25 HGVs per day will be accessing the Lodway compound via junction 19 of the M5, Royal Portbury Dock Road and Marsh Lane. These HGVs would return the same way resulting in approximately 50 HGV trips in total at the peak of construction activity.

				This represents approximately 0.5% of total daily traffic on Royal Portbury Dock Road (two way). In agreement with Highways England construction vehicles will avoid the peak time congestion at junction 19 of the M5 and Royal Portbury Dock Road. Consequently, there will be a negligible impact on the day to day operation of BPC and other port-dependant businesses on the Royal Portbury Dock estate. We have assessed that at the peak of construction intensity the realistic worst case scenario for construction staff movements would be approximately 84 staff per day travelling to Lodway compound. It is likely that some staff will share vehicles, however even if all staff travel separately this would mean a maximum of approximately 168 total (2-way) movements per day travelling from junction 19 on the M5. Staff will use a different route to the construction vehicles and so will avoid the roads through Royal Portbury Dock entirely. Instead, staff will travel to Lodway compound via A369 (Portbury Hundred) and through Pill. In agreement with Highways England, staff shift patterns will be organised so that they avoid peak time traffic to minimise the impact on junction 19 of the M5. Where possible, staff will be split between two shifts per day which will spread the impact of staff movement throughout the day (estimated to be between 06:00 to 14:00 and 14:00 to 22:00).
124-28		7.2 BPC notes the proposed use during construction of the track around the perimeter of part of the RPD Estate between Marsh Lane and the M5 overbridge for HGV traffic (ref Compounds, Haul Roads and Access to Works Plan Sheet 5 – Access Point AW 5.1). BPC is very concerned that this proposed use conflicts with other regular vehicular use of the track by BPC and others including CLH, Highways England and contractors working on the National Grid Hinkley C Connection project all of which access and use must be preserved. The effect of the use of the track on the security of the RPD Estate is also a significant concern. BPC is also unclear whether NSC's proposal includes carrying out any work to this track and, if so, what work is proposed. If BPC permits access over the track during construction, then it must be maintained and eventually left in the same or a better condition than when NSC's works commence and BPC would need the absolute right to approve any proposed works to the track.	Concern about the use of BPC's perimeter access track	The perimeter access track (which is also a bridleway) between Marsh Lane and the M5 is already used by several parties. The use of the track broadly falls into three categories: • Access for maintenance of existing assets • Access for new infrastructure works • Public access as a bridleway Access for maintenance of existing assets - BPC, Highways England and CLH (Pipelines), mainly using LGV's. The Applicant will not impede this existing use of the bridleway. Access for new infrastructure works – in relation to National Grid Hinkley C Connection project and its interface with MetroWest Phase 1, arrangements are progressing between the two projects and there are other locations where there is a physical interface, including at Sheepway. A Statement of Common Ground is being developed which will set out an agreed approach to the management of physical interfaces between the two projects, including HGV traffic. Public access as a bridleway will be suspended on this section of bridleway throughout the construction phase of the project (for up to two years). The Applicant's DCO application document 2.34 Diversion Routes for Pedestrians and Cyclists (Part 1 of 2), pages 6 to 8 shows the local diversions through Pill / Easton-in-Gordano that will be signposted by the Applicant for the duration of the works. The Applicant is willing to enter into an agreement with BPC, Highways England, CLH (pipelines) and National Grid in respect of arrangements for the use of the track. This can include provisions for a pre-works condition survey and schedule of condition, together with provisions for repairing damage caused by the Applicant's use of the track during the construction period. The Applicant explained its approach to the use of the access track in its letter of 15th October 2019.

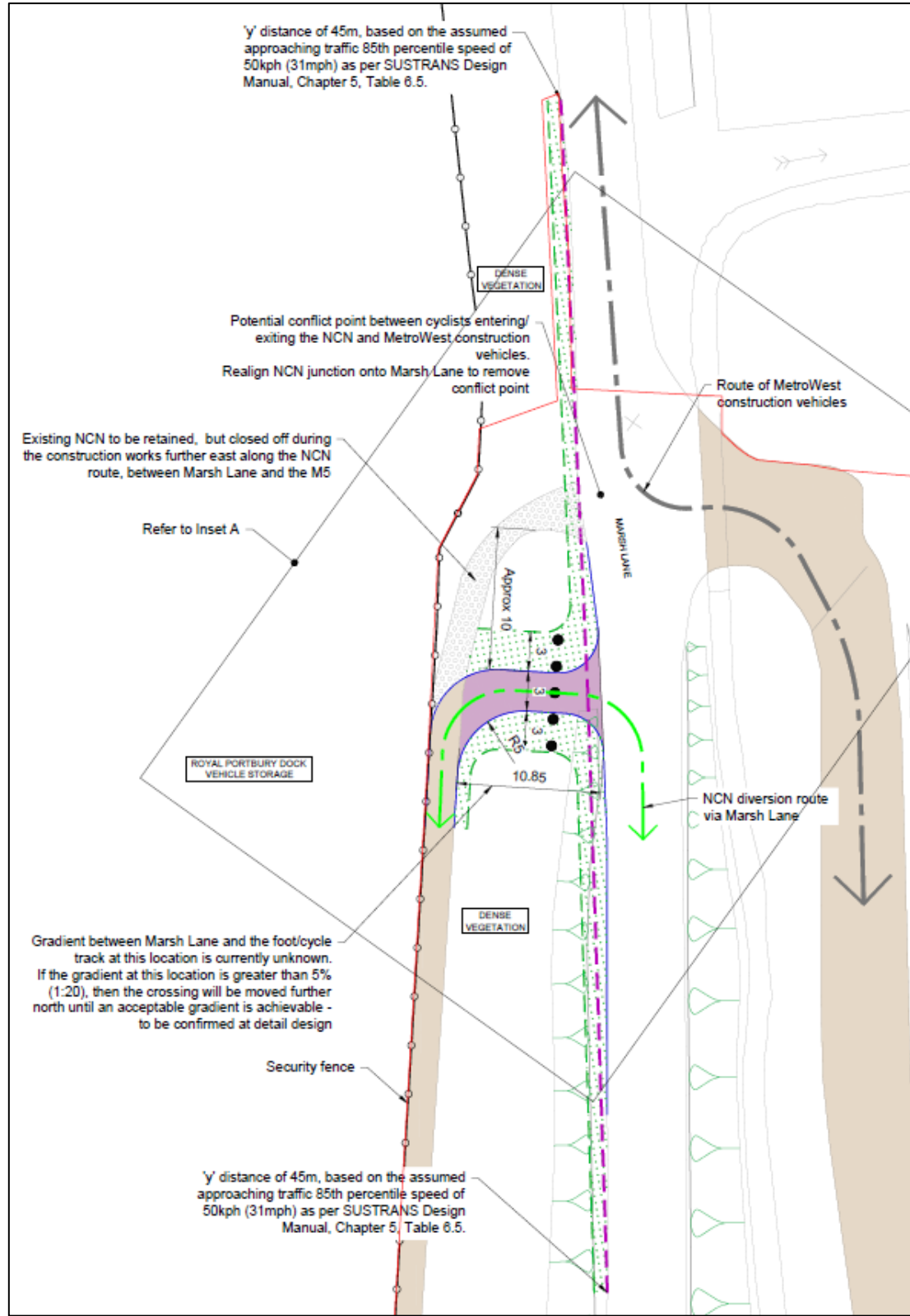
				As discussed at the meeting of 12 th March 2020 and recorded in the agreed notes, BPC is to provide a Construction Protocol which has been used previously for works around the dock estate.
124-29		7.3 The proposed location of a construction compound on BPC land beneath the M5 overbridge will interfere with the need for access (by BPC and others) and impair the security integrity of the RPD Estate (ref Compounds, Haul Roads and Access to Works Plan Sheet 5).	Concern about the temporary construction compound under the M5	The proposed temporary construction compound on land under the M5 owned by BPC, has been used by Network Rail contractors previously. The Applicant is discussing the use of this area with Highways England and no objection in principle has been raised by Highways England. This area is largely hard surfaced and therefore is ideally suited for use as a temporary construction compound, as it would entail less ecology related impacts than a green field site. Although the access for vehicles via the perimeter access track (public bridleway) is gated, both the track and the area under the M5 are not within the Port's dock fence. It is publicly accessible on foot by two public footpaths and is also the location of the terminus of the Public Bridleway from Marsh Lane.
124-30		7.4 BPC has found no further detail of the proposals to deal with culverts that discharge surface water from south of the rail to the north. BPC's particular interest lies in the Easton-in-Gordano culvert (some 200 metres West of the M5 on the railway line route) and the unnamed culvert linking the Court House Farm site, beneath the north abutment to the Royal Portbury Dock Road, and eventually to the Drove Rhine. BPC will need to understand the current proposals and the protections proposed before it can express a view about their acceptability.	Concern about culverts	No new culverts under the railway are proposed. Repair, and if required replacement, of existing Victorian culverts under the trackbed, on Network Rail land, may be carried out by Network Rail. Network Rail's culverts will be cleared and flows improved. As the culverts will be under operational passenger railway a more intensive inspection and maintenance regime will exist once passenger services commence. The details of this will be confirmed following the completion of GRIP 5 detailed design. Technical assessment of our proposal to infill the bridge identified some complex utilities interfaces (in addition to the need for the additional culvert). This work identified these works can be avoided by retaining the bridge but replacing the bridge deck. This is our revised proposal which is included in the DCO application as document 2.21 Cattle Creep Proposed General Arrangement (Sheets 1 and 2).
124-31		Public Paths 8.1 BPC has previously expressed concern about the various works proposed affecting the network of public bridleways/cycleways which it has created in and around the RPD Estate, including proposals to add to that network by creating and imposing further public rights of way over BPC's land. The proposals include alterations to the existing infrastructure at Royal Portbury Dock Road and the creation of new public paths near Marsh Lane and close to the M5 bridge embankment, involving the compulsory acquisition of BPC land. BPC does not accept that a need for these works has been demonstrated, either at all or such that the works proposed can properly constitute associated development. The existing dedicated public paths, the routes and specification of which were agreed with NSC, provide a complete public bridleway/cycleway route towards Pill. Even if the works to re-open the railway line proceed, once those works were complete, these paths will continue to be available as they are now, so no works to or to supplement them are necessary.	Concern about public bridleways and cycle paths	<u>Alterations to Royal Portbury Dock Road</u> - as discussed with BPC previously and set out in our letter of 15th October 2019, we propose the following approach. <i>Extract from 15th October 2019 letter – Royal Portbury Dock Road - Bridleways</i> <i>The existing crossing is an uncontrolled informal crossing and has substandard visibility splays from both sides of the road. The crossing has no marked area for users while waiting for a gap in the traffic to safely cross the road. You will recall that in the early stages of the Scheme we sought your views on upgrading the crossing to a traffic signal controlled crossing (a Pegasus crossing). You were not in favour of this. We accordingly removed the signal controlled crossing from the plans because of your concerns.</i> <i>We are proposing modest works to upgrade the existing crossing to address the substandard visibility by cutting back some of the vegetation on adjacent Port land. The Manual for Streets specifies a visibility distance of 135 metres, however the current visibility is considerably less than this. The position of the existing highway signage for the crossing will need to be relocated to reflect the revised visibility splays. The visibility splays are shown on the attached drawing which is dated 10th October 2017. We also need to install coloured paving to demark an area for users of the crossing to wait, the preferred minimum depth for a none motorised user crossing is 5m. This will also provide some physical presence at the roadside of a crossing (other than the</i>

				<i>signs) at this location to assist with highway legibility particularly for motorised vehicle users. These modest works which are shown in enclosure 4, are all that we are proposing on Royal Portbury Dock Road.</i> <i>The existing railway underbridge (under Royal Portbury Dock Road) is used by horse riders, although technically the path is a permissive path under licence from Network Rail to Sustrans for walking and cycling only. The path has been used over many years by horse riders. While our proposals entail retaining the permissive path post construction of the Scheme, the width of the path will be reduced to 2.5 metres and a secure fence will be installed between the path and the railway. There would be a considerable risk of a horse being startled by the noise and becoming out of control within a confined space of 2.5 metres wide by 30 metres in length, causing a major risk to pedestrians and cyclists including parents and children.</i> <i>The British Horse Society have also raised this major safety concern in response to our formal Stage 2 consultation. Consequently, we have concluded that horse users are most likely to change their route from under the railway bridge to cross on Royal Portbury Dock Road on the bridleways you laid out, thereby increasing the usage of the crossing. The increased usage of the crossing poses an increased risk to horse riders and other road users, and therefore the modest upgrade works proposed by the Scheme, need to be undertaken.</i> <i>Reducing accident risk should have a resultant benefit to the port as a collision on Royal Portbury Dock Road would cause major disruption to traffic accessing or leaving the Port, given that no alternative route exists for larger vehicles to access Royal Portbury Dock.</i> <i>As the land beneath the carriageway of Royal Portbury Dock Road is unregistered we are including the bridge approaches in lands to be acquired and the subsoil will be held for the Council's highway purposes. This acquisition will ensure no land-related consents are needed if works are required to the bridge and bridge structures, save for access on to the operational railway.</i> <i>No change to the highway status of Royal Portbury Dock Road is proposed.</i> <i>End</i>

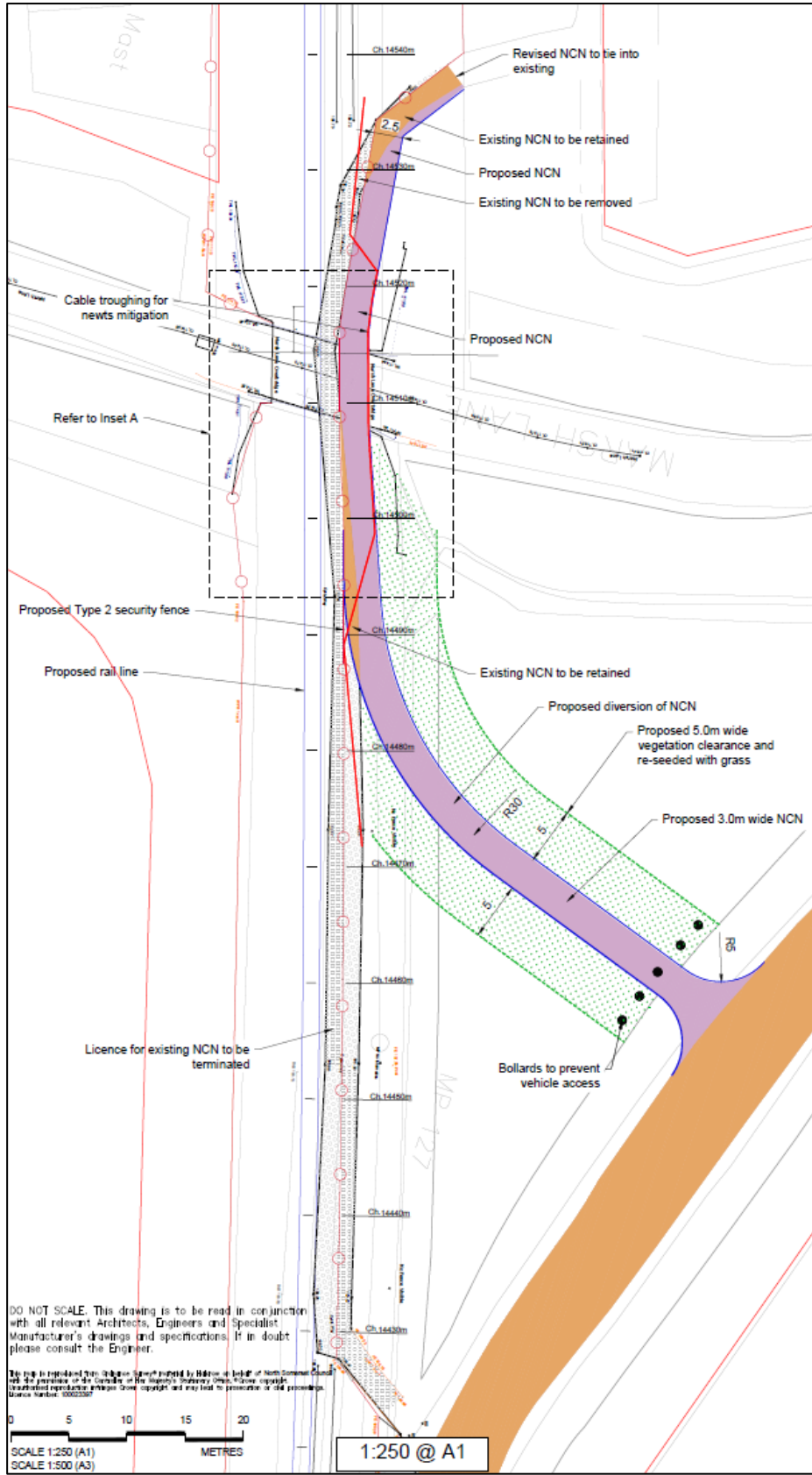
			The plan below which is extracted from page 3 of DCO application document 2.37 National Cycle Network (NCN) Temporary and Permanent Works Plan, shows our proposed modest alterations to the bridleway crossing at Royal Portbury Dock Road.  <u>Alterations near Marsh Lane</u> - as discussed with BPC previously and set out in our letter of 15th October 2019, we propose the following approach. <i>Extract from 15th October 2019 letter – Marsh Lane</i> <i>At Marsh Lane we have two proposals regarding the NCN26/bridleway, one of these is a temporary new section of path to divert the NCN26/bridleway and the other is a permanent new section of path to divert the NCN26/bridleway.</i> <i>The temporary diversion of approximately 10 metres of path north of the railway to the west of Marsh Lane is proposed to prevent modal conflict arising between pedestrians/cyclists/horse riders and Scheme construction traffic, principally HGVs.</i> <i>As you are aware the NCN26/bridleway from Marsh Lane through to Pill is to be closed for the duration of the Scheme construction works (for up to 2 years) as it forms one of the principal haul roads and accesses for our Scheme. As this section of the bridleway is proposed to be used as a HGV construction</i>

				<i>haul route, pedestrians/cyclists/horse will exit/enter the NCN26/bridleway west of Marsh Lane and will be diverted onto the highway at Marsh Lane to and from Easton-in-Gordano and Pill.</i> <i>Enclosure 5 shows our proposals at this location. Without this temporary diversion pedestrians/cyclists/horses would be routed into the immediate proximity of HGV vehicles turning from Marsh Lane onto the closed section of NCN26/bridleway to access proposed compounds under the M5 viaduct and at Lodway. This short temporary diversion is important for reducing road safety risks to vulnerable modes and is therefore justified on highway safety grounds.</i> <i>The permanent diversion of approximately 40 metres of path north of the railway to the east of Marsh Lane, on your land outside of the perimeter fence is necessary because a short section of the existing NCN26 as it passes under the Marsh Lane bridge going eastward, is located on top of the dis-used railway track formation and therefore must be diverted off the railway alignment. The land in between this section of the NCN26 and the bridleway is land owned by Bristol Port. The only practical way to divert the NCN26 off the railway is to encroach onto land owned by Bristol Port.</i> <i>Enclosure 6 shows our proposals at this location. The land in question is currently thickly overgrown, predominately with bramble vegetation. The acquisition of this land is justified on the basis that there is no other practical way of achieving the diversion of the NCN26 which is essential for the re-opening of the railway and we believe it can be taken without serious detriment to the Port's undertaking. If you would prefer to deal with this by a lease or deed of grant with the Council and Sustrans, with the Port retaining the freehold of the land needed, then we would happily consider this with you.</i> <i>End</i>

The plan below which is extracted from page 9 of DCO application document 2.37 National Cycle Network (NCN) Temporary and Permanent Works Plan, shows our proposed temporary diversion at Marsh Lane.



The plan below which is extracted from page 7 of DCO application document 2.37 National Cycle Network (NCN) Temporary and Permanent Works Plan, shows our proposed permanent diversion at Marsh Lane.



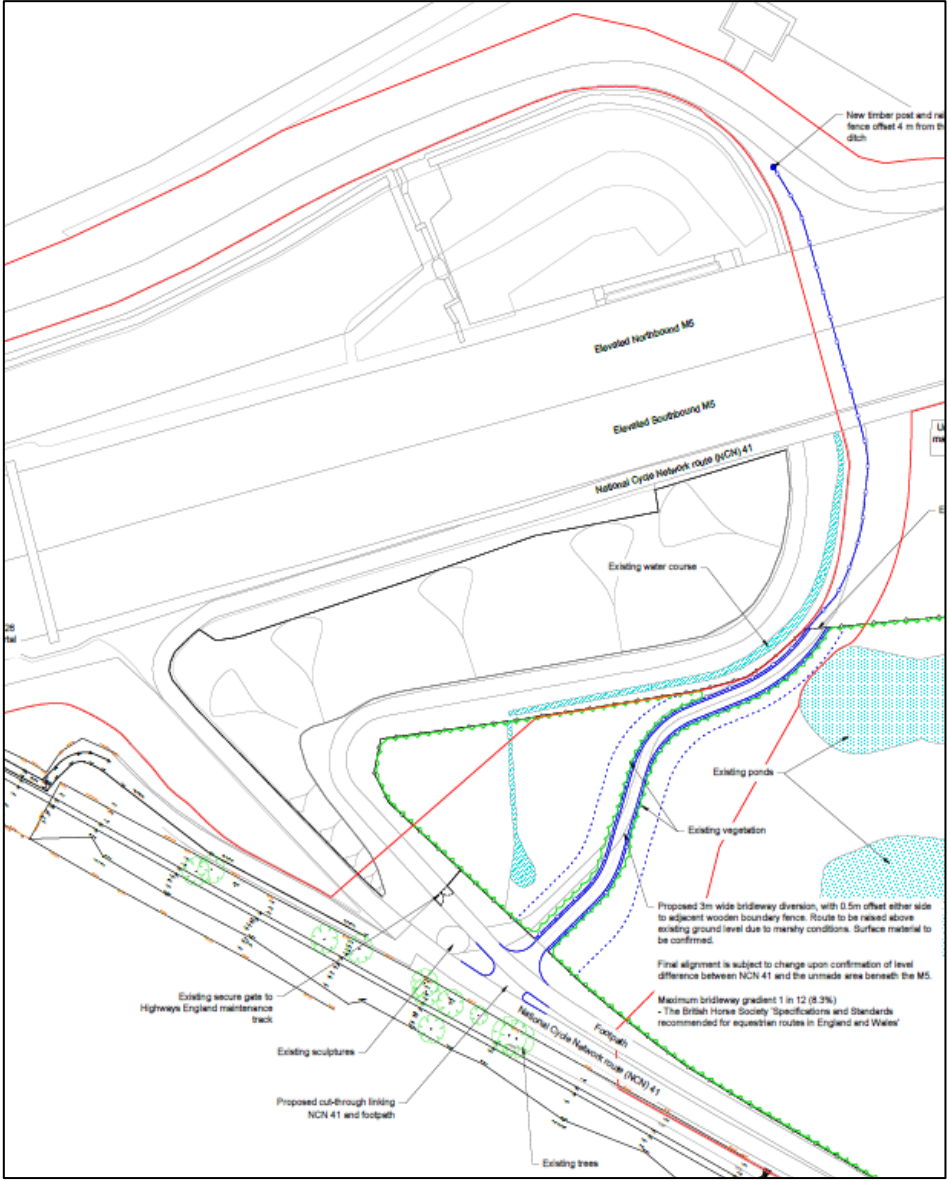
			The need for this permanent diversion is also evidenced by the following photograph of the location. Photograph taken 10th April 2020.  <u>Alterations close to the M5 embankment</u> - as discussed with BPC previously and set out in our letter of 15th October 2019, we propose the following approach. <i>Extract from 15th October 2019 letter – Bridleway Extension east of M5 Avonmouth Bridge</i> <i>This is bridleway extension is proposed for safety reasons and will also provide a useful amenity for local residents and users of the South West coast path. The existing railway underbridge (under the M5) is used by horse riders, although technically the path is a permissive path under licence from Network Rail to Sustrans for walking and cycling, the path has been used over many years by horse riders. The existing bridleway ends under the M5 Viaduct and there is no bridleway linking Marsh Lane to Pill, despite the obvious popularity of the route for horse riders. Enclosure 7 shows the current plans for the bridleway extension.</i> <i>While our proposals entail retaining the permissive path through the railway tunnel under the M5 embankment post construction of the Scheme, the width of the path will be reduced to 2.6 metres and a secure fence will be installed between the path and the railway. The underbridge is 60 metres in length and it would not be safe for pedestrians, cyclists or horse riders for horse riders to continue to use the path due to the noise and proximity of approaching passenger trains. There would be a considerable risk of a horse being startled by the noise and becoming out of control within a confined space of 2.6 metres wide by 60 metres in length, causing a major risk to pedestrians and cyclists including parents and children.</i> <i>The British Horse Society have also raised this major safety concern in response to our formal Stage 2 consultation. Consequently, we have concluded that it is appropriate to provide an alternative path away from the</i>

railway. The proposed alternative path goes across Bristol Port land which is part of the Pill foreshore marsh and connects to an existing bridleway west of the M5 Viaduct.

10. As well as a path, fences and planting are proposed. The planting is proposed to provide a new bat migration corridor. A wider area of acquisition has been shown as the Council needs to know it is able to carry out the proposed works, if the Order is made, and understands ground conditions may mean some flexibility in terms of working space, route and landscaping may be needed. The Council has been advised the nature of the works means that the fairest way forward for the Port is for the required land to be the subject of freehold acquisition. If the Port is prepared to dedicate the required land and licence the Council to carry out the works then this would be acceptable to (and welcomed by) the Council. There will be a landscaping maintenance requirement in the Order and a cost attributable to that maintenance.

End

The plan below which is extracted from page 3 of DCO application document 2.37a Bridleway Extension Plan Under Elevated M5, shows our proposed bridleway extension.



124-32		8.2 It is in any case inappropriate that BPC should be permanently and compulsorily deprived of land in order to provide additional public rights of way in substitution for routes which are currently only permissive and for which the existing (dedicated) public path network already provides an adequate alternative. 8.3 NSC proposals in relation to the various paths also go further than could ever be necessary or proportionate, in that NSC seeks to acquire the whole of the land over which the new works and/or paths may lie. All that would be necessary to secure public access would be the dedication as public highway of the route of any new work, as is the case with the existing dedicated network into which NSC seeks to connect the new paths.	Concern about the proposed acquisition of land	As set out in response to 2.3.4 above, the Applicant offered to explore alternatives to the acquisition of BPC land in our letter of 15th October 2019, if BPC is prepared to dedicate the land and issue a licence or easement to enable the project to carry out the works. The reasons why the bridleway extension is necessary along with the temporary and permanent alterations to the NCN26, is evidenced above in response to 8.1.
124-33		9. Ecology The Examining Authority will need further information on a number of issues, including: 9.1 BPC's environmental management plan for the Court House Farm development; and 9.2 the wider adverse environmental impacts on flora and fauna within BPC's established wildlife corridors and green areas on the southern boundary of the RPD Estate.	Comments regarding ecology	Noted We have tried to make contact with Anne Hayes at BPC about the latest position on the Court House Farm environmental management plan and wildlife corridors but have not at the date of writing received a response.

BY EMAIL Metrowest1@planninginspectorate.gov.uk

The Planning Inspectorate
National Infrastructure Planning
Temple Quay House
2 The Square
Bristol
BS1 6PN

Date 21 September 2020
Your ref TR040011
Our ref GOWL/FIR/0069/00051/GOWL
Direct Dial +44 (0)20 7406 1662
Direct Fax +44 (0)20 7395 3100
Email lgowman@wedlakebell.com

Dear Sirs

Application by North Somerset District Council for an Order Granting Development Consent for the Portishead Branch Line - MetroWest Phase 1 (the "Order")
Interested party reference PORT-S57657

1. We write on behalf of our client First Corporate Shipping Limited, trading as The Bristol Port Company ("BPC"), in respect of the Preliminary Meeting in relation to the above application to be held on 6 October 2020 and 19 October 2020. In particular we write in response to the Rule 6 letter of 7 September in order to make relevant submissions by Procedural Deadline A.
2. BPC is the statutory undertaker (harbour and competent harbour authority) for Bristol and the owner and operator of the commercial port of Bristol ("Bristol Port"). The Port is a strategically important national asset, as well as one with significant local and regional importance. In its Relevant Representations, BPC summarised its concerns as to how the development proposals made by North Somerset Council ("NSC"), as currently set out in the draft Order, will be seriously detrimental to BPC's ability to carry on its statutory undertaking at the Port. These concerns include questions as to the need for and extent of some of the works proposed, as to the requirement for its land to be taken in connection with them, whether the compulsory acquisition proposed can be achieved without serious detriment to its undertaking and a number of important issues related to the adverse impact of the proposals – during construction and operation – on the operation of Bristol Port and BPC's carrying on of its statutory undertaking.

Participation in Preliminary Meeting, Parts 1 and 2

3. To save the Examining Authority's time, BPC does not intend to speak at Part 1 of the Preliminary Meeting but will instead rely on the representations made in this letter and we have completed our response to your Preliminary Meeting Involvement Form accordingly. However, although your form did not then appear to accommodate this, both we and BPC will wish to observe Part 1 of the Preliminary Meeting by way of a live link and BPC reserves its position in relation to making further written submissions on matters arising from Part 1 by Procedural Deadline B and/or to being heard orally in Part 2. For the purpose of providing the live link the email addresses of those requiring a link are as follows:

john.chaplin@bristolport.co.uk

ctite@wedlakebell.com

lgowman@wedlakebell.com.

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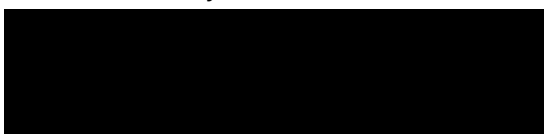
Initial Assessment of the Preliminary Issues (agenda item 4)

4. BPC is pleased to note that, in its Initial Assessment of the Preliminary Issues, the Examining Authority has identified as relevant matters many of the key concerns raised by BPC in its Relevant Representations, these including, alongside matters related to compulsory acquisition, the continued availability of freight paths to and from Royal Portbury Dock, the severance of land currently used by BPC in its statutory undertaking and the proposed loss of land safeguarded for port development. However, BPC is concerned to ensure that the wider issues relating to the effects on the operation of Bristol Port and BPC's statutory undertaking specifically of the construction of the proposals are also given proper consideration in the Examination and should therefore form part of the issues to be assessed by the Examining Authority, separate from any more general construction effects of the proposals.

Issue Specific Hearings and Compulsory Purchase Hearing (agenda items 6 and 7)

5. BPC has been devoting considerable time to a thorough review and analysis of the development proposals and the terms of the draft Order in order that it may make a full assessment of their effects on its operations and undertaking and establish in detail what protective provisions and amendments to the Order and related proposals will be necessary if detriment to those operations and undertaking are to be avoided. BPC would hope that, as a result of further discussions with NSC, it may be possible to resolve many of the concerns identified by agreement, through agreed changes to the proposals or by the inclusion in the Order of suitable protective provisions.
6. However, until agreement has been reached on all matters it is BPC's current intention to participate in and be represented at the Issue Specific Hearing on the draft Development Consent Order (ISH1) and at a compulsory acquisition hearing relating to both its land and the land safeguarded for port development referred to above (being the land adjacent to BPC's boundary to the south of the railway and east of Marsh Lane identified in connection with Work Nos. 16B and 16D).
7. Similarly BPC also requests an issue-specific hearing relating to the effect of the proposals on Bristol Port, to include:
 - 7.1 their impact on BPC's land as a statutory undertaker, including the severance of part of its land used for its statutory undertaking;
 - 7.2 their impact on operations at Bristol Port, including the availability of train paths; and
 - 7.3 their impact on the future development of Bristol Port, including the loss of land safeguarded for port development.
8. We would estimate that half a day might be set aside to deal with the issues identified in 7 above from within the current reserved dates for further Issue Specific Hearings set out in the timetable. However, we submit that the compulsory acquisition hearing relating to BPC's land and to the land safeguarded for port development should not occur before the issue-specific hearing dealing with the issues in 7 above but BPC would be content for the two hearings to be combined if that were the preference of the Examining Authority.

Yours faithfully



Wedlake Bell LLP

14 October 2020

Bart Bartkowiak
Case Manager, National Infrastructure Planning
The Planning Inspectorate
Temple Quay House
Temple Quay
Bristol
BS1 6PN

By email only

Email: bart.bartkowiak@planninginspectorate.gov.uk

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Direct: +44 (0)117 989 6877

Our ref:
KJG1/RG1/381278.1
Your ref:

Dear Mr Bartkowiak

**North Somerset Council
Development Consent Order application for Portishead Branch Line - MetroWest Phase 1
Application Ref: TR040011**

Response to Bristol Port Company's representation of 21 September 2020

We provide our responses to the letter from Wedlake Bell on behalf of Bristol Port Company dated 21 September 2020.

At the first part of the preliminary meeting on 6 October we indicated our agreement to an Issue Specific Hearing regarding the land in the vicinity of Bristol Port Company and the impacts of the project on Bristol Port Company's operations.

We deal with the individual numbered paragraphs in the letter from Wedlake Bell below:

1. Noted.
2. The Applicant agrees that the Bristol Port Company is a statutory undertaker, harbour and competent harbour authority for the Bristol Port.

The Applicant does not however accept that there is any likely serious detriment as a result of the Applicant's proposals but the Applicant will work closely with Bristol Port Company to seek to mitigate any impacts that may arise. Whilst there may be unavoidable impacts during construction it is not anticipated these would have any significant adverse impact on Bristol Port Company's operations. It is further believed that the operation of the Portishead Branch Line once the DCO scheme has constructed will have no material impact on the Port's operations or statutory undertaking.

Participation of preliminary meeting parts 1 and 2

3. Noted

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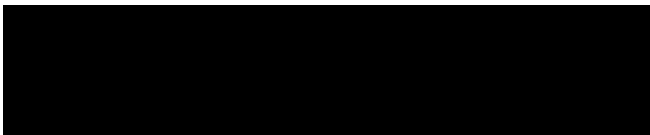
Initial assessment of the preliminary issues (Agenda item 4)

4. The Applicant does not believe that there will be serious detriment, nor any material impact on the Port's operations resulting from the DCO Scheme. The Applicant is continuing to try to liaise with the Port regarding a meeting to review the Port's concerns.

Issues Specific Hearings and compulsory acquisition hearing (Agenda items 6 and 7)

5. The Applicant has indicated that it is willing for the Bristol Port Company's concerns to be fully considered in an Issues Specific Hearing if necessary. The Applicant is continuing to liaise with the Port regarding a meeting to review the Port's concerns and hopes that the Protective Provisions within the Order and the further discussions between the parties will allay the Port's concerns.
6. As indicated above an Issues Specific Hearing regarding the Port's concerns is agreed to by the Applicant.
7. In relation to the concerns of Bristol Port, the Applicant would comment:
 - 7.1 The Applicant believes that the agreement between Network Rail Infrastructure Limited and the Bristol Port Company relating to Court House Farm makes provision for a notice period then termination of the existing Deed of Easement granting rights to Bristol Port Company. The Applicant will rely on Network Rail's ability to terminate that easement and has not sought compulsory powers relating to that easement.
 - 7.2 The Applicant has worked with Network Rail to ensure that there is line capacity to continue the existing maximum permitted train movements on the Port's railway from Royal Portbury Dock to Portbury Junction (20 trains each way per day) for which BPC has commercial rights and there is capacity for these freight train movements through to Parson Street Junction, where the branch line connects with the main line.
 - 7.3 The Applicant is discussing with Bristol Port the reason for its proposed acquisition of land that is safeguarded in the local plan for Port development. The reasons for the compulsory acquisition are inherently linked to the Port and the impacts of flood waters on Port land.
8. We would agree that a half day for the Issues Specific Hearing would be appropriate and would suggest that a date in the New Year would be the most suitable for this, so as to allow discussions between the parties to proceed to the extent that it may be possible that the Issues Specific Hearing can be shortened or may even no longer be required.

Yours faithfully

A large black rectangular redaction box covering the signature area.

Womble Bond Dickinson (UK) LLP

Appendix F

Response to Mrs Freestone

From: [REDACTED]
To: [Metrowest1](#)
Subject: TR040011 WRITTEN SUBMISSION
Date: 20 September 2020 17:58:02
Attachments: [Written submission draft 7.pdf](#)

Dear Mr Bartkowiak,

I attach a written submission in advance of the Preliminary Meeting: Part 1, to be held on 6th October.

I hope that I have followed proper procedure in sending it to this email address.

I assume that sending this written submission does not preclude me from attending the virtual event and that I will be able to register to speak at the Compulsory Acquisitions Hearing on December 4th should that prove necessary?

Thank you.

Yours sincerely,

Susan Freestone

Submission on behalf of:

Susan Elizabeth Freestone, IP reference number [REDACTED]

Stephen James Bullock, IP reference Number [REDACTED]

We are interested parties, siblings who jointly own land to the west and east of the disused section of the railway at Easton-in-Gordano, designated plots [REDACTED] and [REDACTED]. We have received notice of a Compulsory Purchase Order on plot [REDACTED], for which we had previously negotiated a provisional sale to a different party, and a temporary order on plots [REDACTED] and [REDACTED]. We do not feel that Ardent has properly consulted on how the scheme will affect our property. They have changed their requirements a number of times and we feel that the proposed use and timescale represents an unreasonable infringement of our rights over the use of our land.

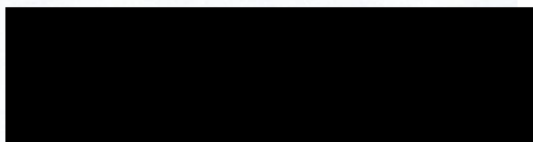
This submission relates to the nature and timing of communications from CP, Principal Consultant of Ardent Management Ltd, with regard to the extent and proposed use of our land and the accuracy of its designation. The lack of care in identifying the sites to be used has been misleading and has compromised our ability to represent our interests appropriately. There has been distressing inconsistency in the stated requirements and lack of evidence provided to support the choice of location for a new receptor.

We grew up on [REDACTED], the land extending from the [REDACTED] [REDACTED] in Easton-in-Gordano all the way to the beginning of the [REDACTED] and opening on to the Severn Estuary, approximately about 100 acres. In 1970 the Port of Bristol Authority compulsorily acquired approximately 80% of our land for the construction of the Royal Portbury Dock. In the same decade the M5 was built through most of what remained of our farm and later widened, encroaching yet further onto family land.

Now we are faced with another assault on our property rights for purposes which are only now becoming clear. Given the volume and complexity of the documentation associated with this project, and especially in light of the fact that we both live a very long way from Somerset, it would have been helpful, and in our view, reasonable, to

direct us to specific documentation detailing plans that might directly and profoundly affect our rights over our land. We were given no accurate guidance nor proper understanding of the impact the development would have.

Thank you for your consideration of these point and those that follow.



Responses to Principal issues	
2 Biodiversity, Ecology and the Natural Environment	Clearly, the effects on biodiversity imposed by construction compounds and traffic must be mitigated. However, surely the need to separate reptiles and newts can be achieved by the use of newt fencing and reptile fencing as referred to in the Reptile Mitigation Strategy, section 4 (reptile fencing) and Sheet 7 (newt fencing) and elsewhere in the MASTERPLAN 235. The idea of trapping wild creatures to protect them from human activity seems wholly counter-intuitive, especially since there was rail traffic on a regular daily basis from the 1860s until the 1960s, yet these species and their progeny survived that period without any interference or assistance.
4 Construction Impacts	The location of land subject to temporary compulsory acquisition appears to us inappropriate. In attempting to negotiate a change to the proposals we have received scant regard and no formal adjustment to a draft Heads of Terms document received on 3rd February. NSDC's own report, (<i>Appendix 9.5 Reptile Survey Report</i>) states that our land is not suitable for reptiles and it is not endorsed for this use.

5 Compulsory Acquisition	We offered an alternative use of our land, suggesting that Plot [REDACTED] be used to site the newt receptor, since it already contains natural ditches and a pond - a far more natural environment for newts, in addition to the use proposed. At over six acres, there should be space for both; NSDC would save money and we would be able to continue to use plots [REDACTED] and [REDACTED] of our land. Whilst we accept that there is a compelling case in the public interest for the compulsory acquisition of the land, rights and powers that are sought by the draft DCO, we question whether the extent of the land subject to the temporary order is reasonable or appropriate. We have also questioned the length of time for which the project will render our land of no use to us. We feel that the proposed use and timescale represents an unreasonable infringement of our rights over the use of our land. With the proposed timescale, at least fifteen years, probably more, will have passed from the initial approach to the conclusion of the project.
14 Socio-Economic Effects	We are getting on in years and we are very concerned about the impact this scheme will have on our ability to dispose of our land, with subsequent material detrimental effect on our financial well-being and that of our families. We have asked for an undertaking that, should the project fail to attract sufficient funding to proceed or be further delayed, all restrictions be withdrawn so we can proceed with use of our land unhindered. We have received no response to this request. It is worthy of note that the various Impact Reports published in association with this project take no account of the human impact on those whose fundamental right to own property is being assaulted

	and the socio-economic effect on our family is very significant.

Material Points

1. Inaccurate designation of our land

Documentation in the public domain, dating back as far as 2017, refers to our land as [REDACTED]. This is a farm adjacent to our own and we had no reason to suspect that the works designated to [REDACTED] were intended for our own land. This is why I repeatedly asked what was the intended use for our fields. We did not have a proper understanding that our land was to be thus affected. As [REDACTED] is adjacent to our own, it is understandable that we would not have suspected that such an error had occurred; the fact that it has, has had a hugely detrimental impact on our ability to respond appropriately in a timely manner.

CP was informed of this error on 4th May 2020, see below, but it has not been rectified. Since we were unaware of the error before 12th December 2019, we were unable to respond appropriately to the section 51 request.

I provide a samples of evidence that this was so, below.

Applicant: North Somerset District Council **6.31, Schedule of Mitigation**

In the 6.31 Schedule of Mitigation published in November 2019, sites identified do not include our property. I refer you to the Environmental Masterplan, published at the same time, which states:

5.2.3

The sites identified for a watching brief are:

- Construction compounds at greenfield sites at;
 - – Portishead station;
 - – Sheepway;
 - – The Portbury Hundred construction compound;
 - – **Lodway Farm** construction compound;
 - – Pill Tunnel eastern portal construction compound; and

- – Clanage Road.
- Two flood compensation sites where the ground will be lowered at (a) the west bank of the Easton-in-Gordano stream, Portbury and (b) at the permanent Clanage Road maintenance compound.
- Three new ponds for great crested newts (“GCN”) located in the Portishead Nature Reserve, at a site between the highway of Sheepway and the disused railway, and a site close to the location of Cattle Creep Bridge, between the disused railway and the M5.

5.2.4

The contractor will erect a fence 5 m around HER 47401, to protect the linear earthworks feature at the proposed **Lodway Farm** construction compound and maintain it for the duration of the works to avoid unintentional damage to the feature during construction activities.

6.12, Environmental Statement, Volume 2, Chapter 9 Ecology and Biodiversity document,

Again, reference is made to Lodway Farm, Pill, and the Lodway Construction Compound. Our land is part of [REDACTED], Easton-in-Gordano.

2.3 - Works Plan

This also refers to Lodway Farm throughout.

2. Scientific Evidence

Point 5 of the Planning Inspectorate Customer Charter states that you will:

Ensure cases are handled by people with the right level of experience and expertise.

We would point out that amphibians and reptiles have always lived on or around the railway embankments when the train services were fully operational and we know this to be the case from our own experience as children.

Whilst we have asked Argent for scientific evidence to justify the planned enclosure for newts on our land, none has been provided to demonstrate any additional benefit to these wild creatures. Therefore, we remain unconvinced that the appropriate level of experience and expertise has been applied to the situation.

3. Communications

Initially, communications with Ardent were dealt with by our brother Ian David Bullock, who sadly died on 8th October 2018. Thereafter communication has been slow, intermittent and failed to address many of the issues raised. Responses have been inconsistent and obscure. Unanswered questions have made it very difficult to submit meaningfully to the consultation. Because of the complexity of the issue we have felt obliged to engage the services of an agent, RS of Greenslade Taylor Hunt, who, hitherto, has made submissions on our behalf.

I asked repeatedly what use was intended for our land and never received a direct reply. We only discovered the proposal to use it as a receptor for newts when the revised plan was published in April 2020. Such use was not identified in the version of the plan published in November 2019. This means that we were not in a position to raise any objections to this proposal earlier in the consultation process.

We attach as an appendix, below, a letter to CP dated 19th September 2019, raising questions about the long-term impact on the land; similarly, these were ignored until after the publication of the plan.

On 25th September 2019, CP wrote to our agent, RS as follows:

Next steps

Based on the revised requirement for the eastern land on permanent basis, we will revise our draft Heads of Terms, with client approval, and circulate as soon as possible. These discussions and negotiations will progress as part of the DCO process and preceding the point of (1) response to consultation on

1st October and (2) the DCO submission, estimated in the next 2 months.

In fact, the Heads of Terms were not received until 3rd February 2020.
See below *

RS, on behalf of Susan Freestone, replied on 26th September 2019:

My client is dismayed at what you are now proposing on her family's land. She feels she has been kept in the dark about what is happening, and at every twist and turn along this process she has had different proposals put to her regarding this land. Now at the 11th hour in September 2019, she has received a response that MetroWest wish to acquire all of her family's land to the west and east of the M5.

xxxxxxx

I would be grateful if you would confirm your intentions for both parcels of land so we can consider this scheme further. She wishes to express her displeasure at the way you keep changing your mind, the way she has been kept in the dark, and the way this scheme has been handled and the lack of information available.

As at this date, you still cannot tell her exactly what area you want or what you are proposing to do with the land. We would like to put forward our clients' objections and comments so you are aware of the problems this scheme proposes and the impact on our client.

On 25th January 2020, Susan Freestone informed CP that she was out of the country and asked that all communication be sent to her electronically. She agreed, replying on 27th January:

Thank you for your email. Yes, not a problem, I will send over the S56 documents to you electronically.

This did not arrive.

*Heads of terms were received on 3rd February 2020, sent only to our agent in spite of previous direct correspondence. We replied with 12 points of objection or inquiry. CP replied eventually on 16th April.

On, 4th May 2020, further to discussion between us, RS wrote again to CP:

*Thank you for your email below of 16th April last.
My clients would like me to pass on their dissatisfaction at the poor communication they've received from North Somerset Council on this matter. They are also confused at the lack of information that has been provided to them about what is being proposed on their land. They have tried to read the document submitted as part of the DCO but are confused at how their land has been described especially since it appears to be referred to as [REDACTED] "which is a property [REDACTED] to their own.*

xxxx

We would also ask the following questions – “Why cannot all the wildlife mitigation works be put on the land you are proposing to purchase from them? Surely this land is large enough to accommodate the amphibians and reptiles rather than affect their land to the east of the motorway? The land to the West of the motorway that you wish to purchase has natural ditches and a pond, making it far more suitable than the land to the East, reinforcing the argument that it is a more suitable site for amphibians. xxxxx Please will you provide us with more precise and accurate information on what is the proposed use of their land?

In reading the following paragraph, please note that the original scheme mooted, proposed a temporary order lasting for a duration of five years and that over three years have already passed.

RS continues:

We would also like to query the length of time you are proposing to take the clients' land? Why have you chosen 8 years? Could this be less? The clients feel you are interfering with their rights, and they would like to agree a shorter period or PREFERABLY none at all for the use of their land should you agree their sensible proposal above and on what evidence do you base your claim that you need the land for 8 years? The clients have read the Council's own ecological report (Appendix 9.5 Reptile Survey Report) and it says the land is not suitable for reptiles and their land is not mentioned for this use. Is there another report that is not in the public domain that states their land is suitable? What evidence is there that the client's land is an appropriate location for a reptile receptor site?

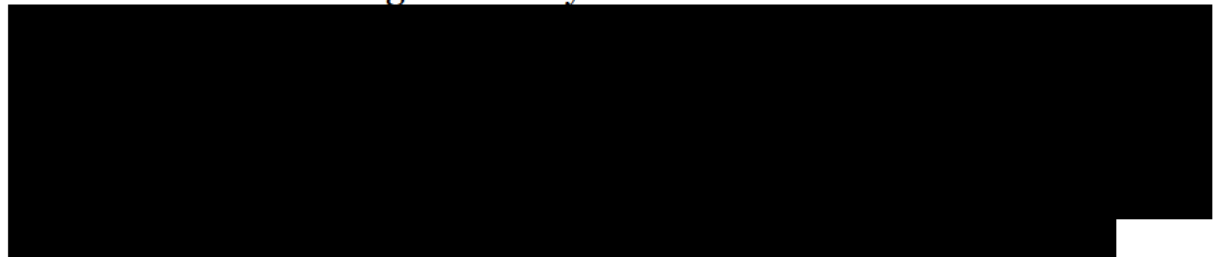
Appendix – Letter from Susan Freestone to CP dated 19/09/19 2019.



19ix19

Dear [REDACTED]

Thank you for your letter of 19th September inviting me to respond to the consultation concerning our family land at Easton-in-Gordano.



With regard to the land to the east of the motorway, I am unclear as to the potential impact of the temporary compulsory order. Once the order is lifted, what will be the condition and potential uses of the land? Will areas be permanently unusable; whose responsibility will it be to maintain the land and its boundaries if it is not fit for agricultural use? What level of compensation will be applied to future loss of income and development possibilities?

Since the death of my brother, Ian David Bullock, my other brother, Stephen and I have been discussing how to make best use of the land and we have been actively seeking an appropriate short-term tenant. Long term, we have considered using the land for solar panels or, subject to planning permission, even creating a mini country park for the use of families travelling on the M5. Several organisations have approached me with a view to acquiring the land for development and its potential value is considerable, especially in light of the sale of adjacent land over recent months for the same purpose and the shortage of building land in North Somerset.

All of this is now brought to a halt by the MetroWest Scheme. My brother lives in Spain and I live in Cambridgeshire, therefore active management of the property is not feasible and we have little option but to sell the land in the medium to long term. We need to know what impact the MetroWest Scheme will have on the value and potential of the land and to be compensated accordingly.

14 October 2020

Bart Bartkowiak
Case Manager, National Infrastructure Planning
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Our ref:
KJG1/RG1/381278.1
Your ref:

Dear Mr Bartkowiak

North Somerset Council
Development Consent Order application for Portishead Branch Line - MetroWest Phase 1
Application Ref: TR040011

Response to Mrs Freestone's submission 20 September 2020

The Applicant has seen Mrs Freestone's submission prepared on behalf of herself and her siblings.

The Applicant has considered the representation in full.

The Applicant accepts that the requirement for the land on either side of the M5 changed throughout the pre-application stage, as environmental information has become available and the need for mitigation better understood.

The Applicant does not accept there has been a "lack of care" regarding the required sites. The Applicant continues to work closely with its environmental consultants to consider the compelling case for the relevant land.

The Applicant notes the concerns expressed regarding the availability of documentation and purported lack of clarity regarding the information provided. The applicant will contact with the interested parties' surveyor to ascertain what the information is required to be provided to the interested parties.

With regard to the interests parties' responses to principal issues, the Applicant has the following comments:

Topic	Interested Party's comments	Applicant's response
2. Biodiversity, ecology and the natural environment	Clearly, the effects of biodiversity in post by construction compounds and traffic must be mitigated. However, surely the need to separate reptiles and newts can be achieved by the use of newt fencing and reptile fencing as referred to in the Reptile Mitigation Strategy, Section 4	The compelling case for the interested parties' land remains. For the land on the western side of the M5 motorway, between the Portishead Branch Line and the M5, the reedbed, fen and scrub habitat is suitable for the creation of Great Crested Newt habitat and is within 1km of the

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Topic	Interested Party's comments	Applicant's response
	(Reptile Fencing) and sheet 7 (Newt Fencing) and elsewhere in the Masterplan 235. The idea of trapping wild creatures to protect them from human activity seems wholly counter-intuitive, especially since there was rail traffic on a regular daily basis from 1860s to the 1960s, yet these species and their progeny survived that period without any interference or assistance.	nearest Great Crested Newt pond, which is located at Portbury Dock Road bridge. Advice from Natural England is that Great Crested Newt receptor sites should be within 1km of existing Great Crested Newt ponds to avoid the need for disease screening for chytrid fungus, which can affect amphibian populations. The existing Great Crested Newt population is located to the west of the M5 between Portishead and the M5. It is therefore considered that any new Great Crested Newt habitat should be located to the west of the M5 within suitable habitat such as the Order lands identified. The land to the west of the M5 is not suitable for use as a receptor site for slow worms (reptiles) due to the wetland habitats (reedbed and fen) not being suitable and the land is within Flood Zone 3, which has a high probability of flooding. Very wet habitats are usually avoided by slow worms. The reptile receptor site east of the M5 was chosen because it is semi-improved grassland habitat with bordering hedgerows and scrub, and is considered to be a suitable site for a reptile receptor with some enhancement (such as the installation of reptile hibernacula and removal of existing grazing). The site is proposed as a receptor for reptiles that will be trapped along the railway corridor between the M5 and Pill tunnel's western portal. The site must be as close as possible to the site at which reptiles were trapped. The area of land is connected to Pill which will ensure that population is not isolated and will allow reptiles to return to the railway corridor in the long term. The construction works from the M5 to Pill tunnel's western portal include removal of existing railway ballast and to replace it with new ballast, strengthening earthworks and a Station and car park at Pill. Reptiles within the areas to be affected by construction works will be trapped and relocated to the reptile receptor site to avoid intentional killing or injury, which is an offence under the Wildlife and Countryside Act 1981 (as amended). It is these activities that are seen as being of significant risk to reptiles and requires the applicant to obtain suitable land for reptile relocation. The Interested Parties' land is the closest and most suitable site for reptile relocation.
4. Construction impacts	The location of land subject to temporary compulsory acquisition appears to be to us inappropriate in	The land selected for the temporary compound is the land to the north-east of the interested parties' land on the eastern side of

Topic	Interested Party's comments	Applicant's response
	attempting to negotiate a change to the proposals we have received to scant regard a no formal adjustment to a draft Heads of Terms document received on 3 February. NSDC's own report (<i>Appendix 9.5 Reptile Survey Report</i>) states that our land is not suitable for reptiles and is not endorsed for this use.	the M5 motorway. That land has been selected as a compound because it is next to the disused railway and the operational railway, allowing rail borne construction traffic to be considered as part of the construction strategy. As that land is to be used as a construction compound site it is incompatible with the use of that land as a reptile receptor. The closest suitable land for a reptile receptor is the interested parties' land on the east side of the M5 motorway and with suitable improvements such as provision of hibernacula it can be considered as a suitable reptile relocation site. Appendix 9.5 Reptile Survey Report (DCO Document Reference 6.25) states that low numbers of slow worms were recorded during the survey of the land subject to temporary compulsory acquisition and paragraph 5.1.7 states that the land offers good, but limited, basking habitat in thick, tussock grassland and scrub edges around the perimeter of the fields and an abundance of various hibernacula features (log piles, rock piles, tree roots etc.) The land is considered to be a suitable site for a reptile receptor with some enhancement (such as the installation of reptile hibernacula and removal of existing grazing).
5. Compulsory acquisition	We offered an alternative use of our land, suggesting that plots [●] be used to site the newt receptor since it already contains natural ditches and a pond, a far more natural environment for newts, in addition to the use proposed. At over 6 acres there should be space for both; NSDC would save money and we would be able to continue to use plots [●] and [●] of our land. Whilst we accept there is a compelling case in the public interest for the compulsory acquisition of land, rights and powers that are sought in the draft DCO, we question whether the extent of the land subject to the temporary Order is reasonable or appropriate. We have also questioned the length of time for which the project will render our land of no use to us. We feel that the proposed use and timescale represents an unreasonable infringement of our rights and use on	The Applicant will seek further clarification from the interested parties in relation to this point, hopefully in good time before the compulsory acquisition hearing on 4 December. The Applicant is unaware of any of the interested parties' land being sought for temporary purposes. All of the land of the Interested Parties is proposed for freehold acquisition. The Applicant is however willing to discuss an arrangement that can be secured by agreement such as a lease for a term of years, for the land on the east side of the M5 motorway.

Topic	Interested Party's comments	Applicant's response
	our land. With the proposed timescale, at least 15 years, probably more, a pass from an original approach to conclusion of the project.	
14. Socio-economic effects	We are getting on in years and we are very concerned about the impact this scheme will have on our ability to dispose of our land, with subsequent material detriment on our financial wellbeing and that of our families. We have asked for an undertaking that, should the project fail to attract sufficient funding or proceed to be further delayed, all restrictions will be withdrawn so that we can proceed with the use of our land unhindered. We have received no response to this request. It is worthy of note that the various impact reports published within association with this project take no account of the human impact on those whose fundamental right to own property is being assaulted and the socio-economic effect on our family is very significant.	If the interested parties' interest in land is acquired by compulsion then the Compensation Code will apply. This accords with the principles of international law and Article 1 of Protocol 1 of the European Convention on Human Rights. The interested parties will be entitled to compensation for their interests in land being acquired, together with any reasonable disturbance claims and, in those circumstances where the statutory Compensation Code requires it, loss payments calculated in accordance with the provisions of the Land Compensation Act 1973 (as amended by the Planning and Compensation Act 2004). If the project does not proceed then the time limit for the acquisition of land will apply – no land can be acquired after five years from the date of making of the Order (see Article 26 of the draft Development Consent Order.

The Applicant's Responses to the remaining parts' of the Interest Parties representation are set out below, using the numbering and headings employed by the Interested Parties:

Material points

1. Inaccurate designation of our land

- 1.1 The Applicant does not believe that there has been an inaccurate designation or description of the relevant Order land. Intended use of the fields to the east of the M5 motorways for reptile relocation. The neighbouring land to the north, comprising Lodway Farm, is required for a construction compound.
- 1.2 Reference is made to the Environmental Masterplan at 5.3.23 and Lodway Farm is highlighted as a construction compound. This is correct, as Lodway Farm, north of the Interested Parties' land, will be used for that purpose.
- 1.3 The same applies in relation to the reference to Lodway Farm at 5.2.4.
- 1.4 It is understood that the interested parties' land is part of the former Manor Farm, Easton in Gordano, and not Lodway Farm.

2. Scientific evidence

The Applicant is advised by Jacobs (formerly CH2M Ltd) whose appropriately qualified environmental consultants have advised on the strategy for amphibians and reptiles throughout. The Applicant will continue to liaise with the interested parties regarding the information that they believe has not been made available to them.

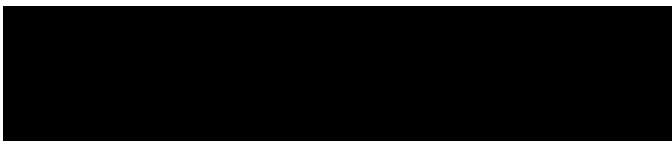
3. Communications

The Applicant's agents are engaging directly with Greenslade Taylor Hunt. The Applicant does not believe that its communications have been intermittent nor failing to address the issues raised. Heads of Terms in relation to negotiations for acquisition by agreement have been attempted and will continue. The Applicant will approach the interested parties direct to obtain a clearer picture of exactly what information remains unclear or unavailable to the interested parties.

4. Concluding remarks

The Applicant has taken on-board the comments of the interested parties and will seek to liaise with them through their appointed agents.

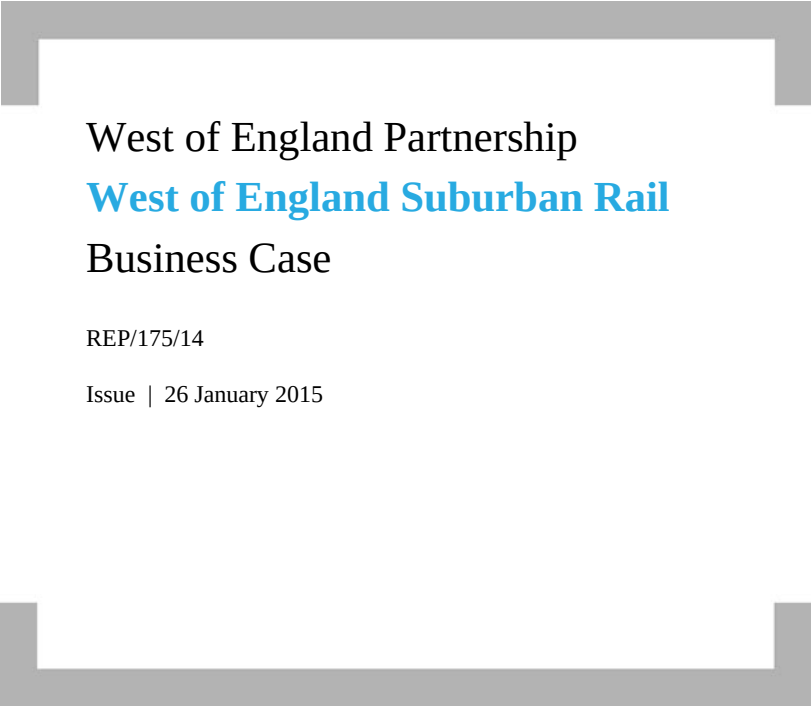
Yours faithfully

A large black rectangular redaction box covering the signature area.

Womble Bond Dickinson (UK) LLP

Appendix G

WECA Report on "Extending Electrification Study" 2015



West of England Partnership **West of England Suburban Rail** Business Case

REP/175/14

Issue | 26 January 2015

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 234415-00

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ARUP

Executive Summary

Background

Arup was appointed by Bristol City Council on behalf of the West of England Partnership to appraise the case for electrification of the MetroWest rail network.

The MetroWest project is designed to create a step change in local rail services and is planned for delivery in two phases. Phase 1 will provide half hourly train services for the Severn Beach line, between Bristol Temple Meads and Bath Spa, and on the reopened Portishead line. Phase 2 will provide half-hourly train services to Yate and Weston-super-Mare and provide hourly services on a reopened Henbury line.

The current proposals have MetroWest services operated by Diesel Multiple Units (DMU). With proposed electrification of the Great Western mainline these units will be operating “under wires” for a significant proportion of their route.

Feasibility and Cost

A review of the current and proposed local rail network has been undertaken to assess the technical viability of electrification and to inform cost estimates. The review shows that there is no technical barrier to electrification but has identified a significant number of structures requiring modification including the Bath Road Bridge. Significant investment is also required in depot facilities and power distribution on the Weston-super-Mare line. In total, it is estimated that a capital investment of £175m would be required to electrify phases 1 and 2. This estimate takes account of works which would already be undertaken as part of Great Western electrification or reopening of the Portishead Line.

The estimated capital cost has been generated through application of available benchmark unit cost data for electrification schemes being progressed in other parts of the UK as well as an assessment of potential structural works required to provide sufficient clearances for overhead wires and initial costing of a new depot and electrical equipment upgrades.

Business Case

The economic case for electrification is justified on the basis of lower operating costs associated with electric rolling stock, and the benefits to passengers of faster journey times and improved quality. Electrification would also be expected to deliver an increase in revenue both because of improved journey times and a step change in passenger perceptions of the network. This is often referred to as the “sparks” effect. Electrification also delivers environmental benefits by reducing greenhouse gas emissions from rail services.

All things being equal, the case for electrification rests on two main factors: the size of the capital investment per kilometre of track electrified, and the intensity of the rail operation (the frequency of service and the level of passenger demand).

If the Metrowest network is considered in isolation, there is unlikely to be a strong economic case for electrification in the short term (Control Period 6, 2019-2024). The capital cost of electrification of this network is high relative to other schemes because of the higher concentration of structures with insufficient clearance and their associated constraints. Similarly, the frequency of service and the size of the

Metrowest rolling stock fleet is such that insufficient operating cost savings would be generated to justify the cost of electrification.

Phase 1 of Metrowest has a stronger business case than Phase 2. This is because part of the Phase 1 network will already be electrified as part of the Great Western mainline electrification, whilst in the base case Phase 2 bears the cost of the electrification of the main line between Bristol Temple Meads and Western-super-Mare. The benefit-cost ratio for the electrification of Phase 1 is 0.61:1 in the 'base case'. For Phase 1 and 2 combined, the benefit cost ratio falls to 0.48:1.

Whilst the standalone case for Metrowest electrification is relatively modest, if a more comprehensive approach to electrification in the South West is considered the business case becomes more compelling. Electrifying a wider network of lines offers significant economies of scale by sharing the costs across a larger number of services (therefore minimising diesel mileage 'under the wires') and offering efficiencies in power supply, depot provision and potentially rolling stock costs.

As part of its refreshed electrification strategy, Network Rail will be considering further electrification of the Western route, including the main line between Bromsgrove and Bristol Temple Meads and the Bristol to Exeter line. If it is assumed that the cost of electrifying these lines is met by a main line scheme, the benefit cost ratio for Phases 1 and 2 rises to 1.06:1 in the base case.

Timing is also key to the business case for electrification. In the short term, Metrowest could be delivered using relatively inexpensive existing diesel rolling stock. When the existing fleet needs to be replaced, the cost of diesel operation could rise significantly relative to electric operation. If electrification is delivered during Control Period 7 (2024-2029) for commencement of operations in 2030, the scheme is more likely to deliver value for money with a benefit-cost ratio of 2.15:1 for Phase 1 or 0.95:1 for Phase 1 and 2. If it is further assumed that the main line routes are already electrified, then the benefit cost ratio of Phases 1 and 2 rises to 5.02:1, suggesting that the proposal offers very high value for money.

Conclusions and Strategy

In conclusion, there are practical and economic reasons for launching the Metro in diesel. The programme of electrification in the UK means that CP6 is the earliest that electrification could be delivered. Furthermore, the short and medium term availability of Electric Multiple Units (EMUs) is uncertain, with recent and planned investment in electrification creating significant competition for cascaded EMUs. Conversely the short to medium term availability of Diesel Multiple Units (DMUs) is good with a range of fleets due for cascade.

It is therefore recommended that the West of England Partnership and rail industry stakeholders continue to plan for the launch of MetroWest as a diesel network. This programme should focus on delivering the highest quality service possible to stimulate new demand and long term growth. The rolling stock needs to be the most efficient and highest quality on offer. A refurbished Class 165 type unit may be a more attractive option for the Metrowest than the older Class 150 trains and the potential for securing these fleets should be explored as part of the next refranchising process.

In the long term, the case for electrification is much stronger. Network Rail Control Period 7, looks like an obvious departure point because of the need to replace ageing diesel fleets by around 2030. Furthermore, by CP7 the rail industry

may have more capacity to deliver electrification schemes as part of the next generation of electrification projects.

Finally, Metrowest electrification should be considered as part of a more comprehensive strategy for electrification in the South West of England. The case for Metrowest electrification cannot be separated from the case for electrifying the between Birmingham and Bristol and to the south west of Bristol to Weston-super-Mare, Exeter or beyond. A co-ordinated approach between authorities in the South West should therefore be taken when promoting the case for electrification in this part of the UK.

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Appendix A

Chainages of MetroWest Lines

Appendix B

Structural Clearances by ELR

Appendix C

Depot Costs

Appendix D

Technical Note: Demand and Revenue Forecasting

1 Introduction

1.1 Appointment

Arup were appointed by Bristol City Council (BCC) on behalf of the West of England Partnership (WoEP) to prepare an outline business case for electrification of the West of England (WoE) suburban rail network. Delivery of the project has required extensive consultation with WoEP, Network Rail, First Great Western and other consultants preparing studies in support of MetroWest.

Arup also appointed IPEX Consulting to provide specialist advice relating to rolling stock and depot locations.

1.2 Scope

The WoEP, comprising of four local authorities – BCC, Bath & North East Somerset Council (B&NES), South Gloucestershire Council (SGC) and North Somerset Council (NSC) – have developed the MetroWest project as the next phase of transport improvements planned across the WoE area.

The MetroWest project is planned in two phases:

- MetroWest Phase 1 which will provide half hourly train services for the Severn Beach line, between Bristol Temple Meads and Bath Spa, and on the reopened Portishead line.
- MetroWest Phase 2 which will provide half hourly train services to Yate and Weston-super-Mare and hourly services on a reopened Henbury line (capacity for two new stations) with additional stations at Ashley Down and possibly Horfield.

A new stations package, comprising stations at Saltford, Ashton Gate and Corsham, may be implemented over the course of Phase 1 and 2 subject to business case and technical evaluations. All stations are subject to separate and individual business cases which are currently being prepared, and interim data for these stations has been included in this assessment.

The current proposals for MetroWest are based on Diesel Multiple Units (DMU). Arup were appointed to appraise the case for electrification of suburban rail lines and associated works to facilitate the introduction of Electric Multiple Units (EMU) which could potentially provide benefits to passengers and operators.

As agreed at the inception meeting, the purpose of the commission was to:

- Confirm if there is a case for electrification of the WoE suburban network and to identify how this might be achieved/phased;
- Identify potential cost savings to be made from electrification;
- Provide the partnership with a basis on which to respond to questions from local stakeholders regarding the potential for electrification of the metro area;
- Set-out the feasibility and potential issues, for example in relation to rolling stock and depots; and

- Provide guidance on the potential associated benefits which could result from electrification of the suburban network.

An outline business case for electrification has not been prepared at this stage because the evidence base gathered as part of this study does not support electrification at the current time or in the near future.

The report presents a clear strategy for moving forward with the MetroWest scheme with the possibility of extending electrification in the future and provides the WoEP with clear, evidence based recommendations for initial deployment of MetroWest services and implementation of EMU as part of a longer term strategy.

Our analysis and reporting has been undertaken in line with Department for Transport (DfT) and Network Rail GRIP requirements so that it may form the basis of any future business case or funding bid.

1.3 Report Structure

The report has been structured into the following sections:

- Section 2 – Presents the background and context of the study. The potential benefits and dis-benefits associated with electrification of the local rail network and services are discussed.
- Section 3 – Summarises the study methodology including the information supplied to Arup to inform our assessment.
- Section 4 – Provides a review of infrastructure along the Metrowest network. Using this information the capital investment required is estimated.
- Section 5 – Presents a review of likely rolling stock availability and depot locations.
- Section 6 – Summarises the timetabling of services and assumed operational patterns.
- Section 7 – Calculates passenger demand and user benefits
- Section 8 – Presents the economic assessment and tests different scenarios and sensitivities.
- Section 9 – Presents our conclusions and recommendations.

2 Background and Context

2.1 Introduction

This study has been commissioned to inform planning, assessment and future funding bids relating to the MetroWest project, which is summarised in section 2.2 below.

It also takes place against a background of committed electrification projects in the UK, most notably electrification of the Great Western Mainline from Paddington to Bristol Temple Meads and Cardiff (via Bristol Parkway), and electrification of Thames Valley services.

2.2 MetroWest

The MetroWest project is designed to facilitate a step change in public transport provision in the greater Bristol area through the introduction of new rail services and increased frequency along existing lines.

The MetroWest project is planned in two phases with a new stations package comprising of individual stations which will be implemented subject to business case and technical evaluations. A diagram locating stations and services is shown in Figure 1.

2.2.1 Phase 1

The MetroWest phase 1 proposals include:

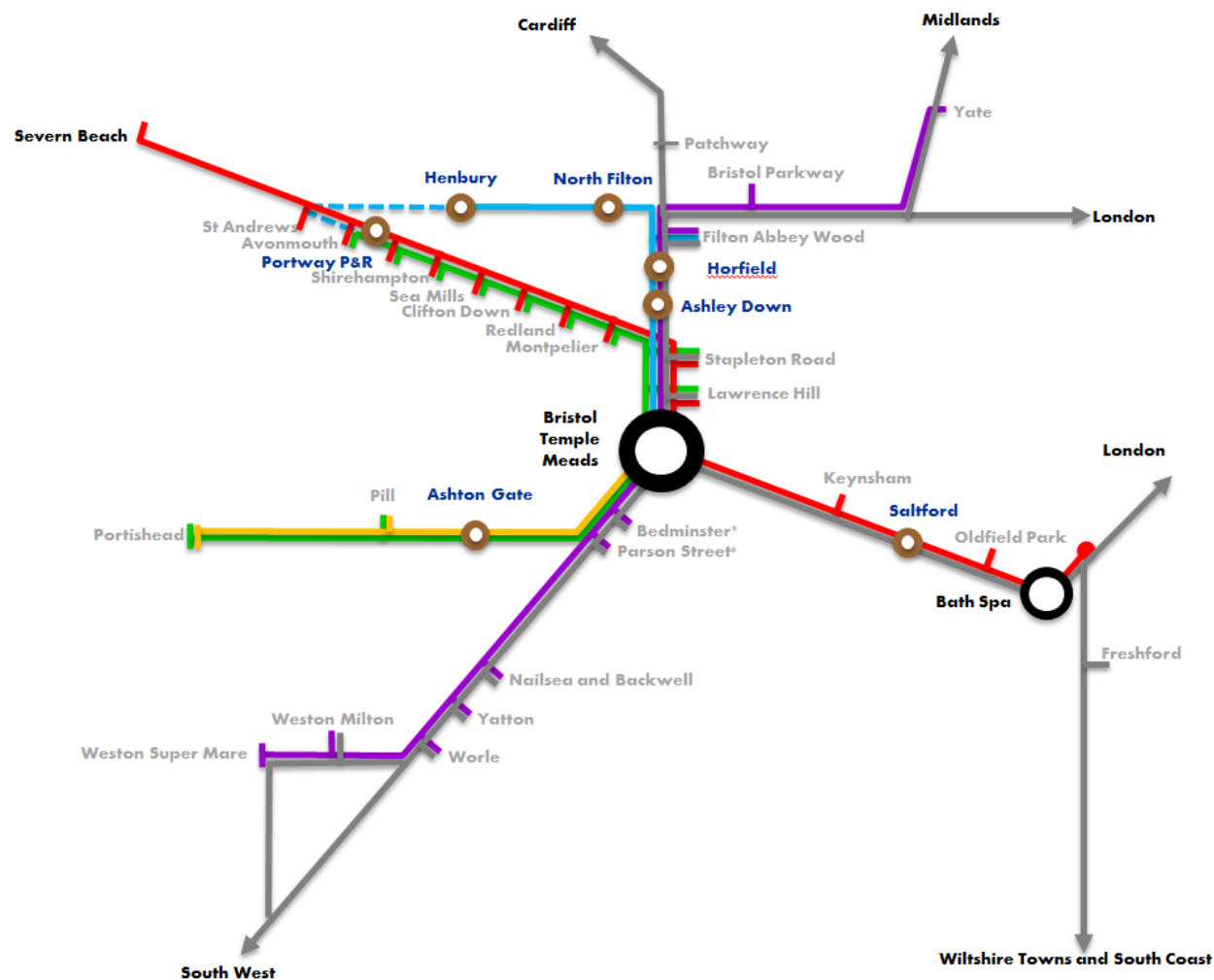
- The reopening of the Portishead rail line and the introduction of half-hourly peak hour services to Bristol Temple Meads (hourly off-peak).
- A new half- hourly service is to be provided between Severn Beach and Bristol Temple Mead with one service continuing to Portishead and the other continuing to Bath Spa.
- New stations at Portway P&R, Ashton Gate and Saltford are proposed as part of a new stations package – separate to Phase 1.

Recent developments in timetabling and service patterns have recommended that the Portishead to Severn Beach service terminates at Avonmouth. Severn Beach will have an hourly service throughout the day, compared to the current two-hourly service.

Different options for these services have been tested and assumed service patterns are presented in Section 6.

Phase 1 rail services are assumed to start in May 2019 with diesel rolling stock. The indicative cost of works and rolling stock to implement Phase 1 is estimated at £58.1 million (2013 prices).

The Joint Transport Board have accepted the recommendation to proceed to the Outline Business Case for MetroWest Phase 1 based on the conclusions from the Preliminary Business Case.



MetroWest

Phases 1 & 2

Proposed Rail Network

Existing rail services (local and inter-regional)

Services - Phase 1

- Portishead to Avonmouth (hourly)
- Portishead to Bristol Temple Meads (hourly)
- Bath to Bristol Temple Meads Shuttle (Extension to Severn Beach - hourly)

* Additional stopping services (Cardiff to Taunton) to call at these

New turnback

Services - Phase 2

- Weston Super Mare to Yate
- Extend Weston-super-Mare to Bristol Parkway service to Yate with turnback
- Henbury to Bristol Temple Meads (hourly)
- Possible new stations (subject to business case)

travelwest+

Bath & North East
Somerset Council



North
Somerset
Council

South Gloucestershire
Council

Figure 1: Proposed MetroWest Phases, Lines and Stations

2.2.2 Phase 2

Phase 2 will see the introduction of half hourly train services to Yate from Weston-super-Mare via Temple Meads. Sections of this route between Bristol Temple Meads and Bristol Parkway will be electrified as part of the Great Western electrification project.

Phase 2 will also establish hourly services on a reopened Henbury Line featuring new stations at Henbury and North Filton. In addition, the feasibility of creating two new stations (Ashley Down and Horfield) between Stapleton Road and Filton Abbey Wood are being examined – with this section of line being upgraded to four track as part of the separate Filton Bank project.

Phase 2 services are assumed to start in 2021. The indicative cost of works and rolling stock is currently being estimated by other consultants working on the Phase 2 business case.

2.2.3 New Stations

New stations at Saltford, Portway, Ashton Gate and Corsham are, subject to business cases, to be delivered over the course of Phase 1 and 2.

Business cases for each station are being prepared by Halcrow with initial forecasts (GRIP 2 stage) issued to Arup to inform passenger forecasting.

2.3 Electrification in the UK

There are a number of electrification schemes confirmed and/or likely within CP5 and CP6. The three schemes with most relevance to MetroWest electrification are:

- Great Western Mainline – which will electrify certain lines within the MetroWest area including Bath Spa to Temple Meads, Temple Meads to Parkway and Westerleigh Junction to the Severn Tunnel.
- Thames Valley – which will result in the potential cascade of existing diesel rolling stock into the MetroWest area and also offers a potential opportunity for extension of electrified services outside of the MetroWest area as well as shared stabling/depot facilities.
- South Wales Valley Lines – which provides opportunities for extension of electrified services outside of the MetroWest area as well as shared stabling/depot facilities.

In addition to offering opportunities the Thames Valley and South Wales Valley Line projects will produce additional demand for limited electrified rolling stock and OLE installation equipment. A number of other electrification improvement schemes in the UK have been identified for programme entry in Network Rail Control Period 5 (CP5), April 2014 – March 2019, and CP6 (April 2019- March 2024).

The Western Route Study (Draft for Consultation, published in October 2014) includes a ‘south west’ package of electrification for potential further consideration. This package includes electrification on the routes from Temple Meads to Weston-super-Mare, and from Weston-super-Mare to Plymouth and Paignton, with a possible extension to Penzance. However, the Route Study does not contain further details on the

case for further electrification on these routes; this will be included in the Network RUS: Electrification Strategy Draft for Consultation due to be published later in 2015.

2.3.1 Great Western Mainline

The Great Western Mainline is being electrified as part of a £5 billion programme of works by Network Rail supported by the introduction of new electrified rolling stock. The programme, shown in Figure 2, will see electrification of the line between Paddington and Bristol by December 2016, electrification to Cardiff by December 2017 and electrification to Swansea by May 2018.

A new fleet of trains, delivered by the Intercity Express Programme (IEP), will provide faster, higher capacity services along the newly electrified railway. Three new depots, located at North Pole (Paddington), Stoke Gifford (Bristol) and Swansea are proposed to service IEP trains.

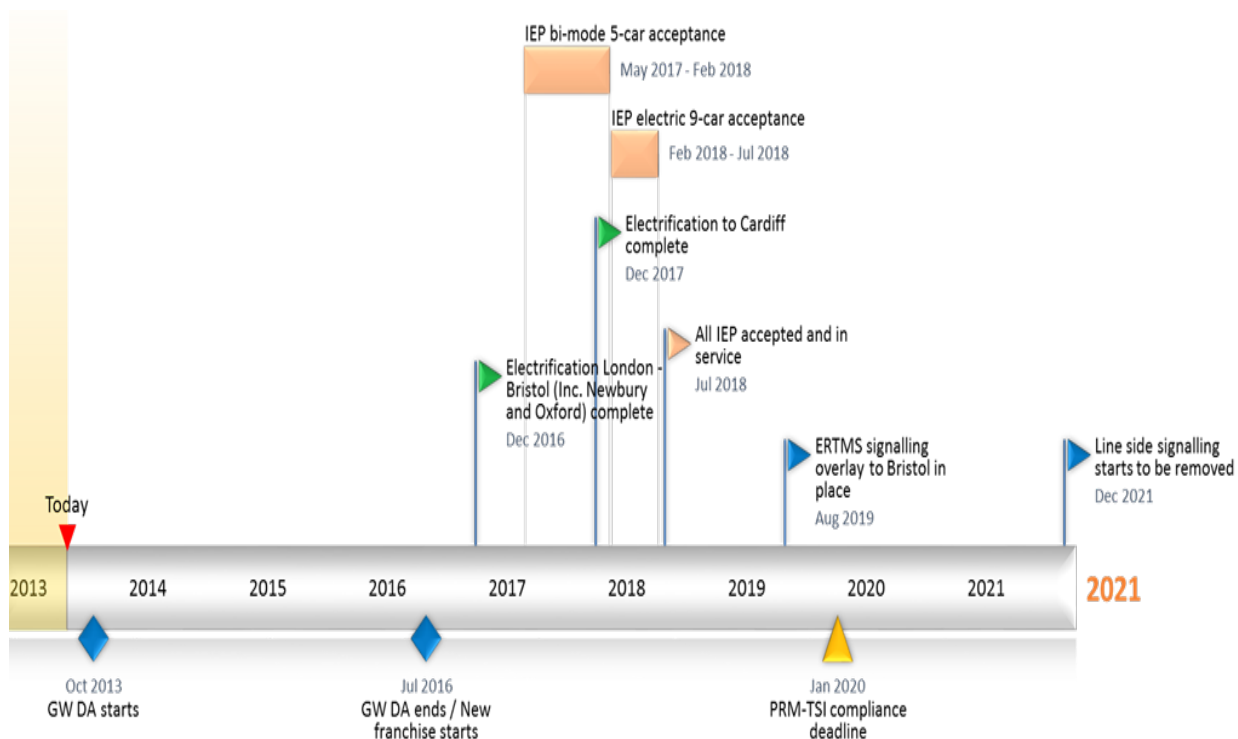


Figure 2: Great Western Electrification Programme and Key Service and Legislation Changes

2.3.2 Thames Valley

The High-Level Outline Specification (HLOS) for electrification of services on the Thames Valley Branch Lines; Acton - Willesden, Slough – Windsor, Maidenhead – Marlow, Twyford – Henley-on-Thames within CP5.

There is also the potential electrification of services between Reading and Basingstoke within CP6.

2.3.3 South Wales Valley Lines

Electrification of the Valley Lines network is programmed for delivery by 2020. This builds on the decision to extend the GWEP project to Swansea. Electrification of the

network in South Wales opens up the prospect of operating electrified services between Swansea, Cardiff and Bristol in the future, although no decisions on future service patterns has been made. If this is the case, it is likely that such services would be operated by a fleet of EMUs based at Cardiff Canton depot.

2.4 Legislature Changes

Since 31 December 1998 the Rail Vehicle Accessibility Regulations (RVAR) have applied to all new rail vehicles entering service since. The RVAR standardised the requirements to meet the needs of disabled passengers.

On 1 July 2008, a new European standard came into force, the technical specification for interoperability for persons with reduced mobility (PRM TSI). The PRM TSI sets standards for accessible trains, stations and other facilities.

All rail vehicles must be compliant with PRM TSI by 1 January 2020. Compliance with PRM TSI must therefore be considered with regards to cascade of rolling stock and fleet replacement programmes.

2.5 Potential Benefits of Electrification

The potential benefits of electrification are multifaceted and include:

- Reduced operating costs to franchise operators as a result of lower fuel, leasing or line costs.
- Reduced journey times between stations as a result of the improved performance of EMU. This provides passenger journey time benefits and also additional timetable flexibility/reliability for operators.
- Improved perception of rail services potentially resulting in modal shift to rail from other modes – the “sparks” effect.

The potential benefits have been assessed and are discussed within the relevant sections of this report. Where appropriate direct and indirect financial benefits have been calculated to inform financial case appraisal.

2.6 Key Issues

Electrification of the Great Western mainline represents a significant opportunity to MetroWest as a significant proportion of the West of England rail network will be electrified.

The upgrade of MetroWest line and rolling stock to facilitate operation of EMU requires consideration of a number of issues within the local and national rail context:

- Costs associated with the installation of OLE on local lines – in particular modifications to bridges, tunnels and other structures as well as improvements to electrical distribution equipment.
- Assessing the potential timetable and operational impacts a switch to EMU services would facilitate and coordinating any timetable changes with the wider network including freight services to Avonmouth and Royal Portbury docks.

- Given the number of scheduled electrification improvement projects already programmed in CP5 it is assumed that electrification of MetroWest lines could not be undertaken until CP6 at the earliest. It is therefore assumed that electrified services could not operate along MetroWest lines until 2021 at the earliest.
- The backlog of electrification in the UK, and the programming of other schemes in the UK is such that electrification of the MetroWest network is unlikely to follow on from the Great Western scheme. In any case, the efficiencies of completing MetroWest immediately following Great Western are unlikely to be significant.
- Electrification of MetroWest rolling stock would introduce the possibility of new or extended services to Swansea, Cardiff or Thames Valley via the Great Western mainline.

These key issues, and associated considerations, have been identified and reviewed as part of the project with financial costs (capital and operational) calculated as appropriate to inform financial case appraisal.

3 Methodology

3.1 Introduction

In calculating the economic case for electrification of MetroWest Arup has been required to derive values for the capital investment required, the operational cost savings and the benefits of electrification – be they direct (revenues) or indirect (user benefits, decongestion benefits).

For a typical rail electrification value case the significant capital investment in OLE and associated infrastructure is funded by future savings in operational costs (OPEX) and benefits (user benefits, increase revenues, crowding reductions, highway decongestion benefits). Figure 3 shows a typical example of how Net Present Value (NPV) is derived in this manner.

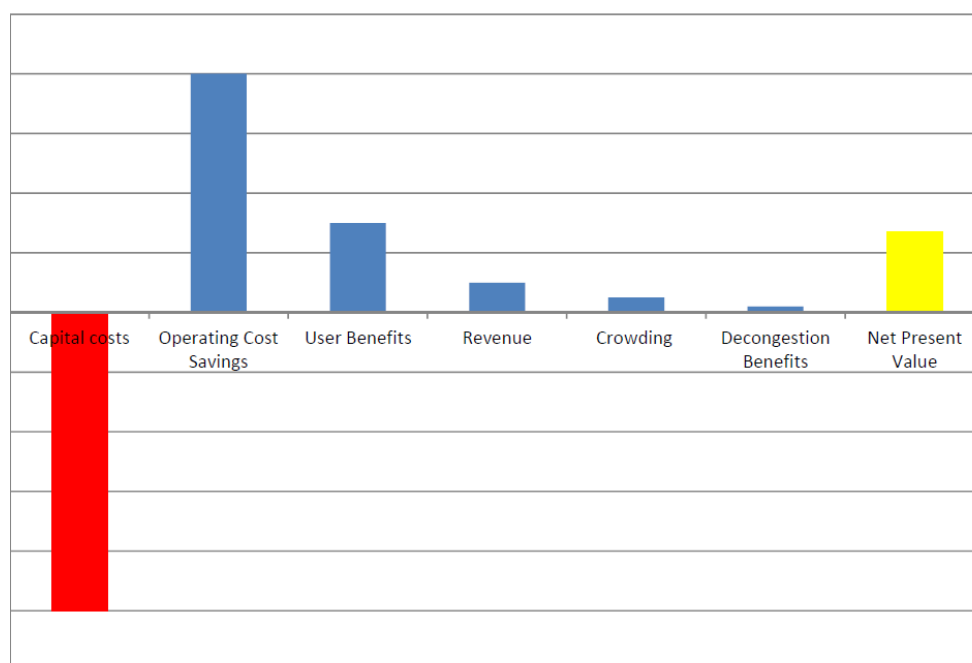


Figure 3: Typical Value Case for Electrification

This sections sets out the broad methodology adopted as a means of introducing the individual chapters dealing with key elements of the business case.

3.2 Methodology Adopted

The capital investment (CAPEX), operational costs (OPEX) and revenues/benefits were calculated through the concurrent assessment of various elements which are brought together to create the overall economic appraisal for electrification of MetroWest.

3.2.1 CAPEX

The capital investment in electrification has been assessed through an appraisal of infrastructure requirements including:

- New OLE including design and contractor fees.

- Structural works to provide the required clearance for OLE.
- Depot Investment.
- Power supply.

Section 4 provides a detailed breakdown of CAPEX assumptions and costing for each line in the MetroWest project.

3.2.2 OPEX

The operational benefits of a switch from DMU to EMU has been calculated through the production of operational costs for a “do-nothing” scenario which assumes DMU operation on MetroWest lines over the life of the economic appraisal.

A number of “do-something” scenarios have then been developed assuming electrification of MetroWest services in 2021 (the earliest year EMU services could operate) as well as later adoption at the end of DMU rolling-stock life.

In calculating the baseline and do-something scenarios it has been necessary to produce service diagrams for EMU and DMU services which reflect the lines and stations open in Phase 1 and Phase 2. This work is summarised in Section 6.

In calculating future operational costs it has been necessary to apply rolling stock cost assumptions. These have been based on an assessment of the most likely DMU and EMU rolling stock to be available for deployment on MetroWest (refer to Section 5).

3.2.3 Passenger Forecasting, Revenue and Associated Benefits

Section 7 summarises the passenger demand forecasting and forecasts for revenues and associated benefits.

An elasticity-based forecasting approach, based on guidance from the Passenger Demand Forecasting Handbook (PDFH) has been adopted to prepare rail forecasts. In this approach, rail passenger demand is expected to grow with the changes in exogenous (i.e. external growth factors such as GDP and population) as well as endogenous factors (i.e. factors resulting from MetroWest electrification).

Passenger demand forecasts have been produced for the do-minimum (DMU) option as well as the do-something (EMU) scenario. The same exogenous factors have been applied to both options.

Do-minimum demand and revenue for existing stations on the MetroWest network has been extracted from MOIRA¹ on a station to station basis. Do-minimum demand for all new stations on the MetroWest network has been taken from forecasts produced by other consultants working on Phase 1 and Phase 2.

To calculate do-something passenger demand forecasts, reference has been made to the Passenger Demand Forecasting Handbook (PDFH) which provides guidance on various drivers of rail demand and values of the elasticities of these drivers. The PDFH 5.1 forms the basis of the forecasting methodology adopted for this project.

¹ MOIRA provides ticketing data for the rail network. A copy of the latest model was obtained from First Great Western for use on this commission.

Using PDFH the effects of MetroWest electrification on a variety of demand factors has been calculated and applied to demand forecasts. These growth factors include timetable and service frequency improvements as well as non-timetable related service quality improvements – often referred to as the “sparks effect”.

3.2.4 Economic Assessment

The economic assessment for electrification of MetroWest has been calculated by assessing the cumulative OPEX saving, increased revenues and associated benefits against the CAPEX required.

The economic assessment has assumed an assessment period of 60-years. The first year of electrification in the do-something scenario is year 2021².

Optimism bias has been applied as per Green Book guidelines for a rail project at GRIP 1 stage.

A discount rate of 3.5% has been applied as per Green Book guidelines.

The baseline assessment models a do-nothing, DMU option against a do-something, EMU option. A number of scenarios and sensitivity tests have been tested reflecting changes in key parameters such as the opening year of EMU services or reductions in CAPEX.

3.3 Sources of Information

3.3.1 Reports & Presentations

The following reports, notes and presentations were issued to Arup to inform our assessment:

- Bristol Area Rail Study Final Report, Halcrow.
- Analysis and Forecasting, MetroWest Interim Report, Network Rail.
- MetroWest Brief issued for GRIP 1 and 2, WoEP.
- MetroWest Train Service Optioneering Briefing and Recommendations, Rail Programme Board.
- Phase 1 Network Strategy & Planning: Capability Analysis, Network Rail.
- Phase 1 Demand Calculation Methodology Note, Halcrow.
- Phase 1, Options for Modelling & Appraisal for Economic Case, WoEP.
- Portishead Reopening, Option Selection Report, GRIP Stage 3, Network Rail.
- Phase 2 Value Management Workshop 1 Presentation & Notes, WoEP.
- Phase 2 Bristol North Fringe Stations, Technical Report, CH2MHill.
- Bristol New Stations, High Level Assessment Study – Filton Bank, CH2MHill.
- Demand Forecasts, North Fringe Stations Study, Technical Note, CH2MHill.
- Saltford Railway Station, Feasibility Investigation, Halcrow.

² This assumes that electrification of Phase 1 of MetroWest delays opening by approximately two years, as agreed at stakeholder workshop October 2014.

- West of England Strategic Economic Plan 2013-2030, WoEP.

The Western Route Study (Draft for Consultation) was published in October 2014 at the same time as the draft version of this report. The impact of the key recommendations of the study have been included as a sensitivity test.

3.3.2 Diagrams, Models and Modelling Information

The following information was obtained from First Great Western and Network Rail, taken from publically available sources or used previous Arup studies:

- General Arrangement and Layout Plans, Portishead Line, Network Rail.
- MetroWest Phase 1 Service Pattern Modelling.
- First Great Western MOIRA model.
- RailSys model.
- Network Rail's Five-Mile Diagrams.
- National Gauging Database (NGD).
- Passenger forecasts for Ashley Down and Ashton Gate.
- Station plans for Henbury East, Filton North and Henbury, CH2MHill
- Information regarding mileage, line speed, locations of structures and stations was taken from these publically available documents.
- Satellite imagery from Bing/Google.
- Previous Arup studies and information from Network Rail pertaining to the costs of depots and power supply.

3.3.3 Meetings

The following meetings were held with key stakeholders during the course of this project:

- Inception meeting with project sponsors and Network Rail, January 2014.
- Workshop 1 with project sponsors and Network Rail, February 2014.
- Discussions with FGW regarding rolling stock and depot facilities, March 2014.
- Workshop 2 with project sponsors and Network Rail, October 2014.

3.3.4 Report Feedback

A draft version of the report was issued to the WoEP on 27 October 2014. Comments received from the client have been incorporated into this issue version.

4 Infrastructure Cost Review

4.1 Introduction

Electrification of the MetroWest lines will require significant investment to upgrade existing and proposed lines to accommodate OLE.

Section 4 serves to outline the assumptions made in this cost estimation exercise and is based on data presented in Appendix A and Appendix B.

4.2 Cost Formulation & Assumptions

The processes and assumptions made in identifying and costing works to facilitate electrification of MetroWest lines are set-out within this section.

All cost estimation was carried out based on engineering judgement using the information available rather than detailed structural investigation. The level of cost accuracy is considered appropriate given the level of optimism bias applied to the business case (refer to later sections of this report).

4.2.1 Clearance Criteria

The vertical clearance limits assumed for different line sections are summarised in Table 1.

Table 1: Adopted vertical clearance requirements

Condition	Clearance	Measurement
Open Route	5100mm	Rail to soffit
Station Structures	5800mm (Optimal) 5400mm (Sub-optimal)	Rail to soffit
Level Crossings	5700mm	Rail to wire height

The wire height increase at crossings has the potential to create clearance issues at adjacent structures that would clear for normal wire heights. It is assumed that an allowable grading ratio of the contact wire is line speed multiplied by five. At a line speed of 40mph the maximum ratio = 1:200, meaning the wire height could reduce from 5.7m to 4.7m in 200m. At 125mph this would take 625m.

The costs and suggested methodology of achieving clearances at individual structures have been identified in Appendix B. The determination of cost is defined by the type of structure and the contributing constraints.

Points found within the top corners of the train envelope have also been considered as infringements, particularly when likely to encroach on pantograph positioning. Lenience has been granted at points that are further away. Figure 4 below shows an example of where a pantograph clash would be likely to occur.

3405 BD Bristol Temple Meads - A Platform 5 Awning (awning)
ELR MLN1 118 m 24 ch 10 yd Date 07/04/2010 Existing Data

ClearRoute 7

3405 (1)
Ltr NA
Slue NA
Ex Cant -39 mm
Ex H Radius -260 m
Ex V Radius 0 m
Pr Cant -39 mm
Pr H Radius -260 m
Pr V Radius 0 m
Linespeed 40 kph
Low Track Fixity

Clearances
[A] 427 mm

Plotted 20/04/2014 17:55
Doc Id 20645160
File 405294-2790665-11824IVM.S00
Licence 611
Prepared By Jamie Walsh

Checked By

ClearRoute 7 © Laser Rail 2014 (Build 7.7)

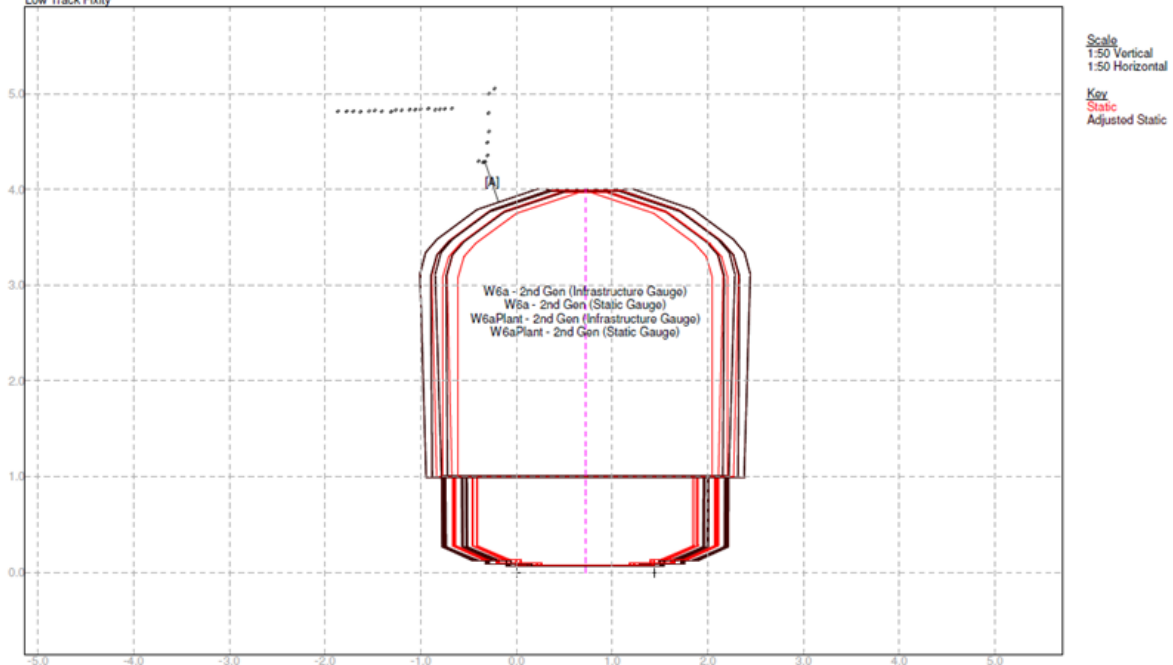


Figure 4: NGD Screenshot of Example Haunch Infringement

4.2.2 Overbridges

Each overbridge with less than the minimum clearance was looked at individually using Bing satellite imagery and Google Street View to gain a basic understanding of the local constraints. Main considerations included track alignment, proximity to junctions/switches and crossings (S&C), road/street level, alternative crossings, span of bridge, general topography and more. The likelihood of services being present in the bridge was also considered. The type of bridge (e.g. flat deck or brick arched) and the amount of infringement were also key factors assessed in calculating cost parameters.

The main solutions considered comprised reconstruction, deck jacking and track lowers. OLE solutions were suggested when none of these options seemed viable financially or practically. Combinations of these solutions were also recommended where appropriate.

NGD information was not provided for all bridges. In these instances the assumption was made that the minimum clearances were similar to adjacent bridges on the same line built in the same period. Assumptions regarding clearances have also been provided in Appendix B.

The costs associated with each set of works was estimated by permanent way and civil structural engineers experienced in electrification related bridge works. The values provided in Appendix B are all-in figures which already include indirect associated costs such as design, Network Rail project management, surveys and contractors' mobilisation.

An area for future feasibility assessment is the emergence of discontinuous electrification. Should it be prove financially viable, such a unit would have the capability to operate on sections of the route without overhead wires. This would offer the potential for sections of track running under restrictive structures to remain un-wired, reducing the clearances required to operate electric trains. A prototype battery powered train is currently being trialled by Network Rail and Bombardier as part of a feasibility study.

4.2.3 Tunnels

The costing of tunnels was advised by a previous study carried out by Arup on the Great Western Mainline (GWML). The worst case cross-section of each of the tunnels and perceived condition of the proposed lines were matched to the closest indicative tunnel on the earlier study. Overall costs were then prorated with respect to the length of the tunnels.

These costs include the component and installation costs of fixings, remedial works, support wires, tensioning equipment, etc. They exclude components such as possession charges.

Tunnel works require more specialised labour and resources which have been captured in the costs. Estimates for regular sections of OLE per kilometre do not apply, i.e. gantries, foundations etc. are discounted. Integral unaffected components such as power supply and signalling would still apply.

NGD information was not provided for all tunnels. In these instances the assumption was made that the minimum clearances were similar to the other tunnels on the same line built in the same period.

4.2.4 Signals

Signal gantries interact with their surroundings less than bridges and tunnels. They are also structurally simpler. Signal gantries were noted to encroach on the required envelope to varying degrees, but as any infringement was assumed to result in reconstruction, each of these structures was estimated to cost £300,000.

4.2.5 Associated Electrification Projects

Due to the order and timing of the proposed works, overlap with external projects was considered. Network Rail's GWML programme has planned to electrify lines from London through to Swansea, including the Bath to Bristol Temple Meads line, Filton Bank (Bristol Temple Meads to Filton Junction) and along the MLN1. Phase 1 is to be constructed before Phase 2.

Lines which are scheduled for electrification through other projects have been excluded from our capital costing. These chainages have been recorded in Appendix A.

4.2.6 Price per Kilometre

Industry estimates for the inclusive cost of electrifying a Standard Track Kilometre (STK) are £1,310,000 without the application of any risk or optimism bias.

A previous study by Arup of urban line electrification identified costs to break down as shown in Table 2.

Table 2: Cost breakdown per kilometre

Cost Component	Description	% of cost	Breakdown cost when £1.31M/km
Bridges & Tunnels¹	Gauge clearing works, bridge reconstruction and jacking	16.30%	£213,663
Parapets¹	Increase in parapet height for compliance with electrical clearance	3.24%	£42,442
Platforms¹	Work resulting from track lowers	0.24%	£3,198
Other¹	Track lowers, level crossing changes, maintenance access	6.21%	£81,395
OLE¹	Foundations, gantries, registration, wiring and bonding	22.68%	£297,238
Power Distribution¹	Upgrades to the existing network to feed the OLE	6.02%	£78,866
Immunisation ¹	Signalling, telecoms and line side power supplies	4.37%	£57,326
Control & Systems²	Signalling, crossings and system supervision	0.33%	£4,360
Contractors Indirects²	Contractor's preliminaries, supervision, management, overheads and profit	19.74%	£258,721
Survey & Design²	Contractors and designers.	7.54%	£98,837
NR Project Management²	Management of development and delivery programme of works	11.75%	£154,070
Possession Charges	Costs associated with applying possessions	1.57%	£20,640
1 = Direct costs			
2 = Indirect costs			

This study priced bridges and tunnels individually, so the “Bridges & Tunnels” estimate per kilometre was taken out and replaced by the assessments made specifically on structures within the MetroWest area. OLE solutions within tunnels has also been considered, and so “OLE” has also been discounted for the length of tunnels on the route.

Applicable direct costs (i.e. discounting Bridges & Tunnels) are to be multiplied by 2, 3 and 3.2 times for dual, triple and quadruple tracks respectively. Two single cantilever structures are used for dual tracks while triple and quadruple track OLE would be installed on gantry systems.

Table 3: Applied cost per kilometre (not including structures)

Track classification	Applied cost per kilometre without structural provision
Single	£480,000
Single Tunnelled	£180,000
Dual	£780,000
Dual Tunnelled	£240,000
Triple	£1,080,000
Quadruple	£1,130,000

The costs of structures for each scheme will be added to the total mileage multiplied by the relevant prices above.

Indirect costs accounted for 41% of the previous study which were then added on to the direct costs. This meant multiplying the direct costs by a factor of 1.695.

4.2.7 Power Supply to Weston-super-Mare

Initial power calculations for the operation of EMUs on MetroWest lines was provided to Network Rail for evaluation. It has been confirmed that the Weston-super-Mare line is likely to require additional electrical distribution supply equipment to ensure the security and reliability of supply. Arup estimates a total cost of around £10,000,000 for this equipment, based on recent design of equivalent infrastructure for Network Rail. This cost has been added the cost of the Phase 2 Weston-super-Mare to BTM total.

4.2.8 Depot Costs

Based on a high-level review of potential depot options a preferred option for a small, new local EMU depot at St Philips Marsh has been identified – refer to Section 5.

Arup has produced an initial estimate for the costs of constructing such a depot based on our experience in the design of IEP depots. A resulting depot cost of £14,000,000 with a range of £10,000,000 to £18,000,000 has been calculated with this cost added to the Phase 1 capital investment total.

A breakdown of depot costs has been provided in Appendix C.

4.2.9 Further Assumptions

The cost of re-commissioning stations has not been included in electrification estimates as the stations will be provided as part of works to facilitate DMU operation.

Arup have not reviewed structures' condition survey reports and have assumed that all structures are in fair condition.

There are gaps in the NGD information which have been highlighted in Appendix B. Clearances have been assumed for some structures. In particular no NGD information has been made available on ELR: POD.

Structural clearances for all structures on the Portishead line where NGD information was not provided were considered to have minimum of 4640mm as specified in the NR Track Design Handbook NR/L2/TRK/2049, section A.8.1a for "Secondary cross

country links and inner suburban commuter routes”. The additional cost of electrifying this route with the relevant clearance modifications has been included with reasoning shown in Appendix B.

The connection of new OLE line into an existing network has not been priced.

The cost of cutting station awnings back is assumed to be covered by the “Platforms” allowance in Table 2.

Risk and optimism bias has not been applied to the costs presented in this section and are instead dealt with in Section 8 – Economic Appraisal.

4.3 Costs

4.3.1 MetroWest Phase 1

The total capital investment required to facilitate MetroWest Phase 1 is shown in Table 4 for each the three lines. Costs for the Portishead include major works to the Bath Road Bridge which are required to facilitate electrification (cost estimate £5,000,000).

The total cost for Phase 1 includes a depot construction estimate of £14,000,000 split equally between Portishead and Severn Beach to BTM.

Table 4: Costs of infrastructure for Phase 1 lines

From	To	Total length to electrify (STK)	Average cost per STK	Total distance-based cost	Costs due to structures	Cost of Depot	Total Cost
Portishead	BTM	20.4km	£1.1m	£22.1m	£13.7m	£7.0m	£42.9m
Severn Beach	BTM	18.6km	£1.3m	£24.1m	£14.4m	£7.0m	£45.6m
Bath	BTM	-	-	-	-	-	-
						Phase 1 Total =	£88.5m

4.3.2 MetroWest Phase 2

The total capital investment required to facilitate MetroWest Phase 1 is shown in Table 5 for each the three lines. The Weston-super-Mare route includes a cost of £10,000,000 associated with improvements to electricity supply and distribution equipment.

Table 5: Costs of infrastructure for Phase 2 lines

From	To	Total length to electrify (STK)	Average cost per STK	Total distance-based cost	Costs due to structures	Cost of power supply	Total Cost
Weston-super-Mare	BTM	51.7km	£0.8m	£40.5m	£8.4m	£10.0m	£59.0m
Yate	BTM	5.2km	£1.0m	£5.3m	£0.5m	-	£5.8m
Henbury	BTM	6.8km	£2.3m	£15.7m	£6.0m	-	£21.7m
						Phase 2 Total =	£86.5m

4.4 Conclusions

The total capital investment (CAPEX) required to facilitate operation of EMU on MetroWest Phase 1 and Phase 2 has been estimated to be £88,500,000 and £86,500,000 respectively. Given that this is a very early stage estimate, there is a significant degree of upside and downside risk to this estimate. Optimism bias and sensitivity testing has been employed in the economic appraisal to reflect these risks.

The prevalence of structures that require works to achieve the minimum clearance is a large contributor to the costs of these proposed lines. Included within the structural costs are modifications to the Bath Road Bridge which is estimated at £5m alone.

Considering the 103 STK distance and the total of £175,000,000 the average cost of is £1,700,000/km, which is 30% higher than Arup's previous study. A large portion of this increase in cost can be attributed to the higher concentration of structures with insufficient clearance and their associated constraints.

5 Rolling Stock and Depots

5.1 Introduction

A review of rolling stock options for operation on MetroWest services has been undertaken to identify potential DMU and EMU rolling stock which maybe cascaded as a result of planning investment in new rolling stock by other operators. This review has focussed on the size, composition and likely release date of rolling stock and the results have been carried forward into the rolling stock assumptions made in the business case.

A high level review of depot and stabling options has been undertaken based on current and planned facilities within the West of England and adjacent areas. This review has focussed on identifying the most likely option for the servicing of future EMU rolling stock and has informed capital investment and “empty mileage” operating assumptions in the business case.

5.2 Existing Rolling Stock

The West of England inter-urban and rural services are operated by a variety of two and three-car DMUs. The composition of this fleet, shown in Table 6, has developed out of necessity throughout the current franchise in order to provide additional capacity and relieve overcrowding. However the composition of the fleet has been significantly constrained by the limited availability of DMU rolling stock, such that efficiencies brought by synergy of fleet type have been second order considerations for the current franchise.

Table 6: Composition of Existing Fleet, West of England

Fleet	Formation	Total Number of Vehicles	Date Into service	Number of Seats per Unit
Class 143 Pacer	8 x two-car	16 vehicles	1986-87	104 seats
Class 150 Sprinter	34 x two-car; 2 x three-car (hybrid)	74 vehicles	1985-87	138 seats per two-car; 209 seats per three-car
Class 153 Super Sprinter	14 x 1-car	14 vehicles	1987-88	75 seats
Class 158 Express Sprinter	2 x two-car; 13 x three-car (12 hybrid)	43 vehicles	1989-92	140 seats per two-car; 210 seats per three-car
Total	73 units	147 vehicles	-	-

These DMUs are primarily maintained out of St Philips Marsh and Exeter depots with overnight servicing and repairs additionally carried out at Plymouth Laira, Penzance and Salisbury depots.

New DMU's were announced for a number of operators including Great Western as part of the 2008 High Level Output Specification (HLOS) Programme. Procurement of these units was to have been led by the DfT's Diesel Trains Limited, set up with the purpose of funding and managing the procurement of up to 200 DMU vehicles, with delivery of the first trains into service during 2011-2012. However during 2009, due to the difficulties in the financing markets obtaining funding for such projects, the procurement was put on hold, and ultimately scrapped for Great Western following the announcement of electrification.

5.3 Future Rolling Stock

5.3.1 Diesel Multiple Units

The planned introduction of EMU vehicles in the London Thames Valley area will result in the cascade of newer DMU units to the West to replace the older DMU vehicles currently in service.

London Thames Valley suburban services are primarily operated by the midlife Class 165 and 166 Turbo DMU fleet. Two three-car Class 150/0 units were transferred into the franchise from London Midland during 2012 to provide greater capacity. These units operate the Reading to Basingstoke Line on weekdays, allowing Turbo units previously deployed on the route to reinforce other services. All vehicles are leased from Angel Trains.

The Class 150/0 units are maintained at Reading depot alongside the Class 165 and 166. Key data on the London Thames Valley fleet is summarised in Table 7.

Table 7: Composition of London Thames Valley Fleet

Fleet	Formation	Total Number of Vehicles	Date Into service	Number of Seats per Unit
Class 165/1 Turbo	20 x two-car 16 x three-car	88 vehicles	1985-87	190 seats per two-car; 294 seats per three-car
Class 166 Turbo Express	21 x three-car	63 vehicles	1987-88	284 seats
Class 150/0 Sprinter	2 x three-car	6 vehicles	1985	209 seats
Total	59 units	157 vehicles	-	-

In order to operate the 16x fleet route in the West of England region, clearance modifications will be required. Angel Trains intends to conclude route clearance approvals during the current Direct Award period to support fleet cascade during 2017/2018.

It is expected that Class 16x will replace Class 158 on the Portsmouth – Cardiff services initially. Depending upon the EMU introduction this could be achieved as early as December 2016. These services are currently operated by Hybrid three-car Class 158. It is expected that this will enable these units to be reformed back into 20 x two-cars and these, together with Class 150 and further Class 16x from LTV, will displace all other DMU types from the Bristol area.

A surplus of Class 150 is also likely to be created depending upon the final number of Class 16x that can be cascaded from LTV and the number of Class 158 that can be introduced onto West of England services (a longer dwell time is required for the 158 due to the door design). This Class 150 surplus could be available to operate additional metro services from December 2016 or May 2017.

5.3.2 Electric Multiple Units

Electrification Schemes

Prior to the July 2012 HLOS announcement there were a number of committed 25kV AC electrification schemes in the UK:

- Great Western electrification is scheduled to be completed between London and Bristol including Newbury and Oxford. This scheme is expected to be a consumer of cascaded EMUs – widely assumed to be Class 319s from Thameslink, or possibly even Class 365s also from Thameslink.
- Edinburgh to Glasgow (via Falkirk) route is scheduled to be electrified by December 2016, along with diversionary routes and the route to the north from the Carmuir area to Dunblane and Alloa. This scheme is expected to be a consumer of new EMUs.
- Lancashire Triangle – Liverpool to Manchester via Chat Moss, Preston to Blackpool South. Completion is scheduled for December 2016. This scheme will release Class 142 and Class 185 units. The Class 185 three-car units are planned to be redeployed onto other routes within their current franchise;
- Transpennine Electrification – Manchester to Leeds was scheduled for completion December 2013 but works are still ongoing. This will displace Class 158 and Class 185 DMUs and possibly some local services which will convert from Class 15x and Class 170 operation to EMU operation as well. This scheme is expected to be a consumer of cascaded EMUs – also widely assumed to be Class 319s from Thameslink, or potentially Class 317s.

Additional electrification schemes announced in the HLOS for CP5 include:

- Great Western extension from Cardiff to Swansea which will mainly be resourced by an altered mix of Super Express Sets. This will also facilitate operation of EMUs in place of a small number of Class 15x units on local services.
- Midland Main Line from Bedford to Derby / Leeds. This will release HSTs and cascade of the Class 222 Fleet.
- Basingstoke to Southampton, mainly providing an AC freight route to the port.
- Oxford – Birmingham, Coventry – Leamington Spa, Bromsgrove – Barnt Green. This allows for replacement of part of the Class 220 / 221 Cross Country fleet with electric rolling stock.
- Gospel Oak – Barking (pending agreement between TfL and DfT). This scheme would release a small number of Class 15x units.

Other schemes with a potential business case for progression in CP6 include:

- Basingstoke to Exeter and Salisbury to Bath (potentially 25kv AC requiring dual voltage EMUs, or 750v DC). This would facilitate release of Class 158/9 units.
- Bromsgrove – Bristol: This allows replacement of a further part of the Class 220 / 221 Cross Country fleet with electric rolling stock. There is currently no known business case for electrification of the cross country route south of Bristol.

The electrification programmes in CP5 and 6 provide little benefit in terms of EMU options for Bristol metro and indeed create a future drain on what is going to be an increasingly scarce resource while producing a surplus of DMU in the market.

Cascade Rolling Stock

As noted, the current West of England fleet is operated as a mix of two and three car DMU. There are no two car EMUs available in the UK other than the DC-only Class 456 and 466, both of which have long term commitments. Direct replacement of two car services is therefore not possible, with three car EMU services required to replace two car DMU services – presenting potential underutilisation issues on MetroWest routes.

With specific regards to potential options for the cascade of EMU rolling stock the following options have been identified and reviewed for suitability and availability for operation on MetroWest routes:

Cascade of Class 313 Units (built 1976-1977)

Up to 44 three-car Eversholt Class 313 units could potentially be displaced in whole or in part from the Thameslink, Southern and Great Northern (TSGN) franchise from mid to late 2016. However there is a good chance that some of the Class 313 could be fitted with ERTMS and continue to operate into the next decade on the Moorgate services.

A further 19 three-car Class 313 units, owned by Beacon Rail Leasing, are on lease with Southern until 2015. They are not part of the stock that will be displaced by Thameslink, however the franchise inherits a surplus of Electrostar rolling stock which they are required to retain, which may facilitate a cascade.

Cascade of Class 315 Units

Class 315 units will be displaced from Greater Anglia/C2C services from 2017 by new Crossrail unit. Some 44 four-car units are expected to be displaced in total.

It is expected that a portion of the Class 315 fleet will initially transfer to the C2C operator to allow Crossrail services to commence from May-2015. The remainder of the total fleet of 61 units are expected to be transferred to the new TfL operator as part of the West Anglia Devolution during 2015. It is anticipated that TfL will seek to rationalise its fleet on an Electrostar derivate such that it is conceivable that further 315 will become available from 2015.

Cascade of Class 317 Units (built 1981-1987)

Class 317 units are expected to be displaced in whole or in part from the TSGN franchise as new Electrostar Class 387 and Siemens Class 700 units are introduced between December 2014 and 2018 and / or potentially from Greater Anglia from 2018 as the train operating company seeks to rationalise smaller fleets.

Currently there are 12 four-car units on lease with First Capital Connect (to be replaced by TSGN) and 51 four-car units on Greater Anglia. First Capital Connect are expected to lease two further Class 317/7 units currently in storage to provide HM cover for their 365 fleet.

Greater Anglia are expected to lease a further two of the 317/7 units currently in storage to provide cover for the 379 being used for the NR funded traction battery trial. Greater Anglia are additionally being loaned the Angel “demonstrator” Class 317. There are also four Class 317/7 air-conditioned units expected to remain in storage.

Cascade of Class 319 Units (built 1987-1990)

Class 319 units are expected to be displaced in whole or in part from the TSGN franchise from 2014 to 2018 as new Electrostar Class 387 and Siemens Class 700 units are introduced. Currently there are 86 four-car units on FCC.

Three units look likely to be mandated to cascade to Northern from May 2014 to facilitate driver and maintainer training, with further units (anticipated to be up to a total of 15 four-car units) expected to follow in December 2014 as new Electrostar Class 387 units are introduced to First Capital Connect

The longer term deployment of Class 319 remains in flux pending the successful TSGN bidders rolling stock strategy, which will dictate the order in which existing First Capital Connect fleet will be cascaded.

Cascade of Class 365 Units (built 1994-1995)

Class 365 units (40 x four-car) could potentially be made available through a cascade from First Capital Connect. However availability remains unknown pending the successful TSGN bidder's rolling stock strategy.

The fleet size is also too large for Bristol Metro and insufficient to cover both London Thames Valley and Metro requirements.

Cascade of Class 360/2 Units (built 2002-2005)

Class 360/2 units (five five-car units) currently operate the Heathrow Connect stopping service between London Paddington and Heathrow Airport. It is understood that the Heathrow Connect service is to be replaced with Crossrail.

The fleet size is, on its own, too small for MetroWest and each unit provides excess capacity over that likely to be required.

Cascade of Class 387 Units (2014)

A total of 29 x four-car Dual Voltage units are the last of the options that could be called from the latest Southern Electrostar build. It is currently understood that these units will initially be introduced onto First Capital Connect to facilitate a cascade out of the older Class 3xx fleet to those franchises with electrification schemes concluding during late 2014 and 2015.

These units themselves are expected to be eventually cascaded out of the TSGN franchise following delivery of Class 700 units. Timescales for the cascade out of this fleet are dependent upon the successful TSGN bidder's rolling stock strategy.

Based on the analysis of the above fleets, it is considered that the most likely option would be to initially utilise a mid-life EMU such as class 36X or 31X rolling stock either operating as a sub-fleet or with an existing fleet broken up due to interest from smaller operators.

Joint Procurement of Rolling Stock

It would be feasible to extend some of the new EMU fast services to Bristol to feed a pool of units based in the Bristol area back to Reading for maintenance. However, it is envisaged that any new EMU for London Thames Valley would be a minimum of four-car, and more likely five-car, and may therefore provide too much capacity and at too great a cost for operation on MetroWest routes.

There is also the feasibility of operating MetroWest services as a sub-fleet of a South Wales EMU fleet procured for the valley lines. These would have similar operational requirements but there are potential issues in stabling and servicing as well as programme entry.

With regards to the business case for investment new EMUs are more costly and cascaded rolling stock always provides the most cost effective option particularly as refurbished units provide comparable performance and passenger experience. Where new rolling stock has been justified on other routes it has been on the basis of high yield routes and a lack of available cascaded rolling stock.

5.3.3 Rolling Stock Refurbishment

Rolling stock quality is important in delivering higher demand and revenue, particularly when a change in passenger perception of rail travel is required. The rolling stock needs to be the most efficient and highest quality on offer. Whatever the stock type, the rolling stock needs to be refurbished to a high standard.

Rolling stock providers have demonstrated that they can achieve a high quality ‘as new’ experience for passengers when refurbishing the interior and exterior of trains. Whilst this requires initial investment, it will deliver value in the long term through higher revenue.

MetroWest stakeholders should be engaged in decisions on rolling stock to ensure that the solution is tailored to the South West. The interior layout should be considered carefully. A metro service may require a metro-style layout arranged to aid rapid boarding and alighting of passengers. Furthermore, if allowance needs to be made for the higher proportion of users likely to be travelling to and from the station by bicycle, then sufficient standing room or bicycle storage should also be considered.

Delivering such improvements in the medium term will act to reinforce the actual and perceived step change in rail services being delivered in the West.

5.4 Depot Options Assessment

5.4.1 DMU Servicing

Under a diesel scenario, servicing of DMU operating on MetroWest will continue to be undertaken at the St Philips Marsh depot.

5.4.2 EMU Servicing

Options for the servicing of electrified rolling stock have been examined with four primary options identified:

- Servicing within a local depot, potentially at St Philips Marsh.
- Shared facility in Canton, Cardiff proposed for Valley Lines.
- Shared facility with IEP trains in Stoke Gifford.
- Shared facility with in Reading London Thames Valley.

There are no plans currently to electrify to or within St Philips Marsh depot. Servicing of EMU rolling-stock would require immunisation of the depot or construction of a smaller dedicated EMU depot facility on adjacent sidings – such a facility could also be provided elsewhere on the local Bristol network. This is the preferred option.

Canton is expected to be electrified as part of the Welsh Valleys electrification project and could potentially maintain a small fleet of EMUs for Bristol metro or possibly provide a sub-fleet from its own EMU fleet under a service agreement for operation on the Metro services. This is identified as the secondary option.

Agility Trains' Stoke Gifford depot is electrified and would have capacity to maintain and operate the 12 or so Metro units required. However Agility's performance regime for IEP is punitive and additional cleaning, stabling and light maintenance workload is likely to be seen as introducing significant risk to their IEP obligations for very limited reward. This option is therefore not considered valid.

It is also conceivable and would present cost benefits for the EMU solution for Metro units to be a common design to the London Thames Valley fleet and to create diagrams and services to work these units back to Reading for maintenance, with stabling and perhaps casualty repair at Canton. Given the distances involved issues with likely differences in rolling stock types this option is considered less feasible than a local depot or use of Canton.

5.5 Conclusions

There are a number of rail electrification schemes identified in the HLOS and additional schemes are being developed by promoters. With a large number of new electrified projects coming online during the next decade there will be considerable competition from other areas of the country for any EMU rolling stock cascaded by existing operators.

Leasing companies generally favour retaining fleet sizes and a number of potentially cascaded EMU fleets are too large MetroWest. There could be the option to jointly procure units with London Thames Valley or Wales and West, however both options present additional problems in terms of stabling and depot facilities, plus the suitability of rolling stock to cater for different franchise route requirements.

As noted, the most likely scenario is that any future EMU operation on MetroWest would initially utilise a mid-life EMU such as class 36X or 31X rolling stock either operating as a sub-fleet or with an existing fleet broken up due to interest from smaller operators. This rolling stock would be expected to provide service until 2030 before replacement by a more modern cascaded EMU.

Conversely while there is likely to be significant competition for EMU there will be a surplus of Class 150 diesel rolling stock as a result of electrification, with some class 16X rolling stock also likely to be available via cascade. This rolling stock would be expected to provide service until 2030 before replacement.

Replacement of DMU would be potentially problematic at this time due to a lack of new units entering the market resulting in a smaller UK fleet from which to cascade rolling stock. It would also be possible to electrify the MetroWest lines prior to 2030 so as to facilitate replacement by a modern cascaded or new EMU, from a sizeable UK fleet – see Figure 5.

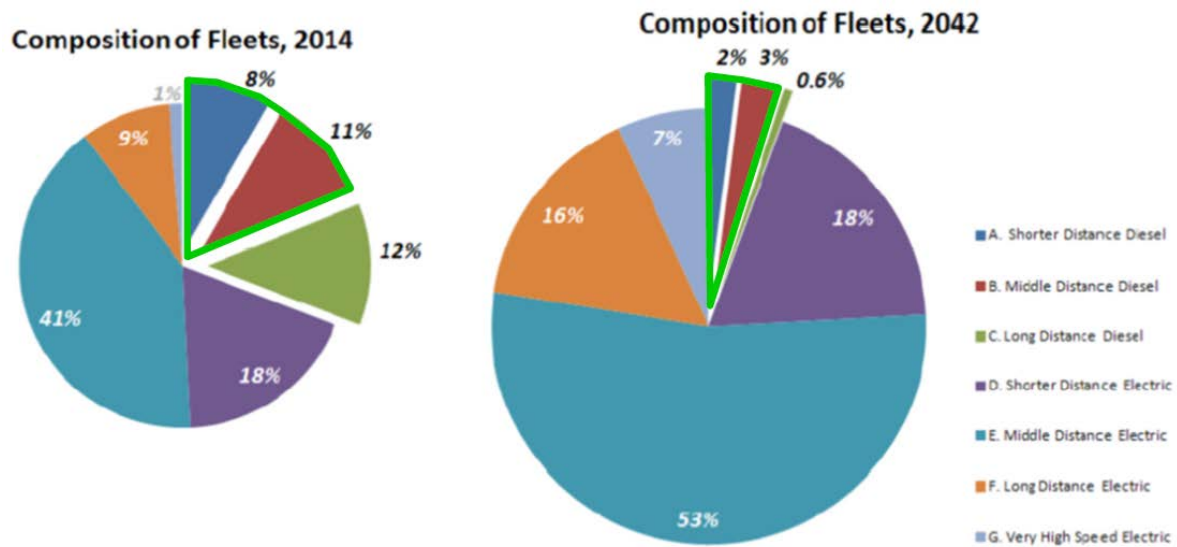


Figure 5: UK Passenger Rolling Stock Projections, ATOC

St Philips Marsh provides a major DMU depot facility within the MetroWest area and there are no proposals to immunise the depot to facilitate servicing of EMU. Should MetroWest electrification proceed the preferred option would be immunisation of the depot or construction of a new, small shed for the servicing of EMUs on adjacent sidings. If this is not achievable, an alternative location would need to be identified within the MetroWest network, or the feasibility of servicing EMU in Canton, as a sub-fleet of a larger South Wales fleet, would be feasible.

6 Timetabling and Operations

This chapter provides details of the Phase 1 and 2 timetables developed for the assessment of the scheme benefits.

6.1 Do-minimum Timetables

The service specification of Intercity Express Programme (IEP) services (Crossrail Iteration 5) was not received by the time this analysis was carried out and therefore has not been included in the timetable modelling. As instructed by WoEP³, indicative “standard hour” timetables for Phase 1 and 2 have been produced using RailSys (provided by NR) Sectional Running Times (SRTs) to fit with the existing timetable.

6.1.1 Phase 1

Service specification for Phase 1 of the project is based on the option 5b service pattern developed as part of the MetroWest project and includes:

- Severn Beach to Bath Spa 1tph all day (forming 2tph between Bath Spa and Bristol Temple Meads with the existing timetable at the time of analysis).
- Avonmouth to Portishead 1tph all day.
- Portishead and Bristol Temple Meads 1tph all day.
- New station at Portway P&R on Severn Beach line.
- New stations at Portishead and Pill on Portishead line.

6.1.2 Phase 2

No service pattern for Phase 2 of the project was available as part of the MetroWest project at the time of this analysis.

Assumed service specification for Phase 2 of the project includes:

- Bristol Temple Meads to Henbury 1tph all day (assumed Henbury loop connecting at St Andrews & continues to form 1tph Avonmouth to Portishead services).
- Yate to Weston Super Mare 1tph all day (existing Weston Super Mare – Bristol Parkway Service extended to yate & retimed to form an hourly services to Yate and tops up existing Gloucester services at Yate forming 2tph at Yate with the existing timetable at the time of analysis).
- New stations at Henbury, North Filton, Horfield and Ashley Down on Henbury line.
- New station at Saltford on Bath Line.
- New station at Ashton Gate on Portishead line.
- New turn back facility at Yate.

The timetables developed have been reviewed using RailSys (a timetable planning and simulation tool developed by Network Rail) to check the running times with current infrastructure and rolling stock. Operational concerns in running the indicative

³ Email 07/07/2014 from client Project Manager.

timetables were identified and adjustments were made to the final timetables. The proposed Do-minimum timetables for a standard hour are attached in Appendix D.

6.2 Future Timetables

Electrification of the Bristol suburban railway network will bring changes in timetables with faster journey times. The journey time savings resulting from deployment of the electric rolling stock compared to the diesel rolling stock is summarised in the Table 8.

Table 8: Journey Time Saving due to Electrification

	Diesel Timetable Journey Time	Electrification Timetable Journey Time	Journey Time Saving due to Electrification	% Difference
Bristol Temple Meads to Portishead	20:00	19:00	01:00	5%
Bristol Temple Meads to Severn Beach	37:00	37:00	00:00	0%
Bristol Temple Meads to Weston-super-Mare	31:00	28:00	03:00	10%
Bristol Temple Meads to Yate	28:00	27:00	01:00	4%
Bristol Temple Meads to Bath Spa	20:00	19:00	01:00	5%
Bristol Temple Meads to Henbury	25:00	25:00	00:00	0%
Portishead to Bristol Temple Meads	20:00	19:00	01:00	5%
Severn Beach to Bristol Temple Meads	38:00	38:00	00:00	0%
Weston-super-Mare to Bristol Temple Meads	30:00	27:00	03:00	10%
Yate to Bristol Temple Meads	26:00	25:00	01:00	4%
Bath Spa to Bristol Temple Meads	20:00	18:00	02:00	10%
Henbury to Bristol Temple Meads	24:00	24:00	00:00	0%

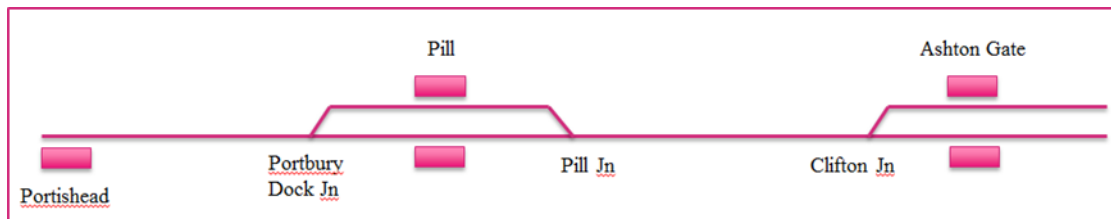
Overall, on average, around 4% journey time savings are expected due to electrification against the do-minimum timetable. Whilst journey time savings are small they are within the range that would be expected for an upgrade to rolling stock. There are a number of factors that limit journey time savings. There are timetabling or train pathing constraints to achievement of journey time savings. Furthermore, even trains are employed that have faster acceleration or deceleration, the improvements in running times are not always sufficient to trigger a change in the timetable and are ‘rounded down’. It is also the case that constraints on line speed mean that the performance of rolling stock is not always reflected in the timetable.

The above journey time savings have been used to develop the electrification (do-something) scenario timetables for Phase 1 and 2. The service patterns for the proposed EMU timetable is same as the do-minimum service patterns described in section 6.1 above. The proposed electrification timetables for a standard hour are attached in Appendix D.

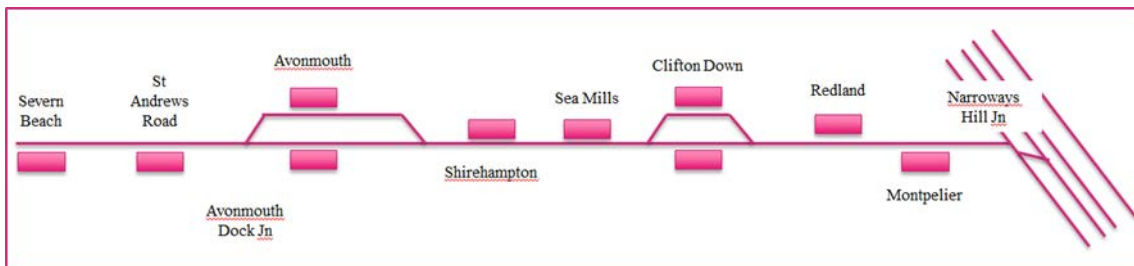
6.3 Conclusions

Exact half hour service pattern for the Severn Beach – Bath Spa and Avonmouth – Portishead services were not achieved due to the path availability on a single track section the Severn Beach and Portishead line.

For example, for exact half hour services at Portishead, Portishead – Bristol Temple Meads service will conflict with the Avonmouth – Portishead service, between Clifton Jnc and Pill Jnc. Therefore, the entire pattern of the Portishead – Bristol Temple Meads service should be re-timed at least three minutes before the Avonmouth – Portishead service passes at this location.



An exact half hourly service on Portishead – Avonmouth service and Severn Beach – Bath service will conflict on single line section between Clifton Down and Avonmouth Dock Jn. Similarly, Avonmouth – Portishead service and Bath – Severn Beach service will conflict between Clifton Down and Narrow Hill Jn. Therefore, the Up and the Down service should be re-timed to avoid potential performance risks.



Phase 2 service patterns with Henbury Loop were achieved with speed improvements on the Filton curve. As there are concerns regarding the turnaround time at Bristol Temple Meads which could have potential performance implications for the Henbury–Avonmouth – Portishead services. Reduction in additional stop on Henbury can provide some operational flexibility. Further performance modelling considering design speed of the new Henbury line should be undertaken for the next stage of the modelling. It could also be considered to run the Avonmouth – Portishead service as one set, and the Henbury – Bristol Temple Meads service as another set to avoid the conflict.

7 Demand and Revenue Forecasts

7.1 Approach

An elasticity-based forecasting approach, based on guidance from the Passenger Demand Forecasting Handbook (PDFH) has been adopted to prepare demand forecasts under diesel and electrification scenarios. The demand forecasting framework is based on two drivers:

- **Exogenous demand growth** - Exogenous factors are background changes which are assumed to be outside the direct control of the rail industry. These include factors such as GDP, employment, population, car ownership, car fuel costs, car journey times. The factors are constant under both diesel and electrification scenarios.
- **Endogenous demand growth** – Endogenous factors are scheme related initiatives which are assumed to be within the direct control of the rail industry. Endogenous factors for this scheme include timetable related Generalised Journey Time (GJT) and frequency improvements as well as non-timetable related service quality improvements.

This section sets out the result of demand and revenue forecasting with a more detailed explanation provided as a technical note in Appendix E.

7.1.1 Impact of Electrification

Electrification is expected to deliver higher demand for two reasons.

Journey Time Savings

As set out previously in this report, electric rolling stock offers marginal improvements in journey time. Lower journey times are expected to result in higher demand for MetroWest services.

The effects of timetable changes for existing stations/services have been modelled using MOIRA. MOIRA uses the mathematical framework based on established relationships between journey times and demand to estimate the change in demand due to timetable change. Both do-minimum and electrification scenarios have been modelled using the timetables described in Appendix D of this report.

Rolling Stock Quality Effects

Along with the timetable changes, the electrification of the Bristol suburban railway network is expected to offer improved service quality with the deployment of electric rolling stock.

Electric trains are quieter than diesel trains and is expected to offer a slightly improved ride quality. The impact of improvement in the ride quality is assumed to lead to an increase in demand across the study area.

This assumption is supported by evidence from various electrification studies which have shown that electrification leads to increase in demand by offering a better quality experience for passengers, often referred to as the “sparks effect”. It has been suggested that one of the reasons for the sparks effect is that people simply prefer electric trains (because they perceive them as more modern or because they value the environmental benefits of electrification). However, electrification is typically accompanied by other

improvements such as frequency enhancements, faster journey times and rolling stock upgrades and therefore it may be that passengers have responded to more tangible improvements.

Notwithstanding this, in practice the investment electrification would provide the impetus for switching to more modern rolling stock or refurbishment of existing units to a high standard. Such a step change may not occur under a diesel scenario and therefore there are good reasons for applying rolling stock quality factors.

Three factors have been chosen to reflect the improvement in rolling stock brought about by electrification: the ride quality, the quality of the train interior/condition and the quality of passenger information provision. It is difficult to be specific about the improvements in rolling stock that would result and therefore these factors have been combined as a proxy for the overall improvement.

Table 9: Incremental Value of Time Multipliers

	Level From	Level To	Commuting	Business/Leisure
Environment	Train in poor condition – with damaged fixtures and seating	Train in good condition – with slightly damaged areas	0.018	0.020
Environment	Extremely bumpy ride	Very smooth ride	0.033	0.037
Information	Audible announcements easily heard	Flat screen display showing relevant information	0.001	0.001
Total			0.052	0.058

Source: PDFH 5.1

Rolling stock quality factors have been applied only to journeys that begin and end within the Bristol suburban network on MetroWest services so that uplift in demand outside the study area are not included in overall scheme benefit estimates. The benefits of improved ride quality due to electrification are assumed to deliver benefits throughout the appraisal period.

7.2 Demand & Revenue Forecasts

The overall net increase in passenger demand and revenue resulting due to electrification of the Bristol suburban railway network is shown in Figure 6 and Figure 7 respectively.

The net increase in demand resulting from the electrification of Phase 1 is estimated to be around 44,000 trips (based on levels of demand in 2019). The increase in demand is associated with revenue of approximately £134,000. The Phase 1 demand uplift is estimated to grow by 48 % to 62,000 by 2033 due to the exogenous factors noted above. Demand growth is capped from 2033 onwards in line with the WebTAG guidance.

The net increase in demand for Phase 1 and 2 is estimated to be around 110,000 in the year 2025, rising to 133,000 by 2033. Approximately, 35% of net increase in revenue is due to journey time savings and 65% is due to rolling stock quality improvements.

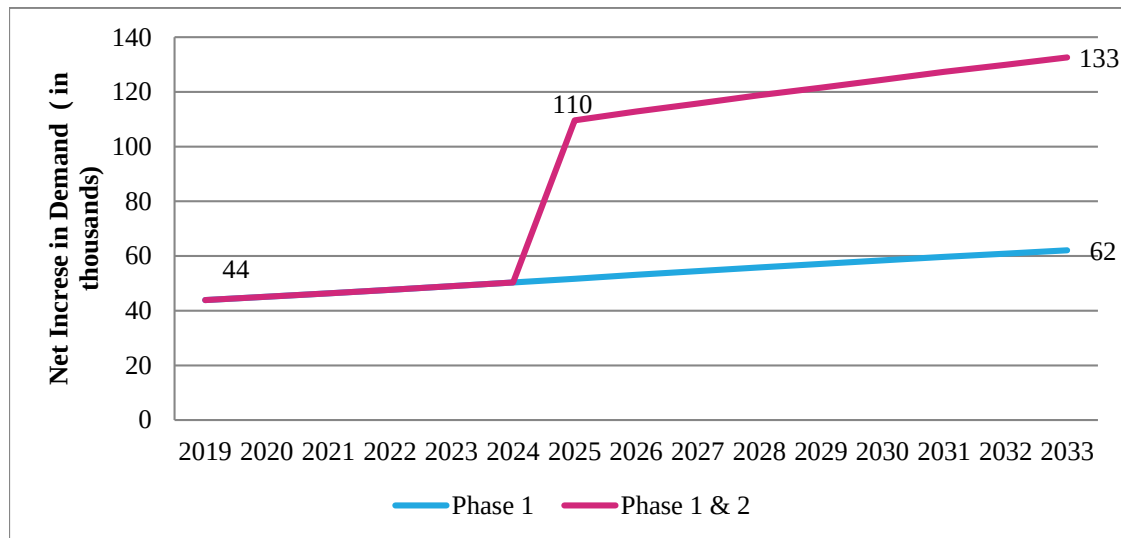


Figure 6: Net Increase in Demand (in thousands, 2013 levels)

The resultant revenue impacts of this increase in passenger numbers is as shown below in Figure 7.

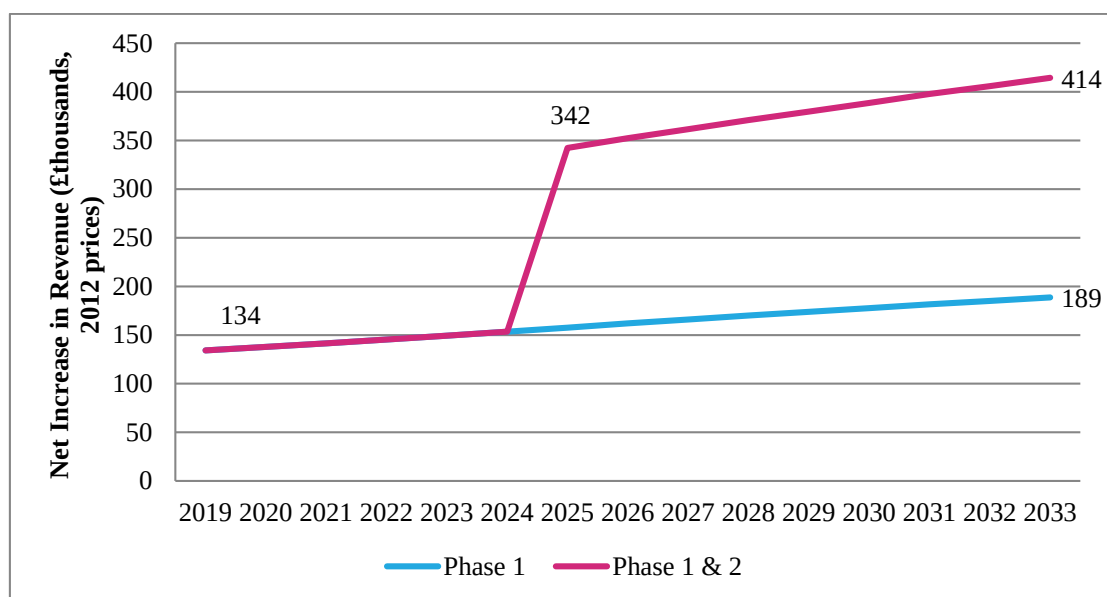


Figure 7: Net Increase in Revenue (£thousands, 2012 prices)

7.3 Capacity Assessment

An indicative assessment of the level of peak time demand that might be expected on each MetroWest train diagram has been undertaken in order to estimate the length of train that will be required on each diagram to inform the operating cost estimate. Whilst the base assumption in previous MetroWest reports has been two-car DMUs⁴, future demand growth may require longer trains to be used.

In the context of MetroWest, future capacity requirements are difficult to predict. This is because it is difficult to accurately allocated annual demand forecasts to specific peak

⁴ Bristol Area Rail Study Final Report, Halcrow

time services in the context of an expanding network of stations and services. Therefore, the assessment is necessarily high level and has been undertaken for the purposes of the business case, not for operational planning purposes.

The MOIRA model has been used to extract morning peak (07:00-10:00) train loading on arrival at Bristol Temple Meads for existing services. For new services peak loading has been estimated using the MOIRA loading data on the existing suburban MetroWest services. These load profiles have not been calibrated against any passenger counts and therefore individual trains loads may vary from the observed count data.

Estimated maximum load factors – the proportion of used capacity – have been estimated for each diagram in the ‘do-minimum’ scenario. This is shown in Figure 8 below. It can be seen that, whilst the majority of trains can be operated with two-car units, a number of trains may be overcrowded, particularly in later years of the appraisal.

The rolling stock requirement based on this assessment is summarised in Table 10.

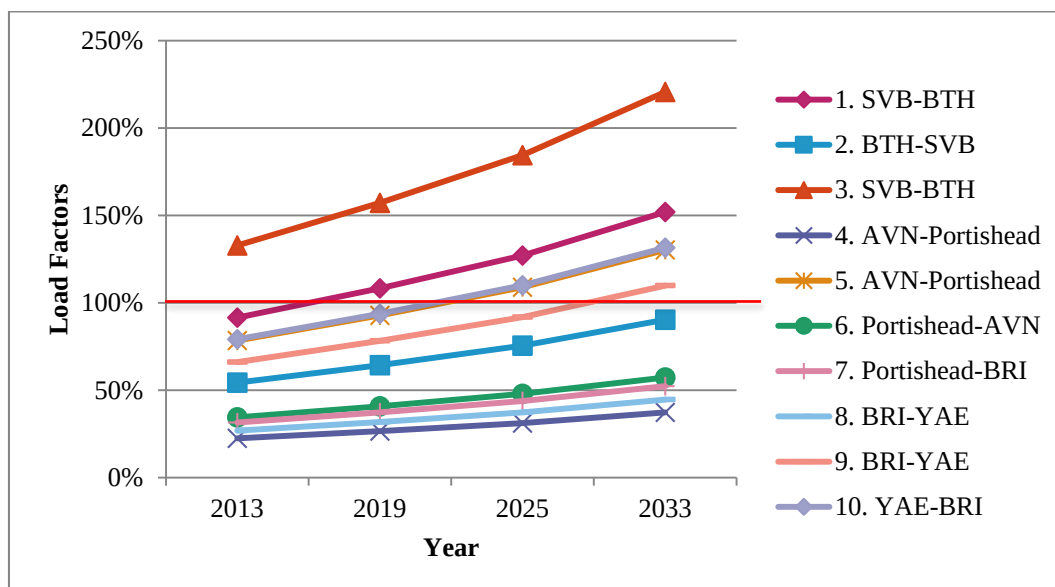


Figure 8: Max Load Factor based on Total Capacity by Diagram (Phase 1+2, DMU, Do-Min)

As noted, the demand analysis has been used to inform the train length and fleet size assumptions used in the operating cost assessment. Where a train reaches 100% of seated and standing capacity in the peak period, it is assumed that the capacity of the service is increased with an additional vehicle. By 2033, a mix of two, three and four-car trains are likely to be required.

Table 10: Rolling Stock requirement based on Total Capacity (Phase 1+2, DMU, Do-min)

Diagram	2013	2019	2025	2033
1 (Severn Beach-Bath Spa)	2-car	3-car	3-car	4-car
2 (Severn Beach-Bath Spa)	2-car	2-car	2-car	2-car
3 (Severn Beach-Bath Spa)	3-car	4-car	4-car	4-car
4 (Portishead-Bristol Temple Meads)	2-car	2-car	2-car	2-car
5 (Avonmouth-Portishead)	2-car	2-car	3-car	3-car
6 (Portishead-Avonmouth)	2-car	2-car	2-car	2-car
7 (Portishead-Avonmouth)	2-car	2-car	2-car	2-car
8 (Yate-Weston Super Mare)	2-car	2-car	2-car	2-car
9 (Yate-Weston Super Mare)	2-car	2-car	2-car	3-car
10 (Yate-Weston Super Mare)	2-car	2-car	3-car	3-car

7.4 High Growth Scenario

The demand forecasts developed for this study, using the PDFH approach, result in an overall growth rate of around 2.5% per annum. These forecasts are considered to be broadly in line with the Network Rail Western Route Study (which is in turn informed by the Market Studies) which suggests that demand growth on regional urban services into Bristol will be 2.4% per annum.

A review of historic growth rates at groups of MetroWest services based the Office of Rail Regulation (ORR) station usage data between 2008 and 2013 has been undertaken to understand recent trends in rail demand for the study area. The review shows that total rail demand on the MetroWest Lines has grown by 21% between 2008 and 2013, which is equivalent to an annual growth rate of 3.8 %. Taking out the major stations Bristol Temple Meads, Bristol Parkway and Bath Spa which use services other than Metrowest services, the patronage has grown by 41% between 2008 and 2013 (6.9% per annum).

In particular, total patronage on the Severn Beach line has experienced high growth of around 67% over the same period (10.8% per annum). A summary of recent trends is shown in Table 11.

Table 11: Rail Demand Trends

Station groupings	2008/09 to 2012/13 Total	2008/09 to 2012/13 Per annum	2011/12 to 2012/13 Per annum
MetroWest Lines	21%	3.8%	2.6%
Severn Beach Line	67%	10.8%	11.0%
Weston-super-Mare Line	26%	4.7%	2.4%
Bath Line	29%	5.2%	9.2%
MetroWest Lines (Ex Bristol Temple Meads, Bristol Parkway & Bath Spa)	41%	6.9%	7.5%

The comparison of predicted growth against the observed growth between 2008 and 2013 clearly shows that the MetroWest lines have been exceeding the predicted growth rates. Whilst it is far from certain that such rapid growth will be sustained, a sensitivity

test has been applied to reflect the fact that rail demand in Bristol has grown strongly in recent years. This also acknowledges that there is a significant degree of uncertainty attached to the rolling stock quality effect which will influence the results of the economic benefits. For this test, a 5% increase in demand per annum (twice that of the baseline forecast) has been allowed from 2013 to 2023. Rail demand is assumed to grow in line with PDFH growth factors from 2023 to 2033.

8 Economic Appraisal

The economic appraisal considers whether electrification offers good value for money. The appraisal has been carried out in accordance with the WebTAG guidance. There are three main elements of the appraisal – capital costs, operating cost savings, and user benefits & revenue impacts. Each of these are dealt with in turn and the overall results provided.

8.1 Scenarios

The following scenarios have been evaluated within the economic appraisal:

- Electrification in CP6 (2019-2024) of Metrowest Phase 1 and Phase 2
- Electrification in CP7 (2024-2029) of Metrowest Phase 1 and Phase 2

Sensitivity testing has also been undertaken for the following:

- Higher passenger growth than forecast in the base cases.
- Lower capital costs for Phases 1 and 2.
- MetroWest electrification building on a wider electrification programme in the South West.

8.2 Capital Costs

The capital cost estimate is described in detail in Section 4. Costs for depot construction or modification of £14m are included based on an assumed small, new depot located at St Philips Marsh. For the purposes of the economic appraisal, optimism bias of 40% has been applied to reflect the systematic tendency for costs to be underestimated. This is the level of optimism bias required for GRIP 3 rail projects. Whilst the cost estimates for Metrowest electrification do not have a GRIP status, they are benchmarked against cost estimates for other electrification schemes which are GRIP stage 2 or 3.

Costs are discounted to a common year and price base – 2010 – to allow comparison with scheme benefits.

Table 12: Capital Costs

	Phase 1	Phase 1 and 2
Capital Costs (£m 2014 prices)	£74.4m	£150.8m
Depot Costs (£m 2014 prices)	£14m	£14m
Power Supply (£m 2014 prices)	NA	£10m
Total Capital Costs (£m 2014 prices)	£88.4m	£174.8m
Total Capital Costs Including Optimism Bias (£m 2014 prices)	£123.8m	£244.7m
Present Value Costs £m (2010 prices)	£92.7m	£183.2m

8.3 Operation Cost Assessment

8.3.1 Assumptions

Rolling Stock Scenarios

One of the major influences on the business case is the assumptions that are made on rolling stock deployment over the 60-year appraisal period. The availability of electric and diesel rolling stock is highly uncertain, particularly in later years of the appraisal. Therefore the business case needs to make sensible and comparable assumptions about rolling stock deployment under both the ‘do-minimum’ option and the intervention options. The assumed rolling stock scenarios are given in the Table 13.

Table 13: Rolling Stock Scenarios

	2019 – 2024	2025-2029	2030-2039	2040-2079
Do-minimum	Life Extended Class 150 (Sprinters)	Cascaded Modern diesel	New Diesel	
Electrification	Cascaded Mid-Life EMU	Cascaded Modern EMU	New EMU	

As noted, in Section 5, the most likely diesel train option for the commencement of MetroWest services would be a Class 150 Sprinter train. It is considered that these trains are likely to reach the end of their useful economic life at around 2030.

For the purposes of the economic appraisal, it is assumed that, from 2030, sufficient cascaded modern diesel trains can be secured from other UK franchises to replace the existing fleet in its entirety. When this second cascaded fleet itself is retired, it is assumed that a new diesel fleet would need to be procured.

Based on the assessment of rolling stock availability, it is assumed that a mid-life EMU would be used in the event of electrification. For consistency, under the cascaded EMU option it is also assumed that the fleet is eventually replaced by newer cascaded EMUs and then New EMUs. However, it should be noted that the pipeline of new EMU procurements in the UK suggest that the availability of cascaded EMU options in the future are likely to be much less constrained than under a diesel scenario.

Fleet Size

The size of fleet (the number of diesel or electric vehicles) is based on the number of train diagrams required to operate the service, the train formation (number of vehicles required for each train) – which is in turn a product of the demand analysis – and the number of maintenance spares required.

A sample of the fleet size assumptions is given in Table 14. Crucially, electric trains come in a minimum three-car formation. Therefore, where demand can be catered for with a two-car diesel train, the switch to electrification results in an additional vehicle. Therefore, electrification results in an increase in the overall fleet size.

The number of spare units required is estimated based on typical ‘availability rates’ in the industry. Electric rolling stock requires less maintenance than diesel rolling stock and therefore achieves a higher level of availability.

Table 14: Fleet Size Assumptions

Scenario		Train Diagrams	Vehicles (2025)	Total Vehicles Including Spares (2025)	Vehicles (2035)	Total Vehicles Including Spares (2035)
Phase 1	Do-minimum	6	16	20	17	21
	Electrification	6	19	22	20	23
Phase 1 and 2	Do-minimum	10	25	31	27	33
	Electrification	10	31	37	32	35

Rolling Stock Costs

Rolling stock costs include monthly capital and maintenance lease charges for each rolling stock type in 2013. Lease rates for each stock type are estimated based on industry knowledge. Capital lease charges are assumed to remain constant in nominal terms and non-capital lease charges are assumed to grow in line with RPI.

Maintenance and cleaning costs are included on a per vehicle mile basis. Train and vehicle mileages are estimated based on the proposed train diagrams and include travel to and from the depot.

Diesel and electricity consumption rates are included in the rolling stock assumptions table in litres per vehicle mile or kWh per vehicle mile respectively. The fuel consumption for each diagram is multiplied by the cost per unit, the rate of which is based on industry knowledge. The DECC diesel and electricity price forecasts are applied to diesel and electrify costs.

Network Rail charges

Variable usage charges – reflecting the costs of track wear caused by trains – are charged on a per vehicle mile basis. These costs have been estimated based on current rates charged by Network Rail for similar vehicle types.

8.3.2 Results

Figure 9 illustrates the cost savings delivered by electrification under the base case scenario. Cost savings are very modest (even negative in the case of Phase 1 and 2 combined) in the early years of the appraisal from 2022 to 2030. This is because of the relatively low cost of the likely diesel rolling stock and the requirement, under electrification, for three-car trains. Cost savings increase significantly over time, peaking at over £3m per annum by 2040. In part this is due to real terms growth in diesel fuel prices and increasing fleet size (to cater for growing demand), but is primarily the result of rolling stock type changes that occur in 2030 and 2040.

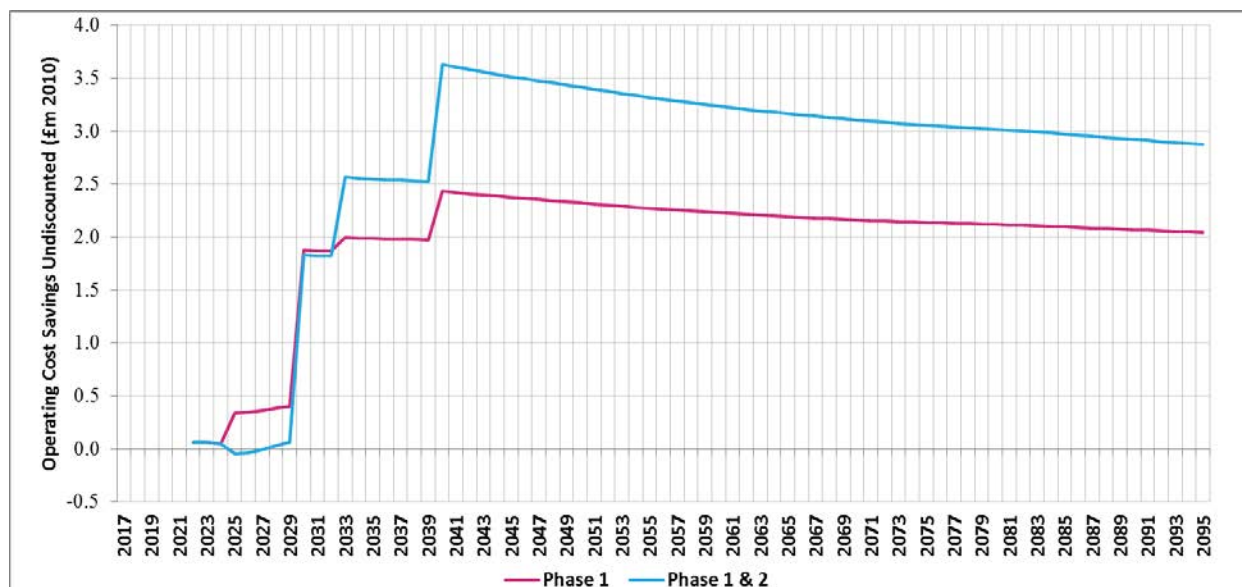


Figure 9: Operating Cost Savings

Over a 60-year period, operating cost savings – in present value (2010) terms – is £34.9m for the electrification of Phase 1 and £46.3m for the electrification of Phases 1 and 2 combined.

Table 15: Operating Cost Saving ('Base Case')

Scenario	Annual Cost Saving (£m, 2014 Prices)				60-Year Appraisal Period (£m, 2010 Prices Values)
	2025	2030	2035	2040	
Phase 1	-0.1	1.8	2.5	3.6	£34.9m
Phase 1 and 2	0.3	1.9	2.0	2.4	£46.3m

8.4 Overall Appraisal

8.4.1 Tests

The economic appraisal has been undertaken for a 'base case' and a range of sensitivity tests, reflecting the uncertainty surrounding some of the key assumptions:

- Timing;
- Demand Growth;
- Capital Costs; and
- Wider South West electrification programme.

8.4.2 Key Assumptions

Key economic assumptions are listed in Table 16.

Table 16: Key Assumptions

Input parameter	Values & data sources
Price Base	2010 (The DfT's current price base year)
Real prices and inflation	HMT's GDP deflator
Discount Rate	3.5% for first 30 years 3.0% for years 31 to 60
MetroWest Scheme Opening Year	Phase 1 2019 Phase 2 2021
Appraisal period	2022 – 2081 (2030 to 2089 for 'CP7 Tests')
Real terms fares growth	1% per annum from appraisal year 2013 to 2033, capped thereafter
Exogenous demand growth	Based on methodology in PDFHv5 .1, growth capped from 2033 onwards
Values of Time	As per WebTAG unit A1-3, Table A 1.3.1 and Table A 1.3.2
Marginal External costs of car use	As per WebTAG unit A5-4, Table A 5.4.2 for Urban roads and Rural Motorways. Estimate of km transferred from car from the National Transport Model

8.4.3 Results

Base Case

In the base case, assuming electrification in Control Period 6, the benefit-cost ratio for the electrification of MetroWest Phase 1 is 0.65:1 with a Net Present Value of -£18m. The case for the electrification of both Phases 1 and 2 is weaker with a benefit-cost ratio of 0.48 and a Net Present Value of -£64m.

If electrification takes place later, in Control Period 7 (completed by 2030), then the economic case improves considerably, with a benefit-cost ratio of 0.92:1 for Phase 1 and 0.66:1 for Phase 2.

The results of the base case are given in Table 17 below.

Table 17: Economic Appraisal: Base Case (£m 2010 prices/values)

	Electrification in Control Period 6		Electrification in Control Period 7	
	MetroWest Phase 1	MetroWest Phase 1 and 2	MetroWest Phase 1	MetroWest Phase 1 and 2
Costs and Revenue				
Capital expenditure	92.7	183.2	70.4	139.1
Operating expenditure	-34.9	-46.3	-30.4	-39.6
Revenue	-6.6	-13.3	-5.4	-11.5
Present value of costs (PVC)	<u>51.2</u>	<u>123.6</u>	<u>34.5</u>	<u>88.1</u>
Benefits				
Consumers travel time	25.2	47.6	23.9	46.4

	Electrification in Control Period 6		Electrification in Control Period 7	
	MetroWest Phase 1	MetroWest Phase 1 and 2	MetroWest Phase 1	MetroWest Phase 1 and 2
Decongestion	0.4	1.1	0.3	1.0
Infrastructure	0.0	0.0	0.0	0.0
Accident	0.3	0.8	0.2	0.7
Local Air Quality	0.0	0.0	0.0	0.0
Noise	0.0	0.1	0.0	0.0
Greenhouse Gases	13.6	19.7	11.9	17.6
Indirect Taxation	-6.4	-10.0	-4.5	-7.6
<u>Present value of benefits (PVB)</u>	<u>33.2</u>	<u>59.3</u>	<u>31.9</u>	<u>58.2</u>
Results				
<u>Net Present Value NPV = B+R-C</u>	<u>-18.0</u>	<u>-64.3</u>	<u>-2.7</u>	<u>-30.0</u>
<u>Benefit Cost Ratio BCR = B/(C-R)</u>	<u>0.65</u>	<u>0.48</u>	<u>0.92</u>	<u>0.66</u>

The primary reason that the business case for electrifying Phase 1 is more cost effective than the business case for electrifying both phases is that the inclusion of Phase 2 increases capital costs by a factor of 116% but delivers operating cost savings that are only 32% higher than for Phase 1. The reasons for this are:

- Phase 1 benefits from the fact that part of the network (between Bristol and Bath) would be electrified as part of the GWEP. Similarly, Phase 2 benefits from the electrification of the section of track from Bristol Temple Meads to Bristol Parkway. However, overall the track length required to be electrified for Phase 2 is 64 single track km compared with 39 single track km for Phase 1.
- With respect to operating costs, Phase 2 can be operated with the addition of just four train diagrams whereas Phase 1 requires six. Therefore the scope for savings is less.
- It is expected that Phase 2 could be operated mainly with two-car train sets in the 'do-minimum' case. Phase 1 requires a higher proportion of three or four-car trains. Therefore, the lack of a two-car EMU option imposes higher costs on operation when Phase 2 is included.

The build-up of costs and benefits for Phase 1 and Phases 1 and 2 is illustrated in the Figure 10 and Figure 11.

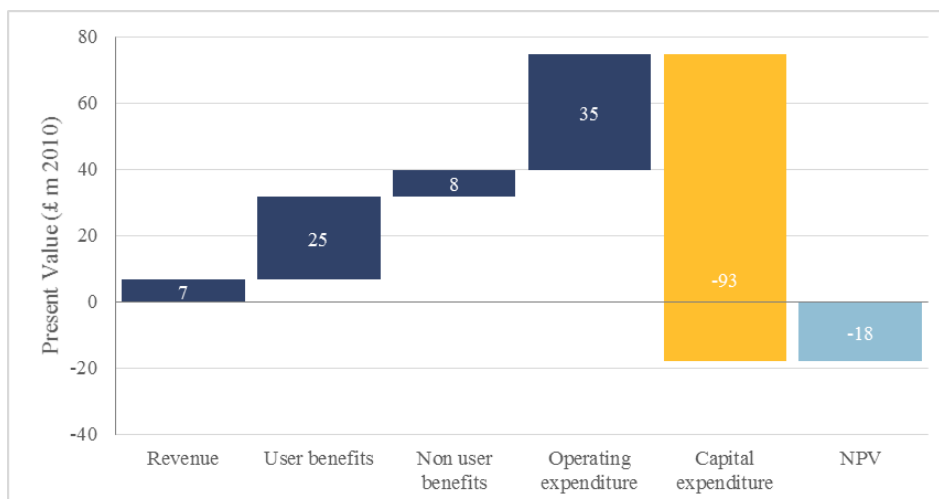


Figure 10: Appraisal Results - Metrowest Phase 1 (Base Case, CP6)

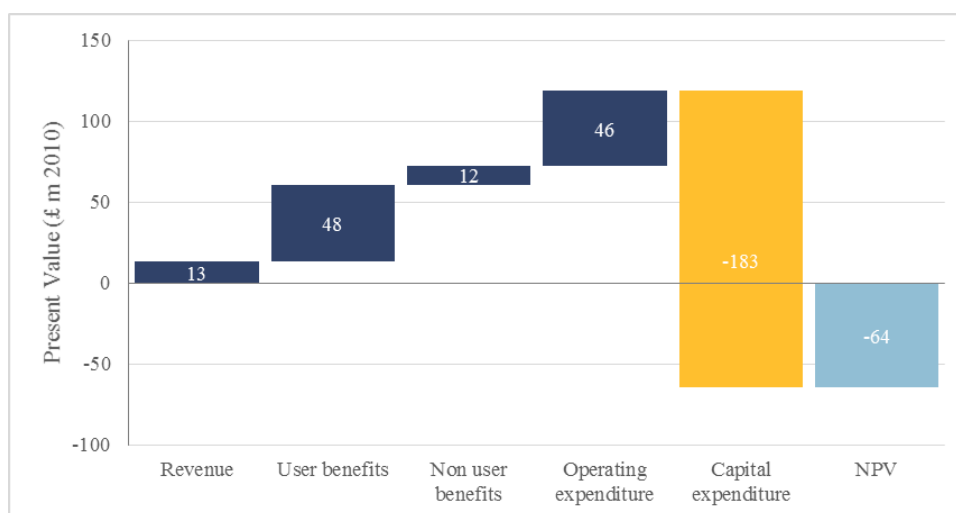


Figure 11: Appraisal Results - Metrowest Phase 1 and 2 (Base Case, CP6)

Within Phase 1, it is likely that electrification of the Severn Beach line would deliver higher benefits relative to the costs of electrifying the line in comparison to the Portishead Line. Similarly, in Phase 2, the cost of electrification between Yate and Bristol Temple Meads are dwarfed by the cost of electrifying between Bristol and Weston-super-Mare.

However, given the fixed costs of power supply and depots, and the inefficiencies of a smaller fleet of EMUs, it is unlikely to be attractive to ‘cherry pick’ routes for electrification. This approach would also limit the flexibility to operate train diagrams in an efficient manner – for example between Portishead and Portway, or between Yate and Weston-super-Mare. If through-running of services is compromised, there may also be capacity constraints to the achievement of the desired service frequencies.

The second key point from the appraisal is the fact that the appraisal result improves if electrification is delayed until Control Period 7 (CP7). Figure 12 and Figure 13 illustrate the build-up of the results with a CP7 electrification scheme.

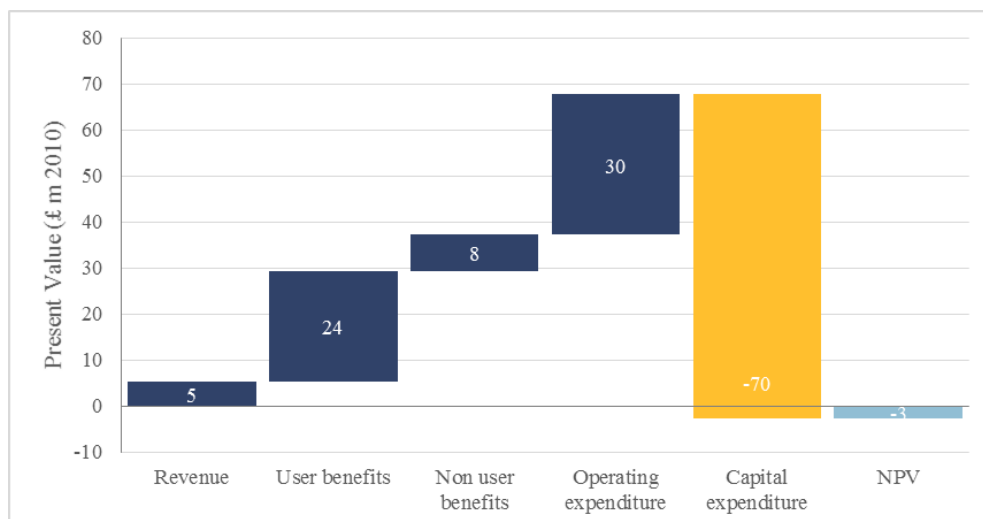


Figure 12 - Appraisal Results - Metrowest Phase 1 (Base Case, CP7)

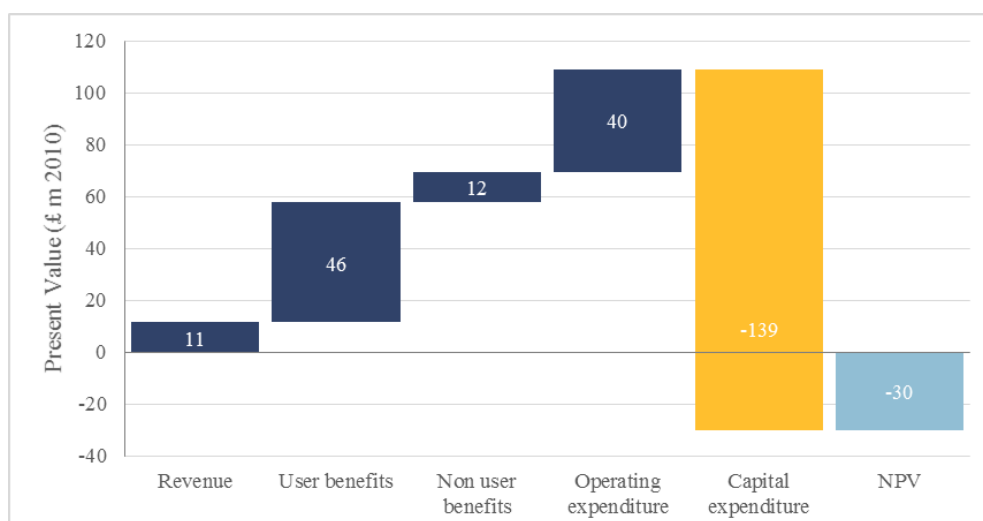


Figure 13 - Appraisal Results - Metrowest Phase 1 and 2 (Base Case, CP7)

There are two main reasons that explain why electrification in CP7 has a stronger case.

Firstly, by 2030 demand on the network is expected to be higher, resulting in higher user benefits and requiring higher capacity services (such that the overall fleet size will be larger).

Secondly, by 2030, the assumed 'do-minimum' fleet – Class 150 DMUs – would reach the end of their usable life and would need to be replaced with a more modern train type. From 2030 onwards, it is expected that the cost of diesel operation will increase relative to electric options. As set out in Section 5, increasingly commuter networks in the UK will be based on electric traction. This emphasis on electrification is having significant implications for the market for rolling stock in the UK. The market for new passenger rolling stock is increasingly moving away from diesel to electric trains. The electrification programme will greatly accelerate this trend and has signalled to suppliers that the market for new diesel trains will be eroded by electrification.

This trend has important implications for the case for electrification. Whilst there will be a number of diesel commuter fleets displaced as a result of electrification in the short

and medium term, in the longer term the supply of cascaded commuter diesel rolling stock may be more constrained. This could result in higher lease costs for diesel trains. It may also dictate that at some point in the future a new fleet of diesel trains will need to be procured. As noted, we assume that this point comes in 2040. With manufacturers increasingly focussing solely on electric trains, the differential in cost between new diesel and new electric trains is expected to be greater than the difference in costs between cascaded diesel and electric fleets.

High Growth Scenario

It is important to consider how the economic case for electrification changes if demand growth is higher than forecast in the base case. Demand forecasting is inevitably uncertain and, importantly, the approach to forecasting future crowding levels and capacity requirements has been undertaken at a relatively high-level. As noted in Section 8 rail demand on services into Bristol has been growing strongly in recent years. Should this rapid growth continue, the level of user benefits would be higher than the base case would suggest. Equally, the operating cost savings would be higher due to a larger fleet size, reducing the penalty imposed due to the lack of a two-car EMU.

The effects of this high demand growth assumption on overall economic benefits is summarised in Table 18. Overall, the user benefits and revenue impacts of electrification are increased by around 25% compared to the base case. Operating cost savings increase by between 23% (Phase 1 and 2) and 39% (Phase 1 only).

Under this scenario, the case for electrification of Phase 1 is considerably stronger. If it is assumed that electrification takes place in CP7, the benefit-cost ratio for this option increases to 2.15:1 with a positive net present value of £21m. This would place the scheme in the ‘high’ value for money category according to DfT guidance.

The case for the electrification of Phases 1 and 2 is also considerably improved but remains marginal with a BCR of 0.95:1, suggesting broadly ‘neutral’ value for money.

Table 18: Economic Appraisal: High Demand Growth (£m 2010 prices/values)

	Electrification in Control Period 6		Electrification in Control Period 7	
	MetroWest Phase 1	MetroWest Phase 1 and 2	MetroWest Phase 1	MetroWest Phase 1 and 2
Present value of costs (PVC)	36.1	110.1	18.1	73.5
Present value of benefits (PVB)	40.5	71.4	39.0	70.0
<u>Net Present Value NPV = B+R-C</u>	<u>4.4</u>	<u>-38.7</u>	<u>20.8</u>	<u>-3.5</u>
<u>Benefit Cost Ratio BCR = B/(C-R)</u>	<u>1.12</u>	<u>0.65</u>	<u>2.15</u>	<u>0.95</u>

Low Cost Scenario

Further tests have been undertaken of the sensitivity of the analysis to the capital costs of electrification. As noted, the UK is embarking on a major programme of electrification. Cost estimates for electrification schemes have risen in recent years and therefore the cost estimate for this scheme has been benchmarked against recent cost estimates. However, delivering lots of electrification schemes may, in the long run, result in efficiency savings or through better understanding, greater certainty in cost forecasting.

To reflect this possibility, Optimism Bias has been removed entirely from the cost estimates. The results of this test should be treated with caution given that there is no empirical basis for excluding Optimism Bias.

Under the low cost scenario, assuming electrification in CP7, electrification of the entire MetroWest network shows a positive result with a BCR of 1.2:1.

Table 19: Economic Appraisal: Low Cost + Base Case Demand (£m 2010 prices/values)

	Electrification in Control Period 6		Electrification in Control Period 7	
	Metrowest Phase 1	Metrowest Phase 1 and 2	Metrowest Phase 1	Metrowest Phase 1 and 2
Present value of costs (PVC)	24.7	71.3	14.4	48.4
Present value of benefits (PVB)	33.2	59.3	31.9	58.2
<u>Net Present Value NPV = B+R-C</u>	<u>8.5</u>	<u>-12.0</u>	<u>17.4</u>	<u>9.8</u>
<u>Benefit Cost Ratio BCR = B/(C-R)</u>	<u>1.34</u>	<u>0.83</u>	<u>2.21</u>	<u>1.20</u>

If the low cost and high demand growth scenarios are combined, the case for electrification is more compelling. For Phase 1, the benefit-cost ratio rises to above 4, placing the scheme in the ‘very high’ value for money category. If the electrification of Phase 1 were to be delayed until CP7, the financial benefits of electrification would, over the 60 year appraisal period – outweigh the financial costs such that the scheme would offer ‘no net cost’ to Government. For Phases 1 and 2, the benefit-cost ratio rises to above 2, but electrification still provides value for money only if electrification occurs in CP7.

Table 20: Economic Appraisal: Low Cost + High Demand Growth (£m 2010 prices/values)

	Electrification in Control Period 6		Electrification in Control Period 7	
	Metrowest Phase 1	Metrowest Phase 1 and 2	Metrowest Phase 1	Metrowest Phase 1 and 2
Present value of costs (PVC)	9.7	57.7	-2.0	33.8
Present value of benefits (PVB)	40.5	71.4	39.0	70.0
<u>Net Present Value NPV = B+R-C</u>	<u>30.8</u>	<u>13.7</u>	<u>41.0</u>	<u>36.2</u>
NPV/Capital Cost = NPV/k	0.47	0.10	0.81	0.36
<u>Benefit Cost Ratio BCR = B/(C-R)</u>	<u>4.19</u>	<u>1.24</u>	<u>NO NET COST</u>	<u>2.07</u>

Wider South West Electrification Programme (Phase 1 and 2 Only)

Partial electrification of a network tends to offer relatively limited benefits because it often results in continued operation of diesel services ‘under the wires’. By expanding electrification to a wide network, this can be avoided in order to maximise operating cost savings and benefits to passenger per km of track electrified.

This is illustrated in the analysis of the base case for MetroWest electrification. There is a stronger case for electrification of Phase 1 of MetroWest, in part, because the line between Bristol Temple Meads and Bath Spa will already be electrified as part of GWML electrification.

The standalone economic case for electrifying Phase 2 of MetroWest is less compelling. This is perhaps unsurprising given that the section of track between Bristol Temple Meads and Western-super-Mare would continue to cater for mainly diesel rolling stock travelling between Bristol and the South West.

Network Rail’s Western Route Study⁵ identifies a range of potential electrification schemes that will be assessed by Network Rail as part of the Electrification Strategy. This includes Bromsgrove to Bristol Parkway (as part of a ‘cross country’ electrification package) and between Bristol and Western-Super-Mare or beyond (as part of a ‘South West’ electrification package). Should these lines be programmed for electrification, this would significantly reduce the required scope and cost of Metrowest electrification. A more comprehensive approach to electrification offers a number of other important economies of scale. The costs of power supply and depot provision, for example, can be shared across a number of lines and services.

To illustrate this opportunity, a further test has been undertaken in which it is assumed that the costs of electrification between Yate and Bristol Temple Meads, and between Bristol Temple Meads and Western-Super-Mare, are met by a main line electrification scheme. In effect, electrification of the Phase 2 network can be achieved at the cost of wiring the Henbury line only. The requirement for a £10m cost of power supply has been excluded and the costs of depot provision have also been removed to reflect the opportunity for such costs to be shared across a much larger fleet of EMUs serving the South West. As a result the benefit-cost ratio for the electrification of Phase 1 and 2 increases to 1.06:1 if the scheme is delivered in CP6, or 1.59:1 if the scheme is delivered in CP7. If higher demand growth or lower capital cost sensitivity tests are applied the BCR rises significantly above 2.0:1 in all cases. This suggests that, if the main line is electrified, there would be a good economic case for extending electrification to the Metrowest network in its entirety.

⁵ Western Route Study (Long Term Planning Process) – Draft for Consultation. October 2014.

Table 21: Economic Appraisal: Wider South West Electrification Programme + Base Case Demand Growth (£m 2010 prices/values)

	Electrification in Control Period 6		Electrification in Control Period 7	
	High Cost	Low Cost	High Cost	Low Cost
Present value of costs (PVC)	55.8	22.8	36.6	11.6
Present value of benefits (PVB)	59.3	59.3	58.2	58.2
<u>Net Present Value NPV = B+R-C</u>	<u>3.5</u>	<u>36.5</u>	<u>21.5</u>	<u>46.6</u>
NPV/Capital Cost = NPV/k	0.03	0.44	0.25	0.74
<u>Benefit Cost Ratio BCR = B/(C-R)</u>	<u>1.06</u>	<u>2.60</u>	<u>1.59</u>	<u>5.02</u>

Table 22: Economic Appraisal: Wider South West Electrification Programme + High Demand Growth (£m 2010 prices/values)

	Electrification in Control Period 6		Electrification in Control Period 7	
	High Cost	Low Cost	High Cost	Low Cost
Present value of costs (PVC)	42.2	9.3	22.0	-3.0
Present value of benefits (PVB)	71.4	71.4	70.0	70.0
<u>Net Present Value NPV = B+R-C</u>	<u>29.1</u>	<u>62.1</u>	<u>48.0</u>	<u>73.0</u>
NPV/Capital Cost = NPV/k	0.25	0.75	0.55	1.17
<u>Benefit Cost Ratio BCR = B/(C-R)</u>	<u>1.69</u>	<u>7.71</u>	<u>3.18</u>	<u>NO NET COST</u>

8.4.4 Summary

The results of the economic appraisal are summarised in the following graphs which show the lower and upper bound appraisal results.

For Phase 1, the base case benefit cost ratio is 0.65:1. Under a more optimistic set of demand and cost assumptions, assuming electrification in CP7, electrification could deliver an overall positive financial return (such that the scheme could be delivered at 'no net cost' to government in the long term).

For Phases 1 and 2 combined, the benefit cost ratio ranges from 0.48:1 in the base case to 2.0:1 under more optimistic assumptions. If it is assumed that a wider programme of electrification is delivered, then a positive financial return might also be expected for Phase 1 and 2.

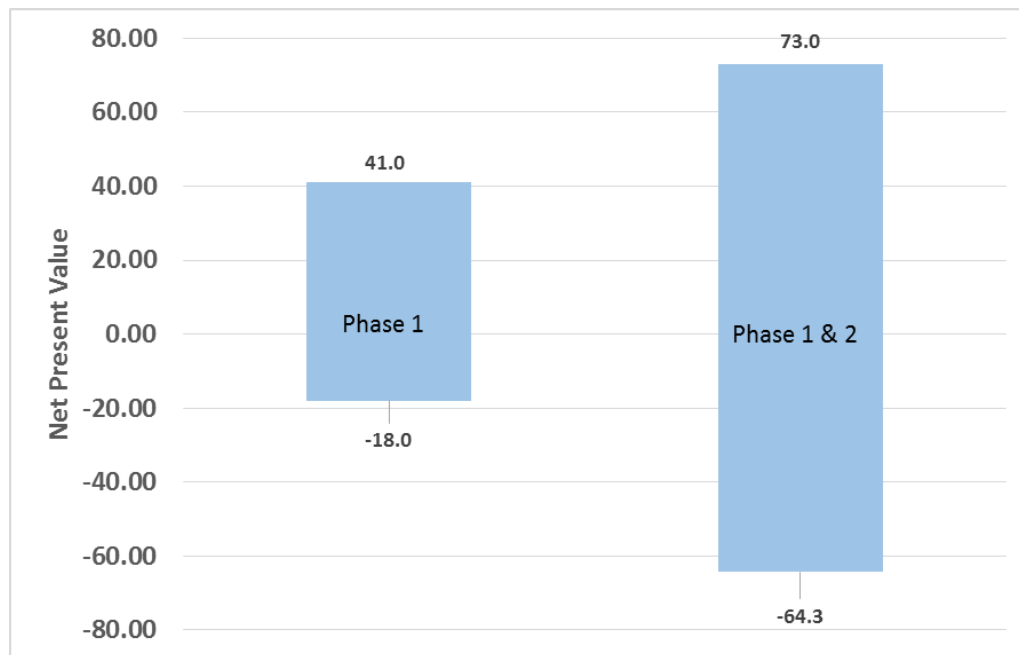


Figure 14: Overall Summary (Net Present Value)

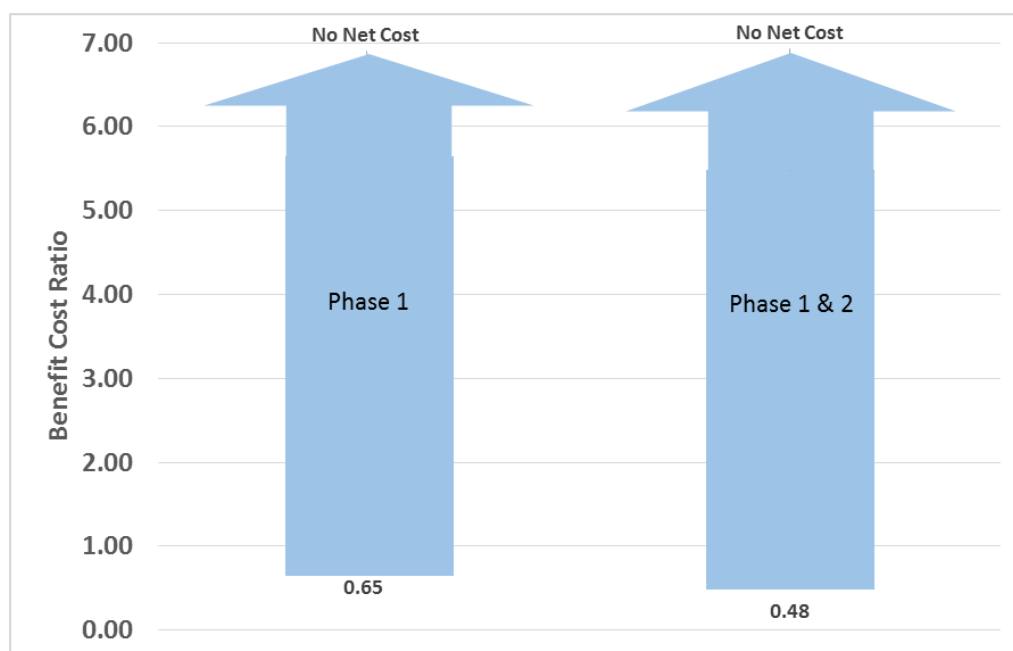


Figure 15: Overall Summary (Benefit-cost ratio)

8.5 Conclusions

In conclusion, if considered as a standalone scheme, electrification of the MetroWest network is unlikely to offer good value for money in the short term. It is therefore unlikely that operating cost savings and user benefits will outweigh the capital costs of electrification. Hence the benefit-cost ratio for electrification of Phase 1 is 0.65 and Phases 1 and 2 combined is 0.48

The intensity of the service on the MetroWest network – the frequency of services, the size of the fleet and the level of demand – is less than on other parts of the electrified

network in the UK. Furthermore, the number of structures on the route and the requirements for power supply dictated that the capital costs are relatively high.

As a high-level means of comparison, the capital cost of electrifying the MetroWest network is considered to be some 30% higher than the current cost estimate for the electrification of the Valley Lines network in South Wales. Forecast demand per km of track requiring wires is approximately 13% lower on the MetroWest network compared to the Valley Lines, whilst predicted future fleet size and train mileage is also some 20% to 30% lower for MetroWest.

However, there is a good case for electrifying the network in the longer term. The relative availability and cost of diesel rolling stock, combined with rising demand, is likely to tip the balance in favour of electrification at the point in time that the existing diesel fleets become life expired. If considered as a CP7 scheme, the benefit cost ratio for electrification increases to between 0.66:1 and 2.07:1 for Phases 1 and 2 combined. Under high passenger demand scenarios – which reflect current rather than forecast annual passenger growth – the benefit cost ratio increases further.

Importantly, if considered as part of a wider programme of electrification in the South West, the case for Metrowest electrification becomes compelling. If it is assumed that the main line between Bromsgrove, Bristol and onward to Western-Super-Mare is electrified, then the benefit cost ratio rises above 1.5:1 for all scenarios.

9 Conclusions and Recommendations

9.1 Conclusions

Arup were appointed by Bristol City Council on behalf of the West of England Partnership to appraise the case for electrification of MetroWest.

The MetroWest project is designed to create a step change in local rail services and is planned for delivery in two phases. Phase 1 will provide half hourly train services for the Severn Beach line, between Bristol Temple Meads and Bath Spa, and on the reopened Portishead line. Phase 2 will provide half-hourly train services to Yate and Weston-super-Mare and provide hourly services on a reopened Henbury line.

The current proposals have MetroWest services operated by Diesel Multiple Units (DMU). With proposed electrification of the Great Western mainline these units will be operating “under wires” for a significant proportion of their route, particularly Phase 1 routes, and Arup has been appointed to appraise the case for electrification of all MetroWest services.

Rail electrification requires significant investment in overhead lines, power distribution, rolling stock and depot/stabling facilities. The potential benefits of electrification, providing justification for this investment include:

- Reduced operating costs to franchise operators as a result of lower fuel, leasing or vehicle and line maintenance costs.
- Reduced journey times between stations as a result of the improved performance of EMU. This provides passenger journey time benefits and also additional timetable flexibility/reliability for operators.
- Improved perception of rail services potentially resulting in modal shift to rail from other modes – the “sparks” effect.

A review of the current and proposed rail network has been undertaken to inform cost estimates for electrification of MetroWest lines. We have also had discussions with Network Rail regarding power supply and distribution and considered the cost of new depot facilities. In total a capital investment of £88.5m is required for Phase 1 and £86.5m for Phase 2 resulting in a total capital investment of £175m.

There are practical and economic reasons for launching the Metro in diesel. The programme of electrification in the UK means that CP6 is the earliest that electrification could be delivered. Furthermore, the short and medium term availability of EMUs is uncertain, particularly given the relatively small fleet size required to operate MetroWest. Cascaded rolling stock provides the most cost effective means of procurement for MetroWest and with a large number of electrification projects currently being delivered competition for these units will be significant. Conversely the short to medium term availability of DMUs is good with a range of fleets due for cascade.

An appraisal of the economic case shows that if delivered in CP6, it is unlikely that electrification will offer good value for money. The economic appraisal indicates that the BCR may be below one for Phase 1. The business case for electrification of Phase 2 is weaker because of the additional costs associated with the electrification between Bristol and Western-super-Mare to service a relatively small number of additional electric services.

However, there is a good case for electrifying the network in the longer term. The relative availability and cost of diesel rolling stock, combined with rising demand, is likely to tip the balance in favour of electrification at the point in time that the existing diesel fleets become life expired. If considered as a CP7 scheme, the benefit cost ratio for electrification increases to between 0.66:1 and 2.07:1 for Phases 1 and 2 combined.

Importantly, if considered as part of a wider programme of electrification in the South West, the case for Metrowest electrification becomes compelling. If it is assumed that the main line between Bromsgrove, Bristol and onward to Western-Super-Mare is electrified, then the benefit cost ratio rises above 1.5:1 for all scenarios.

Therefore, in the short to medium term, operation of MetroWest services using diesel rolling stock would be the preferred option, with electrification reconsidered for CP7 when existing diesel rolling stock will need to be retired and electrified rolling stock will provide a more significant operational cost saving. Furthermore by CP7 the south-west would have one of the only sections of the UK intercity network without electrification. The political and financial case for electrifying of lines south of Bristol would be improved if considered as part of a more comprehensive programme of electrification in the south west.

9.2 Recommendations

It is recommended that the West of England Partnership and rail industry stakeholders continue to plan for the launch of MetroWest as a diesel network. The programme should focus on delivering the highest quality service possible to stimulate new demand and long term growth.

If launching in diesel, MetroWest still need a rolling stock strategy. Rolling stock solution and quality is important in delivering higher demand and revenue, particularly in the context of MetroWest, which needs to change the passenger perception of rail travel. The rolling stock needs to be the most efficient and highest quality on offer. At present the 165s may be a more attractive option for the Metrowest and the potential for securing these fleets should be explored as part of the next refranchising process.

Secondly, whatever the stock type, the rolling stock needs to be refurbished to a high standard. Whilst this requires initial investment, it will deliver value in the long term through higher revenue. The interior layout should be considered carefully, to include features such as sufficient bicycle storage or metro-style layouts to aid rapid boarding and alighting if required. Delivering such improvements in the medium term will act to reinforce the actual and perceived step change in rail services being delivered in the West.

In the long term, the case for electrification is much stronger. CP7 looks like an obvious departure point because of the need to replace ageing diesel fleets by around 2030. At this point, the economic case for electrification is likely to be considerably more positive. Furthermore, by CP7 the rail industry may have more capacity to deliver electrification schemes as part of the next generation of electrification schemes. There is also likely to be more clarity around the costs of electrification.

Finally, Metrowest electrification should be considered as part of a more comprehensive strategy for electrification in the South West of England. The case for Metrowest electrification cannot be separated from the case for electrifying the between Birmingham and Bristol and to the south west of Bristol to Weston-super-Mare, Exeter

or beyond. A co-ordinated approach between authorities in the South West should therefore be taken when promoting the case for electrification in this part of the UK.

Appendix A

Chainages of MetroWest Lines

P1 Portishead to BTM	Distance from Origin (m)	No. of Platforms	Min. Platform Length (m)
Portishead (closed)	0	INA	INA
Pill (closed)	7262	INA	INA
Clifton Bridge Station (closed)	12734	INA	INA
Ashton Gate	13337	INA	INA
Parson Street	15249	2	92
Bedminster	16717	2	101
Bristol Temple Meads	18206	15	82

P1 Severn Beach to BTM	Distance from Origin (m)	No. of Platforms	Min. Platform Length (m)
Severn Beach	0	1	121
St Andrews Road	4305	1	155
Avonmouth	7363	2	82
Shirehampton	9616	1	128
Sea Mills	12231	1	118
Clifton Down	15611	2	108
Redland	16556	1	120
Montpelier	17300	1	132
Stapleton Road	19276	2	211
Lawrence Hill	20197	2	114
Bristol Temple Meads	21887	15	82

P1 Bath to BTM

Ignored as already to be electrified

INA = Information Not Available

P2 Henbury to BTM	Distance from Origin (m)	No. of Platforms	Min. Platform Length (m)
Holesmouth/Hallen Marsh JN	0	-	-
Chittening (closed)	845	INA	INA
Hallen Halt (closed)	3883	INA	INA
Henbury (closed)	5560	INA	INA
Charlton Halt (closed)	7229	INA	INA
North Filton (closed)	8860	-	-
Filton West JN No. 2	8932	-	-
Filton Abbey Wood	9656	3	108
Horfield (closed)	10762	INA	INA
Ashley Hill (closed)	12633	INA	INA
Narrowways Hill JN	13418	-	-
Stapleton Road	14086	2	211
Lawrence Hill	15007	2	114
Dr Days JN	15591	-	-
Bristol East JN	16174	-	-
Bristol East JN	16174	-	-
Bristol Temple Meads	16697	15	82

P2 Weston-super-Mare to BTM	Distance from Origin (m)	No. of Platforms	Min. Platform Length (m)
Weston Super Mare	0	2	210
Weston Milton	2032	1	184
Worle (closed)	3279	-	-
Worle	4035	2	100
Puxton (closed)	4989	INA	INA
Yatton	10762	2	121
Nailsea & Backwell	17099	2	121
Flax Bourton (closed)	20559	INA	INA
Parson Street	27117	2	92
Bedminster	28586	2	101
Bristol Temple Meads	30075	15	82

P2 BTM to Yate	Distance from Origin (m)	No. of Platforms	Min. Platform Length (m)
Bristol Temple Meads	0		
Lawrence Hill	1690	2	114
Stapleton Road	2611	2	211
Ashley Hill (closed)	4064	INA	INA
Horfield (closed)	5934	INA	INA
Filton Abbey Wood	7041	3	108
Bristol Parkway	11004	4	255
Winterbourne (closed)	14102	INA	INA
Coalpit Heath (closed)	16315	INA	INA
Yate	20982	2	103

Phase I - Portishead to BTM notes

Station/Feature	Chainage			ELR	Cum. Chainage (m)	Over Track		Tunnels	Under Track		Notes	Linespeed (mph)	# Tracks	Features
	Mi	Ch	Yd			Footbridges	Roads		Culverts	Roads				
Portishead (closed)	129	53	0	MLN1			8			3	Potential for loop?		1	
Pill (closed)	125	12	0	MLN1	0		2	2		2	Pill Tunnel 30ch, Sandstone tunnel 4ch		1	
Clifton Bridge Station (closed)	121	60	0	MLN1	5471.7696	2	6	2		10	Clifton Bridge Tunnels 2 & 1 , 10.5ch & 3ch		1	Proposed turnaround at 122mi 23ch
Ashton Gate	121	30	0	MLN1	6075.2736		3			2			2	
Parson Street	120	15	0	MLN1	7986.3696	1	1			5		40, 90, 25	3	3rd track introduced after Parson Street to Bedminster
Bedminster	119	22	0	MLN1	9454.896		1			4	Bath Road A4	40, 90, 90, 25	4	
Bristol Temple Meads	118	28	0	MLN1	10943.5392						Numerous under track			
TOTAL					10943.5392	3	21	4	0	26				

(47.5ch Total)

Phase I - Severn Beach to BTM Notes

Station/Feature	Chainage			ELR	Cum. Chainage (m)	Over Track		Tunnels	Under Track		Notes	Linespeed mins (mph)	# Tracks	Features
	Mi	Ch	Yd			Footbridges	Roads		Culverts	Roads				
Severn Beach	11	64	0	AMB	0	1	2		11	10		30	1	
St Andrews Road	14	38	0	AMB	4304.9952									
	16	3	0	AMB	6819.5952		1					15	1	
	9	29	0	CNX	6819.5952									
Avonmouth	9	2	0	CNX	7362.7488							30	2	Loop around Avonmouth Station
	9	2	0	CNX	7362.7488		1			1			1	Single track after loop, OTW to Shirehampton
Shirehampton	7	50	0	CNX	9615.8304		2		3	3		30	1	
Sea Mills	6	0	0	CNX	12231.0144		3	1			Clifton Down Tunnel 1mi	30	1	
Clifton Down	3	72	0	CNX	15610.6368	2	5					15	1	Loop around Clifton Down station
Redland	3	25	0	CNX	16556.1264		2					15	1	
Montpelier	2	68	0	CNX	17300.448	2	1	1		2	Montpelier tunnel 22ch	15	1	
Narrowways Hill JN	2	3	1	BSW	18607.1256	1				4		60-75	2	
Stapleton Road	1	49	17	BSW	19276.4664		2			4		60-75	2	
Lawrence Hill	1	4	3	BSW	20194.524		3		2				4-2	From 4No. to 2No. tracks
Dr Days JN	0	55	4	BSW	20776.9968		2							
Bristol East JN	0	26	5	BSW	21359.4696							40, 25, 25, 25	4	
Bristol East JN	118	2	5	MLN1	21359.4696						Numerous under track			
Bristol Temple Meads	118	28	6	MLN1	21882.5064									
						Footbridges	Roads	Tunnels						
TOTALs					18607.1256	5	17	2	14	16				

(1mi 22ch Total)

Phase II - Henbury to BTM Notes

Station/Feature	Chainage			ELR	Cum. Chainage (m)	Over Track		Tunnels	Under Track		Notes	Linespeed (mph)	# Tracks	Features
	Mi	Ch	Yd			Footbridges	Roads		Culverts	Roads				
Holesmouth/Hallen Marsh JN	118	42	0	AFR	0									Ties into Severn Beach Line
Chittening (closed)	118	0	0	AFR	844.9056				13	8		60	2	
Hallen Halt (closed)	116	9	0	AFR	3882.5424		3					60	2	
Henbury (closed)	115	0	0	AFR	5559.639782		4		2			60	2	
Charlton Halt (closed)	114	0	0	AFR	7229.173248		2	1	2		Charlton Tunnel 302yds long	60	2	
North Filton (closed)	113	0	0	AFR	8859.760589		1						2	
Filton West JN No. 2	112	78	0	AFR	8931.8592								2	
Filton Abbey Wood	4	30	0	BSW	9656.064		2		1			75	2	3 Platforms at FAW
Horfield (closed)	3	55	0	BSW	10762.488	1	1		2	2		60-75	2	Lines already electrified as part of the GWML Electrification Scheme
Ashley Hill (closed)	2	42	0	BSW	12633.3504	1			1	3		60-75	2	
Narrowways Hill JN	2	3	0	BSW	13417.9056	1				4		60-75	2	
Stapleton Road	1	49	17	BSW	14086.332		2			4		60-75	2	
Lawrence Hill	1	4	0	BSW	15007.1328		3		2				4-2	From 4No. to 2No. tracks
Dr Days JN	0	55	0	BSW	15590.52		2							Lines already electrified as part of Phase I
Bristol East JN	0	26	0	BSW	16173.9072									
Bristol East JN	118	2	0	BSW	16173.9072						Numerous under track			
Bristol Temple Meads	118	28	0	BSW	16696.944									
						Footbridges	Roads	Tunnels						
TOTALS					8931.8592	0	10	1	17	8				

(14ch)

Phase II - Weston-super-Mare to BTM Notes

Station/Feature	Chainage			ELR	Cum. Chainage (m)	Over Track		Tunnels	Under Track		Notes	Linespeed (mph)	# Tracks	Features
	Mi	Ch	Yd			Footbridges	Roads		Culverts	Roads				
Weston Super Mare	137	33	0	WSM		2	3		8			60	1	
Weston Milton	136	12	0	WSM	2031.7968		1		3			60	1	
Worle (closed)	135	30	0	WSM	3279.0384							40	1	
Worle JN	135	11	0	WSM	3661.2576		1							
Worle JN	135	0	0	MLN1	3882.5424				1			100	2	
Worle	134	42	9	MLN1	4638.7512	1	1		1	1		100	2	
Puxton (closed)	133	0	0	MLN1	7101.2304		2		8	4		100	2	25mph up and down loop close to Yatton
Yatton	130	28	0	MLN1	11365.992	3	5		6	9		100	2	
Nailsea & Backwell	126	33	0	MLN1	17702.784	1	3		5	5		100	2	
Flax Bourton (closed)	124	0	0	MLN1	21585.3264	3	9	1	2	7	Flax Bourton Tunnel - 106 yds	100-90	2	
Parson Street	120	15	0	MLN1	27720.9504	1	1			5		40, 90, 25	3	3rd track after Parson Street to Bedminster
Bedminster	119	22	0	MLN1	29189.4768		1			4	Bath Road A4	40, 90, 90, 25	4	
Bristol Temple Meads	118	28	0	MLN1	30678.12						Numerous under track			Lines already electrified as part of
TOTALS					27720.9504	10	25	1	34	26				

(5ch)

Phase II - Yate to BTM Notes

Station/Feature	Chainage			ELR	Cum. Chainage (m)	Over Track		Tunnels	Under Track		Notes	Linespeed (mph)	# Tracks	Features	
	Mi	Ch	Yd			Footbridges	Roads		Culverts	Roads					
Bristol Temple Meads	118	28	0	MLN1	0						Numerous under track			15No. Platforms	Lines already electrified as part of Phase I
Bristol East JN	118	2	0	MLN1	523.0368								4		
Bristol East JN	0	26	0	BSW	523.0368		2				40, 25, 25, 25		4		
Dr Days JN		55	0	BSW	1106.424		3		2				4-2	From 4No. to 2No. tracks	
Lawrence Hill	1	4	0	BSW	1689.8112		2			4		60-75	2		
Stapleton Road	1	49	17	BSW	2610.612										
Narrowways Hill JN	2	3	0	BSW	3279.0384	1			1	3		60-75	2		
Ashley Hill (closed)	2	42	0	BSW	4063.5936	1	1		2	2		60-75	2		
Horfield (closed)	3	55	0	BSW	5934.456		2		1			75	2	3 Platforms at FAW	
Filton Abbey Wood	4	30	0	BSW	7040.88	1	1		5	4		60	2	Filton Junction	
Patchway JN no. 2	5	61	0	BSW	9273.8448				4	1			2		
Patchway JN no. 2	112	68	0	SWB	9273.8448										
Stoke Gifford JN No. 2	112	5	0	SWB	10541.2032								2		
Stoke Gifford JN No. 1	111	79	0	SWB	10661.904					1			2		
Stoke Gifford West JN	111	73	0	SWB	10782.6048				1				2		
Bristol Parkway	111	62	0	SWB	11003.8896		3			4		100-125	2	Crosses Winterbourne Viaduct 139yds	Lines already electrified as part of the GWML Electrification Scheme
Winterbourne (closed)	109	68	0	SWB	14101.8768		1		1	5		100-125	2	Crosses Huckford Viaduct 269yds	
Coalpit Heath (closed)	108	38	0	SWB	16314.7248	1			1	4		100-125	2		
Westerly JN	107	14	0	SWB	18406.872				3	4		30	2		
Yate South JN	120	2	11	YAT	20529.1944							40-90	2		
Yate	119	0	0	YAT	22188.8304										
						Footbridges	Roads	Tunnels	Culverts	Roads					
TOTALS					3781.9584	0	0	0	3	4					

A1

Appendix B

Structural Clearances by ELR

Structural Clearances Summary

Open Route	5100
Optimal Station Bridges	5800
Sub-Optimal Station Bridges	5400

https://mapsengine.google.com/map/edit?mid=zAeLkvWjUg3E.kOV_tE_YE93Q

Phase	Route	ELR	Structure Name	Structure Type	Chainage			Clearance	Status	Distance to be Raised	Route Status	Notes / Commentry	Proposal	Estimated Cost
1	Portishead to BTM	POD	Portishead (Closed)	Station	129	53	0		N/A	N/A	Station	NGD information not provided for ELR: POD		-
1	Portishead to BTM	POD	Pill (Closed)	Station	126	12	0		N/A	N/A	Station	NGD information not provided for ELR: POD		-
1	Portishead to BTM	POD	Pill Station overbridge	Bridge	126	8	0	4800	Foul	1000	Station	NGD information not provided for ELR: POD - Flat deck, dual and signgle lanes, close to junctions and surrounded by residential properties. Close to viaduct so lowers not recommended. Clearance not mentioned so assumed to both be 4800mm. Likley that services are present in the road. Close to propose station.	Track lower / OLE	£2,500,000
1	Portishead to BTM	POD	Pill Overbridge	Bridge	126	7	0	4800	Foul	300	Open			
1	Portishead to BTM	POD	Pill Tunnel	Tunnel	125	63	5	4640	Foul	460	Tunnel	NGD information not provided for ELR: POD - nearly 700m long single bore tunnel. Assumed to have 4640mm. clearance, though from previous examination reports it looks less constrained. OLE solution would be the most feasible as cheapest and least intrusive.	Track lower / OLE solution	£350,000
1	Portishead to BTM	POD	Pill Tunnel	Tunnel	125	33	0	4640	Foul	460	Tunnel			
1	Portishead to BTM	POD	Cages Overbridge	Bridge	124	77	0	6000	Clear	N/A	Open	NGD information not provided for ELR: POD. Pictures from examiation reports show large clerances, 6000mm assumed.	-	-
1	Portishead to BTM	POD	Pill Sandstone Tunnel No. 3	Tunnel	123	81	0	4640	Foul	460	Tunnel	NGD information not provided for ELR: POD. Nearly 90m long single bore tunnel. Assumed to have 4640mm clearance. OLE solution would bet he most feasible as cheapest and least	OLE solution	£50,000
1	Portishead to BTM	POD	Pill Sandstone Tunnel No. 3	Tunnel	123	77	0	4640	Foul	460	Tunnel			
1	Portishead to BTM	POD	Clifton Bridge Tunnel No. 2	Tunnel	122	62	12		N/A	N/A	Tunnel	NGD information not provided for ELR: POD. Approx. 230m long single line tunnel appears to be cut through rock with no linings at the portals. Assumed to have 4640mm clearance though headroom looks limited in previous work stream's inspections. The cost of getting clearance to 4640mm is assumed to be capture in the previous study.	OLE solution	£150,000
1	Portishead to BTM	POD	Clifton Bridge Tunnel No. 2	Tunnel	122	52	0		N/A	N/A	Tunnel			
1	Portishead to BTM	POD	Clifton Tunnel No.1	Tunnel	122	32	11	5000	Foul	100	Tunnel	NGD information not provided for ELR: POD. Nearly 300m long tunnel built for dual tracks only accomodates a single line now. Assumed to have a generous minimum clearance of	OLE solution	£180,000
1	Portishead to BTM	POD	Clifton Tunnel No.1	Tunnel	122	30	0	5000	Foul	100	Tunnel			
1	Portishead to BTM	POD	Clifton Bridge Overbridge	Bridge	121	68	0		N/A	N/A	Open	NGD information not provided for ELR: POD. Assumed to have a 4640mm clearance. A small road not open to the public.	Recon	£150,000
1	Portishead to BTM	POD	Clifton Bridge Station (Closed)	Station	121	60	0		N/A	N/A	Station		-	-
1	Portishead to BTM	POD	Footbridge	Footbridge	121	58	0		N/A	N/A	Open	NGD information not provided for ELR: POD. Assumed to have 4640mm clearance.	Jack	£75,000
1	Portishead to BTM	POD	Purells Overbridge	Bridge	121	33	0		N/A	N/A	Open	NGD information not provided for ELR: POD. Very difficult to modify the bridges themselves, particularly the A370. Assumed clearance to be 4640mm all all bridges but this is likely to be conservative.	Track Lower and OLE	£1,500,000
1	Portishead to BTM	POD	Ashton Gate	Station	121	30	0		N/A	N/A	Station			
1	Portishead to BTM	POD	A370 Overbridge	Bridge	121	27	0		N/A	N/A	Open			
1	Portishead to BTM	POD	Ashton Road Overbridge	Bridge	121	24	0		N/A	N/A	Open			
1	Portishead to BTM	POD	Ashton Junction CCTV Xing	Level Crossing	121	3	78		N/A	N/A	Open	Renewal of CCTV crossing assumed to cost £2,000,000. The extent of nearby track lowers will affect this price further.	Renewal	£2,000,000
1	Portishead to BTM	POD	Ashton Junction PP Xing	PP Crossing	121	1	10		N/A	N/A	Open	Renewal of PP Xing crossing assumed to cost £100,000. The extent of nearby track lowers will affect this price further.	Renewal	£100,000
1	Portishead to BTM	MLN1	Parson Street	Station	120	15	0		N/A	N/A	Station	NGD information not provided for ELR: POD	-	-
1	Portishead to BTM	MLN1	Down Parsons Street Bridge	Bridge	120	9	15	4354	Foul	746	Open	Very diffcult to achieve clearance. Suggest a combination of recon, OLE solution and derogation. Track lower difficult due to S&C and adjacent station	Recon / OLE	£5,000,000
1	Portishead to BTM	MLN1	Up Parsons Street Bridge	Bridge	120	9	14	4288	Foul	812	Open			
1	Portishead to BTM	MLN1	Down Bartletts Footbridge	Footbridge	119	72	20	4346	Foul	754	Open	Jack existing bridge and reconstruct stairs	Jack	£150,000
1	Portishead to BTM	MLN1	Up Bartletts Footbridge	Footbridge	119	72	20	4456	Foul	644	Open			
1	Portishead to BTM	MLN1	Signal Gantry	Signal	119	56	21	4808	Foul	292	Open			£300,000
1	Portishead to BTM	MLN1	Signal	Signal	119	56	16	4871	Foul	229	Open			£300,000
1	Portishead to BTM	MLN1	Signal	Signal	119	30	10	4774	Foul	326	Open			£300,000
1	Portishead to BTM	MLN1	Signal Gantry	Signal	119	30	6	5132	Clear	N/A	Open			-
1	Portishead to BTM	MLN1	Bedminster	Station	119	22	0		N/A	N/A	Station			-
1	Portishead to BTM	MLN1	Signal Gantry	Signal	119	2	13	4936	Foul	164	Open			£300,000
1	Portishead to BTM	MLN1	Signal Gantry	Signal	119	2	7	4876	Foul	224	Open			£300,000
1	Portishead to BTM	MLN1	Signal Gantry	Signal	118	61	17	4978	Foul	122	Open			£300,000
1	Portishead to BTM	MLN1	Signal Gantry	Signal	118	61	14	4813	Foul	287	Open			£300,000
1	Portishead to BTM	MLN1	Signal Gantry	Signal	118	61	5	4719	Foul	381	Open			£300,000
1	Portishead to BTM	MLN1	Down Bath Road Bridge	Bridge	118	47	2	4182	Foul	918	Open	Very diffcult to achieve clearance. Suggest a combination or recon, OLE solution and derogation. Track lower difficult due to S&C and Temple Meads. Recon a challenge due to busy highway	Jack / OLE	£5,000,000
1	Portishead to BTM	MLN1	Up Bath Road Bridge	Bridge	118	46	21	4177	Foul	923	Open			
1	Portishead to BTM	MLN1	Signal Gantry	Signal	118	42	10	4880	Foul	220	Open			£300,000
1	Portishead to BTM	MLN1	Signal Gantry	Signal	118	38	10	4819	Foul	281	Open			£300,000
1	Portishead to BTM	MLN1	Signal Gantry	Signal	118	37	17	4754	Foul	346	Open			£300,000
1	Portishead to BTM	MLN1	Platform 4 Awning	Station	118	32	11	4556	Foul	544	Station	BTM awnings assumed to be part of the GWML works		-
1	Portishead to BTM	MLN1	Platform 5 Awning	Station	118	32	10	4401	Foul	699	Station	BTM awnings assumed to be part of the GWML works		-
1	Portishead to BTM	MLN1	Platform 7/8 Awning	Station	118	32	1	4249	Foul	851	Station	BTM awnings assumed to be part of the GWML works		-
1	Portishead to BTM	MLN1	Platform 5 Awning	Station	118	32	0	4461	Foul	639	Station	BTM awnings assumed to be part of the GWML works		-
1	Portishead to BTM	MLN1	Platform 7/8 Awning	Station	118	31	12	4299	Foul	801	Station	BTM awnings assumed to be part of the GWML works		-

Phase	Route	ELR	Structure Name	Structure Type	Chainage			Clearance	Status	Distance to be Raised	Route Status	Notes / Commentry	Proposal	Estimated Cost
1	Portishead to BTM	MLN1	Platform 9/10 Awning	Station	118	28	13	4282	Foul	818	Station	BTM awnings assumed to be part of the GWML works		-
1	Portishead to BTM	MLN1	Platform 9/10 Awning	Station	118	28	8	4299	Foul	801	Station	BTM awnings assumed to be part of the GWML works		-
1	Portishead to BTM	MLN1	Platform 11 Awning	Station	118	28	2	4387	Foul	713	Station	BTM awnings assumed to be part of the GWML works		-
1	Portishead to BTM	MLN1	Bristol Temple Meads	Station	118	28	0		N/A	N/A	Station	BTM awnings assumed to be part of the GWML works		-
1	Portishead to BTM	MLN1	Platform 11 Awning	Station	118	24	18	4552	Foul	548	Station	BTM awnings assumed to be part of the GWML works		-
1	Portishead to BTM	MLN1	Platform 7/8 Awning	Station	118	24	18	4567	Foul	533	Station	BTM awnings assumed to be part of the GWML works		-
1	Portishead to BTM	MLN1	Platform 5 Awning	Station	118	24	10	4427	Foul	673	Station	BTM awnings assumed to be part of the GWML works		-
1	Portishead to BTM	MLN1	Signal Gantry	Signal	118	22	6	4672	Foul	428	Open			£300,000
1	Portishead to BTM	MLN1	Signal Gantry	Signal	118	22	3	5020	Foul	80	Open			£300,000
1	Portishead to BTM	MLN1	Avon Street Bridge	Bridge	118	15	8	5245	Clear	N/A	Open			-
1	Portishead to BTM	MLN1	Viaduct No.11812q	Bridge	118	12	9	5245	Clear	N/A	Open			-
1	Portishead to BTM	MLN1	Kilbon Street Underbridge	Bridge	118	12	2	5245	Clear	N/A	Open			-
1	Portishead to BTM	MLN1	Gas Lane Bridge	Bridge	118	11	14	5245	Clear	N/A	Open			-
1	Portishead to BTM	MLN1	Signal Gantry	Signal	118	7	11	4834	Foul	266	Open			£300,000
1	Portishead to BTM	MLN1	Signal Gantry	Signal	118	7	6	4875	Foul	225	Open			£300,000
1	Portishead to BTM	MLN1	Signal Gantry	Signal	118	7	3	4746	Foul	354	Open			£300,000
1	Portishead to BTM	MLN1	Signal Gantry	Signal	118	6	20	4657	Foul	443	Open			£300,000
1	Portishead to BTM	MLN1	Signal Gantry	Signal	118	6	13	4792	Foul	308	Open			£300,000
1	Portishead to BTM	MLN1	Signal Gantry	Signal	118	6	12	4887	Foul	213	Open			£300,000
1	Portishead to BTM	MLN1	Signal Gantry	Signal	118	6	6	4745	Foul	355	Open			£300,000

Phase	Route	ELR	Structure Name	Structure Type	Chainage			Clearance	Status	Distance to be Raised	Route Status	Notes / Commentry	Proposal	Estimated Cost
1	Severn Beach to BTM	AMB	Severn Beach	Station	11	64	0		N/A	N/A	Station			-
1	Severn Beach to BTM	AMB	St. Andrews Road	Station	14	38	0		N/A	N/A	Station			-
1	Severn Beach to BTM	AMB	Signal gantry	Signal	14	44	2	4572	Foul	528	Open			£300,000
1	Severn Beach to BTM	AMB	Dock Road Bridge	Bridge	14	48	18	4836	Foul	264	Open	Flat deck - bridge is in the wrong location on map (should be 1 mile north). Approach to bridge is on long viaduct	Jack	£1,500,000
1	Severn Beach to BTM	AMB	Signal gantry	Signal	14	49	7	4757	Foul	343	Open			£300,000
1	Severn Beach to BTM	AMB	Signal gantry	Signal	14	49	13	4850	Foul	250	Open			£300,000
1	Severn Beach to BTM	AMB	Signal gantry	Signal	15	4	0	5139	Clear	N/A	Open			-
1	Severn Beach to BTM	AMB	Signal gantry	Signal	15	67	17	4584	Foul	516	Open			£300,000
1	Severn Beach to BTM	AMB	ST Andrews Road MCB Xing	Level Crossing	16	0	0		N/A	N/A	Open	Renewal of MCB crossing assumed to cost £2,000,000	Renewal	£2,000,000
1	Severn Beach to BTM	CNX	Avonmouth Station CCTV Xing	Level Crossing	9	8	0		N/A	N/A	Open	Renewal of CCTV crossing assumed to cost £2,000,000	Renewal	£2,000,000
1	Severn Beach to BTM	CNX	Awning	Station	9	5	9	4362	Foul	738	Station			-
1	Severn Beach to BTM	CNX	Avonmouth	Station	9	2	0		N/A	N/A	Station			-
1	Severn Beach to BTM	CNX	Avonmouth Station Awning	Station	9	5	15	3600	Foul	1500	Station	Haunch clearance issue - corner sticking in 2ch long		
1	Severn Beach to BTM	CNX	Avonmouth Dock CCTV Xing	Level Crossing					N/A	N/A	Open	Renewal of CCTV crossing assumed to cost £2,000,000	Renewal	£2,000,000
1	Severn Beach to BTM	CNX	Shirehampton	Station	7	50	0		N/A	N/A	Station			-
1	Severn Beach to BTM	CNX	Hung Lane Bridge	Bridge	7	41	0	4442	Foul	658	Open	Flat Deck - Difficult to see bridge type. Road already has a hump, increasing by 736mm will be difficult to achieve and will have major impact on adjacent connecting roads	Recon	£2,500,000
1	Severn Beach to BTM	CNX	Hung Lane Bridge	Bridge	7	40	17	4416	Foul	684	Open			
1	Severn Beach to BTM	CNX	Hung Lane Bridge	Bridge	7	40	11	4389	Foul	711	Open			
1	Severn Beach to BTM	CNX	Hung Lane Bridge	Bridge	7	40	6	4364	Foul	736	Open			
1	Severn Beach to BTM	CNX	Woodwell Ln/ Powder House Bridge	Bridge	7	15	9	4527	Foul	573	Open	Flat deck - bridge carries a minor road, but is adjacent to residential properties, on a large skew and on a junction. Increasing height by 618mm will be very challenging.	Recon	£1,800,000
1	Severn Beach to BTM	CNX	Woodwell Ln/ Powder House Bridge	Bridge	7	15	4	4482	Foul	618	Open			
1	Severn Beach to BTM	CNX	Sea Mills UWC Xing	Level Crossing	6	4	0		N/A	N/A	Open	Renewal of UWC crossing assumed to cost £100,000. May be further affected by nearerby track lowers.	Renewal	£100,000
1	Severn Beach to BTM	CNX	Sea Mills	Station	6	0	0		N/A	N/A	Station			-
1	Severn Beach to BTM	CNX	Portway Bridge	Bridge	5	67	1	4565	Foul	535	Open	Flat deck - steel deck, high skew, carries portway, major structure. Increasing height by 557mm will likely require a recon which will be extremely disruptive.	Recon	£3,500,000
1	Severn Beach to BTM	CNX	Portway Bridge	Bridge	5	66	17	4551	Foul	549	Open			
1	Severn Beach to BTM	CNX	Portway Bridge	Bridge	5	66	6	4543	Foul	557	Open			
1	Severn Beach to BTM	CNX	Sneyd Park Bridge	Bridge	5	50	1	4523	Foul	577	Open	Arched - Haunch issues too. Demolish and replace with standard steel footbridge to achieve 648mm	Recon	£400,000
1	Severn Beach to BTM	CNX	Sneyd Park Bridge	Bridge	5	49	18	4452	Foul	648	Open			
1	Severn Beach to BTM	CNX	Clifton Down Tunnel	Tunnel	5	5	7	4897	Foul	203	Tunnel	Severe Haunch clearance issue throughout. Track lower with OLE solution	Track lower/ OLE solution	£700,000
1	Severn Beach to BTM	CNX	Clifton Down Tunnel	Tunnel	4	7	0	4897	Foul	203	Tunnel			
1	Severn Beach to BTM	CNX	St. Johns Road Bridge	Bridge	4	0	6	4731	Foul	369	Open	Arched - Jacking not an option. Potential to recon with a conarch. Track lower probably a more suitable option, but may not achieve full clearance, therefore may need combination	Track Lower / Recon	£1,000,000
1	Severn Beach to BTM	CNX	St. Johns Road Bridge	Bridge	4	0	1	4744	Foul	356	Open			
1	Severn Beach to BTM	CNX	Clfiton Down	Station	3	72	0		N/A	N/A	Station			-
1	Severn Beach to BTM	CNX	Down Station Footbridge	Footbridge	3	71	2	4765	Foul	1035	Station	Flat deck - Jacking bridge possible, but entire ramp will need modifying and extending to achieve 1094mm optimal (694 sub-optimal). Track lower will probably be required under Whiteladies Road, so can also track lower under footbridge	Jack	£250,000
1	Severn Beach to BTM	CNX	Up Station Footbridge	Footbridge	3	70	13	4706	Foul	1094	Station			
1	Severn Beach to BTM	CNX	Whiteladies Road Bridge	Bridge	3	69	2	4326	Foul	774	Open	Arched - Track lower - reconstruction not an option, due to buildings located on bridge	Track Lower	£3,500,000
1	Severn Beach to BTM	CNX	Whiteladies Road Bridge	Bridge	3	68	2	4393	Foul	707	Open			
1	Severn Beach to BTM	CNX	Down Park Road Bridge	Bridge	3	60	9	4593	Foul	507	Open	Arched - Recon could be an option to reduce structural depth and achieve clearance, but due to nature of area, the aesthetics of the arch may need to remain. Suggest track lower.	Track Lower	
1	Severn Beach to BTM	CNX	Up Park Road Bridge	Bridge	3	59	20	4589	Foul	511	Open			
1	Severn Beach to BTM	CNX	Down Hampton Road Bridge	Bridge	3	56	15	4508	Foul	592	Open	Arched - Recon could be an option to reduce structural depth and achieve clearance, but due to nature of area, the aesthetics of the arch may need to remain. Suggest track lower.	Track Lower	
1	Severn Beach to BTM	CNX	Up Hampton Road Bridge	Bridge	3	56	4	4488	Foul	612	Open			
1	Severn Beach to BTM	CNX	Redland Green Bridge	Bridge	3	29	8	4841	Foul	259	Open	Reconstruct with a conarch to achieve 259mm. Track lower not proposed as bridge is located adjacent to a station	Recon	£750,000
1	Severn Beach to BTM	CNX	Footbridge No.328	Footbridge	3	28	2	4390	Foul	710	Open	Flat deck - reconstruct footbridge to achieve 710mm. Footbridge may be listed, so complications likely.	Recon	£500,000
1	Severn Beach to BTM	CNX	Redland Station Awning	Station	3	26	8	4806	Foul	294	Station			-
1	Severn Beach to BTM	CNX	Redland	Station	3	25	0		N/A	N/A	Station	Lines already electrified as part of the GWML Electrification Scheme		-
1	Severn Beach to BTM	CNX	Montpelier	Station	2	68	0		N/A	N/A	Station			-

Phase	Route	ELR	Structure Name	Structure Type	Chainage			Clearance	Status	Distance to be Raised	Route Status	Notes / Commentry	Proposal	Estimated Cost
1	Severn Beach to BTM	CNX	Montpelier Station Footbridge	Footbridge	2	66	0	4700	Foul	1100	Station	NGD information not provided - Assume clearance similar to Clifton Down Station: Jacking could be straightforward, ramps would only be needed on the station side. Track lowers would also be in place as part of the tunnel works	Track lower/ OLE solution	£600,000
1	Severn Beach to BTM	CNX	Montpelier Tunnel	Tunnel	2	59	4	4850	Foul	250	Tunnel	NGD information not provided - Assumed clearance similar to Clifton Down Tunnel: Severe	Track lower/ OLE solution	
1	Severn Beach to BTM	CNX	Montpelier Tunnel	Tunnel	2	47	0	4850	Foul	250	Tunnel	Haunch clearance issue throughout. Track lower with OLE solution		
1	Severn Beach to BTM	CNX	Ashley Hill Overbridge	Bridge	2	36	0		Clear	N/A	Open	Structures made clear as part of Filton Bank electrification scheme		-
1	Severn Beach to BTM	CNX	Narrowways Hill Footbridge	Footbridge	2	12	0		Clear	N/A	Open	Structures made clear as part of Filton Bank electrification scheme		-
1	Severn Beach to BTM	BSW	Narrowways Hill JN	Junction	2	0	66		N/A	N/A	Open			-
1	Severn Beach to BTM	BSW	Stapleton Road	Station	1	0	1095		N/A	N/A	Station			-
1	Severn Beach to BTM	BSW	Lawrence Hill	Station	1	0	88		N/A	N/A	Station			-
1	Severn Beach to BTM	BSW	Dr Days JN	Junction	0	0	1210		N/A	N/A	Open			-
1	Severn Beach to BTM	BSW	Bristol East JN	Junction	0	0	572		N/A	N/A	Open			-
1	Severn Beach to BTM	MLN1	Bristol East JN	Junction	118	0	44		N/A	N/A	Open			-
1	Severn Beach to BTM	MLN1	Bristol Temple Meads	Station	118	0	616		N/A	N/A	Station			-

Phase	Route	ELR	Structure Name	Structure Type	Chainage			Clearance	Status	Distance to be Raised	Route Status	Notes / Commentry	Proposal	Estimated Cost
2	Weston-super-Mare to BTM	WSM	Weston-super-Mare	Station	137	33	0		N/A	N/A	Station			-
2	Weston-super-Mare to BTM	WSM	WSM Station Awning	Station	137	32	17	4579	Foul	521	Station	Throughout length of station (single line)		-
2	Weston-super-Mare to BTM	WSM	Overbridge 13729	Bridge	137	28	17	4950	Foul	150	Open	Flat Deck - Unable to track lower due to station and OLE solution not desirable due to proximity to platform. Jack bridge	Jack	£350,000
2	Weston-super-Mare to BTM	WSM	Overbridge 13729	Bridge	137	27	12	5049	Foul	51	Open			
2	Weston-super-Mare to BTM	WSM	Drove Road Ashcombe Bridge	Bridge	137	18	6	4262	Foul	838	Open	Flat Deck - S&C so no track lower. Jacking 838mm not likely to be feasible. Reconstruct, possibly in combination with an OLE solution	Recon	£2,500,000
2	Weston-super-Mare to BTM	WSM	Pottery Street Bridge	Bridge	136	78	20	4258	Foul	842	Open	Flat Deck Footbridge - move span east on new abutments and add new ramp section.	Jack	£120,000
2	Weston-super-Mare to BTM	WSM	Locking Road FPO Xing	Level Crossing	136	56	0		N/A	N/A	Open	Renewal of FPO crossing assumed to cost £50,000.	Renewal	£50,000
2	Weston-super-Mare to BTM	WSM	Hutton Moor Road Bridge	Bridge	136	31	9	4327	Foul	773	Open	Arched - track lower unlikely to be achievable with station platform to the north. Reconstruct with a conarch	Recon	£750,000
2	Weston-super-Mare to BTM	WSM	Weston Milton	Station	136	12	0		N/A	N/A	Station			-
2	Weston-super-Mare to BTM	WSM	Locking Moor Road Bridge	Bridge	136	5	20	4244	Foul	856	Open	Arched - track lower unlikely to be achievable with station platform to the north. Reconstruct with a conarch	Recon	£900,000
2	Weston-super-Mare to BTM	WSM	WSM FP FPG Xing	Level Crossing	135	64	0		N/A	N/A	Open	Renewal of FPG crossing assumed to cost £50,000.	Renewal	£50,000
2	Weston-super-Mare to BTM	WSM	Wells BC17 FPS Xing	Level Crossing	135	45	0		N/A	N/A	Open	Renewal of FPS crossing assumed to cost £50,000.	Renewal	£50,000
2	Weston-super-Mare to BTM	WSM	Worle (Closed)	Station	135	30	0		N/A	N/A	Station	NGD information not provided for given chainage		-
2	Weston-super-Mare to BTM	WSM	Worle JN	Station	135	11	0		N/A	N/A	Station			-
2	Weston-super-Mare to BTM	MLN1	Worle JN	Station	135	0	0		N/A	N/A	Station			-
2	Weston-super-Mare to BTM	MLN1	Worle	Station	134	0	933		N/A	N/A	Station			-
2	Weston-super-Mare to BTM	MLN1	Puxton & Worle MCB Xing	Level Crossing	133	79	0		N/A	N/A	Open	Renewal of MCB crossing assumed to cost £2,000,000	Renewal	£2,000,000
2	Weston-super-Mare to BTM	MLN1	Puxton (Closed)	Station	133	75	0		N/A	N/A	Station			-
2	Weston-super-Mare to BTM	MLN1	Down Puxton M5 Bridge	Bridge	133	50	3	4908	Foul	192	Open	Track Lower	Track Lower	£200,000
2	Weston-super-Mare to BTM	MLN1	Up Puxton M5 Bridge	Bridge	133	45	18	4899	Foul	201	Open			
2	Weston-super-Mare to BTM	MLN1	Down Hardwicks Bridge	Bridge	132	69	18	4262	Foul	838	Open	Reconstruct bridge and approaches to achieve additional 838mm	Recon	£1,300,000
2	Weston-super-Mare to BTM	MLN1	Up Hardwicks Bridge	Bridge	132	69	13	4581	Foul	519	Open			
2	Weston-super-Mare to BTM	MLN1	Oldbridge FPS Xing	Level Crossing	132	42	0		N/A	N/A	Open	Renewal of FPS crossing assumed to cost £50,000	Renewal	£50,000
2	Weston-super-Mare to BTM	MLN1	Huish CCTV Xing	Level Crossing	132	11	0		N/A	N/A	Open	Renewal of CCTV crossing assumed to cost £2,000,000	Renewal	£2,000,000
2	Weston-super-Mare to BTM	MLN1	Gas House Lane PED Xing	Level Crossing	130	49	0		N/A	N/A	Open	Renewal of PED crossing assumed to cost £50,000	Renewal	£50,000
2	Weston-super-Mare to BTM	MLN1	Down Yatton Footbridge	Footbridge	130	25	7	4831	Foul	269	Open	Jack Footbridge	Jack	£75,000
2	Weston-super-Mare to BTM	MLN1	Up Yatton Footbridge	Footbridge	130	25	7	4991	Foul	109	Open			
2	Weston-super-Mare to BTM	MLN1	Up Fishers Overbridge	Bridge	130	19	2	4739	Foul	361	Open	Jack Bridge	Jack	£350,000
2	Weston-super-Mare to BTM	MLN1	Down Fishers Overbridge	Bridge	130	18	18	4718	Foul	382	Open			
2	Weston-super-Mare to BTM	MLN1	Yatton	Station	130	0	616		N/A	N/A	Station			-
2	Weston-super-Mare to BTM	MLN1	Mud Lane UWC Xing	Level Crossing	129	23	0		N/A	N/A	Open	Renewal of UWC crossing assumed to cost £100,000	Renewal	£100,000
2	Weston-super-Mare to BTM	MLN1	Down Burgess Overbridge	Bridge	128	76	19	4233	Foul	867	Open	Reconstruction	Recon	£350,000
2	Weston-super-Mare to BTM	MLN1	Up Burgess Overbridge	Bridge	128	76	13	4250	Foul	850	Open			
2	Weston-super-Mare to BTM	MLN1	Down Claverham Bridge	Bridge	128	57	15	4252	Foul	848	Open	Reconstruction	Recon	£450,000
2	Weston-super-Mare to BTM	MLN1	Up Claverham Bridge	Bridge	128	57	9	4283	Foul	817	Open			
2	Weston-super-Mare to BTM	MLN1	Down Chelvey Bridge	Bridge	127	44	4	4304	Foul	796	Open	Reconstruction	Recon	£600,000
2	Weston-super-Mare to BTM	MLN1	Up Chelvey Bridge	Bridge	127	43	19	4281	Foul	819	Open			
2	Weston-super-Mare to BTM	MLN1	Nailsea & Blackwell	Station	126	0	726		N/A	N/A	Station			-
2	Weston-super-Mare to BTM	MLN1	Down Nailsea Station Footbridge	Footbridge	126	33	1	4267	Foul	1533	Station	Reconstruction. Jacking may be possible, but the bridge level needs to increase nearly 1600mm for optimum, 1200mm for sub-optimal, so reconstruction is a safer option	Recon	£450,000
2	Weston-super-Mare to BTM	MLN1	Up Nailsea Station Footbridge	Footbridge	126	32	16	4231	Foul	1569	Station			
2	Weston-super-Mare to BTM	MLN1	Down Park Lane Bridge	Bridge	125	4	13	4191	Foul	909	Open	Reconstruction possibly with a conarch. Severing access over the bridge should also be considered as there are other bridges nearby and it is a minor road	Recon	£500,000
2	Weston-super-Mare to BTM	MLN1	Up Park Lane Bridge	Bridge	125	4	1	4207	Foul	893	Open			
2	Weston-super-Mare to BTM	MLN1	Down Flax Bourton Lane Bridge	Bridge	124	38	7	4721	Foul	379	Open	Reconstruction possibly with a conarch.	Recon	£600,000
2	Weston-super-Mare to BTM	MLN1	Up Flax Bourton Lane Bridge	Bridge	124	37	21	4584	Foul	516	Open			
2	Weston-super-Mare to BTM	MLN1	Flax Bourton (Closed)	Station	124	21	0		N/A	N/A	Station			-
2	Weston-super-Mare to BTM	MLN1	Flax Bourton Tunnel	Tunnel	123	66	0		Clear	N/A	Tunnel	OLE solution	OLE solution	£100,000
2	Weston-super-Mare to BTM	MLN1	Flax Bourton Tunnel	Tunnel	123	61	6		Clear	N/A	Tunnel			
2	Weston-super-Mare to BTM	MLN1	Aqueduct Bridge	Bridge	123	40	9	5175	Clear	N/A	Open			-
2	Weston-super-Mare to BTM	MLN1	Down South Liberty Footbridge	Footbridge	121	1	1	4184	Foul	916	Open	Reconstruction		£200,000
2	Weston-super-Mare to BTM	MLN1	Up South Liberty Footbridge	Footbridge	121	0	18	4316	Foul	784	Open			
2	Weston-super-Mare to BTM	MLN1	Parson Street	Station	120	0	130		N/A	N/A	Station			-
2	Weston-super-Mare to BTM	MLN1	Bedminster	Station	119	0	484		N/A	N/A	Station			-
2	Weston-super-Mare to BTM	MLN1	Bristol Temple Meads	Station	118	0	616		N/A	N/A	Station			-

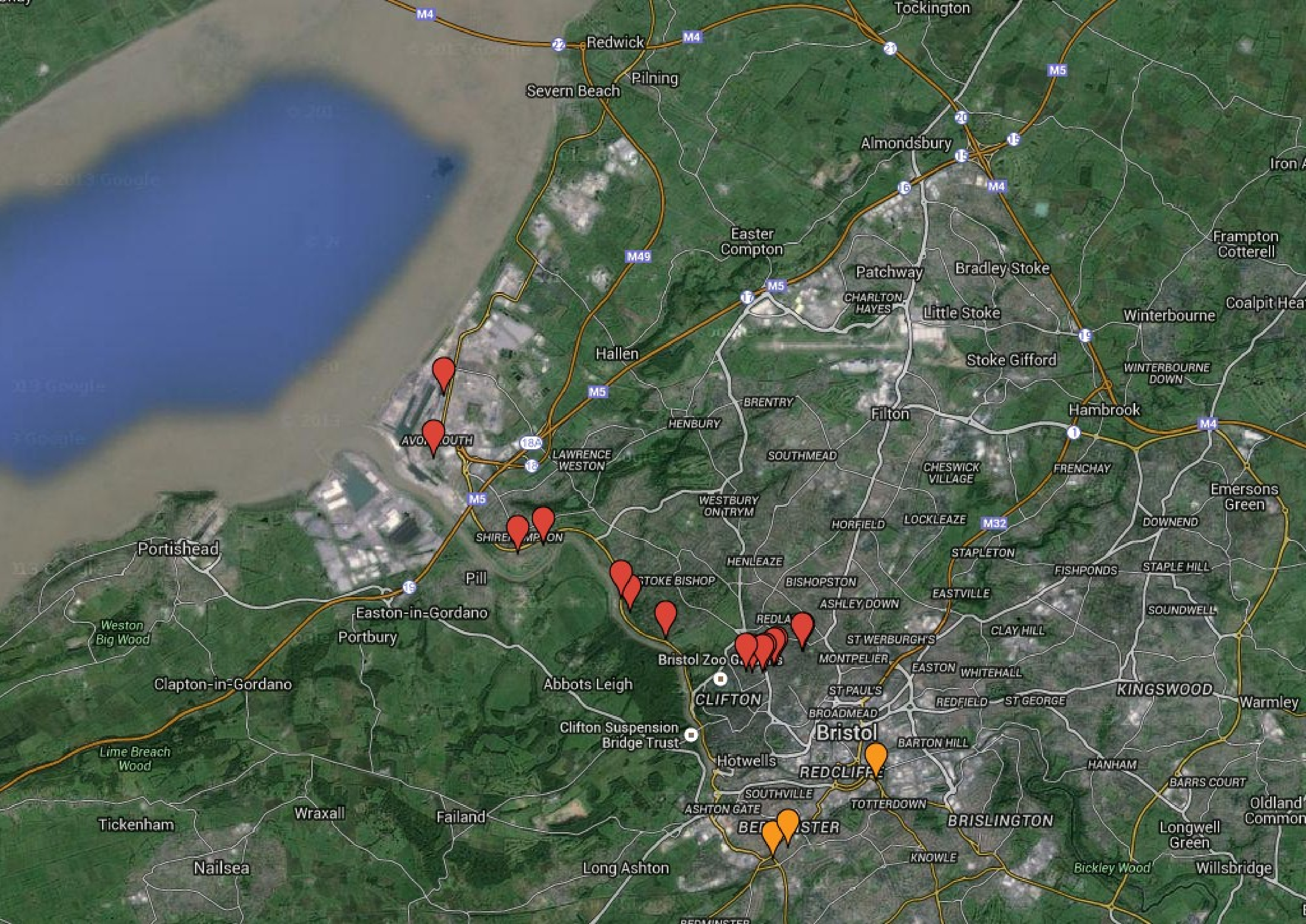
Phase	Route	ELR	Structure Name	Structure Type	Chainage			Clearance	Status	Distance to be Raised	Route Status	Notes / Commentry	Proposal	Estimated Cost
2	BTM to Yate	MLN1	Bristol Temple Meads	Station	118	0	616		N/A	N/A	Station	Lines already electrified as part of Phase I		-
2	BTM to Yate	MLN1	Bristol East JN	Junction	118	0	44		N/A	N/A	Open			-
2	BTM to Yate	BSW	Bristol East JN	Junction	0	0	572		N/A	N/A	Open			-
2	BTM to Yate	BSW	Dr Days JN	Junction	0	0	1210		N/A	N/A	Open			-
2	BTM to Yate	BSW	Lawrence Hill	Station	1	0	88		N/A	N/A	Station			-
2	BTM to Yate	BSW	Stapleton Road	Station	1	0	1095		N/A	N/A	Station			-
2	BTM to Yate	BSW	Narrowways Hill JN	Junction	2	0	66		N/A	N/A	Open			-
2	BTM to Yate	BSW	Ashley Hill (closed)	Station	2	0	924		N/A	N/A	Station			-
2	BTM to Yate	BSW	Horfield (Closed)	Station	3	0	1210		N/A	N/A	Station			-
2	BTM to Yate	BSW	Filton Abbey Wood	Station	4	0	660		N/A	N/A	Station	Lines already electrified as part of the GWML Electrification Scheme		-
2	BTM to Yate	BSW	Patchway JN no. 2	Junction	5	61	0		N/A	N/A	Open			-
2	BTM to Yate	SWB	Patchway JN no. 2	Junction	112	68	0		N/A	N/A	Open			-
2	BTM to Yate	SWB	Stoke Gifford JN no. 2	Junction	112	5	0		N/A	N/A	Open			-
2	BTM to Yate	SWB	Stoke Gifford JN no. 1	Junction	111	79	0		N/A	N/A	Open			-
2	BTM to Yate	SWB	Stoke Gifford West JN	Junction	111	73	0		N/A	N/A	Open			-
2	BTM to Yate	SWB	Bristol Parkway	Station	111	62	0		N/A	N/A	Station			-
2	BTM to Yate	SWB	Winterbourne (Closed)	Station	109	0	1496		N/A	N/A	Station			-
2	BTM to Yate	SWB	Coalpit Heath (Closed)	Station	108	0	836		N/A	N/A	Station			-
2	BTM to Yate	SWB	Westerly JN	Junction	107	14	0		N/A	N/A	Open			-
2	BTM to Yate	YAT	Westerly JN	Junction	121	28	0		N/A	N/A	Open			-
2	BTM to Yate	YAT	Signal Gantry	Signal	121	5	13	4973	Foul	127	Open			£300,000
2	BTM to Yate	YAT	Signal Gantry	Signal	120	35	7	5058	Foul	42	Open			£300,000
2	BTM to Yate	YAT	Signal Gantry	Signal	120	35	1	4988	Foul	112	Open			£300,000
2	BTM to Yate	YAT	Yate South JN	Junction	120	2.5	0		N/A	N/A	Open			-
2	BTM to Yate	YAT	Yate	Station	119	60	0		N/A	N/A	Station			-

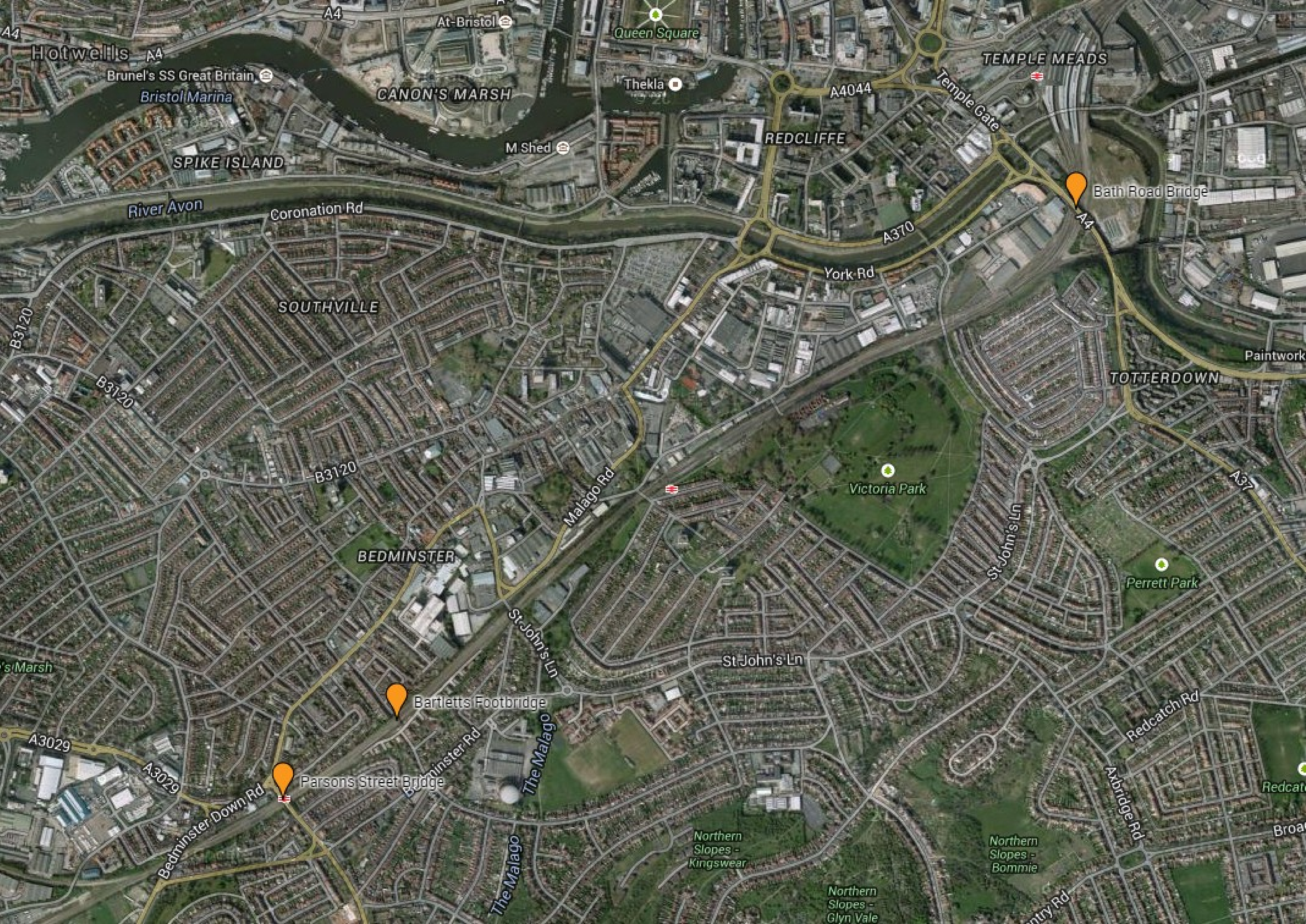
Phase	Route	ELR	Structure Name	Structure Type	Chainage			Clearance	Status	Distance to be Raised	Route Status	Notes / Commentry	Proposal	Estimated Cost
2	Henbury to BTM	AFR	Rockingham Road A403 (Smoke Lane)	Bridge	118	23	6	4650	Foul	450	Open	NGD information not provided. Assume clearance of 4650mm. Flat deck. Track lower would have been recommended, but S&C at junction. Jack and regrade road.	Jack	£500,000
2	Henbury to BTM	AFR	Blaise (Hallen Road)	Bridge	116	5	6	4650	Foul	450	Open	NGD information not provided. Assume clearance of 4650mm. Already considerable gradient on road surface, avoid jacking.	Track Lower	£4,000,000
2	Henbury to BTM	AFR	Overbridge	Bridge	115	55	0	4650	Foul	450	Open	NGD information not provided. Assume clearance of 4650mm. Currently only used as footbridge. If necessary recon as smaller structure for pedestrians		
2	Henbury to BTM	AFR	Station Road B4055	Bridge	115	35	9	4650	Foul	450	Open	NGD information not provided. Assume clearance of 4650mm. If Henbury station is to be rebuilt here clearance requirements would increase by 700mm. In this event consider recon/jack, but this outcome has not been costed.		
2	Henbury to BTM	AFR	Wyck Beck Road A4018	Bridge	115	18		4650	Foul	450	Open	NGD information not provided. Assume clearance of 4650mm. Bust dual carriageway with nearby junctions. Avoid jacking.		
2	Henbury to BTM	AFR	Henbury (Henbury)	Station	115	0	0		N/A	N/A	Station			
2	Henbury to BTM	AFR	Up Fish Pool Overbridge	Bridge	114	65	11	4283	Foul	817	Open	Track lower. Reconstruction possible, but only access to housing estate north of railway line, so temporary access may also need to be constructed		
2	Henbury to BTM	AFR	Down Fish Pool Overbridge	Bridge	114	65	10	4213	Foul	887	Open			
2	Henbury to BTM	AFR	Up Charlton/Henbury Bridge	Tunnel	114	12	4	5126	Clear	N/A	Tunnel	OLE solution	OLE solution	£150,000
2	Henbury to BTM	AFR	Down Charlton/Henbury Tunnel	Tunnel	113	78	10	5107	Clear	N/A	Tunnel			
2	Henbury to BTM	AFR	Signal Gantry	Signal	113	78	3	4572	Foul	528	Open			£300,000
2	Henbury to BTM	AFR	Charlton Halt (Closed)	Station	114	0	0		N/A	N/A	Station			-
2	Henbury to BTM	AFR	Down Overbridge 11366a	Bridge	113	66	3	4414	Foul	686	Open	OLE solution	OLE solution	£150,000
2	Henbury to BTM	AFR	Up Overbridge 11366a	Bridge	113	66	0	4414	Foul	686	Open	Jack or reconstruct bridge	Jack	
2	Henbury to BTM	AFR	Up North Filton Bridge	Bridge	113	9	1	4921	Foul	179	Open	Ideally track lower under this bridge and Gloucester Road bridge, but junction is only 100m north of Gloucester Road. Consider jacking, combined with an OLE solution	Jack and OLE	£1,000,000
2	Henbury to BTM	AFR	Down North Filton Bridge	Bridge	113	8	21	4799	Foul	301	Open			
2	Henbury to BTM	AFR	Up Gloucester Road Bridge	Bridge	113	3	7	4248	Foul	852	Open	Ideally track lower under this bridge and Gloucester Road bridge, but junction is 100m north of Gloucester Road. Consider reconstructing in sections to reduce structural depth (jacking would push road to high), combined with an OLE solution and possible derogation.	Reconstruct and OLE	£4,000,000
2	Henbury to BTM	AFR	Down Gloucester Road Bridge	Bridge	113	3	4	4236	Foul	864	Open			
2	Henbury to BTM	AFR	North Filton (Closed)	Station	113	0	0		N/A	N/A	Station	NGD information not provided for given chainage		-
2	Henbury to BTM	AFR	Filton West JN No.2	Junction	112	78	0		N/A	N/A	Open			-
2	Henbury to BTM	FWC	Cotham Park FC Xing	Level Crossing	5	20	0		N/A	N/A	Open	Renewal of FC crossing assumed to cost £50,000.	Renewal	£50,000
2	Henbury to BTM	FWC			4	66	0		N/A	N/A	Open			-
2	Henbury to BTM	BSW			4	0	1452		N/A	N/A	Open			-
2	Henbury to BTM	BSW	Filton Abbey Wood	Station	4	0	660		N/A	N/A	Station	Lines already electrified as part of the GWML Electrification Scheme		-
2	Henbury to BTM	BSW	Horfield (Closed)	Station	3	0	1210		N/A	N/A	Station			-
2	Henbury to BTM	BSW	Ashley Hill (Closed)	Station	2	0	924		N/A	N/A	Station			-
2	Henbury to BTM	BSW	Narrowways Hill JN	Junction	2	0	66		N/A	N/A	Open	Lines already electrified as part of Phase I		-
2	Henbury to BTM	BSW	Stapleton Road	Station	1	0	1095		N/A	N/A	Station			-
2	Henbury to BTM	BSW	Lawrence Hill	Station	1	0	88		N/A	N/A	Station			-
2	Henbury to BTM	BSW	Dr Days JN	Junction	0	0	1210		N/A	N/A	Open			-
2	Henbury to BTM	BSW	Bristol East JN	Junction	0	0	572		N/A	N/A	Open			-
2	Henbury to BTM	MLN1	Bristol East JN	Junction	118	0	44		N/A	N/A	Open			-
2	Henbury to BTM	MLN1	Bristol Temple Meads	Station	118	0	616		N/A	N/A	Station			-

Legend

-  P1 Portishead to BTM
-  P1 Severn Beach to BTM
-  P2 Henbury to BTM
-  P2 Weston-super-Mare to BTM







Hotwells

Brunel's SS Great Britain
Bristol Marina

CANON'S MARSH

Queen Square

Thekla

TEMPLE MEADS

REDCLIFFE

Bath Road Bridge

River Avon

Coronation Rd

SPIKE ISLAND

SOUTHVILLE

York Rd

A370

Victoria Park

TOTTERDOWN

Paintwork

BEDMINSTER

Malago Rd

St John's Ln

Bartlett's Footbridge

Parsons Street Bridge

St John's Ln

The Malago

Redcatch Rd

Abridge Rd

Northern Slopes - Kingswear

Northern Slopes - Glyn Vale

Northern Slopes - Bommie

Redcat

Broad

entry Rd

A3029

A3029

Bedminster Down Rd

Bedminster Rd

The Malago

A67

A4044

Temple Gate

B3120

B3120

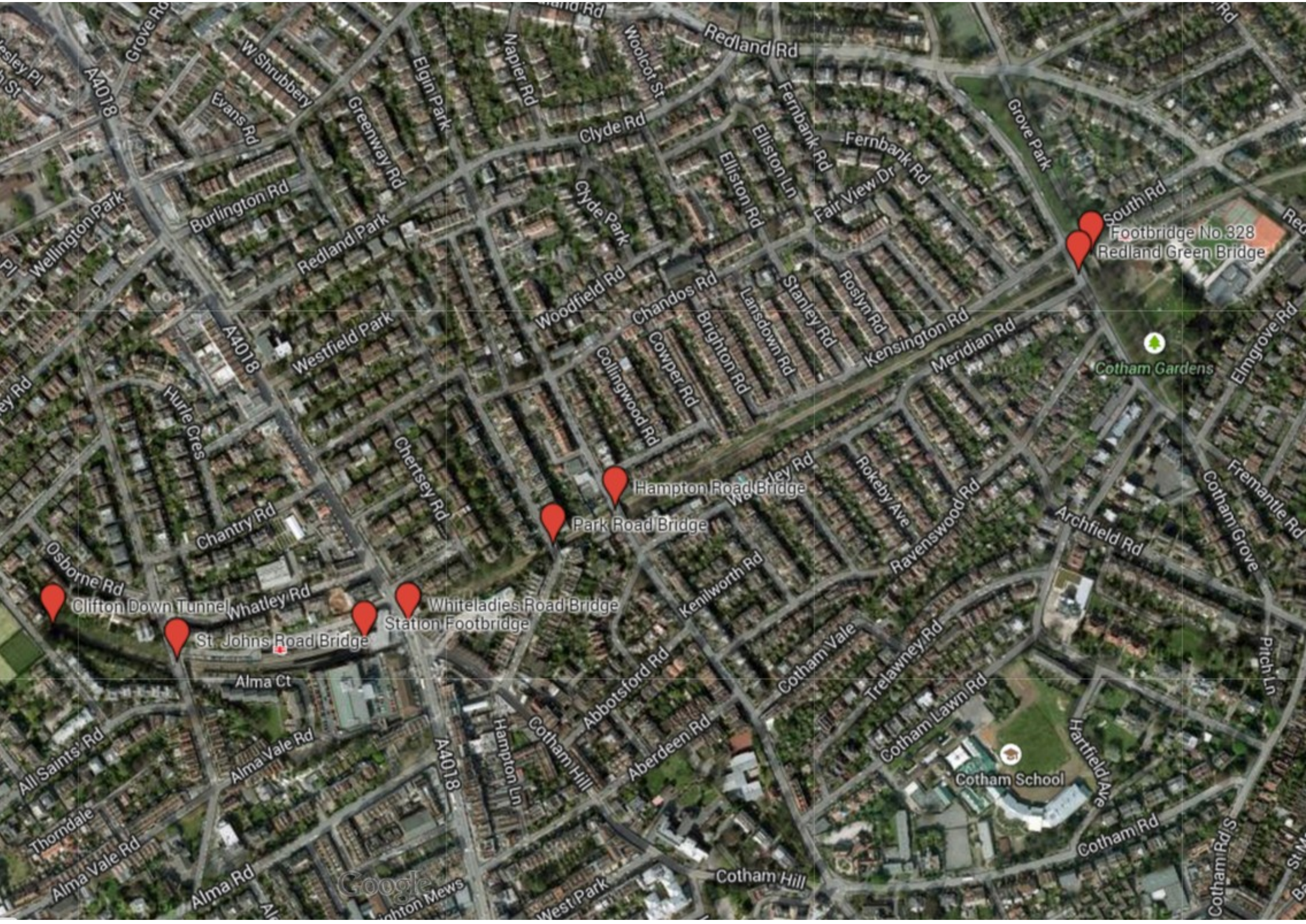
B3120

's Marsh

A4

A4

A4



Footbridge No 328
Redland Green Bridge

Cotham Gardens

Hampton Road Bridge

Park Road Bridge

Whiteladies Road Bridge

Station Footbridge

St. Johns Road Bridge

Cotham School



Seamills Wood

STOKE BISHOP

Portway Bridge

University of Bristol
Botanic Garden

Stoke Hill

Sneyd Park Bridge

SNEYD PARK

River Avon

Portway

Oak Wood

Clifton Down Tunnel

A4

Riv



M5

Portway

Shirehampton Rd

High St

B4054

Shirehampton
Park Golf Club

SHIREHAMPTON

Portway

A4

Crabtree
Slip Wood

Woodwell Ln/ Powder Ho...

The Daisy Field

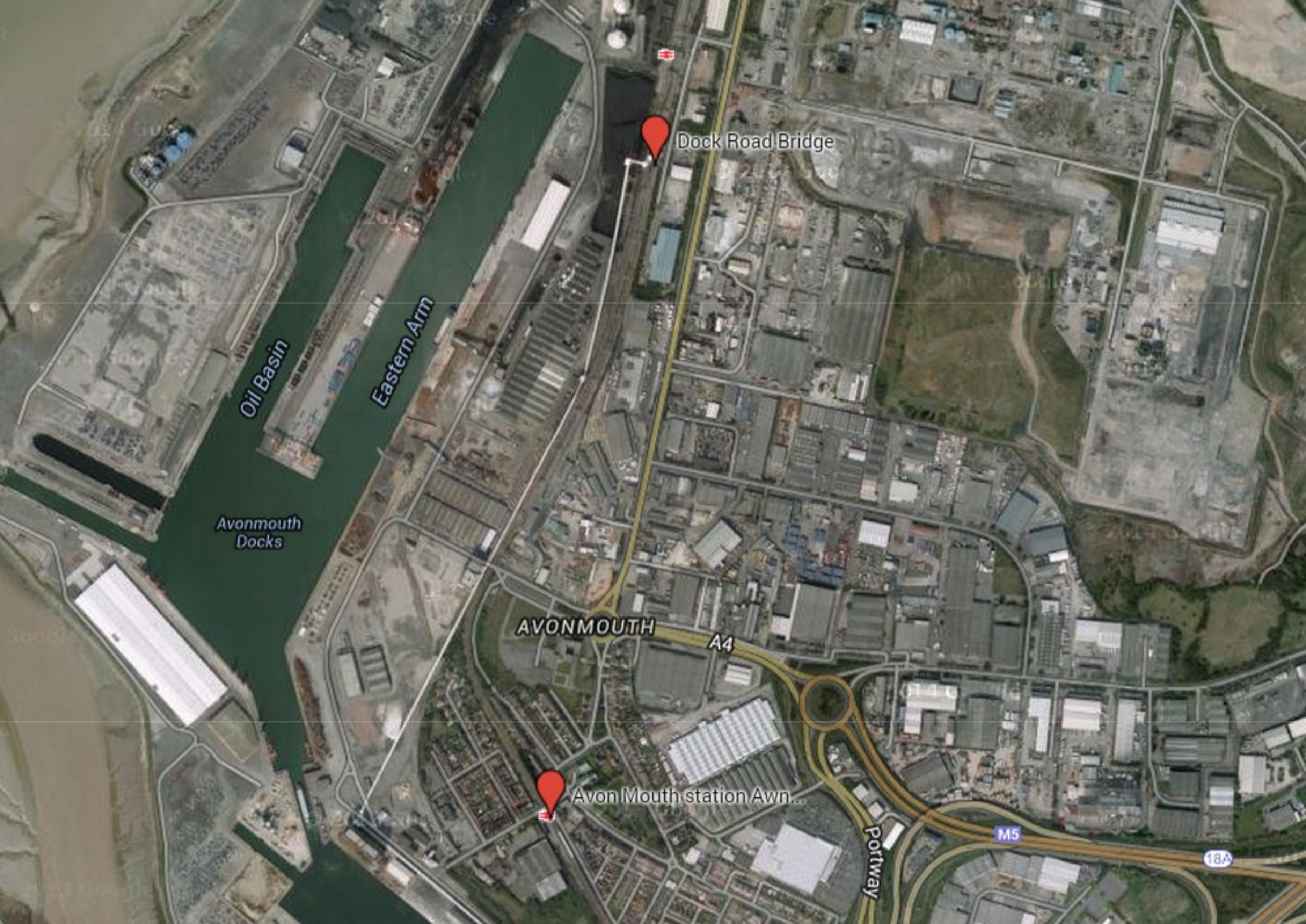
Hung Lane Bridge

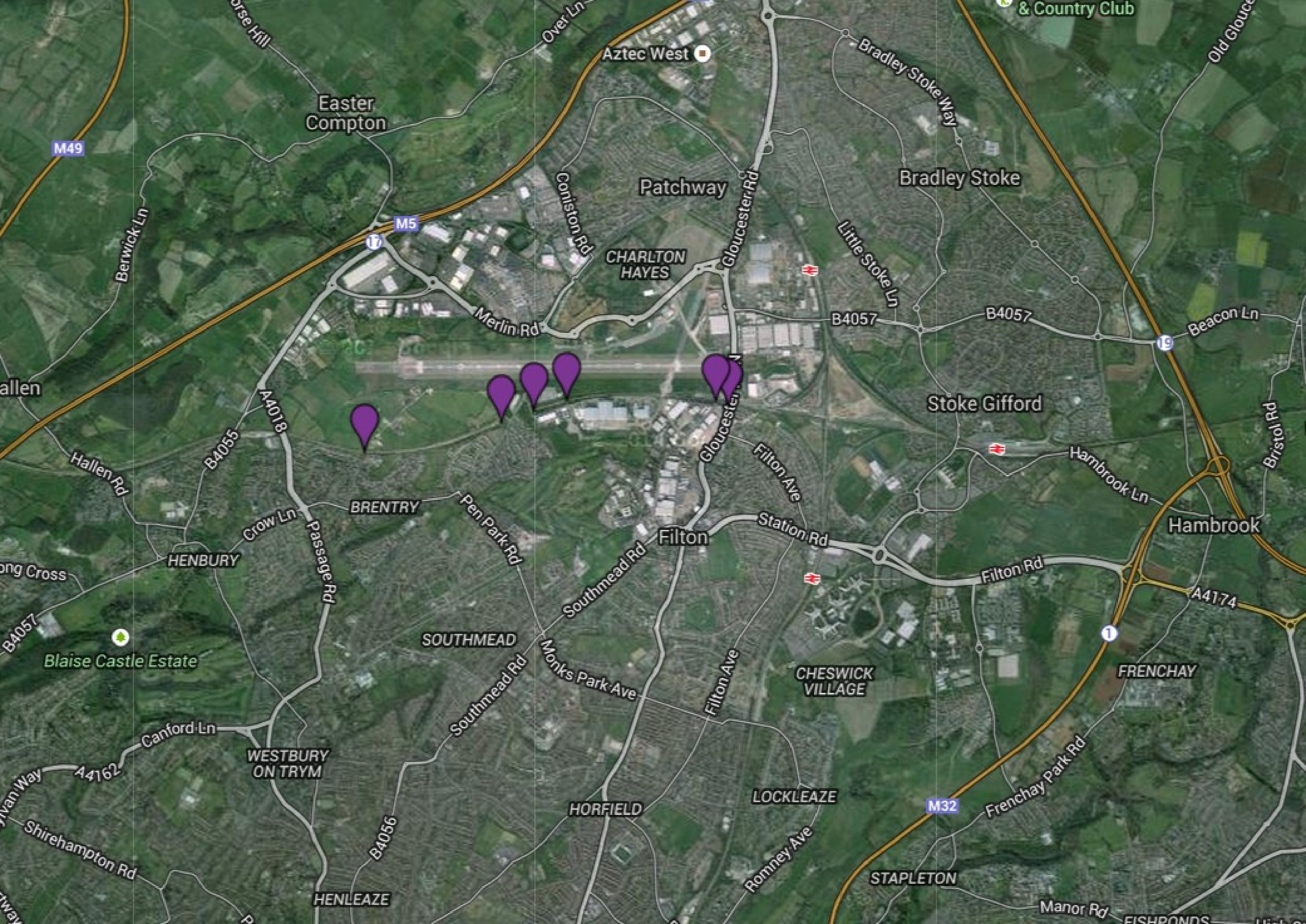
River Avon

River Avon

Pill

HAM-GREEN







North Filton Bridge



Gloucester Road Bridge



North Bristol Park

North Way

New Rd

Gloucester Rd N

College Way

College Way

Blenheim Dr

Lower House Cres

Conygre Rd

Bude Rd

Filton A

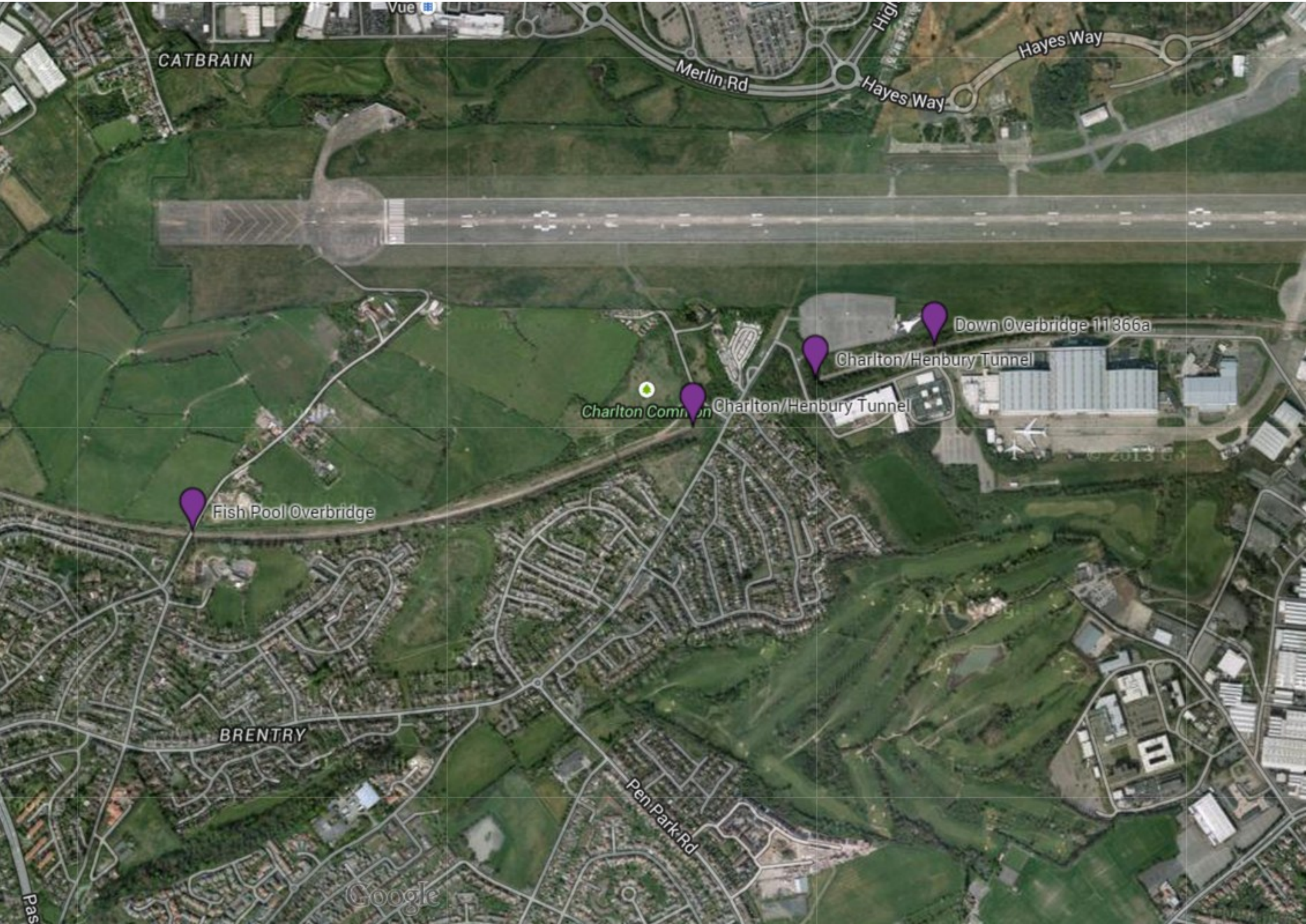
Brid

Rodney Cres

Boverton Rd

Meadowsweet Ave

Google



CATBRAIN

Vue

Merlin Rd

Hayes Way

Hayes Way



Fish Pool Overbridge



Charlton Common



Charlton/Henbury Tunnel



Charlton/Henbury Tunnel



Down Overbridge 11366a

BRENTRY

Pen Park Rd

Google

Pas





Nailsea

Station Rd

Nailsea Park

Bristol Rd

B3129

B3130

jeens Rd

Station Rd

Flax Bourton Lane Brid...

Nailsea Station Footbr...

Station Rd

A370

Flax Bourton

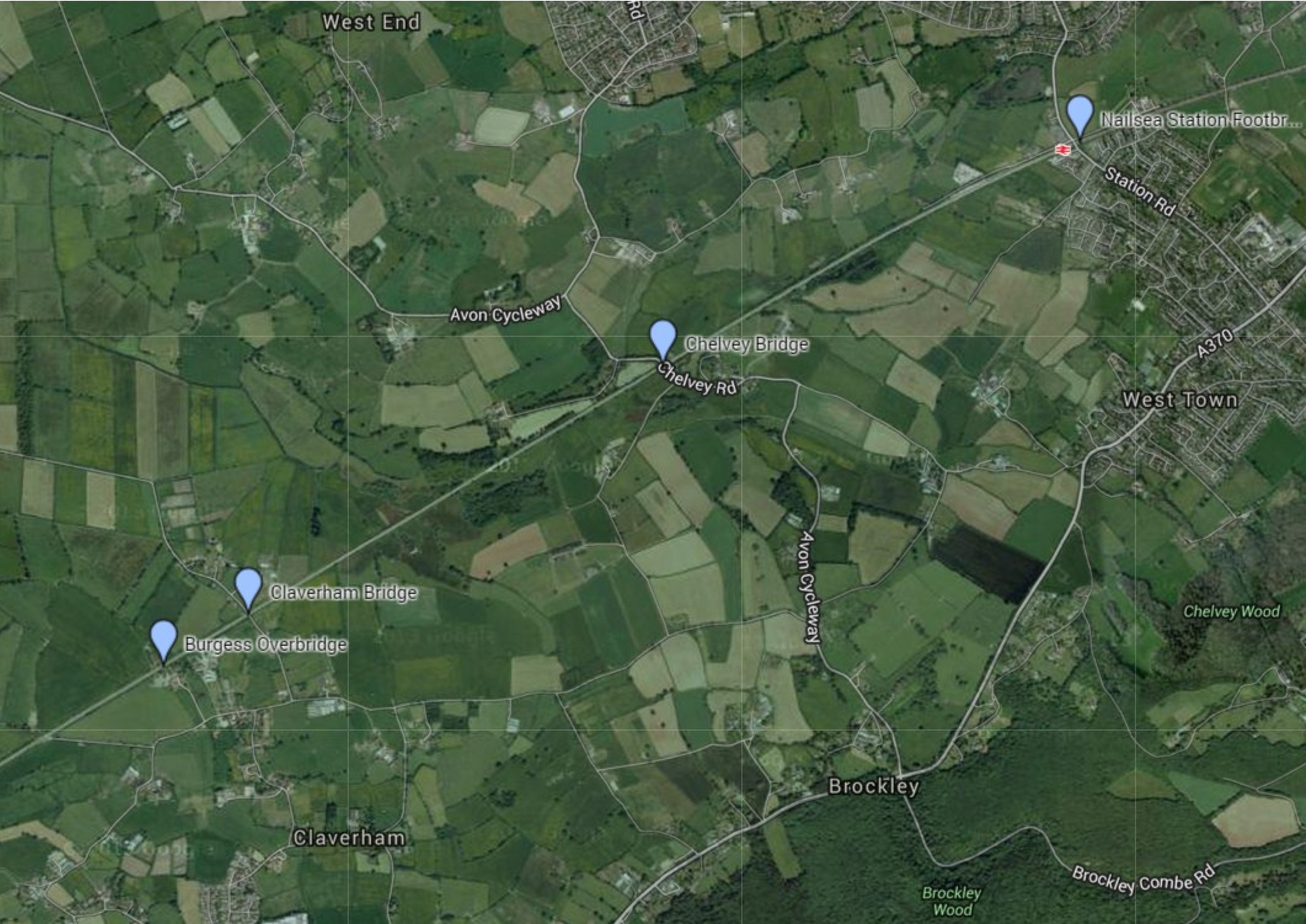
A370

West Town

Backwell

Google

Avon Cy



West End

Nailsea Station Footbr...

Station Rd

A370

West Town

Chelvey Wood

Brockley

Brockley Wood

Brockley Combe Rd

Avon Cycleway

Chelvey Bridge

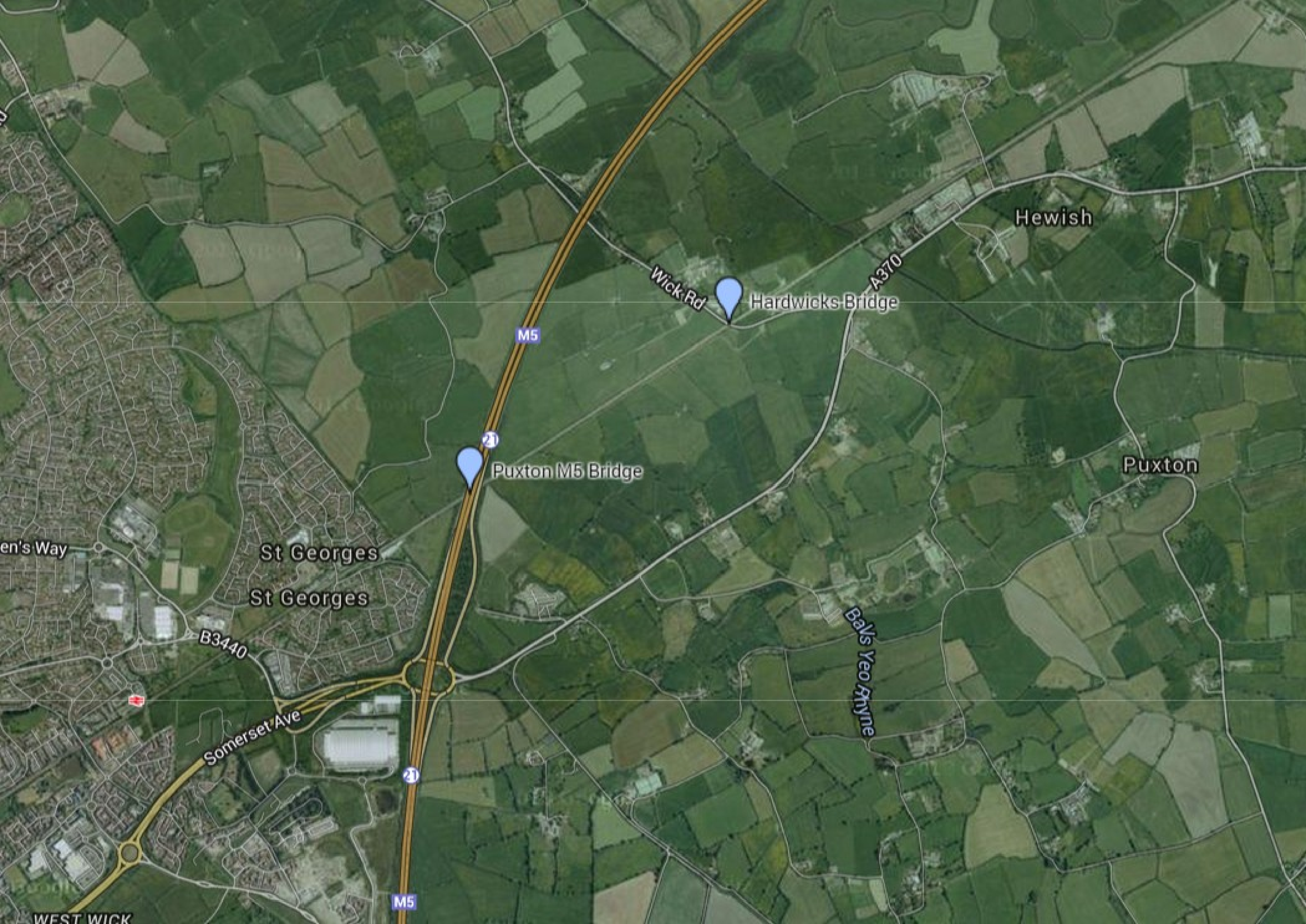
Chelvey Rd

Avon Cycleway

Claverham Bridge

Burgess Overbridge

Claverham



Hewish

Wick Rd

Hardwicks Bridge

A370

M5

21

Puxton M5 Bridge

Puxton

St Georges

St Georges

B3440

Somerset Ave

Bal's Yeo Rhyme

M5

WEST WICK



Capell Cl

St Austell Rd

Chesham Rd S

Charter Rd

Locking Rd

Femlea Rd

Hutton Moor Rd

Hutton Moor Road Bridge

Newbourne Rd

Locking Rd

Rutland Cl

B3440

Warwick Cl

Saville Rd

Martindale Rd

Locking Moor Road Bridge

Maltlands

Clover Ct

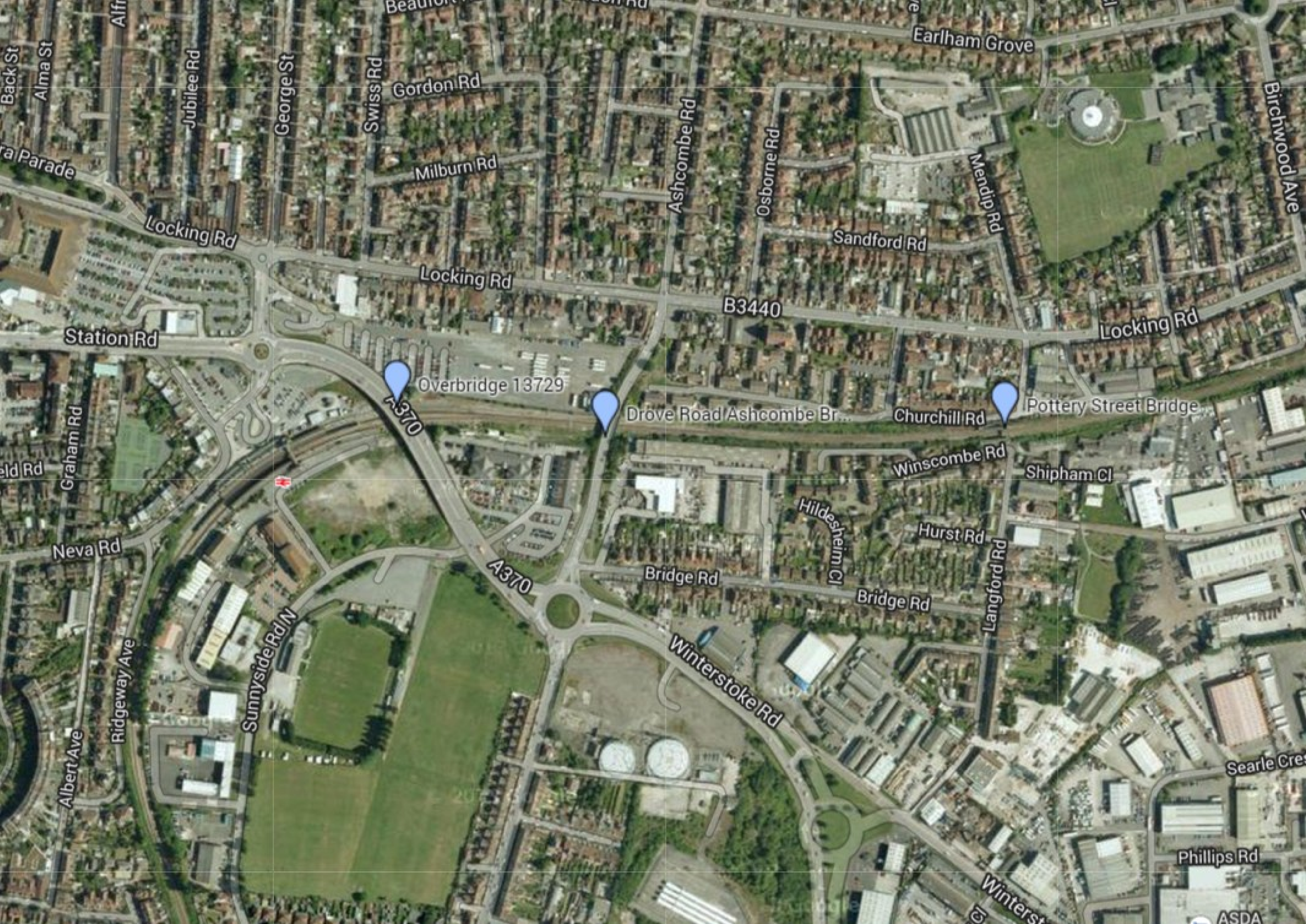
Pennycress

Pennycress

Charlock Rd

Hornets Rugby Club

Aisecome Way



Back St
Alma St
Jubilee Rd
George St
Swiss Rd
Gordon Rd
Milburn Rd
Locking Rd
Station Rd
Overbridge 13729
A370
Drove Road Ashcombe Br...
Churchill Rd
Pottery Street Bridge
Winscombe Rd
Shipham Cl
Hilddesheim Cl
Hurst Rd
Bridge Rd
Langford Rd
Winterstoke Rd
Sunnyside Rd N
Ridgeway Ave
Albert Ave
Earlham Grove
Mendip Rd
Sandford Rd
Osborne Rd
Ashcombe Rd
B3440
Locking Rd
Birchwood Ave
Searle Cres
Phillips Rd
ASDA

B1

Appendix C

Depot Costs

St Philips Marsh

New AC Depot at St Philips Marsh

Equipment	Assumed Size	Cost Assumption	Total cost (2003 SPONS prices)		Total cost adjusted for inflation to 2014	Total cost adjusted for - 30%	Total cost adjusted for + 30%
					42%	30%	30%
Maintenance facility	120	15 Substructure	£279.42	£502,956.00			
	120	15 Frame	£246.55	£443,790.00			
	120	15 Roof	£197.25	£355,050.00			
	120	15 External walls	£98.63	£177,534.00			
	120	15 Windows and doors	£65.75	£118,350.00			
	120	15 Internal walls	£32.87	£59,166.00			
	120	15 Finishes	£65.76	£118,368.00			
	120	15 Sanitary finishes	£32.87	£59,166.00			
	120	15 Mechanical	£230.11	£414,198.00			
	120	15 Electrical	£115.06	£207,108.00			
	120	15 Drainage and external work	£279.42	£502,956.00	£2,958,642.00	£4,201,271.64	£2,940,890.15
							£5,461,653.13
Bogie/Equipment Drop	7	10 Substructure	£532.06	£37,244.20			
	7	10 Frame	£608.07	£42,564.90			
	7	10 Roof	£380.04	£26,602.80			
	7	10 External walls	£152.03	£10,642.10			
	7	10 Windows and doors	£114.01	£7,980.70			
	7	10 Internal walls	£38.00	£2,660.00			
	7	10 Finishes	£114.00	£7,980.00			
	7	10 Sanitary finishes	£76.00	£5,320.00			
	7	10 Mechanical	£722.08	£50,545.60			
	7	10 Electrical	£380.04	£26,602.80			
	7	10 Drainage and external work	£684.08	£47,885.60	£266,028.70	£377,760.75	£264,432.53
							£491,088.98
OLE within facility & CET Road	450	OHLE	£250.00	£112,500.00	£112,500.00	£159,750.00	£111,825.00
Track	2000	Track Foundations	£92.62	£185,232.00			
	300	Rails, sleepers and fixings	£300.00	£90,000.00			
	3	Switches & crossings	£25,000.00	£75,000.00	£350,232.00	£497,329.44	£348,130.61
Stores and Offices	15	60 Substructure	£279.42	£251,478.00			
	15	60 Frame	£246.55	£221,895.00			
	15	60 Roof	£197.25	£177,525.00			
	15	60 External walls	£98.63	£88,767.00			
	15	60 Windows and doors	£65.75	£59,175.00			
	15	60 Internal walls	£32.87	£29,583.00			
	15	60 Finishes	£65.76	£59,184.00			
	15	60 Sanitary finishes	£32.87	£29,583.00			
	15	60 Mechanical	£230.11	£207,099.00			
	15	60 Electrical	£115.06	£103,554.00			
	15	60 Drainage and external work	£279.42	£251,478.00	£1,479,321.00	£2,100,635.82	£1,470,445.07
							£2,730,826.57
CET Installation	1	CET	£500,000.00	£500,000.00	£500,000.00	£710,000.00	£497,000.00
Signalling/DPS			£500,000.00	£500,000.00	£500,000.00	£710,000.00	£497,000.00
Staff Car park	20	10 At Grade Car Park	£1,200.00	£240,000.00	£240,000.00	£340,800.00	£238,560.00
OLE upgrades to St Philips Marsh Yard	2500		£1,400.00	£3,500,000.00	£3,500,000.00	£4,970,000.00	£3,479,000.00
					£14,067,547.65	£9,847,283.36	£18,287,811.95

Assumptions

The building can be built on existing stabling roads with no operational issues/further work due to loss of capacity

The shed will be 2 roads with and four cars long. (120m long 15m wide)

Offices and stores of 15m x 60m

No new stabling is required

Modifications/demolitions to existing infrastructure is excluded from the figures

The existing train wash and wheel lathe can be re-used

Signalling requirements are unknown, a figure has been estimated

OLE can be fed of the Mainline installation works

New OLE for wiring of the St Philips Marsh loop is based on £1.4m per Km

C1

Appendix D

Technical Note: Demand and Revenue Forecasting

D1
