



MetroWest+

Portishead Branch Line (MetroWest Phase 1)

Planning Inspectorate Reference: TR040011

Applicant: North Somerset District Council

9.3.3 ExA.SoCG-EA.D3.V2 – Statement of Common Ground

Between

- (1) North Somerset District Council;
- (2) Network Rail Infrastructure Limited; and
- (3) Environment Agency

Version: 2

Date: December 2020



Version history			
Date	Version	Status	Description/changes
2 November 2020	1	D1 Submission	Draft for submission to examination at Deadline 1
21 December 2020	2	D3 Submission	Draft for submission to examination at Deadline 3

1. Introduction

- 1.1 This Statement of Common Ground ("SoCG") has been prepared by North Somerset District Council ("the Applicant"), Network Rail Infrastructure Limited ("NRIL"), and the Environment Agency ("EA") to set out the areas of agreement and disagreement between the parties in relation to the Development Consent Order ("DCO") application for the Portishead Branch Line (MetroWest Phase 1) ("the DCO Scheme") based on consultation to date. For the avoidance of any doubt, the DCO Scheme is the "authorised development" as defined in the dDCO which includes the development and the associated development described in Schedule 1 of the d DCO.
- 1.2 This SoCG comprises an agreement log which has been structured to reflect topics of interest to the EA in relation to the application for the DCO Scheme. Topic specific matters agreed and not agreed between the EA and the Applicant are included.

2. Scheme overview

- 2.1 The Applicant has applied to the Planning Inspectorate ("PINS") for a DCO to construct the Portishead Branch Line under the Planning Act 2008 ("Application"). The Application was made on 15 November 2019 under reference TR040011 and was accepted for examination on 12 December 2019.
- 2.2 The DCO Scheme will provide an hourly (or hourly plus) railway service between Portishead and Bristol Temple Meads Railway Station, with stops at Portishead, Pill, Parson Street and Bedminster.
- 2.3 The DCO Scheme comprises the Nationally Significant Infrastructure Project ("NSIP") as defined by the Planning Act 2008 ("the 2008 Act") to construct a new railway 5.4 km long between Portishead and the village of Pill, and associated works including a new station and car park at Portishead, a refurbished station and new car park at Pill and various works along the existing operational railway line between Pill and Ashton Junction where the DCO Scheme will join the existing railway. Ashton Junction is located close to the railway junction with the Bristol to Exeter Mainline at Parson Street.¹
- 2.4 The Application has been accompanied by an Environmental Statement ("ES") because the DCO Scheme is classified as EIA development in the EIA Regulations 2017².

¹ Please refer to Schedule 1 of the DCO (Document Reference 3.1) for more detail.

² The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

3. The Environment Agency's role in the DCO Scheme

- 3.1 The EA is a non-departmental public body established under the Environment Act 1995 and sponsored by the Department for Environment, Food and Rural Affairs ("DEFRA"). The EA's principal aim is to protect or enhance the environment and contribute towards attaining the objective of achieving sustainable development.
- 3.2 The EA's role in the DCO process derives from the 2008 Act and secondary legislation made under it. In addition to its overarching role under the sponsorship of DEFRA, it is a prescribed consultee under section 42 of the Act and a consenting body in respect of a wide range of environmental matters including waste operations/discharge, water abstraction and flood risk.

4. Overview of Engagement

4.1 Introduction

- 4.1.1 This section briefly summarises the consultation that the Applicant has had with the EA. For further information on the consultation process please see the Consultation Report (Examination Library Document Reference APP-058). All further document references in this SoCG use the Examination Library Document references.

4.2 Pre-application engagement

- 4.2.1 The Applicant has engaged with the EA on the DCO Scheme during the pre-application process, both in terms of informal non-statutory engagement and formal consultation carried out pursuant to Section 42 of the Planning Act 2008.
- 4.2.2 The Applicant has had regular and constructive engagement with the EA throughout the pre-application process on both a formal and an informal basis. The Applicant adopted a multi-stage approach to formal consultation which has allowed the DCO Scheme proposals to evolve iteratively through the Applicant's consideration and regard for the EA's input, in keeping with the (former) Department for Communities and Local Government (DCLG) Pre-Application Guidance (2015). This has meant that the EA was able to direct the scope of the studies and review interim findings, in particular with regard to the FRA modelling studies, such that the EA meaningfully contributed to the development of the proposals in the DCO Scheme.

The formal consultation was carried out in three main stages:

- i. "Stage 1 Consultation", from 22 June 2015 to 3 August 2015 (pursuant to Section 47 only);
- ii. "Stage 2 Consultation", from 23 October 2017 to 4 December 2017; and
- iii. "Additional Stage 2 Consultation" at several different points following Stage 2 Consultation.

A full account of the Applicant's pre-application engagement with the EA is contained in the Consultation Report (Document reference 5.1).

4.3 Post-application

- 4.3.1 Following the submission of the application on 15 November 2019, the Applicant has continued to engage with the EA to discuss the content of this document.
- 4.3.2 Following the s 56 process, the EA has submitted relevant representations found at RR-013. .
- 4.3.3 The EA then raised further issues in its written representations for Deadline 2 dated 23 November 2020 ("WR") and in response to the ExA's first list of questions which are found at REP2-040.
- 4.3.3 This statement therefore addresses the combination of relevant representations made by the EA in the first instance at RR-013 and the written representations at REP2-040 as well as other selected issues raised during consultation.
- 4.4.4 In addition to the EA's representations, the Applicant responded to the Planning Inspectorate's letter of advice under s 51 of the Planning Act on climate change allowances following the December 2019 NPPF guidance and the Applicant's response dated 21 March 2020 ("the Response") is attached at Appendix 1.
- 4.4.5 Since the application was submitted, Bristol City Council with the support of the Environment Agency has produced the Bristol Avon Flood Strategy ("BAFS") dated October 2020 which is a Strategic Outline Technical Case for Consultation to 20 December 2020 which is attached at Appendix 2. As neighbouring authority the Applicant is part of the stakeholder working group involved in the progress of the flood strategy.
- 4.4.6 The BAFS makes reference to the March Floods at pages 14 and 15 together with the reference .." In March 2020, Bristol experienced the highest tidal event (of 8.81m AOD) since records began ". It is not known where the highest tidal event was taken. However, the Applicant has a set of photographs taken from and around Clifton Overbridge and Rownham Bridge at 09:00 on 12 March 2020 together with a plan showing the position from where the photographs were taken at Appendix 3. The recorded peak tide level at Avonmouth at this time was 8.44mAOD, with a preceding peak tide level at 18:00 on 11 March of 8.63mAOD (source: <https://www.gaugemap.co.uk/#!Detail/8241/3586/2020-03-11/2020-03-12>) and with heavy rain the night before. The second photograph shows the water level at 09.00 on 12 March below the tow path when the harbour itself was flooded and the Portway closed to traffic due to flooding. There is also no evidence of tidal debris on the tow path or railway in the

photographs. The fifth photograph shows standing water due to heavy rain the previous evening to the south and outside the site of the proposed the Clamage Road compound.

4.4.7 As a result of ongoing dialogue between the Applicant and the EA on off-site impacts of the DCO Scheme, the Applicant has produced a report entitled Project "Metro West Flood Risk Assessment – River Avon flood risk: Off-site impacts and mitigation" dated 4 August 2020 which is attached at Appendix 4.

4.4.7 Network Rail has prepared an updated version of Appendix T to APP-189 which is attached at Appendix 5 – The Metrowest Phase 1 Flood Plan. Network Rail have also provided further information on "Used Ballast and Excavation Waste" which is contained in standard NR/L3/ENV/044 attached at Appendix 6.

4.4 Overview of key issues raised in the EA's Relevant Representations and Written Representations at Deadline 2

4.4.1 The EA raised the following key issues:

[summary]

4.4.2 The following sections provide detail on the matters raised by the EA in its representations the actions taken by the Applicant in response, and whether the matter is agreed or remains to be agreed.

5. Flood risk

The following tables set out the detailed comments received by the Applicant and NRIL from the EA in respect of flood risk.

5.1 Flood Risk Assessment ("FRA") – relevant representations issues raised

Ref	Topic	Environment Agency position	Applicant position	Status (Issue Resolved/Issue Outstanding)
5.1.1	Climate Change Allowances	<p>Peak River Flow (fluvial) concern</p> <p>This has been reviewed by the Agency's modellers, who have agreed that the modelling is fit for purpose.</p>	The climate change allowances have been correctly modelled	Issue Resolved: Parties agree that the climate change allowances have been correctly modelled for peak river flow
5.1.2	Climate Change Allowances	<p>Peak Rainfall Intensity (pluvial) concern</p> <p>This has been reviewed by the Agency's modellers, who have agreed that the modelling is fit for purpose.</p> <p>WR 1.7: A Climate change factor of 25% was originally applied to the Colliters Brook. The Agency has reviewed the models and can confirm that the model was run using 40% and 70% uplift for climate change.</p>	The climate change allowances have been correctly modelled	Issue Resolved: (1) The climate change allowances for peak rainfall intensity have been correctly modelled (2) based on modelling and applying the 70% allowance in the Longmoor and Colliter's Brooks catchments in 2075 and 2115 provides an "upper limit" of the frequency of flooding of the DCO Scheme at the crossing of Longmoor and Colliter's Brooks of approximately once every 50 to 75 years on average in 2075 and once every 25 to 50 years on average in 2115 (compared to once every 50 to 75 years on average in both 2075 and 2115 applying 40% allowances).

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5.1.3	Climate Change Allowances	<p>Sea Level Rises concern</p> <p>The Agency's modellers have reviewed the comment and advised in respect of the lack of information regarding the tidal boundary. The model review certificate has requested additional information</p> <p>Ideally the CFB should be updated to CFB 2018</p>	<p>Sea Level:</p> <p>It is not accepted that additional information is lacking but rather EA has acknowledged that there has been a change of personnel in the organisation and the current modeller doesn't have access to all the modelling submitted previously.</p> <p>As a result, the Applicant has resubmitted the full modelling dataset</p>	Issue Resolved: The climate change allowances for sea level rises have been correctly modelled

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		<p>WR: 1.3 - The Agency has reviewed the latest modelling submission for the proposal (March 2020 model) and have concluded the model, as submitted, is insufficient. Accordingly, the Agency has requested additional information for review. The applicant is currently in the process of submitting the requested details.</p> <p>The EA has subsequently confirmed that the flood modelling is fit for purpose.</p>	<p>and the EA have confirmed that the modelling is fit for purpose</p>	
5.1.4	<p>Flood Zones: Location of the undefended areas of the DCO Scheme in flood zones 3 a and b.</p>	<p>WR 1.10: Paragraph 2.2.29 (FRA APP – 173) states there are 7 areas or works lying within undefended flood zone 3 a and 3 b.</p> <p>WR1.9: The FRA (Section 7) refers to associated developments however, these have not been fully assessed for flood risk. Accordingly, details are required in respect of the developments and any potential flood risk impact</p> <p>EA previous comment: The Clange Road proposals have been reviewed however, the Agency would welcome</p>	<p>Table 4.9 of FRA (APP-173) has a list of works as defined in the DCO (not areas) in undefended flood zone 3 a and 3 b. See Reviewed Flood Zone column in table 4.9 and the flood zone plans (APP-174 and 175) showing the areas in undefended zones 3a and 3b as being:</p> <ol style="list-style-type: none"> 1. Portbury Ditch, Portishead foot and cycle path (not the railway) 2. Easton in Gordano stream area 	

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		<p>clarification regarding the location of details concerning the other sites.</p> <p>Comments received 21.12.2020: A detailed assessment of planned works in Flood zone 2, 3a and 3b, must be included in the FRA. The applicant has discarded them from the FRA as they don't require floodplain compensation. We need to see details of those as we assess the overall safety of a proposal against flood risk.</p> <p>We need to see details for items: 3, 20, 23, and 26a</p> <p>Details about these items should be included in the FRA demonstrating how it will be safe to use them during a flood event. Residual risk also needs to be assessed and raised level discussed</p>	<ol style="list-style-type: none"> 3. Markham brook (but railway elevated on Pill Viaduct) 4. Temporary cycle diversion Avon Road, Pill (Jenny's Meadow) (not railway) 5. Temporary micro compound under Pill Viaduct (not railway) 6. Clamage Road Compound (not railway) 7. Bower Ashton area railway <p>Portishead station, car park and the disused line between Portishead and Pill are shown as defended flood zone 3.</p> <p>For the purposes of assessing flood risk the DCO Scheme includes all associated development (car parks, compounds etc) within the meaning of s 115 PA 2008. Therefore all the works and the full extent of the DCO Scheme have been assessed for flood risk</p>	
5.1.5	Design life of the DCO Scheme	WR 1.3: The proposal's design lifetime has been agreed as 60 years, however	The design life of the DCO Scheme is 60 years (2075) but flood risks up to 100	Issue Resolved: Parties agree that the DCO Scheme design life is 60 years.

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		<p>all models and the scheme itself, have been assessed for flood risks up to a 100 year lifetime</p>	<p>years (2115) has been assessed for sensitivity purposes only.</p> <p>The Applicant notes a 60-year design life was accepted by the EA for other West of England infrastructure projects such as the South Bristol Link and for MetroBus (M2 - Ashton Vale to Temple Meads route) in respect of environmental permits.</p>	
5.1.6	BASF	<p>WR 1.10: Section 10 (Mitigation) Table 10.1 page 10.3 (of APP-173) states the residual risk is likely to be mitigated by future strategic tidal flood defences in Bristol. The Agency has previously advised the applicant that it is not acceptable to rely on the proposed strategic defences to mitigate residual risk. For information, the Agency is working with Bristol City Council in respect of future strategic flood defences in Bristol however, proposals are at an early stage and there remains a degree of uncertainty regarding actual delivery</p>	<p>The FRA modelling assumes that no strategic flood defences are built throughout the whole study area.</p> <p>BASF 2.3: Once the Strategy is adopted by Bristol City Council and endorsed by the Environment Agency as having reasonable certainty of delivery (see Section 4.2), it will reduce the constraint of flood risk and open opportunities for regeneration and new development, contributing to the economic success of the city.</p> <p>BASF 4.2 BCC plan to continue to work closely with the Environment Agency in</p>	<p>Issue Resolved: Both parties agree that the FRA assumes no strategic flood defences.</p> <p>Outstanding issue: The EA's position is that no weight is to be given to defence works in the BASF in the determination of the application. The Applicant's position is that some weight is given based on the highly unlikely scenario that BCC and the EA will allow such extensive harm to Bristol to take place due to flooding without at least the early stage defence works.</p>

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			<p>order to ensure the Strategy has a reasonable certainty of delivery.</p> <p>BASF 6.3.8 Project Plan indicates Outline Business Case in 2021/2 for early stage phase 1 works with attendant certainty of delivery likely.</p> <p>BASF Fig 28 and Appendix C shows indicative flood defences to protect Clanage Road Compound and the adjoining railway at Bower Ashton and to be built from 2024 onwards (6.3.8) subject to Outline Business Case.</p> <p>Based on the extensive harm to Bristol City Centre due to flooding if no action is taken, it is highly likely that the undefended flood zone 3a and 3b areas of the DCO Scheme will become defended areas by 2030.</p> <p>For essential infrastructure such as the DCO Scheme, some weight should now be given to the likelihood of flood zone 3a and 3b areas at Clanage Road compound and adjoining Bower Ashton railway becoming defended by 2030 at the latest.</p>	<p>EA's further comment: FRA needs to be updated and reflect this decision.</p>

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5.1.7	Modelling in context	<p>WR 1: The Flood Risk Assessment (FRA) submitted in support of the proposal, has demonstrated that part of the site is in functional floodplain (Flood Zone 3b) and will, as a consequence, flood at a return period as low as 1 in 5 years at present. With the predicted impact of climate change, the frequency of flooding (and flood depth) increases to a potential 5 times a year in 2115</p> <p>WR 1.3.4: The FRA indicates the CAFRA model overestimates the flood risk. It is acknowledged that there is always a degree of uncertainty when predicting flood risk using a model however, the model represents the best available information. Regardless of any uncertainty, the risk of flooding and its attendant safety impacts, remains high. Accordingly, the frequency and depth of flooding remains a concern</p> <p>EA previous comments: It is claimed the assumptions made are conservative and that the model is predicting a higher flood level than what would be experienced. Again, clarification is required.</p>	<p>FRA (APP-173) table 4.10 indicates at present (2015) the DCO Scheme does not flood for the 1 in 5 year event but does in the 1 in 10 year event</p> <p>The Applicant's position is that the modelling assumptions it has made are conservative and that the models are predicting a higher flood level than what would be experienced. This is demonstrated by reference to the photographs at Appendix 3. The MetroWest modelling indicates the railway would flood for a return period between 5 and 10 years for the present day (2015) whereas the March 2020 event, for which the peak level at Avonmouth was slightly above the CFB2018 20 year return period EWL at Avonmouth did not result in flooding to the railway at Bower Ashton. This supports our contention that the modelling is conservative as described (see 5.1.8 below). Also, that at the most vulnerable section of the DCO Scheme at Clanage Road compound and Bower Ashton Railway the realistic present day (2015) return period for a flood event is likely to be approximately 20 years. In other words</p>	

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		<p>The Agency would also welcome clarification regarding the location of the photos and comparisons within the submitted documentation.</p> <p>EA comment 21.12.2020: We agree the site is in functional floodplain and that nothing can be done to reduce the flood risk to the line ie reducing the frequency and depth of flooding without increasing flood risk to third parties</p>	<p>the area will flood at a return period of 1 in 20 years based on the extreme flood event in March 2020]</p>	
5.1.8	Flooding Frequency and depth	<p>Potential high frequency of flooding of the proposed railway line.</p> <p>WR 1.3.4: The model demonstrates that for a 200 year return period, the normal design standard for tidal flooding, the flood depth on the line is 970mm at present, 1330mm within the lifetime of the proposed development and 1930 mm for the 100 year future scenario. With regard to the onset of flooding of the railway line (for the present day) the line is at risk of 150mm of flooding for a return period between 5 and 10 years. Within its</p>	<p>Based on revised climate change allowances, Table 4 in the Response details an assessment of the calculated future frequency of flooding to the DCO Scheme. The calculated frequency of future flooding of the DCO Scheme at its most vulnerable section at Bower Ashton is approximately:</p> <p>- 1 to 2 times per year in 2075 applying the higher central sea level rise allowances,</p>	<p>Issue resolved: The parties agree the frequency and depth of flooding based on the modelling undertaken. However, whilst the Applicant agrees with the EA on predicted depth during flood events, at present day the risk of 150 mm of flooding is likely to be for a return period of 20 years rather than between 5 and 10 years based on the photographic evidence at Appendix 3</p> <p>EA Comment 21.12.2020: The findings are still enough to make the site in FFP even with a less conservative approach</p>

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		lifetime, it increases to 440mm for a 1 year return period, and to 1020mm within a 100 year for 1 year return period	<p>- 2 to 3 times per year in 2075 applying the upper end sea level rise allowances.</p> <p>- Once every 1 to 2 years in 2060 applying the higher central sea level rise allowances,</p> <p>- Once per year in 2060 applying the upper end sea level rise allowances</p> <p>The calculated frequency of future (2115) flooding is approximately 5 to 6 times per year applying the higher central sea level rise allowances, and approximately 8 times per year applying the upper end sea level rise allowances</p> <p>The Applicant agrees with the EA on predicted depth during flood events, at present day the risk of 150 mm of flooding is likely to be for a return period of 20 years rather than between 5 and 10 years based on the photographic evidence at Appendix 3</p>	
5.9	The Sequential Test	WR 1.1: The submitted FRA advises the flood risk Sequential Test has been applied and passed. The Agency	The DCO Scheme utilises operational railway along a historic alignment, which could not be changed without	Issue Resolved

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		acknowledges that the fundamental nature and objectives of the proposal, effectively precludes the use of other sites at a lower risk of flooding	prohibitive costs. There is no option to avoid Flood Zones 3 and 3B.	
5.10	The Exception Test	WR 1.2: The Agency has reviewed the submitted FRA and is of the view it does not currently comply with the requirements set out in the Planning Practice Guidance (Flood Risk and Coastal Change). The Agency requires the submission of additional information for review and an update of the FRA, to ensure an appropriate assessment of the flood risks arising from the proposed development. Network Rail has advised that the depth of flooding on the line is not an issue for them, on the grounds they are unable to operate the line when it is flooded. However, the frequency of flooding is an issue. With climate change, the model demonstrates both the frequency and depth of flooding increases, which will lead to more frequent and longer disruptions on the line and therefore passenger services.	In addition to the comments made on the exception test in the FRA (APP-173) the Applicant makes the following representations: (1) the DCO Scheme is essential infrastructure "designed and constructed to remain operational"(NN NPS). Whilst the infrastructure including car parks, stations will remain operational throughout, the train service may be subject to minor interruption based on modelling conducted. In Appendix 2 of the Response the Applicant has applied the impact of frequency of future flooding on the proposed train service timetable for 2075 and 2115 This shows less than 1% of train operating hours lost per year due to flooding in 2075, with the Upper end sea level rise allowances applied. NRIL has confirmed that for a typical event 8 hours is adequate time for inspection and removal of debris. Moreover the recovery time is not	Issue Outstanding: a. The parties agreed that the first limb of the exception test is met ie: that the development would provide wider sustainability benefits to the community that outweigh the flood risk; b. The parties agree that the DCO Scheme is essential infrastructure.

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		<p>WR 1.6: It is important to note the assumption detailed in Section 8.6.4 p 8.9 is not correct. Rainfall and storms could potentially influence sea level differently along the coast and therefore flooding could potentially occur at any time along the line. Emergency and access arrangements in respect of stations and car parks, need to be evaluated on their own merits. Accordingly, the Agency must request confirmation of the applicant's intention to extend the provisions of the proposed Emergency Response Plan outlined in Appendix T and as detailed under Requirement 5 (CEMP). All emergency and evacuation procedures detailed within the requisite plan, must be to the satisfaction of the local authority's Emergency Planning Officer</p> <p>Previous EA comments: As advised on numerous occasions, Essential Infrastructure should remain operation during a flood event. However, the technical note has assessed certain options to mitigate the increased flood risk and has been unsuccessful.</p>	<p>affected by tidal flooding (see Table 1 Appendix 5).</p> <p>In the alternative based on the Applicant's opinion that fewer flood events are likely compared to those modelled (5.1.8 above), the most vulnerable part of the infrastructure at the Clamage Road and Bower Ashton areas has approximately only a 40% risk of a flood event to interrupt services within the next decade at which point, strategic defences are almost certain to be provided.</p> <p>(ii) that the essential infrastructure is "safe for users in times of flood". See Appendix 5 which provides details on procedures for extreme weather events including for passenger evacuation and welfare.</p> <p>(iii) DCO Scheme would result in "no net loss of floodplain storage and not impeded water flows." The Jacobs technical note at Appendix 4 provides details of the Applicant's evidence on this matter – see also sections below.</p>	

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		<p>Have other options been considered i.e. has any assessment of works upstream been considered? or by negotiations with landowners. Clarification regarding this issue is required.</p> <p>Does this include the time it would take to clean and repair the railway?</p> <p>The flooding experience at that location would be different from the one experienced on the Somerset level and moors referred to in the FRA. With potential wave impact and salted/silted water, which would impact on the recovery time.</p> <p>It is understood it is not possible to design the line out of the floodplain and that depth of flooding is not an issue on the grounds trains will not operate when the track is flooded regardless of the depth</p> <p>How does Network Rail ensure the safety of the passengers when stations are flooded or trains are unable to reach their planned destination?</p>		

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		<p>Appendix T assesses extreme weather plans from the point of view of the Railway structures, but does not consider how to keep the passengers safe. Additionally, it does not include reactive actions about maintenance, such as interventions in the event of blockage of the structures</p> <p>Appendix T needs to consider emergency and evacuation plans for stations, emergency routes out of floodplain, and returning stranded passengers back to safety.</p> <p>The exception test is about demonstrating the development will be safe. This has not been done. Whilst there are discussions about frequency of flooding on the line and flood plain compensation, the FRA does not mention how to make the stations safe i.e. how to evacuate them and how to keep stranded passenger safe.</p> <p>What is the depth of flooding? The increase in frequency is a concern. Flood depth and velocity is also a concern when looking at safety and evacuation/emergency plan.</p>		

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		<p>The obvious preference is for all materials to be stored outside the floodplain. Have all options been investigated?</p> <p>No temporary structure should be allowed within 3b, unless there is appropriate mitigation for the loss of floodplain</p> <p>The potential increase in flood risk to third parties, particularly in the vicinity of Portishead, Pill, Easton-in-Gordano and Clanage Road. Accepted that any approved railway designated as 'Essential Infrastructure' (as this scheme is [because it is an NSIP]) will flood in an extreme flood event, subject to the adoption of an agreed flood management plan, including details of flood warnings and evacuation procedures.</p> <p>However, there will be a section of the line [in Bower Ashton] which will flood more frequently than the 1 in 2 year (50% annual exceedance probability - AEP) with a post development flood level of 0.93 m. The line should remain operational up to a 1 in 20 year (5%</p>		

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		<p>AEP) event, with the allowance for the predicted impact of climate change, without increasing flood risk elsewhere</p> <p>Comments received 21.12.2020: NPPF does specify that essential infrastructures should remain operational during a flood event. The DCO scheme as proven by the FRA and the model, is at risk of flooding so will not be able to operate at all times as required by NPPF</p> <p>300mm is the maximum depth of flooding a person is considered to be able to walk through before it becomes unsafe. The line is predicted to flood to depth of greater than 1m</p> <p>We need to see details of associated development as per comment in 5.1.4 above and get a better understanding of how the compound at Clanage road will be used (permanent and temporary.</p> <p>i) considering the depth and frequency of flooding the assessed recovery time seems low compared to what we would expect.</p>		

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		<p>At this stage, this scheme can't rely on strategic defences for bower ashton and clanage road</p> <p>ii) Appendix 5, recently provided to us does provide details of passenger emergency and evacuation plan. This should be for the emergency panner to assess</p>		
5.1.11	Flood Plain compensation	<p>WR 1.3.5: It is not possible to provide level for level floodplain compensation at the site however, the model shows that volume for volume compensation can be provided by lowering ground levels. The FRA states the preferred mitigation option is to lower the ground level to 7.4m AOD, which would result in an increased flood risk to some properties of 1mm, which the FRA contends is negligible and within model tolerance. It is acknowledged the indicated increase in flood risk is low however, the Agency would prefer the lowering of ground levels to 7.3m AOD, which would have no impact on third parties.</p> <p>(Longmoor and Colliters Streams)</p>	<p>Bower Ashton Railway and Clanage Road Compound</p> <p>See Technical Note Appendix 4 for explanation. An increased flood risk to some properties of 1mm as modelled is insignificant and is within model accuracy (The 1 D model convergence limit is +/- 10 mm.) This is particularly the case when balanced against functionality of the Clanage Road compound. The preferred option is therefore 7.4m AOD.</p> <p>For clarification:</p> <p>1)The proposed compensation area is within the Order limits</p>	

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		<p>WR 1.4: The bank of the river Avon at Bower Ashton, consists of naturally high ground and therefore, there is no requirement to run a breach analysis for that location. However, there is the potential for the Longmoor tunnel and the Colliters Brook system to fail. It is important to note that a valve on the outlet of the Longmoor tunnel, could fail either open or closed. Both scenarios would have consequences in terms of flooding the railway, which must be assessed, together with the potential impact on the railway, in the event of the Longmoor tunnel collapsing.</p> <p>The Agency is initiating a project to invest in the Longmoor/Colliters Brook system and will review options to work in partnership with any parties benefitting from the project.</p> <p>Comment received 21.12.2020: The land within the compound area is already in flood zone 3b, functional floodplain, which is land that is must be safeguarded for flood water during a flood event. If the compound area is used for storage of material, the land will not be available for flood storage</p>	<p>2)The proposed compensation area involves lowering ground levels within the compound by approximately 0.1m on average. This detail of the design will not significantly impede use of the permanent compound as:</p> <ul style="list-style-type: none"> - The access to the compound and ramp up to the track are designed to a specification that accommodates a range vehicular types (taking account of the vehicles that may use the compound). - Whilst the lowering of compound levels by approximately 0.1m may lead to slightly wetter ground conditions during periods of wet weather, the impact of this on use of the permanent compound will be insignificant as it is only expected to be used periodically for maintenance inspections and for occasional site works. <p>Temporary Storage: Storage arrangements are detailed in paragraph 3.2.3 at APP 211 CEMP. All arrangements are required to be approved.</p>	

Ref	Topic	Environment Agency position	Applicant position	Status (Issue Resolved/Issue Outstanding)
		<p>when needed. We need to get clarification on how the compound will be used</p> <p>Previous EA comments: The solution is based on not increasing the width and the level of the railway and allowing it to flood. The Agency would welcome the inclusion of correspondence regarding this issue.</p> <p>Only the access ramp will be raised and contribute to loss of floodplain. This will require compensation for fluvial and also to ensure flood risk is not increased to third parties. Has the applicant considered alternative options to floodplain compensation?</p> <p>The model has been reviewed and additional information is required to validate the model. One point to note is the ground level used for the floodplain compensation appears to be incorrect. The biggest issue for the Agency with regard to the floodplain compensation is the apparent inability to provide</p>	<p>APP-173 – 8.1.22 Colliter’s Brook and Longmoor Brook culverts’ structural performance will be assessed in the context of the DCO Scheme and the culverts will be improved if required to allow for any additional structural loading.</p> <p>It is acknowledged that a FRAP is required before any works are undertaken – see APP-073 Consents and Licences</p> <p>Information on structural loading has been included in the FRA (ES Appendix 17.1, DCO Application Document Reference 5.6).</p> <p>The reference to wider improvement of Longmoor tunnel and Colliters Brook system has not been raised previously by the EA. There is no additional loading for the proposed scheme since the railway is remaining at its current elevation. We note that EA is evaluating the condition of its assets.</p>	

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		<p>level for level compensation, only volume for volume by lowering ground the level within an area that already floods. Three ground levels were tested. The Agency would prefer the lowest ground level to be used as the preferred option, the middle level, still results in increased flood risk to third parties</p> <p>In addition, floodplain compensation should be provided for any temporary loss of storage during construction. Climate change does not need to be taken into consideration for floodplain compensation for temporary works</p> <p>Page 39 of the CAFRA technical note v 4.13 states that the option of 7.4 m AOD can be considered the best solution as offsite impacts are insignificant (+1mm). Clarification is required regarding this matter</p> <p>Floodplain compensation storage is still required for the ramp and is not provided on a level for level basis. However provided the model review is successful, the model demonstrates</p>		

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		<p>the compensation proposed would work</p> <p>As detailed above: In addition, floodplain compensation should be provided for any temporary loss of storage during construction. Climate change does not need to be taken into consideration for floodplain compensation for temporary works.</p> <p>The obvious preference is for all materials to be stored outside the floodplain. Have all options been investigated?</p> <p>No temporary structure should be allowed within 3b, unless there is appropriate mitigation for the loss of floodplain.</p>		
5.1.12	Flood Plain Compensation	<p>WR 1.3.2: The Environment Agency modelled the floodplain using JFLOW at this location however, in order to accurately assess the flood risk, the FRA relies on a purpose built TuFLOW 1D-2D linked model, focusing on the area between the M5 and the railway line. The FRA concludes the Portishead</p>	<p>Easton-in-Gordano Stream:</p> <p>The Applicant is able to clarify that only one floodplain area was originally proposed.</p> <p>Also there is no farm track. The Applicant is seeking a right of access over the land south of cattle creep</p>	<p>Issue Resolved but EA comment 21.12.2020: Access culvert will need to remain at the same level to provide consistency of flood relief. How do we secure this through the DCO application?</p>

Ref	Topic	Environment Agency position	Applicant position	Status (Issue Resolved/Issue Outstanding)
		<p>to Pill section of the scheme is above the fluvial and tidal 1 in 1000 year flood level, for present and future scenarios (2075 and 2115). However, this relies on a flood relief channel in the form of a farm access track running under the railway line. As a result, appropriate provisions are required within the DCO, to ensure the farm access track will be maintained for the lifetime of the development.</p> <p>WR 1.3.2: On the basis of the identified volume of lost floodplain storage (75.5 m3) the Agency confirmed that it would not require the provision of floodplain compensation. Accordingly, all relevant supporting documentation, including the FRA and model report, must be updated to reflect the outcome of the meeting.</p> <p>Previous EA comments: Is this provided in addition to the floodplain compensation storage for moving the line?</p>	<p>bridge. The Applicant is not intending to formally create a track but access is required for the Applicant to maintain the bridge structure and for utility companies to access the land. There is therefore no plans to block the access and it will be maintained in its current form.</p>	

Ref	Topic	Environment Agency position	Applicant position	Status (Issue Resolved/Issue Outstanding)
		How many floodplain compensation areas are required for Easton in gordano		
5.1.13	Portishead to Pill	<p>WR 1.3.1: The proposed development area is currently protected from coastal flooding by flood defences, up to the present day 0.1% (1 in 1000yr) annual probability flood event. The defences will continue to offer protection over the 60 year lifetime of the development for the 0.5% (1 in 200) annual probability flood event, but not the 0.1% (1 in 1000). The defences will not protect the site for a 100 year lifetime</p> <p>EA Comment 21.12.2022: There is still an issue that the defences will not protect the site for 100 year lifetime</p>	The design life is 60 years and for a return period of up to 1,000 years the railway does not flood. (see table 4.10 FRA APP- 173)	
5.1.14	Drove Rhine	WR 1.3.3: The FRA concludes the flood risk impact of the scheme is negligible and there is no need for a post development model. Unfortunately, the FRA does not detail how the railway line will be raised and whether there will be a need to widen the embankment as a result. If this is the case, would there be any loss of	<p>Applicant has undertaken sensitivity testing with an increase of 200mm and difference plots have been added to the Drove Rhyne modelling report.</p> <p>The DCO Scheme will not result in displacement of Drove Rhyne fluvial floodplain storage and therefore no floodplain compensation is required.</p>	Issue Resolved

Ref	Topic	Environment Agency position	Applicant position	Status (Issue Resolved/Issue Outstanding)
		<p>floodplain as a result of a wider footprint and a consequential need for appropriate floodplain storage compensation?</p> <p>During a meeting on the 10 December 2014, discussions included opportunities to deliver wider benefits as part of the works in the vicinity of Drove Rhyne. There is no indication in the FRA that this work is proposed. Clarification from the applicant regarding this matter would be appreciated.</p> <p>EA comment 21.12.2020: The applicant has not provided any answer on the improvement works discussed in the meeting in 2014.</p> <p>Previous EA comments: Stated that the model report shows that for the Drove Rhine, the sensitivity test was only run with an increase of 150mm, not 200mm, therefore a run should be undertaken on a selection of return periods for a 200mm increase of the railway and a post-development difference plan shown.</p>	<p>All proposed works at Drove Rhyne are above the fluvial flood level. The details for the crossing and in parallel are as follows:</p> <p>DCO Scheme crossing culverts on Drove Rhyne tributaries:</p> <p>Where the DCO Scheme crosses the Drove Rhyne tributary culverts (model nodes 3.004, 4.004 and 5.004) the modelled 100 year return period flood level in 2115 is contained within-bank and all proposed works are above the modelled 100 year return period flood level in 2115.</p> <p>Drove Rhyne running parallel to and north of the DCO Scheme:</p> <p>The modelled 100 year return period flood level in 2115 in Drove Rhyne would not result in flooding at the DCO Scheme as ground levels between Drove Rhyne (parallel to and north of the DCO Scheme) and the DCO Scheme are above peak flood levels.</p>	

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5.1.15	Main River Culverts	<p>WR 1.5: Culverts will need to be surveyed to ensure they are structurally sound and sufficient in respect of any proposed works. Any deficient culverts will need to be repaired or replaced on a like for like basis, which will require a FRAP from the Agency, prior to works commencing</p> <p>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</p> <p>The FRA states there will be no additional loading of the culvert. Appropriate provisions will be required in the DCO to ensure compliance with this statement.</p>	<p>APP-186 provides details of track culvert survey for the disused line. It is recommended that all culverts save for two are fully replaced along the disused line (p 7). Also the two remaining culverts are not main river culverts.</p> <p>For the operational line - APP-173 - 8.1.22 explains the position until further detailed design is undertaken.</p> <p>The CEMP APP-122 provides details of flood plain and permitting – section 2.7. Also the Consents and Licences submission APP-073 provides details of permitting.</p> <p>See also requirement 5 DCO including requirement for a construction flood plan and flood emergency preparedness plan for any construction site and compound located within</p>	Issue Resolved

Ref	Topic	Environment Agency position	Applicant position	Status (Issue Resolved/Issue Outstanding)
			undefended flood zone 2 or flood zone 3	
5.1.16	Access Requirements	EA comment 21.12.2020: Encouraging to see that work is progressing on getting access approval from the EA. Issue in progress	Awaiting land agreements from the EA but it is not intended to impede EA access.	
5.1.17	Portishead associated development	<p>Details regarding associated development in Portishead</p> <p>WR 1.6: (Portishead Station) It is important to note the assumption detailed in Section 8.6.4 p 8.9 is not correct. Rainfall and storms could potentially influence sea level differently along the coast and therefore flooding could potentially occur at any time along the line. Emergency and access arrangements in respect of stations and car parks, need to be evaluated on their own merits.</p> <p>Accordingly, the Agency must request confirmation of the applicant's intention to extend the provisions of</p>	<p>The DCO Scheme including associated development is included in the FRA. There are a number of explanatory references to Portishead Station as follows:</p> <p>8.2.3 FRA APP-173 - The proposed Portishead station and car park are located in defended Flood Zones 2 and 3 (Section 4.2.30 and Appendix L, APP-177). For the present day (2015) and future (2075) scenarios, the station and carpark and surrounding areas are defended from coastal flooding for return period above 1000 years</p>	

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		<p>the proposed Emergency Response Plan outlined in Appendix T and as detailed under Requirement 5 (CEMP). All emergency and evacuation procedures detailed within the requisite plan, must be to the satisfaction of the local authority's Emergency Planning Officer</p> <p>EA comments received 21.12.2020: We need to see the details of the plan as we need to review the safety of the associated development.</p> <p>The EA is no longer responsible to comment on surface water drainage and maintenance of the drainage system</p> <p>Depending on weather systems reaching the coast, the flooding along the coast will not necessary take place as predicted. We therefore do not agree with the statement in FRA APP-173 Section 8.6.4 p 8.9. measures should be taken to make Portishead station safe</p> <p>As per NPPF, all works in flood zone 2 and 3 require an FRA. The fact that</p>	<p>Portishead Station APP- 187 provides details of drainage at Portishead Station and maintenance.</p> <p>AP-173 8.6.4: DCO Scheme would flood at Bower Ashton for lower return period tidal flood events than at Portishead station and car parks, i.e. before the car parks, station and access routes flood (Section 4.2.31), and so the service would cease operation before the car parks, station and access routes flood. An Outline Flood Plan (operational phase) has been developed by NRIL (refer to Section 8.7 and Appendix T, DCO Document Reference 5.6).</p> <p>The Applicant has undertaken a further review of the FRA and provides the following explanation regarding the associated development as part of the DCO Scheme</p> <p>Associated development in Portishead</p> <p>The associated development in Portishead includes DCO Works numbers 2, 2A, 3, 4, 5, 6, 7, 7A, 7B, 7C, 7D, 7E and 8.</p>	

Ref	Topic	Environment Agency position	Applicant position	Status (Issue Resolved/Issue Outstanding)
		<p>associated developments are defended or do not require floodplain compensation is not a reason to exclude them from the FRA.</p> <p>Please provide an FRA for the associated works in flood zone 2 and 3</p>	<p>All the above are:</p> <ul style="list-style-type: none"> • Either in Flood Zone 1, defended coastal Flood Zone 2 or defended coastal Flood Zone 3 except for the foot and cycle track crossing of Portbury Ditch (Work 3) which is in undefended fluvial Flood Zone 3a where it crosses the existing culvert structure on Portbury Ditch. Whilst Work 3 is partly in fluvial Flood Zone 3a, all Work 3 proposed works are above the flood level and so the works will not displace floodplain storage and no floodplain compensation is required (FRA APP-173 Table 4.9). • Outside of the simulated coastal 200 year return period flood extent in 2015 and 2075, and all are outside of simulated coastal 1000 year return period flood extent in 2075 except for the temporary haul road (Work 8), which will no longer exist in 2075. • Outside of the simulated flood extent for a breach of coastal defences during the 200 year return period flood in 2075 except for the temporary haul 	

Ref	Topic	Environment Agency position	Applicant position	Status (Issue Resolved/Issue Outstanding)
			<p>road (Work 8), which will no longer exist in 2075.</p> <p>The associated development works in Portishead (Works numbers listed above) are outside of the 200 year return period coastal flood extents for the design life (2075), and all are outside of simulated coastal 1000 year return period flood extent in 2075 except for the temporary haul road (Work 8). Therefore the Applicant's assessment of associated development works in Portishead explains surface water drainage management in Section 8.3 of the FRA (APP-173), Appendix O of the FRA (APP-187 and APP-188) and in the Response.</p> <p>.</p>	
5.1.18	Permitting	<p>The lack of confirmation the Environment Agency's Flood Risk Activity Permitting requirements are fully understood.</p> <p>EA Comment 21.12.2020: The need for FRAP has been added to document APP-073. It is the applicant's</p>	See Master CEMP and requirement 5. FRAPs will be required – see Consents and Licences APP-073	Issue Resolved

Ref	Topic	Environment Agency position	Applicant position	Status (Issue Resolved/Issue Outstanding)
		<p>responsibility to apply for a FRAP once the DCO scheme has been approved</p> <p>EA previous comment: There appears to be an appreciation of the need for a FRAP.</p>		

5.2 Other flooding-related issues raised during consultation for separate tables in this section

Ref	Topic	Environment Agency position	Applicant position	Status (Issue resolved/Issue outstanding)
5.2.1	Draft DCO	<p>A Requirement should be included in the DCO necessitating a Flood Risk Management Plan.</p> <p>EA comment 21.12.2020: Now that we have seen Appendix 5, we are satisfied that NR has taken passenger safety in consideration. It is for the emergency planner to assess the emergency and evacuation proposal in light of the flood risk at the site</p>	<p>Requirement 5 and CEMP (APP-211) provides for Flood Plan (Construction Stage).</p> <p>For the operational stage, Appendix 5 provides details of the extreme weather plan. Network Rail is required to adhere to such plans.</p> <p>Also Appendix T of the FRA APP – 189 (ES Appendix 17.1, DCO Application Document Reference 5.6) comprising the MetroWest Phase 1 Outline Flood Plan for the Operations Phase and the MetroWest Phase 1 Flood Plan during Construction for Proposed Infrastructure at Bower Ashton in Flood Zone 3b (Clanage Road Construction Compound) have been submitted with the DCO application. The Flood Plan for the operations phase will be superseded by Network Rail’s own procedures for managing floods on their network. The contractor will be required to produce a construction stage flood plan which takes into consideration the findings of</p>	Issue resolved

Ref	Topic	Environment Agency position	Applicant position	Status (Issue resolved/Issue outstanding)
			the FRA and the Flood Plan for Proposed Infrastructure.	
5.2.2	Flood risk permits	Requested draft flood risk permits. EA comment 21.12.2020: Due to the complexity of the scheme, we would advise the applicant contact the EA at pre application enquiry regarding all permit application	Environmental permits will be applied for pre-construction as included in Consents and Licences required under Other Legislation APP-073 .	Issue resolved

6. Ground investigation and contamination

6.1 The following table details the process whereby the topics have been scoped through dialogue between the Applicant and the EA, how issues have been resolved, or where matters remain outstanding.

	Sub-topic	Environment Agency position	Applicant position	Status Issue resolved/Issue outstanding
6.1.1	Contaminated Land (Relevant Representation)	<p>WR 2: The Agency, as a regulator with responsibilities to protect the water environment, has, on numerous occasions, advised the applicant the submitted documents do not, in its opinion, provide a sufficient understanding of the potential for contamination within the application site, either in terms of the entirety of the application area, or any particular location therein. Additionally, the subsequent assessment undertaken, asserts that the risks are not significant. However, that assessment, as detailed above, is based on insufficient information.</p> <p>WR 2: EA require amendment to requirement 17 to include a remediation strategy and verification plan</p> <p>The information submitted does not give the Environment Agency confidence that the applicant has adequately understood the potential</p>	<p>All contaminated Land investigations and assessment are set out in the relevant ES chapter APP -105 and APP 144, 145 – 150.</p> <p>The Master CEMP at AS-046 provides details of the Applicant's approach to construction and investigations where appropriate. Requirement 5.</p> <p>Proposed draft amended requirement 17 below:</p> <p>Contaminated land and groundwater 17.—(1) A stage of the authorised development must not commence until a written scheme applicable to that stage to deal with the contamination of any land, including groundwater, within the Order limits which is likely to cause significant harm to persons or pollution of controlled waters or the environment has, after consultation with the relevant planning authority and the Environment Agency, been submitted to and</p>	

	Sub-topic	Environment Agency position	Applicant position	Status Issue resolved/Issue outstanding
		<p>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 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.</p>	<p>approved by the relevant planning authority. (2) The scheme must include an investigation and assessment report, prepared by a specialist consultant approved by the relevant planning authority, to identify the extent of any contamination and the remedial measures to be taken with respect to any contaminants on the site. The scheme must also include a remediation strategy for any contamination not previously identified. This will include a verification plan to inspect and confirm actions as well as long term monitoring and maintenance arrangements. (3) The stage of the authorised development must be carried out in accordance with the approved scheme. (4) Paragraphs (1) and (2) do not apply to any currently operational railway land.</p> <p>The Applicant has adequately addressed the EA's concerns throughout during consultations. See below.</p>	
6.1.2	Contaminated Land (Consultation)	Queried why further investigation of land contamination at Avon Road Underbridge is not deemed necessary.	Further ground investigation is not planned as it is considered there is sufficient information available to	

	Sub-topic	Environment Agency position	Applicant position	Status Issue resolved/Issue outstanding
			<p>inform the detailed design of measures included in the ES Chapter 10 APP- 105 - Geology, Hydrogeology, Ground Conditions and Contaminated Land</p> <p>The master CEMP will address Avon Road and Pill Station.</p>	
6.1.3	Hazardous Waste	<p>Stated that hazardous waste would need to be removed from the site using hazardous waste consignment notes as waste code 170503* and sent for appropriately permitted disposal or remediation before any further use.</p> <p>The Non-hazardous waste would be coded as 17 05 04.</p>	The Applicant agrees with this statement from the EA.	Issue Resolved
6.1.4	Hazardous and non-hazardous Waste	<p>Stated that there is an indication to sort the ballast at depots along the line, which implies both hazardous and non-hazardous sections of ballast would be bought together at the depots and then sorted. Stated that any mixing of hazardous and non-Hazardous waste is prohibited, unless undertaken as expressly stated under a Permit; if mixed, the resultant material would also be deemed hazardous waste.</p>	<p>All materials are to be handled in accordance with NR standards for ballast handling. See Appendix 6 'Used Ballast and Excavation Waste' standard NR/L3/ENV/044.</p> <p>The spoil is likely to be contaminated and there is a large amount of soil and vegetation mixed in with the old track formation. The ballast may need to be separated on site before onward travel to the Network Rail recycling centre.</p>	

7. Wildlife and habitat

7.1 The following table details the process whereby the topics have been scoped through dialogue between the Applicant and the EA, how issues have been resolved, or where matters remain outstanding.

	Sub-topic	Environment Agency position	Applicant position	Status Issue Resolved/Issue Outstanding
7.1.1	Risk to habitats (Relevant Representations)	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.	All issues that the Applicant is required to consider are addressed in the Master CEMP APP-211 and ES Chapter 9 Ecology and Biodiversity APP-031	

	Sub-topic	Environment Agency position	Applicant position	Status Issue Resolved/Issue Outstanding
7.1.2	Risk to Habitats (Consultation)	Include otter assessments / surveys particularly in respect of breeding sites and use of any areas near watercourses. Appropriate mitigation will be required during construction, including covering work holes/trenches at night. Provision of otter passes must be considered.	Otter survey and assessment completed for the DCO Scheme and included in Section 9.6 of ES Chapter 9 APP- 031– Ecology and Biodiversity and in the Otter Survey Report APP-139. Mitigation for otters has been considered in the Master CEMP APP-211. Otter passes are not considered necessary to mitigate the impact of the DCO Scheme.	
7.1.3	Risk to Habitats (Consultation)	Stated clarification needed in respect of habitat creation/enhancement proposals.	No new habitat or enhancements are required for the DCO Scheme which was explained to the EA.	

8. Main rivers and watercourses (excluding flooding) and groundwater

8.1 The following table details the process whereby the topics have been scoped through dialogue between the Applicant and the EA, how issues have been resolved, or where matters remain outstanding.

	Sub-topic	Environment Agency position	Applicant position	Status Issue Resolved/Issue Outstanding
8.1.1	Pollution Prevention (Relevant Representation)	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	The Applicant has adequately addressed the EA's concerns throughout during consultations. Master CEMP APP-211 has requirements to produce plans to prevent pollution during construction. Plus environmental permits will be sought – Consents and Licencing APP-073	
8.1.2		Requested more information on the discharge rates of track / station drainage into Markham Brook to make sure it is acceptable. Also requested discharge rates for any track/ highway drainage that outfalls into any main river or watercourse that connects to a main river. Stated that without this the scheme could end up with a pre-commencement	The existing Pill Station and track drainage was found to either drain directly into the ground beneath the viaduct or flow along the surface of Underbanks road until it runs into existing highway drainage. The proposed drainage design was revised recently, so that Pill Station and track drainage is connected into the highway drainage in Underbanks and	

	Sub-topic	Environment Agency position	Applicant position	Status Issue Resolved/Issue Outstanding
		condition that gives the maximum outfall rate into these watercourses.	<p>will use an existing highway drainage outfall from Underbanks into Markham Brook / River Avon (the harbour area adjacent to Underbanks). The existing highway drainage that outfalls into this location will be improved to increase its capacity and extended to the viaduct. does not outfall into Markham Brook.</p> <p>For background see FRA APP-173 and Surface Water Drainage Strategy APP-192.</p>	
8.1.3	Pollution Prevention (Consultation)	Stated a need for evidence to show that ground water won't change.	<p>This has been assessed in the ES Chapter 10 APP-105 and it was determined that construction will have no impacts on the underlying hydrogeology in terms of regional and local flows or groundwater quality. There were no likely significant effects from operation on groundwater and so this was scoped out at the Scoping Opinion APP- 093</p>	
8.1.4	FRA EA maintenance access (Consultation)	Stated that the FRA should include a 10m maintenance strip adjacent to all main rivers.	<p>This will be addressed once the EA has supplied the land agreements.</p> <p>The DCO Scheme will have no adverse impact on access required to maintain Main River culverts and Main River</p>	

	Sub-topic	Environment Agency position	Applicant position	Status Issue Resolved/Issue Outstanding
			watercourses, included in the FRA APP-173	
8.1.5	Permitting	Stated that permits will not be required for scaffolding within 16m of rivers if it is taken down at the end of each day and stored away from the river, and that each day the river conditions are checked before installation so that their use will not increase flood risk.	Noted.	Issue Resolved
8.1.6		Stated that permits are required within 8m of a main river (or affecting the main river itself) or 16m of a tidal river or flood defence; further away and they can be covered by planning.	Noted.	Issue Resolved

9. Site-specific and other matters

9.1 The following table details the process whereby the topics have been scoped through dialogue between the Applicant and the EA, how issues have been resolved, or where matters remain outstanding.

	Sub-topic	Environment Agency position	Applicant position	Status Issue Resolved/Issue Outstanding
9.1.1	Ham Green Fishing Lakes	<p>Stated that the Ham Green Fishing Lakes will need to be closely monitored during construction to ensure:</p> <ul style="list-style-type: none"> the collection of sediment is maintained effectively, due to the likely increase in loading; the management of any polluting substances stored on site, that may potentially impact on the lakes in the event of a discharge from the site. 	<p>NRIL has installed three “silt busters” to reduce the suspended sediment load of drainage from Pill Tunnel to the Ham Green Lakes. The historic issue of siltation in Ham Green lakes is now resolved and no further mitigation or monitoring is proposed for the DCO Scheme.</p> <p>This is not an issue for the Applicant and the DCO Scheme.</p>	
9.1.2	EA protective provisions	Stated a need for text on Protective Provisions to be included in the DCO application.	The Applicant understands that protective provisions will not be required.	
9.1.3	Avon Gorge EA maintenance access	Stated a need for prior notification of tow path closures through the Avon Gorge, in case there is a clash with the Agency’s maintenance programme.	<p>There are short duration closures proposed but the sites will be manned and access required by the EA will be reasonably accommodated.</p> <p>The Applicant and NRIL will develop a community engagement strategy as set</p>	Issue resolved

	Sub-topic	Environment Agency position	Applicant position	Status Issue Resolved/Issue Outstanding
			out in the Master CEMP APP-211() for the DCO Scheme during construction.	
9.1.4	Permitting	Stated that if a pedestrian ramp is being installed near Longmoor Brook in Ashton Vale, or levels raised within 8m of the watercourse a permit will most likely be needed.	Noted.	Issue Resolved
9.1.5	Pill Viaduct	Stated that works to Pill Viaduct above the 0.1% AEP (1 in 1000 year) flood level with no impact on flood flows may not require a permit as the works are a statutory undertaking.	Noted.	Issue Resolved
9.1.6	Permitting FRA Main rivers	Stated that regarding storing material, there may be a requirement to have permits issued by the EA; the basic position is that no material is to be stored in the flood plain. Explained that if this is absolutely necessary / unavoidable, the material should be stored more than 16 metres away from any main river and will require a Flood Risk Activity Permit from the EA, and may additionally be subject to the requirements of a formal waste permit from the EA.	Master CEMP APP-211 to include flood plan and emergency procedures. A flood plan was produced for the Clanage Road compound and issued to the EA within the FRA APP-173 . The compound is well over 16 m away from the nearest main river. The Applicant will adhere to the EA's consenting requirements and apply for a FRAP if it is required.	
9.1.7	Waste storage	Queried the details regarding the proposed storage of ballast for the disused line and whether EA guidance on these issues was required. Stated that the volumes of materials would	The old ballast is to be stored at the Portbury Hundred and Lodway compounds, and possibly along the rail corridor. Some will be contaminated and perhaps will be stored for over a	

	Sub-topic	Environment Agency position	Applicant position	Status Issue Resolved/Issue Outstanding
		most likely exceed the exempt quantities, and the storage duration of over a year would be an issue too.	year. If so the requisite licence will be secured.	
9.1.8	Waste storage	Stated that the use of the depots to store ballast using the Non Waste Framework Directive 2 exemption is proposed, and that this exemption is for the storage of waste at the site of production. Requested further information on the expected quantity of waste to be stored at any one time and the period any waste ballast would be stored at each collection point is needed, before determining the suitability of this exemption to store the waste ballast before collection.	See Master CEMP APP-211and Consents and Licencing APP-073.	

10. Conclusions

10.1 This Statement of Common Ground records that, in summary:

10.1.1 [insert summary of topics agreed/ not agreed].

11. Agreement on this Statement of Common Ground

This Statement of Common Ground has been jointly prepared and agreed by:

Environment Agency
<i>Name:</i>
<i>Signature:</i>
<i>Position:</i>
<i>On behalf of:</i>
<i>Date:</i>

The Applicant
<i>Name:</i>
<i>Signature:</i>
<i>Position:</i>
<i>On behalf of:</i>
<i>Date:</i>

Network Rail Infrastructure Limited

Name:

Signature:

Position:

On behalf of:

Date: