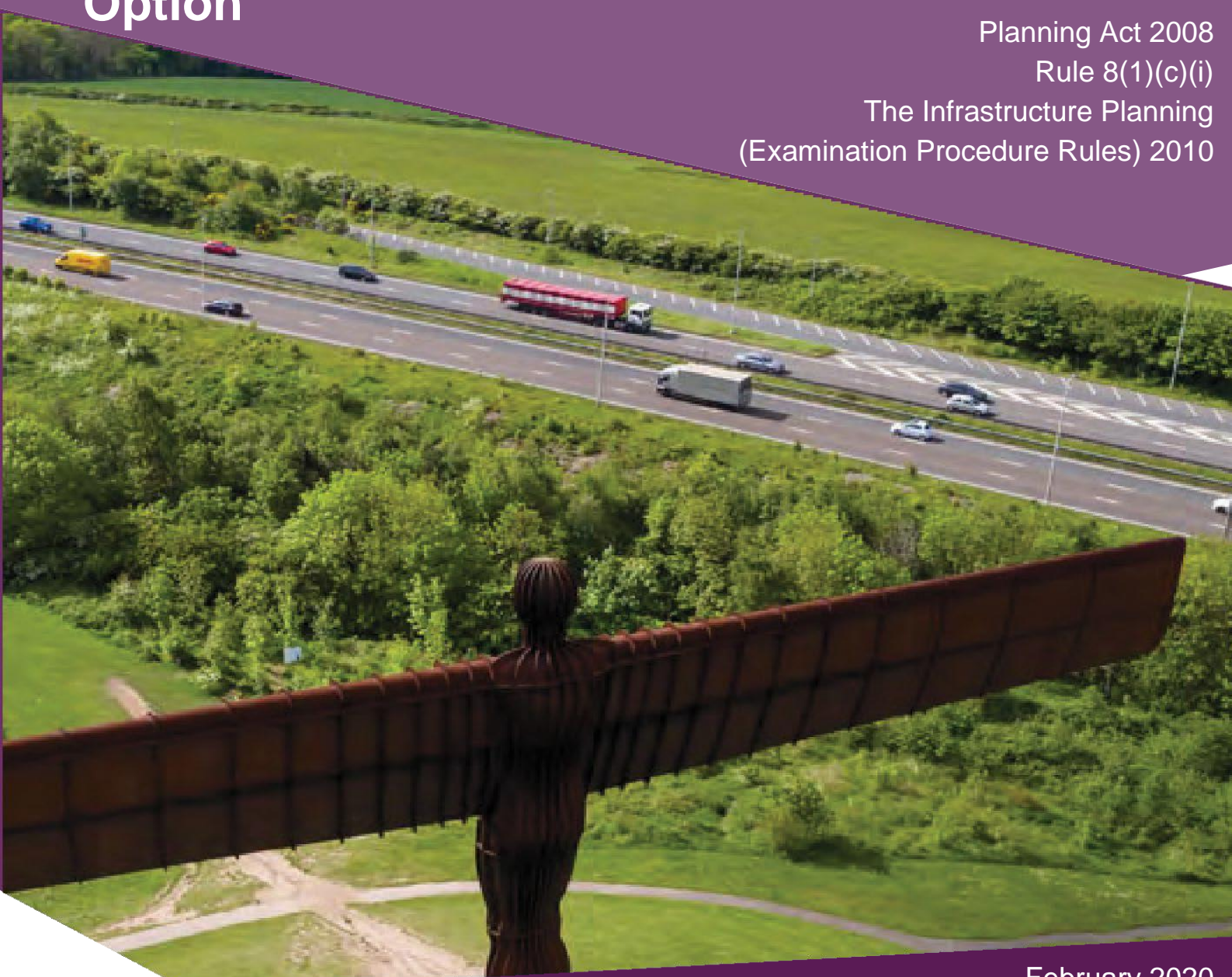


A1 Birtley to Coal House

Scheme Number: TR010031

Applicant's Responses to ExA's First Written Questions – Appendix 1.0.G - DMRB Review Option

Planning Act 2008
Rule 8(1)(c)(i)
The Infrastructure Planning
(Examination Procedure Rules) 2010



Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Examination Procedure Rules) 2010**

**The A1 Birtley to Coal House
Development Consent Order 20[xx]**

**APPLICATION'S RESPONSES TO EXA'S FIRST
WRITTEN QUESTIONS – APPENDIX**

Rule Number:	Rule 8(1)(c)(i)
Planning Inspectorate Scheme Reference	TR010031
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Author:	A1 Birtley to Coal House Project Team, Highways England

Version	Date	Status of Version
Rev 0	25 February 2020	For issue

Table 1.0.G - DMRB Updates

ES Chapter	DMRB (and IANs) Referenced in the ES	DMRB (and IANs) Updates	How the Guidance has Changed?	Implications For/Updates Required to Assessment
Chapter 2 The Scheme	Ref 2.7 Volume 10, Section 1, Part 2, Chapter 12. http://www.standardsforhighways.co.uk/ha/standards/dmr/vol10/section1/ha5692.pdf (accessed 12/12/2018).	Ref 2.7 is superseded by DMRB, Volume 10, Section 0, Part 3, LA 117 Landscape Design https://www.standardsforhighways.co.uk/ha/standards/dmr/vol10/section0/LA%20117%20Landscape%20design-web.pdf	As recorded in Chapter 2 The Scheme of the ES [APP-023], Ref 2.7 states that "trees would not be planted within 5 m of the kerb line and shrubs not within 3 m to avoid root heave and canopies overhanging the carriageway". LA 117 is updated as follows: "Planting design should take account of longer term maintenance, management, nature of the road corridor that this is intended for, including operational as well as safety requirements with shrubs used in edge planting not to be planted within 4.5m from the edge of the carriageway, medium size trees (tree girth less than 450mm) no closer than 7m (i.e. Malus sp, Prunus sp) and larger, climax trees (tree girth greater than 600mm) not within 9m (i.e. Quercus sp, Fagus sp,) unless otherwise agreed by the Overseeing Organisation".	A minor change to the extent of planting would be required to some planting beds to align with LA 117. These will be addressed at detailed design. In terms of the landscape and visual assessment in Chapter 7 Landscape and Visual [APP-028], this would not materially change the findings of the assessment.
Chapter 4 Environmental Assessment Methodology	Ref. 4.7 Design Manual for Roads and Bridges (DMRB). Volume 11 Section 2 Part 5. Published August 2008. Available at: http://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section2/ha20508.pdf	Ref 4.7 is superseded by DMRB, Volume 11, Section 1, Part 4, LA 104 Environmental assessment and monitoring https://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section2/la104.pdf	LA 104 reflects the EIA directive 2014, which was transposed into UK law by the EIA Regulations 2017. The guidance refers to the consideration of environmental factors set out in the EIA directive 2014, as well as the consideration of heat and radiation and major accidents and disasters.	The A1 BCH EIA Scoping Report (HA551462-WSP-EAC-BCH-RP-EN-0000_061 A1 Birtley to Coal House Environmental Impact Assessment Scoping Report) was prepared in line with the EIA Regulations 2017, therefore the assessment is compliant with LA 104. No change is therefore required to the assessment methodology and there is no change to the outcomes of assessment.
Chapter 5 Air Quality	Ref 5.1 Design Manual for Roads and Bridges (DMRB) Volume 11 Environmental Assessment, Section 3 Environmental Assessment Techniques. HA 20707. Air Quality. Available at: http://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section3/ha20707.pdf Ref 5.2 Highways England	Ref 5.1, 5.2, 5.3, 5.4 and 5.5 is superseded by DMRB LA 105 Air Quality Revision 0. Available at: https://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section3/LA%20105%20Air%20quality-web.pdf (Replacing HA207/07, IAN 170/12, IAN 174/13, IAN 175/13, part of IAN 185/15)	Changes to Scoping in LA 105: 1) Ahead of undertaking the assessment, LA 105 places onus on collaboration between traffic and air quality experts to agree study area and to ensure Traffic Reliability Area covers air quality sensitive areas. 2) It introduces the concept of Project Risk Potential and Receiving Environment Sensitivity to determine the level of assessment (simple/detailed). Changes to Construction Assessment in LA 105: 3) Introduces dust risk potential and sensitivity to construction dust to assess required mitigation methods. 4) It advises that construction over 2 years duration should be considered for quantitative assessment.	In a number of instances below, updated assessments are possible and it is intended to submit these to the Examination at future Deadlines. 1) 2) The changes to the scoping methodology would not change the level of assessment undertaken. A study area was agreed between the traffic and air quality disciplines during the course of this assessment which covered the full affected road network (ARN) for the scheme.

ES Chapter	DMRB (and IANs) Referenced in the ES	DMRB (and IANs) Updates	How the Guidance has Changed?	Implications For/Updates Required to Assessment
	<p>(2012). Interim Advice Note 170/12. Updated air quality advice on the assessment of future NOx and NO2 projections for users of DMRB Volume 11, Section 3, Part 1 Air Quality. Available at: http://www.standardsforhighways.co.uk/ha/standards/ians/pdfs/ian170.pdf</p> <p>Ref 5.3 Highways England (2013). Interim Advice Note 174/13. Updated advice for evaluating significant local air quality effects for users of DMRB Volume 11, Section 3, Part 1 Air Quality. Available at: http://www.standardsforhighways.co.uk/ha/standards/ians/pdfs/ian174.pdf</p> <p>Ref 5.4 Highways England (2013). Interim Advice Note 175/13. Updated air quality advice on risk assessment related to compliance with the ES Directive on ambient air quality and on the project of Scheme air quality action plans for user of DMRB Volume 11, Section 3, Part 1 Air Quality. Available at: http://www.standardsforhighways.co.uk/ha/standards/ians/pdfs/ian175.pdf</p> <p>Ref 5.5 Highways England (2015). Interim Advice Note 185/15. Updated traffic, air quality and noise advice on the assessment of links speeds and generation of</p>		<p>Changes in relation to emissions modelling in LA 105: 5) It provides advice on speed banding categories for motorway slip roads and junctions.</p> <p>Changes in relation to ecological assessment in LA 105: 6) Sensitive receptors for ecology have been extended. This now includes for example local nature reserves, local wildlife sites, nature improvement areas, ancient woodland and veteran trees. 7) For ecological receptors, nitrogen deposition must be calculated irrespective of change in nitrogen oxide (NOx) concentrations, and deposition velocity increased, with differentiation between short and tall vegetation. 8) Background nitrogen deposition not reduced.</p> <p>Changes in relation to EU limit value compliance risk assessment in LA 105: 9) It includes an additional requirement to undertake a local model 4m point validation. Compliance in some circumstances is based on local model rather than Pollution Climate Mapping (PCM) model.</p> <p>Changes to Mitigation: 10) It specifies new potential viable mitigation measures (9m barriers / speed limits).</p>	<p>3) 4) No requirement to reassess construction, since mitigation measures already take account of risk of impacts.</p> <p>5) The changes to advice on emissions modelling/speed banding are likely to result in minor changes to the assessment, but given results of the assessment, unlikely to result in changes to the assessment conclusions on significance of effects.</p> <p>6), 7), 8) The changes to advice on ecological assessment will introduce additional areas to the assessment, including Local Nature Reserves (LNR) and Ancient Woodland, and nitrogen deposition changes would require assessment where previously they were screened out using IAN 174/13 significance guidance. In order to assess the risk of a change in significance of effects, a two-stage process would be undertaken: First, all ecological sites will be screened in terms of: current deposition levels and their site-relevant critical loads (i.e. deposition headroom), and Scheme impacts to traffic in the vicinity of the sites. Where a site has sufficient headroom to be likely to avoid an exceedance of its critical load, or where concentrations are likely to decrease as a result of the Scheme (i.e. reduction of traffic on local links), these sites would be scoped out as they are unlikely to result in a significant effect. Secondly, for those sites which are not screened out in the first step, a detailed assessment of nitrogen deposition levels would be undertaken. This can be done using the existing model (i.e. using the emissions from IAN 185/15).</p>

ES Chapter	DMRB (and IANs) Referenced in the ES	DMRB (and IANs) Updates	How the Guidance has Changed?	Implications For/Updates Required to Assessment
	<p>vehicle data into 'speed-bands' for users of DMRB Volume 11, Section 3, Part 1 Air Quality. Available at: http://www.standardsforhighways.co.uk/ha/standards/ians/pdfs/ian185.pdf</p>			<p>To formally quantify the impacts under LA105, the air quality model would need to be re-run incorporating updated advice on speed banding. There is a possibility of a change to the assessment outcome in terms of significance of effects for biodiversity however, the level of remodeling and the risks associated with not re-modelling will be managed while undertaking the screening assessment set out above.</p> <p>9) The changes to advice on EU limit value compliance. The assessment will be reviewed due to the introduction of model validation for receptors at distance of 4m from the running lanes. It is uncertain what change this will likely result in in terms of modelled concentrations used within the compliance risk assessment. However, this is unlikely to affect the outcome in terms of compliance i.e. this will remain a low risk of non-compliance.</p> <p>To formally quantify the impacts under LA105, the air quality model would need to be re-run incorporating updated advice on speed banding, and the introduction of consideration of 4m receptors, although this may not be necessary dependent on the outcome of the review.</p>
Chapter 6 Cultural Heritage	<p>Ref 6.3 Design Manual for Roads and Bridges. Volume 11, Section 3, Part 2 (HA208/07 – Cultural Heritage). Available at: http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/ha20807.pdf</p>	<p>Ref 6.3 and Ref 6.9 are superseded by Volume 11, Section 3 Part 2 LA 106 Cultural heritage assessment http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/LA%20106%20revision%201%20Cultural%20heritage%20assessment-web.pdf LA 106 to be used in conjunction with</p>	<p>Unlike the previous version of DMRB which provided a detailed approach to the heritage assessment and divided it into three sub-topics, the heritage specific information is now contained within a much shorter chapter. The new guidance is less prescriptive on defining study areas, the definitions of levels of harm and ascribing the value to assets.</p>	<p>The assessment that has been completed is in line with LA 106.</p> <p>As the study areas have been agreed with Gateshead Council and the asset values justified there is no need for updates to the assessment or implications from the changes.</p>

ES Chapter	DMRB (and IANs) Referenced in the ES	DMRB (and IANs) Updates	How the Guidance has Changed?	Implications For/Updates Required to Assessment
	<p>(accessed 12/12/2018).</p> <p>Ref 6.9 Design Manual for Roads and Bridges (2001). Trunk Roads and Archaeological Mitigation. Volume 10 Environmental Design, Section 6 Part 1 (HA75/01).</p>	<p>the requirements and advice provided in</p> <ol style="list-style-type: none"> 1) LA 101 Introduction to environmental assessment; 2) LA 102 Screening projects for Environmental Impact Assessment; 3) LA 103 Scoping projects for environmental assessment; and 4) LA 104 Environmental assessment and monitoring. 		
Chapter 7 Landscape and Visual	<p>Ref. 7.1 Highways England (2010). Interim Advice Note (IAN) 135/10 Landscape and Visual Effects Assessment. Available at: http://www.standardsforhighways.co.uk/ha/standards/ians/pdfs/ian135.pdf</p> <p>Ref. 7.2 Highways Agency (1994). Design Manual for Roads and Bridges, Volume 11, Section 3, Part 5, Landscape Effects.</p>	<p>Ref 7.1 (IAN135/10) which replaced Ref 7.2 (DMRB Vol 11, Section 3, Part 5) was a methodology for Highways LVIA written in 2010, in the light of the best practice professional guidance at the time – the Guidelines for Landscape & Visual Impact Assessment Second Edition, 2002 (GLVIA2).</p> <p>LA 107 Landscape and visual effects, published in September 2019, is a rewrite to bring DMRB into line with the third edition of the guidance GLVIA3, 2013. It also brings the DMRB guidance into line with the EIA Regulations developed since the publication of Directive 2011/92/EU amended by 2014/52/EU.</p>	<p>Guidance issued by the Landscape Institute ahead of publication of GLVIA3 2013 advised that, in general terms the approach and methodologies of the two revisions of the document are fundamentally the same, with the main difference being GLVIA3 placing greater emphasis on professional judgement and less on a formulaic approach. GLVIA3 also goes into more detail than GLVIA2 and covers cumulative assessment more thoroughly. This change is generally reflected in LA107 which, with GLVIA3, also aligns with the UK ratification of the European Landscape Convention, the latter recognizing that 'all landscapes are important, irrespective of their location or condition'. An assessment undertaken in accordance with the principles of GLVIA3 and guided by LA107 would not be noticeably different from one undertaken in accordance with the principles of GLVIA3 and guided by IAN 135/10.</p>	<p>Were the new guidance to be applied, the main thrust of the assessment would not be substantially different, inasmuch as the assessment of landscape receptors and visual receptors would be undertaken as separate assessments, to identify potentially significant effects. What would be different is the requirement for the assessment to assess scenarios, to include:</p> <ol style="list-style-type: none"> 1) seasonal differences with or without the project including summer with foliage and winter without foliage; 2) both day and night time situations with or without the project; 3) a winter scenario in the year of opening, and a summer scenario - fifteenth year of operation to traffic; 4) landscape character types and/or landscape character areas; and 5) the opinions and consensus of the local public and different interest groups, their perception of the landscape, the value they place it and assessment of the change the project will incur. <p>With this in mind additional assessments would be required for a separate description of the baseline in winter and summer which is currently combined into a single description of the landscape character and of the existing baseline visual amenity.</p>

ES Chapter	DMRB (and IANs) Referenced in the ES	DMRB (and IANs) Updates	How the Guidance has Changed?	Implications For/Updates Required to Assessment
				However, it is not considered that this would present substantially different findings to those presented within the assessment of Landscape and Visual Effects provided in Chapter 7 [APP-028], and therefore, do not propose any further assessment.
Chapter 8 Biodiversity (including HRA)	Ref 8.3 Design Manual for Roads and Bridges (DMRB). Volume 11, Section 3., Part 4- Ecology and Nature Conservation. Available at: http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/11s3p04.pdf [Accessed November 2018].	Ref 8.3 is superseded by LA 108 Biodiversity https://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/LA%20108%20Biodiversity-web.pdf This full document has been re-written to make it compliant with the new Highways England drafting rules.	There are minor changes in LA 108 only, which result in improvement and clarity to the guidance. The changes include expanded information to define geographical importance (previously value) classification of biodiversity resources, which aligns closer with the Chartered Institute of Ecology and Environmental Management (CIEEM) guidance. It also includes reference to CIEEM Best Practice Guidance.	As the ecological impact assessment was conducted in consideration of the former DMRB and CIEEM guidance, there are no implications identified for/updates required to the assessment.
	IAN 130/10 - Ecology and Nature Conservation: Criteria for Impact Assessment superseded by LA 108 Biodiversity	IAN 130/10 is superseded by LA 108 Biodiversity https://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/LA%20108%20Biodiversity-web.pdf This full document has been re-written to make it compliant with the new Highways England drafting rules.	There are minor changes in LA 108 only, which result in improvement and clarity to the guidance. The changes include expanded information to define geographical importance (previously value) classification of biodiversity resources, which aligns closer with the CIEEM guidance. It also includes reference to CIEEM Best Practice Guidance.	As the ecological impact assessment was conducted in consideration of the former DMRB and CIEEM guidance, there are no implications identified for/updates required to the assessment.
	Ref 8.22 Design Manual for Roads and Bridges (DMRB). Volume 10, Section 4 Part 7 Nature Conservation Advice in Relation to Reptiles and Roads Available at: http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol10/section4.htm	Ref 8.22 is superseded by LA118 Biodiversity Design https://www.standardsforhighways.co.uk/ha/standards/dmrb/vol10/section4/LA%20118%20Biodiversity%20design-web.pdf The full document has been re-written to make it compliant with the new Highways England drafting rules.	LA 118 represents a full re-write. The document strips back the majority of former guidance regarding survey methodology and mitigation. Instead, LA 118 references best practice, CIEEM guidelines and standing advice. There is no information within LA 118 specific to reptiles.	The impact assessment and surveys were undertaken in accordance with former DMRB guidance in combination with CIEEM guidelines, best practice and standing advice, which are now referenced within LA 118. As such, the assessment is compliant with LA 118 and there are no implications identified.
	HA 59/92 Mitigating Against Effects on Badgers, HA 67/93 The Wildflower Handbook, HA 80/99 Nature Conservation Advice in	HA 59/92 Mitigating Against Effects on Badgers, HA 67/93 The Wildflower Handbook, HA 80/99 Nature Conservation Advice in Relation to Bats, HA 81/99 Nature Conservation	LA 118 represents a full re-write. The document strips back the majority of former guidance regarding survey methodology and mitigation. Instead, LA 118 references best practice, CIEEM guidelines and standing advice.	The impact assessment was undertaken in accordance with former DMRB guidance in combination with CIEEM guidelines, best practice and standing advice, which are now

ES Chapter	DMRB (and IANs) Referenced in the ES	DMRB (and IANs) Updates	How the Guidance has Changed?	Implications For/Updates Required to Assessment
	<p>Relation to Bats, HA 81/99 Nature Conservation Advice in Relation to Otters, HA 84/01 Nature Conservation and Biodiversity, HA 97/01 Nature Conservation Management Advice in Relation to Dormice, HA 98/01 Nature Conservation Management Advice in Relation to Amphibians, HA 116/05 Nature Conservation Advice in Relation to Reptiles and Roads, IAN 116/08 Nature conservation advice in relation to bats, IAN 116/08 (W) Nature Conservation Advice in relation to Bats.</p>	<p>Advice in Relation to Otters, HA 84/01 Nature Conservation and Biodiversity, HA 97/01 Nature Conservation Management Advice in Relation to Dormice, HA 98/01 Nature Conservation Management Advice in Relation to Amphibians, HA 116/05 Nature Conservation Advice in Relation to Reptiles and Roads, IAN 116/08 Nature conservation advice in relation to bats, IAN 116/08 (W) Nature Conservation Advice in relation to Bats are superseded by LA118 Biodiversity Design https://www.standardsforhighways.co.uk/ha/standards/dmr/vol10/section4/LA%20118%20Biodiversity%20design-web.pdf</p> <p>This full document has been re-written to make it compliant with the new Highways England drafting rules.</p>	<p>References made to other DMRB docs, including LA 108 Biodiversity in relation to Zone of Influence (Zol) and Study Areas, LA 101 Introduction to environmental assessment in relation to surveys and LA 104 Environmental assessment and monitoring in relation to reporting. Although all of these documents are stripped back and take a similar approach.</p>	<p>referenced within LA 118. As such, the assessment is compliant with LA 118 and there are no implications identified.</p>
	<p>DMRB Volume 11, Section 4, 'Assessment of Implications on European Sites' (HD44/09)</p>	<p>HD44/09 is superseded by LA 115 Habitats Regulations Assessment http://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section4/LA%20115%20revision%201%20Habitats%20Regulations%20assessment-web.pdf</p>	<p>The full document has been re-written to make it compliant with the new Highways England drafting rules. The guidance is now clearer, but with no major changes in content.</p>	<p>No implications identified for/updates required to the assessment.</p>
	<p>IAN 141/11 'Assessment of Implications on European Sites'</p>	<p>No replacement documents. IAN 141/11 is now obsolete.</p>	<p>N/A</p>	<p>No implications identified for/updates required to the assessment.</p>
<p>Chapter 9 Geology and Soils</p>	<p>Ref. 9.1 DMRB Volume 11 Section 3, Part 11: Geology and Soils. Available at: http://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section3/11s3p11.pdf Ref. 9.16 DMRB Volume 11 Section 3, Part 6: Land Use (2001). Available at: http://www.standardsforhighways.co.uk/ha/standards/dm</p>	<p>Ref 9.1 and Ref 9.16 are superseded by DMRB, Volume 11, Section 3, Part 11, LA 109 Geology & Soils (only covers agricultural land as a soil resource) https://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section3/LA%20109%20Geology%20and%20soils-web.pdf</p>	<p>The following changes and updates are contained within LA109:</p> <p>1)The new DMRB guidance provides defined sensitivity and magnitude criteria, and descriptions for impacts on geology and designated geological sites and from contamination to human health, groundwater and surface water.</p> <p>2)The assessment of geohazards such as ground instability no longer forms part of a geology and soils impact assessment (it should be assessed and reported by the Geotechnical Team under new DMRB geotechnical</p>	<p>The following changes would be required to the assessment to make it align with the methodology set out in LA 109:</p> <p>1) To update the assessment criteria for sensitivity and magnitude to reflect those now defined in the new DMRB and update the assessments accordingly. This may result in an increase in significance. (Note: A significance of moderate and above is</p>

ES Chapter	DMRB (and IANs) Referenced in the ES	DMRB (and IANs) Updates	How the Guidance has Changed?	Implications For/Updates Required to Assessment
	<p>rb/vol11/section3/11s3p06.pdf. (Accessed 2018).</p>		<p>guidance CD622 https://www.standardsforhighways.co.uk/ha/standards/dmr/vol4/section1/CD%20622%20Managing%20geotechnical%20risk-web.pdf.</p> <p>3) There is no requirement to assess contamination from spills / run off during operation (to be assessed in the Environmental Statement under Road Drainage and Water Environment).</p> <p>4) There is no requirement to assess sterilisation of mineral resources (to be assessed in the Environmental Statement under Material Resources).</p> <p>5) There is no requirement to assess geomorphology (to be assessed in the Environmental Statement under Road Drainage and Water Environment for hydrological impacts and under Land and Visual for visual impacts).</p> <p>6) Specific guidance documents for mitigation measures are included.</p>	<p>still considered to be significant.) The new DMRB guidance would result in the permanent loss of agricultural land now being a minor effect for best and most versatile (BMV) land and a moderate effect for non BMV land. This therefore would now be considered to be a significant effect (although this only affects 1.37 hectares of land). All the other assessments should not be affected.</p> <p>2) To be compliant with LA 109 all text / sections that relate to the assessment of ground instability should be removed. Further it should be ensured that the assessment of risks from ground instability is included within the geotechnical assessment / reports. Chapter 9 Geology and Soils APP-030 therefore includes more detail than required under LA 109.</p> <p>3) No update is required. Runoff / spills are only mentioned in relation to construction impacts.</p> <p>4) To be compliant with LA 109 all text relating to mineral resources / sterilisation should be removed. Further it should be ensured this is covered in Material Resources chapter. Chapter 9 Geology and Soils APP-030 therefore includes more detail than required under LA 109.</p> <p>5) No update is required. Geomorphology is only included in terms of geologically designated sites which is included under new DMRB</p> <p>6) This will not change the proposed mitigation for A1 B2CH. There are a list of guidance documents now provided in the new DMRB which include types of mitigation. Chapter 9</p>

ES Chapter	DMRB (and IANs) Referenced in the ES	DMRB (and IANs) Updates	How the Guidance has Changed?	Implications For/Updates Required to Assessment
				Geology and Soils [APP-030] has included these mitigation measures where required.
Chapter 10 Material Resources	Ref. 10.1 Highways England (2011) IAN 153/11 Environmental Assessment of Materials & Resources (formally available at http://www.standardsforhighways.co.uk/ha/standards/ians/)	Ref 10.1 has been superseded by LA 110 Material assets and waste (http://www.standardsforhighways.co.uk/ha/standards/DMRB/vol11/section3/LA%20110%20Material%20assets%20and%20waste-web.pdf)	IAN153/11 sets out the process for simple and detailed assessments of effects from materials and waste. LA110 does not provide a separate assessment process for materials and waste (it combines them in a single table), however the data requirements for a detailed assessment (as used in the ES) are comparable to those required in LA110. There is, however, in LA110, an increased focus on action in accordance with the Waste Hierarchy and a drive to circular economy action. IAN 153/11 does not provide any criteria or thresholds for significance of effect; it is noteworthy that some criteria were, however, applied based on good practice and professional judgement. Significance criteria have been updated in LA110 for materials: the assessment of the geographical source of materials has been removed, and replaced with the overall percentage of material recovery / recycling of non hazardous construction and demolition wastes. The significance criteria for waste have not changed.	The changes to the assessment processes between IAN153/11 and LA110 would require updates to the assessment methodology (specifically, the criteria), however, the overall findings of the assessment (not significant) would not be anticipated to alter, as outlined below: <ul style="list-style-type: none"> • Based on the anticipated waste recovery and waste to landfill for the Scheme (outlined in Tables 10-16 and 10-17 of Chapter 10 Material Resources APP.031) the Materials assessment would not reach a 'moderate' threshold in LA110, and therefore, would remain not significant. • In relation to the reduction of landfill capacity or disposal of waste outside the region, the assessment criteria have not altered and hence the assessment findings would remain the same (not significant). <p>As such the outcome of the assessment of significant effects would not change and no change to the assessment is proposed.</p>
	Ref. 10.17 Design Manual for Roads and Bridges Volume 11, Section 2, Part 5: H205/08, former Highways Agency, August 2008 (http://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section2/ha20508.pdf)	Ref 10.17 has been superseded by LA 104 Environmental assessment and monitoring (https://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section2/la104.pdf)	Table 10.6 (Significance of effect matrix), which has been used to assign significance for the materials assessment, was reproduced from H205/08. The table in H205/08 has been reproduced as Table 3.8.1 Significance Matrix in LA104.	There is no change to the significance matrix and therefore there are no implications for the ES assessment and no further assessment is required.
Chapter 11 Noise and	Ref. 11.1 Highways Agency, Scottish Government, Welsh	Ref 11.1 and Ref 11.2 have been superseded by	The key changes for noise and vibration in LA 111 are: 1) Operational Vibration has been scoped out.	It is thought that the application of LA 111 would not result in any

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Vibration	<p>Assembly Government and the Department for Regional Development Northern Ireland (2011), Design Manual for Roads and Bridges, Volume 11, Section 3, Part 7, HD 213/11 revision 1. Noise and Vibration. Available at: http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/index.htm</p> <p>Ref. 11.2 Highways England (2015). Interim Advice Note (IAN) 185/15 Updated traffic, air quality and noise advice on the assessment of link speeds and generation of vehicle data into 'speed-bands' for users of DMRB Volume 11, Section 3, Part 1 'Air Quality and Volume 11, Section 3, Part 7 Noise. Available at: http://www.standardsforhighways.co.uk/ha/standards/ians/pdfs/ian185.pdf</p>	<p>Highways England, Transport Scotland, Welsh Government and Department for Infrastructure (2019), DMRB Volume 11, Section 3, Part 7, LA 111 Noise and Vibration https://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/LA%20111%20Noise%20and%20vibration-web.pdf</p>	<p>2) Noise Nuisance Assessment is no longer required.</p> <p>3) LOAELs and SOAEL are defined for construction and operation, and their significance is more formally considered.</p> <p>4) Sets out more definitively how to determine if an impact gives rise to a significant effect (in terms of EIA).</p> <p>5) Determination of operational significance requires consideration of non-acoustic factors.</p> <p>6) Requirement for speed banding has been removed but need to 'pivot' speeds is retained (there may, in turn, be an associated change in the acoustic corrections for road surfacing, because these are speed dependent).</p> <p>7) The façade change in noise level of the 'greatest magnitude' is now to be reported at receptors, as opposed to the 'least beneficial' which ignored positive outcomes in favour of negative outcomes.</p> <p>8) Consideration of night-time short-term change has been introduced for dwellings and other sensitive receptors (whereas previously it was only considered in the long-term for dwellings). LA 111 now also includes other sensitive receptors in the long-term assessments.</p> <p>9) The 55 dB Lnight cut-off threshold for receptors during the night-time has been removed, so all receptors can now be considered during the night-time.</p>	<p>consequential changes to the conclusions of the ES and a revised assessment would not be justified here for the following reasons:</p> <p>1) and 2) have no implication as the respective elements of the ES did not result in the prediction of any significant adverse effects from the operational phase.</p> <p>3), 4) and 5) were effectively considered in the ES through implementing the advice in Highways England internal guidance regarding consideration of LOAEL and SOAELs and non-acoustic factors in the determination of significance as set out in paragraphs 11.4.36 to 11.4.47 of the ES.</p> <p>6) the changes to the predicted levels that could result if speed banding had not been undertaken would likely be no greater than 1dB and as such would not have changed the conclusions of the assessment.</p> <p>7) it is possible that a re-assessment based on the greatest magnitude of change may reduce the number of receptors where adverse impacts are predicted and increase the number where beneficial impacts are predicted, although no change to significance is anticipated.</p> <p>8) and 9) are not expected to change the results of the assessment. This is because night-time results have been directly derived from the daytime results. It follows therefore, that where no significant adverse effects are predicted during the day, none would be expected during the night-time either.</p>

ES Chapter	DMRB (and IANs) Referenced in the ES	DMRB (and IANs) Updates	How the Guidance has Changed?	Implications For/Updates Required to Assessment
Chapter 12 Population and Health	<p>Ref 12.11 Highways England (2001). DMRB Volume 11 Section 3, Part 6 - Land use. Available at: http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/11s3p06.pdf</p>	<p>Ref 12.11 is superseded by LA 112 Population and Health http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/LA%20112%20revision%201%20Population%20and%20human%20health-web.pdf</p> <p>This full document has been re-written to make it compliant with the new Highways England drafting rules.</p>	<p>The assessment of effects on Agricultural Land in LA 112 is limited to agricultural land holdings and no longer specifies the inclusion of information on Agricultural Land Quality.</p> <p>LA 112 defines the use of a 500m study area for the assessment of land use and accessibility aspects.</p> <p>LA 112 includes the assessment of human health.</p>	<p>The assessment, which was based on Ref 12.11 as well as good practice and professional judgement, reported land effects associated with agricultural land within the Geology and Soils Chapter [APP-030].</p> <p>The study area for Private and Community land take was the scheme footprint, where land is lost in order for the scheme to be built. No land beyond the scheme footprint (or within 500m) would be impacted by land take.</p> <p>The assessment followed Ref 12.11 as well as good practice and professional judgement on the inclusion of the assessment of human health. The assessment reported in the ES determined the significance of the Scheme's effect on human health. This differs from LA 112 which does not apply a significance. Instead it specifies reporting on impacts via health outcomes (which are either positive, neutral, negative, uncertain) resulting from changes to health determinants (such as noise or air quality). The assessment of health is informed by likely changes to health determinants. It can be assumed that if LA112 had been followed for the assessment reported in the ES that the adverse effect reported during construction would translate to negative health outcomes during this stage, and the beneficial effect reported during operation would translate to positive health outcomes during this stage.</p> <p>There are no implications for the ES assessment.</p>

ES Chapter	DMRB (and IANs) Referenced in the ES	DMRB (and IANs) Updates	How the Guidance has Changed?	Implications For/Updates Required to Assessment
	<p>Ref 12.12 Highways England (1993). DMRB Volume 11 Section 3, Part 8 – Pedestrians, Equestrians, Cyclists and Community Effects. Available at: http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/11s3p08.pdf</p>	<p>Ref 12.12 is superseded by LA 112 Population and Health http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/LA%20112%20revision%201%20Population%20and%20human%20health-web.pdf</p> <p>This full document has been re-written to make it compliant with the new Highways England drafting rules.</p>	<p>LA 112 defines the of use of a 500m study area for the assessment of land use and accessibility aspects.</p> <p>LA 112 includes the assessment of human health.</p>	<p>The assessment used a 1 km study area to identify both Public Rights of Way (Figure 12.1, APP-089) and Community and Associated Facilities (Figure 12.2, APP-090).</p> <p>The assessment followed guidance as well as good practice and professional judgement for the inclusion of the assessment of human health. The assessment has determined the significance of the Scheme's effect on human health. This differs from LA 112, which does not apply a significance. Instead it specifies reporting on impacts via health outcomes (which are either positive, neutral, negative, uncertain) resulting from changes to health determinants (such as noise or air quality). The assessment of health is informed by likely changes to health determinants. It can be assumed that the adverse effect reported during construction will mean that there will be negative health outcomes during this stage, and the beneficial effect reported during operation means that there are likely to be positive health outcomes during this stage.</p> <p>There are no implications for the ES assessment.</p>
	<p>Ref 12.13 Highways England (1993). DMRB Volume 11 Section 3, Part 9 – Vehicle Travellers. Available at: http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/11s3p09.pdf</p>	<p>Ref 12.13 is superseded by LA 112 Population and Health http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/LA%20112%20revision%201%20Population%20and%20human%20health-web.pdf</p> <p>This full document has been re-written to make it compliant with the new</p>	<p>Impacts on vehicle travelers are not included in LA 112 guidance, and the aspects of 'View from the Road' and 'Driver Stress' are no longer included in the assessment.</p>	<p>There are no implications for the ES assessment.</p>

ES Chapter	DMRB (and IANs) Referenced in the ES	DMRB (and IANs) Updates	How the Guidance has Changed?	Implications For/Updates Required to Assessment
		Highways England drafting rules.		
	<p>Ref 12.16 Highways England (2005). DMRB Volume 5 Section 2, Part 5, HD42/05, Non-Motorised User Audits. Available at: http://www.ukroads.org/webfiles/HD4205.pdf</p>	<p>Ref 12.16 is superseded by GG 142 Walking, cycling and horse riding assessment and review https://www.standardsforhighways.co.uk/ha/standards/dmr/vol5/section2/GG%20142%20Walking,%20cycling%20and%20horse-riding%20assessment%20and%20review-web.pdf</p>	The updated guidance covers walkers, cyclists and equestrians (WCH) instead of Non-motorised users (NMU).	<p>The ES assessment covered impacts of the Scheme on Walkers, Cyclists and Equestrians (WCH), it does not cover NMUs.</p> <p>There are no implications for the ES assessment.</p>
	<p>Ref 12.18 Highways England (2005). DMRB Volume 11, Section 2, Part 5, HA205/08 Assessment and Management of Environmental Effects. Available at: http://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section2/ha20508.pdf</p>	<p>Ref 12.18 is superseded by LA 112 Population and Health http://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section3/LA%20112%20revision%201%20Population%20and%20human%20health-web.pdf</p> <p>LA 112 includes Receptor Value (Sensitivity) criteria (Table 3.11) specific to each aspect covered by the Population and human health assessment, and replaces the criteria suggested in Volume 11, Section 2, Part 5.</p>	The sensitivity criteria in LA 112 is specific to the Land Use and Accessibility aspects of the Population and Human Health assessment	<p>The criteria remain the same as those applied within Chapter 12 Population and Health APP-033, however LA 112 provides a more detailed description on how to apply it.</p> <p>There are no implications for our assessment.</p>
Chapter 13 Road Drainage and the Water Environment	<p>Ref 13.1 Design Manual for Roads and Bridges (2009). Volume 11 Environmental Assessment, Section 3 Environmental Assessment Techniques, Part 10 (HD 45/09) Road Drainage and the Water Environment. Available at: http://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section3/hd4509.pdf</p>	<p>Ref 13.1 has been superseded by LA 113 Road Drainage and the Water Environment https://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section3/LA%20113%20Road%20drainage%20and%20the%20water%20environment-web.pdf</p>	<p>1) The name of HAWRAT has changed to HEWRAT. There are no significant changes, although there is now an expectation to use background dissolved copper and zinc concentrations to look at the total risk as opposed to added risk of pollution occurring. Additional guidance has been provided around assessing how the scheme passes the assessment.</p> <p>2) New assessment approach on groundwater level and flow.</p> <p>3) New guidance on Groundwater Dependent Terrestrial Ecosystems (GWDTE).</p> <p>4) Changes to routine runoff - ephemeral streams should be assessed as a groundwater receptor and not a surface</p>	<p>1) The change in approach to include the in watercourse background concentrations may lead to failures in the waterbody as a result of the Scheme without the inclusion of mitigation measures. This is because the WFD publicly data (https://environment.data.gov.uk/catchment-planning/WaterBody/GB103023075670) shows that the baseline copper and zinc concentrations are both high, no data is readily available to quantify the level of this. Measures to mitigate the risk of failures have been included within the design (sediment vortex and</p>

ES Chapter	DMRB (and IANs) Referenced in the ES	DMRB (and IANs) Updates	How the Guidance has Changed?	Implications For/Updates Required to Assessment
			<p>water receptor.</p> <p>5) The 1km buffer from a site of special scientific interest (SSSI)/Source Protection Zone (SPZ) or other sensitive area has been removed and now requires professional judgement and consultation should be undertaken if there is an abstraction point within 1km downstream of the outfall.</p> <p>6) New scope for a hydromoprphological assessment.</p> <p>7) Modifications to the importance of receptor and significance criteria.</p>	<p>hydrocarbon interceptors). Further works would be required to quantify the risk and impact of the mitigation. It is intended to submit this updated assessment to the Examination at future Deadlines.</p> <p>2) No impact is considered likely given the findings in Chapter 13 of the ES on the groundwater flood risks, in line with the Scheme being located on a largely clay catchment, elevated above the adjacent ground, no infiltration based SUDS are included and the Environment Agency and Coal Authority's Tool Kit outlines that no risk of minewater flooding.</p> <p>3) With regards to GWDTE no surveys have been undertaken to date to identify if any GWDTE are present in the study area. Given the clay nature of the catchment the potential or changes to these are not expected to be significant.</p> <p>4) No impacts to groundwater as a result of the Scheme are envisaged as the local soils are clay, the streams will convey the runoff to the River Team with minimal losses, thus the approach adopted in the assessment under the previous guidance remains valid.</p> <p>5) No additional features were identified that would be considered in the assessment, given the change in guidance. There would be no additional features identified were the new guidance to be followed and the assessment therefore remains valid.</p> <p>6) A WFD assessment was undertaken as part of Chapter 13 of the ES, limited works are to be undertaken to the waterbodies which</p>

ES Chapter	DMRB (and IANs) Referenced in the ES	DMRB (and IANs) Updates	How the Guidance has Changed?	Implications For/Updates Required to Assessment
	<p>Ref 13.7 Design Manual for Roads and Bridges (2016). Volume 4 Geotechnics and Drainage. Section 2 Drainage. Part 3. HD 33/16. Design of drainage systems. Available at: http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol4/section2/hd3316.pdf</p>	<p>Ref 13.7 was superseded by CG 501 Design of highway drainage systems http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol4/section2/CG%20501%20revision%201%20Design%20of%20highway%20drainage%20systems-web.pdf</p>	<p>No relevant change, as to how this guidance was used within the assessment, for additional context see information provided in the implications for /updates to assessment.</p>	<p>may have a hydromorphological impact, the findings of the WFDa are considered to remain valid.</p> <p>7) No changes to the importance or significance criteria would be required.</p> <p>Note - this Part of the DMRB has only been referenced to support the pluvial flood risk assessment. The guidance in the return periods for which no flooding is allowed to occur from the drainage system has not changed and 1 in 5 year remains the upper limit. Therefore, there is no impact on the assessment.</p>
<p>Chapter 14 Climate</p>	<p>Ref 14.1 Highways England (2007). Design Manual for Roads and Bridges. Volume 11, Section 3, Part 1 Air Quality (HA 207/07).</p>	<p>Ref 14.1 is superseded by Design Manual for Roads and Bridges LA 105 Air Quality Revision 0. Available at: https://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/LA%20105%20Air%20quality-web.pdf</p>	<p>See information provided in Chapter 5 Air Quality above.</p>	<p>See information provided in Chapter 5 Air Quality above.</p>
	<p>Not applicable.</p> <p>At the time of writing the ES there were no DMRB/IAN/Highways England guidance on climate. The ES chapter instead referred to the following for guidance: IEMA, European Commission and National Networks-National Policy Statement.</p>	<p>The following was published in October 2019: DMRB, Volume 11, Section 2, Part 14 LA 114 Climate https://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/LA%20114%20Climate-web.pdf</p>	<p>Not applicable as there was no previous guidance. However, the assessment contained within the ES is well aligned with the guidance.</p>	<p>It is not anticipated that the new guidance would have any implications on the two elements of the assessment as follows:</p> <ul style="list-style-type: none"> • Carbon (GHG) - the process is unchanged. • As data from the outputs of the Air Quality assessment is used to inform the operational phase of the carbon assessment, changes to the Air Quality assessment (detailed above) may cause minor changes to result of the carbon assessment. However, these are unlikely to result in a change to the outcome of the assessment. <p>Vulnerability – broadly aligns as a risk assessment was undertaken, setting out the hazards, risks, consequences, likelihood and significance rating</p>

ES Chapter	DMRB (and IANs) Referenced in the ES	DMRB (and IANs) Updates	How the Guidance has Changed?	Implications For/Updates Required to Assessment
				(without adaptation). Therefore, there would not be a change to the assessment or to the outcome of the ES assessment.
Chapter 15 Cumulative and Combined Assessment	Ref. 15.6 Highways England (2008). Design Manual for Roads and Bridges Volume 11, Section 2, Part 5 Assessment and Management of Environmental Effects. HA205/08.	Ref 15.6 has been superseded by DMRB, Volume 11, Section 2, Part 4, LA 104 Environmental assessment and monitoring https://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section2/la104.pdf	The cumulative effect section in LA 104 now states that the following should be considered within the cumulative assessment which was not included within the previous DMRB guidance: <i>"3) proposals in adopted development plans with a clear identified programme for delivery."</i>	The cumulative and combined assessment complies with the changes in LA 104. As per Section 15.4 of the cumulative and combined assessment [APP-036] relevant developments were included in the assessment.
Outline construction environmental management plan [APP-174]	Ref 1.1 Highways Agency (2014). Interim Advice Note 183/14, Environmental Management Plans	Ref 1.1 is superseded by DMRB, Volume 11, Section 2, Part 8, LA 120 Environmental management plans https://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section2/LA%20120%20Environmental%20management%20plans-web.pdf	LA 120 was re-written to make it compliant with the new Highways England drafting rules. Key changes include: 1) a change to the naming protocol. LA 120 now refers to iterations rather than outline, construction and handover.	There are no impacts to the content of the Outline CEMP and no changes are required.
	Ref 1.7 Highways England. (2010). Interim Advice Note (IAN) 84/10 Part 1. Volume 10, Section 0 – Environmental Design and Management Highways Agency Information System – EnvIS. Available at: http://www.standardsforhighways.co.uk/ha/standards/ians/pdfs/ian84pt1.pdf	Withdrawn. Now refer to Asset Data Management Manual https://www.standardsforhighways.co.uk/ha/standards/admm/index.htm	-	-