A19 Downhill Lane Junction Improvement

Scheme Number: TR010024

6.3 Environmental Statement – Volume 3: Appendices

APFP Regulation 5(2)(a)

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The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

A19 DOWNHILL LANE JUNCTION IMPROVEMENT

The A19 Downhill Lane Junction Improvement Development Consent Order 201[ ]

ENVIRONMENTAL STATEMENT

VOLUME 3: APPENDICES

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APPENDIX 1.1 PINS SCOPING OPINION RESPONSES LOG

1.1A Introduction to the scoping issues log

1.1A.1 In early May 2017, Highways England issued a request to the Planning Inspectorate for their opinion (a 'Scoping Opinion') on the scope of works required to carry out an Environmental Impact Assessment for the proposed A19 Downhill Lane Junction Improvements Scheme, under Regulation 8 of the Infrastructure Planning (Environmental Assessment) Regulations 2009 (as amended; the EIA Regulations). Highways England's request was accompanied by a detailed Scoping Report.

1.1A.2 Before forming their Scoping Opinion, the Planning Inspectorate consulted a total of 61 consultation bodies with a wide range of environmental, health, planning, safety and other interests. Each consultation body was issued a copy of the Scoping Report. Of these, 11 consultation bodies replied within the statutory deadline. Several of these replies were to state that the body had no comment to make; while other bodies made comments that were relevant to the Scheme, but not to the EIA. Late responses were received from two consultation bodies.

1.1A.3 In June 2017, the Planning Inspectorate responded to Highways England by issuing their Scoping Opinion, which is divided into the following components:

- the main body of the document, which sets out the Planning Inspectorate's Scoping Opinion, reached after taking account of the advice of the consultation bodies;
- appendices 1 and 2 of the Scoping Opinion list the consultation bodies they approached, and reproduce the responses received from consultation bodies within the statutory deadline; and
- appendix 3 of the Scoping Opinion sets out the Planning Inspectorate's recommendations in relation to the presentation of the Environmental Statement.

1.1A.4 Many of the individual responses from the consultation bodies contained their own scoping recommendations, although it should be noted that not all of these recommendations were picked up and repeated in the Planning Inspectorate's own Scoping Opinion.

1.1A.5 The original Scoping Report and the Planning Inspectorate's Scoping Opinion are both available to view or download from the Planning Inspectorate website via the following link:

https://infrastructure.planninginspectorate.gov.uk/projects/north-east/a19-downhill-lane-junction-improvement/?ipcsection=docs

1.1A.6 A copy of the Scoping Opinion is also provided within the DCO submission (DCO application document reference TR010024/APP/6.9).

1.1A.7 Tables A1.1-1 and A1.1-2 provided in the remainder of this appendix summarise the recommendations made and issues raised in the Scoping Opinion, and explain how they have been addressed in carrying out the EIA, including whether or not the team decided to pursue the recommendation and why. The tables are in two parts; Table A1.1-1 deals with the Planning Inspectorate's own Scoping Opinion, while Table A1.1-2 relates to the scoping recommendations made in responses to the Planning Inspectorate from the consultation bodies.

Table A1.1-1: Scoping opinion recommendations issued by the Planning Inspectorate

Ref	Issue theme	Scoping Opinion Para.	Scope of issue	Request adopted? Y/N	Discussion/ rationale
0	Scoping responses	1.14	Provide a table in the ES summarising the scoping responses from the consultation bodies and how they are, or are not, addressed in the ES.	Y	Included as Appendix 1.1 of Volume 3 of the ES.
1	Study Area	2.43	Summarise the site and surroundings in the ES.	Y	Included in the ES. Figure 2.1, in Volume 2 of the ES, shows the Scheme and its environmental context.
2	Study Area	2.43	Identify land that could be directly/indirectly affected by the proposed development and any associated auxiliary facilities, landscaping areas, potential off site mitigation or compensation schemes.	Y	Land take proposals are described within the Chapter 2 of the ES. Landscaping areas are shown on the Environmental Masterplan, in Volume 1 of the ES. There are no offsite mitigation or compensation schemes included in the proposals.
3	Proposed development	2.45	The description of the proposed development in the ES must be sufficiently certain to meet regulations.	Y	The Scheme description is based on a design which is sufficiently developed to allow the assessment of environmental impacts.
4	Proposed development	2.48	The ES should include a clear description of all aspects of the Proposed Development, at the construction and operational stages, including: • land use requirements (permanent and temporary) and their duration, including the totality of the area required for construction; • site preparation and enabling works; • construction processes, methods and their duration; • transport routes (temporary and permanent); • emissions to the environment during construction and operation including those to water, air and soil pollution, noise, vibration, light, heat and radiation; and • maintenance activities including any potential environmental impacts.	Y	Land use requirements are described within Chapter 2 of the ES. High-level information on site preparation works and temporary traffic management works was available to inform development of the ES, but detailed information on these processes would not normally be prepared until the detailed design period which follows the granting of consent. An outline construction programme and outline information on construction phasing has been included in Chapter 2 of the ES, but detailed information on these aspects would not normally be prepared until the detailed design period. Construction transport routes within the construction site and access points form part of the temporary land requirements and an outline of this information was available to inform development of the ES. Site maintenance activities and related environmental aspects would be covered by the Construction Environmental Management Plan (CEMP). An outline CEMP would be prepared by the Contractor to accompany the application and filled out in more detail during the detailed design period, and maintained as a live document during construction. Construction emissions etc. were largely dealt with in the specialist topic assessments of impact rather than in the Scheme description. However, features / activities that might give rise to emissions were included in the project description.

Ref	Issue theme	Scoping Opinion Para.	Scope of issue	Request adopted? Y/N	Discussion/ rationale
5	Proposed development	2.49	Address the environmental effects of all wastes which will be processed and removed from the site.	Y	Chapter 11 of the ES identifies the main types of waste likely to be produced from the Scheme and has covered all the largest waste quantities, but the specific quantities of some smaller quantity types of waste, which may result during construction, were unknown at this stage. However, it should be noted that the Scheme is a net importer of bulk fill material, so it is not anticipated that significantly large quantities of surplus materials would require disposal.
6	Proposed development	2.49	Identify and describe the control processes and mitigation procedures for storing and transporting waste on and off site. All waste types should be quantified and classified.	Y	Waste management would be controlled through the development of a SWMP and the CEMP. An example SWMP is provided as part of the CEMP submitted with the DCO application.
7	Alternatives	2.53	Provide an outline of the main alternatives studied by the applicant and an indication of the applicant's choice.	Y	Discussion of the alternatives for the Scheme design and also NMU options has been included.
8	Alternatives	2.55	In Chapter 3 of the ES, include inter alia, a description of alternative construction processes, drainage design and options for non-motorised user improvements.	Y	The ES presents the overall Scheme and NMU alternative options considered, including a summary of the key considerations (including environmental) that resulted in decisions leading to preferred option selection and embedded environmental design mitigation, such as for the drainage design and main site compound location.
9	Alternatives	2.56	Ensure that the reasons for the choices made are clearly described, with a description of the environmental considerations that were taken out.	Y	Covered in Chapter 3 of the ES. In some cases, environmental considerations may not have influenced the choice.
10	Construction and Access	2.57	Include information regarding the size and location of construction compounds in the DCO boundary.	Y	The location of the main site compound is shown on Figure 2.4 in Volume 2 (Figures) of the ES. This does not outline the size of the compound specifically as it remains to be confirmed subject to realising the opportunity to share the Testo's main site compound. However, the figure shows the area of temporary land take set aside for material storage and the main site compound. The land shown represents the worst case land take.
11	Construction and Access	2.58	Information on construction including: phasing of programme; construction methods and activities associated with each phase; siting of construction compounds (on and off site); lighting equipment/ requirements; and number, movements and parking of construction vehicles (both HGVs and staff) should be clearly indicated in the ES.	Y	An outline programme is included, showing high level phases and an overview of activities within each phase. High level outline information on the haul roads and their anticipated routes and construction method, plus information on lighting and the location of the main site compound, have been provided with sufficient detail to inform the development of the ES; although the exact main site compound layout, in terms of parking areas etc., would be further refined during detailed design.
12	Construction and Access	2.60	Discuss the suitability of extended working hours with the relevant planning and highways authorities. The ES should describe the proposed working hours and demonstrate how these would be secured in	Y	Working hours are outlined in Chapter 2 of the ES, including commentary on any proposed out of hours

Ref	Issue theme	Scoping Opinion Para.	Scope of issue	Request adopted? Y/N	Discussion/ rationale
			the DCO.		working.
13	Construction and Access	2.61	Include a CEMP as part of the ES that includes at least the minimum measures required to demonstrate how the mitigation measures relied upon as part of the ES would be delivered through the CEMP. The Applicant should also consider how this document would be secured within the DCO.	Y	An outline CEMP has been provided as part of the DCO submission and would contain the Register of Environmental Commitments (REAC) from the ES. This would be finalised prior to construction. Adherence to the CEMP would be secured through the DCO Requirements.
14	Construction and Access	2.62	Alongside any illustration of these routes and consideration of abnormal load deliveries, a description of the construction works required for the temporary and permanent access roads, and the works required to reinstate the temporary roads should be provided in the ES. The ES should clearly identify the location of the roads that will be retained for maintenance purposes, and the access points for these roads.	Y	Chapter 2 of the ES outlines the construction works and enabling works required, including the location and construction of the main site compound. A traffic management plan would be developed, prior to construction, to outline the specific traffic management proposals.
15	Construction and Access	2.63	Clarify whether any offsite highways improvements would be required to facilitate the development and the means that would be used to secure permission for these works.	Y	There are no offsite highways improvements required for the Scheme.
16	Construction and Access	2.64	Impacts during construction upon access for vehicles using A1290 Washington Road should be assessed. This should consider potential conflicts with shift patterns at the Nissan plant and delivery / export arrangements for the automotive plant operations.	Y	The ES has taken into consideration conflicts with shift patterns. The effects of construction for businesses in the vicinity (for example the Nissan Plant, Three Horseshoes Public House and further afield at Boldon Business Park) would be minimised or avoided through measures in a traffic management plan (TMP). These could include restrictions on the routes of construction traffic and careful timing/ design of diversions and/ or temporary road closures.
17	Operation and Maintenance.	2.65	Information on the operation and maintenance of the Proposed Development should be included in the ES.	Y	High level information on operation and maintenance of the Scheme has been included. This will largely be in line with the existing situation.
18	Operation and Maintenance.	2.66	The ES should describe the frequency of operational maintenance activities, the number of workers required, equipment requirements and access arrangements.	Y	These routine maintenance works are largely the remit of the existing DBFO Company and are not likely to change from the existing situation as a result of the development. Only very limited information available at the ES stage. The outline Handover Environmental Master Plan (part of the CEMP) will make some prescriptions re environmental maintenance aspects
19	Decommissioning	2.68	Consider and present the process and methods of decommissioning.	Y	Decommissioning is not included within the scope of the EIA and is not typically covered for highways projects due to the very long lifetime of highways and the unpredictability of the timing and circumstances under which they might be decommissioned.
20	Regulations	3.4	Be aware that The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 include for revocation and transitional provision relevant to the current Regulations.	Y	The Scheme is being submitted under The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009, as amended, as the Scoping Report was issued before 16th May 2017 when the 2017 Regulations came into force.

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21	Assessment Principles	3.7	The relevant NPS for the Proposed Development is the NPS for National Networks (NPSNN) which sets out assessment principles that should be considered in the EIA. When undertaking the EIA, the Applicant must have regard to the NPSNN and identify how these principles have been assessed in the ES.	Y	Each specialist chapter within the ES (Chapters 6-14) outlines how the NPSNN applies. NPSNN accordance tables are also included within the Planning Statement.
22	Methodology	3.10	Consult timing and relevance of survey work and methodologies with relevant consultees	Y	This refers to informal (as opposed to formal 'Section 42') consultation with relevant stakeholders in relation to the issues that are key to the EIA and preparation of the ES. Such consultation has taken place and has been a key part of our EIA process.
23	Study area	3.10	Identify the physical scope of the study areas	Y	Details of the study areas are outlined in each specialist chapter of the ES (Chapters 6-14).
24	Study area	3.10	Agree study areas with relevant consultees	Y	This refers to informal (as opposed to formal 'Section 42') consultation with relevant stakeholders in relation to the issues that are key to the EIA and preparation of the ES. Such consultation has taken place and has been a key part of our EIA process.
25	Definitions	3.11	Continuously clarify definitions of any terms used to describe the proposed development	Y	Noted.
26	Mitigation method	3.12	Tabulate the residual effects after mitigation on the basis of specialist topics, inter-relationships, and cumulative impacts	Y	Residual effects are reported within each specialist chapter (Chapters 6-14) of the ES.
27	Consultation and Responses	3.12	Tabulate how the assessment has taken account of this opinion and responses to consultation	Y	Provided within this Appendix 1.1, in Volume 3 (Appendices) of the ES.
28	Mitigation method	3.12	Tabulate the mitigation measures proposed	Y	Mitigation measures proposed for all specialist chapters (Chapters 6-14) are tabulated in the Schedule of Commitments, which forms part of the REAC; see Appendix 1.3 in Volume 3 (Appendices) of the ES.
29	Mitigation method	3.12	Tabulate the Habitats Regulations Assessment- describe affected European sites and their locations, with any mitigation or compensation measures.	Y	A HRA screening exercise was completed and the need for HRA was screened out of the assessment. Details are included in the HRA document provided as part of the DCO submission (application document TR010024/APP/6.10).
30	Inter-relationships	3.13	Explain how the proposed development relates to other developments	Y	This is included in the scheme description and introduction and also assessed within Chapter 15 of the ES.
31	Methodology	3.13	Explain any assumptions made or reliance that has been placed on certain aspects of other developments including the likely time scale and construction methodologies	Y	Publically available information on the stages of other key information has been used to inform the EIA and where appropriate this information have been included within Chapter 2 of the ES.
32	Mitigation method	3.16	Provide sufficient detail of proposed mitigation by management plans, to understand the extent to which they will be effective and the minimum measures required to achieve such mitigation	Y	Example management plans (MMP; SWMP: Soil Management Plan) have been provided with the Outline CEMP and will be finalised during detailed design.
33	Methodology	3.17	Provide a visual organogram to show interrelationships across the various plans and topic areas (to aid understanding of how such plans relate and potentially overlap)	Y	Organogram included within Chapter 1 of the ES.
34	Cumulative Effects	3.18	Consider the relationship between 'future baseline' conditions and any assessment of cumulative effects that are undertaken.	Y	This has been included in the approach to the cumulative assessment outlined in Chapter 15 of the ES.

Ref	Issue theme	Scoping Opinion Para.	Scope of issue	Request adopted? Y/N	Discussion/ rationale
35	Methodology	3.21	Identify matters that are proposed to be 'scoped out'	Y	No specialist topics have been scoped out of the assessment. This provides consistency with the Testo's scheme as the two, while independent, are closely linked.
36	Methodology	3.24	Explain and justify why some approaches are scoped out - to ensure they have not been overlooked.	Y	This is included within Chapter 5 of the ES.
37	Air Quality - Approach Description	3.25	Include a clearly justified description of the approach in the ES, with modelled evidence to support the conclusions at each DMRB 'stage'.	Y	This has been included within the methodology section of Chapter 6 of the ES.
38	Air Quality - Assessment	3.25	Include a 'detailed' assessment in order to adequately consider the potential combined air quality effects of all three schemes.	Y	Detailed assessment undertaken and outlined within Chapter 6 of the ES.
39	Air Quality - Results	3.27	Include comparable data in terms of particulate matter within the ES alongside further discussion and justification as to why additional air quality monitoring was not considered necessary to inform the baseline conditions	Y	The air quality assessment has included all relevant information as required in line with the methodology.
40	Air Quality - Effects on LWS and SSSI	3.30	Consider potential air quality effects on the LWS identified and any further LWS and SSSIs that may require consideration based on the extent of the affected road network including: • Clexheugh Rock and Ford Limestone Quarry SSSI; • Boldon Pastures SSSI; • South Hylton Pasture SSSI; • West Farm Meadow SSSI; • Fulwell & Carley Hill Quarries SSSIs; and • Cleadon Hill SSSI.	Y	Effects on designated ecological sites beyond the Scheme's DCO boundary have been considered in ES Chapter 9 of the ES.
41	Air Quality - Figures	3.32	Present a clear figure of the affected road network as well as figures showing other sensitive receptor locations identified for the purposes of the air quality assessment.	Y	Figure 6.1, in Volume 2 (Figures) of the ES, outlines the affected road network and any sensitive receptors.
42	Air Quality - Inter-relationships	3.33	Consider and assess the inter-relationship between air quality and ecological impacts with cross reference to other relevant chapters.	Y	Inter-relationships are considered at the end of each specialist chapter (Chapters 6-14) of the ES.
43	Air Quality - Further Assessment	3.34	Given that the affected road network has yet to be fully defined, the SoS cannot agree that potential air quality effects of the Proposed Development do not require further assessment at this stage as it is not possible to know with certainty whether anticipated effects will or will not occur for given receptors. The need for further assessment should be explained and justified in the context of the affected road network once it has been defined.	Y	This has been included within Chapter 6 of the ES.
44	Air Quality - Construction Dust	3.35	In terms of construction dust, the SoS recommends that the study areas and impact assessment methodology is informed by the Institute of Air Quality Management's (IAQM) guidance on the assessment of dust from demolition and construction.	Y	IAQM guidance has been used to inform the selection of the study area.
45	Air Quality - Assessment	3.35	The assessment should take specific account of storage of materials and reflect the whole footprint of the Proposed Development's construction area (plus potential cumulative effects associated with other developments including IAMP and the A19 Testo's junction).	Y	This has been covered in ES Chapters 6 and 15 of the ES.
46	Air Quality - Impacts	3.36	The ES should include specific consideration of air quality impacts associated with movements of infill materials to and from material storage areas in particular between the Proposed Development and the A19/A1058 Coast Road junction.	Y	The use of the Coast Road material has subsequently been scoped out of the EIA as this material is no longer anticipated to be available for the Downhill Lane Scheme.
47	Air Quality - Off Site Impacts	3.37	Air quality and dust levels should be considered not only on site but also off site, including for NMUs along access roads, local footpaths and other Public Rights of Way.	Y	This has been done for all receptors within 200 m of the DCO boundary.
48	Air Quality - Mitigation Method	3.38	The ES should include a description of any potentially 'in-built' mitigation measures incorporated into the design as mitigation for construction or operational air quality effects (e.g. prefabricated materials).	Y	Embedded mitigation has been identified and detailed within Chapter 2 of the ES.
49	Air Quality - Monitoring Regimes	3.39	Consider whether the current air quality monitoring regimes of the relevant local authorities is sufficient in quality and quantity to monitor the Proposed Development's longer term operational effects.	Y	This has been considered within Chapter 6 of the ES.
50	Air Quality - Mitigation	3.39	The ES should also include consideration of potential options for operational mitigation measures that	Y	No significant effects have been identified.

Ref	Issue theme	Scoping Opinion Para.	Scope of issue	Request adopted? Y/N	Discussion/ rationale
	Method		could be proposed should significant effects be identified through operational monitoring.		
51	Cultural Heritage - Assessment Method	3.40	The results of a simple assessment will be used to determine whether a more detailed assessment is required. Clearly explain this process in the ES, and if a detailed assessment is not deemed to be required, this should be agreed with the relevant local authorities and Historic England.	Y	A simple assessment was undertaken and the approach is outlined in Chapter 7 of the ES. Desk-based sources and geophysical survey conducted to inform the ES confirmed the assessment of the Scoping Report that there was low potential for unknown archaeological remains to be present within the footprint of the proposed scheme. As a result, the proposed simple assessment methodology was considered to be sufficient to allow an informed assessment of the impact of the proposed scheme to be made.
52	Cultural Heritage - Assessment Method	3.41	Take part in and provide evidence of the cultural heritage assessment consultation with the Tyne and Wear Historic Environmental Record, Historic England, and the Tyne and Wear Archaeologist.	Y	Chapters 4 and 7 of the ES include details of the consultation undertaken in relation to the scope of the assessment.
53	Cultural Heritage - Heritage Assets Impacts	3.42	Consider using the ZTV to identify the potential extent of impacts on the settings of heritage assets, and therefore to inform the definition of an appropriate study area.	Y	ZTV has been used to identify the potential impacts and this is detailed in Chapter 7 of the ES.
54	Cultural Heritage - Study Area	3.42	The chosen study areas should be clearly defined and justified in the ES, and agreed with the relevant local authorities and Historic England.	Y	The study area Is defined within Chapter 7 of the ES and this was agreed through consultation.
55	Cultural Heritage - Study Area	3.43	The SoS notes a number of Scheduled Monuments that are not mentioned by the Applicant as being within their defined study area including • Wardley Moated Site 5km north west; • WWI Early Warning Mirror 4.5km east; • Bowes Railway 7km west; • Monwearmouth Monastery and Priory 6km south-east; and • Colliery Engine House Washington F Pit, 6.5km south-west.		Noted. These are all located outside of the study area and also outside of the ZTV, defined as within 2km from the centre point of Downhill Lane junction.
56	Cultural Heritage - Monument Impacts	3.44	Consider the need to assess any potential indirect effects on scheduled monuments, with regard to the ZTV, during the construction and operation of the Proposed Development.	Y	This is considered in Chapter 7 of the ES, where applicable.
57	Cultural Heritage - Physical Asset Impacts	3.45	The ES should consider any potential physical impacts on the identified assets along with impacts on their setting. Potential impacts on the setting of buried archaeology should also be considered.	Y	This is considered in Chapter 7 of the ES, where applicable.
58	Cultural Heritage - Heritage Assets Impacts	3.46	The ES should confirm whether any impacts on the setting of heritage assets located in proximity to the proposed development, but outside of the 300m study area, would arise from the Proposed Development.	Y	The ZTV was used to consider effects on settings up to 2 km away.
59	Cultural Heritage - Survey Locations	3.47	Discuss and agree the locations of geophysical surveys of suitable areas of the proposed scheme footprint and the timings at which they will be undertaken with the relevant local authorities. If a Written Scheme of Investigation (WSI) is proposed, a draft of this document should be provided with the application documentation.	Y	It was agreed with the Tyne and Wear Archaeology Officer that a geophysical survey of all new permanent and temporary land take required for the Scheme would be undertaken in line with industry best practice guidelines.
60	Cultural Heritage - Heritage Assets Assessment	3.48	The assessment of the setting of heritage assets should consider the implications of any updates to this guidance which may be published prior to the submission of the DCO application	Y	No new guidance on the setting of cultural heritage assets was introduced during the preparation of the ES.
61	Cultural Heritage - Historic Landscapes	3.49	Paragraph 7.2.11 states that seven historic landscape types have been identified in the study area and summarised in Table 7.3. However, Table 7.3 only describes four historic landscape character areas. All historic landscapes within the study area should be described in the ES along with an assessment of the effects on the setting of these landscapes	Y	All relevant historic landscape types identified within the study area have been presented within Chapter 7 of the ES. The impacts on these have all been considered and included.
62	Cultural Heritage - Inter-relationships	3.50	The ES should clearly identify and assess the inter-relationships between this topic and the landscape and visual impact assessment. Potential inter-relationships with other assessments should also be	Y	All the specialist chapters (Chapters 6-14) of the ES include a section considering the potential for any

Ref	Issue theme	Scoping Opinion Para.	Scope of issue	Request adopted? Y/N	Discussion/ rationale
			considered – for example, if new landscaping is proposed to mitigate potential impacts on heritage assets, this may impact on ecological receptors.		effects from inter-relationships with other topics.
63	Landscape and Visual - Model Description	3.51	The ES should describe the model used to identify the ZTV, the area covered and the timing of the surveys.	Y	A summary of the method is provided in Chapter 8 of the ES, with greater detail being included within Appendix 8.1 of the ES.
64	Landscape and Visual - Study area	3.52	Justify the extent of the study area in the ES and confirm how it accords with DMRB Interim Advice Notes (IAN) 135/10 and the Guidelines for Landscape and Visual Impact Assessment (GLVIA3) guidance as referred to in paragraph 8.3.1 of the Scoping Report.	Y	Justification of the methodology used and the appropriate guidance is outlined within Chapter 8 and Appendix 8.1 of the ES.
65	Landscape and Visual - Visual Impacts on Water Bodies	3.53	Consider whether there is potential for visual impacts for recreational users of the River Don and other water bodies located in proximity to the Proposed Development.	Y	All appropriate visual receptors were considered within Chapter 8 of the ES, with the approach discussed and agreed with the relevant local authorities.
66	Landscape and Visual - Receptors	3.53	Recommends that the sensitivity of receptors should be discussed and agreed with the relevant local authorities	Y	Consultation with both South Tyneside Council and Sunderland City Council in relation to the number and location of viewpoints and receptors has been undertaken and feedback has been incorporated into the assessment.
67	Landscape and Visual - Viewpoint Locations	3.54	The SoS requests that the locations of viewpoints are agreed with the relevant local authorities and identified on a plan.	Y	
68	Landscape and Visual - Visual Effects	3.55	Night time visual effects should include the impact of lighting during both construction and operation of the propose development	Y	The impact of lighting has been considered within the assessment.
69	Landscape and Visual - Use of Materials	3.56	The SoS requests that careful consideration is be given to the form, siting, and use of materials and colours in terms of minimising the adverse visual impact of such structures.	Y	The structures design team had input from the landscape architect to agree form preference and colour finish (mid grey to blend into cloud cover) when undertaking their option proposals report. The preferred option put forward was in line with these discussions. Siting was predominantly determined by use and safe clearance over the Washington Road, however the location of the eastern ramps has made best use of existing mature vegetation along the western edge of Town End Farm. Furthermore, mitigation planting has been designed to further screen, filter or soften views towards these structures.
70	Landscape and Visual - Structural Assessment	3.57	A structural assessment will determine the feasibility of reusing the existing overbridge. The assessment presented in the ES should capture the worst case scenario for construction and operation of the Proposed Development.	Y	Structural assessment has determined that the existing overbridge would be retained. The construction and operation works outlined in Chapter 2 of the ES.
71	Landscape and Visual - Assessment	3.58	National Character Areas, the City of Sunderland Landscape Character Assessment and local landscape character units should be referenced in the ES as a means of assessing landscape impacts relevant to the Proposed Development	Y	This has been included in the Landscape Character section of Chapter 8 of the ES.
72	Landscape and Visual - Landscape Impacts	3.58	Impacts on landscape components and landscape character resulting from both construction and operation should be considered. This should include impacts on historic landscapes (cross referenced to the cultural heritage assessment as appropriate).	Y	Chapter 8 of the ES assesses the impact on landscape features and character area. Inter-relationships between topics are considered at the end of the specialist ES chapters (Chapters 6-14).
73	Landscape and Visual - Temporary/ Permanent Visual Effects	3.59	The ES should include an assessment of the effects resulting from any temporary features such as material/soil storage stockpiles as well as assessing those resulting from any permanent structures such as overbridges and gantries.	Y	Temporary and permanent landscape and visual effects are considered in Chapter 8 of the ES.

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74	Landscape and Visual - Tree Removal Assessment	3.60	Any resulting impacts from the removal of any TPO trees should be assessed in the ES with cross reference to where the ecological effects of their removal are considered.	Y	There are no TPOs affected by the Scheme.
75	Landscape and Visual - Mitigation method	3.61	The SoS assumes the delivery of potential mitigation methods would be subject to a detailed landscape plan and would expect to see at least a draft of such a plan provided with the ES. The Applicant should confirm how such mitigation measures will be secured in the DCO.	Y	A detailed landscape plan is enclosed within the ES in the form of an Environmental Masterplan. The mitigation measures have been outlined in an Environmental Action Plan / Register of Environmental Commitments (REAC), which is also included in the outline CEMP to secure these mitigation measures through DCO Requirements.
76	Landscape and Visual - Inter-relationships	3.62	The ES should identify and assess the inter-relationships between this topic and the cultural heritage and ecological assessments, particularly in relation to the effects of any proposed mitigation measures.	Y	This is covered at the end of Chapter 8 of the ES.
77	Landscape and Visual - Mitigation method	3.62	Provision of an integrated landscape and ecological mitigation/management plan should be considered.	Y	An illustrative Environmental Masterplan is provided in Volume 1 of the ES to cover this.
78	Ecology - Study area	3.63	The Applicant should seek to agree the study areas with Natural England (NE) and the relevant local authorities.	Y	Natural England and relevant local authorities have been consulted during on-going consultations relating to Testo's and Downhill Lane junction improvement schemes.
79	Environmental Features Map	3.63	The two statutory designated sites within 2km of the Proposed Development (Hylton Castle Cutting and Hylton Dene) have not been labelled on the Environmental Features Map (Figure 1.2 of the Scoping Report). The SoS requests that any designated sites referenced in the ES are clearly identified on an accompanying plan.	Y	These are included and labelled on Figure 9.1 within Volume 2 (Figures) of the ES and have been taken into account during the assessment in Chapter 9 of the ES.
80	Ecology - Hylton Castle Cutting	3.64	If no likely significant effects on Hylton Castle Cutting are anticipated as a result of the Proposed Development, this should be agreed with NE and the EA and explained in the ES.	Y	Chapter 9 of the ES outlines why there are no significant impacts on Hylton Castle Cutting.
81	Ecology - LWS	3.65	18 LWS have been identified within a 2km study area, although the SoS notes that details of only 17 LWSs have been provided in Table 9.1. The relevant local authorities and the local wildlife trusts should be consulted to confirm which LWSs may be affected by the Proposed Development.	Y	More recent biological records centre data was obtained and local wildlife trusts consulted to update the list of LWSs.
82	Ecology - Ecological Surveys	3.66	The ES should set out the justification and rationale for the survey effort to confirm existing ecology surveys conducted in 2014-2016 are sufficient, and where possible record agreement with key stakeholders - NE and local planning authorities.	Y	This is discussed in Chapter 9 of the ES and there has been validation surveys in 2017 and 2018. Natural England and relevant local authorities have been consulted during on-going development of the Downhill Lane Scheme, which is summarised in ES Chapter 4 of the ES.
83	Ecology - Reptile Surveys	3.67	The SoS advises the Applicant to consider whether features such as existing road verges could support reptile species.	Y	Considered in Chapter 9 of the ES.
	Ecology - Freshwater Fish Species	3.67	Clarify in the ES whether there would be any potential impacts on protected or notable freshwater fish species.	Y	Freshwater fish have not been included in the assessment due to the low likelihood of their presence based on previous field surveys and desk based surveys.
84	Ecology - Survey Coverage	3.68	The Applicant is advised to discuss and agree the scope of survey coverage with NE, the Environment Agency (EA) and the relevant local authorities as appropriate.	Y	Natural England, Environment Agency and local authorities were consulted when defining the scope and extent of surveys covering the Downhill Lane Scheme.
85	Ecology - Survey Coverage	3.68	Where it is considered that surveys are not required, this position should be fully justified in the ES. If further species surveys are proposed during the preconstruction period, this should be clarified in the ES and appropriately secured.	Y	The species and surveys to be excluded from the assessment are discussed in Chapter 9 of the ES, with any further surveys recorded in the REAC.

Ref	Issue theme	Scoping Opinion Para.	Scope of issue	Request adopted? Y/N	Discussion/ rationale
86	Ecology - River Don Restoration Project	3.69	The opinions in term of the vision for the restoration of the River Don and a study that has been commissioned should be considered as part of the project design and EIA process	N	Since submitting the Scoping Report, the Scheme no longer directly affects the River Don.
87	Ecology - Bat Surveys	3.70	SoS recommends that the assessment of impacts on bats considers the effects of shadowing and light pollution. This should be cross-referenced with the landscape and visual assessment as appropriate.	Y	This has been considered during the assessment of impacts on bats.
88	Ecology - Otter Surveys	3.70	Sunderland City Council comment on the need for further otter surveys, and SoS agrees that these should be carried out in discussion with them.	N	Since submitting the Scoping Report, the Scheme no longer includes the River Don within the DCO boundary as it does not have any proposed physical works within or over the River Don. Therefore, otter surveys were not required, but signs of otters were looked for during the survey of the connecting tributary.
89	Ecology - Ecology Assessment	3.71	Clearly present and justify the method to assess the ecological resource and characterisation of impact in determining effect significance	Y	This is presented in Chapter 9 of the ES.
90	Ecology - Tree Assessment	3.72	The ES should confirm whether any ancient woodland or veteran trees could be affected by the Proposed Development and assess the effects.	Y	No ancient woodland or veteran trees in study area, thus none at risk.
91	Ecology - Tree Assessment	3.72	Where trees would be affected by development proposals, in accordance with paragraph 5.32 of the NPSNN, the Applicant should set out proposals for their conservation or, explain why their loss is unavoidable.	N	
92	Ecology - Biodiversity	3.73	Demonstrate how opportunities have been taken to build beneficial biodiversity into the design of the Proposed Development.	Y	Section 9.9 of Chapter 9 in the ES outlines how the Scheme has tried to achieve this. The attenuation ponds, for example, are likely to have a secondary biodiversity function by providing habitats suitable for amphibians.
93	Ecology - Mitigation method	3.73	Ensure that any such habitat is appropriately and demonstrably secured to provide confidence to the overall delivery of such mitigation measures - Consult the NE, the EA and the relevant local authorities in this regard.	Y	Presented in REAC and CEMP, which will be committed to through the DCO.
94	Ecology - Inter-relationships	3.73	Assess the consequential impacts from any potential enhancement measures on other environmental topics, particularly landscape and visual receptors.	Y	This is covered at the end of Chapter 9 of the ES.
95	Ecology - Cross-reference	3.74	The ecological assessment presented in the ES should take account of impacts from noise, vibration and air quality (including dust), and cross reference should be made to these technical assessments. Consider the need to include cumulative impacts.	Y	This has been considered in assessment in Chapter 9 of the ES.
96	Geology & Soils - Study Area	3.76	Explain and justify the chosen appropriate extent for the study area.	Y	This has been explained in Chapter 10 of the ES.
97	Geology & Soils - Hylton Castle Cutting	3.77	Agree with the NE and the EA that no likely significant effects on Hylton Castle Cutting are anticipated.	Y	Consultation has been ongoing throughout the EIA process. No effects on Hylton Castle Cutting have been identified as there is no pathway for which impacts would occur.
98	Geology & Soils - Geological Sites	3.77	Any locally designated geological sites should be identified and considered in the assessment.	Y	Any sites that are within the study area have been identified. No designated sites have been identified within the study area.
99	Geology & Soils - Land Contamination	3.78	Discuss with the Environment Agency and South Tyneside the need for and scope of further site investigation works to assess impacts from present land contamination. Discuss if a simple assessment will be sufficient.	Y	Consultation with relevant stakeholders is summarised in Chapters 4 and 10 of the ES.
100	Geology & Soils - Mitigation method	3.79	Discuss measures to mitigate any unexpected contamination encountered during construction with the Environment Agency and secure these measures in the DCO (e.g. through the CEMP).	Y	This has been included and measures required to be contained within the CEMP have been identified.
101	Geology & Soils - Methodology	3.80	The general impact assessment methodology described in Section 5.3 of the ES should be applied in the context of assessing each potential impact. Use additional guidance outside of DMRB and	Y	The methodology used has been outlined in Section 10.3 of Chapter 10 in the ES. This is in line with the

Ref	Issue theme	Scoping Opinion Para.	Scope of issue	Request adopted? Y/N	Discussion/ rationale
			professional judgement to develop a methodology that is appropriate to the topic. Agree this with the relevant statutory consultees		general approach outlined in Chapter 5 of the ES and utilises DMRB where appropriate in addition to professional judgement. Consultation with relevant stakeholders has been ongoing throughout the EIA process.
102	Geology & Soils - Agricultural Land Classification	3.81	Provide evidence of the Agricultural Land Classification of the agricultural soils within the site. Identify any best and most versatile agricultural land within the application site and consider the effects on this resource in the ES.	Y	This has been included within Chapter 10 of the ES. All the agricultural land affected by the Scheme has been identified as Grade 3b.
103	Geology & Soils - Soil Management Plan	3.82	Consider Natural England's scoping consultation response as part of the soils management plan.	Y	Noted.
104	Geology & Soils - Mineral Resources	3.83	The Proposed Development is located within the defined coalfield and as such, the SoS welcomes the consideration of mineral resources and their potential sterilisation within the scope of the proposed assessment.	Y	This has been considered and GI identified that the coal was thin with no evidence of workings. None of the deposits are classified as mineral reserves.
105	Geology & Soils - Mitigation method	3.84	Link the potential mitigation measures as presented in section 10.7 of the scoping report to the CEMP as referred to in paragraphs 5.3.23 - 5.3.25 of the scoping report.	Y	Mitigation measures outlined in Section 10.7 of Chapter 10 of the ES have been linked to the development of a CEMP where appropriate.
106	Geology & Soils - Mitigation method	3.84	Provide evidence to support how mitigation measures to determine the significance of effects will be secured and delivered in the DCO.	Y	Mitigation measures have been outlined in the REAC, which is included in the outline CEMP to be secured through the DCO Requirements.
107	Materials & Waste - Study area	3.85	Consider whether the need for material sourcing, delivery and waste disposal in the locality would merit a wider study area. (especially - approach that would include movement of material between the Proposed Development site and the A19/A1058 Coast Road junction -11.2.1 - Scoping Report)	Y	The study area has been defined geographically consisting of the Tyne and Wear regional area (five Metropolitan boroughs of South Tyneside, North Tyneside, City of Newcastle, Gateshead and City of Sunderland). The Coast Road material reuse has been scoped out of the assessment as this material will not be available for the Scheme.
108	Materials & Waste - Study area	3.85	Clearly justify the extent of the study area in the ES with reference to the appropriate guidance.	Y	The study area has been defined within Chapter 11 of the ES.
109	Materials & Waste - Assessment	3.86	Considering the nature of the Proposed Development, the SoS agrees that this it is appropriate to scope operational effects out of the Materials assessment.	Y	Noted.
110	Materials & Waste - Waste	3.87	The potential for generation of non-hazardous waste and how it will be dealt with should be considered as part of the ES.	Y	This has been considered in Chapter 11 of the ES.
111	Materials & Waste - Environmental Impacts of Materials	3.87	The ES should assess the environmental impacts of all options of material supply sources and disposal routes that are being considered. Where flexibility is to be retained in the DCO, justified worst case scenarios should be assessed as part of the EIA.	Y	This has been considered in Chapter 11 of the ES.
112	Materials & Waste - Storage	3.88	Include temporary storage areas for soils and other materials that would be required during construction within the red line boundary of the proposed development.	Y	The DCO boundary includes all temporary work area requirements.
113	Materials & Waste - Soil Storage	3.88	Consider the potential effects resulting from the requirement for soil storage in the assessment, and describe any inter-relationships.	Y	This has been considered in Chapters 10 and 11 of the ES.
114	Materials & Waste - Inter-relationships	3.88	Also consider inter-relationships with geology and soils, road drainage and the water environment, air quality, noise and vibration, and people and communities.	Y	Inter-relationships between topics have been considered and are included at the end of these specialist ES chapters (Chapters 6-14).
115	Materials & Waste - Mitigation method	3.89	Provide a draft of a SWMP to demonstrate how the mitigation measures would be delivered in practice. Ensure that the SWMP is adequately defined and secured as part of the DCO application.	Y	A draft SWMP has been provided within the CEMP.
116	Noise & Vibration - Receptors	3.91	The methodology and choice of noise receptors should be agreed with the relevant Environmental Health Department of the local planning authority and with the EA.	Y	Consultation with the relevant authorities has been undertaken and is detailed in Chapter 12 of the ES.

Ref	Issue theme	Scoping Opinion Para.	Scope of issue	Request adopted? Y/N	Discussion/ rationale
117	Noise & Vibration - Monitoring Locations	3.92	Consult with Sunderland City Council to identify appropriate noise monitoring locations to the south of the Proposed Development.	Y	Consultation with the relevant authorities has been undertaken and is detailed in Chapter 12 of the ES.
118	Noise & Vibration - Sensitive Receptors	3.93	Consider sensitive receptors in the surrounding environment, including residential, ecological and recreational land uses. Any additional monitoring should reflect the sensitive receptors in the surrounding environment.	Y	Sensitive receptors have been identified and explained within Chapter 12 of the ES.
119	Noise & Vibration - Monitoring Locations	3.93	Identify the location of noise sensitive receptors and the noise monitoring locations on a plan in the ES.	Y	Noise receptors are identified on Figure 12.2 of Volume 2 (Figures) of the ES.
120	Noise & Vibration - Noise Assessment	3.94	Provide detail on the construction plant, activities, and programme in the ES to demonstrate the assessment results accurately reflect the anticipated construction noise environment on a worst case basis.	Y	This has been included in Appendix 12.4 of Volume 3 (Appendices) of the ES.
121	Noise & Vibration - Estimations	3.94	Describe and justify any key assumptions or estimations made in terms of these parameters.	Y	These are presented in Chapter 12 of the ES.
122	Noise & Vibration - Noise Assessment	3.95	The assessment of construction noise should take into account construction traffic movements, in particular that associated with the proposed delivery of material to the site.	Y	These are presented in Chapter 12 of the ES.
123	Noise & Vibration - Receptors	3.96	Identify receptors which exist beyond 600m from an affected route, and define and justify whether the approach to undertake a qualitative assessment is required or not.	Y	This has been considered, as appropriate.
124	Noise & Vibration - Low Noise Mechanisms	3.97	Consider the mechanisms for securing acoustic bunds, low noise surfacing, and use of low noise construction plant in the DCO. For example, as part of the CEMP, through a standalone construction noise management plan or through other means.	Y	Mitigation proposed in Chapter 12 of the ES would be secured through the CEMP.
125	Noise & Vibration - Mitigation method	3.98	Within the ES clearly justify the need for operational noise mitigation measures as described in Paragraph 12.7.2 of the Scoping Report, and assess their effectiveness at reducing the significance of effects identified	Y	This has been considered, but no operational noise mitigation has been proposed as a result of no receptor for the Scheme experiencing either a 1dB(A) or 3dB(A) change in noise levels in the short or long term.
126	Noise & Vibration - Mitigation method	3.98	Explain where operational mitigation measures are not proposed, in relation to background noise levels and the impact of the proposed development	Y	
127	Noise & Vibration - Inter-relationships	3.98	Where options such as temporary and permanent noise barriers and/or bunding are being considered, inter-relationships with the landscape and visual impact assessment should be considered.	Y	This has been considered, as appropriate.
128	Noise & Vibration - Mitigation method	3.99	Consider and describe any such measures that are inherent or inbuilt into the design that are proposed in minimising noise effects.	Y	These have been covered in Chapter 2 of the ES, where appropriate.
129	Noise & Vibration - Noise Assessment	3.100	Address noise impacts on people particularly any potential noise disturbance at night and other unsocial hours, such as weekends and public holidays.	Y	
130	Noise & Vibration - Noise Assessment	3.101	The noise and vibration assessments should take account of the traffic movements along access routes, especially during the construction phase.	Y	
131	Noise & Vibration - Noise Complaints	3.102	Consider monitoring noise complaints during construction and when the proposed development is operational.	Y	The CEMP would contain a complaints procedure what would cover this requirement.
132	People & Communities - Workforce	3.104	Jobs generated should be considered in the context of the available workforce in the area.	Y	The employment impacts of the Scheme have been assessed using the Additionality Guide, which allows the local labour market to be taken into account. This is outlined in Chapter 13 of the ES.
133	People & Communities - Economic Effect	3.104	Assess the wider effects of the Proposed Development in terms of local / regional economic activity.	Y	Economic assessment of the Scheme has been undertaken and results presented within Chapter 13 of the ES.
134	People & Communities - Effects of Proposed Development	3.104	The assessment criteria should be geographically specific and consider the potential significance of effects of the Proposed Development within the local and regional context.	Y	The assessment criteria have been developed to be appropriate to the geographical location of the Scheme and has considered the local and regional context.
135	People & Communities -	3.105	Consider the need for activity surveys to inform the usage level of the key PRoW around the Proposed	Y	A NMU context report has been undertaken and an

Ref	Issue theme	Scoping Opinion Para.	Scope of issue	Request adopted? Y/N	Discussion/ rationale
	Activity Surveys		Development site and the potential effects of temporary / permanent stopping up thereof during construction or operation.		NMU survey was undertaken in 2016 to assess the activity levels on the local NMU network. These are provided in Volume 3 (Appendices) of the ES.
136	People & Communities - Mitigation Method	3.107	The interrelated effects of any proposed mitigation measures should be considered in the other relevant technical assessment chapters, for example landscape and visual, noise, road drainage and the water environment and effects on travellers in particular.	Y	Inter-relationships between topics have been considered and are included at the end of each specialist chapter (Chapters 6-14 of the ES).
137	People & Communities - Mitigation Method	3.108	The ES should also consider any distinction between 'in-built' mitigation measures that are inherent in the design and those that are proposed in response to identified significant effects.	Y	This has been outlined in Chapter 2 of the ES.
138	Road Drainage & Water - Water Framework Directive	3.109	The methodology, baseline data and scope of the WFD assessment should be discussed and agreed with the Environment Agency. The Applicant's attention is drawn to the advice on WFD assessment in Section 4 of this Opinion.	Y	Discussions with the Environment Agency and relevant local authorities have been ongoing throughout the EIA process and feedback taken into account within Chapter 14 of the ES.
139	Road Drainage & Water - Flood Risk Assessment	3.110	Agree the content and conclusions of the FRA with the Environment Agency and the relevant local authorities prior to submitting the DCO.	Y	
140	Road Drainage & Water - Flood Risk Assessment	3.110	Use of the updated climate change allowances in the FRA modelling should be discussed and agreed with the Environment Agency.	Y	
141	Road Drainage & Water - Study Area	3.111	Study area and scope of the baseline data should be discussed and agreed in consultation with the Environment Agency and relevant statutory consultees, clearly described and justified in the ES.	Y	
142	Road Drainage & Water - Water Environment Effects	3.111	Potential effects on all aspects of the water environment, including groundwater, surface waters, transitional waters and coastal waters should be considered	Y	The effects on all identified aspects of the water environment within the defined study area have been addressed within Chapter 14 of the ES.
143	Road Drainage & Water - Drainage Design	3.112	Agree the drainage design details with the Environment Agency and consult local authorities.	Y	Drainage design has been discussed and agreed with the Environment Agency as part of wider Scheme consultation.
144	Road Drainage & Water - Drainage Design	3.112	Describe the drainage design with accompanying figures. Assess the worst case scenario if flexibility is needed.	Y	Drainage design is outlined in Chapter 2 of the ES, although relevant features of the design are also summarised in Chapter 14 of the ES. Figure 2.6, in Volume 2 (Figures) of the ES, shows the drainage design for the Scheme.
145	Road Drainage & Water - Drainage Design	3.112	Ensure that all aspects of the proposed drainage design can be implemented within the extent of the DCO boundary (including pipeline outfall works)	Y	The DCO boundary allows for all drainage works required.
146	Road Drainage & Water - Operational Effects	3.112	Discuss the operational effects of the proposed scheme (e.g. procedures for containment of spillages within the drainage system)	Y	This is discussed in Chapter 14 of the ES; relevant pollution prevention procedures would also be included within the CEMP.
147	Road Drainage & Water - Drainage Design	3.113	Clearly explain any integration of drainage design, include any options or design flexibility in the DCO and how they are considered as part of the assessment.	Y	Discussions with the Environment Agency and relevant local authorities have been ongoing throughout the EIA process and feedback has been taken into account within Chapter 14 of the ES.
148	Road Drainage & Water - Mitigation Method	3.114	Identify all mitigation measures for construction and operation of the proposed development and explain how these would be secured in the DCO.	Y	This has been included where appropriate within Chapter 14 of the ES.
149	Road Drainage & Water - Mitigation Method	3.114	Address and agree on going monitoring with relevant authorities to ensure any mitigation measures are effective.	Y	Discussions with the Environment Agency and relevant local authorities have been ongoing throughout the EIA process and feedback taken into account within Chapter 14 of the ES.
150	Road Drainage & Water - Proposed Development	3.114	Reference should be made in the ES chapter to any other regimes relevant to the Proposed Development (such as environmental permitting and water resources licences).		This has been included within Chapter 14 of the ES, where appropriate.
151	Road Drainage & Water - Water Environment Effects	3.115	Assess the impacts on the water environment prior to mitigation being taken into account.	Y	This was the approach applied in Chapter 14 of the ES.

Ref	Issue theme	Scoping Opinion Para.	Scope of issue	Request adopted? Y/N	Discussion/ rationale
152	Road Drainage & Water - Mitigation Method	3.115	Consider any distinction between 'in-built' mitigation measures that are inherent in the design and those that are proposed in response to identified significant effects.	Y	Embedded mitigation is outlined in Chapter 2 of the ES.
153	Road Drainage & Water - Water Environment Effects	3.116	Seek opportunities to improve on the quality of existing discharges where these are identified and shown to contribute towards WFD commitments	Y	The drainage design includes use of attenuation ponds, which have been included with the intention of providing improvements to existing discharges.
154	Road Drainage & Water - River Don Restoration Project	3.116	Reflect the comments made in relation to the River Don restoration project (in the context of ecological assessment) in the design of the proposed development and the ES.	N	Since submitting the Scoping Report, the Scheme no longer affects the River Ron. The wider context of discharges to the River Don have been assessed and included within the WFD assessment, available in Appendix 14.3 of the ES.
155	Road Drainage & Water - Inter-relationships	3.117	Consider the potential for inter-relationships where LWS' include sections of the River Don- whether water pollution could impact on ecological receptors such as the LWS' and the species they support.	Y	This has been assessed and commentary included within Chapter 14 of the ES.
156	Road Drainage & Water - Cross-reference	3.117	Cross reference the road drainage and water environment assessment to the ecological assessment as appropriate.	Y	
157	Cumulative Effects - Definitions	3.118	The definitions of intra-project effects and inter-project effects should be followed in the presentation of the cumulative effects assessment to be undertaken in the EIA.	Y	The approach is discussed within Chapter 5 of the ES.
158	Cumulative Effects - Traffic Model	3.119	Clearly describe which projects feature in the traffic model, and which additional projects are included in the cumulative assessment.	Y	This is outlined within Chapter 15 of the ES.
159	Cumulative Effects - Double Counting	3.119	Clearly describe the approach taken to avoid the 'double counting' of effects.		This is managed through the assessment approach described within Chapter 15 of the ES.
160	Cumulative Effects - Sifting Projects	3.121	Agree the process of sifting projects from the long list to a short list with local planning authorities.	Y	The local planning authorities were consulted on the short-listing of development for the cumulative effects assessment in Chapter 15 of the ES.
161	Preliminary Environmental Information (PEI)	4.4	Prepare a Statement of Community Consultation (SoCC) that must state whether the proposed development is EIA development and, if it is, how the applicant intends to publicise and consult on the preliminary environmental information.	Y	This has been prepared for the Scheme and reported within the Consultation Report in the DCO application.
162	Habitats Regulations Assessment (HRA)	4.5	Provide sufficient information to enable an appropriate assessment to be carried out.	Y	This is presented in DCO application document reference TR010024/APP/6.10.
163	Habitats Regulations Assessment	4.6	Provide evidence of an agreement with the relevant Statutory Nature Conservation Bodies confirming that a HRA won't be required	Y	This is presented in Chapter 4 of the ES and DCO application document reference TR010024/APP/6.10.
164	Plan to Agree Habitats Information	4.8	Prepare a plan to agree upfront what habitat regulation information needs to be supplied to the planning inspectorate	Y	A HRA statement is presented in DCO application document reference TR010024/APP/6.10.
165	Sites of Special Scientific Interest	4.13	Notify NE before authorising operations likely to damage the special interest features of a SSSI.	Y	Noted. No impacts on any SSSI have been identified within the ES.
166	European protected species	4.17	Consult with NE and agree appropriate requirements to secure necessary mitigation. Provide confirmation from NE whether any issues have been identified which would prevent the EPS licence being granted.	Y	The Scheme would not have any significant impacts on protected species.
167	Other Regulatory Regimes	4.21	Ensure clearly that the regulatory areas and relevant authorisations, licenses, permits, and consents that are necessary to enable operations are addressed in the ES.	Y	Information is included in Chapter 1 and Appendix 1.4 of the ES.
168	Water Framework Directive	4.23	Regard relevant river basin management plans and ensure the proposed development is compliant with the terms of the WFD.	Y	This has been included within Appendix 14.3 in Volume 3 (Appendices) of the ES.
169	Water Framework Directive	4.25	Include the risk of deterioration of any water body quality element to a lower status class Include support for measures to achieve 'good' status for water bodies. Include how the application does hinder implementation of measures to improve a surface water body or ground water. Include the risk of harming any protected area.	Y	This has been included within Appendix 14.3 in Volume 3 (Appendices) of the ES.

Ref	Issue theme	Scoping Opinion Para.	Scope of issue	Request adopted? Y/N	Discussion/ rationale
170	The Water Resources Act	4.29	Request an abstraction licence from the EA if more than 20m3/day of water is extracted from a surface or underground source.	Y	The will be managed within the CEMP.
171	The Water Resources Act	4.32	Identify whether an environmental permit and/or water resources licence is required from the EA before an NSIP can be constructed.	Y	No Environment Agency permit or licence is required.
172	Health Impact Assessment	4.37	Regard the responses received from the relevant consultees regarding health, and in particular to the comments from the health and safety executive and public health England.	Y	Under the 2009 EIA Regulations a formal HIA is not required, but health considerations have been covered under Chapter 6 (Air Quality), Chapter 12 (Noise and Vibration) and Chapter 13 (People and Communities) of the ES.
173	Transboundary Impacts	4.39	Indicate whether the proposed development is likely to have significant impacts on another EEA state	Y	No significant impacts on another EEA state are expected.
174	Transboundary Impacts	4.40	Identify whether the proposed development has the potential for significant transboundary impacts, and if so what these are.	Y	No significant transboundary impacts are expected.

Table A1.1-2 Scoping Recommendations to the Planning Inspectorate from their consultation bodies

Ref	Consultee	Issue theme	Scope of issue	Request adopted? Y/N	Discussion/ rationale
175	The Coal Authority	Land stability risk	There are no recorded coal mining legacy hazards at shallow depth that could pose a risk to land stability. No comments or observations to make on the scope of the ES.	Y	Noted.
176	Durham County Council	No comment	No comments to make in regard to the proposed development.	N/A	
177	Environment Agency	Water resources and flood risk	Promote the use of Sustainable Drainage Systems (SuDS). Submit detailed investigations such that the use of SuDS has been fully explored. Follow "SUDS management train" approach.	Y	See references to SuDS in Chapters 2 and 14 of the ES
178	Environment Agency	Water resources and flood risk	Review the Don Vision document and the River Don Feasibility Study. Support the inclusion of section 14.8.1 of the Scoping Report and request that SUDS management train to be included.	Y	Noted.
179	Environment Agency	Water Framework Directive	Recommend Water Framework Directive (WFD) Compliance Assessment is a separate section within the ES	Y	WFD Compliance is assessed within Appendix 14.3 in Volume 3 (Appendices) of the ES.
180	Environment Agency	Water Framework Directive	Don waterbody cannot meet good ecological condition under WFD (Classified overall as poor and heavily modified, with evidence of channelization and straightening).	Y	Noted.
181	Environment Agency	River Restoration	River Restoration Centre have carried out a study and provided recommendations for the Don (including the culvert under the A19 at Downhill Lane Junction). Available for consideration.	N/A	The Scheme no longer includes the River Don within the DCO boundary, so no works would be directly affecting the River Don.
182	Environment Agency	Ground Water and Land Contamination	Recommend further site investigation works are undertaken at the site to assess any impacts from land contamination. Risks to controlled waters, including surface and ground waters should be assessed with remedial/mitigation measures proposed/undertaken as required.	Y	Further Ground investigation work has been undertaken and this has been taken into account in Chapters 10 and 14 of the ES, as appropriate.
183	Environment Agency	Ground Water and Land Contamination	Follow risk management framework provided in CLR11, model procedures for the management of land contamination, when dealing with contaminated land. Refer to the EA guiding principles for land contamination for the type of information we require in order to assess risks to controlled waters from the site.	Y	Suitable pollution prevention guidelines have been identified and included in the mitigation section of Chapter 10 of the ES. These would be included within the CEMP.
184	Environment Agency	Regulatory Requirements	Development requires an Environmental Permit under the Environmental Permitting Regulations 2010 from the EA. Contact EA to discuss any issues.	Y	Noted.
185	Environment Agency	Regulatory Requirements	Waste transported to and from the development must only be carried by a registered waste carrier. A waste recovery plan needs to be agreed with the EA for any activity involving the recovery of waste on land.	Y	A SWMP has been drafted for inclusion in the Outline CEMP submitted as part of the DCO application. The intention is for this to be finalised prior to construction.
186	Environment Agency	Regulatory Requirements	Need an environmental permit for flood risk activities if any following work within 8 metres of the River Don is proposed: • In, under, over or near a main river • on or near a flood defence on a main river • in the floodplain of a main river • on or near a sea defence	Y	Work is not being directly undertaken on the River Don as part of the Scheme. There is work to a tributary of the River Don, however an environmental permit is not needed for work on the tributary based on the following guidance from .gov.uk: *'You do not need flood risk permits to work on 'ordinary watercourses'– usually small rivers, streams and ditches.'* The Environment Agency have confirmed that no flood works consent is required for the Scheme.
187	Historic England	No comment	Historic England have no comments on the document.	Y	Noted.
188	Health and Safety Executive	Land use planning	Proposed development does not fall within the consultation distances of any major accident hazard installations or pipelines. There are no licensed explosive sites in the vicinity.	Y	Noted.

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189	Natural England	General Principles	Include: • A description of the development. • Expected residues and emissions. • Assessment of alternatives & clear reasoning to why the preferred option has been chosen. • Description of the aspects of the environment likely to be significantly affected. • Description of the likely significant effects of the development on the environment. • Description of the measures envisaged to prevent, reduce, and offset any significant adverse effects on the environment. • Non-technical summary of the information. • An indication of any difficulties encountered by the applicant in compiling the required information.	Y	These aspects have all been included in the ES as a matter of course.
190	Natural England	Ecological aspects of an environmental statement	Include the potential impact of the proposal upon features of nature conservation interest and opportunities for habitat creation/enhancement	Y	This is included in Chapter 9 of the ES.
191	Natural England	Ecological aspects of an environmental statement	Carry out EcIA as part of EIA - process of identifying, quantifying, and evaluating the potential impacts of defined actions on ecosystems or their components	Y	This has been undertaken as part of the assessment outlined in Chapter 9 of the ES.
192	Natural England	Ecological aspects of an environmental statement	Follow guidance on taking into account biodiversity interests in planning decisions and the framework that local authorities should provide to assist developers.	Y	Noted.
193	Natural England	Regionally and locally important sites	Include an assessment of the likely impacts on wildlife and geodiversity interests of local sites. Include proposals for mitigation of any impacts and if appropriate, compensation measures.	Y	This is included in Chapter 9 of the ES.
194	Natural England	Protected Species	Records of protected species should be sought from appropriate local biological record centres, nature conservation organisations, groups and individuals.	Y	This is included in Chapter 9 of the ES.
195	Natural England	Protected Species	Consider wider context of the site - habitat linkages and protected species populations in the wider area.	Y	This is included in Chapter 9 of the ES.
196	Natural England	Protected Species	Areas affected by the proposal should be thoroughly surveyed by competent ecologists at appropriate times of year.	Y	This is included in Chapter 9 of the ES.
197	Natural England	Protected Species	Include survey results impact assessments and appropriate accompanying mitigation strategies included as part of the ES.	Y	This is included in Chapter 9 of the ES.
198	Natural England	Habitats and Species of Principal Importance	Assess the impact on habitats/species listed as 'Habitats and Species of Principal Importance' and include in ES.	Y	This is included in Chapter 9 of the ES.
199	Natural England	Habitats and Species of Principal Importance	Consider species and habitats included in the relevant local biodiversity action plan.	Y	This is included in Chapter 9 of the ES.
200	Natural England	Habitats and Species of Principal Importance	Carry out habitat survey to identify any important habitats present.	Y	Surveys were undertaken and formed the basis of the assessment in Chapter 9 of the ES.
201	Natural England	Habitats and Species of Principal Importance	Carry out ornithological, botanical, and invertebrate surveys.	Y	
202	Natural England	Habitats and Species of Principal Importance	ES should include: • Any historical data for the site affected by the proposal. • Additional surveys carried out as part of this proposal. • The habitats and species present. • The status of these habitats and species. • The direct and indirect effects of the development upon those habitats and species. • Full details of any mitigation or compensation that may be required.	Y	This is included in Chapter 9 of the ES.
203	Natural England	Soil and Agricultural Land Quality	Impacts from the development should be considered in light of the Government's policy for the protection of the best and most versatile agricultural land.	Y	Agricultural impact assessment for the Scheme has been detailed in Chapter 13 of the ES.
204	Natural England	Soil and Agricultural Land Quality	Consider soils under a more general heading of sustainable use of land and the ecosystem services they provide as a natural resource.	Y	In line with our proposed scope.

Ref	Consultee	Issue theme	Scope of issue	Request adopted? Y/N	Discussion/ rationale
205	Natural England	Soil and Agricultural Land Quality	Consider the degree to which soils will be disturbed/harmed and whether any 'best and most versatile' agricultural land would be affected.	Y	This is considered in Chapter 10 of the ES.
206	Natural England	Soil and Agricultural Land Quality	If required, an agricultural land classification and soil survey of the land should be undertaken, to confirm the soil physical characteristics of the full depth of soil resource (1.2 metres).	Y	This is considered in Chapter 10 of the ES.
207	Natural England	Soil and Agricultural Land Quality	Consider including: • Proposals for handling different types of topsoil and subsoil and the storage of soils and their management whilst in store. • The method of assessing whether soils are in a suitably dry condition to be handed, and the avoidance of soil handling, trafficking, and cultivation during the wetter winter period. • Describing the proposed depths and soil types of the restores soil profiles. • The effects on land drainage, agricultural access, and water supplies, including other agricultural land in the vicinity. • The impacts of the development on farm structure and viability, and on other established rural land use and interests, during and after site working period.	Y	This is considered in Chapter 10 of the ES.
208	Natural England	Soil and Agricultural Land Quality	Consider a detailed restoration plan illustrating the restored landform and the proposed after uses, together with details of surface features, water bodies and availability of outfalls to accommodate future drainage requirements.	Y	Volume 1 of the ES contains an Environmental Masterplan highlighting areas that would be restored, the attenuation ponds and areas of habitat creation.
209	Natural England	Climate Change Adaption	ES should reflect the principles in the England Biodiversity Strategy published by Defra and identify how the developments effects on the natural environment will be influenced by climate change, and how ecological networks will be maintained	Y	This is considered in Chapter 9 of the ES.
210	Natural England	Climate Change Adaption	NPPF requires that the planning system should contribute to the enhancement of the natural environment by establishing coherent ecological networks that are more resilient to current and future pressures - demonstrate in ES.	Y	This is considered in Chapter 9 of the ES.
211	Natural England	Cumulative and in-combination effects	Fully consider the implications of the whole scheme in the ES, and include all supporting infrastructure.	Y	In line with the scope of the ES.
212	Natural England	Cumulative and in-combination effects	The ES should include an impact assessment to identify, describe, and evaluate the effects likely to result from the project in combination with other projects.	Y	This is considered in Chapter 15 of the ES.
213	Northumbria Water	Land drainage	We have no public sewers or water mains in the area affected by this scheme. No comments to make regarding this proposal.	N/A	N/A
214	Public Health England	Chemicals and Radiation	Summarise the relevant issues into a specific section of the report - key information, risk assessments, proposed mitigation measures, conclusions and residual impacts, relating to human health.	N	There is currently no established DMRB guidance for human health assessment. While Health Impact Assessment is a feature of the 2017 EIA Regulations, these do not apply to the Scheme as the Scoping Report was submitted prior to the 16th May 2017. However, health impacts have been considered within Air Quality and in the context of any sources of potential contamination within Geology & Soils. Noise and Vibration and People and Communities also consider the health effects of the Scheme.
215	Public Health England	Chemicals and Radiation	Highlight compliance with the requirements of national policy statements and relevant guidance and standards.	Y	Chapter 10 of the ES considers sources of land contamination.
216	Public Health England	Level of Detail	In cases where assessments may not be relevant to an application, or may be completed using qualitative rather than quantitative methodology, promoters should fully explain and justify their rationale in the submitted document.	N	

Ref	Consultee	Issue theme	Scope of issue	Request adopted? Y/N	Discussion/ rationale
217	Public Health England	Electric and Magnetic Fields (EMF)	Confirm that the proposed development does not include the addition, relocation, or impact upon any potential sources of EMF.	Y	No electricity substations or overhead electricity lines are being affected.
218	Public Health England	Electric and Magnetic Fields	Or ensure that an adequate assessment of the possible impacts in undertaken and included in the ES.	N/A	
219	Public Health England	General Approach	The EIA should identify and assesses the potential public health impacts of the activities at, and emissions from, the installation. Assessment should consider the development, operational, and decommissioning phases.	Y	See above response to above row reference 214.
220	Public Health England	General Approach	The EIA for the Downhill Land Junction Improvement Scheme should include consideration of the impacts of associated development and that cumulative impacts are fully accounted for.	Y	This is considered in Chapter 15 of the ES.
221	Public Health England	General Approach	EIA should start at the stage of site and process selection, so that the environmental merits of practicable alternatives can be properly considered. Where this is undertaken, the main alternatives considered should be outlined in the ES.	Y	Chapter 3 of the ES presents a summary of the main alternatives considered.
222	Public Health England	Receptors	The ES should clearly identify the development's location and distance from off-site human receptors that may be affected by emissions from, or activities at, the development. Off-site human receptors may include: people living in residential premises; people working in commercial and industrial premises; and people using transport infrastructure, recreational areas and publicly-accessible land. Environmental receptors may include: watercourses; surface and ground water; wells; boreholes; and water abstraction points.	Y	Receptors and impacts are considered within the following ES chapters: Air Quality (Chapter 6); Noise (Chapter 12); People and Communities (Chapter 13); and Water and Land Drainage (Chapter 14).
223	Public Health England	Impacts arising from construction and decommissioning	Assess impacts arising from emissions due to construction and decommissioning, consider potential impacts on all receptors and describe monitoring and mitigation. Ensure appropriate measures are in place to mitigate any potential impact on health from emissions.	Y	
224	Public Health England	Impacts arising from construction and decommissioning	Provide an effective CEMP and DEMP to assure activities are well managed.	Y	An Outline CEMP forms part of the DCO application. Decommissioning is not included within highways developments.
225	Public Health England	Impacts arising from construction and decommissioning	Ensure robust mechanisms are in place to respond to any complaints of traffic-related pollution, during construction, operation, and decommissioning of the facility.	Y	The CEMP contains procedures for dealing with complaints relating to statutory nuisance and for any general issues with the Scheme. Highways England controls would apply during operation.
226	Public Health England	Emissions to air and water	When considering a baseline (of existing environmental quality) and in the assessment and future monitoring of impacts these should: • Include appropriate screening assessments and detailed dispersion modelling where this is screened as necessary. • Encompass all pollutants which may be emitted by the installation in combination with all pollutants arising from associated development and transport, ideally these should be considered in a single holistic assessment. • Consider the construction, operational, and decommissioning phases. • Consider the typical operational emissions and emissions from start-up, shut-down, abnormal operation and accidents when assessing potential impacts and include an assessment of worst-case impacts. • Fully account for fugitive emissions. • Include appropriate estimates of background levels. • Identify cumulative and incremental impacts. • Include consideration of local authority, Environment Agency, Defra national network, and any other local site-specific sources of monitoring data.	Y	This is considered in Chapters 6 and 14 of the ES.
227	Public Health	Emissions to air and water	• Compare predicted environmental concentrations to the applicable standard or guideline value	Y	This is considered in Chapters 6 and 14 of the ES.

Ref	Consultee	Issue theme	Scope of issue	Request adopted? Y/N	Discussion/ rationale
	England		for the affected medium. • If no standard or guideline value exists, the predicted exposure to humans should be estimated and compared to an appropriate health-based value (a Tolerable Daily Intake or equivalent). Further guidance is provided in Annex 1. • This should consider all applicable routes of exposure, e.g. include consideration of aspects such as the deposition of chemicals emitted to air and their uptake via ingestion		
228	Public Health England	Emissions to air and water	With regards emissions to air and water, the EIA should • Identify and consider impacts on residential areas and sensitive receptors in the area(s) which may be affected by emissions, this should include consideration of any new receptors arising from future development. • Include consideration of impacts on existing areas of poor air quality e.g. existing or proposed local authority Air Quality Management Areas (AQMAs). • Include modelling using appropriate meteorological data (i.e. come from the nearest suitable meteorological station and include a range of years and worst case conditions). • Include modelling taking into account local topography. • Include assessment of potential impacts on human health and not focus solely on ecological impacts. • Identify and consider all routes by which emissions may lead to population exposure (e.g. surface watercourses; recreational waters; sewers; geological routes etc.). • Include consideration of potential impacts on recreational users (e.g. from fishing, canoeing etc.) alongside assessment of potential exposure via drinking water. • Undertake quantitative assessment where possible. • EIA should appraise and describe the measures that will be used to control both point source and fugitive emissions and demonstrate that standards, guideline values or health-based values will not be exceeded due to emissions from the installation, as described above. • When assessing the potential impact of a proposed installation on environmental quality, predicted environmental concentrations should be compared to the permitted concentrations in the affected media; this should include both standards for short and long-term exposure.	Y	This is considered in Chapters 6 and 14 of the ES.
229	Public Health England	Land Quality	Provide details of any hazardous contamination present on site (including ground gas) as part of the site condition report.	Y	This is considered in Chapter 10 of the ES.
230	Public Health England	Land Quality	Emissions to and from the ground should be considered in terms of the previous history of the site and the potential of the site, once operational, to give rise to issues.	Y	This is considered in Chapter 10 of the ES.
231	Public Health England	Land Quality	Public health impacts associated with ground contamination and/or the migration of material off-site should be assessed and the potential impact on nearby receptors and control and mitigation measures should be outlined.	Y	This is considered in Chapter 10 of the ES.
232	Public Health England	Land Quality	Relevant areas outlined in the Government's Good Practice Guide for EIA include: effects associated with ground contamination that may already exist, effects associated with the potential for polluting substances that are used to cause new ground contamination issues on a site, impacts associated with re-use of soils and waste soils.	Y	This is considered in Chapter 10 of the ES.
233	Public Health England	Waste	The EIA should demonstrate compliance with the waste hierarchy	Y	This is considered in Chapter 11 of the ES.
234	Public Health England	Waste	For wastes arising from the installation the EIA should consider the implications and wider environmental and public health impacts of different waste disposal options and disposal route(s) and transport method(s) and how potential impacts on public health will be mitigated	Y	Chapter 11 of the ES assesses the wider environmental impacts associated with waste production, but would seek to minimise off site waste disposal the use established main road networks to existing waste handling facilities to

Ref	Consultee	Issue theme	Scope of issue	Request adopted? Y/N	Discussion/ rationale
					avoid new receptor impacts.
235	Public Health England	Other Aspects	Inform how the promoter would respond to accidents with potential off-site emissions (e.g. flooding or fires, spills, leaks or releases off-site). Assessment of accidents should: identify all potential hazards in relation to construction, operation and decommissioning; include an assessment of the risks posed; and identify risk management measures and contingency actions that will be employed in the event of an accident in order to mitigate off-site effects.	Y	Pollution prevention procedures would form part of the CEMP and this would contain spillage response procedures and accident procedures.
236	Public Health England	Other Aspects	Consider the COMAH Regulations and the Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations 2009: both in terms of their applicability to the installation itself, and the installation's potential to impact on, or be impacted by, any nearby installations themselves subject to these Regulations.	N	There are no COMAH installations. While Major Accidents is a feature of the 2017 EIA Regulations, these do not apply to the Scheme as the Scoping Report was submitted prior to the 16th May 2017.
237	Public Health England	Other Aspects	As good practice, include the risk of community anxiety and stress as part of every risk or impact assessment of proposed plans that involve a potential environmental hazard.	N	
238	Public Health England	Electromagnetic Field	Advice on health effects of power frequency electric and magnetic fields is available in the following link: https://www.gov.uk/government/collections/electromagnetic-fields#low-frequencyelectric-and-magnetic-fields	N	Noted, although not anticipated to be relevant to the Scheme.
239	Public Health England	Policy Measures for the electricity industry.	Voluntary code of practice for ICNIRP guidelines from the Department of Energy and Climate Change: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/37447/1256-code-practice-emf-public-exp-guidelines.pdf	Y	Noted.
240	Public Health England	Exposure Guidelines	Recommends the adoption of the EMF exposure guidelines published by the International Commission on Non-Ionizing Radiation Protection (ICNIRP).	N	Noted, although not anticipated to be relevant to the Scheme.
241	Public Health England	Strategic Magnetic Fields	Practical policies need to be implemented to prevent inadvertent harmful exposure of people with implanted electronic medical devices and implants containing ferromagnetic materials, and injuries due to flying ferromagnetic objects, and acute exposure of the general public should be as low as 0.5 mT.	N	Noted, although not anticipated to be relevant to the Scheme.
242	Public Health England	Power Frequency Electric and Magnetic Fields	The ICNIRP guidelines give reference levels for public exposure to 50 Hz electric and magnetic fields, and these are respectively 5 kV m−1 (kilovolts per metre) and 200 μT (microtesla).	N	Noted, although not anticipated to be relevant to the Scheme.
243	Public Health England	Ionising radiation	Carry out the necessary radiological impact assessments to demonstrate compliance with UK legislation and the principles of radiation protection. This should be set out clearly in a separate section or report and should not require any further analysis by PHE. In particular, the important principles of justification, optimisation and radiation dose limitation should be addressed. In addition, compliance with the Euratom BSS and UK legislation should be clear. Include a full radiation dose assessment.	N	Not relevant to the Scheme.
244	Public Health England	Ionising radiation	The radiological impact of any solid waste storage and disposal should also be addressed in the assessment to ensure that this complies with UK practice and legislation; information should be provided on the category of waste involved.	N	Noted, although not anticipated to be relevant to the Scheme.

Ref	Consultee	Issue theme	Scope of issue	Request adopted? Y/N	Discussion/ rationale
245	Public Health England	Human Health Risk Assessment (Chemical Pollutants)	The following points should be considered when undertaking a human health risk assessment: • Consider including Chemical Abstract Service (CAS) numbers alongside chemical names, where referenced in the ES • The most recent United Kingdom standards for the appropriate media (e.g. air, water, and/or soil) and health-based guideline values should be used when quantifying the risk to human health from chemical pollutants. Where UK standards or guideline values are not available, those recommended by the European Union or World Health Organisation can be used • When assessing the human health risk of a chemical emitted from a facility or operation, the background exposure to the chemical from other sources should be taken into account • When quantitatively assessing the health risk of genotoxic and carcinogenic chemical pollutants PHE does not favour the use of mathematical models to extrapolate from high dose levels used in animal carcinogenicity studies to well below the observed region of a dose-response relationship. When only animal data are available, we recommend that the 'Margin of Exposure' (MOE) approach10 is used.	N	There is currently no established DMRB guidance for human health assessment. While Health Impact Assessment is a feature of the 2017 EIA Regulations, these do not apply to the Scheme as the Scoping Report was submitted prior to the 16th May 2017. However, health impacts have been considered within Air Quality and in the context of any sources of potential contamination within Geology & Soils. Noise and Vibration and People and Communities also consider the health effects of the Scheme.
246	Royal Mail	Major road users	Request the ES includes information on the needs of major road users and acknowledges the requirement to ensure the major road users are not disrupted through full advance consultation by the applicant at the appropriate time in the DCO and development process	Y	This is included in our current scope.
247	Royal Mail	Traffic mitigation measures	The ES should include detailed information on the construction traffic mitigation measures that are proposed to be implemented (including a draft construction traffic management plan)	Y	The ES provides a suitable level of detail on traffic management measures proposed. A more detailed Traffic Management Plan would be developed during detailed design.
248	Royal Mail	Traffic mitigation measures	ES must give careful consideration to the potential for cumulative traffic impact. Reliance in the traffic model on assumption about traffic growth over time will not be sufficient. Detailed traffic impact assessment covering all three proposals should be undertaken as part of cumulative impact assessment.	N	The cumulative operational traffic impact assessments have been undertaken in line with current DMRB, PINS and Department of Transport guidance for a national highways development. Our cumulative assessment can only use available publicly environmental information; it is not with the remit of the Scheme to undertake impact assessment in detailed form for another scheme.
249	Royal Mail	Consultation	Request that Royal Mail are fully pre-consulted by Highways England on any proposed road closure/diversions/alternative access arrangements/hours of working and the content of the CTMP.	Y	Noted.
250	South Tyneside & Sunderland City Councils	Overview	Consider national policy guidance (NPPF), local plans and strategic land reviews, and regional transport strategies including Local Transport Plan 3.	Y	Relevant policy guidance has been taken into account throughout the ES.
251	South Tyneside & Sunderland City Councils	Overview	Consider design requirements for cumulative traffic impact in relation to the proposed International Advanced Manufacturing Park (IAMP), and also any design requirements for the A19 Testo's junction scheme.	Y	The design has been developed in liaison with the IAMP developers and consideration of the Testo's development.
252	South Tyneside & Sunderland City Councils	Potential Impacts on Access and Transport	The Transport Assessment will need to consider baseline traffic, traffic growth and development traffic to ensure robust assessment	Y	Provided separately to the ES, but a Transport Assessment has been undertaken in line with DMRB, PINS and Department of Transport guidance for national highways developments.
253	South Tyneside & Sunderland City Councils	Potential Impacts on Access and Transport	The consideration of additional peak hour assessments to cover Nissan (NMUK) shift operations over and above normal weekday peak hours would be appropriate.	Y	Nissan shifts have been considered when assessing access and transport impacts.
254	South Tyneside	Potential Impacts on	Additional consideration should be given to non-motorised user and public transport provision to	Y	Effects on NMUs are covered within Chapter 13 of

Ref	Consultee	Issue theme	Scope of issue	Request adopted? Y/N	Discussion/ rationale
	& Sunderland City Councils	Access and Transport	provide connectivity to the IAMP. The provision of a road safety audit will need to consider highway safety implications with particular regard to non-motorised users. The proposal may need to include stopping up of public highway, traffic regulation orders (temporary and permanent), diversions and creation of new rights of way.		the ES.
255	South Tyneside & Sunderland City Councils	Potential Impacts on Access and Transport	In regards to the realignment of the Downhill Lane carriageway, the highway design specification will need to follow the guidelines set out in the Design Manual for Roads and Bridges (DMRB).	Y	The design has followed current DMRB guidelines and/or related IANs.
256	South Tyneside & Sunderland City Councils	Potential Impacts on Access and Transport	In terms of accidents and road safety, an analysis of personal injury accidents over a period of 5 years would be appropriate.	N/A	Not relevant to the ES.
257	South Tyneside & Sunderland City Councils	Potential Impacts on Access and Transport	Given the scale of the proposed scheme, environmental considerations should include air quality, carbon savings, potential noise impact and any attenuation measures deemed necessary.	Y	Considered in Chapters 6 and 11 of the ES.
258	South Tyneside & Sunderland City Councils	Road Drainage and the Water Environment	The proposed scheme will need to undertake a Flood Risk Assessment along with a drainage strategy for highway drainage requirements.	Y	Drainage strategy is summarised in Chapter 2 of the ES, while a FRA is Appendix 14.2 in Volume 2 of the ES.
259	South Tyneside Council	Road Drainage and the Water Environment	Further to this, the impacts from the scheme should be mitigated through the use of appropriate controls such as SUDs to ensure that there is no increase of flood risk and that there is an appropriate treatment of highways run off post development. There needs to be recognition that there are properties at flood risk downstream of the development in the West Boldon area.	Y	SuDS have been taken into account in the drainage design and in the FRA in Appendix 14.2 in Volume 2 of the ES.
260	South Tyneside Council	Geology and Soils	Ground investigation was completed in 2007, undertake some additional work to demonstrate that no further contamination is present such as a result of any fuel spills or other spillages on the road network	Y	Additional ground investigation was undertaken in 2017/18. This has been taken into account in Chapter 10 of the ES.
261	South Tyneside & Sunderland City Councils	Construction Traffic Management	Details of construction traffic and routing, abnormal load deliveries, construction management plan and scheme of working will be required.	Y	The ES contains a suitable level of detail relating to construction traffic. An Outline CEMP is provided in the DCO application and will be finalised during detailed design.
262	South Tyneside & Sunderland City Councils	Construction Traffic Management	Manage construction activities to avoid any conflict with NMUK shift patterns or just-in-time delivery / export arrangements for the automotive plant operations. It is imperative that consideration is given to coordinating the highway designs / construction periods (where possible) so as to reduce the impacts to nearby businesses.	Y	Not directly relevant to the ES, but would be considered through the CEMP.
263	South Tyneside Council	Summary	The Council strongly supports this proposed major investment in the strategic road network. Inclusion of the project in the Roads Investment Strategy Part 1 programme is welcomed.	Y	Noted.
264	Sunderland City Council	Ecological Impacts	The Local Planning Authority considers that further otter surveys should be carried out and results discussed with the Local Planning Authority.	N	The Scheme red line no longer includes the River Don as no works are proposed that directly affect the River Don. However, the 2017 survey of the tributary to the River Don did look for otter signs.
265	Sunderland City Council	Summary	Inclusion of the project in the Roads Investment Strategy Part 1 funding programme is welcomed as the proposals will assist with delivery of the IAMP as a regionally significant employment site. Based on the information provided, the proposed approach to assessment of traffic impact on both the environment and road network is supported.	Y	Noted.

APPENDIX 1.2

REVIEW OF ENVIRONMENTAL EFFECTS ASSOCIATED WITH REMOVING RIGHTS TO CREATE BRIDLEWAY B46 DIVERSION UNDER THE TESTO'S SCHEME DCO

The Downhill Lane junction improvement scheme (the Scheme) is proposing to establish a non-motorised user route north-east of Downhill Lane junction which would replace a non-motorised user route that has been consented in the A19 / A184 Testo's Junction Improvement Scheme (the Testo's scheme) Development Consent Order (DCO), but that is not yet in existence. The non-motorised user route proposed in the Testo's scheme does not complement the segregated non-motorised user facilities proposed under the Scheme; whereas the existing B46 bridleway would form a more desirable route. Accordingly, the Scheme proposes:

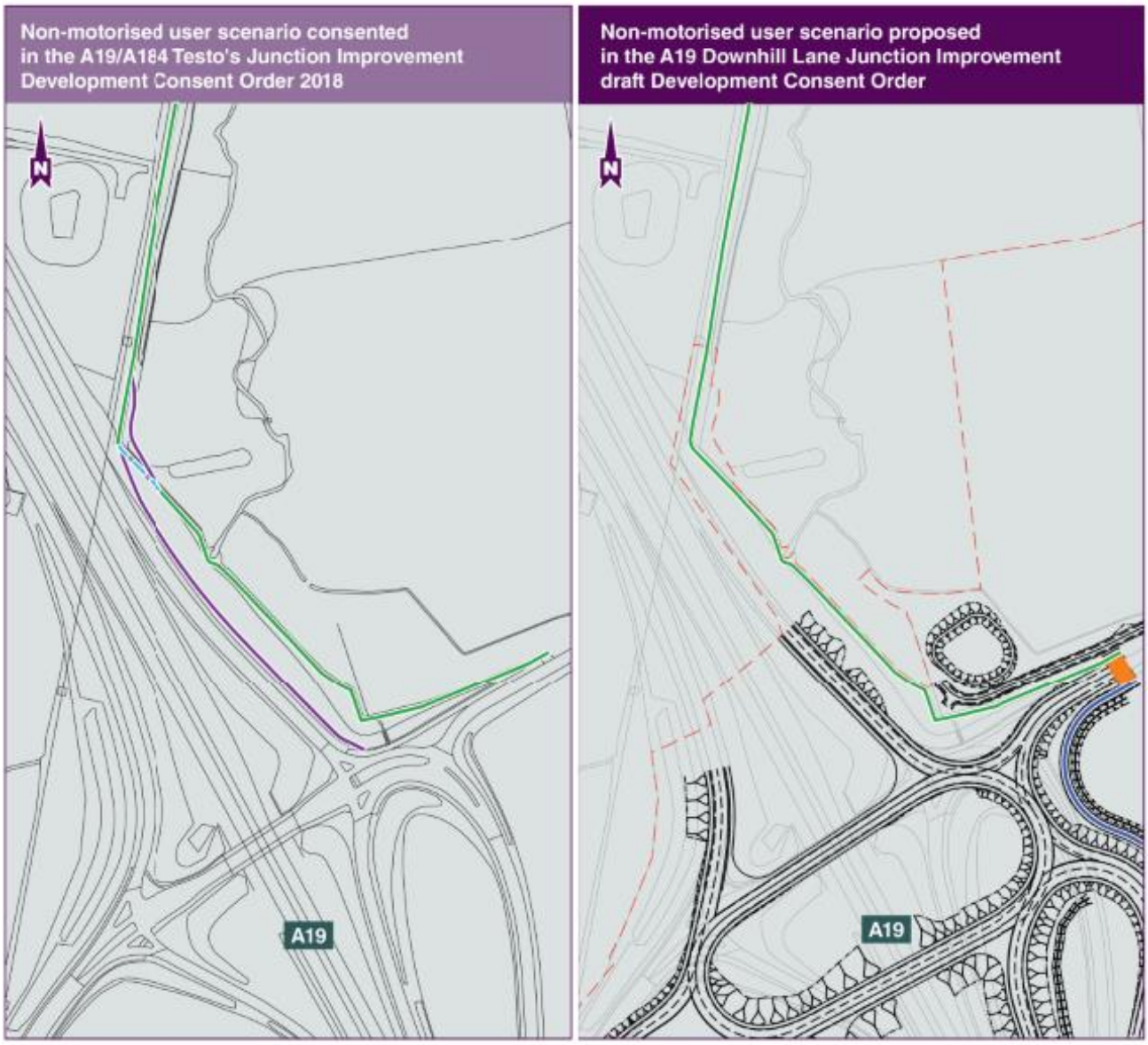
- the removal of the proposed non-motorised user route consented in the Testo's DCO; and
- the establishment of the non-motorised user route proposed under this Scheme that would be improved by maintaining part of the B46 which is proposed to be stopped up under the Testo's DCO.

This is explained in more detail in the Revised plans, drawings and sections for the A19/A184 Testo's Junction Alteration Scheme (application document reference TR010024/APP/7.5) and the Explanatory Memorandum (application document reference TR010024/APP/3.2).

The purpose of this appendix, and the sections below, is to provide a qualitative assessment of the environmental impacts on a topic-specific basis of these changes to the non-motorised user provision, based on professional judgement. The review has taken into consideration the effects identified in the Testo's scheme Environmental Statement (the **Testo's scheme ES**)[1], where the new non-motorised user route proposed in the Testo's DCO is predominantly considered as part of a larger scheme layout within the Testo's scheme ES. However, Chapter 13 'People and Communities' of the **Testo's scheme ES** specifically states that the new ramp along Bridleway B46 for cyclists would increase connectivity and provide safety improvements.

[1] Highways England 2017 *A19 / A184 Testos Junction Improvement TR010020 6.1 Environmental Statement – Volume 1 The Main Text* (Document reference TR010020/APP/6.1) [on-line] Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010020/TR010020-000203-TR010020_APP_6.1%20-%20Environmental%20Statement.pdf (Accessed December 2018)

Figure 1 - Bridleway B46 Amendment



Key

- Proposed A19 Downhill Lane Development Consent Order boundary
- Existing Bridleway - Public Right of Way
- Public Right of Way in the consented A19/A184 Testo's junction improvement Development Consent Order
- Extinguished Public Right of Way in the consented A19/A184 Testo's junction improvement Development Consent Order
- Proposed non-motorised user route in the A19 Downhill Lane improvement scheme application to be submitted
- Proposed signal controlled non-motorised user crossing in the A19 Downhill Lane improvement scheme application to be submitted

Air Quality

There would be a reduction in construction dust and vehicle emissions that would otherwise have been created by the bridleway diversion construction works. However, the adjacent construction works for the southbound link from Testo's junction would still be required, so there would be no significant change in the air quality effects, assessed in Chapter 6 of the Testo's scheme ES, on those few receptors in this area (e.g. users of Bridleway B46, when being used during construction, and local wildlife, such as in Make me Rich Meadow LWS).

During operation, retaining Bridleway B46 on the existing alignment avoids exposing NMUs to increased air pollutant emissions by keeping them further away from traffic using the southbound link from Testo's junction.

Overall, the changes to the non-motorised user provision would offer positive air quality effects compared with those effects set out in the Testo's scheme ES.

Cultural Heritage

There would be a small reduction in the extent of previously undisturbed ground affected by the work area required to create the combined B46 Bridleway diversion and southbound link from Testo's junction; as assessed in Chapter 7 of the Testo's scheme ES. This would offer a small benefit by reducing the risk of encountering buried archaeology along the east side of the A19, north of Downhill Lane junction. In particular, there would be a benefit from reducing the extent of temporary and permanent construction works within the footprint of the historic route of the Stanhope and Tyne Railway Line (asset number 58).

Overall, the cultural heritage effects of the changes to the non-motorised user provision would be positive compared with those effects set out in the Testo's scheme ES.

Landscape and Visual Effects

There would be a benefit from avoiding localised impacts on landscape character and visual amenity, as assessed in Chapter 8 of the Testo's scheme ES, from a small reduction in the extent of vegetation clearance and ground re-profiling east of the A19, north of Downhill Lane junction. This would be limited to the area solely required for the Bridleway B46 diversion at the foot of the clearance and re-profiling works still required for the southbound link from Testo's junction. Therefore, these changes would be localised and visible only really to users of Bridleway B46 and travellers along the A19 southbound link from Testo's.

Overall, the changes to the non-motorised user provision would offer a localised positive effect on landscape character and visual amenity, as compared with those effects set out in the Testo's scheme ES.

Ecology and Nature Conservation

There would be a beneficial effect from the small reduction in the extent of habitat clearance, as assessed in Chapter 9 of the Testo's scheme ES, required for the Testo's scheme construction works, including a linear length that runs between Make-me-Rich Meadow Local Wildlife Site (LWS) and the A19, plus over the A19 River Don culvert, where land is no longer required solely for the temporary or permanent Bridleway B46 diversion construction works. This would also partly reduce the risk of pollution to the River Don and Make-me-Rich Meadow LWS, plus construction activity disturbance effects on flora and

fauna using the LWS, due to moving the works areas slightly away (westward) from these receptors.

Overall, the changes to the non-motorised user provision would offer positive ecological effects compared with those effects set out in the Testo's scheme ES.

Geology and Soils

Compared with the Testo's scheme ES, there would be a benefit from a small reduction in the volume of soils and extent of Grade 3 agricultural land temporarily and permanently disturbed by construction works associated with the Bridleway B46 diversion. This benefit would be limited to the area solely required for the Bridleway B46 diversion at the foot of the clearance and re-profiling works still required for the southbound link from Testo's junction.

Overall, the changes to the non-motorised user provision would offer a positive effect on soils and geology, compared with those effects set out in the Testo's scheme ES.

Materials

There would be a small benefit from reducing the need to import soils and other materials solely to needed to create the extra embankment extension for the diversion of Bridleway B46; as compared with the assessment in Chapter 11 of the Testo's scheme ES. This would offer an additional benefit from a reduction in associated construction and embedded material carbon emissions.

Overall, the changes to the non-motorised user provision would offer a positive effect on materials use and waste generation compared with those effects set out in the Testo's scheme ES.

Noise and Vibration

Though there would be a reduction in construction activity over a linear length, the adjacent construction works for the improved southbound link from Testo's means there would be no significant change in the noise and vibration effects, assessed in Chapter 12 of the Testo's scheme ES, for those receptors within this area (e.g. users of Bridleway B46 exposed to construction noise).

During operation, retaining Bridleway B46 on the existing alignment avoids exposing NMUs to increased noise emissions from passing closer to traffic using the southbound link from Testo's junction.

Overall, the changes to the non-motorised user provision would offer a localised positive effect with regards noise, as compared with those effects set out in the Testo's scheme ES.

People and Communities

Even though Chapter 13 of the Testo's scheme ES states the new ramp along Bridleway B46 for cyclists would increase connectivity and provide safety improvements, the changes to the non-motorised user provision under the Scheme would still provide beneficial effects for users of Bridleway B46, including Nissan Plant cycling commuters. In addition, the changes would also reduce the duration of any temporary closures / diversions and exposure of users passing immediately adjacent to a construction site that would have been

created by the new ramp along Bridleway B46 combined with and works affecting Bridleway B46 to the north near Testo's junction.

During operation, avoiding Bridleway B46 users travelling immediately adjacent to the A19 southbound link from Testo's removes safety risks associated with: NMUs being close to fast moving traffic, including lorries; and cyclists being attracted to use the Downhill Lane junction to cross the A19 instead of the new standalone NMU route and bridge.

Overall, the changes to the non-motorised user provision would offer the same benefits as well as additional positive effects for NMUs along Bridleway B46, as compared with those effects set out in the Testo's scheme ES.

Road Drainage and Water Environment

There would be a beneficial effect from the small reduction in the extent of construction works over the A19 River Don culvert and adjacent to or within the River Don floodplain as compared to the assessment in Chapter 14 of the Testo's scheme ES; this applies to land no longer required solely for the temporary or permanent Bridleway B46 diversion construction works. This would offer a benefit of partly reducing the risk of pollution to the River Don during construction, due to moving the works areas slightly away (westward) from the River.

In addition, there may be adjustments to the ground profile and removal of the new hardstanding area associated with the diverted bridleway that could create a benefit by slightly reducing the volume of total operational run-off, which in turn increases the available attenuation capacity in Pond 1 to mitigate flood risk potential.

Overall, the changes to the non-motorised user provision would offer a positive effect on the water environment, including the River Don, compared with those effects set out in the Testo's scheme ES.

Relationship between this document and the Scheme ES

As set out above, this document has taken into consideration the effects identified in the Testo's scheme ES and how those effects would be affected by the replacement NMU provision proposed as part of the Scheme (set out in more detail in the Revised Testo's plans, drawings and sections document in Application Document Reference TR010024/APP/7.5). For the avoidance of doubt, as the benefits outlined above are either positive or neutral, and no physical works are proposed as part of this element of the Scheme, this NMU provision does not affect the assessment set out in the Scheme ES.

APPENDIX 1.3 REGISTER OF ENVIRONMENTAL ACTIONS AND COMMITMENTS

1.3A Introduction

1.3A.1 This register of environmental actions and commitments (REAC) is made up of two parts. Part 1 sets out the schedule of mitigation commitments and Part 2 is the environmental action plan.

1.3A.2 Although the REAC initially forms part of the Environmental Statement (ES), during the implementation of the Scheme it would be appended to the Construction Environmental Management Plan (CEMP) and would be viewed as a 'live' document. Therefore, the REAC acts in part as a 'bridge' between the ES and the CEMP. Part 2 in particular can be added to during the detailed design phase and, as each objective is deemed to be achieved, the date of achievement would be entered with the initials of the person signing it off.

Part 1: Schedule of environmental mitigation commitments

1.3A.3 The schedule set out in Part 1 (see Table A1.3-1) summarises the mitigation measures that have been committed to within the various chapters of the ES, with a cross-reference to the relevant 'Requirements' that secure those commitments in the Development Consent Order.

Part 2: Environmental Action Plan

1.3A.4 The schedules set out in Tables A1.3-2, A1.3-3 and A1.3-4 comprise the Environmental Action Plan (EAP). The EAP sets out the actions required to implement the Scheme in accordance with the ES. It sets out environmental objectives that are derived from environmental mitigation measures identified within Table A1.3-1 and Volume 1 of the ES, together with the actions required to achieve those objectives and the targets (or achievement criteria) that would be used to determine whether the objective has been met.

1.3A.5 Note that the environmental objectives identified in the EAP may be related to one or more mitigation measure identified in Part 1; relevant mitigation measures are identified by cross-reference to the relevant paragraph and / or table. An individual objective may require a single action to achieve the relevant target, or may require a series of actions carried out in order, or several separate actions carried out in parallel. Each action required has been identified separately.

1.3A.6 The responsibility for undertaking the action has been allocated as clearly as possible – as a minimum to the relevant corporate body (Highways England or Costain), if possible, to a specific department or specific role within that organisation.

1.3A.7 If the action requires consultation, agreement or approval from one or more third parties, those parties are identified in the relevant column.

1.3A.8 The EAP is divided into three phases:

- actions required before the start of construction;
- actions required during the construction period; and
- actions required after the end of construction.

1.3A.9 An individual environmental objective may require actions in more than one phase. If so, this is identified in the 'notes' column and the objective itself will be described in all relevant phases.

1.3B Actions required before the start of construction

1.3B.1 Actions required at this stage fall into the following main categories:

- designing / planning for other actions required before construction and for actions required during construction;
- consultation with and / or seeking agreement where required, from third parties;
- applications for any licences, consents or legal procedures still required in advance of construction; and
- construction of mitigation measures required in advance of the main works.

1.3C Actions required during the construction period

1.3C.1 Actions required at this stage fall into the following main categories:

- continued designing / planning for actions required during construction and after construction; and
- construction or other implementation of the majority of ES mitigation measures and of most EAP actions.

1.3D Actions required after the end of construction

1.3D.1 Actions required at this stage fall into the following main categories:

- implementation of actions required during the first few years after construction, to achieve the successful establishment of mitigation measures;
- implementation of long-term maintenance / management measures; and
- if applicable, any post-construction monitoring and evaluation measures to determine the success or otherwise of mitigation measures.

REAC PART 1: SCHEDULE OF ENVIRONMENTAL MITIGATION COMMITMENTS (Table A1.3-1)

Adverse Impact	Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
Air quality				
AQ1: Dust nuisance effects caused by the construction works of the Scheme.	Mitigation and control measures for potential emissions of fugitive dust during construction activities would be included in the Construction Environmental Management Plan (CEMP), and implemented during the construction phase. The CEMP would be developed in consultation with South Tyneside Council and Sunderland Council. Details can be found within the Environmental Action Plan.	Not significant.	N/A	Requirement 4
Cultural heritage				
CH1: Direct impact on two areas of levelled ridge and furrow field systems, plus a small part of the remains of the route for the Stanhope and Tyne Railway and the site of Downhill Lane level crossing.	None required, as agreed with relevant authorities.	Neutral.	N/A	Requirement 9
Landscape and visual effects				
LVIA1: Changes in local topography: • Temporary adverse due to deposition of soil and materials within agricultural land to the north, south and east of Downhill Lane junction. • Permanent adverse due to creation of new raised embankments for the new southern section of the junction, slip roads to the south as well as new ramps for the NMU bridge to the east of Washington Road.	Make good all temporary land used for haul roads, plant and material storage areas and the main site compound by restoring to their state immediately prior to commencing construction works (e.g. site clearance); acquire and refer to photographic records of land prior to commencing construction works.	Construction: Slight adverse. 2021: Slight adverse. 2036: Slight beneficial.	Environmental Masterplan (HE514495-JAC-ELS-MULTI-DR-L-0001)	Requirement 5
LVIA2: Changes to hydrological features: Permanent beneficial change to hydrological landscape features due to creation of habitat planting around the three new attenuation ponds and local ditches.	Make good all temporary land used for haul roads, plant and material storage areas and the main site compound by restoring to their state immediately prior to commencing construction works (e.g. site clearance); acquire and refer to photographic records of land prior to commencing construction works.	Construction: Neutral 2021: Neutral 2036: Slight beneficial.	Environmental Masterplan (HE514495-JAC-ELS-MULTI-DR-L-0001)	Requirement 5
LVIA3: Changes to field patterns adjacent to Downhill Lane junction from the: reduction in field size; loss of hedgerow boundaries to the west of the A19, along the A1290 and along the edges of the junction to the east; and loss of hedgerow field boundaries to the east of Washington Road and at Downhill Lane to the east of the junction as a result of the realignment of Washington Road.	Linear tree and shrub planting and woodland blocks would help restore the field pattern. The slight reduction in field size due to the Scheme footprint would be barely perceptible within the wider landscape.	Construction: Slight adverse. 2021: Slight adverse. 2036: Neutral	Environmental Masterplan (HE514495-JAC-ELS-MULTI-DR-L-0001)	Requirement 5

Adverse Impact	Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
LVIA4: Permanent and temporary loss of agricultural land use north, east and south of Downhill Lane junction	Returning temporarily affected land to agricultural use after completion to reduce adverse effects on agricultural land use. However, there will be permanent loss of some agricultural areas to the west and east of the junction due to the footprint of the Scheme and the realignment to Washington Road.	Construction: Slight adverse. 2021: Slight adverse. 2036: Slight adverse	N/A	Article 29
LVIA5: Permanent loss of vegetation cover, including loss of woodland / mature tree belts, between the southbound on slip road to the A19 and Washington Road. Further tree, scrub and shrub loss required for the new northbound off slip road, new junction area and realigned Washington Road to the east and A1290 / Downhill Lane to the west.	• Retain and protect existing tree, shrub and scrub vegetation to the north of Downhill Lane junction (northbound on and southbound off-slip roads) to provide screening for views from the north during the construction period. • Provide tree belt planting on embankment slopes between the Downhill Lane junction northbound off and southbound on slip road, as well as the realigned Washington Road, to screen and / or filter views towards the layout and lighting of the Washington Road and new road and NMU bridge and integrate the embankments into the landscape. Maintain planting by controlling weed growth, replacing dead trees and ensuring adequate space for healthy tree growth. • Provide tree, shrub and scrub planting along the Downhill Lane junction northbound off and southbound on slip roads and provide woodland planting within the new junction circulatory area of the junction to replace lost vegetation and integrate the Scheme into the surrounding landscape character. • Provide habitat creation to the extents of the attenuation pond area to the north-east of Downhill Lane junction.	Construction: Moderate adverse. 2021: Moderate adverse. 2036: Slight adverse.	Environmental Masterplan (HE514495-JAC-ELS-MULTI-DR-L-0001)	Requirements 4 and 5
LVIA6: Landscape Character: LCU 2 A19 vegetated corridor – adverse effects from the presence of new physical structures, loss of vegetation and redirection of traffic.	Landscape mitigation in line with the South Tyneside Landscape Character Study – Part 2 guidelines: "*Provision of new woodland and hedgerow planting to reinforce and reinstate landscape pattern / structure and create linear links between sites of habitat value. Avoid extensive woodland planting that would obscure key views to the south (Penshaw Monument) or east (St Nicholas Church)*". Establishment of tree, shrub and scrub planting and habitat creation around the new attenuation ponds would integrate the Scheme with the surrounding vegetation and shrub and scrub planting to gap up boundaries. Adverse effects would remain due to the presence of permanent additional bridge structures at Downhill Lane junction and the NMU bridge, as well as the presence of ramp structures along the NMU route.	Construction: Moderate adverse 2021: Moderate adverse 2036: Slight adverse	Environmental Masterplan (HE514495-JAC-ELS-MULTI-DR-L-0001)	Requirements 4 and 5
LVIA7: Landscape Character: LCU 5 River Don scrubby farmland and LCU9a Usworth Lowland - adverse effects from the presence of new physical structures, loss of vegetation and redirection of traffic.		Construction: Moderate adverse 2021: Slight adverse 2036: Neutral		Requirements 4 and 5
LVIA8: Landscape Character: LCU 1 Western lowland; LCU 8 Town End Farm - adverse effects from the presence of new physical structures, loss of vegetation and redirection of traffic.		Construction: Slight adverse 2021: Slight adverse 2036: Neutral		Requirements 4 and 5
LVIA9: Landscape Character LCU10 Nissan Plant and IAMP One - short-term effects due to construction activity at Downhill Lane junction and along the A1290 reducing tranquillity and increasing the perception of movement.	Minimise effects on landscape character by making good all temporary haul roads and plant / materials storage areas west of the A19 to their previous original state.	Construction: Slight adverse 2021: Not significant 2036: Not significant	N/A	Requirements 4 and 5

Adverse Impact	Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
LVIA10: Close-range views of construction works for walkers and cyclists using the shared cycleway / footway along Washington Road, which would be diverted during the construction period.	Considerate method of construction to enable soil storage to be phased so the easternmost temporary soil storage bund is retained during most of the works to enable screening of views towards the main site compound and working areas; especially from the north-western edge of Town End Farm. The close-range views to the temporary soil bunds would remain an effect in itself.	Construction: Very large adverse	N/A	Requirement 4
LVIA11: Close-range views of construction works from north-western edge of Town End Farm and users of: the shared cycleway/footway along A1290 and Washington Road approaching Downhill Lane junction; users of Downhill Lane and the GNFHT to the eastern and western approaches of the Scheme; a property within the Downhill Farm complex.		Construction: Large adverse	N/A	Requirement 4
LVIA12: Views of construction works for: residents at properties with views towards the construction works (including on Lawn Drive / Downhill Lane, Make-Me-Rich Farm, Usworth Cottages and The Chalet); users of Downhill Lane (east); northern and eastern outdoor areas of the NELSAMs; and northern edge of IAMP One and NMU route along the internal road.		Construction: Moderate adverse	N/A	Requirement 4
LVIA13: Views of construction works for: users of WBEEC outdoor teaching areas; residents at the western edge of Town End Farm; users of the football pitches north of the NELSAM; properties at the edge of Swan Court in Hylton Castle; walkers on footpaths B29 and B22, residents of West Pastures Travelling Community Site, users of the Travelling Man public house, and users of the shared cycleway / footway on the A1290 between Washington Road and Cherry Blossom Way; farm buildings and properties with oblique and/or upper floor views (incl. Mount Pleasant Farm); and NMUs in the IAMP One green corridor and along Follingsby Lane.		Construction: Slight adverse	N/A	Requirement 4

Adverse Impact	Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
LVIA14: Operational visual effects from the shared cycleway / footway on Washington Road.	The detailed landscape and ecological design to include: • Tree belt planting on embankment slopes between the Downhill Lane junction northbound off and southbound on slip road as well as the realigned Washington Road to screen and or filter views towards the layout and lighting of the Washington Road and new road and NMU bridge, and integrate the embankments into the landscape. Maintain planting by controlling weed growth, replacing dead trees and ensuring adequate space for healthy tree growth. • Tree, shrub and scrub planting along the Downhill Lane junction northbound off and southbound on slip roads and provide woodland planting within the circulatory area of the junction to replace lost vegetation and integrate the Scheme into the surrounding landscape character. • Linear tree and shrub planting to the outer edge of Washington Road, Downhill Lane and A1290 to integrate the realigned roads and provide filtered screening of lighting from adjacent housing areas. • Tree and shrub planting to the outer edges of the new NMU route east of the realigned Washington Road, and also to the foot of the approach ramps on both sides of the new NMU bridge to aid in screening and/or integrating the structures. • Habitat creation to the extents of the attenuation pond area to the north-east of the Downhill Lane junction area. • Linear tree and shrub planting and species rich grassland around the attenuation pond to the south of Downhill Lane junction to help integrate it into the landscape. • Linear tree and shrub planting, scrub and species rich grassland around the attenuation pond to the south-west of Downhill Lane junction adjacent to the A1290 to help integrate it into the landscape and provide some screening for views towards the NMU bridge area.	2021: Large adverse 2036: Moderate adverse	Environmental Masterplan (HE514495-JAC-ELS-MULTI-DR-L-0001)	Requirement 5
LVIA15: Operational visual effects on residents of the north-western edge of Town End Farm and users of Bridleway B46, Downhill Lane, the Great North Forest Heritage Trail.		2021: Large adverse 2036: Slight adverse		Requirement 5
LVIA16: Operational visual effects on views for: users of the eastern section of Footpath B27; Bridleway B28; shared cycleway / footway along the A1290 and across Downhill Lane junction towards Washington Road; residents of Usworth House, The Chalet, properties on Lawn Drive, Downhill Farm complex and Make-Me-Rich Farm; and visitors and workers at the NELSAMs.		2021: Moderate adverse 2036: Slight adverse		Requirement 5
LVIA17: Operational visual effects on views from the shared cycleway / footway along Washington Road and over Washington Road footbridge, south of the Scheme.		Permanent: Moderate adverse		Requirement 5
LVIA18: Operational visual effects on users of the football pitches north NELSAMs and users of the pedestrian and cycle route along IAMP One's internal road.		Permanent: Slight adverse		Requirement 5
LVIA19: Operational visual effects on: users of footpath B29; residents at the West Pastures Travelling Community Site; residents of properties along western edge of Swan Court in Hylton Castle; visitors to the Travelling Man public house; residents at Mount Pleasant Farm and Elliscope Farm; workers at IAMP One; and users of Follingsby Lane through IAMP One.		2021: Slight adverse 2036: Neutral		Requirement 5
Ecology and nature conservation				
ECOL1: Non-statutory designated sites (Make-Me-Rich Meadow LWS)	Mitigation would be through the CEMP's pollution risk, lighting and noise controls and provision of attenuation ponds built into drainage design.	Construction: Significant at local level Operation: Not significant	N/A	Requirement 4

Adverse Impact	Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
ECOL2: Habitat loss	A total of 8.76 ha of habitat creation/planting as follows: • Open grassland (incorporating improved and species poor semi-improved grasslands) = 3.58 ha. • Species rich neutral grassland (incorporating semi-improved neutral and marshy grasslands) = 2.16 ha. • Native Woodland (incorporating native broadleaved plantation and mixed plantation) = 1.88 ha. • Scrub/tree and shrub planting = 1.14 ha. In addition, 1.85 km of hedgerow/linear tree and shrubs would be planted, as shown on the Environmental Masterplan. A monitoring programme to review the success of the planting proposals (woodland and hedge planting especially) and wetland creation to be developed, in consultation with the local authorities, to cover: • what the indicators of success would be (including the successful establishment of certain species, or % cover of certain botanical species); • actions to resolve any failures in the mitigation; • regular monitoring by a suitably qualified Ecological Clerk of Works (EcCoW) according to a monitoring programme to be determined for the construction period; and • continue annually until end of aftercare period.	Construction: Significant at local level Operation: Not significant	Environmental Masterplan (HE514495-JAC-ELS-MULTI-DR-L-0001)	Requirement 5
ECOL3: Amphibians – harm or disturbance	Common Toads have been recorded in the survey area, especially in the West Boldon Environmental Education Centre, and are listed as a Species of Principal Importance (SoPI) and protected under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. This places a duty of care on public authorities to: protect important habitats and species, and to actively seek opportunities to enhance biodiversity through development proposals, where appropriate. The habitat proposals contained within the Masterplan, would contribute towards habitat creation for the Common Toad. For certain areas: • Site compound and storage areas to be located away from known Common Toad breeding pond and other aquatic habitats that may support breeding populations of amphibians. • Ecological clerk of works to be present during site clearance operations in sensitive habitats adjacent to known Common Toad breeding ponds. • Where possible, material from site clearance works would be used to create additional refugia and/or hibernacula within areas adjacent to attenuation ponds, proposed north and south of Downhill Lane junction, to improve the suitability of terrestrial habitat.	Construction: Significant at local level Operation: Not significant	Habitat creation: Environmental Masterplan (HE514495-JAC-ELS-MULTI-DR-L-0001) Surveyed ponds: document ref. B0140301/OD/196 – Testo's and Downhill Lane Great Crested Newt Environmental DNA and Habitat Suitability Index Survey Report	Requirements 4 and 7
ECOL4: Breeding / Wintering Birds – harm or disturbance	• Vegetation to be retained/lost (including trees and scrubs) clearly demarcated with a marking system agreed with the contractor to avoid encroachment into areas of high value bird habitat, such as dense scrub or woodland. • Vegetation removal as part of the site clearance must consider the potential for nesting birds to be present. Where possible, vegetation removal should be scheduled to occur outside the bird breeding season. Therefore, vegetation removal would occur from late August through to February inclusive.	Construction: Significant at local level Operation: Not significant	Environmental Masterplan (HE514495-JAC-ELS-MULTI-DR-L-0001)	Requirements 4, 5 and 7

Adverse Impact	Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
	• If vegetation removal during the bird nesting season cannot be avoided, precautionary nesting bird surveys would be required. If nesting birds are identified, then protective buffer zones around each nest would be required and vegetation removal within that buffer may have to be postponed until all the young have fledged or the nest is abandoned. • The proposed landscape restoration planting would include native species of local provenance that provide suitable nesting areas or a source of food at different times of year such as blackthorn, hawthorn, bramble and teasel. Where possible, night time working would be kept to a minimum during the construction period. In addition, lighting for the operational Scheme would avoid / minimise illuminating habitats adjacent to the Scheme by using directional lighting, reduced lighting column height 9where appropriate), baffles, cowls, landscaping and the use of screens.			
ECOL5: Barn Owl – harm or disturbance	• Where possible planting for the Scheme would take into account general habitat requirements for barn owl and seek to install low-flight obstructions (tall hedges or lines of closely spaced trees to act as commuting corridors and reduce the risk of barn owl vehicle strike). • 1.85 km of hedgerow would be planted as part of the proposals shown on the Environmental Masterplan and seek to connect severed ends of hedgerows to re-establish wildlife commuting corridors. • Night working would be avoided where possible. If it cannot be avoided, it would be restricted in the vicinity of known commuting routes and valuable areas of foraging habitat (i.e. commuting hedgerows should not be illuminated nor have generators placed next to them). In addition, lighting for the operational Scheme would aim to avoid illuminating habitats adjacent to the Scheme. A monitoring programme to identify any increased risk of road traffic accidents for barn owls to be developed, in consultation with Natural England and local authorities, to cover: • regular monitoring during construction by a suitably qualified EcCoW; • actions to resolve additional measures, if requires; and • post construction, during the aftercare period, bi-annual site visits and environmental record centre record checks to identify recorded barn owl road traffic accidents and general barn owl activity in the area and also to determine the current status of previous identified roosts/nesting sites (conditional on 3rd party agreement for access).	Construction: Significant at local level Operation: Not significant	Environmental Masterplan (HE514495-JAC-ELS-MULTI-DR-L-0001)	Requirements 4, 5 and 7
ECOL6: Bats – harm or disturbance	• Where possible planting for the Scheme should take into account general habitat requirements for bats and seek to create rough grassland habitat and replace severed linkages / commuting corridors, such as hedgerows, through translocations and/ or new planting and ditches through habitat creation. • As a general precaution, felling of trees with significant (moderate or high) bat roost potential, should be undertaken in autumn, between late August and October/early November following a check of the potential roost features and soft felling protocols (where required); this is a time when bats do not have dependent young and are not hibernating, so should be active enough to escape harm if proper precautions are taken. Additional lighting of the Scheme to be installed in accordance with the Lighting Engineers Guidance for the Reduction of Light Pollution (Bat Conservation Trust & The Institution of Lighting Engineers, 2009). In brief the effect on bats and disturbance to adjacent habitats can be minimised by: reducing the amount of lighting installed; using low pressure sodium lamps or high-pressure sodium instead of mercury or metal	Not significant (during construction and operation).	Document ref.: B0140301/OD/191 - A19 / A184 Testos Junction Improvement and Downhill Lane Junction Improvement 'Bat Roost Potential and Activity Report' (April 2017)	Requirements 3, 4, 5 and 7

Adverse Impact	Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
	halide lamps; reducing the brightness (potentially at certain times of night); and reducing the height of lighting columns. The brightness would be kept as low as possible and light spill reduced by directing the beam downwards using hoods cowls, screens and appropriate landscaping (Bat Conservation Trust & The Institution of Lighting Engineers, 2009).Night working to be avoided where possible. If it cannot be avoided, it should be restricted in the vicinity of known bat commuting routes and valuable areas of foraging habitat (i.e. avoid illuminating commuting routes or having generators placed next to them).			
ECOL7: Otter – harm or disturbance	No holts have been identified in the vicinity of the new outfall proposed for the Scheme and it is unlikely there would be an increased risk of mortality for this species, based on Scheme design and survey information. Therefore, no specific mitigation is proposed, but the following best practice mitigation is proposed to cover general protection for this species: • No steep-sided, deep and/or water-filled excavations would be left uncovered overnight as otters could fall in and become trapped. Any major excavations that need to be left uncovered overnight would have their slopes battered. If it is necessary to leave excavations open overnight they would be protected with suitable fencing to avoid trapping any animals. • Night-working should be avoided where possible. If it cannot be avoided, it should be restricted in the vicinity of known commuting routes and valuable areas of foraging habitat (i.e. River Don). Lighting for the operational Scheme would avoid or minimise illuminating habitats adjacent to the Scheme through the use of directional lighting, reduced lighting column height (where appropriate), baffles, cowls, landscaping and the use of screens.	Construction: Significant at local level Operation: Not significant	N/A	Requirements 3, 4 and 7
ECOL8: Invertebrates – habitat loss	Where possible planting for the Scheme would take into account general habitat requirements for invertebrates and seek to create rough grassland habitat and to replace severed linkages, such as hedgerows. For aquatic invertebrates, mitigation would be through the CEMP's pollution controls (see ES Chapter 14 'Water and the Environment') and provision of attenuation ponds built into drainage design to minimise contaminants and sediments reaching aquatic habitats.	Not significant (during construction and operation).	N/A	Requirements 4, 5 and 7
Geology and soils				
GEOL1: Release and spread of unknown contamination - possible disturbance of unknown localised contamination during construction such as in filled pits, spillages and that associated with existing and disused drainage systems.	Implementation of a Contaminated Land: Applications In Real Environments (CL:AIRE) Materials Management Plan (CL:AIRE, 2014) to mitigate the risks arising from the re-use of site won material or the importation of unsuitable material for use on site. Should contamination be encountered during further ground investigation or the construction phase, additional investigations and risk assessments would be undertaken to identify any remediation required. The re-use of any contaminated soils would be investigated and controlled via an Inspection and Discovery Strategy, which is required to form part of a Materials Management Plan. This Inspection and Discovery Strategy would clearly set out the procedures to be followed in the event that unexpected contamination is encountered, including the appropriate assessment and mitigation actions and requirements to consult with regulators.	Not significant (during construction and operation).	N/A	Requirements 4 and 6
GEOL2: Release and spread of potentially contaminated dust during construction.	Where appropriate, use of dust suppression during periods of dry weather to prevent dust blow.		N/A	Requirement 4

Adverse Impact	Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
GEOL3: Accidental spillages on the highway during the operational phase.	Appropriate pollution prevention measures would be implemented during any clean up activity. Site would be covered by hardstanding which would limit migration of contamination.		N/A	Requirement 4
GEOL4: Potentially contaminated run-off from the construction site during construction phase.	Mitigation would also be through the CEMP's pollution controls (see 'Water and the Environment').		N/A	Requirement 4
GEOL5: Potentially contaminated run-off from the highway during operation.	Design measures to collect any contaminated water in attenuation ponds, built into drainage design, to minimise contaminants and sediments reaching aquatic habitats.		N/A	Requirement 3
GEOL6: Compaction of near surface deposits and increase in vertical load experienced by the soil under the embankment.	Design the Scheme to reduce the amount of soil consolidated during construction and operation, such as including drainage measures at the toe of embankments to prevent ponding of water. Soil management operations to be in accordance with Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009), which requires a Soil Resources survey to help devise a Soil Management Plan as part of the CEMP and / or Site Waste Management Plan (SWMP). The Soil Management Plan would include measures to achieve careful stewarding of the soil resources during construction, proper restoration of the land and subsequent agricultural aftercare, including any necessary land drainage. When developing the soil management strategy review the methods of soil handling outlined in Defra's Good Practice Guide for Handling Soils and develop more detailed strategies, with measures to include: • stripping of topsoil and subsoil when weather and soil conditions are suitable; • separate storage and management of topsoil and subsoil stockpiles; • return of these soils to the original plots, also in separate layers (where possible and where these plots are not occupied by permanent new infrastructure); • use of appropriate machinery to minimise soil compaction; • relief of any compaction of restored soils; • surface ripping and, if necessary, under-drainage of restored sites (subject to other environmental constraints, such as the presence of buried archaeological remains); and • period of aftercare for restored soils, including appropriate cropping, for example a temporary grass ley if required, and associated soil nutrient requirements.		N/A	Requirements 3, 4 and 8
GEOL7: Agricultural Land - permanent loss	Permanent loss of agricultural land cannot be mitigated. However, surplus topsoil from all areas would be sustainably managed and re-used; this would be in line with the requirements of a Soil Management Plan to be outlined in the Contractor's CEMP. Provide suitable outfalls for severed agricultural land drainage located to the land west of the new highway boundary	Permanent: Slight adverse	N/A	Requirement 4
GEOL8: Agricultural Land – temporary loss	Agricultural land would be returned to landowners on completion of the construction works. This would be in line with the requirements of a Soil Management Plan to be outlined in the Contractor's CEMP.	Construction: Not significant	N/A	Article 29
Materials				

Adverse Impact	Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
MAT1: Climate Change	Adopt material efficient design and Design Team to provide a brief statement estimating the overall quantity of material required through the application of an efficient design. Monitor through confirmation from the Construction Team that the Scheme 'As Constructed' is in accordance with the design. Structures, drainage, road restraint systems, street lighting, traffic signals and signage products would be procured with consideration of the environmental effects associated with their manufacture, as well as other considerations such as structural design, carbon footprint, energy consumption, long-life performance, visual impacts, durability and cost. Both reinforced concrete and steel structures include a measurable recycled content in their manufacture. Where possible, the availability of responsibly sourced local and recycled materials would be considered in order to reduce potential environmental effects, such as from transport emissions. Develop and implement a CEMP that considers methods to reduce the impact of energy use in construction, including consideration of using materials with lower embodied energy, such as re-used and recycled materials and locally sourced materials. The CEMP will include: • appropriate project targets for materials and waste; • a Site Waste Management Plan (SWMP); • a Materials Management Plan (MMP) in accordance with CL:AIRE; • a Soil Management Plan (MMP) detailing protocols for soil management in line with current industry best practice as set out by DEFRA's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites[1] and requirements within the Specification for Highways Works series 600[2] and 3000[3]; • procedures for the management of material procurement, delivery, storage, handling, use and disposal; and • use of materials responsibly sourced in accordance with BES 6001:2009 and the UK Government Timber Procurement Policy[4]. Monitoring would be through an appropriate programme of Environmental Auditing and Reporting.	Carbon footprint (construction materials) – Negligible magnitude. Carbon footprint (construction transport) – Negligible magnitude	N/A	Requirements 3 and 4
MAT2: Depletion of Water Resources	Adopt material efficient design and Design Team to provide a brief statement estimating the overall quantity of material required through the application of an efficient design. Monitor through confirmation from the Construction Team that the scheme 'As Constructed' is in accordance with the design. Develop and implement a CEMP that considers methods to manage and reduce water use in construction. Monitor through an appropriate programme of Environmental Auditing and Reporting.	Residual effects and their significance for this topic are excluded from the assessment element of this chapter.	N/A	Requirements 3 and 4
MAT3: Depletion of Primary Materials	Use land temporarily reserved for material storage to significantly increase the amounts of materials that can be re-used on site. Develop and implement a Materials Management Plan that considers and manages the re-use of materials on-site, off-site secondary/recycled materials, locally sourced materials, and other responsibly sourced materials including those certified to BES 6001:2009.	Residual effects and their significance are included under the carbon footprint assessment (Materials – Negligible magnitude).	N/A	Requirement 4

1 Department for Environment, Food and Rural Affairs (DEFRA) (2009). Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.
2 Available at: http://www.standardsforhighways.co.uk/ha/standards/mchw/vol1/pdfs/600.pdf
3 Available at: http://www.standardsforhighways.co.uk/ha/standards/mchw/vol1/pdfs/series_3000.pdf
4 Available at: https://www.gov.uk/guidance/timber-procurement-policy-tpp-prove-legality-and-sustainablity

Adverse Impact	Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
	Use procurement policies and KPIs to actively investigate options to maximise local sourcing of materials and include as much recycled content as practicable, in accordance with the required specifications of the construction material and relevant procurement legislation, plus where consistent with value for money. Maximise use of on-site material, wherever practicable; set aside areas for storage of materials for re-use. Consideration of synergies between local schemes, including Testo's, for materials re-use. Monitoring would be through an appropriate programme of Environmental Auditing and Reporting.			
MAT4: Depleting Landfill Capacity (and/or Severance of Access)	Design out waste where possible (e.g. through specification of standard lengths, use of off-site manufactured and modular elements etc.). Use land temporarily reserved for material storage to significantly increase the amounts of materials that can be re-used on site. Develop a Site Waste Management Plan as part of the CEMP, early on in the design stage, to explore methods to manage waste arising from the construction in accordance with the waste hierarchy. The SWMP would identify, prior to the start of construction, the types and likely quantities of wastes that may be generated, plus set out how these wastes would be reduced, re used, managed and disposed of. The SWMP would also set out how all construction phase materials would be managed, which may include a Soils Management Plan, in consideration of: • Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (DEFRA, 2009), which provides guidance for excavation, handling, storage and final placement of soils; and • Environment Agency Position Statement: Definition of Waste: Development Industry Code of Practice. Leave hazardous materials (e.g. tar bound planings) in situ where safe and feasible to do so to avoid unnecessary generation of hazardous waste arisings. Monitoring would be through an appropriate programme of Environmental Auditing and Reporting. Regular reviews of, and updates to, the SWMP would also enable the monitoring of mitigation measure's effectiveness at maximising the use of locally sourced and low environmental impact materials.	With no certainty of being able to re-use at other construction sites the residual effect significance would be Neutral to Slight Adverse.	N/A	Requirements 3 and 4
MAT5: Hazardous wastes disposal	If contaminated soils or wastes encountered during the construction works, further investigation, testing and risk assessment would be undertaken to determine whether the soils could either: stay on-site, require treatment to make them suitable to remain on-site, or would need to be disposed of off-site. No or low volumes expected.	If no contamination found, or found and remediated, significance of the effect would be Neutral.	N/A	Requirement 4
Noise and vibration				
N&V1: Construction noise and vibration	CEMP to apply mitigation measures in alignment with the guidance detailed in BS 5228: 2009+A1:2014 – Part 1: Noise 'Code of Practice for noise and vibration control on construction and open sites', Part 1: Noise and Part 2: Vibration. As a minimum, the following mitigation measures would be employed on site so noise and vibration levels would be attenuated as far as possible: • using 'best practicable means' during all construction activities;	Temporary, short duration significant adverse effects for properties and other sensitive receptors close the Scheme during construction (e.g. 33 and 45 Boston Crescent, in Town End	N/A	Requirement 4

Adverse Impact	Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
	• avoiding unnecessary revving of engines and making sure plant and equipment is switched off when it is not in use for long periods of time; • keeping haul roads well maintained and avoid steep gradients; • starting up plant and equipment sequentially rather than all together; • selecting low noise emitting plant where available and suitable; • using audible reversing warning systems on mobile plant and vehicles of a type which, whilst still giving proper warning, have a minimum noise impact on persons outside sites; • establishing in consultation with the local authorities the appropriate controls for undertaking significantly noisy works, vibration-causing operations close to receptors or working outside of normal construction hours (assumed to be 07:30 to 18:00 Monday to Friday and 08:00 to 13:00 on Saturday); • should it be necessary to work outside of the parameters set out in Schedule 2 of the DCO, consulting the Environmental Health Departments of South Tyneside Council and Sunderland City Council on such hours and where necessary noise and vibration limits, plus notifying nearby residents in advance of the works; • programming works so that the requirement for working outside normal working hours is minimised (taking into account the highway authority's statutory duties under the Traffic Management Act 2004); • setting vibration soil compaction plant to a low amplitude setting when operating in close proximity to sensitive receptors; • using low noise emission plant where possible; • making sure all piling would be rotary; • developing and maintaining good relations with people living and working in the vicinity of site operations; • implementing an efficient complaints procedure; • where viable, using temporary noise screens around particularly noisy activities (or stationary plant such as generators); and • regularly maintaining plant.	Farm, and 5 Usworth Cottages and The Chalet beside the Follingsby/A1290 junction).		
People and communities				
People and Communities – Agricultural land and businesses				
P&C1: Wheathill Farm – permanent and temporary loss of land and land drainage severance.	New access arrangement off A1290 including track for northern field, new land drainage arrangements and reinstatement of temporarily disturbed land.	Adverse, not significant (construction and operation)	N/A	Article 29 Requirements 3, 4 and 8
P&C2: West Fellgate Farm - temporary loss of land and land drainage severance.	Reinstatement of temporarily used land.	Construction: Adverse, not significant Operation: Neutral	N/A	Article 29

Adverse Impact	Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
P&C3: Mount Pleasant Farm, West Boldon - permanent and temporary loss of land and land drainage severance.	New access gateway off Downhill Lane (East); new land drainage arrangements; and reinstatement of temporarily disturbed land.	Adverse, not significant (construction and operation)	N/A	Article 29 Requirements 3, 4 and 8
P&C4: Land at Downhill Lane junction (1) - loss of access from Downhill Lane (East)	New access arrangement via site of attenuation pond north-east of Downhill Lane junction	Construction: Adverse, not significant Operation: Neutral	N/A	Article 29 Requirement 3
P&C5: Land at Downhill Lane junction (2) and land east of A1290 - temporary loss of land	Reinstatement of temporarily used land.	Construction: Adverse, not significant Operation: Neutral	N/A	Article 29
P&C6: Land at Downhill Lane junction (3) – permanent and temporary loss of land	Reinstatement of temporarily used land.	Adverse, not significant (construction and operation)	N/A	Article 29
P&C6: Land at Downhill Lane junction (4) – permanent and temporary loss of land	Reinstatement of temporarily used land.	Construction: Adverse, not significant Operation: Neutral	N/A	Article 29
People and Communities – Community land and facilities and physical assets				
P&C7: Make- Me-Rich Farm -changes in access to the farmstead.	New access road included as part of the design.	Construction: Minor adverse Operation: Neutral	N/A	Article 29 Requirement 3
P&C8: IAMP One and Nissan Plant - disruption during construction as a result of diversions and roads closures. Improved access during operation.	Implementation of a suitable Traffic Management Plan (TMP)	Construction: Adverse - Not Significant Operation: Beneficial – Not significant	N/A	Requirements 4 and 10
P&C9: Three Horseshoes pub - disruption during construction as a result of road closures and diversions.	Implementation of a suitable TMP	Construction: Adverse - Not Significant Operation: Neutral	N/A	Requirements 4 and 10
P&C10: Temporary disruption / severance of access to community facilities within Town End Farm and Hylton Castle by outside residential properties during construction (e.g. Make-Me-Rich Farm or The Chalet and Usworth Cottages).	Implementation of a suitable TMP	Construction: Slight adverse - Not significant Operation: Beneficial – Not significant	N/A	Requirements 4 and 10
P&C11: Large supermarket and cinema at Boldon Business Park, plus North East Land, Sea and Air Museums Gateshead Skills Academy Air Training Corps -	Implementation of a suitable TMP	Construction: Adverse - Not significant Operation: Beneficial – Not significant	N/A	Requirements 4 and 10

Adverse Impact	Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
disruption during construction as a result of diversions and roads closures.				
People and Communities – Non-motorised users, community severance and accessibility and connectivity				
P&C12: Temporary disruption to users of: Bridleway B46, Washington Road, Downhill Lane (East), Downhill Lane junction, the A1290 and Downhill Lane (West).	Maintain NMU access during construction. Contractor to confirm routes requiring temporary closures / diversion during construction (expected to include the B46 bridleway, cycleway across Downhill Lane / Washington Road and Washington road walkways). Contractor identify a programme of temporary closures and plan/prepare and signpost alternative temporary diversion routes where practicable. Closure programme to be managed through the CEMP.	Construction: Significant adverse	N/A	Requirements 4 and 10
P&C13: NMU access along and connectivity with B46 bridleway	At the south end of Bridleway B46, provide a new at grade Pegasus crossing across Downhill Lane (East), to prevent crossing the slip-road and link to the new NMU route along the realigned Washington Road.	Operation: Significant beneficial	Environmental Masterplan (HE514495-JAC-ELS-MULTI-DR-L-0001)	Requirement 3
P&C14: NMU access along and connectivity with Bridleway B46, Downhill Lane junction, Downhill Lane (East), Washington Road and the A1290	Provision of a new segregated multi-user NMU route (cycleway, footway and bridleway) running from Bridleway B46 across Downhill Lane (East) and south alongside Washington Road, then crossing the A19 to the A1290 via a new NMU bridge to the south of the junction to provide complete segregation of NMUs and vehicles and improved safety.	Operation: Significant beneficial		Requirement 3
P&C15: NMU access along and connectivity with A1290, Follingsby Lane and Downhill Lane (West)	Provision of an at grade Pegasus crossing facility on the A1290 to the new IAMP One NMU route along Follingsby Lane from the above new shared NMU route, providing greater segregation between vehicles and NMUs.	Operation: Significant beneficial		Requirement 3
P&C16: Community amenity effects for vehicle users and NMUs	Implementation of a suitable TMP, plus mitigation proposed for air quality, noise and visual receptors would mitigate the effects during construction. During operation there would be amenity benefits provided by the new NMU route offering greater safety and reduction in the fear of accidents for commuters.	Construction: Significant adverse Operation: Significant beneficial	N/A	Requirements 3, 4 and 10
People and Communities – Public transport users				
P&C17: Bus routes 50 and 56 - potential for temporary delays on A1290 / Downhill Lane (West) and across Downhill Lane junction, plus temporary relocation of bus-stop.	Implement the TMP developed in consultation with the local authorities.	Construction: Adverse – not significant	N/A	Requirement 10
P&C18: Bus routes 50 and 56 - permanent relocation of northbound bus-stop.	If required, permanently relocate the northbound bus stop to a more suitable position, away from the realigned junction, in discussion with the relevant stakeholders.	Operation: Not significant	N/A	Requirement 3
People and Communities – Economy and employment				
P&C19: N/A	N/A	N/A	N/A	N/A
People and Communities – Travellers				
P&C20: Increased driver stress during construction due to travelling through roadworks and addition of construction traffic, plus increased uncertainty and stress during occasional overnight diversions. The	During the construction phase, a TMP and site TMP would be implemented to reduce any increase in stress caused by the roadworks. This would include temporary signage which would be put in place to reduce uncertainty and frustration. Other measures proposed to be part of the TMP include: • designated construction access route to/from the Scheme for all construction traffic and deliveries;	Construction: Minor adverse	N/A	Requirements 4 and 10

Adverse Impact		Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
change in traffic composition may also increase drivers fear of accidents and frustration if unable to overtake slower moving vehicles.		• Heavy Goods Vehicle delivery window; and • use of internal haul roads to minimise the number of trips associated with transporting plant across the site.			
P&C21: The presence of traffic management and temporary traffic signals would increase journey times.			Construction: Minor adverse	N/A	Requirements 4 and 10
P&C22: Increased driver stress and journey times during the operational phase AM and PM peak hours; uncertainty may be increased due to a new road layout.		Road signs and traffic signals would be used to explain route changes and to direct to drivers, with the aim of reducing uncertainty, delays and driver stress for those drivers using the new road layout. The improved section of the A19 would also be designed to a higher highway standard than the existing road, which would help to reduce uncertainty, fear and driver stress.	2021: Moderate to minor adverse 2036: Minor adverse	N/A	Requirements 4 and 10
P&C23: Views of drivers from the road would change to from rural views to views of construction traffic and plant on the site of the Scheme.		See 'Landscape and visual effects' mitigation planting.	2021: Minor adverse 2036: Not significant	N/A	Requirement 5
Road drainage and the water environment					
Construction – change in water quality	**WTR1:** River Don (except for Make-Me-Rich Meadow): water quality and biodiversity	Develop Pollution Prevention Plan, including spillage response measures, prior to construction. Prepare appropriate method statements for working with and storing oils and chemicals in line with the requirements of the Control of Pollution (Oil Storage) Regulations 2001. Contractor to implement a Construction Environmental Management Plan. Design an Environmental Incident Control Plan (EICP) to ensure protective measures are implemented to deal with both normal and emergency situations. Contractors to undertake construction work to best practice standards. Permanent drainage system to be developed early in construction. Limit works in-channel to times of low flows and sign-up to the Environment Agency flood warning system. For any works in ordinary watercourses, such as obstructions to flow, Ordinary Watercourse Consent would be required from South Tyneside Council or Sunderland Council. Similar works to any main rivers, or any works within 8 m of a main river, would require an Environmental Permit from the Environment Agency. Provide construction phase Surface Water Management Plan.	Construction: Neutral	N/A	Requirements 4, 6, 7 and 8
	WTR2: Hylton Dene Burn: water quality and biodiversity		Construction: Neutral	N/A	
	WTR3: River Don (except for Make-Me-Rich Meadow): dilution and removal of waste products.		Construction: Neutral	N/A	
	WTR4: Land drain: water supply / quality		Construction: Neutral	N/A	
	WTR5: Groundwater: water supply / quality / vulnerability		Construction: Neutral	N/A	
	WTR6: Boldon Lake: water quality and biodiversity		Construction: Neutral	N/A	
	WTR7: Mount Pleasant Marsh: water quality, biodiversity and recreation		Construction: Neutral	N/A	
	WTR8: Make-Me-Rich Meadow (section of the River Don flowing through): water quality and biodiversity		Construction: Neutral	N/A	

Adverse Impact		Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
Construction – flooding from increased surface water run-off	**WTR9:** River Don (except for Make-Me-Rich Meadow)		Construction: Neutral	N/A	
	WTR10: Hylton Dene Burn		Construction: Neutral	N/A	
	WTR11: Boldon Lake		Construction: Neutral	N/A	
	WTR12: Mount Pleasant Marsh		Construction: Neutral	N/A	
	WTR13: Make-Me-Rich Meadow (section of River Don flowing through)		Construction: Neutral	N/A	
	WTR14: Floodplain		Construction: Neutral	N/A	
WTR15: River Don and tributaries, plus Hylton Dene Beck – increased sediment delivery to water column during construction (fluvial geomorphology)			Operation: Neutral	N/A	
WTR16: River Don and tributaries – construction disturbance to river banks and riparian vegetation (fluvial geomorphology)		Minimise work within 8 m of the watercourse. Where in-channel work is required (for construction of outfall headwall) minimise disturbance to bank and work in low-flow conditions where possible.	Operation: Slight adverse	N/A	Requirements 4, 7 and 8
WTR17: River Don (except for Make-Me-Rich Meadow): change in water quality		Runoff from Catchments 4 and 6 would pass through attenuation ponds before being discharged into the River Don.	Operation: Slight beneficial	ES (Vol.2) Figure 2.6 ‘Proposed Drainage Design’	Requirements 3, 7 and 8
WTR18: River Don (except for Make-Me-Rich Meadow): dilution and removal of waste products			Operation: Slight beneficial		
WTR19: River Don (except for Make-Me-Rich Meadow): change in biodiversity			Operation: Slight beneficial		
WTR20: Hylton Dene Beck: change in water quality		Runoff from Catchment 7 would pass through a new attenuation ditch with pond before discharging into an existing piped drainage system leading to the tidal River Wear via Hylton Dene Burn. Runoff from Catchment 8 would pass through a new attenuation pond before being discharged into an existing piped drainage system leading to the tidal River Wear via Hylton Dene Burn.	Operation: Slight beneficial	ES (Vol.2) Figure 2.6 ‘Proposed Drainage Design’	Requirements 3, 7 and 8
WTR21: Hylton Dene Beck: change in biodiversity			Operation: Slight beneficial		
WTR22: Hylton Dene Beck: flooding from increased water run-off			Operation: Slight beneficial		
WTR23: Hylton Dene Beck: increased sediment delivery to water column			Operation: Slight beneficial		
WTR24: Make-Me-Rich Meadow (section of the River Don that flows through Make-Me-Rich Meadow): change in water quality		Catchment 4 and 6 would pass through attenuation ponds before being discharged into the River Don, upstream of Make-Me-Rich Meadow.	Operation: Slight beneficial	N/A	Requirements 3, 7 and 8

Adverse Impact	Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
WTR25: Make-Me-Rich Meadow (section of the River Don that flows through Make-Me-Rich Meadow): change in biodiversity		Operation: Slight beneficial		
WTR26: River Don (except for Make-Me-Rich Meadow): flooding from increased water run-off	Run-off from Catchments 4 and 6 would pass through attenuation ponds before being discharged into the River Don.	Operation: Slight beneficial	N/A	Requirements 3, 7 and 8
WTR27: Make-Me-Rich Meadow (section of the River Don that flows through Make-Me-Rich Meadow): flooding from increased water run-off	Catchment 4 and 6 would pass through attenuation ponds before being discharged into the River Don, upstream of Make-Me-Rich Meadow.	Operation: Slight beneficial		
WTR28: Floodplain: flooding from increased water run-off		Operation: Neutral		
WTR29: Tributary of River Don - increased erosion of channel bed and/or banks (fluvial geomorphology)	Direct outfall downstream, keep outfall headwall flush with bank, minimise size of headwall.	Operation: Slight adverse	N/A	Requirements 3, 7 and 8
Cumulative Effects				
CEA1: Adverse additive cumulative noise and air pollution effects on workers in IAMP One and residential receptors at Town End Farm and Capetown Road.	Application of good construction dust and noise practices through the CEMP developed in consultation with the local authorities and taking into consideration local developments (including IAMP Two) to reduce the cumulative effects.	Construction: Minor adverse Operation: see 'Air Quality', above	N/A	Requirement 4
CEA2: Adverse additive cumulative effects on the landscape character of LCUs 1, 2, 5, 8 and 9 (a, b & c) during construction and operation.	During detailed design, continue liaising with the local authorities and taking into consideration third-party local developments (including IAMP Two) to accommodate and be able to integrate with these neighbouring third party schemes with regards to landscape and visual amenity mitigation in this area.	Construction: Major to moderate adverse Operation: Minor adverse	N/A	Requirement 5
CEA3: Adverse additive cumulative effects on views from residential receptors, NMUs on routes near the junction and users of commercial facilities.		Construction: Major to moderate adverse Major to Minor adverse in Opening Year, reducing to Moderate to Minor adverse or Neutral	N/A	Requirement 5
CEA4: Adverse additive cumulative habitat fragmentation and severance for species due to the temporary and permanent habitat loss.	Highways England has already proactively liaised with the local authorities and the developers of the Wearpoint 55 (ID1) and IAMP developments (One and Two) during the early design and planning phases of these schemes. In this way the Scheme design has accommodated and will be able to integrate with these neighbouring third party schemes. Continue liaising with the local authorities and taking into consideration the third party developments (esp. Testo's and IAMP) to develop the detailed design and monitor adverse effects on habitats and species in order to manage the Scheme's contribution to the integrated ecological conservation for this area.	Construction: Moderate adverse Operation: Minor adverse	N/A	Requirements 4, 5 and 7

Adverse Impact	Mitigation proposed	Residual effect	Proposed plan reference	DCO Reference
	Apply good practice to mitigate the risk of additive adverse cumulative effects from pollution and sedimentation of aquatic habitats using the CEMP developed in consultation with local authorities and taking into consideration third party developments (e.g. Testo's junction and IAMP Two).			
CEA5: Additive adverse cumulative permanent loss and temporary disturbance of Grade 3b agricultural soils.	IAMP Two would be the principal contributor to agricultural land loss and the affected agricultural land is of low quality (i.e. not best and most versatile land). However, proactive engagement with the local authorities and third party developers for ID1 and ID2, the current Scheme design has allowed overlap of development footprints to reduce the net cumulative effect. During operation the temporarily lost agricultural land by all the schemes would be restored.	Construction: Moderate adverse Operation: Minor adverse	N/A	Article 29 Requirement 4
CEA6: Additive cumulative effects on NMUs – adverse disruption during construction, but beneficial effects during operation.	Maintain NMU access and apply good construction practices through CEMPs developed in consultation with the local authorities and taking into consideration third party developments (e.g. Testo's junction and IAMP Two) to reduce the cumulative effects. Improved NMU networks across Testo's junction and the IAMP developments and the Scheme offer cumulative operational safety improvements.	Construction: Minor adverse Operation: Minor beneficial	N/A	Requirements 3 and 4
CEA7: Additive cumulative effects on driver stress during construction.	Development of TMPs in consultation with the local authorities and taking into consideration third party developments (e.g. Testo's junction and IAMP Two) to reduce the cumulative effects from construction traffic movements.	Construction: Minor adverse	N/A	Requirements 4 and 10
CEA8: Additive adverse cumulative effects on land drainage and flood risk.	Develop detailed drainage design, with suitable temporary and permanent drainage systems, in liaison with the Environment Agency and Local Authorities, plus taking into consideration third party developments (e.g. Testo's junction and IAMP).	Construction: Minor adverse Operation: Not significant	N/A	Requirements 3 and 8
CEA9: Additive adverse cumulative effects on surface water quality.	Apply good construction practices through the CEMP to control the risk of pollution to the surrounding water; consult local authorities and take into consideration third party developments (including Testo's and IAMP) to reduce the cumulative effects. Remove contaminated sediment periodically from any SUDs as part of an operational maintenance regime for the Scheme.	Construction: Minor adverse Operation: Minor adverse	N/A	Requirements 4, 6 and 8

REAC PART 2 – ENVIRONMENTAL ACTION PLAN (Tables A1.3-2, A1.3-3 and A1.3-4)

Table A1.3.2 Actions required before the start of construction (i.e. during the detailed design stage or before construction)

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required?	Completed? (initial / date)	Notes / further action
P1	**Air quality**							
P1.1	Plan the construction work for the Scheme to prevent generation of nuisance dust impacts at sensitive receptors. Measures to prevent or minimise the generation and spread of dust based on those outlined by the Institute for Air Quality Management[5] (IAQM).	Chapter 6, Section 6.7	Identify the construction activities or conditions likely to occur during construction that may generate airborne dust.	Principal Contractor	No justified complaints of dust nuisance from receptors in the vicinity of the Scheme	Awarded contractor, South Tyneside Council and Sunderland Council to consult upon CEMP.		
P1.2			**Site Management** Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken. Make the complaints log available to a local authority when asked. Record exceptional incidents that cause dust and / or air emissions, on- or offsite, and the action taken to resolve the situation in the log book.					Measures are based on a Low risk site for on-site construction activities, and a High Risk site for track-out associated with construction vehicle traffic
P1.3			**Monitoring** Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to a local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100 m of the site boundary, with cleaning to be provided if necessary. Carry out regular site inspections to monitor compliance with the dust management plan, record inspection results, and make an inspection log available to a local authority when asked. Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.					Measures are based on a Low risk site for on-site construction activities, and a High Risk site for track-out associated with construction vehicle traffic

[5] Institute for Air Quality Management (2014) *Guidance on the assessment of dust from demolition and construction.*

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required?	Completed? (initial / date)	Notes / further action
P1.4			**Preparing and maintaining the site** Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible. Where practicable, erect solid screens or barriers, around dusty activities or the site boundary, that are at least as high as any stockpiles on site. Where practicable, fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period. Keep site fencing, barriers and scaffolding clean using wet methods. Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site.					Measures are based on a Low risk site for on-site construction activities, and a High Risk site for track-out associated with construction vehicle traffic
P1.5			**Operations** Provide an adequate water supply on the site for effective dust/particulate matter. Suppression/mitigation using non-potable water, where possible and appropriate. Use enclosed chutes and conveyors and covered skips. Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.					Measures are based on a Low risk site for on-site construction activities, and a High Risk site for track-out associated with construction vehicle traffic
P1.6			**Measures specific to Track-out** Where practicable, use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use. Avoid dry sweeping of large areas. Make sure vehicles entering and leaving sites are covered to prevent escape of materials during transport.					Measures are based on a Low risk site for on-site construction activities, and a High Risk site for track-out associated with construction vehicle traffic

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required?	Completed? (initial / date)	Notes / further action
			Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable. Pre and during construction, record all inspections of haul routes and any subsequent action in a site log book. Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned. Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site) where reasonably practicable. Provide an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits. Access gates to be located at least 10 m from receptors where possible.					
P2	**Cultural heritage**							
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
P3	**Landscape and visual effects**							
P3.1	Avoid or minimise loss of existing vegetation screening	ES Chapter 8, Section 8.7, & Environmental Masterplan	Scheme design to maximise retention and protection of existing trees, shrub and scrub vegetation to the north of Downhill Lane junction (northbound on and southbound off-slip roads) to provide screening for views from the north during the construction period.	Design Team (Jacobs)	Approval of design documents by Highways England after consultation with third party contractors and statutory bodies as appropriate	Natural England, South Tyneside Council and Sunderland City Council		
P3.2	Mitigation planting to replace lost vegetation	ES Chapter 8, Section 8.7, & Environmental Masterplan	Acquire photographic records of the land to be temporary affected prior to commencing construction works, to inform future site restoration. Undertake the detailed landscape and ecological design, including planting schedules and specification documentation. Design to include: • Tree belt planting on embankment slopes between the Downhill Lane junction northbound off and southbound on slip road as well as the realigned Washington Road to screen and or	Design Team (Jacobs)	Approval of documents by Highways England after consultation with third party contractors and statutory bodies as appropriate	Natural England, South Tyneside Council and Sunderland City Council		
P3.3	Mitigation planting to integrate the scheme design				Approval of documents by Highways England after consultation with third party contractors and statutory bodies as appropriate	Natural England, South Tyneside Council and Sunderland City Council		

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required?	Completed? (initial / date)	Notes / further action
P3.4	Mitigation planting to provide screening functions		filter views towards the layout and lighting of the Washington Road and new road and NMU bridge, and integrate the embankments into the landscape. Maintain planting by controlling weed growth, replacing dead trees and ensuring adequate space for healthy tree growth. • Tree, shrub and scrub planting along the Downhill Lane junction northbound off and southbound on slip roads and provide woodland planting within the circulatory area of the junction to replace lost vegetation and integrate the Scheme into the surrounding landscape character. • Linear tree and shrub planting to the outer edge of Washington Road, Downhill Lane and A1290 to integrate the realigned roads and provide filtered screening of lighting from adjacent housing areas. • Tree and shrub planting to the outer edges of the new NMU route east of the realigned Washington Road, and also to the foot of the approach ramps on both sides of the bridge to aid in screening and/or integrating the structures. • Habitat creation to the extents of the attenuation pond area to the north-east of the Downhill Lane junction. • Linear tree and shrub planting and species rich grassland around the attenuation pond to the south of Downhill Lane junction to help integrate it into the landscape. • Linear tree and shrub planting, scrub and species rich grassland around the attenuation pond to the south-west of Downhill Lane junction adjacent to the A1290 to help integrate it into the landscape and provide some screening for views towards the NMU bridge area.		Approval of documents by Highways England after consultation with third party contractors and statutory bodies as appropriate	Natural England, South Tyneside Council and Sunderland City Council		
P3.5	Mitigation planting to provide habitat replacement and/or enhancement				Approval of documents by Highways England after consultation with third party contractors and statutory bodies as appropriate	Natural England, South Tyneside Council and Sunderland City Council		
P3.6	Mitigation grass seeding to replace and integrate lost verge grass and incorporate new species rich grassland areas		Undertake the detailed landscape and ecological design including providing seed mixes and specification documentation. Grass seed mixes to include suitable species for function and		Approval of documents by Highways England after consultation with third party contractors and statutory bodies as appropriate	Natural England, South Tyneside Council and Sunderland City Council		

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required?	Completed? (initial / date)	Notes / further action
			biodiversity (species rich grassland and amenity / verge seeding).					
P3.7	Mitigation planting to attenuation ponds to provide suitable species rich grassland		Undertake detailed landscape and ecological design including providing seed mixes and specification documentation. Grass seed mixes to include suitable species for function and biodiversity (species rich grassland).		Approval of documents by Highways England after consultation with third party contractors and statutory bodies as appropriate	Natural England, South Tyneside Council and Sunderland City Council		
P3.8	Make sure earthworks design suitable for planting and seeding and to determine requirement for soil retention		Landscape input into detailed design of all slope gradients / earthworks. Landscape to consider requirement for soil retention on any slopes steeper than 1:2.5.	Design Team (Jacobs)	Approval of documents by Highways England	N/A		
P3.9	Soil management		Testing existing topsoil and subsoil to be carried out to BS3882:2015 Specification for topsoil and BS8601:2013 Specification for subsoil and requirements for use. Landscape input into soil specification to verify adequate soil depths and quality are provided along with effective handling and preparation of soils.	Design Team (Jacobs)	Approval of documents by Highways England after consultation with third party contractors and statutory bodies as appropriate	Natural England, South Tyneside Council and Sunderland City Council		
P4	**Ecology and nature conservation**							
P4.1	Continue to monitor fauna within the Scheme boundary	ES Chapter 9, Section 9.10	Update water vole, otter and wintering bird surveys in 2018/2019 so the data is less than 12 months old when commencing construction. Use survey results to review mitigation recommendations to make sure they continue to be sufficient. Develop, in liaison with the local authorities, a programme of regular monitoring of habitat creation and barn owl activity by a suitably qualified EcCoW through the construction period and aftercare programme.	Principal Contractor appointed EcCoW.	Maintain up to date baseline data and mitigation methods for species of importance at risk from the Scheme	Natural England and South Tyneside Council and Sunderland City Council Ecologists. Relevant landowners.		Continue to observe the habitat for any change in species distribution during the construction phase.
P4.2	Mitigate pollution risk impacts	ES Chapter 9, Section 9.9	Produce method statements for refuelling vehicles and machinery. Produce an emergency spill procedure plan.	Principal Contractor	Prevention of fuel and oil being spilt. Minimise the quantity of pollution entering the ecosystem (esp. River Don) in the event of an accidental pollution spill.	N/A		Comply with the method statements during the construction phase

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required?	Completed? (initial / date)	Notes / further action
P5	**Geology and soils**							
P5.1	To avoid release and spread of contamination.	ES Chapter 10, Section 10.7	Undertake a Supplementary Ground Investigation, including sampling and testing for both geotechnical and contaminated land purposes. Develop a Contaminated Land: Applications In Real Environments (CL:AIRE) Materials Management Plan (CL:AIRE, 2014) , including an Inspection and Discovery Strategy. Design measures to collect any contaminated water in attenuation ponds, built into drainage design, to minimise contaminants and sediments reaching aquatic habitats.	Costain	Provide more information on the geotechnical and chemical status of site soils. Design measures to minimise contaminants and sediments reaching aquatic habitats.	-	-	
P5.2	Effects on agricultural land	ES Chapter 10, Section 10.7	Preparation of detailed methodology of reinstatement back to agriculture those areas affected by temporary uses. Undertake a Soil Resources Survey to provide a baseline for future site restoration. Prepare a Soil Management Plan, using the results of the Soil Resources Survey, to achieve careful stewarding of the soil resources during the construction works period. Take into account guidance outlined in Row GEOL6 in REAC Part 1.	Costain	Completion of a Soil Resources Survey. Approval of Soil Management Plan by Highways England.	Farm businesses contacts.		Soil Resources Survey provides a benchmark for site restoration and is required to inform the Soil Management Plan.
P6	**Materials**							
P6.1	Keep material imports to a minimum	ES Chapter 11, Section 11.7	Adopt material efficient design. Provide a statement estimating the overall quantity of material required through the application of an efficient design. Establish appropriate project targets for materials and waste.	Design Team (Jacobs)	Confirmation that construction is as per design estimate.			
P6.2	Reduce use of natural resources		Develop within the CEMP procedures for the management of material procurement, delivery, storage, handling, use and disposal; use a Soil Resource/Materials Management Plan (MMP) detailing protocols for soil management in line with current industry best practice as set out by DEFRA's Construction Code of Practice for the Sustainable	Costain				

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required?	Completed? (initial / date)	Notes / further action
			Use of Soils on Construction Sites[6] and requirements within the Specification for Highways Works series 600[7] and 3000[8]. Take into consideration guidance outlined in Rows MAT2 and MAT3 in REAC Part 1.					
P6.3	Keep waste exports to a minimum	ES Chapter 11, Section 11.7	Design out waste, where possible. Develop a Site Waste Management Plan (SWMP) early on in the design stage to explore methods to manage waste arising from the construction in accordance with the waste hierarchy. Take into consideration guidance outlined in Row MAT4 in REAC Part 1. Provide a statement estimating the overall quantity of waste reduced through the application of designing out waste measures.	Design Team (Jacobs)	Statement in SWMP from Design Team estimating the overall quantity of waste reduced through the application of designing out waste measures.			
			Implement good materials management and good practice construction methods, including use of temporary materials storage areas. Leave hazardous materials (e.g. tar bound planings) in situ where safe and feasible to do so to avoid unnecessary generation of hazardous waste arisings. Implement the CEMP, SWMP and MMP, with all construction works aware of measures identified in plans. Monitor through programme of Environmental Auditing and Reporting.	Costain	Confirmation that construction is as per design.			
P6.4	Reduce effects of importing materials and exporting waste	ES Chapter 11, Section 11.7	Give preference to nearby sources of materials and waste disposal companies. Implement good practice construction methods and reduce haulage distances and/or need to travel. Implement the CEMP, SWMP, MMP and a TMP, with all construction works aware of measures identified in plans.	Costain	Evidence of measures to reduce effects of importing materials and exporting waste			

6 Department for Environment, Food and Rural Affairs (DEFRA) (2009). Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.
7 Available at: http://www.standardsforhighways.co.uk/ha/standards/mchw/vol1/pdfs/600.pdf
8 Available at: http://www.standardsforhighways.co.uk/ha/standards/mchw/vol1/pdfs/series_3000.pdf

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required?	Completed? (initial / date)	Notes / further action
			Establish procedures for the management of material procurement, delivery, storage, handling, use and disposal. Use materials responsibly sourced in accordance with BES 6001:2009 and the UK Government Timber Procurement Policy[9]. Monitor impact of energy use in construction through programme of Environmental Auditing and Reporting.					
P7	**Noise and vibration**							
P7.1	Identify construction phase noise & vibration levels with the local authorities.	ES Chapter 12, Section 12.7	Consult with Environmental Health Departments of South Tyneside Council and Sunderland City Council regarding construction noise and vibration limit levels and a programme of monitoring during construction. Undertake baseline noise monitoring at residential locations to establish pre-scheme noise levels.	Costain	Noise and vibration limit levels and a programme of monitoring, during construction, established in consultation with local authorities	South Tyneside Council and Sunderland City Council	To be completed before any site work undertaken.	Local authorities normally require noise and vibration monitoring and impact prediction immediately before construction.
P7.2	Mitigate construction phase noise & vibration if required after P7.1 and D7.1.	ES Chapter 12, Section 12.7	Identify in the CEMP activities that could result in significant noise and vibration levels. Where necessary provide appropriate mitigation measures (e.g. temporary noise barriers, choice of plant, insulation of property, temporary re-housing, and management of plant or working time restrictions for noisy activities). As a minimum, the CEMP to include the following noise and vibration mitigation measures as far as possible: • using 'best practicable means' during all construction activities; • avoiding unnecessary revving of engines and making sure plant and equipment is switched off when it is not in use for long periods of time; • keeping haul roads well maintained and avoid steep gradients; • starting up plant and equipment sequentially rather than all together;	Costain	CEMP reflects measured discussed with the local authorities	South Tyneside Council, Sunderland City Council, Residents and Natural England	After Detailed Design – before start of construction	The requirement for mitigation measures is expected. This would be reconsidered after D7.2 and detailed construction programme and plant details.

[9] Available at: https://www.gov.uk/guidance/timber-procurement-policy-tpp-prove-legality-and-sustainablity

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required?	Completed? (initial / date)	Notes / further action
			• selecting low noise emitting plant where available and suitable; • using audible reversing warning systems on mobile plant and vehicles of a type which, whilst still giving proper warning, have a minimum noise impact on persons outside sites; • establishing, through consultation with the local authorities, the appropriate controls for undertaking significantly noisy works, vibration-causing operations close to receptors or working outside of normal construction hours (assumed to be 07:30 to 18:00 Monday to Friday and 08:00 to 13:00 on Saturday); • providing advance notification to residents near noisy works outside normal hours; • programming works so that the requirement for working outside normal working hours is minimised (taking into account the highway authority's statutory duties under the Traffic Management Act 2004); • setting vibration soil compaction plant to a low amplitude setting when operating in close proximity to sensitive receptors; • using low noise emission plant where possible; • making sure all piling would be rotary; • developing and maintaining good relations with people living and working in the vicinity of site operations; • implementing an efficient complaints procedure; • where viable, using temporary noise screens around particularly noisy activities (or stationary plant such as generators); and • regularly maintaining plant.					
P7.3	Meet requirements of Land Compensation Act, Part 2 – Identify properties that meet	ES Chapter 12, Section 12.7	Publish list of properties within 300 m that qualify for noise insulation in local press, or statement that no properties qualify. Take account of changes in	Highways England	Highways England approval of the eligible properties.	South Tyneside Council, Sunderland City	After Detailed Design – before	Good practice to offer noise insulation to eligible properties

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required?	Completed? (initial / date)	Notes / further action
	the eligibility criteria of The Noise Insulation Regulations.		design and traffic predictions (if any). Make offers of insulation to eligible properties before construction commences.		Residents accepting offers on insulation.	Council and Residents	start of construction	before construction starts. Although, under the Act, Highways England would have until 6 months after road opening to make an offer.
P7.4	Meet requirements of Land Compensation Act, Part 1	ES Chapter 12, Section 12.7	Identify all properties where noise levels may change and predict changes for each property. Identify the contribution of the Scheme to the overall noise level for the year of opening and the design year. Take account of changes in design and traffic predictions (if any). Provide results to the District Valuer.	Costain	Highways England approval of the detailed noise levels	District Valuer	After Detailed Design	To inform consideration of potential claims for Injurious Affection under the Land Compensation Act Part 1.
P8	**People and communities**							
P8.1	Minimise community severance, maximise accessibility and connectivity during construction	ES Chapter 13, Section 13.7	Development of a construction TMP, including: • temporary signage; • temporary bus stop relocation, if required; • designated construction access route to/from the Scheme for all construction traffic and deliveries; • Heavy Goods Vehicle delivery window; and • use of internal haul roads to minimise the number of trips associated with transporting plant across the site.	Principal Contractor	Accepted plan to reduce traffic impacts.	Highways England		
			Programme temporary closures, identification of alternative NMU access routes/ diversions during the construction period.	Principal Contractor	Programme and plan for temporary NMU access	Local authority		
P8.2	Mitigate impacts on agriculture and farm businesses	ES Chapter 13, Section 13.7	Identify replacement access points to severed fields and areas where existing access is lost.	Principal Contractor	Continuity of access / operation for farm businesses.	Landowners		
P8.3			Identify suitable outlets for existing field drainage systems and continuity of water and other utility supplies.		Continuity of drainage and water and utility supplies.			
P8.4			Develop detailed methodology to reinstate areas affected by temporary uses back to agriculture.		Reinstatement of areas affected by temporary use back to agriculture.			

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required?	Completed? (initial / date)	Notes / further action
P9	**Road drainage and the water environment**							
P9.1	Prevent adverse impacts on water quality	N/A	Develop detailed drainage design in consultation with the Environment Agency with relation to the treatment of pollutants	Design Team	Approved detailed design			
P9.2		ES Chapter 14, Section 14.7 Table 14.10	Develop Pollution Prevention Plan, including spillage response measures, and incorporate into the CEMP.	Principal Contractor	Pollution Prevention Plan in place prior to construction			
P9.3		ES Chapter 14, Section 14.7 and Table 14.10	Prepare appropriate Method Statements for working with and storing oils and chemicals in line with the requirements of the Control of Pollution (Oil Storage) Regulations 2001.		Appropriate Method Statements in place prior to construction			
P9.4		ES Chapter 14, Section 14.7 and Table 14.10	Design an Environmental Incident Control Plan (EICP) for the construction period on site so protective measures are implemented to deal with both normal and emergency situations		EICP in place prior to construction			
P9.5		ES Chapter 14, Section 14.7 and Table 14.10	Obtain consent for works in the works in tributary to the River Don.		Consent for works granted prior to construction	South Tyneside Council and Sunderland City Council		
P9.6		ES Chapter 14, Section 14.7 and Table 14.10	Confirm support for Drainage Strategy with Environment Agency and local authorities		Approved Drainage Strategy	Environment Agency, South Tyneside Council and Sunderland City Council		
P9.7	Prevent adverse effects related to flood risk	ES Chapter 14, Section 14.7 and Table 14.10	Limit works in-channel to times of low flows and sign-up to the Environment Agency flood warning system.	Principal Contractor	Signed-up to the Environment Agency flood warning	Environment Agency		
P9.8		ES Chapter 14, Section 14.7 and Table 14.10	Obtain consent from South Tyneside Council or Sunderland Council for any works in an ordinary watercourse.		Consent for works granted prior to construction	South Tyneside Council and Sunderland City Council		
P9.9		ES Chapter 14, Section 14.7 and Table 14.10	Prepare construction phase Surface Water Management Plan		Surface Water Management Plan in place prior to construction			

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required?	Completed? (initial / date)	Notes / further action
P9.10		ES Chapter 14, Section 14.7 and Table 14.10	Confirm support for Drainage Strategy with Environment Agency and local authorities		Approved Drainage Strategy	Environment Agency, South Tyneside Council and Sunderland City Council		
P9.11		N/A	Develop detailed drainage design that provides adequate capacity and for any additional highways run-off to be discharged at a greenfield run-off rate.	Design Team (Jacobs)	Detailed drainage design developed in consultation with the Environment Agency	Environment Agency, South Tyneside Council and Sunderland City Council		
P9.12	Comply with Water Framework Directive (WFD)	N/A	Develop detailed drainage design in accordance with good practice as in DMRB	Design Team (Jacobs)	Outfall design minimises disturbance to watercourse bank and work in low-flow conditions, where possible. Compliance with applicable legislation.	Environment Agency, South Tyneside Council and Sunderland City Council		
P9.13		N/A	Confirm Environment Agency support for the WFD assessment.					
P9.14		N/A	Obtain consent for works in the tributary to the River Don (see P9.5)					
P9.15		ES Chapter 14, Appendix 14.3	Detailed design of the drainage system to consider the following to minimise impacts on the River Don: • direct the new outfall downstream to minimise impacts to flow patterns; • direct the new outfall away from the banks of a river to minimise any potential risk of erosion (particularly on the opposite bank); and • minimise the size/extent of the outfall headwall where possible to reduce the potential impact on the banks.					
P10	**Cumulative Effects**							
P10.1	Develop detailed Scheme design that minimises adverse and maximises beneficial effects of any potential integration with other developments.	ES Chapter 15, Section 15.7	Continue consulting local planning authorities and taking into consideration other developments (including Testo's junction and IAMP Two) during detailed design development to minimise adverse and maximise beneficial cumulative effects (esp. for landtake, landscape, land drainage & ecology).	Design Team (Jacobs)	Approved detailed design that takes into account Testo's junction and IAMP Two developments	Local developers, South Tyneside Council and Sunderland City Council		
P10.2	Develop TMPs and CEMPs that reduce cumulative effects	ES Chapter 15, Section 15.7	Continue consulting with local planning authorities and taking into consideration other developments (including Testo's junction and IAMP Two) when developing a TMP and CEMP that reduces the	Principal Contractor	TMP and CEMP that takes into account Testo's junction and IAMP Two construction activities	Local developers, South Tyneside Council and Sunderland City Council		

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required?	Completed? (initial / date)	Notes / further action
			cumulative effects, especially with dust, noise and water emissions and traffic movements.					

Table A1.3-3: Actions required during the construction period

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required	Completed? (initial / date)	Notes / further action
D1	**Air quality**							
D1.1	Prevent the generation of nuisance dust effects for sensitive residents.	ES Chapter 6, Section 6.7	Implement the CEMP control measures *(based on measures outlined in IAQM and pre-construction action plan)* to prevent or minimise the generation and spread of dust as a result of construction activities or conditions. In the event of justified complaints (related to dust nuisance), review measures and control procedures and adjust as appropriate.	Principal Contractor	No justified complaints of dust nuisance from receptors in the vicinity of the Scheme	South Tyneside Council and Sunderland Council		
D2	**Cultural heritage**							
D2.1	Manage risks to unexpected archaeological finds	ES Chapter 7	If archaeological finds encountered during excavations, contact Archaeology Specialists for advice. Use Toolbox talks to train workforce to identify archaeology risks.	Principal Contractor	Managing risks of unexpected archaeological finds during excavations			
D3	**Landscape and visual effects**							
D3.1	Minimise effects of the site compound and soil storage piles.	ES Chapter 8, Section 8.7, & Environmental Masterplan	Keep any loss of vegetation to a minimum by careful siting of the main site compound, haulage routes and plant / materials storage areas. Contractor to provide a suitable method statement for earth movements and soil storage to help screen temporary views from Town End Farm (e.g. soil storage phased so the easternmost temporary soil storage bund is retained during most of the works to enable screening of views towards the main site compound and working areas).	Costain	Contractor's method statement approved by Highways England	Landowners		
D3.2	Minimise effects of site clearance to prevent damage to trees, significant vegetation and habitats.	ES Chapter 8, Section 8.7, & Environmental Masterplan	Employ a suitably competent and qualified Environmental Clerk of Works (ECoW) to oversee all site clearance and environmental implementation works. Erect suitable habitat protection fencing prior to site clearance and commencement of construction. Arboriculturalist input on requirement for tree works and tree protection of important/ mature trees to	Costain	Identification of all vegetation for protection and protection fencing in accordance with specification. Confirmed within contractor's method statement.	N/A		

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required	Completed? (initial / date)	Notes / further action
			BS5837:2012 Trees in relation to design, demolition and construction – Recommendations					
D3.3	Mitigation planting to replace lost vegetation to integrate the Scheme and provide screening functions in accordance with detailed landscape and ecology design contract documents.	ES Chapter 8, Section 8.7, & Environmental Masterplan	ECoW to make sure subsoil and topsoil profiles are of appropriate depths and soils meet specification (soil analysis) prior to commencement of planting and seeding works. Make sure all gradients and final levels are correct and in line with the Scheme design. Make sure there are no areas susceptible to waterlogging through poor drainage. Make sure soil is prepared in line with the landscape and ecology specification (ground preparation and cultivation). Supply and sow seeds at the correct time of year for each specified seed mix (Mar-May) and in accordance with the specification. Supply and plant trees/ shrubs in accordance with the specification during the next available planting season after completion of earthworks (Oct-March)	Costain	Obtain adequate subsoil and topsoil analysis prior to spreading. ECoW confirms soil and planting methods, during planting works, are appropriate and carries out inspection on completion.	N/A		
D4	**Ecology and nature conservation**							
D4.1	Minimise disturbance to protected species (breeding and wintering birds, barn owls, badgers, bats, water voles and otters)	ES Chapter 9, Sections 9.5, 9.9 and 9.10	Where possible conduct vegetation clearance from late August through to February inclusive to avoid the breeding bird season. If this is not possible works to occur under the supervision of an EcCoW who will set up protective areas around any active nest found until the nest has been abandoned or the chicks have fledged.	Principal Contractor with guidance from the suitably qualified EcCOW.	Reduce the impact of the Scheme on protected species by reducing number of fatalities and impact on normal behaviour patterns.	N/A		Additional action maybe required if the distribution of protected species was to change. An ecologist's advice should be sought if during construction a protected species is located.
			Where possible fell trees with bat potential between August and November.					
			Night-working should be avoided where possible. If it cannot be avoided, it should be restricted in the vicinity of known protected species commuting routes and valuable areas of foraging habitat for bats and otters (e.g. River Don).					
			Lighting for the operational Scheme should avoid / minimise illuminating habitats adjacent to the Scheme through the use of directional lighting, reduced lighting column height (where appropriate), baffles, cowls, landscaping and the use of screens.					
			No steep-sided, deep and/or water-filled excavations to be left uncovered overnight. Any major excavations that need to be left uncovered					

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required	Completed? (initial / date)	Notes / further action
			overnight should have their slopes battered. If it is necessary to leave excavations open overnight, provide suitable fencing to avoid trapping any animals.					
			Site compounds and storage areas to be located away from known Common Toad breeding ponds (at West Boldon Education Centre) and other aquatic habitats that may support breeding populations of amphibians. EcCoW to be present during site clearance operations in sensitive habitats adjacent to known Common Toad breeding ponds.					
			Regular monitoring of barn owl activity by a suitably qualified EcCoW according to the monitoring programme to be determined through the construction / aftercare programme.					
D4.2	Minimise loss of habitat	ES Chapter 9, Section 9.9	Clearly mark vegetation which is to be lost or retained (including trees and scrubs) with a pre-agreed marking system to avoid encroachment into areas of high value habitat.	Principal Contractor with guidance from the suitably qualified EcCOW.	Minimise and prevent unnecessary loss of vegetation to be retained.	N/A		
D4.3	Minimise pollution	ES Chapter 9, Section 9.9	Store oil, fuel and chemicals according to The Control of Pollution (Oil Storage) Regulations 2001.		Prevent any pollution entering the ecosystem.	N/A		
			Refuel vehicles and machinery in designated locations on an impermeable surface (away from drains and watercourses), following the predetermined method.					
			Make sure the main site compound and fuelling stations have drainage interceptors, temporary drainage system with attenuation ponds to allow the settlement of silt.					
D4.4	Increase biodiversity	ES Chapter 9, Sections 9.9 and 9.10	Proposed landscape planting to include native species of local provenance that provide suitable nesting areas or a source of food at different times of year, such as blackthorn, hawthorn, bramble and teasel.	Main contractor with guidance from the suitably qualified EcCoW.	Provide enhancements in existing retained habitats near the Scheme for bats, bird species and otters.	Relevant landowners, South Tyneside Council and Sunderland City Council		
			Where possible, material from site clearance works to be used to create additional refugia and/or hibernacula within areas adjacent to the three proposed attenuation ponds to improve the suitability of terrestrial habitat.		Provide additional refugia and/or hibernacula for amphibian (e.g. Common Toad) in existing retained habitats near the Scheme.			All subject to 3rd party agreement.
D4.5	Manage risks of unexpectedly finding protected species	ES Chapter 9	If a protected species found on the site during construction, pause works in that area and seek	Principal Contractor	No harm to protected species	Natural England		

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required	Completed? (initial / date)	Notes / further action
			advice of a professional Ecologist. Use Toolbox talks to train workforce to identify protected species risks.					
D5	**Geology and soils**							
D5.1	Avoid deterioration of soil resources	ES Chapter 10, Section 10.7	Implementation of Soil Management Plan. Undertake soil management operations in accordance with Defra's Good Practice Guide for Handling Soils, with measures including: • stripping of topsoil and subsoil when weather and soil conditions are suitable; • separate storage and management of topsoil and subsoil stockpiles; • return of these soils to the original plots, also in separate layers (where possible and where these plots are not occupied by permanent new infrastructure); • use of appropriate machinery to minimise soil compaction; • relief of any compaction of restored soils; and • surface ripping and, if necessary, under-drainage of restored sites (subject to other environmental constraints, such as the presence of buried archaeological remains).	Costain	Retain soil resources potential to support plant growth			This action is carried forward and included in the Actions required after the end of construction.
D5.2	Minimise soil deterioration and consolidation	ES Chapter 10, Section 10.7	Include drainage at the toe of embankment slopes.	Costain	Prevent ponding of water at the toe of the embankment slope.			
D5.3	Avoid release and spread of contamination.	ES Chapter 10, Section 10.7	Implementation of CL:AIRE Materials Management Plan, including an Inspection and Discovery Strategy.	Costain	Mitigate risks arising from the re-use of site won material. Appropriate mitigation to be detailed in the CEMP.			
D5.4	Avoid release and spread of potentially contaminated dust during construction.	ES Chapter 10, Section 10.7, and ES Chapter 6, Air Quality Also, actions P1.1-1.8 and D1.1.	Use dust suppression systems especially in the area of any mobile screening and crushing plant. Consult local authorities and, if required, obtain any required consents.	Costain	Prevent the generation of nuisance dust. Relevant measures detailed in the Contractor's CEMP.	Local Authority Pollution Prevention Control (LAPPC)		

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required	Completed? (initial / date)	Notes / further action
D5.5	Reduce environmental pollution from accidental spillages on the highway during the operational phase.	ES Chapter 10, Section 10.7	Implement appropriate pollution prevention measures during any clean up activity.	Costain	Relevant measures detailed in the Contractor's CEMP.			
D5.6	Avoid potentially contaminated run-off from the highway during construction and operational phases.	ES Chapter 10, Section 10.7	Appropriate drainage to collect, treat or contain run-off during operation to be provided.	Costain	Appropriate mitigation measures set out in CEMP and detailed design to collect any contaminated water.			
D5.7	Avoid waste generation and soil disposal off-site.	ES Chapter 10, Section 10.7	Where practicable, treatment of 'unacceptable' material (i.e. material not suitable for use in engineering works) on site to render it acceptable for use in the works (for example, by treatment with lime or cement).	Costain	Adequate earthworks balance achieved.			
D6	**Materials**							
D6.1	Keep material imports to a minimum	ES Chapter 11, Section 11.7	Implement good materials management and good practice construction methods, including use of temporary materials storage areas. Implement and regularly review / update the CEMP, MMP and SWMP, with all construction works aware of measures identified in plans. Monitor through programme of Environmental Auditing and Reporting against the project targets for materials and waste, plus Scheme 'As Constructed' design. If contaminated soils or wastes encountered during the construction works, undertake further investigation, testing and risk assessment to determine whether the soils could either: stay on-site, require treatment to make them suitable to remain on-site, or would need to be disposed of off-site. Where possible, leave hazardous materials (e.g. tar bound planings) in situ where safe and feasible to do so to avoid unnecessary generation of hazardous waste arisings.	Costain	Confirmation that construction is as per design.			
D6.2	Reduce use of natural resources							
D6.3	Keep waste exports to a minimum							
D6.4	Reduce effects of importing materials and exporting waste	ES Chapter 11, Section 11.7	Give preference to nearby sources of materials. Give preference to local waste disposal companies. Implement good practice construction methods and reduce haulage distances and/or need to travel.	Costain	Evidence of measures to reduce effects of importing materials and exporting waste. Use of materials responsibly sourced in accordance with			

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required	Completed? (initial / date)	Notes / further action
			Monitor impact of energy use in construction through programme of Environmental Auditing and Reporting.		BES 6001:2009 and the UK Government Timber Procurement Policy.			
D7	**Noise and vibration**							
D7.1	Monitoring of construction noise and vibration levels during construction.	ES Chapter 12, Section 12.7	Monitoring of construction noise and vibration levels as required. If noise/vibration levels are elevated locally mitigate, change method of working, temporarily re-house, insulate property etc.	Costain	Provide monitored data to South Tyneside Council and Sunderland City Council. If necessary, mitigation strategy updated.	South Tyneside Council Sunderland City Council Residents	Throughout construction period.	Any assessment based on noise and vibration limits defined in consultation with the local authorities.
D8	**People and communities**							
D8.1	Minimise community severance, maximise accessibility and connectivity during construction	ES Chapter 13, Section 13.7	Implement TMP and site TMP, including temporary signage.	Principal Contractor		Local authority		
			Implement temporary closures and provide alternative NMU access routes / diversions during the construction period	Principal Contractor	NMU access / connectivity maintained	Local authority		
D8.2	Mitigate impacts on agriculture and farm businesses	ES Chapter 13, Section 13.7	Provide replacement access points to severed fields and areas where existing access is lost. Consult landowners so that accommodation works would suit their requirements, where reasonably practicable to do so.	Principal Contractor	Continuity of access / operation for farm businesses.	Landowners		
D8.3			Provision of suitable outlets for existing field drainage systems and continuity of water and other utility supplies.	Principal Contractor	Continuity of drainage and water and utility supplies.	Landowners		
D8.4			Adherence to detailed methodology to reinstate areas temporarily affected by back to agriculture.	Principal Contractor	Reinstatement of areas affected by temporary use back to agriculture.	Landowners		
D9	**Road drainage and the water environment**							
D9.1	Prevent adverse effects on water quality	ES Chapter 14, Section 14.7	Establish the permanent drainage system for the Scheme early in the construction process to reduce the temporary risks of pollution to the water environment during construction.	Principal Contractor	No detrimental effect on water quality during the construction phase			
D9.2		ES Chapter 14, Section 14.7 and Table 14.10	undertake construction work to best practice standards and implement actions in the following plans to control the risk of pollution: • Pollution Prevention Plan. • Method Statements for working with and storing oils and chemicals in line with the requirements of the Control of Pollution (Oil Storage) Regulations 2001.		No spillages or leaks resulting from construction activities during the construction phase.			

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required	Completed? (initial / date)	Notes / further action
			• Surface Water Management Plan Environmental Incident Control Plan (EICP). • Consent for works in tributary to the River Don.					
D9.3			Operate in accordance with best practice standards.					
D9.4		ES Chapter 14, Section 14.7 and Table 14.10	Implement the measures described in appropriate Method Statements for working with and storing oils and chemicals in accordance with the requirements of the Control of Pollution (Oil Storage) Regulations 2001.					
D9.5			Construction plant must be refuelled in designated areas on an impermeable surface, away from drains and watercourses.		No environmental incidents arising from the construction works.			
D9.6			Make spill kits available at appropriate locations and train site personnel in their use.					
D9.7		Table 14.10	Comply with the Environmental Incident Control Plan (EICP) on site during the works.					
D9.8	Prevent adverse effects on flood risk	Table 14.10	Implement construction phase surface water management plan	Principal Contractor	No increase in flood risk during the construction phase			
D9.9	Comply with Water Framework Directive (WFD)	Appendix 14.3	Implement appropriate mitigation stated in the WFD assessment during construction. Follow sufficient construction method statements (see above).	Principal Contractor	No environmental incidents arising from the construction works.			
D10	**Cumulative Effects**							
D10.1	ES Chapter 14, Section 14.7 and Table 14.10	ES Chapter 15, Section 15.6	Continuing to liaise with the local planning authorities and, as appropriate, third party developers (e.g. IAMP Two) to share monitoring data to inform regular reviews of mitigation measures to manage the Scheme's adverse effects on or risks to habitats and species.	Costain	Reviews of ecology mitigation measures during construction informed by review of wider cumulative effects on or risks to habitats and species.			

Table A1.3-4: Actions required after the end of construction

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required	Completed? (initial / date)	Notes / further action
A1	**Air quality**							
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A2	**Cultural heritage**							
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A3	**Landscape and visual effects**							
A3.1	Mitigate effects of construction works and prevent damage to trees and significant vegetation	ES Chapter 8, Section 8.7, & Environmental Masterplan	Remove rubbish, debris as it arises and leave the construction work and main site compound areas clean and restored to their original use and state prior to construction. Remove all temporary fencing / signs and other structures.	Costain	Inspections by ECoW to confirm suitable making good of areas after decommissioning of site compound and storage areas			Use pre-construction works photos of the temporary affected land to inform site restoration.
A3.2	Mitigation planting to replace lost vegetation, integrate the Scheme and provide screening functions	ES Chapter 8, Section 8.7, & Environmental Masterplan	Aftercare requirement for all landscape planting and seeding maintained, to achieve their full establishment, prior to handover to the future maintaining authority for on-going highway maintenance. Contractor committed to 3 years of aftercare provision, Highways England committed to a period of 5 years to replace any planted tree or shrub that dies or is seriously damaged or diseased.	Highways England	Regular inspections of planting by the ECoW to approve thriving specimens and achievement of plant/ grass sward growth in accordance with contract document specifications.			
A3.3	Maintain long-term maintenance of landscape works and planted areas	ES Chapter 8, Section 8.7, & Environmental Masterplan	Prepare Handover Environmental Management Plan and data for Envis/ soft estate management.	Costain	Provision of Handover Environmental Management Plan and Envis data			
A4	**Ecology and nature conservation**							
A4.1	Minimisation of adverse operational effects from habitat loss, disturbance and severance.	ES Chapter 9, Section 9.10	Confirm, in liaison with stakeholders, aftercare monitoring programme still appropriate and include indicators of success (e.g. establishment of certain species or % cover of certain botanical species)	Principal Contractor appointed EcCoW.	Make sure the mitigation achieved predicted overall effect of the Scheme on the ecosystem.	Natural England, South Tyneside Council and Sunderland City Council (relevant officers) Relevant landowners		Monitoring programme should include actions to resolve any failures in the mitigation measures.
			Monitor the success of the planting proposals (woodland and hedge planting especially) and wetland creation.					
			Bi-annual site visits, during the aftercare period, and environmental record centre record checks to identify recorded barn owl RTAs and general barn owl activity in the area and also to					

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required	Completed? (initial / date)	Notes / further action
			determine the current status of previous identified roosts/nesting sites (conditional on 3rd party agreement for access).					
A5	**Geology and soils**							
A5.1	To avoid deterioration of soil resources	ES Chapter 10, Section 10.7	Aftercare of restored soils if required. Appropriate cropping of restored soils, for example a temporary grass ley if required, and associated soil nutrient requirements.	Costain	Retain soil resources potential to support plant growth and maintain quality of agricultural land / soils.			
A6	**Materials**							
N/A	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A7	**Noise and vibration**							
A7.1	Based upon final Scheme design and as built drawings meet requirements of Land Compensation Act, Part 2 – Reassess the properties that meet the eligibility criteria of The Noise Insulation Regulations.	ES Chapter 12, Section 12.7	Publish list of properties within 300 m that qualify for Noise Insulation, or statement that no properties qualify. Make offers of insulation to eligible properties before construction commences.	Highways England	Identification of eligible properties. Residents accepting offers on insulation.	Residents	Within six months of road opening.	Legal requirement under the Land Compensation Act, Part 2.
A7.2	Based upon final Scheme design and as built drawings reassess the requirements of Land Compensation Act, Part 1.	ES Chapter 12, Section 12.7	Identify all properties where noise levels may change and predict changes for each property. Identify the contribution of the Scheme to the overall noise level for the year of opening and the design year. Take account of changes in design and traffic predictions (if any). Pass results to the District Valuer.	Highways England	Identification any properties eligible requirements of Land Compensation Act, Part 1.	District Valuer	.	To inform consideration of potential claims for Injurious Affection under the Land Compensation Act, Part 1.
A7.3	Assess changes in noise and vibration levels post works	ES Chapter 12, Section 12.7	Undertake noise monitoring at residential locations to establish post-scheme noise levels.	Highways England	Completion of monitoring and publication of survey data / report.	South Tyneside Council Sunderland City Council Residents		There is no requirement to undertake noise measurements, however Highways England generally request post opening noise monitoring.
A8	**People and communities**							
A8.1	Mitigate effects on physical assets	ES Chapter 13, Section 13.7	Return of temporarily used agricultural land to landowners for agricultural use. Relocation of bus stop, if required.	Principal Contractor	Reinstatement of lane and bus stop.	Landowners		
A9	**Road drainage and the water environment**							

Ref.	Environmental Objective	Cross-ref. to ES	Action	Responsibility	Target (achievement criteria)	Third-party contact required	Completed? (initial / date)	Notes / further action
A9.1	Maintenance of attenuation ponds	ES Chapter 14, Section 14.7	Remove contaminated sediment periodically from the attenuation ponds. Undertake regular inspections to ascertain when this action would need to be taken.	Highways England	Maintenance of attenuation ponds			

APPENDIX 1.4 OTHER REGULATORY REGIMES

1.4A Introduction

1.4A.1 As outlined in Chapter 1 of Volume 1, this Environmental Statement (ES) has been written to inform an application for a Development Consent Order (DCO). In addition to the application for a DCO, the Scheme is subject to a number of other regulatory regimes or consent requirements, as follows:

- Habitat Regulations Assessment (Appropriate Assessment); and
- drainage-related consents.

1.4A.2 This appendix summarises the way in which these other regulatory regimes and consent requirements have been, or are to be addressed.

1.4A.3 The ES determined there was no requirement for a European Protected Species Licence or licence under the Protection of Badgers Act 1992.

1.4B Habitats Regulations Assessment

1.4B.1 The potential need for Habitats Regulations Assessment (HRA) has been considered separately from the EIA[1]. HRA addresses the potential for 'likely significant effects' on sites designated for their nature conservation value at European or international level, collectively known as Natura 2000 sites. The relevant European and international designations covered by this requirement are:

- Special Protection Areas (SPAs), including potential SPAs (pSPAs);
- Special Areas of Conservation (SACs), including candidate or possible SACs (cSACs or pSACs);
- Ramsar sites (i.e. sites designated under the international Ramsar Convention); and
- Sites of Community Importance (SCI).

1.4B.2 For the A19 Downhill Lane Junction Improvement Scheme, no Natura 2000 sites were identified in the vicinity of the Scheme. The nearest such sites are the Northumbria Coast Ramsar Site and Special Protection Area and the Durham Coast Special Area of Conservation, all located approximately 6.5 km east of Downhill Lane junction.

1.4B.3 If a project that is subject to an application for a DCO, when taken alone or with existing and known future projects, is likely to affect a European site and/or a European marine site, the applicant must provide a report with the application showing the site(s) that may be affected together with sufficient information to enable the competent authority to make an appropriate assessment, if required.

1.4B.4 Guidance published by the Planning Inspectorate[2] sets out a four-stage process for HRA. The first stage of HRA is a 'screening' process designed to determine whether it is necessary to proceed to the later stages. Highways England's own guidance[3] specifies that, in carrying out the screening process, consideration should be given to any Natura 2000 site within 2km of the route corridor or project boundary (or 30 km if bats are one of the qualifying features of the Natura 2000 site), plus any waterbody in the same catchment if the project crosses a river designated as a Natura 2000 site. In this case, the distance to the nearest Natura 2000 site is more than three times the threshold distance, there are no sites within 30 miles with bats as a qualifying feature, and the project does not cross a relevant designated river.

1.4B.5 Further consideration has been given to whether traffic-related effects such as changes in air quality or noise could affect the nearest Natura 2000 site. This has been done through examining the network of 'affected roads' beyond the extent of the scheme in which induced traffic changes are sufficient to warrant their being included in the study area for air and/or noise assessment. No such affected roads are within 2 km of the relevant Natura 2000 sites.

1.4B.6 It was therefore concluded that no screening for potential effects on Natura 2000 sites was necessary as there is no potential for the project to have significant effects on any Natura 2000 site. Further information is contained within Application Document reference TR010024_APP_6.10 'Habitat Regulation Assessment'.

1.4C Drainage related consents

1.4C.1 Highways England would only be required to apply for an Environmental Permit for activities over or within 8 m of the River Don (as it is a main river) as well as work within the floodplain of the River Don. No environmental Permit is currently required for the Scheme. A local watercourse drainage-related consent would also be required for any works within an ordinary watercourse, such as the River Don tributary.

1.4C.2 The Environment Agency and local authorities have been consulted throughout the development of the Scheme drainage strategy. However, it is not possible to apply for a permit or consent at this stage, as the detailed design of the Scheme is on-going.

[1] Document reference number TR010024/APP/6.10
[2] Planning Inspectorate, Advice Note 10 (Habitat Regulations Assessment); Version 7, January 2016.
[3] Design Manual for Roads and Bridges, Volume 11 (Environmental Assessment), Section 4 (Assessment of Implications on European Sites).