

SILVERTOWN TUNNEL

Volume 8

8.116 Schedule of Compliance with the National Policy Statement

April 2017

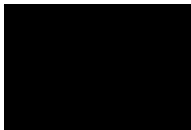
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Silvertown Tunnel

Schedule of Compliance with the National Policy Statement

Document Reference: 8.116

Author: Transport for London

Rev.	Date	Approved By	Signature	Description
0	05/04/2017	David Rowe (TfL Lead Sponsor)		For submission to the DCO Examination at Deadline 6

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Appendix A – Schedule of Compliance with the National Policy Statement

SUMMARY

S.1 Compliance with the National Policy Statement

- S.1.1 The table at Appendix A sets out each of the policies in the National Networks National Policy Statement ('the NPS') that are relevant to schemes on the national road network, and explains how the Silvertown Tunnel scheme complies with each requirement . The table includes references to application documents and other submissions made during the examination which provide further information on this compliance.
- S.1.2 A statement of the Scheme's compliance with planning policies, including key policies in the NPS and other relevant development plan policies, was submitted with the application (APP-094). In addition, the Environmental Statement submitted with the application includes an appendix which sets out how the Applicant's assessment complies with the requirements of the NPS (APP-044).

Appendix A. Schedule of Compliance with the National Policy Statement

NPS Ref	NPS requirement	How addressed	In which document and document reference number
Chapter 2			
The need for development of the national networks and Government's policy			
Text box on p. 9	<p>The Government will deliver national networks that meet the country's long term needs; supporting a prosperous and competitive economy and improving overall quality of life, as part of a wider transport system. This means:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Networks with the capacity and connectivity and resilience to support national and local economic activity and facilitate growth and create jobs. <input type="checkbox"/> Networks which support and improve journey quality, reliability and safety. <input type="checkbox"/> Networks which support the delivery of environmental goals and the move to a low carbon economy. <input type="checkbox"/> Networks which join up our communities and link effectively to each other. 	<p>The Silvertown Tunnel scheme is proposed in response to the three transport problems which exist at the Blackwall Tunnel: congestion, frequent closures and a lack of resilience (owing to the lack of proximate alternative crossings). These are set out in chapter 2 of the Case for the Scheme.</p> <p>The Planning Policy Compliance Statement at chapter 3 sets out how the Scheme meets the core NPS tests around congestion, supporting growth, resilience, reliability and connectivity. The Planning Policy Compliance Statement in chapter 4, together with this document, sets out how the Scheme supports the delivery of the environmental goals set out in the NPS.</p> <p>The aims of the Scheme align with the NPS summary of need in seeking to provide networks with capacity, connectivity and resilience.</p>	<p>Case for the Scheme APP-093</p> <p>Planning Policy Compliance Statement APP-094</p>
2.6	<p>There is also a need for development on the national networks to support national and local economic growth and regeneration, particularly in the most disadvantaged areas. Improved and new transport links can facilitate economic growth by bringing businesses closer to their workers, their markets and each other. This can help</p>	<p>Paragraph 3.2.5 of the Outline Business Case for the Scheme shows it has a positive economic outcome in terms of an NPV of £967m and an adjusted NPV of £1,225m (when reliability benefits are included) over 60 years. All user purposes (business, commuting and other) experience net user benefits.</p>	<p>Outline Business Case APP-100</p> <p>Regeneration and Development Impact Assessment APP-102</p>

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	rebalance the economy.	<p>The Regeneration and Development Impact Assessment sets out how the increase in cross-river trips, reduction in congestion and increase in access to customers would enable the economy of the Regeneration Area to be more competitive (paragraph 7.1.7).</p> <p>The Bus Strategy commits TfL to bringing forward a bus network which optimises opportunities for residents to access employment, and seeks to improve access in areas of deprivation and support the Convergence Agenda.</p>	Bus Strategy REP4-044
2.27	In some cases, to meet the need set out in section 2.1 to 2.11, it will not be sufficient to simply expand capacity on the existing network. In those circumstances new road alignments and corresponding links, including alignments which cross a river or estuary, may be needed to support increased capacity and connectivity.	As set out in chapters 2 and 3 of the Case for the Scheme in relation to road based river crossings in East London there is a lack of resilience. The crossings nearest to Blackwall Tunnel, the Woolwich Ferry and the Rotherhithe Tunnel cannot act as real alternatives when the Blackwall Tunnel is under strain: they too are old and capacity-constrained and lack the strategic connections to the wider network.	Case for the Scheme APP-093
Chapter 3			
Wider Government policy on the national networks			
3.3	In delivering new schemes, the Government expects applicants to avoid and mitigate environmental and social impacts in line with the principles set out in the NPPF and the Government's planning guidance. Applicants should also provide evidence that they have	The Environmental Statement sets out how environmental (and social) impacts will be mitigated, and how opportunities for enhancements have been considered. This is supported by the Mitigation Routemap which sets out what mitigation is being provided and where this is detailed e.g. the	<p>Environmental Statement APP-031</p> <p>Environmental Statement Appendix 9.H APP-065</p>

NPS Ref	NPS requirement	How addressed	In which document and document reference number
	<p>considered reasonable opportunities to deliver environmental and social benefits as part of schemes.</p>	<p>Code of Construction Practice ('the CoCP').</p> <p>The Monitoring and Mitigation Strategy sets out the approach to monitoring the traffic, air quality, noise and socio-economic impacts of the Silvertown Tunnel scheme in operation and the process for determining and implementing appropriate mitigation for any localised traffic and traffic-related impacts which arise as a result of the Scheme, both prior to and after opening.</p> <p>The Scheme will also support the delivery of a number of environmental and social benefits including improvements to the local bus and local cycling and walking networks, as well as potential biodiversity enhancements where they are practical.</p> <p>The Bus Strategy submitted at Deadline 6 sets out TfL's commitments to developing an improved cross-river bus network.</p> <p>The Design and Access Statement sets out the illustrative pedestrian and cycle improvements at 7.3, which will be delivered through compliance with the Design Principles at Table 2-2. These will be secured via a legal agreement with LB Newham.</p> <p>Biodiversity enhancements will be delivered through the Biodiversity Action Plan and Mitigation</p>	<p>(Biodiversity Action Plan and Mitigation Strategy)</p> <p>Mitigation Routemap Revision 2 REP4-041</p> <p>Monitoring and Mitigation Strategy REP4-046</p> <p>Bus Strategy REP6</p> <p>Design and Access Statement APP-095</p> <p>Design Principles Revision 2 REP4-037</p> <p>Transport Assessment APP-086</p> <p>Regeneration and Development Impact Assessment APP-102</p> <p>Draft DCO Revision 4 REP4-025</p>

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		<p>Strategy.</p> <p>Compliance with the Design Principles and the Biodiversity Action Plan and Mitigation Strategy is secured through a requirement in the draft DCO.</p>	
3.17	<p>The Government expects applicants to use reasonable endeavours to address the needs of cyclists and pedestrians in the design of new schemes. The Government also expects applicants to identify opportunities to invest in infrastructure in locations where the national road network severs communities and acts as a barrier to cycling and walking, by correcting historic problems, retrofitting the latest solutions and ensuring that it is easy and safe for cyclists to use junctions.</p>	<p>The Scheme includes improvements to walking and cycling routes in the locality with the potential for further enhancements to be made at the detailed design stage in line with the Design Principles. The development of the detailed design in line with the Design Principles is secured by a DCO Requirement.</p> <p>The Design and Access Statement sets out illustrative walking and cycling improvements to be carried out through the Scheme and the Design Principles at LSCP.03 sets out how the detailed design should seek to improve access for pedestrians and cyclists.</p>	<p>Design and Access Statement APP-095</p> <p>Design Principles Revision 2 REP4-037</p>
3.22	<p>Severance can be a problem in some locations. Where appropriate applicants should seek to deliver improvements that reduce community severance and improve accessibility.</p>	<p>Measures have been sought to seek to overcome the existing severance caused by the A102 Blackwall Tunnel approach road. The replacement of the existing footbridge with a new foot and cycle bridge at Boord Street will help to improve accessibility. The improvements to walking and cycling routes in the area, delivered as set out above, will also help to overcome this.</p>	<p>Draft DCO Revision 4 REP4-025</p> <p>Design Principles Revision 2 REP4-037</p>
3.24	<p>The Government will consider tolling as a means of funding new road capacity on the Strategic</p>	<p>This paragraph applies only to the Strategic Road Network (SRN) (i.e. the trunk roads and motorways</p>	

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	Road Network. New road capacity would include entirely new roads and existing roads where they are transformed by an improvement scheme.	for which the Secretary of State is the traffic authority – see footnote 7 on p. 6 of the NPS). The Scheme does not involve the SRN. The relevant policies relating to charging on 'other roads' are set out in paragraphs 3.25 and 3.26 (see below).	
3.25	River and estuarial crossings will normally be funded by tolls or road user charges.	Chapter 4 of the Case for the Scheme sets out how charging is vital for meeting the Scheme objectives by managing demand for the Silvertown Tunnel.	Charging Statement APP-097
3.26	Proposals for tolling or user charging to fund new capacity and/or manage demand on roads or proposed roads that do not form part of the Government's Strategic Road Network are a matter for local and other traffic authorities.	Chapter 4 of the Case for the Scheme sets out how charging is vital for meeting the Scheme objectives by managing demand for the Silvertown Tunnel. The Charging Statement sets out why a user charge is a critical part of the Applicant's proposals for the Scheme. The procedure for setting and varying the charges is set out in the Charging Policies and Procedures document.	Charging Statement APP-097 Case for the Scheme APP-093 Charging Policies and Procedures Revision 2 REP4-039
3.27	Where tolls or road user charges are proposed as part of a highways project that is the subject of a direction given under section 35 of the Planning Act 2008, the Government will expect the applicant to demonstrate that the proposals are consistent with this NPS, the relevant development plan and relevant statutory transport strategies and plans.	The charging proposals are consistent with the NPS and with the Mayor's Transport Strategy (MTS) and the relevant local development plans and transport strategies. The principle of charging is consistent with the Mayor's Transport Strategy (MTS) which states at Proposal 130 that TfL may 'consider managing the demand for travel through pricing incentives' and that the Mayor will consider imposing charges 'to support specific infrastructure improvements, such as river crossings'. Paragraph 397 of the MTS further explains that funding options for new	Planning Policy Compliance Statement APP-094

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		<p>crossing could include tolling on highway crossings to finance the schemes and manage traffic demand.</p> <p>Proposal 39 of the MTS supports the principle of the Scheme as it states that the Mayor will take forward a package of river crossings in east London, including 'A new fixed link at Silvertown to provide congestion relief to the Blackwall Tunnel and provide local links for vehicle traffic'.</p>	
Chapter 4			
General principles of assessment			
4.2	There is a presumption in favour of granting development consent for national networks NSIPs that fall within the need for infrastructure established in this NPS.	<p>The need for the Scheme has been established in the statutory development plan and is also consistent with the requirements of the NPS, as set out above. This need is also explained in Chapter 2 of the Case for the Scheme.</p> <p>The Planning Policy Compliance Statement at chapter 3 sets out how the Scheme meets the core NPS tests on need, focusing on congestion, supporting growth, resilience and connectivity.</p>	<p>Case for the Scheme APP-093</p> <p>Planning Policy Compliance Statement APP-094</p>
4.5	Requirement for applications normally to be supported by a business case prepared in accordance with Treasury Green Book principles and normally based on the Department for Transport's WebTAG guidance.	<p>The Outline Business Case document has been carried in accordance with Green Book principles, as set out at paragraph 3.1.1 of that document.</p> <p>The traffic modelling for the Scheme has been carried out following WebTAG guidance as set out</p>	<p>Outline Business Case APP-100</p> <p>Transport Assessment APP-086</p>

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		in the Transport Assessment.	Traffic Forecasting Report APP-105
4.6	Applications should usually be supported by a local transport model.	Section 1.5 of the Transport Assessment submitted with the Scheme sets out the approach to transport modelling and data, including the use of local transport models alongside the strategic LoRDM and RXHAM models. In addition to this information in the Transport Assessment, more information on the local models and how they have been used in relation to the strategic models can be found in the Applicant's response to FWQ TT1 (REP1-174) and the Commentary on the Interface between Strategic and Local Modelling.	Traffic Forecasting Report APP-105 Transport Assessment APP-086 Response to First Written Questions (Traffic and Transport) REP1-174 Commentary on Interface between Strategic and Local Modelling REP2-050
Environmental Impact Assessment			
4.15	Applications to be accompanied by an Environmental Statement which will consider the likely significant effects of the proposed development.	The Environmental Statement submitted with the application for the Scheme sets out an assessment of the likely significant environmental effects of the Scheme.	Environmental Statement APP-031
4.16 – 4.17	When considering significant cumulative effects, any environmental statement should provide information on how the effects of the applicant's proposal would combine and interact with the effects of other development (including projects for which consent has been granted, as well as those already in existence).	This is addressed in Chapter 17 of the Environmental Statement, which deals with cumulative effects.	Environmental Statement APP-031

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4.18 - 4.19	The NPS recognises that some DCO applications may not settle all aspects of the proposal in precise detail (paragraph 4.18). Where this is the case, the applicant should explain which elements of the proposal have yet to be finalised and the reasons why.	Chapter 4 of the Environmental Statement explains the flexibility sought (para 4.1.5) and the reasons for that flexibility. The individual chapters of the Environmental Statement take account of the parameters set for the Scheme in the assessment of effects.	Environmental Statement APP-031
Habitats Regulations Assessment			
4.22 to 4.25	Requirement under the Habitats Regulations on the Secretary of State to consider whether a project could have a significant effect on the objectives of a European site or any site to which the same protection is applied.	<p>A Stage 1 Habitat Regulation Assessment (HRA) report has been undertaken and agreed with Natural England, as set out at section 8 of that document.</p> <p>The outcome of the assessment is that the scheme is not likely to result in significant effects on the integrity of any Natura 2000 site, nor any of its qualifying features and that no further assessment is required.</p> <p>The HRA Report evaluated the potential impacts of the Scheme on Natura 2000 sites and found there to be no likely significant effect on such sites due to the Scheme.</p>	Environmental Statement Appendix 9.G Habitats Regulations Assessment (HRA) Report APP-064
Alternatives			
4.26	Applicants should comply with all legal requirements... on the assessment of alternatives.	<p>Chapter 3 of the Environmental Statement reviews the main alternatives that have been considered by the Applicant in developing the Scheme.</p> <p>Alternatives are also considered in chapters 3 and 5 of the Case for the Scheme.</p>	<p>Environmental Statement APP-031</p> <p>Case for the Scheme APP-093</p>

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4.27	All projects should be subject to an options appraisal.	Chapters 3 and 5 of the Case for the Scheme sets out how the Scheme developed and the options that were assessed, including a back-check of options.	Case for the Scheme APP-093
Criteria for Good Design			
4.28-4.34	The Secretary of State needs to be satisfied that National Networks Infrastructure Projects are sustainable and as aesthetically sensitive, durable, adaptable and resilient as they can be.	<p>The Design and Access Statement explains how the NPS has been taken into account in the design process to date, and how this has fed into the Design Principles.</p> <p>This latter document sets out the high level design aspirations for the above ground elements of the Scheme and identifies a series of Principles and a design assurance process for their detailed design. Compliance with the Design Principles is secured by a DCO Requirement.</p>	<p>Design and Access Statement APP-095</p> <p>Design Principles Revision 2 REP4-037</p> <p>Draft DCO Revision 4 REP4-025</p>
4.35	Applicants should be able to demonstrate how the design process was conducted and how the proposed design evolved.	Chapters 3 and 4 of the DAS sets out the design process to date. The DCO Requirements and the Design Principles will control the design of the Scheme moving forward, if the Scheme is granted consent.	<p>Design and Access Statement APP-095</p> <p>Design Principles Revision 2 REP4-037</p> <p>Draft DCO Revision 4 REP4-025</p>
Climate change adaptation			
4.42	The applicant should take into account the potential impacts of climate change using the latest UK Climate Projections available at the time and ensure any environment statement that is	Resilience to climate change has been taken into account in the Flood Risk Assessment (document reference 6.1 Appendix 16.A) which requires the Scheme's drainage design to take account of	Environmental Statement Flood Risk Assessment (Appendix 16.A) APP-077

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	<p>prepared identifies appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure. Should a new set of UK Climate Projections become available after the preparation of any environment statement, the Examining Authority should consider whether they need to request additional information from the applicant.</p>	<p>it.Compliance with the FRA in the implementation of the Scheme is secured by Requirement 11 of the dDCO.</p> <p>Allowance for climate change has been incorporated into the drainage design by the inclusion of potential changes to peak rainfall intensity for the '2080s' (the years 2070 to 2115), in accordance with Environment Agency guidance dated 12 April 2016.</p> <p>The Scheme's design accommodates a 30% climate change allowance, with additional flood risk checks carried out for 40%, as recommended for the upper allowance.</p> <p>The climate change allowances are based on predictions of anticipated changes to peak river flow, peak rainfall intensity and sea level rise, which means that the drainage design will focus on the attenuation of surface water runoff prior to discharge to watercourses and the existing sewerage network, as described in paragraph 4.5.38 of the ES (APP-031) and in paragraph S1.10 of the Flood Risk Assessment (APP-077).</p> <p>Surface water drainage is also secured by Requirement 8 of the dDCO.</p>	<p>ES Chapter 16 Surface Water Quality and Flood Risk APP-031</p> <p>Draft DCO Revision 4 REP4-025</p> <p>Sustainability Statement APP-091</p>

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4.43	<p>The applicant should demonstrate that there are no critical features of the design of new national networks infrastructure which may be seriously affected by more radical changes to the climate beyond that projected in the latest set of UK climate projections. Any potential critical features should be assessed taking account of the latest credible scientific evidence on, for example, sea level rise (e.g. by referring to additional maximum credible scenarios such as from the Intergovernmental Panel on Climate Change or Environment Agency) and on the basis that necessary action can be taken to ensure the operation of the infrastructure over its estimated lifetime through potential further mitigation or adaptation.</p>	<p>Beyond flooding and drainage which are discussed above there are no critical features which could be affected by climate change.</p> <p>The Energy and Carbon Statement sets out the Applicant's commitment to minimise CO2 emissions during the construction, demolition and excavation activities of the Scheme (see Chapters 5, 6 and 7). This is to be achieved through a variety of measures including materials selection and the commitments to the use of the river for the transport of specified materials, as well as the approach to waste management, all of which are reported in more detail under separate headings within that statement and feed into the mitigation measures set out in the Environmental Statement.</p> <p>The Energy and Carbon Statement explains the consistency of this approach with the Government's goal of reducing greenhouse gas emissions under the Climate Change Act 2008 – the benchmark set out in the NPS.</p>	<p>Energy and Carbon Statement APP-089</p> <p>Sustainability Statement APP-091</p>
4.44	<p>Any adaptation measures should be based on the latest set of UK Climate Projections, the Government's national Climate Change Risk Assessment and consultation with statutory consultation bodies. Any adaptation measures must themselves also be assessed as part of any environmental impact assessment and included in the environmental statement, which should set out how and where such measures are proposed</p>	<p>The design of the Scheme makes full allowance for the assessed effect of climate change projections as set out above at 4.42.</p> <p>Consultation with statutory bodies such as the Environment Agency has been carried out and is recorded in the relevant Statements of Common Ground and the Environmental Statement.</p>	<p>Sustainability Statement APP-091</p> <p>Environmental Statement APP-031</p> <p>Mitigation Routemap Revision 2 REP4-041</p>

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	to be secured.	The Mitigation Routemap sets out in tabular form the mitigation measures proposed within the Environmental Statement and how they are secured.	
Pollution Control			
4.52	There is a statutory duty on applicants to consult the Marine Management Organisation.	<p>The MMO was formally consulted as a S.42 consultee and a response received on 25.11.16 Regular meetings have been held, full details of all engagement is included in the Statement of Common Ground (the 'SoCG') with the MMO submitted at Deadline 5.</p> <p>The draft DCO includes a Deemed Marine Licence at Schedule 12.</p>	SoCG 004 MMO REP5-006 Draft DCO Revision 4 REP4-025
4.54	Applicants are encouraged to begin pre-application discussions with the Environment Agency as early as possible. It is however expected that an applicant will have first thought through the requirements as a starting point for discussion. Some consents require a significant amount of preparation; as an example, the Environment Agency suggests that applicants should start work towards submitting the permit application at least 6 months prior to the submission of an application for a Development Consent Order, where they wish to parallel track the applications. This will help ensure that applications take account of all relevant environmental considerations and that the relevant regulators are able to provide timely	<p>Regular meetings and discussions have been held with the Environment Agency seeking to agree a Statement of Common Ground which was submitted in draft at deadlines 1 and 3. Discussions have taken place regarding the proposed disapplication within the DCO of certain consents and the need for pollution controls for activities such as dewatering, together with the need for any other consents not disapplied through the DCO.</p> <p>The terms of the Protective Provisions for inclusion in the DCO (Schedule 13) for the benefit of the Environment Agency are being discussed between the parties, but the Applicant agrees with the overall principle that a set of provisions should be</p>	<p>Environment Agency SoCG005 REP3-011</p> <p>Draft DCO Revision 4 REP 4-025 Schedule 13</p>

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	advice and assurance to the Examining Authority.	included. Certain plans required to be produced under the CoCP will be approved by or consulted upon with them, pursuant to a DCO Requirement.	
4.55	<p>The Secretary of State should be satisfied that development consent can be granted taking full account of environmental impacts. This will require close cooperation with the Environment Agency and/or the pollution control authority, and other relevant bodies, such as the MMO, Natural England, Drainage Boards, and water and sewerage undertakers, to ensure that in the case of potentially polluting developments:</p> <ul style="list-style-type: none"> <input type="checkbox"/> the relevant pollution control authority is satisfied that potential releases can be adequately regulated under the pollution control framework; and <input type="checkbox"/> the effects of existing sources of pollution in and around the project are not such that the cumulative effects of pollution when the proposed development is added would make that development unacceptable, particularly in relation to statutory environmental quality limits. 	<p>The Environmental Statement assesses the likely significant environmental impacts of the Scheme and where necessary, identifies the necessary mitigation measures (as summarised in the Mitigation Routemap).</p> <p>Many of the measures pertinent to pollution are set out in the CoCP (compliance with which is secured by a DCO Requirement) that commits the contractor to a series of measures which would regulate the pollution impact of the development during construction. In particular, the Applicant will require the contractor to have an Environmental Management System in place in accordance with the relevant British Standard and the contractor will be obliged to produce and maintain a Construction Environmental Management Plan together with a series of detailed Environmental Management Plans.</p> <p>Those plans are required to be the subject of on-going review and/or approval, as detailed and secured by the CoCP and DCO.</p> <p>There has been close cooperation with the relevant bodies, SoCGs were submitted at deadlines 1, 3, 4 and 5 with Natural England, deadline 1 with</p>	<p>Environmental Statement APP-031</p> <p>Mitigation route map Revision 2 REP4-041</p> <p>CoCP Revision 3 REP4—035</p> <p>Draft DCO Revision 4 REP4-025</p> <p>SoCG001 Natural England Revision 2 REP4-063</p> <p>SoCG040 Thames Water REP1-149</p> <p>SoCG004 MMO updated REP5-006</p>

NPS Ref	NPS requirement	How addressed	In which document and document reference number
		Thames Water and with the MMO at deadlines 2 and 5, and relevant protective provisions are included in Schedule 13 of the dDCO.	
Common law nuisance and statutory nuisance			
4.58	It is very important that during the examination of a nationally significant infrastructure project, possible sources of nuisance under section 79(1) of the 1990 Act, and how they may be mitigated or limited are considered by the Examining Authority so they can recommend appropriate requirements that the Secretary of State might include in any subsequent order granting development consent.	<p>A Statement in Respect of Statutory Nuisance is submitted as part of the application documentation. The document sets out where a statutory nuisance under the Environmental Protection Act 1990 could be engaged by the Scheme but that, with the proposed Scheme mitigation in place, it is not expected that there would be a breach of the Act during construction or operational activities.</p> <p>The CoCP sets out how construction impacts will be mitigated.</p>	<p>Statement in Respect of Statutory Nuisance APP-088</p> <p>CoCP Revision 3 REP4--035</p>
Safety			
4.61	The applicant should undertake an objective assessment of the impact of the proposed development on safety including the impact of any mitigation measures. This should use the methodology outlined in the guidance from DfT (WebTAG) and from the Highways Agency.	<p>Accident changes as a result of the Scheme have been analysed using the Department for Transport's (DfT) Cost and Benefits to Accidents – Light Touch (COBA-LT) software. COBA-LT is a computer programme developed by the DfT to undertake the analysis of the impact on accidents as part of economic appraisal of a road scheme as is set out in unit A4.1 of DfT's Transport Analysis Guidance (TAG).</p> <p>The appraisal period used for the assessment has been the standard of 60 years assumed in DfT's TAG for major highway infrastructure programmes. The outcome of the analysis with the Scheme in</p>	<p>Environmental Statement APP-031</p> <p>CoCP Revision 3 REP4--035</p> <p>Response to first written questions: FWQ Health HSS Report REP1-171</p>

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		<p>place was a reduction in accidents, and therefore no mitigation measures were deemed necessary nor subsequently assessed.</p> <p>The adopted approach has therefore been completed in accordance with TAG, as specified under paragraph 4.61 of the NPSNN. Further details, including the outcomes of the assessment, can be found in Appendix E of the Economic Assessment Report (Document 7.8.1) [APP-101].</p> <p>Further details on how the Scheme has taken into account safety in its design can be found in the Applicant's response to the Examining Authority;s First Written Questions HSS.2, 3, 4, and 5</p> <p>The CoCP requires a Construction Traffic Management Plan to be approved by the relevant planning authority. The CoCP requires that the CTMP ensures that safety measures are implemented to minimise road-related risks. The Contractor will specify the highest current standards in construction vehicle safety, including visibility. This includes but is not limited to FORS Gold (Fleet Operator Recognition Scheme), CLOCS (Construction Logistics and Cycle Safety), SLS (Safety Lorry Scheme) and WRRR (Work Related Road Risk) scheme.</p>	
4.62	They should also put in place arrangements for undertaking the road safety audit process. Road safety audits are a mandatory requirement for all	As set out in Chapter 4 of the Environmental Statement and in response to the Examining Authority's First Written Question HSS.3	Environmental Statement APP-031

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	trunk road highway improvement schemes in the UK (including motorways).	independent Road Safety Audit (RSA) has been undertaken in accordance with the appropriate design standards to evaluate the Scheme proposals and identify any potential concerns. Mitigation measures identified by the RSA have been incorporated in the Reference Design proposals. The RSA work completed to date is the initial phase of a multi-staged process that will continue as the design definition matures through the Detailed Design process and Scheme implementation.	Response to first written questions: FWQ Health HSS Report REP1-171
4.64	<p>The applicant should be able to demonstrate that their scheme is consistent with the Highways Agency's Safety Framework for the Strategic Road Network and with the national <i>Strategic Framework for Road Safety</i>. Applicants will wish to show that they have taken all steps that are reasonably required to:</p> <ul style="list-style-type: none"> <input type="checkbox"/> minimise the risk of death and injury arising from their development; <input type="checkbox"/> contribute to an overall reduction in road casualties; <input type="checkbox"/> contribute to an overall reduction in the number of unplanned incidents; and <input type="checkbox"/> contribute to improvements in road safety for walkers and cyclists. 	<p>The Silvertown Tunnel will not form part of the Strategic Road Network so the Highways Agency Framework does not apply. However road safety is a key priority for the Mayor of London and the Applicant. The Road Safety Action Plan for London sets out how the Applicant and the London boroughs will build on progress in making roads safer and sets out the plan for reducing the number of killed and seriously injured road casualties by a further 40 per cent by 2020.</p> <p>In accordance with WebTAG guidance, an assessment of the impact of the Scheme on safety has been undertaken. The COBA-LT methodology has been used to undertake an analysis of future accident levels with the Scheme in operation, and this analysis can be found in Appendix E of the in the Economic Assessment Report (Document</p>	<p>Environmental Statement APP-031</p> <p>Response to first written questions: FWQ Health HSS Report REP1-171</p> <p>Economic Assessment Report APP-101</p>

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		<p>7.8.1) [APP-101].</p> <p>Whilst the addition of a new link in the strategic network is likely to introduce new safety risks in the form of new junctions and links, these risks can be effectively mitigated by designing the new link to the latest safety standards and guidance. The overall assessment of the safety implications using COBA-LT indicates that the Scheme would have a marginally positive impact on accident levels (equating to a reduction of 233 accidents over a 60 year period, or a reduction of 0.15% compared to the Reference Case). This accident reduction applies across a study area that represents the area where the biggest changes in traffic flows are expected as a result of the scheme and includes almost 8,000 links; it includes strategic roads including the A2, A12, A13, A1011 and A1020, and the Dartford Crossing.</p> <p>An independent Stage 1 RSA has been undertaken for the Scheme during the Reference Design stage, in accordance with the TfL Procedure SQA-0170. The safety implications of the Scheme have been given due consideration at this stage of the Scheme development and this will continue to be the case through the Detailed Design process and Scheme implementation.</p> <p>Paragraphs 4.5.78 to 4.5.82 of the Environment</p>	

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		<p>Statement (APP-031) set out the considerations that have been given to ensuring road safety.</p> <p>Further details on how the Scheme has taken into account safety in its design can be found in the Applicant's response to the Examining Authority;s First Written Questions HSS.2, 3, 4, and 5 (REP1-171).</p>	
4.65	<p>They will also wish to demonstrate that:</p> <ul style="list-style-type: none"> <input type="checkbox"/> they have considered the safety implications of their project from the outset; and <input type="checkbox"/> they are putting in place rigorous processes for monitoring and evaluating safety. 	<p>This is set out in Chapter 4 of the Environmental Statement. The Applicant has its own well established frameworks, policies and processes for monitoring and evaluating the safety of its road network including for new schemes such as the Silvertown tunnel. This includes the following documents and supporting information: Safe Streets for London, Our Six Road Safety Commitments, Our Approach, The Road Safety Action Plan for London 2020, Road Risk and Vulnerable User Working Paper and Cycle Safety Action Plan.</p> <p>The Applicant has applied and will continue to apply the principles of road safety audit (RSA) at all stages to monitor and evaluate the safety of the scheme in accordance with TfL SQA-0170 Road Safety Audit.</p> <p>The Applicant routinely monitors the performance of new infrastructure on the TLRN to ensure that</p>	<p>Environmental Statement APP-031</p> <p>Response to first written questions: FWQ Health HSS Report REP1-171</p>

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		<p>scheme safety objectives are being met, using the Traffic Accident Diary System (TADS). Changes to the number and severity of collisions involving any and all road users can trigger further road safety audit and improvements.</p> <p>The Applicant has also established a Tunnel Design and Safety Consultation Group (TDSCG) in accordance with the Design Manual for Roads and Bridges (DMRB) BD78/99 Appendix F. This ensures the involvement of key stakeholders, including the emergency services, in crucial decisions in the design and implementation of the scheme related to tunnel safety.</p> <p>TfL applies the Road Tunnel Safety Regulations 2007 to the scheme. Whilst these do not strictly apply to the Applicant's tunnels, as they are not on the trans-European road network, the Applicant adopts the regulations as best practice for all of its tunnels including Silvertown. This sets minimum standards for the safe design, operation and management of road tunnels. In accordance with the regulations, the Applicant will act as the Administrative Authority and Tunnel Manager for the Scheme, and appoint a Tunnel Safety Officer to arrange and coordinate safety related matters and give expert advice on road tunnel safety. Further details on how the Scheme has taken into</p>	

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		account safety in its design can be found in the Applicant's response to the Examining Authority's First Written Questions HSS.2, 3, 4, and 5 (REP1-171).	
Security considerations			
4.75	Government policy is to ensure that, where possible, proportionate protective security measures are designed into new infrastructure projects at an early stage in the project development. Where applications for development consent for infrastructure covered by this NPS relate to potentially 'critical' infrastructure, there may be national security considerations.	<p>The scheme is not considered to be "critical infrastructure" for the purposes of national security. Nevertheless, and as set out in the Applicant's response to the Examining Authority's First Written Questions HSS.7, security is of paramount concern for the Applicant and in particular the protection of the tunnel users, operational staff and the asset. The Reference Design has been developed to inform the scheme assessment and has considered the principles of protection of users and asset security and protection. .</p> <p>During the development of the Reference Design of the Scheme a Tunnel Design Safety Consultation Group (TDSCG) has been convened in accordance with the Highways England guidance recommendations of BD78/99; Design of Road Tunnels. The consultation group has included representatives from the emergency responders and relevant planning agencies (including the London Fire and Emergency Planning Authority, LFEPA), and has considered a broad range of tunnel operation matters, including those related to security, which have informed the Reference Design of the Scheme.</p>	<p>Design and Access Statement APP-095</p> <p>Design Principles Revision 2 REP4-037</p> <p>FWQ Health HSS Report REP1-171</p> <p>Environmental Statement APP-031</p> <p>DCO Revision 4 REP4-025</p>

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		<p>The TDSCG group and its remit will continue through the subsequent detailed design stage, to ensure that operational safety and security measures as deemed necessary by the Group are appropriately considered and included in the detailed design.</p> <p>Section 4.5.83 of the ES (Security Considerations) (APP-031) presents the detailed design commitment to the provision of a secure infrastructure asset with reference to relevant bodies and guidance, and the Scheme design has evolved by embedding best practice including 'secured by design' principles to design out crime. This is secured by Design Principle LSCP.03, which requires the detailed design to be developed with reference to safety and security including Secured by Design, Design Council CABE guidance and the Centre for the Protection of National Infrastructure and National Counter-Terrorism Security Office's Protecting Crowded Places design guidance.</p>	
Health			
4.81	As described in the relevant sections of this NPS, where the proposed project has likely significant environmental impacts that would have an effect on human beings, any environmental statement should identify and set out the assessment of any likely significant adverse health impacts.	This requirement is fulfilled by the Environmental Statement at chapter 18 and the Health and Equalities Impact Assessment (the HEqIA) which contains a comprehensive assessment of the health and equalities effects of the Scheme during construction and operation. A full summary of the assessed effects is set out in Tables 15-1 to 15-4	Environmental Statement APP-031 Health and Equalities Impact Assessment APP-090

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		<p>of the HEqIA.</p> <p>The operational air quality health effects have also been further considered in the Updated Air Quality and Health Assessment submitted at Deadline 2.</p> <p>During construction, no significant adverse effects, after mitigation measures, were identified, whilst access to construction jobs is assessed to have potential significant benefits. Similarly, during operation, significant benefits in terms of access to jobs and services, and reduced driver stress are identified and no significant adverse effects, after mitigation measures, were identified. Some impacts on personal affordability as a result of user charging are identified for low income groups but the HEqIA identifies that the opportunity for improved public transport using the bus lane within the tunnel would be of particular benefit to those income groups and would serve to offset this impact through the provision of new and extended public transport routes.</p> <p>The HEqIA concludes that the health impacts attributable to likely changes in air quality resulting from the operation of the Scheme, are expected to be negligible.</p> <p>The HEqIA in chapter 10 sets out noise impacts and mitigation. It demonstrates that the majority of changes to noise levels are negligible. Mitigation</p>	<p>Updated Air Quality and Health Assessment REP2-041</p>

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		measures have been included in the Scheme design and include 1.8m high noise barriers and low noise road surfacing.	
4.82	The applicant should identify measures to avoid, reduce or compensate for adverse health impacts as appropriate. These impacts may affect people simultaneously, so the applicant, and the Secretary of State (in determining an application for development consent) should consider the cumulative impact on health.	As established in the HEqIA, and the Updated Air Quality and Health Assessment, after mitigation measures, no significant adverse effects on health from the Scheme have been identified.	Health and Equalities Impact Assessment APP-090 Updated Air Quality and Health Assessment (REP2-041)
Chapter 5			
Air quality			
5.7	The environmental statement should describe: <input type="checkbox"/> existing air quality levels; <input type="checkbox"/> forecasts of air quality at the time of opening, assuming that the scheme is not built (the future baseline) and taking account of the impact of the scheme; and <input type="checkbox"/> any significant air quality effects, their mitigation and any residual effects, distinguishing between the construction and operation stages and taking account of the impact of road traffic generated by the project.	This guidance has been fully taken into account and applied in Chapter 6 of the Environmental Statement. Information on the existing air quality constraints has been obtained including monitoring information from within Air Quality Management Areas (AQMA) and Air Quality Focus Areas (AQFA). The air quality at the time of opening (taken to be 2021 for the purpose of the assessment) has been defined, assuming both that the scheme is not built (the Reference Case) and taking account of the impact of the scheme (the Assessed Case). The assessment distinguishes between construction and operational impacts, describes	Environmental Statement APP-031 Appendices 6.A to 6.E APP-049-AAP-053 Updated Air Quality and Health Assessment REP2-041

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		significant air quality effects, considers their mitigation and sets out the residual effects. The assessment of the operational impacts takes into account changes in road traffic flows generated by the Scheme.	
5.8	Defra publishes future national projections of air quality based on evidence of future emissions, traffic and vehicle fleet. Projections are updated as the evidence base changes. Applicant's assessment should be consistent with this but may include more detailed modelling to demonstrate local impacts.	<p>The Air Quality assessment has taken into account the most up to date versions of Defra modelling tools as of the time of the assessment. More detailed modelling has also been applied, in particular, the Highways England guidance regarding air quality projections, which adopts a more precautionary approach than utilising the projections directly from the Defra's tools.</p> <p>Variable temporal emission rates have also been used in the ADMS-Roads dispersion modelling, to account for the diurnal traffic profile and therefore more accurately represent changes in pollutant concentrations over the course of the day.</p>	<p>Environmental Statement Chapter 6. APP-031 (as updated in Pre-Examination Period)</p> <p>Updated Air Quality and Health Assessment REP2-041</p>
5.9	In addition to information on the likely significant effects of a project in relation to EIA, the Secretary of State must be provided with a judgement on the risk as to whether the project would affect the UK's ability to comply with the Air Quality Directive.	An assessment has been carried out to determine the risk of the project affecting the UK's ability to comply with the Air Quality Directive. This has been done in accordance with Highways England's Interim Advice Note 175/13.	<p>Environmental Statement Chapter 6 APP-031 (as updated in Pre-Examination Period)</p> <p>Applicant's Response to Rule 17 Request REP1-093</p>

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5.11	<p>Air quality considerations are likely to be particularly relevant where schemes are proposed:</p> <ul style="list-style-type: none"> <input type="checkbox"/> within or adjacent to Air Quality Management Areas (AQMA); roads identified as being above Limit Values or nature conservation sites (including Natura 2000 sites and SSSIs, including those outside England); and <input type="checkbox"/> where changes are sufficient to bring about the need for a new AQMAs or change the size of an existing AQMA; or bring about changes to exceedances of the Limit Values, or where they may have the potential to impact on nature conservation sites. 	<p>AQMAs and the likely Scheme impacts upon them have been fully taken into account in this assessment. The assessment has gone further in considering Air Quality Focus Areas established by the Greater London Authority, sensitive areas highlighted by local authority Environmental Health Officers and roads identified by Defra for the purpose of reporting compliance with the EU Directive on air quality.</p> <p>There is one designated nature conservation site within 200m of the affected road network. This site was assessed following guidance in the DMRB.</p> <p>A number of AQMAs cover the study area for exceedances of annual mean NO₂ and 24-hour PM₁₀ concentrations. Consideration has been given to whether the Scheme will create new AQMAs or change the size of an existing AQMA.</p>	<p>Environmental Statement Chapter 6 APP-031</p>
5.12	<p>The Secretary of State must give air quality considerations substantial weight where, after taking into account mitigation, a project would lead to a significant air quality impact in relation to EIA and / or where they lead to a deterioration in air quality in a zone/agglomeration.</p>	<p>The assessment has provided all the necessary information for the Secretary of State to give air quality the appropriate consideration. The potential for a significant air quality impact of the Scheme has been addressed by carrying out a detailed assessment using the results of monitoring and modelling. The significance of the changes in concentrations identified has been determined using guidance designed specifically for assessing road schemes, as detailed in Highways England's Interim Advice Note 174/13.</p>	<p>Environmental Statement Chapter 6 APP-031</p> <p>Applicant's Response to Rule 17 Request REP1-093</p>

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		<p>The assessment has also determined whether the scheme would risk the project affecting the UK's ability to comply with the Air Quality Directive. This has been done in accordance with Highways England's Interim Advice Note 175/13.</p>	
5.13	<p>The Secretary of State should refuse consent where, after taking into account mitigation, the air quality impacts of the scheme will:</p> <ul style="list-style-type: none"> <input type="checkbox"/> result in a zone/agglomeration which is currently reported as being compliant with the Air Quality Directive becoming non-compliant; or <input type="checkbox"/> affect the ability of a non-compliant area to achieve compliance within the most recent timescales reported to the European Commission at the time of the decision. 	<p>The Scheme lies within the Greater London agglomeration, which is currently non-compliant with the Air Quality Directive. In terms of the first bullet point, therefore, the Scheme will not cause the Greater London agglomeration to become non-compliant.</p> <p>In terms of the second bullet point, a compliance risk assessment has been undertaken in accordance with the guidance in IAN 175/13 to identify whether the Scheme will affect the ability of the Greater London agglomeration zone to achieve compliance within the most recent timescales reported by Defra to the European Commission. The results of the compliance risk assessment are that the Scheme does not delay the Greater London Urban Agglomeration from achieving compliance within the most recent timescales reported to the European Commission by Defra.</p> <p>Defra are in the process of updating their air quality action plans (as a result of the clientearth judgement) due to be published in draft in April 2017, which will set out how the Government</p>	<p>Environmental Statement Chapter 6 APP-031</p> <p>Applicant's Response to Rule 17 Request REP1-093</p> <p>Monitoring and Mitigation Strategy REP4-046</p>

NPS Ref	NPS requirement	How addressed	In which document and document reference number
		<p>intends to achieve compliance with the EU Limit Values in the quickest time possible. The scheme results in an overall improvement in air quality at receptors with the highest pollutant concentration and will therefore support the achievement of compliance with the annual mean nitrogen dioxide EU Limit Value. In addition the Monitoring and Mitigation Strategy is in place post operation which will provide the mechanism to ensure that the scheme impacts are not materially worse than reported in the ES.</p>	
5.14	<p>The Secretary of State should consider whether mitigation measures put forward by the applicant are acceptable. A management plan may help codify mitigation at this stage. The proposed mitigation measures should ensure that the net impact of a project does not delay the point at which a zone will meet compliance timescales.</p>	<p>Mitigation measures are set out at Environmental Statement section 6.5 and summarised in tabular form in the Mitigation Routemap.</p> <p>The air quality assessment demonstrates that the Scheme does not delay the Greater London Urban Agglomeration from achieving compliance within the most recent timescales reported to the European Commission by Defra.</p>	<p>Environmental Statement APP-031</p> <p>Applicant's Response to Rule17 Request REP1-093</p> <p>Mitigation Routemap Revision 2 REP4-041</p>

NPS Ref	NPS requirement	How addressed	In which document and document reference number
5.15	<p>Mitigation measures may affect the project design, layout, construction, operation and/or may comprise measures to improve air quality in pollution hotspots beyond the immediate locality of the scheme. Measures could include, but are not limited to, changes to the route of the new scheme, changes to the proximity of vehicles to local receptors in the existing route, physical means including barriers to trap or better disperse emissions, and speed control. The implementation of mitigation measures may require working with partners to support their delivery.</p>	<p>Chapter 6 of the Environmental Statement sets out the detailed assessment that has been carried out of both construction and operational impacts. Pollution hotspots have been identified (Air Quality Focus Areas) and impacts across a large area assessed.</p> <p>Mitigation measures for air quality impacts arising during the construction phase are set out in the Code of Construction Practice which includes the requirement for an Air Quality Management Plan to be submitted for approval to the relevant planning authorities. The implementation of these measures is secured by DCO requirement 5.</p> <p>The user charge is the principal mitigation measure which will be used to manage air quality impacts. Air quality impacts during operation will be monitored and the user charge will be used to regulate traffic flows and manage the air quality impacts arising from these flows. This is explained in the document Charging Policy and Procedures</p> <p>The Monitoring and Mitigation Strategy sets out an extensive regime for monitoring local air quality effects arising from traffic once the Scheme has opened to public use. The monitoring outputs will be used in an annual review by a firm of experts which will determine whether the scheme has</p>	<p>Environmental Statement, Chapter 6 (APP-031)</p> <p>Updated Air Quality and Health Assessment (REP2-041)</p> <p>Charging Policies and Procedures Revision 2 (REP4-039)</p> <p>Monitoring and Mitigation Strategy (REP4-046)</p>

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		materially worsened air quality, TfL is required to prepare a scheme of mitigation and submit this to the Mayor for approval.	
Carbon emissions			
5.17	Carbon impacts will be considered as part of the appraisal of scheme options (in the business case), prior to the submission of an application for DCO. Where the development is subject to EIA, any Environmental Statement will need to describe an assessment of any likely significant climate factors in accordance with the requirements in the EIA Directive. It is very unlikely that the impact of a road project will, in isolation, affect the ability of Government to meet its carbon reduction plan targets. However, for road projects applicants should provide evidence of the carbon impact of the project and an assessment against the Government's carbon budgets.	<p>These requirements are fulfilled in the Air Quality chapter of the Environmental Statement and further detail is provided in the Energy and Carbon Statement The latter document reports (paragraph S.1.4) that a number of carbon saving measures are incorporated into the construction phase of the project and, similarly, that key energy saving measures are also proposed for the operation of the built development (paragraph S.1.7). At paragraph 6.6 of the air quality chapter of the ES, the regional assessment shows that CO₂ emissions would not change significantly between the base year and opening year, with and without the Scheme.</p> <p>The Energy and Carbon Statement provides a summary of the amount of construction and operational CO₂ associated with the Scheme in relation to the five-yearly carbon budgets set by the government to reach the target set by the Climate Change Act, in Section 5.3, 6.6 and 7.2 of the report.</p>	<p>Environmental Statement chapter 6 APP-031</p> <p>Energy and Carbon Statement APP-089</p>
Biodiversity and ecological conservation			

NPS Ref	NPS requirement	How addressed	In which document and document reference number
		<p>2km of the Scheme, with the exception of commuting/foraging bats. However, no potential roosting features were found in relation to these species within the Order Limits. Relevant mitigation measures are detailed in the CoCP and the ES.</p> <p>The Scheme was found to have no impact on nationally designated Sites of Special Scientific Interest (within 2km of the Scheme sites).</p> <p>An Extended Phase 1 Habitat Survey was undertaken to identify any nationally protected species within the Order Limits. Wild birds and bats were recorded. Although black redstart were not recorded within the Order Limits, there are previous records of the species nesting and foraging in the area. Precautionary mitigation measures are detailed in the CoCP.</p>	<p>063</p> <p>CoCP Revision 3 REP4-035</p>
5.23	<p>The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.</p>	<p>In accordance with the NN NPS the terrestrial ecology chapter of the ES has clearly set out any likely significant effects on internationally, nationally and locally designated sites of ecological or geological conservation importance on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity.</p> <p>The Scheme will conserve and enhance its biodiversity value through the identification and mitigation of its significant ecological impacts.</p>	<p>Environmental Statement APP-031</p> <p>CoCP Revision 3</p>

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		<p>Identification of effects has been undertaken through desk study and survey of the Order Limits, as set out in Section 9.4 of the ES Terrestrial Ecology chapter. Significant adverse effects identified have been mitigated within the Scheme design, as detailed in Section 9.5 of the ES Terrestrial Ecology chapter, the CoCP and Appendix 9.H: Biodiversity Action Plan and Mitigation Strategy.</p>	<p>REP4-035</p> <p>Environmental Statement Appendix 9.H: Biodiversity Action Plan and Mitigation Strategy Revision 1 REP4-034</p>
5.25	<p>As a general principle, and subject to the specific policies below, development should avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives. The applicant may also wish to make use of biodiversity offsetting in devising compensation proposals to counteract any impacts on biodiversity which cannot be avoided or mitigated. Where significant harm cannot be avoided or mitigated, as a last resort, appropriate compensation measures should be sought.</p>	<p>Mitigation, outlined in Environmental Statement Section 9.5 has been incorporated into the Scheme design to reduce significant impacts on important ecological features.</p> <p>Residual significant effects will be mitigated within the Order Limits or offset within the wider area as set out in Section 9.6 and according to the principles set out in Appendix 9.H: Biodiversity Action Plan and Mitigation Strategy. Compliance with this document is secured by the draft DCO.</p> <p>Through a legal agreement with the host boroughs TfL will pay a financial contribution to RB Greenwich to be used only for the purpose of offsetting habitat loss outside of the order limits in line with the parameters set in the Biodiversity Action Plan and Mitigation Strategy (Environmental Statement Appendix 9.H). As explained in that document, the implementation of the Biodiversity Action Plan and Mitigation Strategy will be</p>	<p>Environmental Statement APP-031</p> <p>Environmental Statement Appendix 9.H: Biodiversity Action Plan and Mitigation Strategy REP4-034</p> <p>Design Principles Revision 2 REP4-037</p> <p>Draft DCO Revision 4 REP4-025</p> <p>Legal agreement with RB Greenwich</p>

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		undertaken in consultation with the Design Review Panel and other relevant stakeholders.	
5.31	Sites of regional and local biodiversity and geological interest (which include Local Geological Sites, Local Nature Reserves and Local Wildlife Sites and Nature Improvement Areas) have a fundamental role to play in meeting overall national biodiversity targets, in contributing to the quality of life and the well-being of the community, and in supporting research and education. The Secretary of State should give due consideration to such regional or local designations. However, given the need for new infrastructure, these designations should not be used in themselves to refuse development consent.	<p>All of the ecological features are evaluated as being of site – level importance or local importance, whilst the potential for black redstart was assigned as being of county level importance (Table 9-8 Environmental Statement).</p> <p>The ES assesses the impact on these features and mitigation has been built into the Scheme design. This includes weekly black redstart monitoring by a specialist during the breeding season as set out in the CoCP.</p>	<p>Environmental Statement APP-031</p> <p>CoCP Revision 3 REP4-035</p>
5.33	Development proposals potentially provide many opportunities for building in beneficial biodiversity or geological features as part of good design. When considering proposals, the Secretary of State should consider whether the applicant has maximised such opportunities in and around developments. The Secretary of State may use requirements or planning obligations where appropriate in order to ensure that such beneficial features are delivered.	<p>For the operational phase, a commitment is proposed to a scheme – specific Biodiversity Action Plan (BAP) and Mitigation Strategy (Document Reference 6.3.9.8) which contains a series of measures, secured through the draft DCO</p> <p>The Scheme proposals include a commitment to 18,958 sqm of permanent habitat creation. There will be a net permanent gain of 1,275 sqm in the northern site and a net permanent deficit of 6,345 sqm in the southern site. In this respect, the BAP commits to offsetting through the creation of habitat outside the Order Limits, with the scale of off-setting to be calculated using Natural Capital</p>	<p>Environmental Statement APP-031</p> <p>Draft DCO Revision 4 REP4-025</p>

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		<p>Valuation methods. With these measures in place, the Environmental Statement concludes that there will be no permanent significant adverse residual effects from the Scheme and that there are likely to be some beneficial effects based on the quality of the replacement habitat and the proposed offsetting.</p>	
5.36	<p>Applicants should include appropriate mitigation measures as an integral part of their proposed development, including identifying where and how these will be secured. In particular, the applicant should demonstrate that:</p> <ul style="list-style-type: none"> <input type="checkbox"/> during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works; <input type="checkbox"/> during construction and operation, best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised (including as a consequence of transport access arrangements); <input type="checkbox"/> habitats will, where practicable, be restored after construction works have finished; <input type="checkbox"/> developments will be designed and landscaped to provide green corridors and minimise habitat fragmentation where reasonable; <input type="checkbox"/> opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site 	<p>The Environmental Statement at section 9.5 details the mitigation incorporated into the design.</p> <p>Ecological best practice will be followed during construction and operation to limit the effect of the Scheme on important ecological features, as set out in the CoCP.</p> <p>Green corridors have been retained or replaced within the Order Limits where possible. Appendix 9.H: Biodiversity Action Plan and Mitigation Strategy includes design principles for all operational soft landscaped areas to mitigate the ecological effects of the Scheme. Compliance with this document is secured by the draft DCO.</p> <p>In temporary construction areas habitats will be retained and protected where practicable, as set out in the CoCP. Any habitat that is lost or damaged will be replaced in the same state and condition.</p>	<p>Environmental Statement APP-031</p> <p>CoCP Revision 3 REP4-035</p> <p>ES Appendix 9.H Biodiversity Action Plan and Mitigation Strategy APP-065</p>

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	landscaping proposals, for example through techniques such as the 'greening' of existing network crossing points, the use of green bridges and the habitat improvement of the network verge.		
5.37	The Secretary of State should consider what appropriate requirements should be attached to any consent and/or in any planning obligations entered into in order to ensure that mitigation measures are delivered.	The Mitigation Routemap sets out how the various mitigations are secured. In many cases this is through the Requirements.	Mitigation Routemap Revision 2 REP4-041
Waste			
5.42	The applicant should set out the arrangements that are proposed for managing any waste produced. The arrangements described should include information on the proposed waste recovery and disposal system for all waste generated by the development. The applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that the alternative is the best overall environmental outcome.	<p>The applicant's assessment is set out in Chapter 13 of the Environmental Statement. The assessment identifies how waste management will be regulated by the Code of Construction Practice, a Site Waste Management Plan and a construction Traffic Management Plan, secured through the CoCP (which in turn is secured by Requirement 5 of the draft DCO). In addition, specific measures are proposed to identify and separate hazardous waste, which would be managed and transported in accordance with the Hazardous Waste (England and Wales) Regulations 2005 and the relevant Permitting Regulations.</p> <p>As set out in the Environmental Statement and the CoCP, The Scheme will apply the waste hierarchy by moving waste management practices as far up the hierarchy as practicable, and by minimising disposal and maximising reuse and recycling.</p>	<p>Environmental Statement APP-031</p> <p>CoCP Revision 3 REP4-035</p> <p>Draft DCO Revision 4 REP4-025</p>

NPS Ref	NPS requirement	How addressed	In which document and document reference number
5.43	<p>The Secretary of State should consider the extent to which the applicant has proposed an effective process that will be followed to ensure effective management of hazardous and non-hazardous waste arising from the construction and operation of the proposed development. The Secretary of State should be satisfied that the process sets out:</p> <ul style="list-style-type: none"> <input type="checkbox"/> any such waste will be properly managed, both on-site and off-site; <input type="checkbox"/> the waste from the proposed facility can be dealt with appropriately by the waste infrastructure which is, or is likely to be, available. Such waste arisings should not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area; and <input type="checkbox"/> adequate steps have been taken to minimise the volume of waste arisings, and of the volume of waste arisings sent to disposal, except where an alternative is the most sustainable outcome overall. 	<p>A Site Waste Management Plan (SWMP) has been developed for the Scheme detailing how all wastes will be managed and has been submitted with the application as an appendix to the CoCP. The SWMP will be refined and updated as the design and the Scheme progresses in accordance with the requirements of the NN NPS through the application of the waste hierarchy (see Figure 13-3 of the ES).</p> <p>The Construction, Demolition and Excavated Materials Commitments (appended to the CoCP,) has considered the waste hierarchy, and includes a commitment to 80% (by weight) of CD&E materials to schemes for beneficial use. This is supported by the Receptor Site Assessment (for Excavated Materials) (appended to the CoCP) which provides the methodology and evaluation criteria of selecting a receptor site as well as the process to ensure that the excavated material is managed and treated with the least impact to the environment and communities.</p> <p>A commitment is made to use river transport in the CoCP to minimise the amount of waste that would need to be transported from the site by road.</p>	<p>CoCP Revision 3 REP4-035</p> <p>Environmental Statement APP-031</p>
5.44	<p>Where necessary, the Secretary of State should use requirements or planning obligations to</p>	<p>Measures to be taken in the management of materials produced by the Scheme will be set out</p>	<p>CoCP Revision 3 REP4-035</p>

NPS Ref	NPS requirement	How addressed	In which document and document reference number
	ensure that appropriate measures for waste management are applied.	<p>in a Construction Materials Management Plan and Site Waste Management Plan prepared by the Contractor for each site. These plans are required by the CoCP, which is secured by Requirement 5 of the DCO.</p> <p>The Contractor must deal with CD&E Materials in accordance with the <i>CD&E Materials Commitments</i> set out at Appendix C of the CoCP. This includes commitment for 80% (by weight) of CDE waste to be taken to schemes for 'beneficial use'. This commitment is secured through the CoCP.</p>	Mitigation Routemap Revision 2 REP4-042
Civil and military aviation and defence interests			
5.56	The applicant should consult the MoD, CAA, National Air Traffic Services (NATS) and any aerodrome – licensed or otherwise – likely to be affected by the proposed development in preparing an assessment of the proposal on aviation or other defence interests.	No such effects are expected to arise in this case. The applicant has been in direct contact with London City Airport, whose response to the statutory consultation for the Scheme and in its relevant representation raises no objections in relation to aerodrome safeguarding. The airport supports the principle of a Silvertown Tunnel in the interests of improving accessibility and cross-river transport capacity but has concerns relating to construction traffic impacts around the airport, the composition of STIG and seeks assurances relating to cross-river bus services.	London City Airport REP5-027
Dust, odour, artificial light, smoke, steam			
5.84	Where the development is subject to an Environmental Impact Assessment, the applicant should assess any likely significant effects on amenity from emissions of odour, dust, steam,	Chapter 6 of the Environmental Statement assesses dust and steam. Odour was scoped out of the assessment, with the agreement of the Secretary of State, as this is not relevant to a	Environmental Statement APP-031 Environmental

NPS Ref	NPS requirement	How addressed	In which document and document reference number
	<p>smoke and artificial light and describe these in the Environmental Statement.</p>	<p>highways scheme. Construction lighting will be designed in accordance with appropriate standards, as set out in Chapter 4 of the Environmental Statement.</p> <p>Dust is assessed in the Construction Dust Assessment at ES Appendix 6.A CoCP Chapter 5 sets out what the AQMP will cover.</p> <p>Odour control is addressed through the CoCP as are other construction impacts such as steam and smoke. A Lighting Management Plan is required by the CoCP.</p> <p>An Air Quality Management Plan (AQMP) will be prepared by the Contractor for each worksite and submitted for approval to the relevant planning authority. The AQMP will contain details of the measures to limit vehicle, plant and dust emissions during construction and control odour. It also includes monitoring requirements.</p> <p>Once the mitigation set out in the CoCP is put in place no significant adverse effects are predicted.</p>	<p>Statement Appendix 6.A - Construction Dust Assessment APP-049</p> <p>CoCP Revision 3 REP4-035</p>

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5.85	<p>In particular, the assessment provided by the applicant should describe:</p> <ul style="list-style-type: none"> <input type="checkbox"/> the type and quantity of emissions; <input type="checkbox"/> aspects of the development which may give rise to emissions during construction, operation and decommissioning; <input type="checkbox"/> premises or locations that may be affected by the emissions; <input type="checkbox"/> effects of the emission on identified premises or locations; and <input type="checkbox"/> measures to be employed in preventing or mitigating the emissions. 	<p>Measures to eliminate or limit the potential impacts of the construction are principally set out within the CoCP. Assessments of the proposed construction methodology and its likely dust, odour, artificial light, smoke, steam effects are set out in Chapters 6 (Air Quality) and 15 (Townscape and Visual Amenity).</p> <p>With the measures proposed in the CoCP, no significant adverse effects are predicted. No adverse effects are anticipated during operation of the Scheme.</p>	<p>CoCP Revision 3 REP4-035</p> <p>Environmental Statement 6.1.6 and 6.1.15 APP-031</p>
5.86	<p>The applicant is advised to consult the relevant local planning authority and, where appropriate, the Environment Agency about the scope and methodology of the assessment.</p>	<p>The Environment Agency and the host boroughs were consulted during the preparation of the Environmental Statement. This is documented in the relevant topic areas of the Environmental Statement, the Consultation Report and the Statements of Common Ground with the Environment Agency.</p>	<p>Environmental Statement APP-031</p> <p>Consultation Report APP-018</p> <p>Environment Agency SoCG005 REP3-011</p>
5.88	<p>If development consent is granted for a project, the Secretary of State should consider whether there is a justification for all of the authorised project (including any associated development) being covered by a defence of statutory authority against nuisance claims. If the Secretary of State cannot conclude that this is justified, then the defence should be disapplied, in whole or in part, through a provision</p>	<p>The Statutory Nuisance statement identifies whether the proposed development engages one or more of the statutory nuisances, set out in section 79(1) of the Environmental Protection Act 1990 ("the EPA"), and if so, summarises how the Applicant proposes to mitigate or limit such nuisances through the CoCP and draft DCO.</p>	<p>Statement in Respect of Statutory Nuisance APP-088</p>

NPS Ref	NPS requirement	How addressed	In which document and document reference number
	in the Development Consent Order.		
5.89	The Secretary of State should ensure the applicant has provided sufficient information to show that any necessary mitigation will be put into place. In particular, the Secretary of State should consider whether to require the applicant to abide by a scheme of management and mitigation concerning emissions of odour, dust, steam, smoke, artificial light from the development to reduce any loss to amenity which might arise during the construction and operation of the development. A construction management plan may help codify mitigation.	<p>The CoCP is secured by a Requirement. The CoCP will ensure the management of these issues. It also requires a number of other plans to be produced to ensure control of construction impacts such as lighting, traffic and air quality.</p> <p>The Mitigation route map provides a guide to how all Environmental Statement mitigation is secured.</p>	<p>CoCP Revision 3 REP4-035</p> <p>Draft DCO Revision 4 REP4-025</p> <p>Mitigation Routemap Revision 2 REP4-041</p>
Flood risk			
5.98	<p>Where flood risk is a factor in determining an application for development consent, the Secretary of State should be satisfied that, where relevant:</p> <ul style="list-style-type: none"> <input type="checkbox"/> the application is supported by an appropriate FRA; <input type="checkbox"/> the Sequential Test (see the <i>National Planning Policy Framework</i>) has been applied as part of site selection and, if required, the Exception Test (see the <i>National Planning Policy Framework</i>). 	<p>The application is accompanied by a Flood Risk Assessment (FRA).</p> <p>The FRA draws attention to existing flood defences and existing arrangements for flood warning and evacuation, the consequence of which is that the Scheme will remain safe in times of flood and will cause no increase in flood risk to third parties. The Scheme is also flood resilient, with current flood defences sufficient to prevent overtopping to the year 2065 and the drainage design for the Scheme incorporates a 30% allowance for the predicted effects of climate change.</p>	<p>Flood Risk Assessment Environmental Statement Appendix 16.A APP-077</p> <p>Environmental Statement APP-031</p> <p>Draft DCO Revision 4 REP4-025</p>
5.99	When determining an application the Secretary of State should be satisfied that flood risk will not be increased elsewhere and only consider development appropriate in areas at risk of	A DCO Requirement requires the development to be carried out in accordance with the Flood Risk	

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	<p>flooding where (informed by a flood risk assessment, following the Sequential Test and, if required, the Exception Test), it can be demonstrated that:</p> <ul style="list-style-type: none"> <input type="checkbox"/> within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location; and <input type="checkbox"/> development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed, including by emergency planning; and priority is given to the use of sustainable drainage systems. 	<p>Assessment.</p> <p>The current flood defences are lower than the future 2100 predicted water levels, so that it may be necessary for the defences to be raised in due course as part of local plans for flood defence.</p> <p>The Scheme will not prohibit the raising of the defences in the area around the Scheme. It will be designed and constructed to ensure that the structural integrity of existing flood defences is not adversely affected, and an intrusive survey will be undertaken to inform this. Extensive consultation has been undertaken with the Environment Agency in this regard, and it is proposed that the Protective Provisions within the draft DCO for the Environment Agency will provide a mechanism for the continued protection of the existing flood defences to ensure their state is not adversely affected by the Applicant's works. The terms of the protective provisions are currently the subject of discussions between the parties.</p> <p>The drainage system has been developed using SuDS principles, this is set out at 4.5.38 of the ES.</p>	
Stability			
5.118	A preliminary assessment of ground instability should be carried out at the earliest possible stage before a detailed application for development consent is prepared. Applicants should ensure that any necessary investigations	A Settlement Assessment Report has been produced and informs Chapter 12 of the Environmental Statement (Geology and Soils). Settlement monitoring will be carried out and will include, prior to construction, an assessment of the	Environmental Statement Appendix 12.B Settlement Assessment Report APP-070

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	<p>are undertaken to ascertain that their sites are and will remain stable or can be made so as part of the development. The site needs to be assessed in context of surrounding areas where subsidence, landslides and land compression could threaten the development during its anticipated life or damage neighbouring land or property. This could be in the form of a land stability or slope stability risk assessment report.</p>	<p>likely effects of settlement on the Grade II listed Blackwall Tunnel building. Settlement monitoring and the utilisation of any necessary mitigation in this regard is secured by the CoCP.</p> <p>With the proposed mitigation measures in place, no significant adverse impacts are predicted.</p>	<p>Environmental Statement APP-031</p> <p>CoCP Revision 3 REP4-035</p>
Historic Environment			
5.126	<p>Where the development is subject to EIA the applicant should undertake an assessment of any likely significant heritage impacts of the proposed project as part of the Environmental Impact Assessment and describe these in the environmental statement.</p>	<p>This is assessed in chapter 8 of the ES. One listed building is located within the Order Limits – the Grade II listed Blackwall Tunnel entrance building.</p>	<p>Environmental Statement APP-031</p>
5.127	<p>The applicant should describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the asset's importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant Historic Environment Record should have been consulted and the heritage assets assessed using appropriate expertise. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, the applicant should include an appropriate desk-based assessment</p>	<p>The significance of heritage assets is set out in chapter 8. No impacts to cultural heritage assets are anticipated during the operational phase of the Scheme. During construction mitigation will be put in place in relation to the potential for archaeological remains and potential for settlement impacts on the Blackwall Tunnel, as secured by the CoCP.</p>	<p>Environmental Statement APP-031</p> <p>Mitigation Routemap Revision 2 REP4-041</p> <p>CoCP Revision 3 REP4-035</p>

NPS Ref	NPS requirement	How addressed	In which document and document reference number
	and, where necessary, a field evaluation.		
5.129	In considering the impact of a proposed development on any heritage assets, the Secretary of State should take into account the particular nature of the significance of the heritage asset and the value that they hold for this and future generations. This understanding should be used to avoid or minimise conflict between their conservation and any aspect of the proposal.	<p>It is not considered that there will be any foreseeable direct impacts to the settings of heritage assets during the construction and operational phases of the scheme (ES paragraph 8.5.1).</p> <p>There is a potential settlement risk to the Grade II listed Blackwall Tunnel entrance building. However, the CoCP requires a settlement assessment prior to construction (in accordance with Appendix A of the CoCP – Settlement Assessment and Mitigation Process) to ensure the mitigation of that risk so that no significant adverse impact is anticipated.</p>	<p>Environmental Statement APP-031</p> <p>CoCP Revision 3 REP4-035</p>
5.142	Where there is a high probability that a development site may include as yet undiscovered heritage assets with archaeological interest, the Secretary of State should consider requirements to ensure that appropriate procedures are in place for the identification and treatment of such assets discovered during construction.	<p>Moderate adverse effects are identified on the sub-surface archaeological remains from the tunnelling activity but the ES concludes that these would be reduced to neutral effects following appropriate mitigation – in this case a process of excavating and recording archaeological remains prior to construction (ES paragraph 8.6.5).</p> <p>A Written Scheme of Investigation (WSI) will be produced in consultation with Historic England and GLAAS (and the MMO and the PLA where there are marine elements) at the detailed design stage for approval by the relevant planning authority, as</p>	<p>Environmental Statement chapter 8 APP-031</p> <p>CoCP Revision 3 REP4-035</p>

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		<p>secured by the CoCP.</p> <p>Dredging and scour to the river bed caused by the construction and operation of the proposed jetty are assessed to have a slight to moderate adverse effect on potential sub-surface archaeological remains, which would be reduced to neutral effects following appropriate mitigation, secured through the CoCP.</p>	
Landscape and Visual			
5.144	<p>Where the development is subject to EIA the applicant should undertake an assessment of any likely significant landscape and visual impacts in the environmental impact assessment and describe these in the environmental assessment. A number of guides have been produced to assist in addressing landscape issues. The landscape and visual assessment should include reference to any landscape character assessment and associated studies, as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England.</p>	<p>The townscape and visual assessment in the Environmental Statement (Chapter 15) first considers the sensitivity of the local area and identifies the importance which local policy attaches to the following:</p> <ul style="list-style-type: none"> • the Blue Ribbon Network and the Thames Policy Areas north and south of the river; • strategic views identified in the London View Management Framework (LVMF), of which one view – the view from the General Wolfe statue at Greenwich Park is relevant; and • local views identified in local policy – of which the view along Greenwich Peninsular from the Pilot Public House is relevant. 	Environmental Statement APP-031

NPS Ref	NPS requirement	How addressed	In which document and document reference number
		<p>The assessment defined a Study Area of 500 metres from the Order Limits, which is extended to take account of the view from Greenwich Park. A Zone of Visual Influence (ZVI) is identified on Drawing 15.1 appended to the ES.</p>	
5.145	<p>The applicant's assessment should include any significant effects during construction of the project and/or the significant effects of the completed development and its operation on landscape components and landscape character (including historic landscape characterisation).</p>	<p>Chapter 15 of the ES assesses this and mitigation is provided through the CoCP which will control construction impacts including visual impacts such as lighting at night.</p> <p>The Contractor will employ best practices to minimise townscape and visual disruption, for example protection of existing vegetation to be retained, where possible, and targeted use of hoarding to screen construction sites.</p> <p>For each worksite a Lighting Management Plan will be prepared by the Contractor in consultation with the relevant planning authority. The Contractor will implement the measures set out in the Lighting Management Plan, pursuant to Requirement 5 of the draft DCO. Lighting will be designed, positioned and directed so as not to unnecessarily intrude on adjacent buildings and so as to prevent unnecessary interference with local residents, the DLR, passing motorists, the navigation lights for air or water traffic, and wildlife breeding seasons.</p>	<p>Environmental Statement APP-031</p> <p>CoCP Revision 3 REP4-035</p>
5.146	<p>The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of</p>	<p>The permanent landscape effects are assessed as slight beneficial and not significant. As set out in Table 15-8 of the ES, the Scheme introduces new</p>	<p>Environmental Statement APP-031</p>

NPS Ref	NPS requirement	How addressed	In which document and document reference number
	the project and potential impacts on views and visual amenity. This should include any noise and light pollution effects, including on local amenity, tranquillity and nature conservation.	infrastructure which is not at odds with the local townscape and includes landscape proposals which serve to enhance the local townscape and views.	
5.149	Landscape effects depend on the nature of the existing landscape likely to be affected and nature of the effect likely to occur. Both of these factors need to be considered in judging the impact of a project on landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints, the aim should be to avoid or minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.	The Environmental Statement assessment conclusions include:- <i>“15.6.3... the proposed built form will not be out of character with that already within the surrounding urban environment and will include elements, such as new buildings and landscape proposals, that will contribute positively to the regeneration of the area... the Scheme includes landscape proposals... which will enhance the local public realm and incorporate new pedestrian and cycle links. As a result, the magnitude of townscape impact is considered to be Minor Beneficial and... the significance of townscape effect during operation is considered to be Slight Beneficial.</i> <i>15.6.6... the proposed infrastructure would sit within a context formed by existing highway structures and industrial areas such that the scheme would not be fundamentally discordant in views across these surroundings. In addition, a number of views would be enhanced by reduced areas of derelict or industrial land, which would be replaced with new buildings and additional areas of planting... The overall significance of visual effect during operation is therefore considered to be Slight Beneficial”</i>	Environmental Statement APP-031
Land use			

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5.165	The applicant should identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan. The assessment should be proportionate.	These issues are addressed in Chapter 7 of the Environmental Statement which deals with the effect of the proposals on Community and Private Assets. Minor to moderate adverse impacts arise principally from the loss of existing land uses, particularly businesses. The loss of existing land uses is an inevitable consequence both of the NPS preference for the use of previously developed land and of the locational requirements of the Scheme itself. The majority of businesses being lost are of a temporary nature with temporary leases and planning permissions.	Environmental Statement APP-031
5.168	Applicants should also identify any effects, and seek to minimise impacts, on soil quality, taking into account any mitigation measures proposed. Where possible, developments should be on previously developed (brownfield) sites provided that it is not of high environmental value. For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination and how it is proposed to address this.	<p>Effects on soil and the management of contamination risk is addressed in chapter 12 of the ES and is secured by the CoCP which requires a Construction Materials Management Plan. This plan will include strategies for dealing with contaminated materials.</p> <p>The Construction Materials Management Plan must be approved by the relevant planning authority. See CoCP section 13.2.</p>	<p>Environmental Statement APP-031</p> <p>CoCP Revision 3 REP4-035</p>
5.184	Public rights of way, National Trails, and other rights of access to land (e.g. open access land) are important recreational facilities for walkers, cyclists and equestrians. Applicants are expected to take appropriate mitigation measures to address adverse effects on coastal access, National Trails, other public rights of way and open access land and, where appropriate, to	The effect of the proposals on public rights of way is considered in Chapter 11 of the Environmental Statement, and relevant mitigation measures necessary during construction are set out in the CoCP - these include measures to protect pedestrian and cycle routes during construction, including clear signage, fencing and diversion routes .	<p>Environmental Statement APP-031</p> <p>Design and Access Statement APP-095</p> <p>Design and Access</p>

NPS Ref	NPS requirement	How addressed	In which document and document reference number
	<p>consider what opportunities there may be to improve access. In considering revisions to an existing right of way consideration needs to be given to the use, character, attractiveness and convenience of the right of way. The Secretary of State should consider whether the mitigation measures put forward by an applicant are acceptable and whether requirements in respect of these measures might be attached to any grant of development consent.</p>	<p>The detail of pedestrian and cycleway links is developed further in the Design Principles , and illustrated in the Design and Access Statement and the Design and Access Statement Addendum .</p>	<p>Statement Addendum REP4-045</p> <p>Mitigation Routemap Revision 2 REP4-041</p> <p>Design Principles Revision 2 REP4-037</p> <p>Draft DCORevision 4 REP4-025</p> <p>CoCP Revision 3 REP4-035</p>
Noise and vibration			
5.189	<p>Noise assessment in ES should include:</p> <ul style="list-style-type: none"> • a description of the noise sources including likely usage in terms of number of movements, fleet mix and diurnal pattern. For any associated fixed structures, such as ventilation fans for tunnels, information about the noise sources including the identification of any distinctive tonal, impulsive or low frequency characteristics of the noise. • identification of noise sensitive premises and noise sensitive areas that may be 	<p>The noise and vibration assessment is contained within Chapter 14 of the Environmental Statement.</p> <ul style="list-style-type: none"> • A description of construction noise sources is contained within Appendix 14.A - Construction Noise Assessment • Ventilation impacts and of any distinctive tonal, impulsive or low frequency characteristics of the noise have been assessed in accordance with BS4142. 	<p>Environmental Statement APP-031</p> <p>Environmental Statement Appendix 14.A Construction Noise Assessment APP-071</p> <p>Environmental Statement Appendix 14.B Noise Survey</p>

NPS Ref	NPS requirement	How addressed	In which document and document reference number
	<p>affected.</p> <ul style="list-style-type: none"> • the characteristics of the existing noise environment. • a prediction on how the noise environment will change with the proposed development: <ul style="list-style-type: none"> o In the shorter term such as during the construction period; o in the longer term during the operating life of the infrastructure; o at particular times of the day, evening and night as appropriate. <p><input type="checkbox"/> an assessment of the effect of predicted changes in the noise environment on any noise sensitive premises and noise sensitive areas.</p> <p><input type="checkbox"/> measures to be employed in mitigating the effects of noise. Applicants should consider using best available techniques to reduce noise impacts</p> <ul style="list-style-type: none"> • the nature and extent of the noise assessment should be proportionate to the likely noise impact. 	<ul style="list-style-type: none"> • Operational impacts have been based upon the most likely traffic flows (taken from the RXHAM traffic model). The CRTN methodology used in the operational assessment considers the mix of cars and HGVs on individual roads on the road network within the noise and vibration study area. <p>Noise sensitive premises and noise sensitive areas have been identified in accordance with DMRB. Non residential sensitive receptors are identified on Drawing 14.1 Noise Important Areas and Other Sensitive Receptors (Document Reference 6.2).</p> <p>Noise surveys have been undertaken at 25 locations within the study area to establish characteristics of the existing noise environment. The surveys undertaken included:</p> <ul style="list-style-type: none"> • attended short term 3hr CRTN surveys during the daytime period between 10:00 and 17:00 during a typical weekday period; • attended short term 3hr overnight noise surveys between 23:00 and 02:00 during a typical weekday period; • unattended long term 24hr surveys; and, • unattended long term 5 day surveys. <p>Appendix 14.B Noise Survey Data (Document</p>	<p>Data APP-072</p> <p>Environmental Statement Drawing 14.1 Noise Important Areas and Other Sensitive Receptors APP-038</p> <p>Environmental Statement Drawing 14.3 Baseline Noise Monitoring Locations APP-038</p> <p>CoCP Revision 3 REP4-035</p> <p>Draft DCO Revision 4 REP4-025</p> <p>Response to Boroughs' LIRs and WRs REP2-036</p> <p>Appendix A: Explanation of Baseline Noise and Vibration Monitoring in Newham</p> <p>Appendix C: Noise and Vibration Mitigation</p> <p>Appendix D: Additional</p>

NPS Ref	NPS requirement	How addressed	In which document and document reference number
		<p>Reference:6.3.14.2) presents the monitored noise levels from the surveys and Drawing 14.3 Baseline Noise Monitoring Locations presents the noise monitoring locations.</p> <p>Additional monitoring of existing noise levels was undertaken and submitted at Deadline 2, covering 17 locations within 1km of the Scheme, with particular consideration given to areas near the tunnel portals. In response to previous comments, survey protocols and methodologies were agreed with host boroughs in advance of recording.</p> <p>Surveys undertaken include 3 hour, 24 hour and 6 day recordings, undertaken at varying times of the day and night. Findings contributed to enhanced understanding of the current noise environment, including the allocation of construction noise significance levels.</p> <p>Predictions of how the noise environment will change during the construction phase have been assessed in section 14.6 of the Environmental Statement.</p> <p>Longer term operation impacts have been assessed in accordance with DMRB for the design year of 15 years after opening. These operational impacts are presented in section 14.6 of the</p>	<p>Noise Survey Data</p> <p>SWQ Noise and Vibration NV Report REP4-058</p>

NPS Ref	NPS requirement	How addressed	In which document and document reference number
		<p>Environmental Statement.</p> <p>Daytime and night time noise impacts during the construction and operational phase of the scheme have assessed and are presented in section 14.6 of the Environmental Statement.</p> <p>An assessment of the effect of predicted changes in the noise environment on any noise sensitive premises and noise sensitive areas has been undertaken and assessed in accordance with DMRB and is presented in section 14.6 of the Environmental Statement.</p> <p>Measures to minimise and mitigate any noise impacts from the scheme are presented in section 14.5 of the Environmental Statement, and include the construction measures set out in the CoCP, and the DCO Requirements for local planning authority approval of the operational noise mitigation scheme, which will include noise barriers and low noise road surfacing. Further detail on Noise Mitigation measures is included in the note submitted at Appendix C to the Applicant's response to the Boroughs' Local Impact Reports and Written Representations.</p> <p>The assessment has been undertaken in accordance DMRB and is proportionate to the likely noise impacts as a result of the Scheme.</p>	

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5.190	The potential noise impact elsewhere that is directly associated with the development, such as changes in road and rail traffic movements elsewhere on the national networks, should be considered as appropriate.	In accordance with DMRB changes in road traffic noise on traffic links outside of the detailed calculation area have been assessed and are presented in Table 14-44 and 14-48 of the Environmental Statement.	Environmental Statement APP-031
5.191	Operational noise, with respect to human receptors, should be assessed using the principles of the relevant British Standards and other guidance. The prediction of road traffic noise should be based on the method described in <i>Calculation of Road Traffic Noise</i> . The prediction of noise from new railways should be based on the method described in <i>Calculation of Railway Noise</i> . For the prediction, assessment and management of construction noise, reference should be made to any relevant British Standards and other guidance which also give examples of mitigation strategies	This is assessed in Chapter 14 of the ES. Operational noise impacts with respect to humans has been undertaken in accordance with the following guidance (refer to section 14.3 of the Environmental Statement): <ul style="list-style-type: none"> • Calculation of Road Traffic Noise (CRTN) • The Design Manual for Roads and Bridges (DMRB) • BS 4142:2014 Methods for rating and assessing industrial and commercial sound Construction noise impacts with respect to humans has been undertaken in accordance with the following guidance (refer to section 14.3 of the Environmental Statement): <ul style="list-style-type: none"> • BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control 	Environmental Statement APP-031

NPS Ref	NPS requirement	How addressed	In which document and document reference number
		<p>on construction and open sites. Noise</p> <ul style="list-style-type: none"> BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites. <p>Vibration</p>	
5.192	<p>The applicant should consult Natural England with regard to assessment of noise on designated nature conservation sites, protected landscapes, protected species or other wildlife. The results of any noise surveys and predictions may inform the ecological assessment. The seasonality of potentially affected species in nearby sites may also need to be taken into account.</p>	<p>Natural England has been consulted regarding noise impacts on biodiversity. This is set out in the SoCG and Chapter 9 of the Environmental Statement.</p>	<p>Environmental Statement APP-031</p> <p>Natural England SoCG001 Revision 2 REP4-063</p>
5.194	<p>The project should demonstrate good design through optimisation of scheme layout to minimise noise emissions and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission.</p> <p>The project should also consider the need for the mitigation of impacts elsewhere on the road and rail networks that have been identified as arising from the development, according to Government policy.</p>	<p>The Scheme has been designed to minimise noise.</p> <p>Low noise road surfacing and noise barriers will be provided. The details of these noise mitigation measures are subject to approval by the relevant planning authority, secured by a Requirement.</p>	<p>Environmental Statement APP-031</p> <p>Draft DCO Revision 4 REP4-025</p>
5.195	<p>The Secretary of State should not grant development consent unless satisfied that the proposals will meet, the following aims, within the context of Government policy on sustainable development:</p> <p><input type="checkbox"/> avoid significant adverse impacts on health and quality of life from noise as a result of the new</p>	<p>The Environmental Statement sets out at chapter 14 how this is met (14.8.3).</p> <p>Throughout the construction period mitigation methods described in section 14.5 would be implemented in order to avoid significant adverse noise impacts. Strict adherence to the Code of</p>	<p>Environmental Statement APP-031</p> <p>CoCP Revision 3 REP4-035</p> <p>Health and Equalities Impact Assessment</p>

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	<p>development;</p> <p><input type="checkbox"/>mitigate and minimise other adverse impacts on health and quality of life from noise from the new development; and</p> <p><input type="checkbox"/>contribute to improvements to health and quality of life through the effective management and control of noise, where possible.</p>	<p>Construction Practice (CoCP) and associated Noise and Vibration Management Plan would ensure that no significant adverse noise impacts would arise during construction.</p> <p>The Construction Noise and Vibration Mitigation Scheme (CoCP Revision 3, Appendix G) sets out noise and vibration thresholds in relation to the provision of noise insulation and, if appropriate, temporary rehousing if required during the construction period.</p> <p>Changes in traffic as a direct result of the Scheme would result in both increases and decreases in noise in the short term and long term impact scenarios. Adverse traffic noise impacts of the Scheme in the short term would be limited to slight adverse and would not be significant. In the long term, changes in road traffic noise would result in six dwellings within the Hoola Development experiencing a noise increase which has been assessed as having a moderate adverse effect.</p> <p>A further assessment of the impact at these dwellings has been carried out considering the noise insulation included in the approved design of the Hoola Development, as set out in section 10.9 of the Health and Equalities Impact Assessment. The assessment concludes that the dwellings' noise insulation would ensure that internal noise</p>	<p>APP-090</p> <p>CoCP Revision 3 REP4-035 Appendix G: Construction Noise and Vibration Mitigation Scheme</p>

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		<p>levels with the Scheme in operation would be below acceptable levels (set by the London Borough of Newham in planning conditions 33 and 34 for the Hoola Development) and as such it is considered that no significant adverse impacts on health and quality of life would occur.</p> <p>The predicted effects from the operation of the tunnel ventilation system would be neutral through the use of intelligent design to ensure that the noise emissions including any penalties for tonality or unusual characteristics would be below existing background noise levels.</p> <p>The overall conclusion of the HEqIA in relation to the health effects caused by noise is that the effect of the Scheme in relation to health of the population due to changes in noise levels is not considered to be significant.</p>	
5.196	<p>In determining an application, the Secretary of State should consider whether requirements are needed which specify that the mitigation measures put forward by the applicant are put in place to ensure that the noise levels from the project do not exceed those described in the assessment or any other estimates on which the decision was based.</p>	<p>Mitigation is proposed in the form of acoustic barriers around the northern and southern tunnel portals; and low noise/thin road surfacing on new or re-surfaced roads. The details of these are subject to approval by the relevant planning authority, secured by Requirement 12 of the DCO. That requirement specifies that the measures submitted for approval must either reflect the measures presented in the ES, or where the proposed measures are materially different, be accompanied by evidence that they will result in</p>	<p>Draft DCO Revision 4 REP4-025</p>

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		effects which are not materially worse than those reported in the ES.	
5.199	For most national network projects, the relevant Noise Insulation Regulations will apply. These place a duty on and provide powers to the relevant authority to offer noise mitigation through improved sound insulation to dwellings, with associated ventilation to deal with both construction and operational noise. An indication of the likely eligibility for such compensation should be included in the assessment. In extreme cases, the applicant may consider it appropriate to provide noise mitigation through the compulsory acquisition of affected properties in order to gain consent for what might otherwise be unacceptable development. Where mitigation is proposed to be dealt with through compulsory acquisition, such properties would have to be included within the development consent order land in relation to which compulsory acquisition powers are being sought.	<p>A Noise Insulation Regulations Assessment was submitted at deadline 1, in response to the Examining Authority's First Written Question NV.27.</p> <p>The Construction Noise and Vibration Mitigation Scheme (CoCP Revision 3, Appendix G) sets out noise and vibration thresholds in relation to the provision of noise insulation and, if appropriate, temporary rehousing if required during the construction period.</p>	<p>Response to first written questions: FWQ Noise NV Report Appendix F REP1-166</p> <p>CoCP Revision 3 REP4-035 Appendix G: Construction Noise and Vibration Mitigation Scheme</p>
Impacts on transport networks			
5.203	Applicants should have regard to the policies set out in local plans, for example, policies on demand management being undertaken at the local level.	Regard has been had to local planning policies as set out in the Planning Policy Compliance Statement.	Planning Policy Compliance Statement APP-094
5.204	Applicants should consult the relevant highway authority, and local planning authority, as appropriate, on the assessment of transport	The local planning and highway authorities have been consulted with regarding transport impacts. The engagement has been ongoing throughout the	Consultation Report APP-018

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	impacts.	process. This is recorded in the Consultation Report as well as in individual SOCGs.	SoCG Report REP1-127 SoCGs Rep1-128 – REP1-150
5.205	Applicants should consider reasonable opportunities to support other transport modes in developing infrastructure. As part of this, consistent with paragraph 3.19-3.22 above, the applicant should provide evidence that as part of the project they have used reasonable endeavours to address any existing severance issues that act as a barrier to non-motorised users.	<p>Public transport provision will be supported by the proposals for a dedicated bus, coach and HGV lane within the Silvertown Tunnel, coupled with proposed exemptions from user charges for public transport. The provision of bus services through the tunnel is secured the Bus Strategy referred to in DCO requirement 13.</p> <p>The effects on the public transport network are reported at paragraph 3.9 in the Planning Policy Compliance Statement – cross river public transport accessibility would be transformed by the scheme, directly consistent with the NPS.</p> <p>As part of the Scheme, localised pedestrian and cycle improvements are proposed. Illustrative plans are set out in the Design and Access Statement and the Design Principles will guide the detailed design process to provide for these improvements. A trial for a cycle shuttle service through the tunnel is also secured through legal agreements with LB Newham, LB Tower Hamlets and RB Greenwich.</p>	<p>Planning Policy Compliance Statement APP-094</p> <p>Design and Access Statement APP-095</p> <p>Design and Access Statement Addendum REP4-045</p> <p>Design Principles Revision 2 REP4-037</p>
5.208	Where appropriate, the applicant should prepare a travel plan including management measures to mitigate transport impacts. The applicant should	A construction travel plan forms part of the CoCP requirements as part of a Construction Traffic Management Plan.	CoCP Revision 3 REP4-035

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	also provide details of proposed measures to improve access by public transport and sustainable modes where relevant, to reduce the need for any parking associated with the proposal and to mitigate transport impacts.		
Water quality and resources			
5.223	Any environmental statement should describe: <ul style="list-style-type: none"> <input type="checkbox"/> the existing quality of waters affected by the proposed project; <input type="checkbox"/> existing water resources affected by the proposed project and the impacts of the proposed project on water resources; <input type="checkbox"/> existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project, and any impact of physical modifications to these characteristics; <input type="checkbox"/> any impacts of the proposed project on water bodies or protected areas under the Water Framework Directive and source protection zones (SPZs) around potable groundwater abstractions; and <input type="checkbox"/> any cumulative effects. 	Chapter 16 of the ES considers the effects on water resources. The CoCP and its subsidiary plans secured by Requirement 5 to the DCO, requires the Contractor to employ the appropriate water conservation and pollution prevention measures and site drainage controls required.	Environmental Statement APP-031 CoCP Revision 3 REP4-035
5.227	The Examining Authority and the Secretary of State should consider proposals put forward by the applicant to mitigate adverse effects on the water environment and whether appropriate requirements should be attached to any development consent and/or planning obligations.	Chapter 16 of the Environmental Statement sets out the required mitigation measures for water quality, which are secured at construction, by the CoCP and at the operational stage by their inclusion in the FRA, which is secured by a	Environmental Statement APP-031 CoCP Revision 3 REP4-035

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	<p>If the Environment Agency continues to have concerns and objects to the grant of development consent on the grounds of impacts on water quality/resources, the Secretary of State can grant consent, but will need to be satisfied before deciding whether or not to do so that all reasonable steps have been taken by the applicant and the Environment Agency to try to resolve the concerns, and that the Environment Agency is satisfied with the outcome.</p>	<p>Requirement in the draft DCO, or as part of the surface water drainage system to be approved by the relevant planning authority under a separate Requirement.</p> <p>The Environment Agency and the Marine Management Organisation will also have the ability to approve and condition works that may have an effect on water quality, pursuant to the Deemed Marine Licence and Protective Provisions contained within the draft DCO.</p>	<p>Draft DCO Revision 4 REP4-025</p>