

FOE ENGLAND WALES AND NORTHERN IRELAND

WRITTEN REPRESENTATION

HIGHWAYS ENGLAND'S RESPONSE

1. NATIONAL POLICY STATEMENT FOR NATIONAL NETWORKS (NN NPS)

1. *1.1.1 Paragraph 1.2 of the NN NPS requires that the Secretary of State decide this application in accordance with the NPS, unless to do so would breach any duty imposed under any legislation and/or international obligation. As the ExA is aware, the Government is responsible for fulfilling the requirements of the Ambient Air Quality Directive (2008/50). EU legal limits are absolute and must be met irrespective of cost, have to be met everywhere in a Zone (not just at certain receptors), and cannot be averaged across an Air Quality Zone (that is, an increase in one part of a Zone offset against improvement in another). Air pollution must not be worsened in three ways: a breach must not be caused; air already failing legal limits cannot be worsened or compliance delayed; and the non-deterioration principle applies: "maintain the levels of those pollutants below the limit values and shall endeavour to preserve the best ambient air quality, compatible with sustainable development". This accords with the views both of the EU Commission (see clarification to Clean Air in London: http://cleanair.london/legal/europe-at-its-best-takes-legal-action-against-uk-at-its-worst-on-air-pollution/attachment/cal-269-letter-of-clarification-from-the-commission-190214_redacted / and of Robert McCracken QC – see opinion for Clean Air in London of October 2015 (in particular paragraphs 42 and 49): http://cleanair.london/legal/clean-air-in-london-obtains-qc-opinion-on-air-quality-law-including-at-heathrow/attachment/cal322-robert-mccracken-qc-opinion-for-cal_air-quality-directive-and-planning_signed-061015/.*
2. *1.1.2 We consider that the scheme is not compatible with the EU Ambient Air Quality Directive on the evidence available and must be refused. In summary this is on the basis that the scheme would be worsening breaches of NO₂ concentrations in AQMA areas which is significant (EPUK/IAQM Guidance, paragraph 7.11 <http://cleanair.london/legal/clean-air-in-london-obtains-qc-opinion-on-air-quality-law-including-atheathrow/attachment/air-quality-planning-guidance-v1-1-2/>) and should lead to refusal (McCracken opinion, paragraph 3) – and indeed it seems that there are new locations where EU legal limits are breached, which would require refusal (McCracken paragraph 2). Further details below at paragraph 4.6.1.5. Further, these are expected to be underestimates due to traffic generation expected to be higher than predicted, and emissions worse than*

predicted (see below at paragraph 4.6.1.8). However as the baseline compliance dates for 2 of the Air Quality Zones have been revised (cited in the government's draft new Air Quality plans, Table 2) the scheme baseline data must be re-done before it is possible to ascertain compliance or not with EU law.

Highways England's Comment

- 2.1 No change is anticipated in the evaluation of compliance with the Ambient Air Quality Directive as a result of the Scheme from the implementation of the draft Defra air quality action plan.
- 2.2 The scheme's impact on air quality has been assessed in line with the Government's published guidance set out in IAN 174/13 '*Updated air quality advice on risk assessment related to compliance with the EU Directive on ambient air quality and on the production of Scheme Air Quality Action Plans for user of DMRB Volume 11, Section 3, Part 1 Air Quality*' for the consideration of Significant air quality effects and IAN 175/13 '*Updated air quality advice on risk assessment related to compliance with the EU Directive on ambient air quality and on the production of Scheme Air Quality Action Plans for user of DMRB Volume 11, Section 3, Part 1 Air Quality*' for the judgement of risk to affects the UK's ability to comply with the Air Quality Directive. These Interim Advice Notes were developed to address the requirements of the National Policy Statement for National Networks (NN NPS).
- 2.3 The outcome of the air quality assessment concludes that it would not result in a significant local air quality effect, nor affect the UK's ability to comply with the Air Quality Directive (see paragraphs 6.15.4 to 6.15.7 of the ES).
- 2.4 The recent opinion of Robert McCracken for Clean Air in London does not affect the evaluation of significance of the air quality effects of the Scheme, nor the extent to which the Scheme complies with the air quality policy tests within the NN NPS. Moreover, the opinion of Mr McCracken, untested in court, is simply legal advice to his client (which is not Friends of the Earth), provided on the instructions of that client. It is not a legal document of any wider consequence, and is certainly not "new legal advice" against which the Scheme should be tested. On that basis, Highways England does not consider that a further reassessment of the impact of the Scheme on air pollution is warranted or required.

- 2.5 Highways England does not use the Institute of Air Quality Management '*Land-Use Planning & Development Control: Planning For Air Quality*' document to inform its judgment on the outcome of the scheme impacts. However, it can be noted that whilst this document acknowledges the need to make a judgement with regards to compliance with EU Limit Values, it does not provide any advice on how to do so.
- 2.6 Indeed it states this within the introductory section of the guidance: "*This document has been developed for professionals operating within the planning system. It provides them with a means of reaching sound decisions, having regard to the air quality implications of development proposals. It also is anticipated that developers will be better able to understand what will make a proposal more likely to succeed. This guidance, of itself, can have no formal or legal status and is not intended to replace other guidance. For example, industrial development regulated by the Environment Agency, and requiring an Environmental Permit, is subject to the Horizontal Guidance Note H11, while for major new road schemes, Highways England has prepared a series of advice notes on assessing impacts and risk of non-compliance with limit values.*"
3. *E1.3 We are concerned that the project would not deliver appropriate environmental and social benefits as required by the NNNPS, paragraph 3.3, which is that 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.*

Highways England's Comment

- 3.1 Note a response to the issue of environmental and social benefit is also provided at paragraph 20 below.

4. *In line with the guidance contained within NN NPS, each topic Chapter of the Environmental Statement (Document Reference Number 6.1) has outlined the proposed mitigation measures, during both the construction and operational phases of the Scheme in order to address the potential environmental effects identified through the individual assessments undertaken. Details of mitigation measures on the various chapters in ES were contained in Appendix A of the Explanatory Memorandum (Application Document Reference 3.2), which was updated in the response to the examiners question 4.1.3 which enclosed an update "table of Mitigation in Appendix A.*

1.3.1 Relevant NPPF principles include (paragraph 17) "support the transition to a low carbon future in a changing climate"; and "contribute to conserving and enhancing the natural environment and reducing pollution". The basic premise of this road expansion encourages private car use instead of enabling options to reduce private car use. Table 6.19 and Table 6.20 of Appendix 6 both show an increase in carbon emissions. The Committee on Climate Change has warned in its most recent report of the need to avoid "lock-in" to high carbon pathways. They have also recommended that the lessons from schemes to reduce travel demand should be applied and evaluated, recommendation 18, Table A.1 (https://www.theccc.org.uk/wpcontent/uploads/2015/06/6.738_CCC_ExecSummary_2015_FINAL_WEB_250615.pdf).

Highways England's Comment

- 4.1 An assessment of carbon emissions has been undertaken in line with Highways England's published guidance. An increase in carbon emissions, as noted in Tables 6.19 and 6.20 of the ES is predicted with the operation of the Scheme. The carbon emissions of the Scheme have been considered consistently with the requirements of the policies contained within the NN NPS, as described in paragraph 6.18.9 of the ES (Application Document Reference 6-1).
5. *1.3.2 We further note that the applicant relies upon the NN NPS with regard to climate change impacts as follows (para 6.18.9): "Paragraph 5.18 of the NN NPS states than an increase in CO2 emissions is not a reason to refuse development consent, unless the increase was large enough to have a material impact on the ability of the Government to meet its carbon reduction targets. The regional assessment of the Scheme predicts that there will be an increase in CO2 with the operation of the Scheme. However, as noted in the NN NPS (paragraph 3.8) the carbon emissions anticipated over the next 10-15 years from the strategic road building programme are considered to be small (less than 0.1% of annual carbon*

budget) and the increases associated with the Scheme are part of that small increase. The Scheme will therefore not affect the ability of the Government to meet its carbon reduction targets". Paragraph 3.8 of the NN NPS relies on policies for ULEVs and policies to meet the Government's carbon budgets, and in addition references a figure from the 'Investing in Britain' policy document. However the Climate Change Committee's most recent report to Government on progress (June 2015) states that: "Without the impact of higher temperatures in 2014, therefore, there is limited evidence of progress reducing emissions outside the power sector". Emissions regulations for vehicles are specifically picked out as an area with "no certainty" over the next few years. Travel behaviour, and increased take up of low emission and electric vehicles are also singled out as areas where Government needs to take a role. We therefore consider it imperative that the contribution of the scheme to CO2 emissions is properly investigated.

Highways England's Comment

- 5.1 Highways England relies upon the NN NPS. As noted in the response to paragraph 4.1 above, section 104 of the Planning Act 2008 requires an application for development consent to be determined in accordance with the NN NPS.
- 5.2 The carbon emissions of the Scheme have been considered consistent with the requirements of the policies contained within the NN NPS, as described in paragraph 6.18.9 of the ES.
- 5.3 The Committee on Climate Change report (<https://www.theccc.org.uk/publication/reducing-emissions-and-preparing-for-climate-change-2015-progress-report-to-parliament/>) includes a range of recommendations to progress reductions in greenhouse gas emissions and to assist in preparing for climate change. This includes highlighting areas for action, as outlined in the 2015 progress report:

"First, what steps will the Government take during this Parliament to make sure that targets to reduce emissions for the 2020s and beyond are achieved in a cost-effective way? Virtually all policies or funding in these areas are due to expire during this Parliament. This includes the end of programmes and incentives to reduce energy bills through more efficient buildings, to support low-carbon power investment, to develop the market for low emission vehicles, and to promote low-carbon heat. Without significant new policies progress will fall behind what is required to meet legal obligations through the 2020s."

5.4 The role of the Committee on Climate Change also includes recommendations across a range of sectors to reduce greenhouse gas emissions. The quotations listed above relate to nationwide measures and not individual highway schemes. As such, it would be inappropriate to focus on the Scheme alone, particularly as the relevant policy is the NN NPS.

4. ENVIRONMENT

6. *4.1.5 Friends of the Earth support the ExA's concern that requirement 8 allows for modification of the CEMP at any time without the requirement to seek the agreement of the LPA and without reference to the ES.*

7. *1.4.5.1 We would support a modification to this part to ensure that the affected LPA must be consulted and amendments agreed with due regard to the ES.*

Highways England's Comment

7.1 As stated in the response to the Examining Authority's ("ExA") 1st Written Question (4.1.5), "*Highways England agrees to the deletion of sub-paragraph 3 in requirement 8. This amendment is reflected in the revised draft of the DCO that will be provided by Deadline III.*"

7.2 The amendment is incorporated in the revised draft DCO.

8. *4.6.1 The ExA refers to the NN NPS para 5.13 which states: "The Secretary of State should refuse consent where, after taking into account mitigation, the air quality impacts of the scheme will 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" and asks whether, having regard to the final judgement of the Supreme Court in the "ClientEarth" case, the assessment of air quality impacts set out in the ES indicate that the scheme would comply with this requirement of the NNNPS.*

9. *4.6.1.1 This approach is used by the applicant in the methodology in ES chapter 6 paragraph 6.2.65, and under compliance risk assessment at 6.15.6, and finally referred to in the summary at 6.18.8.*

Highways England's Comment

9.1 Please note that the responses at paragraphs 2.1 onwards above are also relevant to the ExA's questions 4.6.1 to 4.6.1.7.

- 9.2 Highways England has explained how the Scheme is consistent with paragraph 5.13 of the NN NPS, as outlined in paragraph 6.18.8 of the ES, within Highways England's response to Question E4.6.1 of the ExA's first written questions.
- 9.3 Highways England's response to Question E4.6.1 also addresses the implications of the *ClientEarth* case for the Scheme. Highways England has commented further in the response to paragraph 1 of the respondent's case above.
10. *4.6.1.2 We do not consider that the NN NPS is consistent with EU law in this respect. We refer to the McCracken opinion, paragraph 59. What cannot be the case is that a scheme which would worsen air pollution should only be refused if it would delay compliance of that Air Quality Zone – that is, if somewhere else in the relevant Zone would be worse. Clearly action could be taken to address the other location (eg traffic could be banned from Marylebone Road, or wherever), leaving the scheme then the worst in Zone. It cannot be the intention or will of the EU to allow worsening of air pollution "under the cover" of somewhere even worse. Article 13 of the Air Quality Directive makes clear that Member States must ensure that emissions remain within limit values "throughout their zones and agglomerations". Since the development will materially worsen air quality in areas which are already in breach of air quality legislation within the locality of the development, it seems clear that the application must be refused.*

Highways England's Comment

- 10.1 Section 104 of the Planning Act 2008 requires an application for development consent to be determined in accordance with the NN NPS. An Examination of an application for Development Consent is not the appropriate forum to challenge the policy contained in the NN NPS. As noted at section 1 of Annex D to the ExA's Rule 8 letter dated 11 September 2015:
- "...the merits of Government Policy, as set out in the National Networks National Policy Statement (NNNPS), are not a matter for debate during the examination."*
- 10.2 Highways England has set out the approach to, and conclusions of, the compliance risk assessment undertaken for the Scheme in the response to paragraph 1 of the respondent's case above.
11. *4.6.1.3 With regard to the section of NN NPS paragraph 5.13 "within the most recent timescales reported to the European Commission at the time of the decision", the government consultation Air Quality plans refers to new baseline compliance date estimates for some*

zones: *"Note this assessment differs from data submitted to the Commission in September 2013. To ensure we use best available evidence the 2013 assessment has been updated to take account of latest emission factors. This data will be resubmitted in "due course" (Overview document Table 2). This includes revised dates for 2 Zones relevant for this scheme. It is these dates which should be the relevant dates. It could be argued further that since the EU court has clarified that legal limits for NO2 must be met in the shortest time possible, and that it was for the UK Courts to order the government to ensure this is achieved, and in turn the UK Supreme Court ruling in April 2015 indeed ordered the UK government to prepare new plans by the end of the year to achieve compliance in the shortest time possible (<https://www.supremecourt.uk/cases/uksc-2012-0179.html> April 2015), it is the shortest possible time that is relevant to the phrase "most recent timescales" in the NN-NPS.*

Highways England's Comment

- 11.1 As noted in the responses above, the compliance risk assessment undertaken for the Scheme and set out in the response to paragraph 1 of the respondent's case above demonstrates that it will not affect the timescales for the dates of compliance for any of the zones within which the Scheme or the wider local operational air quality study area is located.
- 11.2 This is the case for the previous dates of compliance, and also for the proposed dates of compliance listed in the draft Defra air quality action plan.
12. *4.6.1.4 The implications of the Supreme Court ruling are in turn that whereas if limits were being met in an Air Quality Zone, a scheme which was fully mitigated, produced no net emissions and was Air Quality Neutral as required by the London Plan could be acceptable – however with the special measures the UK is under following the Supreme Court ruling, in relevant areas at the appropriate time, if limits are to be met in the shortest time possible, then with a pollution generating scheme any appropriate mitigation measures proposed for a scheme should be adopted anyway, but the scheme itself should not be allowed to add any extra pollution.*

Highways England's Comment

- 12.1 Highways England's response to Question E4.6.1 of the ExA's first written questions addresses the implications of the *ClientEarth* case for the Scheme. Highways England has commented further in the response to paragraph 1 above.

- 12.2 Section 104 of the Planning Act 2008 requires an application for development consent to be determined in accordance with the NN NPS.
- 12.3 Under the NN NPS, the Secretary of State is not required to refuse consent for a scheme which causes additional air pollution. Paragraph 5.12 of the NN NPS provides:
- 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.*
- 12.4 As set out in the ES Chapter 6, and in the comments of Highways England above, the Scheme is not expected to lead to significant air quality impact, or lead to a deterioration in air quality in a zone/agglomeration. As set out above, nor is the Secretary of State required to refuse consent in accordance with Paragraph 5.13 of the NN NPS.
- 12.5 In relation to the London Plan, the Air Quality Neutral guidance (Air Quality Neutral Planning Support: GLA 80371, dated May 2013) is designed for the assessment of air quality effects of proposed developments within London. The document states in paragraph 2.9:
- “Major Transport Infrastructure*
- Major transport infrastructure development, such as that proposed by TfL, is assessed using the Transport Advisory Guidance (TAG) methodology, which estimates changes to NOx and PM emissions, and then applies an economic valuation. It is therefore suggested that it would be inappropriate to apply the air quality neutral policy to these types of development.”*
- 12.6 A TAG assessment has been undertaken for the Scheme. It is therefore considered that the air quality neutral guidance is not applicable to highways schemes, such as Highways England road schemes.
13. 4.6.1.5 *It seems clear at Appendix 6 of the ES that the results show unacceptable increases in concentrations of NO2. Increases in traffic on the M4 is cited at paragraphs 6.18.8, 6.9.15, 6.10.17. Paragraph 6.15.5 shows the applicant recognises an increase in NO2 concentration in an area predicted to be non-compliant in Defra's plan by 2020 and 2022 (although the*

receptor N353 is not cited elsewhere in Chapter 6 of the ES). Indeed Table 6.21 cites receptors where concentrations already above the objective would be worsened or a new exceedance created (7 of medium magnitude and 11 of small). Also, although these do not seem to be listed with the above, there are a number of Junction sections where worsening of levels which would already exceed limits would occur. For instance for Junction 11-10 a medium increase is reported, and this is reported at locations (paragraph 6.6.9) where concentrations were exceeded in the baseline (paragraph 6.6.5). Also the off scheme section Junctions 3-1 also shows an increase, apparently at locations (paragraph 6.14.25) where concentrations were exceeded in the baseline (paragraph 6.14.16). With these sections wholly within AQMAs (6.6.1 and 6.14.2 respectively), this must be seen as significant under EPUK/IAQM Guidance, paragraph 7.11, and is in turn should be require refusal (McCracken opinion, paragraph 3).

Highways England's Comment

- 13.1 Traffic increases are predicted along the Scheme route as a result of the anticipated additional future demand, and the increase in capacity of the Scheme. These increases have been described particularly in sections of the ES where sensitive receptor locations are identified to contribute to the overall evaluation of air quality significance for the Scheme, for example in paragraph 6.10.18 of the ES.
- 13.2 The tables, sections and paragraphs identified above relate to the local operational air quality assessment against air quality objective values. Where a sensitive receptor has been identified to be in a location with a predicted concentration of NO₂ above the annual average air quality objective, and to have a change of more than 0.4 µg/m³, this is considered as part of the overall evaluation of significance for the Scheme. This is consistent with the approach outlined in IAN 174/13 'Updated advice for evaluating significant local air quality effects for users of DMRB Volume 11, Section 3, Part 1 Air Quality (HA207/07)' used in the assessment.
- 13.3 The EPUK/IAQM Guidance referred to above has not been utilised within the air quality assessment. This is because the assessment of air quality for highways schemes is undertaken utilising DMRB guidance and associated Interim Advice Notes. The EPUK/IAQM Guidance notes that the EPUK/IAQM guidance is not intended to replace the approach as utilised in the air quality assessment of the Scheme:

“This document has been developed for professionals operating within the planning system. It provides them with a means of reaching sound decisions, having regard to the air quality implications of development proposals. It also is anticipated that developers will be better able to understand what will make a proposal more likely to succeed. This guidance, of itself, can have no formal or legal status and is not intended to replace other guidance. For example, industrial development regulated by the Environment Agency, and requiring an Environmental Permit, is subject to the Horizontal Guidance Note H11, while for major new road schemes, Highways England has prepared a series of advice notes on assessing impacts and risk of non-compliance with limit values.”

- 13.4 The overall operational assessment of significance of the Scheme is set out in paragraph 6.15.16 and Tables 6.21 and 6.22 of the ES. Whilst there will be a slight increase in air pollution as a result of the Scheme, the overall assessment of effects indicates that air quality effects of the Scheme are not significant.
- 13.5 The compliance of the Scheme with the NN NPS policy tests is explained in paragraphs 6.18.1 to 6.18.10 of the ES.
14. *4.6.1.6 Further, the 2 scheme sections referred to above appear to have receptors which are listed as having concentrations above legal limits in the 'with scheme' (paragraphs 6.6.9 and 6.14.25), that are not listed as having concentrations above legal limits in the baseline scenarios (paragraphs 6.6.5 and 6.14.16). If that is so, it implies breaches being caused, which would clearly require refusal (McCracken paragraph 2). However paragraphs 6.15.6 and 6.18.8 imply that the scheme would not result in a compliant Zone becoming noncompliant. We thus call on the ExA to satisfy itself that there would on the evidence provided not be new breaches caused.*

Highways England's Comment

- 14.1 In this representation, Friends of the Earth have confused the two separate measures of air quality impact assessed in Chapter 6 of the ES. Once the difference between the two bases of assessment is understood, it is plain that there is no requirement for refusal of development consent.
- 14.2 The results referred to in paragraphs 6.6.9, 6.14.25, 6.6.5 and 6.14.16 of the ES relate to the local operational air quality assessment. This assessment considers air quality objective values and not EU Limit Values. As such, where a change in concentration

results in a predicted concentration at a sensitive receptor, this does not represent a breach of an EU Limit Value, as compliance with EU Limit Values is only considered against the Automatic Urban and Rural Monitoring Network and the Pollution Climate Mapping models. The risk that the Scheme adversely affects compliance with EU Limit Values (i.e. a delay in compliance of a zone or making a compliant zone non-compliant) has been considered (as described above in paragraphs 1.9 to 1.19), and this is not the case.

15. ***4.6.1.7 In any event, the baseline information has changed, and material pertaining to this proposal must be updated. The Defra consultation on its Air Quality plans included revised baseline compliance dates for some Air Quality Zones.***

<https://consult.defra.gov.uk/airquality/draft-aq-plans> - see the Overview document, Table 2. The Greater London Zone the baseline compliance date has been brought forward from 'sometime after 2030' to 'by 2030', and Defra expects compliance 'by 2025' with their plans. For the South East Zone the baseline compliance date has been brought forward from 'by 2025' to 'by 2020' (with 'by 2020' also being the date Defra expects compliance with their plans). This means that baseline information on air quality prepared for the ES which forms the basis of the scheme proposals is out of date (eg as referenced in ES section 6.2, and the first paragraph of the text with Table 6.21). The changed compliance dates could have various impacts which could include an area which would now be compliant being taken over limits with the scheme. The entire air quality baseline of the scheme needs to be re-done.

Highways England's Comment

- 15.1 This issue is addressed by Highways England in the response to paragraph 1.1.2 above.
- 15.2 No change is anticipated in the evaluation of compliance with the Ambient Air Quality Directive as a result of the Scheme from the implementation of the draft Defra air quality action plan. For that reason, the air quality baseline of the Scheme does not need to be reconsidered.
16. ***4.6.1.8 There is concern however that the results presented do not accurately reflect the levels of emissions and concentrations that would result from the scheme. First assessments of induced traffic are likely to be an under-estimate (we refer the ExA to the WR of Campaign for Better Transport/CBT). In addition we note that the modelling relies upon the following assumption (at paragraph 6.2.57): "A key element of the local operational detailed assessment is the rate of improvement in air quality over time as cleaner vehicles enter the***

national vehicle fleet" (and also referred to at paragraph 6.4.1). However the technical advice note referred to in 6.2.57 used for vehicle emissions factors was we understand updated, and that used for compliance risk assessment (referred to in paragraph 6.2.65) has been suspended (we refer the ExA to the WR of CBT). There has been known discrepancy between laboratory testing and real-world emissions, and there has been the recent revelations of the VW 'cheat' devices. A full assessment would have to be made to ascertain robust and reliable information on impacts of the scheme on emissions and concentrations.

Highways England's Comment

- 16.1 With respect to induced traffic flow forecasts, the existence of the principle of induced traffic arising from increased road capacity is acknowledged and whilst Campaign for Better Transport ("CBT") has used historic examples on which to base its assertions of under-estimation by Highways England, it does not follow that the Scheme will produce higher levels of induced traffic than forecast. Highways England used a variable demand model, developed in accordance with TAG guidance that itself reflects the recommendations of the SACTRA report which covered the subject of induced traffic. Traffic forecasts for 2013 from the validated 2009 base model were checked against actual outturn traffic data for 2013 and found to be acceptable. Tables A-5, A-31 to A-32 and A-33 to A-34 at Appendix A of the Traffic Forecasting Report (Reference) illustrate the minimal levels of induced traffic, modal choice and time of day choice impacts respectively that arise through the use of the variable demand modelling.
- 16.2 With respect to vehicle emissions, Highways England is aware a range of recent publications on which indicate discrepancies in real world emissions versus the prescribed European Emission Standards. There are two technical approaches used in the assessment methodology which address these discrepancies.
- 16.3 First, measurement data have been collected across the air quality study area, both by local authorities and additional Scheme specific data collection commissioned by Highways England. These data are used within the air quality assessment to ensure the modelling is predicting pollution concentrations reasonably across the study area. Concentrations of NO₂ are predicted at the monitoring locations for the Baseline Year (2013) and compared against the concentrations measured in those locations.
- 16.4 Where the modelling under-predicts pollutant concentrations, an adjustment factor was derived which was then applied to the future modelling predictions to correct for

any systematic under-predictions. This approach is intended to address any gap between real-world conditions, and assumptions included in the modelling variables, for example emission factors which would include relevant vehicles from any manufacturer which may operate, or be alleged to operate, a ‘defeat device’.

- 16.5 Secondly, the projection of modelled concentrations of NO₂ into the future is based upon the advice in IAN 170/12 v3 (*‘Updated air quality advice on the assessment of future NO_x and NO₂ projections for users of DMRB Volume 11, Section 3, Part 1 ‘Air Quality’*). This makes allowance for vehicles performing differently between the laboratory testing and the real world, for vehicles with the Euro 5 engines, affected by the recent scandal relating to certain manufacturers but also makes allowance for potential under-estimates in the latest Euro 6 vehicles currently entering the UK fleet. This approach is described more fully in paragraphs 6.2.57 to 6.2.60 of the ES.
- 16.6 With respect to information covering the Design Year (2037), an assessment of the predicted effects of the Scheme has been provided in Highways England’s response to Question E4.6.7 of the ExA’s first written questions.
- 16.7 The scheme assessment methodology is considered robust and representative, and further assessment is not considered to be required.
17. *4.6.1.9 We also refer the ExA to the Climate Change Committee's 2015 report to Government which highlighted that transport emissions have continued to rise, but policy uncertainty remains around vehicle emissions both in terms of policy and practice. There is an acknowledged policy gap as to how the carbon budget will be met in 2023-27 which is the period directly consequent to the predicted start date of this development.*

Highways England's Comment

- 17.1 Note that paragraph 4.1 above also deals with these issues.
- 17.2 The Climate Change Committee's 2015 report is addressed by Highways England in the response to paragraph 1.3.2 above.
- 17.3 The carbon emissions of the Scheme have been assessed as being consistent with the requirements of the policies contained within the NN NPS, as described in paragraph 6.18.9 of the ES.

- 17.4 Highways England has sought advice from DfT, in respect of the points raised by Friends of the Earth (England, Wales and Northern Ireland). Highways England has been advised by DfT that it is currently considering this matter and looks to provide a response later in 2015.
18. *4.6.7 The ExA requests further information on an assessment of local air quality effects provided for the design year with and without the scheme.*
19. *4.6.7.1 In the table at 6.2 of Appendix 6 the Background pollution map estimates, estimates are provided for 2013 and 2022, but not for 2037 Design year. We support the ExA's request as above.*

Highways England's Comment

- 19.1 An assessment of the predicted effects of the Scheme in 2037 has been provided in Highways England's response to Question E4.6.7 of the ExA's first written questions.
20. ***7.1 The ExA asks whether the scheme complies with the need to be designed to minimise social and environmental impacts and improve quality of life in accordance with para 3.2 of the NNNPS.***

Highways England's Comment

- 20.1 Paragraph 3.3 of the NN NPS states:

“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 considered reasonable opportunities to deliver environmental and social benefits as part of schemes.”

- 20.2 It should be noted that, contrary to the assertion by Friends of the Earth, paragraph 3.3 of the NN NPS does not require the delivery of environmental and social benefits. Instead, the requirement is that reasonable opportunities to deliver environmental and social benefits have been considered. This is a different test, which has been applied in the case of the Scheme. In particular, these are drawn together in the Socio Economic Report (Application Document Reference 7-2).
- 20.3 The environmental and social benefits of the Scheme are important and relevant and have been assessed in accordance with Government guidance. The Scheme has been

subject to detailed appraisal covering a wide-range of potential impacts on the wider community. The assessment followed the guidelines for appraisal set out in Treasury guidance (The Green Book, Appraisal and Evaluation in Central Government) and as laid down for transport projects in the Department for Transport's TAG, the Design Manual for Roads and Bridges ("DMRB") and supplementary advice in the form of IANs published by Highways England.

- 20.4 The assessment covers travel-related benefits (principally travel time and reliability), safety, regeneration, and a range of environmental impacts (air quality, noise, greenhouse gases, land and townscape, heritage, biodiversity and water), physical activity and journey quality. Where possible, these effects are monetised, otherwise they are considered qualitatively. These potential benefits are compared against the costs of the Scheme (capital, construction impacts and operating), together with the change in indirect tax revenues to central government (principally fuel duties). The results of this assessment are brought together in an Appraisal Summary Table ("AST"), a copy of which is provided in Appendix B of the Socio-Economic Report for the Scheme (Application Document Reference 7-2).
- 20.5 The AST, together with supporting worksheets, was submitted to the Transport Appraisal and Strategic Modelling and Road Economics teams within the Department for Transport, who undertook a Value for Money ("VfM") assessment. The metric used to define the VfM for the Scheme (or any other investment) is the ratio of the total net benefits divided by the total net costs, called the Benefit Cost Ratio ("BCR"). Taking account of all the costs and benefits, the Scheme has been assessed as having a BCR of 2.2, which affords the Scheme a rating of high value for money.
- 20.6 Paragraph 3.3 of the NN NPS also indicates that: "*The Government's detailed policy on environmental mitigations for developments is set out in Chapter 5 of this document.*"
- 20.7 A review of Chapter 5 of the NN NPS indicates that air quality mitigation is focused upon the mitigation of significant air quality effects and/or compliance with EU Limit Values. This is described in paragraphs 5.12 and 5.13 of the NN NPS.
- 20.8 The Scheme is not predicted to result in significant air quality effects and as such specific air quality mitigation measures are not required. This is set out in the overall operational assessment of significance of the Scheme, as set out in paragraph 6.15.16 and Tables 6.21 and 6.22 of the ES (Application Document Reference 6-1).

- 20.9 Paragraph 5.14 of the NN NPS reiterates the key requirement of mitigation is: “*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.*”
21. *7.1.1 Friends of the Earth point to the issue of air quality in particular. Recent figures for premature deaths due to NO2 pollution now add to those for particulate pollution, meaning a greater impact on the health of citizens should be taken into account. A figure of 23,500 extra annual premature deaths from Nitrogen Dioxide (NO2) for the UK has been estimated by Defra and included with the government's draft Air Quality Plans (<https://consult.defra.gov.uk/airquality/draft-aq-plans> - see the Overview document, paragraph 8). With this added to the existing figure of 29,000 annual premature deaths due to particulate air pollution (Committee on the Medical Effects of Air Pollutants/COMEAP <https://www.gov.uk/government/publications/comeap-mortality-effects-of-long-term-exposure-to-particulateair-pollution-in-the-uk>) brings the total to 52,500 premature deaths a year for the UK.*

Highways England's Comment

- 21.1 The correspondence from Public Health England (dated 8 October 2015 and provided at **Appendix []** to these responses) notes the approach taken in the air quality assessment. Public Health England does not identify any concern that there will be a significant increase in risk to health from changes in air quality.
- 21.2 A range of potential health issues has been raised by consultees, with those issues of principal concern including air quality. In response to this, and in order to ensure that the summation of the possible health impacts arising from the Scheme (not only from air quality, but also from emissions to water, waste management and contaminated land), a Health Impact Assessment (“HIA”) has been prepared for the Scheme (and is submitted for Deadline III). Whilst the submission of a HIA is not a mandatory requirement under the Planning Act 2008, the HIA sets out the potential effects on human health of the Scheme, bringing together information relating to effects on human health from the various topic assessments within the ES.
- 21.3 Both potential beneficial and adverse effects of the Scheme on public health have been assessed. The HIA records an assessment of minor adverse impact in relation to air quality for both construction and operation phases of the Scheme.

- 21.4 On that basis, the Scheme is consistent with the requirements of the specific air quality policy tests within the NN NPS, as outlined in paragraphs 6.18.1 to 6.18.10 of the ES.
22. 7.1.2 For London a figure of nearly 10,000 premature deaths a year from NO2 has been set out by the Mayor:
<http://www.london.gov.uk/media/mayor-press-releases/2015/07/london-becomes-first-world-city-to-quantify-the-health-effects>.

Highways England's Comment

- 22.1 As noted in the response to paragraph 7.1.1 above, the HIA prepared for the Scheme does not identify a significant increase in health risks from the operation of the Scheme.