Gatwick Northern Runway

TR020005

National Highways Comments on Responses to Examining Authorities Written Questions

May 2024

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1 Introduction and Responses to the Examining Authority's Third Written Questions

This document has been prepared by National Highways to set out its comments to any responses made by others to the Examining Authority's (ExA) Written Questions (WQs) which were introduced into the examination at Deadline 3. These can be found in Table 1.1 below.

Table 1-1 National Highways Comments on Responses to the Examining Authority's Written Questions

WQ No	Question to / Response by	Question Posed	Response Provided	National Highways Comments
The Applicant's Response to the Examining Authorities Written Questions - General and Cross Topic [TR020005/REP3/091]				
GEN.1.21	The Applicant	Good Design Comment on the desirability of implementing the following measures to ensure that good quality sustainable design and integration of the Proposed Development into the landscape is achieved in the detailed design, construction and operation of the project. How might they be secured? Are any further measures appropriate? b) A 'design review panel' to provide informed 'critical-friend' comment on the developing sustainable design proposals; In the opinion of CBC and other local authorities where relevant, would the implementation of any or all of the above measures assist in determining post-consent approvals (including the discharge of requirements) in relation to achieving good design?	By way of introduction the Applicant is grateful for this question and wants the ExA to be aware that it has sparked a conversation within GAL about the approach to take; recognising the importance of good design to the airport and its community. As set out below, design issues are already taken very seriously and consulted on widely but the Applicant would like the opportunity to explore further the ideas prompted by the question and to develop its response through the examination. b) Securing good design is an important feature of GAL's procurement process and the Applicant carefully considers the appointment of its contractors / designers, including those who have a track record and examples of airport developments. In addition, the Applicant can call on the expertise of its major shareholders Vinci Airports, who own / manage / operate nearly 70 different airports world-wide, and who have a particular interest and specialism in airport design. The Applicant will consider the desirability of a design review panel for certain key buildings in light of comments received by the local authorities.	National Highways notes the Applicant's response and reiterates National Highways' position that it would reserve the right to be included as part of any design review panel in order to protect its interest in the safe operation and maintenance of the Strategic Road Network. National Highways requests that the Applicant provides clarity on the timeframes for its response to the Examining Authority.
GEN.1.30	The Applicant	Future Baseline – ES Chapter 12 Transport Has any assessment in the ES been done of the future baseline transport effects of either the increase of movement from the 2023 40.9 mppa or the 2019 baseline 46.6 mppa to the future baseline levels of 57.3 mppa in 2029, 59.4 mppa in 2032 and 67.2 mppa in 2047?	Mode share: In the future baseline scenarios, air passenger mode shares are forecast to continue to move away from car and towards public transport, with public transport mode share for passengers forecast to increase from 43% in 2016 to 52% in 2047. This is a response to increasing congestion and journey times on the highway network, increased parking and forecourt access charges over time and improvements to bus and rail provision, all in the absence of the Project. Future baseline employee mode shares are forecast to increase from 29% in 2016 to 35% in 2047. Bus and coach demand in the future baseline: Tables 128 and 129 of Transport Assessment Annex B: Strategic Transport Modelling Report [APP260] provide the bus / coach air passenger and employee trip numbers for the base and future baseline years. It is assumed that bus and coach service frequencies would increase as the industry responds to growth in demand. Additional local bus services part-funded by the Applicant would provide extra capacity for employees and other airport users.	National Highways has raised a number of concerns in relation to mode shares that are presented by the Applicant as part of its Surface Access Commitments document. National Highways has reviewed the updated Surface Access Commitments **[TR020005/REP3/029]** submitted at Deadline 3 and has outlined its continued concerns in respect to securing a realistic and achievable mode share that protects the Strategic Road Network as part of Appendix A to National Highways comments on submissions made at Deadline 3. In respect to Bus and Coach demand in the future baseline, National Highways reiterates its concerns that the Applicant's proposals at present only seek to financially support public transport services for the first five years of the project. Only through long term support and investment can a sustainable change in public transport mode share be achieved. Furthermore, National Highways notes that the Applicant's updated Surface Access Commitments has not implemented the changes recommended by National Highways in respect to Commitment 5 and has outlined its response in Appendix A to National Highways comments on submissions made at Deadline 3.

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GEN.1.33	The Applicant	National Networks National Policy Statement - March 2024 The Proposed Development was accepted for Examination prior to the publication of the latest National Networks National Policy Statement (NNNPS) and in accordance with paragraph 1.16, the 2015 NNNPS should have effect. However, paragraph 1.17 explains that the latest 2024 NNNPS is potentially capable of giving rise to important and relevant considerations in the decision-making process. Given this, provide an outline of any implications arising for the designation of the latest NNNPS the ExA should consider.	The Applicant has prepared a detailed comparison table setting out the equivalent or different provisions within the ANPS, the NNNPS 2014 and the NNNPS 2024 (Appendix A to this document). Inevitably, the comparison demonstrates many changes in wording and, for instance, additional information requirements. The final column of the comparison table seeks to identify whether there are more significant differences between the three NPS. The comparison document is necessarily extensive but the Applicant suggests that the principal implications that may arise from an application of the NNNPS 2024 are as follows: • 4.23 – attention is drawn to the principle of Biodiversity Net Gain, although no specific percentage requirement is set out. • 4.27 – the NPS provides further detail around Good Design, including identifying four design principles. • 4.32 – sets out requirements for design review and suggests the appointment of a design champion. • 4.57 – the NPS provides greater emphasis on the importance of opportunities to improve active travel (see also paragraphs 4.72, 5.271 and 5.278). • 5.194 – several paragraphs set out more detail about the approach to noise assessment and mitigation, for example in relation to construction and traffic noise. • 5.31 – sets out a requirement for Whole Life Carbon Assessment. • 5.37 - sets out a requirement for a construction carbon plan. • 5.39 – policy in relation to the assessment of GHG impact is more explicit that assessment should be undertaken against Carbon Budgets. • 5.131 – sets out more requirements in relation to Flood Zone 1. • 5.162 – requires LVIA to consider dark sky impacts.	National Highways notes the detailed comparison document provided by the Applicant at Appendix A to its response **[TR020005/REP3/092]** and considers the points National Highways raised in response to GEN.1.33 **[TR020005/REP3/138]** remain relevant.
DCO.1.5	The Applicant	Heads of Terms for s106 Agreement ... Why do Surface Access Commitments need to be addressed through the agreement and not the DCO? How does this relate to Requirement (R) 20 of the dDCO? ...	... The Applicant's approach towards the use of DCO Requirements and s106 obligations is set out in The Applicant's Response to Actions ISH 2-5 [REP2-005]. The obligations secured through the draft DCO s106 Agreement include measures which are both mitigation and wider community benefits. The Environmental Statement identifies those measures that are mitigation and enhancements in the context of the full narrative of the assessments. There are also a number of obligations within the draft DCO s106 Agreement which have been continued from the 2022 Agreement because they have proved beneficial to the JLAs, the Applicant or both in the operation of the Airport in the context of the local area. These are shown in the table in Appendix A to The Applicant's response to Actions ISH 2-5 [REP2-005].	As set out by National Highways during ISH7, the s106 agreement contains matters directly relevant to it. National Highways will submit a draft requirement and other DCO provisions for consideration by the Examining Authority should an agreement enabling the enforcement of the s106 obligations (to the extent they apply to the Strategic Road Network (SRN) not be reached, or it be deemed unlikely to be reached.
DCO.1.8	The Applicant	Securing Surface Access Commitments Paragraph 8.4.24 of the Planning Statement [APP-245] states that within the Surface Access Commitments GAL commits to achieving various modes shares within three years of the opening of the new northern runway.	An updated version of the Surface Access Commitments (SAC) (Doc Ref. 5.3 v2) is submitted at Deadline 3 with amendments to section 6 which clarifies the process that must be followed where there is a breach or an anticipated breach of the mode share commitments. This includes a requirement to prepare a SAC Mitigation Action Plan if two successive Annual Monitoring Reports continue to show that the mode share commitments have not been met or, in the Applicant's	National Highways welcomes the amendments made to the Surface Access Commitments at Deadline 3 and has responded separately as part of its comments on Deadline 3 submissions in Appendix A However, National Highways welcomes any suggestions from the Examining Authority or local authorities to enhance the robustness of commitments.

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		What sanction is there if these commitments are not met?	or the TFSG's reasonable opinion, suggests they may not be met (having regard to any circumstances beyond the Applicant's control which may be responsible). The TFSG can consider, comment on and approve or reject the SAC Mitigation Action Plan and the TFSG may propose additional or alternative interventions it believes to be necessary to achieve the mode share commitments. The Applicant must incorporate these interventions into the SAC Mitigation Action Plan or provide valid reasons why it does not consider they are necessary to achieve the mode share commitments; or offer suggestions for alternative actions where there is evidence they will achieve or exceed the same goal. The Applicant will implement the measures in the SAC Mitigation Action Plan once approved with the TFSG. Where the TFSG does not agree with any reasons put forward for the non-inclusion of the proposed measures, it must give the Applicant its reasons in writing. Within 90 days of receiving the TFSG's written reasons, the Applicant must submit the SAC Mitigation Action Plan and the proposed measures must be submitted to the Secretary of State who may approve the action plan with or without the measures or such additional or alternative interventions it considers reasonably necessary to achieve the mode share commitments having had regard to the materials in the submission. All representations submitted by the TFSG must be included in the submission to the Secretary of State. The Applicant will implement the measures in the SAC Mitigation Action Plan approved by the Secretary of State unless otherwise agreed with the TFSG. In addition, the Applicant must make available on its website a copy of the materials submitted to the Secretary of State and any materials received from the Secretary of State, subject to any confidential or commercially sensitive materials being appropriately redacted.	
DCO.1.19	The Applicant	Art.6 (Limits of Works) Version 2 of the dDCO [AS-004] removed Work Nos. 3 and 29 from sub-paragraph (3). The related EM [AS-006] did not reference their removal nor a reason for removing them. Explain. Why does Art. 6 only apply to specific Work Nos.? The EM has changed the title to Limits of works but paragraph 4.7 still says limits of deviation. Update the EM to explain the change. The EM (paragraph 4.10) does not provide a reason why this provision is required. Please provide one. What is the difference between Art. 6 (2) and Art. 6 (4)(b)? Include an explanation in the EM.	(d) Article 6(4)(a) is required to reflect the design uncertainty that is inherent in a third-party infrastructure scheme that remains subject to the approval of the relevant highway authorities. The Surface Access Highways Plans - Engineering Section Drawings [APP-021] show the provisional levels for the highway works, but the final detailed design remains subject to finalisation through further discussion with National Highways and the local highway authorities, which is ongoing. It is therefore necessary for a degree of vertical deviation to be permitted in respect of these works by reference to the provisional design shown on the Engineering Section Drawings. This is the purpose of article 6(4)(a). The proposed magnitudes in article 6(4)(a) have been developed with such potential changes in mind and with due consideration of magnitudes of limits of deviation in other made DCOs. The Applicant is in ongoing discussions with National Highways to ensure that they are content with the limits specified.	Outside of the examination, National Highways has continued to engage with the Applicant in relation to the vertical Limits of Deviation applied to the Surface Access Works. The Applicant has presented the following proposed amendments: *Taking on board National Highways' response, the vertical limits of deviation are proposed to be amended to provide reduced typical limits of deviation across the surface access highways elements of the scheme (1m upwards and 1m downwards, as per A66 scheme) with exceptions created for the North Terminal Flyover Link (Work No. 36f), the Gatwick Spur mainline at the South Terminal Flyover (Work No. 35a between approx. CH 880 and CH 1680), the South Terminal Roundabout slip road links Work No. 35b,c,e,f) and the A23 London Road diverge to Airport Way (Work No 36e) where the greater limits of 1.5m upwards and 2m downwards would apply. The assets where greater limits would apply are considered to have greater opportunities for design refinement at the detailed design stage (e.g. to minimise cut/fill volumes on the links, account for contractor innovation, and to address highway authority comments in relation to design proposals such as optimising the alignments for road user safety or*

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				maintenance requirements), all of which would be undertaken in consultation with the relevant highway authorities. National Highways can confirm that the proposed changes to the Limits of Deviation outlined above are considered acceptable. These amendments represent a stricter general Limits of Deviation whilst offering the flexibility for further refinement where necessary. However, in order to ensure that these changes can be readily viewed and cross referenced across the draft Development Consent Order (dDCO) and associated plan, National Highways requests that the following is undertaken: Where Work Number 35a is to be afforded greater DCO flexibility, National Highways requests that separate identifiers are provided to distinguish between those sections of Work Number 35a that would be subject to 1m and those subject to 2m Limits of Deviation, for example (Work Number 35a(i) and Work Number 35a(ii) etc). This is considered necessary due to the parameter plans not containing chainage details.
DCO.1.20	The Applicant	Art. 8 (Consent to transfer benefit of Order) ... Further justification/ explanation is required in relation to sub-paragraph 8 (4).	... b) Article 8(4) provides for the transfer or grant of the benefit of the DCO to a relevant highway authority (in respect of highway works) or a registered company (in respect of the identified office and welfare facilities, new aircraft hangar and hotels) without the subsequent consent of the Secretary of State. This is justified because the Secretary of State will be able to consider the justification for such transfers through the examination and post-examination process, in the same manner as if they were considering a request for consent subsequently. The ability to transfer the benefit of the DCO as regards highway works to a relevant highway authority in article 8(4)(a) is well precedented and is justified on the basis that such authorities will be heavily involved in the carrying out of the highway works forming part of the authorised development and will likely be best-placed to exercise the Order powers themselves rather than that requiring the undertaker to do so. The ability to transfer the limited identified works in article 8(4)(b) to a registered company reflects that companies other than the Applicant will likely operate these facilities in due course (as is the case for the equivalent facilities on the Airport today) and will require the benefit of the Order in this regard. The specified works are not mitigation measures for the wider Project and do not have correlative material commitments and thus there is no risk in a third party company exercising the benefit of the Order in respect thereof. It would therefore be unnecessary and disproportionate to require the undertaker to seek further consent from the Secretary of State to such transfers postgrant of the DCO. The Applicant notes that planning permission under the Town and Country Planning Act 1990 is not personal and runs with the land over which it is granted. Given that the works identified in article 8(4)(b) could have been consented under the 1990 Act (or, for some, pursuant to the Applicant's permitted development rights) if not forming part of the wider Project, the ability to transfer the benefit of the Order in respect of these works without further consent is considered appropriate.	National Highways is supportive of article 8(4)(a) as this simplifies transfers of highway works.

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DCO.1.32	The Applicant	Art. 34 (Application of the 1981 Act and modification of the 2017 Regulations) Further justification is required for sub-paragraphs (5), (6), (11) and (16) to (19) in the EM. In respect of sub-paragraph (8) (b) please reference your answer to DCO.1.29. EM paragraph 7.30 states that the modifications are based in large part on previous development consent orders, including Art. 26 of The Manston Airport Development Consent Order 2022 and Art. 34 of The Sizewell C (Nuclear Generating Station) Order 2022. Art. 34 differs significantly from these cited precedents notably sub-paragraph (5). Please explain the need for the differences.	Paragraph (6) amends section 5 of the Compulsory Purchase (Vesting Declarations) Act 1981 (the "1981 Act") to omit language that is not applicable where the 'compulsory purchase order' is a DCO, which is necessary given that article 34(1) applies the 1981 Act as if the DCO were a compulsory purchase order. Paragraph (6) is well precedented, including in article 20(3) of the Rother Valley Railway (Bodiam to Robertsbridge Junction) Order 2023 and article 21(3) of the Network Rail (Cambridge South Infrastructure Enhancements) Order 2022. The Applicant's intention in including paragraphs (5) and (16) – (19) is to amend the Compulsory Purchase of Land (Vesting Declarations) (England) Regulations 2017 to facilitate the compulsory acquisition of land and rights in favour of a third-party statutory undertaker ("SU"). This would allow for acquired land/rights to vest directly in the SU, without the need for the undertaker to acquire the land/rights in its own name and then separately transfer such land/rights to the relevant SU. The need for this approach arises from the fact that the Project encompasses a significant component of surface access works, which will be carried out to a large extent by the relevant highway authorities, including National Highways. Those SUs will need to hold the interests or rights in land required to carry out those elements of the Project. Additionally, utility diversions will be required to facilitate works both on- and off-airport, with a need for utility SUs to hold the necessary land and rights for the utility works and the resulting diverted apparatus. Without provisions that allow for direct vesting of compulsorily acquired land or rights in the SUs, the undertaker (i.e. the Applicant or a successor) would need to acquire the land/rights, register them at HM Land Registry in its own name and then arrange a subsequent transfer to the SUs and a further registration at HM Land Registry in their name. The present significant backlogs at HM Land Registry and the additional procedure involved in the above two-stage process could lead to unintended and undesirable consequences for the construction timetable. The Applicant stresses that these provisions do not provide any additional powers of acquisition that could not otherwise be exercised by the undertaker. They simply streamline the administrative process of land ownership or rights holding and registration in a case where land/rights are required to be acquired for works being carried out by third-party SUs. In light of comments from the ExA and local authorities on these provisions, as well as emerging precedent in pending DCO applications, the Applicant is undertaking a review of these provisions to consider any amendments to ensure that the drafting clearly reflects its intention and to address concerns raised. The Applicant will provide an update at a future deadline.	National Highways supports the Applicant's drafting which seeks to directly vest land. National Highways looks forward to reviewing any proposed amendments to this drafting to ensure the provisions are clear.
DCO.1.40	The Applicant	R6 – National highway works In paragraph (2) is 'the third anniversary of the commencement of dual runway operations' an appropriate timescale?	The delivery milestone for the "national highway works" as such term is defined in Article 2 and secured by Requirement 6 of the dDCO is informed by the modelling undertaken in support of the Application. In particular, such modelling assumes that dual runway operations commence in assessment year 2029 and that national highway works are operational by assessment year 2032. These assumptions have accordingly been reflected in the drafting of the requirement and specifically the need for the works to be in place by the third anniversary of the commencement of dual runway operations (to mirror, in non-date form, the temporal period between assessment years 2029 and 2032). The Transport Assessment [AS-079] presents the result of VISSIM modelling for the future baseline and with Project scenarios for the assessment years 2032 and 2047. VISSIM model sensitivity tests have now also been undertaken for the	National Highways notes the general overview provided by the Applicant, but still has a number of concerns as set out in National Highways' response to this written question **[TR020005/REP3/138]**. National Highways considers that unless these modelling concerns are resolved, the works should be developed prior to the commencement of any airport growth, rather than three years after such growth has been enabled by the DCO.

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			equivalent 2032 and 2047 scenarios for the post-Covid assumptions, drawing on the strategic model sensitivity tests reported in Accounting for Covid-19 in Transport Modelling [AS-121]. The VISSIM sensitivity tests are reported in Post-Covid VISSIM Sensitivity Tests for 2032 and 2047 (Doc Ref. 10.19) which is being submitted at Deadline 3. They show that in the vicinity of the Airport, the operation of the highway network in the post-Covid sensitivity tests (in both the future baseline and with Project scenarios) is better than that in the core modelling which supported the Application, which confirms the conservative nature of the core modelling in providing a reasonable worst-case assessment. The Applicant is preparing further VISSIM modelling to illustrate the operation of the network in 2029, prior to the proposed completion date of the national highway works. The Applicant will prepare a technical note to report on these findings from the "core" and post-Covid 19 sensitivity model tests, which together with the VISSIM modelling for 2032 will form part of further engagement with National Highways on the delivery milestone for the national highway works, as secured pursuant to Requirement 6 of the draft DCO. The Applicant will update the ExA on the output of these discussions at the earliest opportunity, indicatively expected to be at Deadline 5. By way of general overview, the modelling indicates that the additional traffic generated by the Project after the commencement of dual runway operations in assessment year 2029 and the implementation of the interventions set out in ES Appendix 5.4.1: Surface Access Commitments [APP-090] would lead to a slightly worse network performance compared to the equivalent future baseline scenario, but not to the extent that the national highway works would be necessary at that point. The highway works are, however, shown to be desirable by assessment year 2032 to address congestion on the road network in the vicinity of the Airport that would otherwise lead to adverse network impacts in future years. In this way, the Project national highway works would deliver benefits to the performance of the network for both airport-related and non-airport traffic and would result in levels of performance which would be better overall than in the equivalent future baseline situation.	
The Applicant's Response to the Examining Authorities Written Questions – Air Quality [TR020005/REP3/083]				
AQ.1.8	The Applicant	National Highways (NH) in its RR [RR-3222] raises a query regarding which emission factor toolkit has been used in the assessment. Can the Applicant respond to this?	The road traffic emissions were obtained from the Defra Emissions Factor Toolkit (EFT) version 113 as set out in Paragraph 13.7.16 of ES Chapter 13: Air Quality [APP-038]. This was the most recently available toolkit at the time of the assessment. Section 1.4 of Appendix F of Supporting Air Quality Technical Notes to Statements of Common Ground [REP1-050] addresses the implications of EFT version 12, released following the submission of the DCO Application.	The Applicant's response to this question does not specifically refer to, nor justify, not implementing the DMRB LA105 methodology (i.e. use of the National Highways tools associated with the LA105 method, including the National Highways specific emissions tool). The Applicant refers to the Defra Emissions Factors Toolkit (EFT) that they have used in the ES (v11) and a sensitivity test undertaken using EFT v12, as reported in Appendix F of Supporting Air Quality Technical Notes to Statements of Common Ground (SoCG) **[TR020005/REP1/050]**. The Applicant does not refer to another sensitivity test reported in Appendix F of Supporting Air Quality Technical Notes to SoCG **[TR020005/REP1/050**], which was more relevant to National Highways' relevant representation – the use of a more precautionary assumption of vehicle emissions factors. With reference to Appendix F of Supporting Air Quality Technical Notes to SoCG **[TR020005/REP1/050]**, the Applicant does not appear to have provided the evidence requested, to demonstrate that local monitoring data has been

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				assessed to confirm that the direction taken to adopt the approach to future rates of improvement in air quality, is appropriate.
AQ.1.9	The Applicant	ES Chapter 13, paragraph 13.5.56 [APP-038] states that the operational study area is the 11km x 10km study area. However, paragraph 13.5.5 states that the wider study area includes the Affected Road Network (ARN) along which there is potential for impacts during operation. Can the Applicant confirm whether the ARN is assessed for the operational phases and if not, provide justification?	The Applicant can confirm that the ARN is assessed for the operational phases. Paragraphs 13.5.4 to 13.5.10 of ES Chapter 13: Air Quality [APP-038] sets out the construction and operational phase study areas. The study area assessed for construction traffic and the operational phases includes the 11 km by 10 km domain plus the modelled Affected Road Network (ARN) outside this area. Figure 4.1.1 Modelled Road Network of Air Quality Figures – Part 2 [REP1-018] presents the ARN network for the wider study area.	National Highways requests that the Applicant provides a figure showing the Affected Road Network (ARN), based upon the traffic change screening method applied, on top of the modelled domain for each scenario.
AQ.1.10	The Applicant	ES Chapter 13, paragraph 13.5.26 [APP-038] does not include 2047 in the slow fleet transition on the assumption that all aircraft will be new generation. ES Appendix 13.9.2, paragraph 3.1.1 [APP-168] states that this is based on assumptions around airlines' fleet procurement programmes and business models. However, these assumptions are not explained, ie the difference between the engine types and how they are anticipated to change over time. Can the Applicant provide further explanation on how and to what degree the engine type is anticipated to transition to the new generation of engines by 2047?	The forecast proportions of next generation aircraft in the fleet over time in the 'central case' (most likely rate of fleet transition) is provided in Section A1.3 of Annex 1 to ES Appendix 4.3.1 Forecast Data Book [APP-075]. Detailed fleet information, including how it is anticipated to change from 2029 to 2047 is provided in Table A1.3.2. The forecast proportions in Table A1.3.1 show 100% next generation aircraft in the 2038 and 2047 scenarios in both the base case and Northern Runway case. The proportions of next generation forecast in the Slow Fleet Transition scenarios are provided in Annex 3, which shows proportion of next generation aircraft being 82% of the fleet in 2038, but reaching 100% in 2047, matching the 'central case'. Therefore, by 2047, the fleet mix in terms of next generation aircraft in the 'central case' and the Slow Fleet Transition case will be aligned. An assessment of the 2047 central case was undertaken and is presented in ES Chapter 13: Air Quality [APP-038] and therefore an air quality assessment of the 2047 Slow Fleet Transition sensitivity scenario was not considered necessary, as it would be assumed to be the same as the central case already assessed. ES Appendix 4.3.1 Forecast Data Book [APP-075] sets out the consultation and engagement which informed the forecasts used including consideration of the Jet Zero Strategy. The Jet Zero Strategy sets out UK Government's framework and plan for achieving net zero aviation in the UK by 2050. The strategy considers improvements in aircraft fleet, considering sustainable aviation fuel and introductions of zero emission aircraft.	The Applicant's response that one of the scenarios they have considered includes the combined impact of construction and operation when they overlap, is welcomed.
AQ.1.12	The Applicant	ES Chapter 13, paragraphs 13.10.24 and 13.10.51 [APP-038] report locations where there are predicted exceedances of the PM2.5 objective in the do minimum and do something scenarios for 2024 leading to a moderate adverse effect (for 2024 R_117 and R_147 and for 2029 R_147). The ES states that the Proposed Development is unlikely to change traffic in those areas and changes are attributed to 'modelled traffic noise' which is explained in Transport Assessment (TA) Annex E [APP-263]. However, this Annex does not identify Sutton Common Road	The Applicant addresses the change in concentration at Sutton Common Road (R_147) receptor at Section 3 of Appendix C of Supporting Air Quality Technical Notes to Statements of Common Ground [REP1-050]. In summary, at R_147 an anomaly in the emissions data was identified within the construction scenarios. The traffic data represent an overall decrease in AADT and the closest receptor H_166 demonstrates that the concentration change at R_147 Sutton Common Road is likely to be 0.1 µg/m3 for NO2, PM10 and PM2.5 corresponding to no significant effects.	The Applicant refers to Appendix C of Supporting Air Quality Technical Notes to SoCG **[TR020005/REP1/050]**, within which they acknowledge an error in the impacts reported for this receptor in the original submission. The Applicant states that the corrected impact is likely to be 0.1µg/m^3 for NO_2, PM_{10} and $PM_{2.5}$ corresponding to no significant effects and that this does not affect the overall conclusion and no significant effects are anticipated. This clarification is welcomed by National Highways. The change in traffic flow data provided by the Applicant in Table 2 of Appendix C of Supporting Air Quality Technical Notes to SoCG **[TR020005/REP1/050]** does demonstrate that impacts are likely to be negligible.

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		(R_147) as a receptor that is subject to model noise in 2024 or 2029. Can the Applicant explain why the moderate adverse effects at R_147 in 2024 are not considered significant?		
AQ.1.17	The Applicant	ES Chapter 13, paragraph 13.10.25 [APP-038] states that the largest change in pollutants during construction in the 2024 scenario is at receptor R_147. This is located 12km north of the M25 and is concluded to experience a moderate adverse effect. Can the Applicant further explain why the largest change would take place up to 12km from the M25 rather than in local proximity to the construction activity?	The Applicant addresses the change in concentration at Sutton Common Road (R_147) receptor at Section 3 of Appendix C of Supporting Air Quality Technical Notes to Statements of Common Ground [REP1-050]. Section 4 of Appendix C [REP1-050] provides a summary of the highest predicted concentration and greatest change, alongside the reasoning for each assessment scenario. The largest change in 2024 is predicted to occur at receptor R_600, located in Horley close to the A23 (London Road) and the change is due to airport activity.	Please refer to National Highways response provided to question AQ.1.12.
AQ.1.21	The Applicant	NH in its RR [RR-3222] states that there is a limitation to the use of using 0.2m dispersion site roughness and that some sensitive receptor locations may not be suited to this roughness factor. This may lead to underestimation of the turbulence on the ARN. Can the Applicant justify the use of the 0.2m site roughness factor and how this can be considered for the ARN as a reasonable worst case for assessing impacts to air quality?	The Applicant acknowledges that given the extent of the modelling domain, the topography and land-use do vary between the receptors which have been considered and assessed, which will affect the dispersion of pollutants in the real-world. As set out in the response to the Relevant Representation from National Highways [RR-3222] and the Statement of Common Ground between Gatwick Airport and National Highways [REP1-036], the use of a single surface roughness (SR) value of 0.2m was used for consistency, mirroring the approaches taken in previous Gatwick business as usual emissions inventories and air quality modelling studies undertaken for 2002/3, 2005/2006, 2010 and 2015. The 2005/6 study acknowledged that an 'an approximate representative value of roughness length for modelling the dispersion of sources on, or close to the airport is expected to lie in the range 0.2 m to 0.5m: in the 2002/3 modelling study a value of 0.2 m was chosen. The predicted ground-level concentration from low-level sources decreases with increasing roughness length. Although 0.2 m is at the lower end of the plausible range of values (giving concentrations that are more likely to be overestimates than underestimates), this value was retained for the current study'. Following the same approach, a SR value of 0.2 m was chosen for this assessment. Furthermore, the modelling methodology included in the ES Chapter 13: Air Quality [APP-038] was developed and discussed through extensive engagement with local councils between August 2019 and February 2023, as set out in Table 13.4.4 of Chapter 13. This included seven Topic Working Group meetings with local councils and technical support (AECOM), discussing all aspects of the assessment methodology. A disagreement with the SR approach was not noted. As part of the methodology and scope development, together with the post-assessment stage, the Applicant's Project team review other DCO Application	The Applicant refers to previous emissions inventories and studies undertaken for the Airport as justification of the surface roughness (SR) value used, including to note "an approximate representative value of roughness length for modelling the dispersion of sources on, or close to the airport is expected to lie in the range 0.2 m to 0.5m". National Highways notes that the study area reported extends well beyond sources on, or close to, the airport. The Applicant refers to air quality assessments undertaken for National Highways schemes and states that those assessments used a single SR value to represent their entire model domain. National Highways acknowledges that is the case, but notes that the Applicant does not confirm the single SR value used in those assessments and whether any of them used an SR value of 0.2m for the dispersion site. The Applicant also states that it is difficult to draw exact comparisons between projects [on SR] due to differences in the environment and model set up. The Applicant then refers to the suggestion from CERC and research published by the University of Birmingham that a lower SR value will result in higher concentrations. It is the opinion of National Highways that due to the difficulty in comparisons stated by the Applicant, the influence of using a higher SR value should be confirmed by a sensitivity test, noting that the influence of SR on individual receptors is also dependent on the distance and orientation of receptors to the modelled road source. The assumption that a higher SR value equates to a lower concentration is not guaranteed.

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			documents on the Planning Inspectorate website. Of particular relevance to this study based on the scales, geography or recent time periods, the Applicant's Project team reviewed the Air Quality Assessments submitted as part of the DCO applications for a large number of schemes, including (but not limited to) the M25 J10 Wisley Junction (PINS reference TR010030), M25 J28 Improvements (PINS reference TR010029), A66 Northern Trans-Pennine Project PINS reference TR010062) and Lower Thames Crossing (PINS reference TR010032), all submitted by National Highways. It is noted that each of the associated assessments submitted as part of the DCO Applications above were based on the use of a single SR value for the modelling domain, rather than the use of a variable SR, in-line with the approach taken by Gatwick Airport. In relation to the potential implications of the use of variable SR rather than a single number for the modelling domain, it is difficult to draw exact comparisons between projects due to differences in the environment and model set up. In simplistic terms, CERC (the model developers of ADMS software) suggest that the greater the surface roughness value used in a model (for example in an urban area), the greater the level of turbulence and mixing, which has the effect of reducing pollutant concentrations, rather than increasing pollutant concentrations. This is further documented in the published research paper by the University of Birmingham, which summarises: - "The model results suggest that reducing surface roughness in a city centre can increase ground-level pollutant concentrations, both locally in the area of reduced roughness and downwind of that area…. We expect the results from this study to be relevant for all atmospheric dispersion models with urban-surface parameterisations based on roughness". The maximum impact from the Project is in the area of Horley. Looking in isolation, the model SR for this area may be between 0.2 - 0.5 m, representing open suburbia (increased turbulence from urban conurbation). Based on knowledge of how the models perform, supported by the University of Birmingham research paper above, it is expected that any increase in model SR from 0.2 m to 0.5 m would have the effect of reducing the predicted pollutant concentrations. The assessment provided in the ES therefore presents reasonable worst-case effects and despite this concludes that the impact of the Project would not be significant. Therefore, it is concluded that the Gatwick AQA submitted as part of the DCO Application is robust, having actively engaged with stakeholders throughout the Project's development and is consistent with other major DCOs approaches, including those submitted by NH. Having a variable model SR, whereby some areas would see an increased model SR value at locations close to the NH strategic network is expected to have the effect of reducing pollutant concentrations and reported potential impacts at these locations, rather than increasing pollutant concentrations impacts. Therefore, the Gatwick AQA submitted as part of the DCO Application is considered to present a conservative worst-case assessment.	
AQ.1.22	The Applicant	Can the Applicant provide evidence that the Proposed Development will not exacerbate pollutant levels along the NH	A summary table (Table 1) has been provided below to demonstrate that for all roads listed, the Project does not create an exceedance of the Limit Value or delay compliance in any zone or agglomeration. The table provides a row for each of	The additional information provided on Compliance Link impacts is welcomed and National Highways has no further comment.

<table>
<tr><th>WQ No</th><th>Question to / Response by</th><th>Question Posed</th><th>Response Provided</th><th>National Highways Comments</th></tr>
<tr><td></td><td></td><td>six compliance links surrounding the proposed site boundary; A23, A264, A2220, A2004, A2011 and A2219 or lead to an exceedance of the EU Limit Value of 40µg/m3 as an annual mean for NO2 along these links?</td><td>the roads listed in the question above and gives information from the modelling to show the highest predicted NO2 annual mean concentration at each link location and the largest change as a result of the Project. Traffic data for each road and the change as a result of the Project is also presented for 2032 operational year, the scenario with the maximum predicted change.

Further information in relation to National Highways' queries has been provided in paragraph 2.1.2 in Appendix C of Supporting Air Quality Technical Notes to Statements of Common Ground [REP1-050].

Table 1 Summary table
<table><tr><th>Road name</th><th>Worst case compliance receptor along road</th><th>Maximum modelled Annual Mean NO_2 Concentration (µg/m³)*</th><th>Maximum modelled change from DM to DS (µg/m³)**</th><th>DM 2032 traffic flow on link adjacent to compliance receptor (AADT)</th><th>DS 2032 traffic flow on link adjacent to compliance receptor (AADT)</th><th>Change in tra flow as a resu the Project (D DS AADT)</th></tr><tr><td>A23</td><td>P_164</td><td>28.5</td><td>0.6</td><td>103,350</td><td>115,039</td><td>11,689</td></tr><tr><td>A264</td><td>P_30</td><td>18.2</td><td>0.2</td><td>29,678</td><td>29,991</td><td>313</td></tr><tr><td>A2220</td><td>P_28</td><td>17.3</td><td>0.1</td><td>14,660</td><td>14,754</td><td>94</td></tr><tr><td>A2004</td><td>P_25</td><td>18.1</td><td><0.1</td><td>14,076</td><td>13,958</td><td>-118</td></tr><tr><td>A2011</td><td>P_32</td><td>18.9</td><td>0.1</td><td>24,562</td><td>24,639</td><td>77</td></tr><tr><td>A2219</td><td>P_17</td><td>15.5</td><td>0.1</td><td>7533</td><td>7522</td><td>-11^</td></tr></table>*from DS2029 operational modelled scenario
**from 2032 operational modelled scenario
^ It is noted that P_17 is predicted to experience a change of 0.1µg/m³ increase in NO_2 from DM to DS 2029, but a decrease in traffic flow of 11 AADT. This is caused by surrounding roads, Haslett Avenue West and Station Road approximately 48m north and 90m east respectively of P_17 experiencing a predicted increase in AADT collectively.</td><td></td></tr>
<tr><th colspan="5">Legal Partnership Authorities Response to Examining Authorities Written Questions [TR020005/REP3/135]</th></tr>
<tr><td>CA.1.32</td><td>Affected persons</td><td>Accuracy of the Book of Reference, Land Plans and Points of Clarification

Are any Affected Persons or IPs aware of any inaccuracies in the BoR [REP1-009 and REP1-011], SoR [AS-008] or Land Plans [AS-015 and AS-016]? If so, please set out what these are and provide the correct details.</td><td>RBBC are not aware of any inaccuracies in these documents.

WSCC are not aware of any inaccuracies in these documents; however, the Surrey LIR [REP1-098] at 21.1 raises some queries in relation to Rights of Way and Access Plans.</td><td>National Highways notes that currently the Applicant's Book of Reference incorrectly identifies land under National Highways ownership which National Highways understands should have transferred to West Sussex County Council as part of the 1978 statutory de-trunking order of the A23 by virtue of section 228 of the Highways Act 1959. The land has been transferred equitably but the legal registration has not been effected yet.

National Highways are liaising with West Sussex County Council on this matter in order to ensure that the Land Registry records are updated.</td></tr>
<tr><td>DCO.1.2.3</td><td>RHA's</td><td>Art. 15 (Public Rights of Way-creation, diversion and stopping up)

EM paragraph 5.36 states: "Schedule 4 Part 2 identifies the single existing public right of way which will be permanently stopped up for which no substitute is to be provided." Why is no substitute provided?</td><td>Schedule 4 Part 2 of the draft DCO [Response to s51 advice – 2.1 Draft Development Consent Order [Tracked] Version 2 [AS-005]] proposes to extinguish Footpath 346_2Sy, Reference B2.

This is shown on Sheet 1 of the Rights of Way & Access Plans [APP-018] and is indicated by a red dashed line and reference B2. The Highway Authority (WSCC) understands the Applicant's position to be that the section of footpath FP346/2sy referenced B2 that is being extinguished, is being replaced by a new shared footway and pedestrian route, which is being provided as an alternative. This alternative route is indicated on Sheet 1 of the Rights of Way & Access Plans [APP-018] and is indicated by a pink line and references C2 to C8.

If this alternative route is falling within the publicly maintainable highway, then it would be considered an extinguishment of the PRoW rather than a diversion. As</td><td>National Highways notes the response provided by the Legal Partnership Authority and will consider the Applicant's response to this matter in relation to National Highways request for Footpath 346_2sy to be relocated into Schedule 4 Part 1.</td></tr>
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WQ No	Question to / Response by	Question Posed	Response Provided	National Highways Comments
			a PRoW could not be diverted onto a highway and an alternative publicly accessible route would be provided. However, it is the Highway Authority's understanding that these routes are not to be publicly adopted highway but will sit within GAL's control. Therefore, the proposed extinguishment is removing the public right of access without providing an alternative public right of way. The Applicant therefore has three potential options to ensure this newly proposed route [Reference C2 to C8 shown in pink on Rights of Way & Access Plans [APP-018]] has suitable public access rights, they are: • Proposed full bridleway status of the route and ensure it is suitably designed to cater for all potential users • Propose footpath status, but alternative provision for cyclists would need to be considered • Footpath but with permissive cycle route	
Surrey County Council Response to Examining Authorities Written Questions [TR020005/REP3/146]				
CA.1.40	Surrey County Council (as landowners)	In terms of Bayhorne Farm and noting the content of the WR submitted as Deadline 1 [REP1-096], please provide additional detail in respect of what mitigation measures are considered necessary by SCC in order to enable a suitable access from the South Terminal Roundabout and how these would be secured.	 1.11. The above temporary and permanent works shown in the above surface access arrangement plans are set out in detail in Work No. 35 in the draft DCO. SCCaL considers that the mitigation necessary to meet its concerns would include amendments to these plans and Work No. 35 is amended to enable a permanent access arrangement to be included within the DCO into Bayhorne Farm as part of the Project. The ExA is asked to require the Applicant to work up proposals in consultation with the SCCaL at the earliest opportunity, so that if a change request is needed, it can be accommodated within the examination timetable. 1.14. In order to mitigate the impact of the Project on development at Bayhorne Farm, SCCaL asks: 1.14.1. Work No.35 is amended to ensure a permanent access from STR, "the Bayhorne Farm Access Road", into Bayhorne Farm is included, if necessary, by way of a change request;	National Highways notes the response from SCC, as land owner, and its aspiration to make permanent, the potential temporary access into the South Terminal Roundabout Compound. Access to the existing Bayhorne Farm site is not currently provided from the South Terminal Roundabout or any other point on the Strategic Road Network. National Highways provided comments to the Applicant on the 8th February, in response to its concerns with the South Terminal Roundabout construction proposals, including the proposed temporary construction access. These comments were reiterated in National Highways Principal Areas of Disagreement Summary Statement item number 86 **[TR020005/REP2/54]** issued at Deadline 2. National Highways awaits a response from the Applicant on comments previously raised. National Highways will continue to work with the Applicant to agree the suitability and design of the temporary access to ensure the safe operation of the SRN during the construction period. However, National Highways would expect any agreement to include a requirement to remove the temporary access at the earliest opportunity. National Highways, as the relevant Highway Authority, does not support the temporary access proposals being converted to a permanent feature and listed as part of Work Number 35 in the dDCO **[TR020005/REP3/006]**. No designs, assessment, or modelling has been produced in connection with the operational impact of such a proposal, either as an access to Bayhorne Farm, or to facilitate the proposed Horley Strategic Business Park.

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			1.14.2. The relevant surface arrangement plans and other plans and application documents are amended to show the permanent access on a new alignment and that the new alignment is agreed in advance with SCCaL prior to issue; 1.14.3. The freehold interest in the Bayhorne Farm Access Road, once completed, is transferred to SSCaL at nil premium;	
The Environment Agency's Response to the Examining Authorities Written Questions [TR020005/REP3/127]				
WE.1.6	Environment Agency	Flood Risk Assessment Paragraph 5.10.13 of the FRA [AS-078] states that the Proposed Development "would not increase flood risk elsewhere and that it would be safe for users for its lifetime mean that the requirements of the Exception Test have been met". Some elements of the Proposed Development (Table 3.3.10) are stated to have differential lifetimes. Explain: a) How long is the "lifetime" of all elements of the Proposed Development? b) Has the EA accepted this duration for all elements? and c) Does the mitigation secured within the dDCO cover this whole period?	It is our understanding that different lifetimes have been assigned to different elements of the proposed project. The airfield works have a suggested lifetime of 40 years with the surface access a suggested lifetime of 100 years. Works specifically associated with proposed construction activities have been assigned a shorter lifetime due to their temporary nature, the suggestion being these will be completed within the 2020's epoch. We would welcome confirmation by the applicant on the development lifetimes. In line with the National Planning Policy Framework (NPPF) and the associated Planning Practice Guidance Flood Risk and Coastal Change (PPG) the expectation the lifetime associated with non- residential development depends on the characteristics of that development, with the PPG highlighting a period of at least 75 years as being likely to form a starting point for assessment. Due to the nature and importance of project elements falling under the surface access description, the suggested lifetime of no less than 100 years for those appears reasonable. The applicant should be able to provide detailed justification for why the suggested lifetime of 40 years has been assigned to the airfield elements We have noted the comment that significant works have taken place on the airfield during the last 40 years and the expectation is for this to continue to take place in the future. When considering the proposed development in its entirety there is one other aspect it would be helpful for the applicant to clarify. The details in the FRA for the proposed mitigation for fluvial flood risk consists of two flood compensation areas and syphons to the movement of flood water across the site and to maintain flood flow routes. We would expect the fluvial mitigation to be suitable to, at its minimum manage the design flood, plus an appropriate allowance for climate change for the proposed lifetime of the development. As the proposed development is considered to contain elements of essential infrastructure, the higher central allowance for climate change should be considered. The fluvial flood compensation/mitigation should be designed as a minimum for the 1% AEP event 20% for climate change. This is recognised by the applicant within section 7.2 of their FRA. The applicant should be able to demonstrate the proposed compensation/mitigation will ensure there is no increase in flood risk elsewhere as a result of the proposed project. The applicant has undertaken flood risk modelling to support their application. The Environment Agency is in the process of reviewing this modelling and we are currently unable to offer any detailed	National Highways, as recorded in its SoCG **[TR020005/REP1/036]** and PADSS **[TR020005/REP2/054]** has a number of outstanding matters in relation to fluvial risk which are subject to the ultimate outcome of discussions between the Applicant and the Environment Agency. National Highways will keep abreast of this issue and will monitor the status of any updated agreements submitted at Deadline 5.

WQ No	Question to / Response by	Question Posed	Response Provided	National Highways Comments
			comment on the findings of the applicants' flood risk modelling, which includes the fluvial flood compensation/mitigation areas.	