



Horsham
District
Council



GATWICK AIRPORT NORTHERN RUNWAY PROJECT

Planning Inspectorate's Reference: TR020005

Legal Partnership Authorities

Comments on The Applicant's Response To The ExA's Written Questions (ExQ1)

Response to [[REP3-083](#)] | Air Quality

DEADLINE 4: 15 May 2024

Crawley Borough Council (GATW-AFP107)

Horsham District Council (20044739)

Mid Sussex District Council (20044737)

West Sussex County Council (20044715)

Reigate and Banstead Borough Council (20044474)

Surrey County Council (20044665)

East Sussex County Council (20044514)

Tandridge District Council (GATW-S57419)

Legal Partnership Authorities' Comments on the Applicant's Responses To The ExA's Written Questions (ExQ1)

Response to [\[REP3-083\]](#) | Air Quality

The Legal Partnership Authorities are comprised of the following host and neighbouring Authorities who are jointly represented by Michael Bedford KC and Sharpe Pritchard LLP for the purposes of the Examination:

- Crawley Borough Council
- Horsham District Council
- Mid Sussex District Council
- West Sussex County Council
- Reigate and Banstead Borough Council
- Surrey County Council
- East Sussex County Council; and
- Tandridge District Council.

In these submissions, the Legal Partnership Authorities may be referred to as the “*Legal Partnership Authorities*”, the “*Authorities*”, the “*Joint Local Authorities (“JLAs”)*” or the “*Councils*”. Please note that Mole Valley District Council are also part of the Legal Partnership Authorities for some parts of the Examination (namely, those aspects relating to legal agreements entered into between the Applicant and any of the Legal Partnership Authorities).

Introduction

1. The Legal Partnership Authorities have now had the opportunity to review the Applicant's responses to ExQ1 in conjunction with their specialist consultants and legal advisors.
2. The Applicant provided their response to ExQ1 in the form of 19 separate written submissions to the examination together with annexes. For the ExA's ease of review, the Legal Partnership Authorities set out their comments on the Applicants responses in the final column of the table below.
3. Where the Legal Partnership Authorities have decided not to comment on one of the Applicant's responses, this question has been deleted from the table below.
4. For the avoidance of doubt, where the Legal Partnership Authorities have decided not to comment on one of the Applicant's responses this should not be taken to indicate that the Legal Partnership Authorities agree with or attest to this response.
5. At deadline 4, the Legal Partnership Authorities have submitted a paper authored by their specialist aviation consultants at York Aviation LLP entitled “Response to Additional Documents Submitted at Deadline 3 – Case for the Scheme and Related Matters” (the “**York Aviation Deadline 4 Paper**”).
6. **The York Aviation Deadline 4 Paper addresses issues relating to the case for the scheme thematically and includes further commentary on the Applicant's responses to the ExQ1 questions relating to this topic.**

ExQ1	Question to: Question and Applicant's Answer	Legal Partnership Authorities' Response
AIR QUALITY		
AQ.1.1	<p>The Applicant</p> <p>Air Quality Monitoring</p> <p>Paragraph 8.5.15 of the Planning Statement [APP-245] states that “<i>a commitment is made to the continuation of current monitoring with new monitoring locations on the airport site and external to the airport are proposed to allow future monitoring of concentrations as set out in Table 13.9.1 in ES Chapter 13.</i>”</p> <p>What is the purpose of the monitoring and how would the data be used?</p> <p>In the context of the conclusions of the assessment in Chapter 13: Air Quality [APP-038], and the absence of any significant effects identified as a result of the Project, it was not considered necessary for this monitoring to be secured as a requirement to the DCO. However, in acknowledgment of the monitoring arrangements under the existing 2022 s106 Agreement, the Applicant is happy to support the understanding of air pollution effects more generally in the local area, and accordingly it is proposing to commit to continued monitoring obligations under the new s106 Agreement set out in Schedule 1, Air Quality in the Draft Section 106 Agreement [REP2-004].</p> <p>The Applicant has provided the proposed monitoring site locations and a draft Air Quality Action Plan (AQAP) at Appendices 1 and 5 of the Draft Section 106 Agreement [REP2-004]. In summary, the monitoring will include funding for three monitoring sites to be managed by Reigate and Banstead Borough Council. The</p>	<p>It is important to note that air pollution such as nitrogen dioxide is a ‘no threshold’ pollutant and thus has a health impact on the communities surrounding the airport effectively down to zero exposure. This is reflected in the fact that the WHO guideline value for nitrogen dioxide is considerably below the UK standard that is being used by the airport in its assessment.</p> <p>As such an important part of certified monitoring including diffusion tube monitoring (as opposed to the indicative monitoring the airport is also planning) is to assess the ongoing impact on the local community and ensure that pollution levels are falling and not rising regardless of the standard, as while the applicant makes much of no UK standards being breached it appears to miss the fact that UK policy in relation to air pollution has moved on from a simple pass / fail approach, to ensuring that levels of pollution exposure are reduced over time and that any new developments should help in this process - as outlined at the start of the AQ sections for the Surrey LIR [REP1-097] and West Sussex LIR [REP1-068].</p> <p>The certified monitoring (as opposed to the indicative monitor the airport is also planning to use) is also important to check that the results of the modelling work completed as part of the DCO are correct in</p>

	<p>Applicant will manage two automatic reference standard monitors on the airport site, as well as four continuous indicative monitors.</p> <p>The monitoring will allow continuous collection of air quality concentrations in the vicinity of the airport to support the understanding of air pollution effects in the local area. The data will be used to compare against national standards, provide data to understand the sources of emissions, allow investigation of any changes in concentration in future and for transparency, the data will be reported by the airport.</p>	<p>practice. For obvious reasons the model being used by the applicant (i.e. a two runway set up with the emergency runway further north and in full time use) has not been validated and the monitoring will form an important part of this process going forward.</p> <p>The key points that the inspector may wish to consider here are:</p> <ul style="list-style-type: none"> i) The applicant's refusal to fund monitoring of nitrogen dioxide / PM / and ozone beyond 2038. This is despite the fact the applicant has not modelled 2047 (full capacity) using dispersion modelling and the emissions inventory shows pollution from the airport increasing between 2038 and 2047. The local authorities have stated that funding should be to 2047 or 389,000 movements whichever occurs later i.e. the airport at full capacity. ii) The applicant has refused to fund the real time NOx and PM analyser operated by Crawley borough council to the SE of the airport. Given this site will provide important information in the future to validate the computer model used for the DCO outputs this site should be funded. iii) The joint local authorities would ask that the indicative monitoring data - if it is to be placed on a public facing website - is marked as 'indicative only not suitable for compliance monitoring'.
	<p>The Defra Emission Factor Toolkit version 11 (EFT v11) was used for the assessment of air quality in ES Chapter 13: Air Quality [APP-038]. EFT v11 includes the vehicle fleet composition data as detailed in Section 3.10, ES Appendix 13.6.1: Air Quality Assessment Methodology [APP-158]. Appendix F of the Supporting Air Quality Technical Notes to Statements of Common Ground [REP1-050], addresses how the air quality assessment has accounted for the topic of uncertainty in emissions over time.</p> <p>a) The Applicant provided an assessment of the delay in the ban of diesel and petrol vehicle sales in Appendix F, Section 1.3 of Supporting Air Quality Technical Notes to Statements of Common Ground [REP1-050]. In summary, it concluded that the EFT v11 had not incorporated the ban on the sale of new petrol and diesel cars and vans in 2030 and therefore the five year delay would have limited or no impact on the emission factors used in the ES.</p> <p>A review of the Transport Decarbonisation Plan¹ (TDP) and the Department for</p>	

¹ Department for Transport (Defra) (2021) Decarbonising Transport: a better, greener Britain

		<p>Transport (DfT) Transport Analysis Guidance (TAG) Data Book² was also undertaken to evidence that the proportions of EVs have been revised upwards since the Defra EFT v11 was released. The review provides the estimates of the EFT v11 EV proportions used in the assessment. The review showed that the uptake of EVs in the DfT datasets are greater than that assumed in the EFT. The TAG or TDP would result in reduced emissions compared to those assessed in the ES. Therefore, the uptake of EVs assumed in ES Chapter 13: Air Quality [APP-038] is considered conservative and the delay to the ban on the sale of new petrol and diesel cars from 2030 to 2035 will have no significant implications on the air quality assessment in the ES.</p> <p>b) Given the answer set out in (a), the delay to the ban is not likely to give rise to a change of significance.</p> <p>c) Given the answer set out in (a), no changes to mitigation measures are proposed.</p>	<p>To date (25 years) the airport and the local authorities have agreed and operated on the basis that pollution monitoring data collected around the airport will be undertaken using equipment and methods that are suitable for compliance monitoring. This is to ensure that all parties – airport and local communities – can have full confidence in the data and that any decisions being made can be done so on the basis of a robust and scientifically sound data set.</p> <p>The applicant’s intention to use indicative monitoring equipment (which can significantly overestimate or underestimate compared to certified methods) goes against this long standing convention and has the potential to ‘muddy the waters’. Hence the need for such data to be clearly flagged, and for operational monitoring to form part of the examination discussions.</p>
<p>AQ. 1.3</p>	<p>The Applicant</p>	<p>Detailed Odour Assessment</p> <p>Paragraph 8.5.22 of the Planning Statement [APP-245] states that a detailed odour assessment can be provided at the detailed design stage to demonstrate management of odour effects.</p> <p>Can the Applicant set out the basis on which a decision would be taken as to whether</p>	<p>Project Change 3 [AS-139] proposes an alteration to the treatment works for de-icer pollution and surface water runoff from the airport. A constructed wetland (reed bed) solution is now proposed at the site adjacent to Crawley Sewage Treatment Works. Although odour is a known risk for this type of facility, the applicant states there will be no significant odour effects and therefore no further mitigation for odour is proposed. No evidence is provided to support this conclusion other than the implementation of best practice.</p>

² Department for Transport (2023) Transport Analysis Guidance data book, May 2023 v1.21

		<p>to provide such an assessment?</p> <p>What would be included in a ‘detailed odour assessment’?</p> <p>Where is this set out and secured through the DCO? If not, why not?</p>	<p>The authorities remain concerned about odour impacts from the reedbeds due to the potential for anaerobic decomposition, and the proximity of residential properties (within 55m) to the works boundary.</p> <p>Where controls are imposed via environmental permits, the local planning authority, would want to see a detailed assessment of the odour impacts including the risk under both normal and abnormal operating conditions, and whether the management and control measures proposed are appropriate for mitigating the risks.</p> <p>In addition, the authorities would point out that the applicant has failed to produce a quantified odour impact assessment for aviation fuel as part of the DCO, despite the fact that it managed such an assessment in 2019 (see air quality chapter - Surrey LIR [REP1-097]) and fuel odour is an on going issue for local residents around the airport.</p> <p>Given (in the absence of any other information) any aviation fuel odour impact is likely to be proportional to the change in aircraft movements, it is likely that the odour impact on the local community will increase as a result of the DCO.</p> <p>The local authorities have asked the airport to commit to undertake the measures (listed below) to investigate odour around the airport as part of a s106 agreement in light of both the ongoing issues with odour and the likely increase in the problem, but the applicant has refused to do so.</p> <p><i>Prior to the construction of the northern runway a commitment to a two stage odour study to:</i></p> <p><i>a) determine the ambient concentration of aviation fuel at which odours are perceived on the Horley Gardens Estate, using a tracer for aviation fuel such as 1,3,5 trimethybenzene.</i></p>
		<p>It should be noted that Paragraph 8.5.22 of the Planning Statement [APP-245] is referring to the replacement CARE facility and the proposed water treatment works. As detailed in Paragraph 8.5.22, the proposed water treatment works are not considered to be significant in relation to odour as it would not handle highly odorous of offensive contaminants. As detailed in Section 4 of the Change Application Report [AS-139], the Applicant has put forward a change to the DCO Application to remove the proposed biomass boilers and to change in the purpose of the CARE facility to become a waste sorting facility only.</p> <p>Basis for decision – The facilities which could result in odour from the processes would be subject to environmental permits. Best practice methods following industry guidelines would be followed to scope the nature and level of detail of environmental assessment required for the environmental permit. As odour is a known risk for these types of facilities, it would be included in the planning and permitting requirements for the environmental assessment.</p> <p>What would be included in the assessment – The risk of effects would be scoped to determine a proportionate assessment following industry best practice guidance (e.g. IAQM Guidance on the assessment of odour for planning v1.1, Environment Agency ‘H4 odour management’ for environmental permitting). This would determine the level of detail required to inform recommended mitigation and effects, this could</p>	

		<p>include source pathway receptor assessment or dispersion modelling.</p> <p>Where is this secured – The environmental permitting processes for these sites, dictated by the Environment Agency, will secure the assessment to be undertaken and any required mitigation.</p>	<p><i>b) subject to the concentrations determined a) being sufficiently high that a field based detection system can be used, to install a monitor at an appropriate site around the airport for a 1 year period to examine the distribution of odour events to understand the meteorological and operational practices that give rise to the odour issues for local residents.</i></p> <p>Given:</p> <ul style="list-style-type: none"> - the lack of a quantified odour assessment, - the risk that odour issues will increase, - and the failure of the applicant to countenance measures to investigate the issue, <p>if the Secretary of State is minded to grant permission for the DCO the joint local authorities would wish to see article 49 (Defence to proceedings in respect of statutory nuisance) of the draft DCO [REP3-006] amended in accordance with the drafting set out at row 39 of Appendix M to the West Sussex LIR [REP1-069].</p>
<p>AQ.1.4</p>	<p>The Applicant</p>	<p>Air Quality Management Areas</p> <p>With reference to paragraph 5.43 of the ANPS, does the Applicant consider that the impact of the Proposed Development would be sufficient to bring about the need for new Air Quality Management Areas (AQMA) or change the size of the existing AQMAs?</p> <p>If a need is identified, can the Applicant provide summary information in ES Chapter 13 [APP-038], including the number of additional people located in the extended area compared with the numbers in the existing area(s) in the reasonable worst case operating scenario? (There are further questions below on matters of detail).</p>	<p>The joint authorities note the comment by the applicant that: <i>Monitoring within these AQMAs demonstrate that annual mean NO₂ concentrations have consistently been below the air quality standards since 2015 as reported in Section 13.7 of ES Chapter 13: Air Quality [APP-038].</i></p> <p>The authorities would point out for clarity that within the Horley AQMA monitoring point RB149 breached the standard in 2015, 2016, 2017, 2018, and 2019. Residential premises within the AQMA breached the standard in 2015, 2016, 2017, and were very close to the 40µg m⁻³ limit value with a concentration of 39 µg m⁻³ in 2018 and 2019.</p> <p>Similarly, NO₂ concentrations at sites CR62, CR69 within Crawley's Hazelwick AQMA have breached the standard from 2015 to 2019. Relevant exposure at CR93 and CR97 within the extended area of</p>

	<p>The air quality assessment in ES Chapter 13: Air Quality [APP-038] has demonstrated that the Project will not result in any new exceedances of the national air quality standards, as such the local authority would not be required to consider extending any existing AQMA or creating new AQMA.</p> <p>The impact at the AQMAs in future years have been assessed with the results presented in Section 13.10 of ES Chapter 13: Air Quality [APP-038] and within ES Appendix 13.9.1 Air Quality Results Tables and Figures [APP-162 - APP-167]. The air quality impacts at receptors including those within AQMAs demonstrate that there are forecast to be no new exceedances of the air quality standards with the Project. At locations of predicted exceedances, the future baseline concentrations without the Project also exceed the air quality standard.</p> <p>For context, there are two AQMAs declared for exceedances of the annual mean NO₂ air quality standard within the 11 km by 10 km domain centered on the Airport, Horley AQMA and Hazelwick AQMA. Monitoring within these AQMAs demonstrate that annual mean NO₂ concentrations have consistently been below the air quality standards since 2015 as reported in Section 13.7 of ES Chapter 13: Air Quality [APP-038]. The air quality assessment has demonstrated that predicted NO₂ concentrations at all receptors in the two AQMAs are below the air quality standard with and without the Project and would therefore not create exceedances of the air quality standard in these areas.</p>	<p>Crawley's AQMA also exceeded the NO₂ standard during this period, with an annual mean NO₂ concentration of 65 µg m⁻³ measured at CR93 in 2017 and borderline exceedances of 39 µg m⁻³ during the post Covid years 2021 and 2022.</p> <p>It is therefore unclear how the applicant can make a claim that annual mean NO₂ concentrations have consistently been below the air quality standards since 2015 within these AQMAs.</p> <p>The authorities have not seen breaches of the standard from 2020 to 2022 reflecting COVID. The 2023 data is yet to be processed but given the airport had not fully recovered to 2019 passenger numbers and aircraft movements in 2023 the monitoring results are still likely to be an underestimate of the 'true' situation.</p> <p>The joint authorities would also point out that the applicants modelled nitrogen dioxide concentration at the RB149 site (GAL ref M_421) for 2018 was 31.8 µg m⁻³ whereas the actual measured value in 2018 was 43.4 µg m⁻³. Similarly modelled NO₂ at CR97 in Crawley was reported by the applicant as 24.1µg m⁻³ when the measured concentration in 2018 was 40 µg m⁻³.</p> <p>(Note the points referred to here was actually modelled and is not an interpolation from the contour plots).</p> <p>While these large differences don't necessarily represent an error with the road traffic model, they do demonstrate that road traffic modelling can miss localised hot spots and demonstrates the need for ongoing monitoring (to when the airport is at full capacity) allied to local knowledge to ensure that the air quality standards are met in practice.</p> <p>It should also be noted that there are number of technical queries that relate, in part, to air quality modelling undertaken by the applicant that were submitted at Deadline 3 [REP3-117].</p>
--	---	--

<p>AQ.1.5</p>	<p>The Applicant</p>	<p>ANPS Mitigation</p> <p>The ANPS mitigation section (5.35 to 5.41) is omitted from Table 13.2.4 of ES Chapter 13 [APP-038].</p> <p>Can the Applicant confirm which of the measures identified, including those listed under 5.39, are committed to by the Applicant and where are these secured in the DCO? For those that are not committed to, can the Applicant explain its position?</p>	<p>The inspector may wish to note the following in relation to the submitted draft air quality action plan (Annex 5 in the draft s106) [REP2-004].</p> <p>The draft AQAP submitted by GAL only refers to the carbon action plan, surface access commitments and Construction code of Practice. There is no commitment to individual measures, and the CAP, SAC and CoCP have been drafted to be self-regulatory, with no control threshold levels or action levels.</p> <p>The applicant's conclusion that the impact of the Proposed Development would not be significant, is based solely on meeting air quality standards. The applicant uses this as justification for providing no additional mitigation beyond that designed into the scheme or required by regulation. As such it appears to miss the fact that UK policy in relation to air pollution has moved on from a simple pass / fail approach, to ensuring that levels of pollution exposure are reduced over time and that any new developments should help in this process.</p> <p>There is no account taken of the health impacts to the local community as a result of the additional emissions associated with the project (£83m damage cost to health (Table 7.2.1 Needs Case [APP-251]), which the JLAs believe should be addressed by the applicant within its AQAP in line with ANPS 5.23 and the Emissions and Mitigation Guidance for Sussex (CBC Local Plan Policy ENV12).</p> <p>The JLAs consider that the AQAP would work better as a Requirement in DCO. In part this is because as currently drafted the s106 expires 9 years after opening (2038), yet emissions from the airport are still increasing beyond this point.</p> <p>Other key issues with the current air quality action plan include:</p>
		<p>ES Chapter 13: Air Quality [APP-038] has provided an assessment of air quality impacts from all related sources (road vehicles, aircraft and airport sources) following the methodology agreed with the local authorities. A robust assessment of the construction and operational periods presenting reasonable worst case effects has been provided in line with best practice guidance and available data. The assessment concludes that the impact of the Proposed Development would not be significant.</p> <p>Notwithstanding this, the Applicant has provided a draft Air Quality Action Plan (AQAP) at Appendix 5 of the Draft Section 106 Agreement [REP2-004] which details the mitigation proposed.</p> <p>The actions taken to reduce emissions would be secured in the following documents, should the DCO be granted:</p> <ul style="list-style-type: none"> • The Carbon Action Plan (CAP) [APP-091] secured by Requirement 21 of the Draft DCO (Doc Ref. 2.1); • The Surface Access Commitments (SAC) [APP-090] secured by Requirement 20 of the Draft DCO (Doc Ref. 2.1); 	

	<ul style="list-style-type: none"> • The Code of Construction Practice [REP1-021] secured by Requirement 7 of the Draft DCO (Doc Ref. 2.1); • The Outline Construction Traffic Management Plan [APP-085] secured by Requirement 12 of the Draft DCO (Doc Ref. 2.1); • The Outline Construction Workforce Travel Plan [APP-084] secured by Requirement 13 of the Draft DCO (Doc Ref. 2.1); and • Deadline 2 Submission – 10.11 Draft Section 106 Agreement [REP2-004] <p>The ANPS example mitigation measures (paragraph 5.39) have been considered within the above documents. The commitments within the CAP (e.g., specific to Airport Buildings and Ground Operations, to achieve Net Zero for the Applicant’s Scope 1 and 2 GHG emissions by 2030, and zero emission by 2040) and SAC (e.g. the sustainable transport mode share commitments for passenger and staff journeys) will require emission reductions from a wide range of sources across the airport operations and surface access journeys to and from the airport. All measures from those included in the ANPS example have been considered within the toolkit of measures in the CAP and SAC, other than consideration of ‘physical barriers to trap or better disperse emissions and speed control on roads’, which are not considered as there are no localised air quality impacts to mitigate, which would benefit from such an action.</p> <p style="padding-left: 40px;">As noted in those documents, in general terms, it is the absolute outcomes which are committed to, rather than the individual measures themselves, which are purposely not prescriptive to allow the Applicant flexibility to select the most effective combination of them (or others) based on circumstances and knowledge that exist at the time (particularly in respect of the fast-evolving technological and regulatory landscape in terms of those measures informing the CAP).</p>	<ul style="list-style-type: none"> i) The document in essence simply provides a long list of measures that the applicant says it <i>may</i> implement, not what it will implement. ii) It fails to set out which of the measures in the plan are the ‘embedded mitigation’ i.e. measures the airport has already assumed in place in the DCO air quality assessment, so it is possible to assess if these measures are on track given the air quality assessment in the DCO application is dependant on all of these measures being implemented successfully. iii) It fails to identify which additional measures are intended to mitigate the increased airport related pollution, as reflected by the difference in the emissions inventories for the ‘with’ and ‘without’ project scenarios. iv) It is unclear why the airport is only going to produce an air quality action plan 5 years after the commencement of the project (para 1.3.1 [REP2-004]) rather than one which applies from the outset (commencement) given by 2029 under the ‘with’ project scenario the airport will be handling 330,000 movements vs 313,000 without the development, and 61.3 mppa with the development vs 57.3 without the development. v) It fails to present costings, performance indicators, delivery timescales, the level of pollution reduction the measure is likely to deliver (either as a concentration reduction on the Horley Gardens Estate or tonnage released to atmosphere) vi) To help the applicant to design their air quality action plan template the joint authorities would suggest the following
--	---	---

			<p>columns are included in the action plan which are taken from the DEFRA air quality action plan template³:</p> <p>Measure No. Measure Estimated Year Measure to be Introduced Estimated / Actual Completion Year Estimated Cost of Measure Measure Status Target Reduction in Pollutant / Emission from Measure Key Performance Indicator Progress to Date Comments / Potential Barriers to Implementation</p> <p>vii) The joint authorities would also draw the inspectors' attention to the concern raised in the Surrey LIR at para 11.68 [REP1-097] where the applicant appears to think that burning Hydrogen or SAF will lead to a reduction in NOx emissions, as the current measures proposed in the action plan (annex 5 [REP2-004]) fail to address these concerns with for example para 3.3.2 of the action plan claiming that SAF will lead to a reduction in NOx emissions, but no evidence is supplied to support this despite the JSA making the evidenced point that (in relation to SAF) 'there are no measurable impacts seen to date on NOx emissions'.</p> <p>Equally action plan measure FL13 simply says 'supporting hydrogen fuelled aircraft' with no supporting evidence that this will in fact reduce NOx emissions in practice. A hydrogen powered combustion based jet engine enables the use of higher pressure ratios in the engine which, all else being equal, will lead to higher NOx emissions than a kerosene engine.</p>
--	--	--	--

³ <https://laqm.defra.gov.uk/air-quality/action-planning/uk-regions-aqap-report-templates/>

			A review of the Draft AQAP has been undertaken by AECOM on behalf of the Joint Local Authorities and submitted at Deadline 4.
AQ.1.6	The Applicant	<p>Code of Construction Practice – Air Quality</p> <p>Can the Applicant add air quality, dust and odour management to the list of topic specific plans identified as annexes of the CoCP [APP-083 to APP-087]?</p>	<p>Construction Dust Management Plan (CDMP)</p> <p>A draft Construction Dust Management Plan (CDMP) has been provided by the Applicant to the Joint Local Authorities. This was not provided at the submission of the DCO and so is welcome. The draft construction DMP draws together and builds on the information provided within the CoCP and ES. The drafting suggests there will not be one CDMP but several CDMPs.</p> <p>The draft CDMP importantly confirms the CDMPs will be submitted for approval linked to the Draft DCO through the inclusion of the CDMP within the CoCP.</p> <p>The draft CDMP sets out in greater detail how the work package DMPs will be prepared and provides one example. This is helpful, but it is unclear why the draft CDMP cannot be developed at this stage for more than just one example and be completed for all work packages identifying where the higher risk locations are, prior to mitigation, and where monitoring is envisaged to be required. It is believed that GAL have sufficient information to do this and it would provide the Councils with confidence that higher risk areas have been identified and suitable monitoring has been identified consistently. At a later stage several contractors may be required by GAL and this could lead to inconsistencies. This could be avoided if future contractors only had to make minor alterations to draft plans that have already been developed.</p> <p>There are a number of other points including:</p> <ul style="list-style-type: none"> • Dust soiling is only discussed in terms of visual techniques, not dust soiling or deposition methods needed to understand dust nuisance risks. • Further specifics on procedures and data sharing are needed within the draft CDMP.
		<p>Management measures to mitigate air quality, dust and odour impacts are addressed within the body of the Code of Construction Practice (CoCP) [REP1-021].</p> <p>The CoCP (para 2.2.7) requires Construction Dust Management Plans (CDMPs) to be prepared in accordance with the measures within the CoCP. CDMPs will be prepared prior to the construction of each planned work package for the construction of the Project. The mitigation measures within the CDMPs will be confirmed based on the level of dust risk associated with each work package, taking into account the magnitude of work and cumulative effects in relation to works across the site as a whole that could be occurring in parallel. The level of risk will be assessed in line with STEP 2 of the IAQM guidance as provided in Section 2 of the ES Appendix 13.6.1 Air Quality Assessment Methodology [APP-158]. The mitigation measures will be in accordance with the measures outlined in the CoCP [REP1-021] and best practice.</p> <p>Measures for odour management and for managing emissions from vehicles and machinery are set out in Section 5.8 of the CoCP [REP1-021] and are based on best practice industry guidance.</p>	
		<p>The road traffic emissions were obtained from the Defra Emissions Factor Toolkit</p>	

		<p>(EFT) version 11⁴ 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.</p> <p>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.</p>	<ul style="list-style-type: none"> It is not clear that these should be completed by a relevant air quality specialist and this could be included with the CDMP. <p>A technical note reviewing the Draft CDMP has been prepared by AECOM on behalf of the Joint Local Authorities and submitted at Deadline 4.</p> <p>Construction Odour The Applicant states the construction works have the potential to release unpleasant odours. But, beyond stating that suitable mitigation following best practice will be implemented via the CoCP (para 5.8.3 APP-082) no further details of how mitigation would be secured are provided.</p> <p>The LA would welcome a more proactive approach to odour management in the form of a draft Odour Management Plan (OMP) within the CoCP for approval by the LPA, to provide additional confidence in the control measures in place during the construction phase.</p> <p>This is particularly important given the defence of statutory authority against nuisance claims (ANPS 5.231). A draft or outline OMP should be made available for the Examination phase and should outline proposed odour mitigation measures, procedures for monitoring, complaints and resolution process and communications with local authorities.</p>
AQ.1.9	The Applicant	<p>Air Quality - Study Area</p> <p>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</p>	<p>There are number of technical queries that relate, in part, to the clarity of the study areas (ARN) utilised by the applicant. These queries were submitted at Deadline 3 [REP3-117], Appendix 3 (See Page 27 Affected Road Network.)</p>

⁴ Department for Environment Food and Rural Affairs (Defra) (2021) Emissions Factors Toolkit (EFT) (Version 11.0)

		<p>for impacts during operation.</p> <p>Can the Applicant confirm whether the ARN is assessed for the operational phases and if not, provide justification?</p>	
		<p>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.</p> <p>Figure 4.1.1 Modelled Road Network of Air Quality Figures – Part 2 [REP1-018] presents the ARN network for the wider study area.</p>	
<p>AQ.1.10</p>	<p>The Applicant</p>	<p>Air Quality – Cumulative Effects</p> <p>Can the Applicant explain how an assessment of construction and operation cumulatively in 2029 captures a worst-case scenario noting that ES Chapter 13, Tables 13.10.5 and 13.10.6 [APP-038] demonstrate an increase in operational emissions that could act cumulatively with construction emissions?</p> <p>The 2029 Highways (Surface Access) Construction scenario represents years 2029 to 2032, during which there will be an overlap with the operation of the Project. The Construction scenario assessed is a combined scenario considering the cumulative contribution from both construction and operational traffic during this period to</p>	<p>There are number of technical queries that relate, in part, to cumulative effects. These queries were submitted at Deadline 3 [REP3-117], Appendix 3 (See Page 29 Cumulative Effects and Inter-Relationships).</p> <p>Please also see comments under AQ1.14 relating to applicant's assessment and management of the cumulative impacts of construction and operational traffic emissions in Crawley's AQMA.</p>

	<p>represent a realistic worst-case assessment.</p> <p>Appendix D of Supporting Air Quality Technical Notes to Statements of Common Ground [REP1-050] addresses Relevant Representation queries on the modelling scenarios included in the ES Chapter 13: Air Quality [APP-038], including further detail on cumulative construction and operation impacts.</p> <p>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.</p> <p>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 Strategy⁵. The Jet Zero Strategy sets out UK Government’s framework and plan</p>	
--	--	--

⁵ Department for Transport (2022) Jet Zero Strategy: delivering net zero aviation by 2050.

		<p>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.</p>	
<p>AQ.1.12</p>	<p>The Applicant</p>	<p>Effects due to Modelled Traffic Noise</p> <p>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 (R_147) as a receptor that is subject to model noise in 2024 or 2029.</p> <p>Can the Applicant explain why the moderate adverse effects at R_147 in 2024 are not considered significant?</p> <hr/> <p>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].</p> <p>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</p>	<p>There are number of technical queries that relate, in part, to traffic model noise. These queries were submitted at Deadline 3 [REP3-117], Appendix 3 (See Page 29 Model noise).</p>

		<p>Sutton Common Road is likely to be 0.1 µg/m³ for NO₂, PM₁₀ and PM_{2.5} corresponding to no significant effects.</p>	
<p>AQ.1.14</p>	<p>The Applicant</p>	<p>Effects on the Hazelwick AQMA</p> <p>ES Chapter 13 paragraph 13.7.2 [APP-038] identifies that the Hazelwick AQMA extension is within the 10km x 11km study area. However, the modelled figures are not referenced with the assessment. For example, ES Chapter 13, paragraph 13.10.21 states that the highest annual mean NO₂ concentration at Hazelwick AQMA is anticipated at receptor R_538 as 31.8 µg/m³ as shown in the Air Quality Modelling Results in ES Appendix 13.9.1 Part 2 [APP-163]. However, receptor R_442 shows an anticipated NO₂ concentration at Hazelwick AQMA as 34.8 µg/m³.</p> <p>Can the Applicant either explain why the extension is not included in the discussion or update the ES Chapter and assessment to include the extension modelling?</p> <hr/> <p>The extension of the Hazelwick AQMA is considered in Paragraph 13.7.2 of ES Chapter 13: Air Quality [APP-038]. A figure showing the location of the extension and receptors considered within the ES assessment is provided above in AQ.1.13. Results for the 12 modelled receptors within Hazelwick AQMA extension are reported in ES Appendix 13.9.1: Air Quality Results Tables and Figures Part 4 - Part 6 [APP-165, APP-166, APP-167], identifiable by 'Hazelwick AQMA (extension)' within all results tables. The results of the original AQMA are reported separately, within which the highest anticipated annual mean NO₂ concentration for the 2024 construction scenario is 31.8 µg/m³ at receptor R_538, as reported in Paragraph</p>	<p>Crawley borough council has specific concerns regarding the impact of construction traffic within its AQMA. Whilst the applicant has modelled the effects on the Hazelwick and extended Hazelwick AQMA, further discussion regarding mitigation is not forthcoming from the applicant because of its firm stance that there are negligible impacts in the AQMA as a result of the Project.</p> <p>The council believes that the potential for localised AQ impacts within the AQMAs are likely for a number of reasons:</p> <ul style="list-style-type: none"> • The sequencing of the airfield construction works and surface access improvements will result in highways works coinciding with a fully operational northern runway (2029). The combined effect is likely to result in redistribution or rerouting of traffic across the local road network, leading to the risk of localised hotspots along affected roads, including within areas of already high NO₂ concentrations such as AQMAs. • The assessment of AQ impacts from the Project assumes minimum impact on Crawley's AQMA from construction traffic. The CMTP and CWTMP are intended to ensure construction traffic adheres to designated routes. However the draft CMTP identifies the route through Crawley's AQMA as a contingency access for construction traffic to the airport. This is because it is the only alternative route to the airport from the M23.

		<p>13.10.21 of ES Chapter 13: Air Quality [APP-038].</p> <p>Including the extension, R_442, has the highest anticipated annual mean NO₂ concentration of 34.8 µg/m³ for the 2024 construction scenario, as reported in Table 3.1.1 of ES Appendix 13.9.1 Air Quality Results Tables and Figures – Part 2 [APP-163]. This does not change the conclusions of the assessment as the receptors in the extension, including R_442, show negligible impacts as a result of the Project.</p>	<ul style="list-style-type: none"> • Little information on monitoring or mechanisms for compliance are provided within the CMTP and CWTMP. Without adequate controls and monitoring in place local pollution hot spots may be created within the AQMA. These management plans should therefore be provided for scrutiny during the examination and must be prepared for approval by local and highways authorities. • Other non-construction traffic would also use the contingency re-routed from the motorway through the AQMA, and/or use it as an alternative to avoid disruption from highways works. • Operational monitoring will be important to understand if changes in air quality are occurring or unacceptably worsening. This places additional burdens on the Authorities to maintain monitoring networks across their districts which are impacted by the Project. This should be addressed through mitigation by the applicant. • This matter has been discussed in more detail in the West Sussex LIR Air Quality Section (para13.55 - 13.73 [REP1-068]).
AQ.1.15	The Applicant	<p>Modelling – Reduction in PM10 and NOx Pollutants</p> <p>ES Chapter 13, Table 13.10.1 [APP-038] sets out the modelling results for construction year 2024 with the project for NOx, PM10 and PM2.5. The change in emissions is compared to the 2024 construction period without the Project, as shown</p>	<p>There are number of technical queries that relate, in part, to changes in emissions presented. These queries were submitted at Deadline 3 [REP3-117], Appendix 3 (See Page 26 Emission Ceiling).</p>

		<p>in ES Table 13.7.3. This demonstrates a reduction in emissions of PM10 and NOx with the Project at peak construction year in 2024 without explanation as to why there is such an improvement considering the anticipated increase in construction activity.</p> <p>Can the Applicant explain the justification as to why the modelling demonstrates a reduction in PM10 and NOx pollutants?</p>	
		<p>Table 13.10.1 of ES Chapter 13: Air Quality [APP-038] shows a small reduction in NO_x emissions (-1.9 t/yr) and increase in emissions for PM₁₀ (1.0 t/yr) and PM_{2.5} (0.6 t/yr) for the 2024 construction period. The changes in emissions are due to changes in road traffic between the Without and With Project scenarios. The reduction in NO_x emissions can be explained by a slight decrease in road traffic across the modelled network. The small increases in PM emission can be attributed to changes in fleet composition between with and without Project scenarios. As there is a slightly greater proportion of heavy goods vehicles with the Project, the PM emissions show a small increase as HGVs have higher PM exhaust emissions than light duty vehicles and have more brake and tyre wear due to their heavier weight.</p> <p>The reductions in traffic have been reviewed by the transport consultants and the small changes in traffic flows are considered reasonable in the strategic model with small changes in input assumptions (HGV construction vehicles and workers). Whilst the analysis indicates small reductions in emissions in some locations, the scale is within the tolerances of the model and should not be considered as an impact of any significance.</p> <p>Further detail on AADT information can be found in the Transport Assessment - Annex B Strategic Transport Modelling Report [APP-260]. Figure 200 shows that</p>	

		<p>there are small reductions in AADT through the Gatwick corridor and on the M25, with small increases elsewhere. These AADT figures are the product of micro changes in flows at the hourly level. The subtle changes to the model to generate the Airfield Construction traffic (the employee demand and the HGVs) will lead to small changes in traffic volumes on links with localised rerouting across the network in the assignment.</p>	
		<p>For Table 13.7.3 which presents the pollutant emissions for the 2024 construction period (Without Project), the Applicant confirms that the emissions reported are correct, however there is an error in the Total PM_{2.5} emissions reported, as these do not reflect the sum of the sources. The Applicant has revised the 'Total (all sources)' and 'Total (airport-related)' PM_{2.5} emissions in an updated version of ES Chapter 13: Air Quality (Doc Ref. 5.1 v2) submitted at Deadline 3.</p> <p>The PM_{2.5} emissions and change presented in Table 13.10.1 of ES Chapter 13: Air Quality [APP-038] for the 2024 construction scenario (With Project) are accurate. Therefore, there is no impact to the air quality assessment or conclusions.</p>	
<p>AQ.1.18</p>	<p>The Applicant</p>	<p>Cross-referencing with Odour Management and Financial Costs</p> <p>ES Chapter 10 [APP-035] and Chapter 17 [APP-042] are cross referenced in Chapter 13 paragraphs</p> <p>13.12.6 and 13.12.7 [APP-038] where odour management and the financial cost of air pollution are discussed respectively.</p> <p>Can the Applicant signpost exactly where in these Chapters these topics are</p>	<p>Chapter 17 (Needs Case Appendix 1 – National Economic Impact Assessment [APP-251]) provides a TAG assessment identifying the air quality damage costs of the Project (£83m) representing an assessment of the cost of the health impacts of the Project in line with the requirements of the Air Quality and Emissions Mitigation Guidance for Sussex (Crawley Borough Council Local Plan policy ENV 12).</p> <p>The Applicant states that the assessment of air quality does not rely on information from Chapter 17. However, the JLAs believe that the damage cost approach is consistent, not only with the local Sussex</p>

		<p>discussed and explain how/ if they influence the assessment in ES Chapter 13?</p> <p>Inter-related effects on odour impacts during groundworks are referred to in ES Chapter 10: Geology and Ground Conditions [APP-035], with paragraphs 10.6.3 to 10.6.38 on the Baseline Environment and Table 10.6.3, highlighting historical activity which may give rise to odour risk. ES Appendix 5.3.2 Code of Construction Practice [REP1-021] includes measures to mitigate odour risks.</p> <p>The financial costs have been presented in Table 7.2.1 of Needs Case Appendix 1 – National Economic Impact Assessment [APP-251].</p> <p>The cross references are for information to demonstrate where other air quality related aspects are also being considered within the DCO Application. The assessment of air quality does not rely on information from Chapter 10 or Chapter 17, therefore they do not influence the conclusions provided in Chapter 13: Air Quality [APP-038].</p>	<p>policy, which addresses how emissions from the development can be offset at a local level proportionate to the value of the damage to health, but it is also central to Defra’s damage cost guidance and the <u>UK Air Quality Strategy</u>, which encourages authorities to</p> <p><i>“robustly assess the monetised benefits of air quality interventions”</i></p> <p>And acknowledges that:</p> <p><i>“improving air quality has direct, proven economic benefits, even when the up-front cost of intervention is high”.</i></p> <p>The damage costs also allow the Applicant to determine the appropriate level of mitigation to offset local health impacts from their emissions.</p>
<p>AQ.1.19</p>	<p>The Applicant</p>	<p>Mitigation – Dispersal of Emissions</p> <p>ES Chapter 13, paragraph 13.5.55 [APP-038] states that mitigation measures for the concrete batching plant and non-road mobile machinery may include increasing the release height of emissions for sufficient dispersion and that this is set out in the CoCP. However, there appears to be no such wording in the CoCP.</p> <p>Can the Applicant explain where such mitigation measures are secured through the DCO?</p>	<p>It is unclear from the applicant’s response if the need for greater dispersal from increasing the release height of emissions are provided for in the CoCP, or whether the applicant is saying that since their assessment shows no significant impacts predicted, that they have scoped out the need for any such mitigation.</p> <p>The JLAs are concerned that there is a lack of clarity on how and where many of the construction impacts will be mitigated. Despite requests for more specific information, the details of mitigation and how it will be implemented, monitored and complied with is either missing or vague, and often non-committal.</p>

	<p>Section 5.8 of ES Appendix 5.3.2 Code of Construction Practice (CoCP) [REP1-021] includes measures to control and minimise emissions from non-road mobile machinery (NRMM).</p> <p>The reference in paragraph 13.5.5 of ES Chapter 13: Air Quality [APP-038] that <i>‘increasing the release height of emissions for sufficient dispersion (if necessary)’</i> is deliberately not framed as a prescriptive requirement. This is because the NRMM assessment has been based on a number of conservative assumptions, as detailed in Section 13.12 of ES Appendix 13.4.1 [APP-158] and the assessment demonstrates that there are no significant impacts predicted.</p> <p>The risk of impacts from NRMM is mitigated under the secured measures contained within Section 5.8 of the CoCP [REP1-021], <i>‘site preparation/ maintenance’</i> where it is stated to <i>‘Plan site layout so that machinery and dust causing activities are located away from receptors, as far as possible.’</i></p> <p>The detailed design process (post-DCO) would provide an opportunity to review the need for additional measures, if considered necessary, and any requirement for Environmental Permits for combustion plant if necessary as a result of design information, plans and site layout details. This may include, for example, the concrete batching plant or other NRMM requiring Environmental Permits. Release height of emissions would be considered and assessed as part of an Environmental Permit application to satisfy the regulator, the Environment Agency.</p> <p>The CoCP [REP1-021] secures monitoring following best practice guidance. Monitoring will be used to assess if the agreed mitigation measures are being applied effectively. This will be described in the Construction Dust Management Plan, which</p>	
--	--	--

		will be developed and secured in accordance with the CoCP [REP1-021] .	
--	--	---	--