



# Gatwick Airport Northern Runway Project

## Air Quality Technical Queries

### Book 10

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## Air Quality – Technical Queries

- 1.1.1 This document provides an update on the status of the air quality technical queries.
- 1.1.2 Table 1 summarises the key documents between the Applicant and local authorities on the technical queries to support the Statements of Common Ground and air quality discussions relating to the draft Section 106 Agreement.
- 1.1.3 Table 2 sets out the current status of each topic, following the TWG in on 5 July 2024 and correspondence with the air quality representative (AECOM) on 20 August 2024.
- 1.1.4 For completeness, Table 3 sets out the response on all items marked as ‘Progress’ or ‘Not Agreed’ following the status update on 24 June 2024.

**Table 1: Air Quality – Technical Queries, Key Documents**

Date	Document	Examination Reference
Deadline 3	Review of Progress on Technical Issues submitted by Joint Local Authorities and Joint Surrey Councils	<a href="#">REP3-117</a> , <a href="#">REP3-133</a>
Deadline 5	The Applicant’s response to the review of air quality technical matters	<a href="#">REP5-073</a>
24 June 2024	Document provided by AECOM on behalf of local authorities with updated status	-
5 July 2024	Topic Working Group to discuss remaining air quality technical matters	-
20 August 2024	Email Correspondence with AECOM on behalf of local authorities on the latest status.	-

**Table 2: Topic Status update following July TWG**

Ref	Topic	Status (24/06/2024)	Current Status (20/08/2024)
A.1	Assessment Scenarios	Not Agreed	Agreed
A.2	Ecology Assessment	Not Agreed	Agreed
A.3	Emission Ceiling	Not Agreed	Agreed
A.4	Base Year	Agreed	Agreed
A.5	Years of Assessment	Agreed	Agreed
A.6	Modelled Scenarios	Progress	Agreed
A.7	Monitoring Data	Agreed	Agreed
A.8	Affected Road Network	Not Agreed	Not Agreed
A.9	Heavy Goods Vehicles (HGVs)	Agreed	Agreed
A.10	Technical Issues regarding the Air Quality Assessment	Progress	Agreed
A.11	Air Quality Receptors	Progress	Not Agreed
A.12	Modelled Receptor Height	Agreed	Agreed
A.13	AM Modelled Speeds	Agreed	Agreed
A.14	Cumulative Effects and Inter-Relationships	Not Agreed	Agreed
A.15	Methodology to determine short term air quality effects	No further discussion required	No further discussion required
A.16	Model noise	Agreed	Agreed
A.17	Ammonia	Agreed	Agreed
A.18	Verification	Agreed	Agreed
A.19	Low emission buses	Progress	Not Agreed
A.20	Modal shift	Not Agreed	Not Agreed
A.21	Work not being completed to schedule	Agreed	Agreed
A.22	Operational Phase Point Sources	Agreed	Agreed
A.23	Heating Plant Modelling	Progress	Agreed
A.24	Asphalt Batching	Progress	Agreed
A.25	Dust Management Plan (DMP)	Progress	Progress*
A.26	Management Plan	Agreed	Agreed
A.27	Communication and Engagement Management Plan	Agreed	Agreed
A.28	Complaints information wording	Not Agreed	Agreed
A.29	Method statement	Agreed	Agreed
A.30	Air quality monitoring	Progress	Agreed

Ref	Topic	Status (24/06/2024)	Current Status (20/08/2024)
A.31	Document cross referencing	Agreed	Agreed
A.32	Construction odour mitigation	Not Agreed	Agreed
A.33	Construction Traffic Management Plan (CTMP) Consultation	Agreed	Agreed
A.34	CTMP Access	Not Agreed	Not Agreed
A.35	CTMP Monitoring	Not Agreed	Not Agreed
A.36	CTMP measures	Progress	Agreed
A.37	Buildability report clarity	Not Agreed	Agreed
A.38	Travel plan monitoring framework	Not Agreed	Not Agreed
A.39	No reference to Environmental Permitting Legislation in reference to an Asphalt Plant	Progress	Agreed
A.40	Clean Air Strategy 2023	Agreed	Agreed

\*Further comments have been provided on the construction dust management strategy, to be incorporated into a revised CDMS at Deadline 10.

**Table 3: The Applicant's response on topics labelled 'Progress' or 'Not Agreed'**

Ref	AECOM's response	The Applicant's response
A.1	<p>In relation to airport growth we have reviewed the clarification paragraphs within Transport Assessment Report [APP-258] and in particular paragraph 152 which sets out:</p> <p>'The construction arrangements at that time have therefore been overlaid on the strategic model for the 2029 with Project scenario, as at this time the northern runway is assumed to have opened [emphasis added] and additional demand would be present on the highway network.'</p> <p>In this paragraph GAL appear to be stating that the operation of the northern runway forms part of the future baseline upon which Highways construction works have then been assessed. If this correct the applicant have treated part of the Project for which DCO is being sought as committed development, where permission has already been obtained.</p> <p>This is inappropriate and the Applicant should consider the effects on the road network and air quality from the Project as a whole from the combination of operational and construction activities. Specifically, comparing a future baseline without the operation of the northern runway against a situation where the northern runway is in operation and the Highways works are underway (i.e. the Project). This would show the change in traffic and air quality associated with the combined operational and construction effects associated with the Project that the DCO is being sought.</p> <p>Without this scenario the air quality effects of the Project in 2029 cannot be assessed and the significance of air quality effects determined. This is because the study area for the Projects combined operational and construction effects is unknown, nor have the receptors that would be affected been identified (human health or designated habitats) nor is the level of traffic change and the associated change in air quality known. This means the ES is incomplete. A traffic dataset and air quality assessment update is required to appropriately consider the combined effects of the Project in 2029.</p>	<p>Paragraph 152 of the Transport Assessment Report [APP-258] refers to the Highways 2029 'with Project Scenario' only, where the combination of operational and construction demand would be present on the highway network.</p> <p>To clarify, the future baseline <u>does not include</u> the operation of the northern runway. The Applicant has compared a future baseline without the operation of the northern runway against a situation where the northern runway is in operation and the Highways works are underway (i.e. the Project).</p>
A.2	<p>This point relates to whether the ecology results can be relied upon due to concern over the scenario considered for the 2029 year. As the position concerning scenarios (where the Applicant has treated Airfield operations as committed development) is not agreed this point in turn is not agreed.</p>	<p>Addressed as part of A.1</p>
A.3	<p>Points concerning the CARE Facility can be agreed. However, the key point about why heating plant emissions reduce with increased development associated with proposals has not been answered. The response only provides sign posting to the origin of the data. Concerning why traffic emissions decreases the response states in para 1.4.5 [REP5-073] 'In terms of traffic flows, the decreases are because the construction scenarios introduce capacity constraint in the area around the airport which has a displacement effect of traffic routing through this corridor'. This is important as it indicates why it is important to model the air quality effects associated with a combined operational and construction scenario and not just superimposed construction on top of the operational scenario. As if the construction TM reduces capacity around the Airport it is uncertain where the additional operational traffic would reroute to in combination with construction traffic and what the air quality study area would be for an appropriate combined scenario, currently all that can be observed is the study area associated with the construction activities. This means that it is not known what receptors would be affected in 2029, what the change in concentrations would be,</p>	<p>Addressed as part of A.1</p>

	nor the total concentrations. In summary, an evaluation of air quality significance is not currently possible for the 2029 scenario. This means the ES is incomplete. A traffic dataset and air quality assessment update is required to appropriately consider the combined effects of the Project in 2029.	
A.6	A remaining clarification is requested on which background years have been utilised in the different scenarios, this has been provided for emission rates.	As set out in Paragraph 13.7.8 of <b>ES Chapter 13: Air Quality [REP3-018]</b> , background pollutant concentrations for each year of assessment have been obtained. Background concentrations for 2024 and 2029 were used for the 2024 and 2029 assessment years. Background concentrations for 2030 (latest year of available data) have been used for the 2032 and 2038 assessment years.
A.8	It is still not possible to look at each individual scenario ARN to understand if the scenarios and the changes in traffic and pollutant concentrations for each scenario are logical.	The ARN network presented in Figure 4.1.1 for the wider study area <a href="#">[REP1-018]</a> sets out all roads which were modelled in each scenario, considering both operational and construction phases. It is considered that this figure appropriately demonstrates the road network modelled, and provides consistency in modelling and reporting of results. Reporting individual scenario ARNs would not change the assessment conclusions i.e. that the impact of the Proposed Development would be not significant.
A.10	The ADMS5 response is accepted, along with the CARE Facility response. <b>The specifics of the designated habitat queries have not been addressed.</b> The congestion approach accepted.	The Applicant has noted that points are agreed on the ADMS5, CARE facility and congestion approach.  On the habitat queries, the assessment of habitat sites was agreed with the ecology team. In addition, details of the assessment were provided to Natural England and Natural England agreed with the conclusions of the assessment.
A.11	The provision of information on receptors by local authority is welcomed. The point concerning receptors on figures being made was that members of the public and people without access to shapefiles will not be able to follow the information within the ES without improved figures. This means the ES is incomplete.	Table 2.1.1 of <b>ES Appendix 13.6.2: Air Quality Receptors [APP-160]</b> provides details of the modelled human receptor locations, corresponding to ES Appendix 13.6.2, Figures 2.1.1 to 2.1.5 contained in the <b>ES Air Quality Figures (Part 4) [APP-069]</b> . Table 2.1.1 provides X (Easting) and Y (Northing) grid reference coordinates which can be used by the public and Interested Parties to access receptor locations. The ES is therefore not incomplete.
A.14	As the position concerning scenarios is not agreed this point in turn is not agreed.	Addressed as part of A.1
A.19	Low emission buses are not committed to within the response and therefore this point is not agreed. The local authorities request that the commitment to low emission buses is included within the DCO.	The detailed CWTP will confirm measures to be implemented to facilitate efficient and sustainable travel options for the construction workforce, such as the role of low emissions bus services, for approval and consultation with the relevant authorities in line with DCO Requirement 13. As discussed at the TWG, it is not appropriate to secure the requested commitment via the DCO at this stage due to the details of funding or working with others outside of Gatwick control having not been finalised.

A.20	<p>Information on how sensitive air quality predictions are to modal shift achievement is not provided. Therefore, the Applicant should include sanctions within the Surface Access Commitment [REP3-028] for non-compliance. Environmental Managed Growth proposals would help ensure mode shift commitments are met or mitigated by capping growth.</p>	<p>The Applicant has provided a response to this item under Section 3 of the <b>Response to JLA’s EMG Framework Paper</b> submitted at Deadline 6 [REP6-093].</p>
A.23	<p>The clarification provides a cross reference to paragraph 3.9.19 [APP 158] ‘The energy team provided forecasts of natural gas consumption for GAL and third parties and, separately, for standalone third parties. These included medium-ambition scenarios for the future year scenarios with and without the Project. For each of the future year scenarios, the natural gas consumption projections were used to scale emissions from 2018.’ This relates to likely natural gas consumption, but does not set out how this was then used to determine where it was appropriate to spatially include emission sources for future development, such as hotels.</p>	<p>Future developments under Gatwick’s control will be managed via the CAP arrangement and are assumed to be all electric with no on-site emissions of NOx or PMs. All such developments are subject to detailed design approvals where it can be demonstrated there are no new sources of emissions to air.</p>
A.24	<p>It is noted that a total of six batching plants were modelled to represent either concrete or asphalt activities. However, it is unclear that the emissions from both processes are equivalent and so whether this approach is appropriate.</p>	<p>In the absence of detailed specifications, it was assumed that both concrete and asphalt batching plants would be powered by the same type of generator, based on the assumption that both plant types would have similar load requirements.</p> <p>The technical specification of Cummins 500kW diesel engine was used as an assumption for the generator to estimate emissions.</p> <p>The emissions are based on conservative assumptions, assuming a typical setup using a diesel engine rather than powered by alternative fuels or power taken from a grid connection. It was assumed that the generators would be in operation 24 hours a day, 7 days a week in both construction scenarios as a worst case assumption.</p>
A.25	<p>The provision of a draft Construction Dust Management Plan and the subsequent updates to the plan following the AECOM review are welcome. There are a small number of remaining areas further work/discussion is needed:</p> <ul style="list-style-type: none"> <li>A. Confirmation is requested that all areas of the proposed development will be covered by an individual DMP.</li> <li>B. A plan of the high risk areas included in the CDMP Strategy would be helpful to the local authorities along with the table of high risk areas (Table 4.1);</li> <li>C. The need for the local authorities to request compliant information or elevated dust soiling data should be replaced with an automatic process that provides this information. The local authorities are not going to know when to ask otherwise and so will not be aware of issues for their residents.</li> <li>D. Further information is requested on how local authorities would gain access to real time monitoring data e.g. Osiris data and other monitoring data (e.g. dust soiling) and visual inspection records (e.g. sharepoint of files updated monthly).</li> <li>E. Confirmation is sought that each area specific DMP will include a map showing the spatial extent of the works area, proximity to the surrounding and the proposed monitoring locations.</li> <li>F. Environmental Statement Appendix 5.3.2 CoCP Annex 9 – Construction Dust Management Strategy Version 1 [REP5-022] Para 3.1.1 – Can this be changed to ensure that when a dust management plan is sent for approval by the local planning authority, that in situations where the dust impacts are potentially in a neighbouring authority that a copy of the proposed management</li> </ul>	<p>A response is provided for each item relating to the <b>Construction Dust Management Strategy</b> [REP5-022] below, note letters have been added to each point to aid with the response.</p> <ul style="list-style-type: none"> <li>A. All work construction activities which generate dust will be subject to a DMP.</li> <li>B. The spatial extent of each works are shown in [REP6-009]</li> <li>C. Under DCO requirement 2a local authorities will be provided with a program of works.</li> <li>D. Meetings have been set out in the s.106 where results can be provided.</li> <li>E. The DMP will include a map showing the spatial extent of the works area, monitoring locations and receptors.</li> <li>F. The text will be updated as requested.</li> <li>G. Section to be added into the CDMS on dust soiling and deposition techniques.</li> </ul>

	<p>plan will also be sent to the Environmental Health department of that authority so they may feed back to the planning authority responsible for approving the report.</p> <p>G. Additional paragraphs or a section is required on dust soiling and deposition techniques, as dust soiling and deposition are only currently mentioned in the context of reporting.</p>	
A.28	Information on complaints should be shared with local authorities without the authorities having to request information. This will support the local authorities in their role to confirm the effectiveness of mitigation measures.	Meeting arrangements are set out in the s.106, information can be provided at these formally agreed meetings and there is the option of additional meetings with RBBC included.
A.30	It noted that reference to reporting additional techniques has been included in the draft CDMP Strategy but only in the reporting section (paragraph 5.7.14). Further information on dust deposition and soiling techniques should be added in prior to the reporting paragraph, similar to that provided for Osiris monitoring.	Addressed in A.25
A.32	<p>The response does not list any additional measures nor set out what the industry guidance is that is referred to. We 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>As set out in Paragraph 5.1.14 of the <b>Written Summary of Oral Submissions ISH7: Other Environmental Matters</b> [REP4-033], no significant odour effects are expected during construction therefore no construction Odour Management Plan is required. However, Paragraphs 5.8.3 to 5.8.5 of the <b>ES Appendix 5.3.2: Code of Construction Practice</b> [REP4-007] set out management procedures for construction odour, that would be in place should any such issues arise.</p> <p>Relevant industry guidance on odour mitigation includes:</p> <ul style="list-style-type: none"> <li>▪ Defra (2010) Odour Guidance for Local Authorities, March 2010.</li> <li>▪ Environment Agency (2011) H4 Odour Management, March 2011.</li> <li>▪ European Commission (2018) Best Available Techniques Reference Document for Waste Treatment, Industrial Emissions Directive 2010/75/EU (Integrated Pollution Prevention and Control), 2018.</li> <li>▪ Scottish Environmental Protection Agency (2010) Odour Guidance, version 1, January 2010.</li> </ul>
A.34	No further information has been provided by the Applicant to explain the level of likely use of the contingency access. Further information is still required on the use and monitoring of this contingency route. Sanctions may also be needed to ensure that this route is not used excessively.	<p>Monitoring requirements are set out in section 6.6 of the oCTMP [REP7-026] and section 10 of the oCWTP [REP7-024]. Further detail will be provided in the CTMP and CWTP submitted to local authorities for approval under DCO Requirements 12 and 13 respectively.</p> <p>Section 6.6 of the oCTMP [REP7-026] has been updated to provide more certainty in relation to Junction 10 M23 and Hazelwick Air Quality Management Area.</p>
A.35	The response appears to indicate that a very basic review of monitoring data to check whether air quality is exceeding air quality standards along would be used. Rather than a monitoring system with different thresholds below the air quality standards to determine when a risk of exceedance is emerging to allow action to be taken ahead of any exceedance. The local authorities concerns about how the Applicants "Restrictions and Monitoring" within the CTMP would identify, monitor and control construction traffic utilising routes through the J10 M23 and Crawley's AQMA.	Section 6.6 of the oCTMP [REP7-026] has been updated to provide more certainty in relation to Junction 10 M23 and Hazelwick Air Quality Management Area. Further detail will be provided in the CTMP submitted to local authorities for approval under DCO Requirement 12.



	<p>The Applicants response refers to Section 2 of the Draft AQAP which it says sets out measures and monitoring commitments related to the construction phase.</p> <p>Section 2 of the Draft AQAP doesn't give any more detail on how measures or monitoring would protect air quality – it simply refers back to the CTMP and CWTP without giving any further detail.</p>	
A.36	<p>Wheel washing provision is more clearly set out, there is no further progress on low emission plant and fleet. The local authorities still request the Applicant to meet Stage V Non-Road Mobile Machinery as previously committed to by the Applicant within the ES and at Issue Specific Hearing 7 for the duration of construction and not just after 2030. Information has not been provided by the Applicant to explain what the implications are of this change for the air quality assessment presented within the ES [APP-038].</p>	<p>The <b>ES Appendix 5.3.2: Code of Construction Practice</b> <a href="#">[REP4-007]</a> (DCO Requirement 7) NRMM commitment aligns with the Greater London Authority (GLA) NRMM requirements. During the initial construction period (pre 2030), NRMM will be required to meet emission standard Stage IV as a minimum and will be required to meet Stage V from 2030. The planned NRMM fall in the net power range of 56-560kW. A comparison of the Euro Stage IV (Directive 2010/26/EU) and Euro Stage V (Regulation (EU) 2016/1628) show that Nitrogen Oxide (NOx) emission limits are the same. For Particulate Matter (PM), the rate reduces from 0.025g/kWh to 0.015g/kWh however the contribution to total concentrations is negligible (&lt;0.01%).</p> <p>Considering the emission changes between Stage IV and V and the conservatism built into the ES NRMM assessment, NRMM emissions associated with construction are implicitly represented and would not change the results of the assessment reported in <b>ES Chapter 13: Air Quality</b> <a href="#">[REP3-018]</a>. The commitment aligns with best practice GLA guidance and acknowledges availability and technological requirements of local contractors.</p>
A.37	<p>As the position concerning scenarios is not agreed this point in turn is not agreed.</p>	<p>Addressed as part of A.1</p>
A.38	<p>The cross reference provided has been reviewed and the annual monitoring approach is noted. However, there is no mention of how air quality monitoring will be considered along with all the other transport metrics. Environmental Managed Growth proposals would be useful to incorporate air quality within the monitoring.</p>	<p>The Applicant has provided a response to this item under Section 3 of the <b>Response to JLA's EMG Framework Paper</b> submitted at Deadline 6 <a href="#">[REP6-093]</a>.</p>
A.39	<p>The response notes that licences would be required and obtained as needed. Clarification is sought that the Applicant is referring to Environmental Permits.</p>	<p>An Environmental permit will be obtained where required.</p>