



Gatwick Airport Northern Runway Project

Appendix A: Response to West Sussex Joint Local Authorities – Air Quality

Book 10

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1 Appendix A – Response to Deadline 3 Submissions from Joint Local Authorities on Air Quality

- 1.1.1 This document has been prepared to respond to a review of air quality technical matters, as summarised by AECOM on behalf of the Joint Local Authorities in response to the Applicant’s **Supporting Air Quality Technical Notes to Statements of Common Ground** [[REP1-050](#)] and air quality discussions relating to the draft Section 106 Agreement. The AECOM review document was submitted as Appendix A of the Deadline 3 submission from the West Sussex Joint Local Authorities [[REP3-117](#)] and again at Appendix A of the Deadline 3 submissions from Joint Surrey Councils [[REP3-133](#)]. This document is therefore provided in support of the Statement of Common Ground (SocG) in relation to the topic of air quality for following Councils:

Joint Surrey Councils

- Surrey County Council
- Tandridge District Council
- Mole Valley District Council
- Reigate and Banstead Borough Council

West Sussex Councils

- Crawley Borough Council
- Mid Sussex District Council
- Horsham District Council
- West Sussex County Council

- 1.1.2 The document is split into sections based on the subheadings set out in the AECOM review document. Each subheading repeats the review text in italics followed by the Applicant’s response. This document does not seek to replicate information that is available elsewhere, either within the Application and/or Examination documents, referring out where appropriate.
- 1.1.3 Table 1 has been produced for the air quality representative (AECOM) on behalf of the Joint Local Authorities to populate with the status of each technical query to confirm to the Examining Authority (ExA) where agreement has been reached. It is requested that the status in Table 1 should be updated to reflect the following:
- **“Agreed”** to indicate where a matter has been resolved

- **“Further discussion required”** to indicate where matters are subject of ongoing discussion with the aim to either resolve or refine the extent of disagreement between the Applicant and Joint Local Authorities.

Table 1: Topic Status

Ref	Topic	Status (to be populated by Joint Local Authority/ AECOM)
A.1	Assessment Scenarios	
A.2	Ecology Assessment	
A.3	Emission Ceiling	
A.4	Base Year	
A.5	Years of Assessment	
A.6	Modelled Scenarios	
A.7	Monitoring Data	
A.8	Affected Road Network	
A.9	Heavy Goods Vehicles (HGVs)	
A.10	Technical Issues regarding the Air Quality Assessment	
A.11	Air Quality Receptors	
A.12	Modelled Receptor Height	
A.13	AM Modelled Speeds	
A.14	Cumulative Effects and Inter-Relationships	
A.15	Methodology to determine short term air quality effects	
A.16	Model noise	
A.17	Ammonia	
A.18	Verification	
A.19	Low emission buses	
A.20	Modal shift	
A.21	Work not being completed to schedule	
A.22	Operational Phase Point Sources	
A.23	Heating Plant Modelling	
A.24	Asphalt Batching	
A.25	Dust Management Plan (DMP)	

A.26	Management Plan	
A.27	Communication and Engagement Management Plan	
A.28	Complaints information wording	
A.29	Method statement	
A.30	Air quality monitoring	
A.31	Document cross referencing	
A.32	Odour mitigation	
A.33	Construction Traffic Management Plan (CTMP) Consultation	
A.34	CTMP Access	
A.35	CTMP Monitoring	
A.36	CTMP measures	
A.37	Buildability report clarity	
A.38	Travel plan monitoring framework	
A.39	No reference to Environmental Permitting Legislation in reference to an Asphalt Plant	
A.40	Clean Air Strategy 2023	

1.2 A.1. Assessment Scenarios

There are a number of clarifications required to understand the assessment scenarios utilised in the air quality assessment. This is particularly the case for those scenarios where both construction and operational activities are underway at the same time, but the assessment has treated them separately. The concern is that the scenarios assessed in the Environmental Statement (ES) do not provide a realistic worst case assessment.

Specific clarification points include:

- Clarification is required on how the use of two parallel scenarios for 2029 provide a realistic worst case to be evaluated. A single scenario reflecting the anticipated operation of the increased capacity at the airport with the surface access construction works is the realistic worst case in 2029.*
- Clarification is required as to how operational activities and ongoing construction works in 2032 have been assessed.*
- General clarification is required as to how the selection of assessment years and their configuration of operational and construction was made and how this aligns with the requirements of the Airports National Policy Statement including paragraph 5.33, specifically ‘.... Including when at full capacity... including interaction between construction and operational changes’.*

- *Table 2.1.1 page 24, UK Health Security Agency identifies that for some assessment scenarios, construction and operation will overlap and that this needs to be addressed. The response points to cumulative effects and Inter-relationships chapter as covering this matter, however a review of this chapter (Chapter 20) indicates that this is incorrect. a*

Update: Supporting Air Quality Technical Note to Statements of Common Ground, Version 1.0, March 2024, Ref TR020005.

Further information is provided in Appendix D of the above document. The document describes the phases included in each assessment year and provides further information with regards to how the construction and operational phases were assessed. Section 2.4 'Assessment of cumulative construction and operational impacts', acknowledges that there is overlap between the construction and operational phases but does not provide clarity as to whether the traffic flow for the construction and operational phases have been included in the same traffic model and if this has then been compared against a baseline situation with neither activity. Therefore, the above points still require further clarification.

- 1.2.1 As clarified in the latest Joint Local Authorities (JLA) Topic Working Group (TWG) on 22 April 2024, the highways (surface access) Construction scenario represents a cumulative scenario considering the contribution from both construction and operational traffic to represent a realistic-worst case assessment. The highways construction scenario is compared against the 2029 future baseline, as represented in ES Chapter 13, Table 13.10.2 [[REP3-018](#)].

1.3 A.2. Ecology Assessment

In addition to the above issue relating to whether a worse-case scenario has been modelled as part of the air quality assessment, the following points in relation to the ecology assessment have been raised.

Specific clarification points include:

- *The Ecology and Nature Conservation chapter utilises the predicted air quality results for NO_x and nitrogen deposition to determine whether there are significant effects on designated habitats. The chapter concludes there are none in relation to air quality. However, this is based on the scenarios assessed within the air quality chapter that need further review to determine if the scenarios do represent a realistic worst case.*
- *The HRA (Habitat Regulations Assessment) utilises the predicted air quality results for NO_x, ammonia and nitrogen deposition to determine whether there are habitat integrity risks to European designated sites. The HRA concludes there are none in relation to air quality both for the proposed development in isolation and in combination. However, this is based on the scenarios assessed within the air quality chapter that need further review to determine if the scenarios do represent a realistic worst case.*

The concern is that the scenarios utilised do not represent a realistic worst case for the proposed development.

- 1.3.1 Clarification regarding scenarios was addressed in the within **Appendix D of the Supporting Air Quality Technical Notes to the SoCGs** [[REP1-050](#)] and the

response given for A.1 above. In summary, the modelling scenarios included in the ES air quality assessment represent a realistic worst-case assessment and which has then informed the worst-case assessment in **ES Chapter 9: Ecology and Nature Conservation** [[APP-034](#)].

1.3.2 The Applicant has responded to the HRA assessment scenarios at EN1.1.6 of the Applicants Response to the ExA's Written Questions [[REP3-090](#)]. In summary, the scenarios assessed represent the reasonable worst-case scenarios.

1.4 A.3. Emission Ceiling

Linked to concern around the assessment scenarios considered in the air quality assessment, the same concerns apply to the emissions ceiling calculations as to how realistic these are, particularly when the construction and operational activities are on-going and the emissions ceiling calculations treat these separately. Specific clarification point include:

- *Clarification is sought as to why in the 2024 construction scenario, when traffic management is in place to maintain traffic flows that roads emissions for both Airport and Non-Airport reduce? (See Table 13.10.1). The same query is raised for 2029 construction and separate operational Non-Airport Emissions (See Tables 13.10.2 and 13.10.5), for 2032 (See Table 13.10.6), 2038 (See Table 13.10.7) and 2047 (See Table 13.10.8).*
- *Clarification is also requested on why changes in the Central Area Recycling Enclosure (CARE) emissions even with the capacity of the facility doubling do not change? (See Table 13.10.6, 13.10.7 and 13.10.8). Heating plant emissions improvements are also typically predicted overall. Clarification on why this is and what future assumptions concerning any additional hanger and hotel heating emissions have been made. There is concern on how appropriate the emissions scenarios are.*

Further clarification is required on the scenarios considered in the emissions ceiling calculations and further clarification is needed on some counterintuitive changes predicted in the emissions ceiling calculations as described above.

1.4.1 Clarification regarding scenarios was addressed within **Appendix D of the Supporting Air Quality Technical Notes to the SoCGs** [[REP1-050](#)] and the response given above. In summary, the modelling scenarios included in the ES air quality assessment represent a realistic worst-case assessment.

1.4.2 The Applicant has responded to the change in emissions for 2024 at AQ.1.15 of the Applicants Response to the ExA's Written Questions [[REP3-083](#)].

- 1.4.3 The Applicant has put forward a change to the DCO Application to remove the boilers from the CARE facility and which has subsequently been accepted by the ExA into the Examination. The replacement CARE facility which now forms part of the DCO application is a waste sorting facility only.
- 1.4.4 As set out in paragraph 3.9.19 of Appendix 13.4.1 Air Quality Assessment Methodology [APP-158], future year heating emissions were based on energy forecasts.
- 1.4.5 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.

1.5 A.4. Base Year

The concern is that the most up to date year (2022) of baseline information has not been used. If this had been used, it may have increased confidence in the air quality assessment. Specific clarification point include:

- *Paragraph 13.5.18 of the ES, Chapter 13 Air Quality, states that 2018 is the baseline year for assessment, with data from 2020 and 2021 not being representative due to COVID-19 lockdown periods and due to traffic data being available from 2018. No reference is made to 2022 data which should have been available during the preparation of the air quality assessment. Additionally, the traffic model has a baseline year of 2016, with data extrapolated to 2018 by the traffic team. Further clarification is required as to why a 2022 baseline year was not adopted to reduce the amount of projection in air quality predictions between scenario years and increase the confidence in predicted outcomes.*

- 1.5.1 The baseline year of 2018 was selected based on traffic and monitoring data availability and was discussed and agreed to be used with the local authorities and AECOM at technical working group meetings before the application was submitted. This provides a reference level against which any potential changes in air quality can be assessed. Paragraph 13.5.18 of ES Chapter 13: Air Quality [REP3-018] provides full details of the selected baseline year. Further, the modelling was carried out in 2022, as such the data would not have been available for this assessment.

1.6 A.5. Years of Assessment

The following concern is with regards to the consistency of assessment years.

- *Paragraph 12.6.63 of the traffic and transport chapter identifies that 2032 is an interim assessment year, whilst paragraphs 12.6.65 to 12.6.67 have the design year listed as*

2047. Table 12.7.1 also includes the same description of years as above. Similar descriptions are also provided in paragraph 12.4.4 of the traffic and transport chapter. This is in contrast to the air quality chapter which lists 2032 as the interim year and 2038 as the design year (See para 13.5.23). Paragraph 12.4.5 of the traffic and transport chapter states that 2038 is also utilised by some topics, noting this is not a requirement for traffic and transport. This scenario is described as a design year in the air quality chapter. Further clarification is sought on the above point. It should be noted that the design year is typically 15 years after opening year.

- 1.6.1 Clarification regarding scenarios was addressed within **Appendix D** of the **Supporting Air Quality Technical Notes to the SoCGs** [[REP1-050](#)].
- 1.6.2 Section 5.4 of Appendix 4.3.1 Forecast Data Book defines the assessment years [[APP-075](#)].

1.7 A.6. Modelled Scenarios

Additional information regarding if the approach used for the 2024 and 2029 scenarios is considered conservative.

A specific clarification point is:

- *Background maps from Defra have been used in the air quality assessment, as well as the Defra Emissions Factors Toolkit (EFT) for scenarios after 2030. This provides a conservative assumption as the last available years for these scenarios within these tools is 2030. There is no discussion on whether this is conservative for the 2024 and 2029 scenarios. The concern is that more recent years of assessment are not worst case.*

Further clarification should be provided which background and EFT years for which scenarios

- 1.7.1 Clarification regarding scenarios was addressed within Appendix D of the Supporting Air Quality Technical Notes to the SoCGs [[REP1-050](#)]. Appendix D, Section 2.2 includes the conservatism considered for the 2024 and 2029 construction scenarios. The assessment has been carried out on a reasonable worst case basis with the peak construction traffic being combined with peak passenger traffic in those years.

1.8 A.7. Monitoring Data

Clarification is required on two points in relation to the monitoring data provided in the ES.

Specific clarification points include:

- Paragraph 3.2.1 of the ES Air Quality Appendix 13.6.1 which refer to monitoring data in 2019, rather than 2018. Confirmation is requested that this is a typo.
- It is understood that the monitoring data presented in Table 3.2.1 in the ES Air Quality Appendix 13.6.1 are the monitoring data included within the affected road network (ARN). Clarification is requested as to what data is presented in Table 2.3.4, as additional data not presented in this table, is presented in Table 3.2.1, for example site CR101. It is unclear what the differences are in the information presented between tables.

- 1.8.1 The monitoring data set out in Table 3.2.1, in ES Appendix 13.6.1 Air Quality Data and Model Verification [[APP-159](#)] is for the baseline year of 2018.
- 1.8.2 The data presented in Table 2.3.4 of ES Appendix 13.6.1 Air Quality Data and Model Verification [[APP-159](#)] shows all diffusion tube monitoring locations across local authorities within the 11km by 10km study domain, as shown in Figure 13.1.12 of ES Air Quality Figures Part 1 [[APP-066](#)]. Data shown in Table 3.2.1 Air Quality Data and Model Verification [[APP-159](#)] shows the 2018 monitoring data for the locations within 200m of the ARN in the wider study area considered in model verification. Therefore, Table 3.2.1 includes additional sites outside of the 11km by 10km study domain shown in Table 2.3.4.

1.9 A.8. Affected Road Network

A figure is requested of the ARN for all modelled scenarios.

Specific clarification points include:

- There is no clear figure provided of the ARN for the different assessment years. It is not possible to understand which routes are affected in which scenario. Paragraph 13.5.5 of the ES air quality chapter refers to a 'wider study area' beyond the 11 km by 10 km domain, plus the modelled ARN outside this area and that this is shown on Figure 13.4.1.4.1.1. The ES Air Quality Figures – Parts 1, 2, 3, 4 and 5 have been reviewed and this figure cannot be identified. Currently, figures within Part 3 just show a wider study area domain, not the actual roads meeting the ARN criteria (e.g. Appendix 13.6.1 Figure 2.3.1). Figures should be provided to illustrate the roads affected in each scenario.
- No further information on the road traffic air quality study area was identified in ES Appendix 13.4.1: Air Quality Assessment Methodology. However, reference to the above missing figure is made within this ES Appendix document, suggesting it has been missed in the collation of this ES Appendix. The limitation of the approach described in Figure 13.4.1.4.1.1 to presenting the ARN in the 'wider study area' may be that it is not possible to distinguish between the construction phase and operational phase ARNs unless this is disaggregated on the figure, which the text reviewed to date suggest it is not. The lack of

clear study area information makes it very difficult to understand the changes in traffic during the different scenarios and therefore understand if the effects being presented at receptors are reasonable between the construction and operational phases.

It is requested that the roads within the 11 km by 10 km domain which have met the ARN criteria are illustrated separately for the construction and operational phases on figures. This will inform our understanding of where the greatest air quality effects should be anticipated in this domain.

Update: Air Quality Figures – Part 2 Version 2.0, March 2024, Ref TR020005

The updated figure 4.1.1 includes the modelled road network but not the ARN. It is also unclear if this is for the operational phase and construction phase assessment.

1.9.1 Figure 4.1.1 Modelled Road Network of Air Quality Figures – Part 2 [\[REP1-018\]](#) presents the ARN network for the wider study area. The ARN includes all roads in the construction and operational traffic models which are predicted to exceed the EPUK/IAQM guidance screening criteria due to the Project (IAQM and EPUK, 2017). The ARN is assessed for both the operational and construction phases.

1.9.2 The ARN presented in Figure 4.1.1 Modelled Road Network of Air Quality Figures – Part 2 [\[REP1-018\]](#) shows all roads which were modelled in each scenario. Rather than having several different affected road networks, as they would be different in each year, an approach was taken to screen all road links and combine into one model roads layer. This approach is beneficial as it allows all receptors to be modelled in each year to provide consistency of reporting the results.

1.10 A.9. Heavy Goods Vehicles (HGVs)

Further information is required regarding several issues identified concerning HGVs.

Specific clarification points include:

- Paragraph 15.4.2 of the Transport Assessment identifies a different definition of HGVs and light goods vehicles (LGV) to that typically utilised in air quality assessments, as noted in the Construction Traffic Management Plan (CTMP). Confirmation is required to check that this definition has not been used within other aspects of the ES, specifically within the air quality assessment.*
- A key issue considered in the assessment are the changes in emissions as a result of staff and passenger vehicles and changes due to car park provisions. There is no mention of changes due to HGV associated with the operation of the proposed development e.g.*

freight and deliveries. The concern is that changes in heavy vehicles are not being considered.

• Additionally, the traffic data comprised a fleet mix of cars, LGVs and HGVs, for both Airport and Non-Airport vehicles. With Airport vehicles also including buses, coaches and staff cars. Clarification is sought that the HGV and LGV split of data provided for the air quality assessment does not consider HGVs to be just vehicles over 7.5t and that HGVs have been considered for vehicles greater than 3.5t. The use of fleet mix suggests that further details of fuel types and vehicle ages were provided. Is this correct? And if so, how was this data used with the Emissions Factors Toolkit? Further details are therefore required on the technical aspects of the roads air quality assessment methodology to confirm that emissions for HGVs have been calculated correctly.

1.10.1 As set out in paragraph 3.10.2 of Appendix 13.4.1 Air Quality Assessment Methodology [[APP-158](#)], the air quality assessment uses the 'basic split' in the Emission Factor Toolkit (EFT) to provide the fleet mix for the modelled roads.

1.10.2 HGVs are defined in the strategic model as being 2.5 Passenger Car Unit (PCUs), whilst LGVs are 1 PCU. Whilst there is a relationship to weight, as given in the Transport Assessment paragraph 15.4.2, the classification by axle length has been used in analysing survey data. In the development of the model a number of different classes were combined (2 axle, 3 axle and 4+ axles) based on standard definitions from surveys to form the HGV user class. Therefore, the HGV numbers used in the ES are representative and aligned with the data reported in the air quality assessment.

1.10.3 In terms of HGVs associated with the Project, this is considered. Section 7.6.3 / Table 43 of the Strategic Transport Modelling Report [[APP-260](#)] outlines the growth in goods vehicles servicing the airport. These HGVs were included in the data provided for the air quality assessment.

1.11 A.10. Technical Issues regarding the Air Quality Assessment

Further information is required to clarify the following points regarding the air quality assessment:

• Paragraph 13.5.57 of the ES sets out that ADMS-Airport and ADMS 5 dispersion models were utilised. Clarification is requested on what emission sources could not be accommodated in ADMS-Airport and how these were re-combined with all the other contributions from ADMS-Airport to provide total changes in pollutant concentrations.

• The CARE Facility assessment presented in paragraphs 13.10.71 to 13.10.97 of the ES appears to have been undertaken in isolation to the other pollutant sources associated

with the proposed development. Clarification of where the combined change in pollutant concentrations is presented within the ES is required. h• A qualitative discussion of 2047 is provided in paragraphs 13.10.163 to 13.10.173 of the ES along with a summary of annual pollutant emissions. Previous years have been assessed quantitatively. This has shown that in increasingly later years that generally increased numbers of designated habitat sites are affected and that these require evaluation by the ecology team to determine whether effects are likely to be significant or not. It is not clear if the ecology team was involved in this qualitative evaluation. t• Paragraph 3.10.11 of the ES Air Quality Appendix 13.4.1 identifies how congestion has been assessed around junctions, but not away from junctions.

- A qualitative discussion of 2047 is provided in paragraphs 13.10.163 to 13.10.173 of the ES along with a summary of annual pollutant emissions. Previous years have been assessed quantitatively. This has shown that in increasingly later years that generally increased numbers of designated habitat sites are affected and that these require evaluation by the ecology team to determine whether effects are likely to be significant or not. It is not clear if the ecology team was involved in this qualitative evaluation. t• Paragraph 3.10.11 of the ES Air Quality Appendix 13.4.1 identifies how congestion has been assessed around junctions, but not away from junctions.*
- Paragraph 3.10.11 of the ES Air Quality Appendix 13.4.1 identifies how congestion has been assessed around junctions, but not away from junctions.*

- 1.11.1 ADMS 5 was used for the assessment of the replacement CARE facility's boilers. The ES considers all concentrations together, such that combined concentrations associated with all sources can be predicted. The data was combined in post processing.
- 1.11.2 A change to the DCO Application has since been accepted by the ExA to remove the boilers from the replacement CARE facility. The replacement CARE facility in the DCO application now comprises a waste sorting facility only.
- 1.11.3 The Applicant has provided further information regarding the 2047 assessment at Section 3 of **Appendix D** of the **Supporting Air Quality Technical Notes to the SoCGs** [[REP1-050](#)]. The method of assessment for ecological sites has been agreed by Natural England.
- 1.11.4 Section 13.10 of Appendix 13.4.1 Air Quality Assessment Methodology [[APP-158](#)] details speed data used for the assessment. Highway peak hours were used for four specific time periods to reflect congestion on the road network. Speeds at junctions and roundabouts were modelled at a reduced speed to reflect queuing and congestion. The approach has been discussed and agreed at previous TWG

meetings with the JLA and AECOM. In addition, the JLA and AECOM provided particular junctions where queuing lengths were requested to be extended which was taken into account the modelling.

1.12 A.11 Air Quality Receptors

More detail is required with regards to receptor locations and cross-referencing between the ES and air quality figures.

Specific clarification points include:

- It is not possible to relate the figures to the results set out in the appendices tables using the application documents as receptor figures do not include any receptor identification numbers. Additionally, receptor tables do not identify which figure the receptor listed is shown in as would be expected or which local authority a receptor is located within.*
- Receptor figures require an update to present receptor IDs and an additional column in the results tables identifying which local authority a receptor is located in would be very useful.*

Update: Supporting Air Quality Technical Note to Statements of Common Ground, Version 1.0, March 2024, Ref TR020005.

Tables have been provided indicating which local authority each human health and ecological receptor are located in. However, the air quality figures have not been updated so cannot be cross-referenced to the report.

1.12.1 The Applicant has provided receptor tables listed by local authority in Appendix B of the **Supporting Air Quality Technical Notes to the SoCGs** [\[REP1-050\]](#).

1.12.2 The model files shared with the Topic Working Group (TWG) (August 2023) include model spatial files, including a receptor file which can be used to identify receptors on a map.

1.13 A.12. Modelled Receptor Heights

Further clarification is required regarding the height at which receptors were modelled.

A specific clarification point is:

- Paragraph 3.1.4 of the ES Air Quality Appendix 13.4.1 indicates pollutant contributions are calculated at ground level. This is appropriate for vegetation, but for human health breathing height would be expected. It is unclear if a breathing height has been used in the air quality predictions or just ground level*

1.13.1 Human receptors were modelled at a breathing height of 1.5 m as can be evidenced in the model files provided in August 2023.

1.14 A.13. AM Modelled Speeds

Further clarification is required regarding the speed modelled during the AM period within the air quality assessment.

A specific clarification point is:

- *Two AM time period speeds were provided, with the lower one was utilised, which in some circumstances could result in lower emissions. Was any testing done to inform this decision? It is unclear whether the AM speed used in the air quality assessment provides a worst-case assessment.*

Clarification is required as to why the lower speed was used.

1.14.1 The lowest speed for the AM peak period was used to reflect congestion on the road network for that specific time period. This is conservative for the areas where there could be congestion in the network.

1.14.2 Road traffic count sites on both the strategic and local road network were analysed to understand the peak flows on the highway network. The analysis concluded that in the morning peak period there were distinct peak hours on the Strategic Road Network (SRN) and local road networks, in order to assess the peak impact upon the network two separate hours therefore needed to be modelled.

1.15 A.14. Cumulative Effects and Inter-Relationships

The CIA (cumulative effects and inter-relationships) for air quality is incomplete.

Specific clarification points include:

- *Table 20.7.1 includes several rows to capture cumulative air quality effects. The table includes the majority of assessment scenarios but omits the surface access construction scenario and so is incomplete.*
- *Table 20.7.1 describes the results of a qualitative assessment undertaken for 2047. It is unclear why this is considered to be a cumulative assessment.*
- *Table 20.7.1 does not include any discussion of the cumulative effects of the overlaps between construction activities and operational activities. This is however, discussed in Table 20.8.3, but through a sequential discussion of periods and the assessment of those*

periods without recognising that some of the periods being described sequentially are actually anticipated to occur concurrently and as such cannot be relied upon.

- 1.15.1 The Applicant acknowledges that Table 20.7.1 does not include air quality effects for the surface access construction period (2029-2032). The construction period (2024-2029) presented in Table 20.7.1 is also relevant for the surface access period. Table 13.13.1 of the ES Chapter 13: Air Quality [[REP3-018](#)] provides a summary of effects for both construction periods.
- 1.15.2 The 2047 year is considered cumulative as it accounts for all emissions cumulatively within the vicinity of the airport. The traffic data used for the assessment of 2047 includes all planned growth.
- 1.15.3 Overlaps between construction and operational activities are addressed in the within **Appendix D of the Supporting Air Quality Technical Notes to the SoCGs** [[REP1-050](#)]. In summary, the Highways (Surface Access) Construction scenario considers the contribution from both construction and operational traffic over this period to represent a realistic worst-case assessment.

1.16 A.15. Methodology to determine short term air quality effects

Further clarification is required regarding the methodology utilised to determine short term air quality effects.

Specific clarification points include:

- *Paragraph 13.5.33 of the ES and paragraph 3.1.3 of the ES Air Quality Appendix 13.4.1 describes an approach to determining whether short term standards may be exceeded or not based on Defra guidance LAQM.TG(22). This approach is based on monitoring adjacent to roads and does not address situations where there are multiple sources of emissions, such as Airports. This approach has also been utilised for the CARE facility specifically, as set out in paragraph 13.10.84 which as a point source would have been expected to have had modelling undertaken for the relevant short-term criteria. The concern is that an inappropriate method has been used to consider short-term effects.*

- 1.16.1 Based on the monitored and modelled annual mean concentrations, the impact of NO₂, PM₁₀ and PM_{2.5} are not considered to be at risk of exceeding the short term standards as outlined in Section 13.10 of the air quality assessment. Therefore, an assessment of short term effects was scoped out. This is in line with the guidance outlined within Defra LAQM Technical Guidance (2022).
- 1.16.2 As presented in the Air Quality Assessment, the two AQMAs within the 11 km by 10 km domain are designated for exceedances of the annual mean NO₂ air

quality standard only. There were no exceedances of the 1-hour mean NO₂ standard of 200 µg/m³ or 24-hour mean PM₁₀ standard of 50 µg/m³ reported at any of the five continuous monitoring sites in operation within the 11 km by 10 km domain.

- 1.16.3 A change to the DCO Application has subsequently been accepted by the ExA to remove the boilers from the replacement CARE facility. The DCO application now proposes a replacement CARE facility as a waste sorting facility only.

1.17 A.16. Model Noise

Model noise is cited in a number of the scenario years to explain adverse changes in air quality. It is surprising that areas of traffic model noise have been included in the air quality assessment.

Clarification is sought as to whether areas of model noise are just isolated features within the model or if they will have affected the overall performance of the traffic model.

- 1.17.1 Paragraph 12.5.5 to 12.5.6 of ES Chapter 12 Traffic and Transport [[REP3-016](#)] considers 'model noise' which can occur in the strategic transport modelling. To summarise, localised model noise has only been identified in two particular areas – Croydon and Steyning.

1.18 A.17. Ammonia

Paragraph 3.1.8 of the ES Air Quality Appendix 13.4.1 identifies ammonia from road traffic. Is there any ammonia contribution from the CARE facility associated with any abatement equipment? There is a risk that a pollutant could be missing from the assessment.

Further clarification should be included as to whether ammonia needs to be assessed.

- 1.18.1 A change to the DCO Application has subsequently been accepted by the ExA to remove the boilers from the replacement CARE facility. The DCO application now proposes the replacement CARE facility as a waste sorting facility only. Therefore, there is no requirement to assess the facility further for ammonia.

1.19 A.18. Verification

There are a series of clarification sought to establish if the air quality model verification is robust.

Specific clarification points include:

- *There is no figure to show where the different model verification zones have been applied. It is not possible to relate the model verification information in the technical*

appendix to the receptors assessed. A figure showing verification zones and receptors is required.

- One of the criteria stated for excluding air quality monitoring data for verification is the removal of sites with less than 75% data capture, i.e. 9 months. This is not considered to be an appropriate reason and may have resulted in the loss of suitable data for inclusion in the verification process. Kerbside sites are listed as being excluded. This is generally acceptable unless the sites are representative of exposure. The final exclusion criteria relates to the exclusion of sites influenced by local characteristics which were not explicitly modelled. This may be acceptable in some circumstances but not all and verification may be used to capture these variations. 173 sites were excluded from a total of 420 sites. This is over 40% and seems very high. This may indicate that too stringent and/or inappropriate exclusion criteria as described above have been utilised. The concern is that excessive numbers of monitoring sites may have been excluded from model verification which could have improved the quality of the air quality verification and so the confidence in outputs.
- Clarification is requested on what distance has been used to exclude monitoring locations in relation to the sites excluded due to sites being 'set back from modelled road sources'. Clarification is also requested as to whether this was the case or not for any kerbside sites excluded. Further details on the sites excluded on this basis is required.
- Several verification zones have less than 6 monitoring sites and so statistical analysis may be difficult for these zones. Additional sites, as described above, may increase numbers in some of these zones. Additionally, the statistical model performance of some zones remains at the boundary of acceptable, particularly Croydon, Park Lane. It is noted that within the Hazelwick Roundabout zone that one of the tubes, HR11, has very different monitored concentrations and model performance and so may require a review to consider if it belongs in the zone. Lastly the Crawley zone is listed to have 3 monitoring sites, but only two are shown in Diagram 3.3.4. There are some technical details that further information is needed concerning air quality model verification.

Update: Supporting Air Quality Technical Note to Statements of Common Ground, Version 1.0, March 2024, Ref TR020005.

Within this document, figures have been provided indicating verification zones which addresses the first point. However, further information regarding the remaining points have not been provided.

- 1.19.1 As noted by AECOM, a figure to show where the different verification zones are applied has been set out in **Appendix A of the Supporting Air Quality Technical Notes to the SoCGs** [[REP1-050](#)].

- 1.19.2 To clarify the process for screening monitoring sites into the verification, the following steps were taken.
- 1.19.3 **Step 1** – Using GIS software all sites within 200m of the modelled affected road network were selected to ensure a full list of all monitoring sites in the region, which had been reported in local authority reports in past years were reviewed for consideration in the verification process. This gave us a list of 420 sites.
- 1.19.4 **Step 2** – As step 1 included many sites at locations not directly adjacent to the modelled road network or historical sites which may not have been in operation in 2018 (historical sites) it was important to screen the long list down to a list of sites which would be appropriate for use, following LAQM TG.22 guidance. Also, sites where a diffusion tube and a continuous monitor were located in the same spot the data from the continuous monitor was selected. This left us with 287 sites to use in the verification process.
- 1.19.5 **Step 3** – The 287 sites were modelled and considered in the process with only 40 sites being removed as detailed in Table 2. This left 247 sites, which represents an extensive network of monitors across the study area which have been used for validation.
- 1.19.6 Therefore, the removal of 40 sites from a starting list of 287 useable sites is a much lower percentage (14% rather than the 40% noted). We hope this clarification is helpful.

Table 2: Criteria used to exclude monitoring data

Reason	Sites removed
Monitoring site with low data capture for 2018, ie less than 75 per cent in a year	10
Monitoring site located on a road island, where concentrations cannot be accurately represented in the model.	2
Monitoring site influenced by localised characteristics which were not explicitly modelled.	7
Kerbside location, i.e. too close to the road to be accurately represented by the model.	15
Monitoring site obstructed by vegetation and therefore concentrations would not be accurately represented in the model.	6

- 1.19.7 Only ten monitoring sites across the study area were excluded due to data capture in 2018 being less than 75%. Should these sites have been included in the model verification process, the outcomes of the zonal factors would be unchanged.

- 1.19.8 In line with TG22, inclusion of kerbside sites is generally not recommended as models may under-predict concentrations closer to the roadside. On this basis 15 sites were removed from model verification. The exception is where kerbside sites are relevant for exposure and in that case, kerbside sites have been included in the verification process. Model verification points located on a road island can be considered in the same way as kerbside sites. Two sites were removed on road islands, these do not represent locations of exposure.
- 1.19.9 In accordance with section 7.587 in the Defra Local Air Quality Management Technical Guidance (TG22), “the correlation coefficient could be applied particularly in cases where large datasets...are being compared but this is not recommended for smaller datasets. It is generally less useful for smaller datasets and can be controlled by single points at the upper or lower ranges of datasets”. As such, the correlation coefficients should not be considered in the zones where a small number of sites have been used. The RMSE values are within $\pm 25\%$ of the objective being assessed. The annual mean objective for NO_2 is $40\mu\text{g}/\text{m}^3$, and the RMSE for all zones are lower than $10\mu\text{g}/\text{m}^3$, which is in line with the criteria outlined in section 7.585 of Defra’s TG22.
- 1.19.10 Hazelwick Roundabout zone displays good agreement, with no systematic under or over prediction and modelled results within $\pm 25\%$ of the monitored results. The only exception to this is the diffusion tube HR11, in 2018 the annual average concentration was $22.5\mu\text{g}/\text{m}^3$, which is systematically lower than all other concentrations at Hazelwick roundabout. On this basis, the agreement at this location is expected to be related to localised factors or uncertainties in monitoring data as the model set up reflects good agreement at all other monitoring sites in this zone.
- 1.19.11 Three monitoring sites are included in the Crawley Zone. Due to the similarity of the monitored and modelled results two sites are overlapping in Diagram 3.3.4.
- 1.19.12 Overall, the verification methodology follows Defra LAQM TG.22, the steps above were described and agreed with local councils at the modelling methodology workshop in November 2022. The model performance meets the Defra requirements and has been considered suitable for use in the assessment.

1.20 A.19. Low emission buses

Section 7.7, paragraph 7.7.1 refers to the possibility of low emission bus fleet vehicles to minimise air quality effects. This would be beneficial and further details and discussion would be useful. Due to the magnitude of the works, discussion is proposed on how this can be committed to and secured within the DCO.

Further information on low emission buses and securing these is required.

- 1.20.1 Within the Travel Plan measures in the Outline Construction Workforce Travel Plan (oCWTP) [[APP-084](#)], paragraph 7.7.1 sets out that low emission vehicles would be encouraged and used where practicable for all contractor workforce bus services accessing the airport to minimise any potential air quality effects.
- 1.20.2 Under Requirement 13 of the **Draft DCO** (Doc Ref. 2.1), the detailed Construction Workforce Travel Plan (CWTP) is to be submitted and approved by Crawley Borough Council (in consultation with other relevant authorities) prior to commencement of the relevant part of the development. 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.

1.21 A.20. Modal Shift

The following clarifications are sought regarding modal shift:

- *Paragraph 12.8.6 of the traffic and transport chapter sets out a variety of measures that will be implemented to encourage the modal shift assumed with the proposed development. Within the assumptions there are controls on onsite parking numbers, parking charges and forecourt access charges. There is concern over whether the modal shift can be achieved and if this is not achieved what the air quality effects may be. Further details are requested to understand what assumptions concerning off-airport parking, both approved and unapproved and how sensitive the achievement of the anticipated modal shift is to any variation in these assumptions.*
- *Paragraph 12.8.11 of the traffic and transport chapter identifies that the proposed interventions achieve at least the committed model share shift three years after opening of the new northern runway. This may mean there is a risk that an operational scenario after 2029, but before 2032 is the worst case i.e. 2030 or 2031 for air quality. Further details are required to understand this risk.*

- 1.21.1 The mode share commitments within the Surface Access Commitments (SACs) document [[APP-090](#)] represent the position GAL is confident it can achieve, based on the modelling of mode choice and transport network operation. Further details are provided in Chapter 7 of the Transport Assessment [[AS-079](#)]. The range of interventions to improve sustainable travel has been tested to inform the mode share commitments reported in the Application. The SAC also includes a section on GAL's further aspirations, which includes more ambitious mode share targets which it will be working towards, but it has set the committed mode

shares explicitly to ensure that the core surface access outcomes set out in Environmental Statement are delivered. The SAC contains measures to monitor and ensure that the mode commitments are met.

- 1.21.2 No changes to off-airport car parking supply are assumed in the modelling work. This is set out in paragraph 6.7.2 of the Transport Assessment Annex B Strategic Transport Modelling Report [[APP-260](#)], which also explains the occupancy cap assumed in the model and off-airport parking demand above this cap is re-allocated to on-airport car parks. As set out in paragraph 7.8.1 of [APP-260](#), the car parking provision assumed within the strategic model is primarily to allow the model to represent the distribution of car parks, and therefore support the assignment of car trips to different parking access points on the network. The number of car trips within the strategic model is determined from the mode choice element of the model suite. The mode choice model uses travel costs, including parking charges and forecourt charges, to determine the overall number of journeys made by car between origins and destinations within the network, because the model is based on comparing the costs of making a given journey by different modes (including the cost of time spent travelling). This is described in more detail in Chapter 7 of [APP-260](#).
- 1.21.3 Please see Table 2 of the Applicant's **Response to Rule 17 Letter – Car Parking** [[REP3-019](#)], which shows the car driver mode share is higher in 2029 than 2030 and 2031.
- 1.21.4 Conservative assumptions have also been built into the air quality assessment to reduce uncertainty in any future scenario such as background values being frozen to 2030 and no improvements in aircraft emissions being accounted for in the air quality modelling.
- 1.21.5 The assessment of air quality is measured against the relevant air quality standards. The draft Section 106 agreement includes commitments to monitoring of air quality at current and proposed monitoring sites against relevant air quality standards. Results will be reported to local authorities.

1.22 [A.21. Work not being complete to schedule](#)

Paragraph 12.9.67 of the traffic and transport chapter indicates that 'It is anticipated that the highways works will be required to be completed by the summer period after the third anniversary of the opening of the northern runway.' The concern is that there could be adverse air quality effects if works are not completed to schedule.

Clarification is requested on the phrase 'required', to understand if there is anticipated to be disruption on the road network without the works being completed by this stage?

- 1.22.1 The assessment indicates that completion of the highway works by three years after dual runway operations commence is appropriate in order to provide sufficient capacity for traffic generated by the Project, based on the air passenger forecasts used in the assessment, and that the highway works are not required until that date.
- 1.22.2 As set out in Chapter 13 of the Transport Assessment [[REP3-058](#)], the highway modelling indicates that the highway network would continue to operate satisfactorily until the assessment year of 2032, taken as the third anniversary of dual runway operations commencing. ES Chapter 12: Traffic and Transport [[REP3-016](#)] assesses the effects of the Project in both 2029 and 2032 and concludes that in 2029, prior to completion of the highway works, there would be no significant adverse effects and no mitigation is required.
- 1.22.3 Further work has since been undertaken in Accounting for Covid-19 in Transport Modelling [[AS-121](#)]. This showed that traffic flows in 2023 were generally less than those observed in 2016 (the year on which the core modelling is based, Table 6 of [[AS-121](#)]). Forecast traffic flows across the modelled area would be around 10% lower in 2029 and 14% lower in 2047 than those in the core model scenarios. The post-Covid scenarios are considered more likely to accurately forecast future conditions than the core scenarios, in particular over the near to medium term.
- 1.22.4 Requirement 6(3) in Schedule 2 to the **draft DCO** (Doc Ref. 2.1) provides that the undertaker must have completed construction of the national highway works and made an application to National Highways for a provisional certificate under the protective provisions in Part 3 of Schedule 9 to the draft DCO by the third anniversary of the commencement of dual runway operations, unless otherwise agreed with National Highways. This secures the timing of delivery of these works unless National Highways has agreed alternative timing, having regard to any potential impacts on the network.

1.23 A.22. Operational Phase Point Sources

The ES indicates that no emission measurement data for point source modelling were available and so default emission factors were used. Were data on the stack height, hours of operation, flow rates and stack diameters available or were assumptions utilised? Further clarification is required

- 1.23.1 As set out in Paragraph 3.9.18 of ES Appendix 13.4.1 Air Quality Assessment Methodology [[APP-158](#)], for heating plant emissions, default emission factors were taken from the EEA guidebook (EMEP/EEA, 2019). The stack parameters

for GAL energy sources are provided in Table 3. Flow rates were estimated from the kW rating of the boilers and emissions were based on gas supply data. In absence of data for third party hotel and hangar sources, default parameters were used for stack height, flow rate, diameter and temperature as set out in Table 4 below. Default parameters of 0 m/s for velocity and 15 °C for temperature were used to represent a passive vented release. All sources were assumed to be in operation 24/7 as a conservative assumption.

Table 3: Stack parameters for GAL energy sources

Source name	Type	Temperature (°C)	Velocity (m/s)	Height (m)	Diameter (m)
ST Departures	South Terminal	15	0	10	1
Fire Station	Fire Station	80	0.13	10	0.5
Servisair MT	Airport Operations	75	0.38	10	0.5
MT Workshops	Airport Operations	75	0.38	10	0.5
Bldg 583D	Building	15	0	10	1
Bldg 583C	Building	70	0.04	10	0.5
Bldg 583A	Building	70	0.04	10	0.5
ST Arrivals	South Terminal	15	0	10	1
BA Jubilee House	Office	80	0.52	10	0.5
NT Boiler House	North Terminal	110	9.12	10	0.5
NT Main Terminal	North Terminal	15	0	10	1
South Terminal 1	South Terminal	150	14.30	10	0.5
South Terminal 2		150	14.30	10	0.5
ST Pier 3	South Terminal	15	0	10	1
Schlumberger House	Office	15	0	10	1
NT CIP Building	North Terminal	80	0.32	10	0.5
NT Pier 4 Extension	North Terminal	80	0.42	10	0.5
APV - Gate 45	Airport Operations	80	0.42	10	0.5
South Terminal - CIP	South Terminal	15	0	10	1

Source name	Type	Temperature (°C)	Velocity (m/s)	Height (m)	Diameter (m)
Concord 2000	Airport Operations	80	0.21	10	0.5
Pier 4 & Pier 6	Pier	80	1.19	10	0.5
NT Transfer Baggage	North Terminal	15	0	10	1
First Point Building	Airport Operations	15	0	10	1
ST IDL (Catering Supplies)	South Terminal	15	0	10	1
Viewpoint	Airport Operations	15	0	10	1
Atlantic House	Airport Operations	80	0.33	10	0.5
Airfield Operations	Airport Operations	80	0.07	10	0.5
Pier 3 & Ashdown Hse	Pier	80	0.44	10	0.5
ST Main (North Intake)	South Terminal	80	0.52	10	0.5

Table 4: Default parameters for 3rd Party Energy Sources

Parameter	Value
Height (m)	10
Diameter (m)	1
Velocity (m/s)	0
Temperature (°C)	15

1.24 A.23. Heating Plant Modelling

Paragraph 3.9.17 of the ES Air Quality Appendix 13.4.1 identifies heating plant modelling has been undertaken for the Hilton Hotel and other airport facilities including hotels and hangers. This appears to relate to existing sources. It is unclear what modelling for heating plant has been done for which scenarios in the future situation with and without the proposed development.

Clarification is sought as to whether this is for both existing and future hotels and plant, both with and without the proposed development.

1.24.1 Paragraph 3.9.19 of ES Appendix 13.4.1 Air Quality Assessment Methodology [APP-158] sets out the assumptions used for future year scenarios with and without the Project with regard to heating plant emissions.

1.25 A.24 Construction phase point sources and asphalt batching

Clarification is required on the following points regarding construction phase point sources and asphalt batching:

- *Clarification is sought as to whether there are one or more proposed concrete batching plants. The modelling technical appendix indicates 6 concrete batching plants, is this correct?*
- *Within the Code of Construction Practice (CoCP) concrete and asphalt batching are identified in a list of construction activities. Concrete batching is identified in the air quality chapter of the ES and has been quantitatively modelled. This appears not to be the case for the asphalt batching plant. There is uncertainty over the potential inclusion of an asphalt plant in the construction phase.*

1.25.1 The air quality assessment included emissions from six batching plants, these were modelled on a conservative basis in terms of duration of use and location. The batching plants could be either concrete or asphalt.

1.26 A.25. Dust Management Plan (DMP)

The following clarification is requested regarding the DMP:

- *The CoCP includes a series of 5 Annex documents, such as a Water Management Plan and Outline Traffic Management Plans. No DMP or Outline DMP is included. A DMP or outline DMP should be developed during the examination and the CoCP updated accordingly to secure the DMP. There is no reason why a DMP or outline DMP has not be prepared. The monitoring portion of Section 5.8 suggests that further detailed plans are needed to design a DMP. This is not considered to be correct.*

A draft construction dust management plan has now been prepared. A detailed review of the document will be undertaken.

1.26.1 The Draft Construction Dust Management Plan (CDMP) shared with the Local Authorities on the 26th March 2024 has considered the items requested in the Local Impact Report. The Applicant has provided an updated version at Deadline 5 and made updates in response to subsequent comments received from AECOM / the Local Authorities.

1.27 A.26. Management Plan

Paragraph 2.2.8 of the ES Appendix 5.3.2 identifies that management plans will be prepared prior to construction works. Further agreement is required on the timescales that are appropriate in advance of the works to gather baseline air quality data.

1.27.1 As set out in Section 5.8.2 on Monitoring in the Code of Construction Practice (CoCP) [\[REP4-007\]](#), ‘Monitoring will be carried out following best practice guidance as defined by the IAQM (Moorcroft et al. 2018)’. In line with the IAQM guidance, baseline monitoring would commence at least three months before work commences on site where possible.

1.27.2 The draft CDMP has been updated to include this clarification.

1.28 A.27. Communication and Engagement Management Plan

Paragraph 4.12.1 of the ES Appendix 5.3.2 identifies that a Communications and Engagement Management Plan will be prepared and that this will be an internal GAL document. This document should be shared with the local authorities. The need to have this type of plan is also identified as a general control measure for dust in paragraph 5.8.2, reinforcing this cannot just be a GAL internal document.

Agreement that the Communications and Engagement Management Plan should also be available to local authorities is required.

1.28.1 A **Construction Communications and Engagement Plan (CCEP)** [\[REP2-015\]](#) was submitted to the Examination at Deadline 2 and forms Annex 7 of the ES Appendix 5.3.2: Code of Construction Practice, secured under the **Draft DCO** (Doc Ref. 2.1). The document forms part of the Examination and is therefore available for the Local Authorities, and other Interested Parties, to provide any comments they may have. Paragraph 4.12.1 of the **Code of Construction Practice** [\[REP4-007\]](#) has been updated accordingly to reflect the submitted CCEP.

1.29 A.28. Complaints information wording

Paragraph 4.12.7 of the ES Appendix 5.3.2 identifies that a complaints procedure will be established but does not reference the sharing of complaints and their resolution with local authorities. This measure is also identified within the site management air quality section as something that will be made available to local authorities. It is however noted that local authorities are to be provided the compliant information when asked.

This text should be amended such that complaints information is provided to local authorities when complaints are received.

- 1.29.1 Section 7 of the **Construction Communications and Engagement Plan** [REP2-015] sets out further detail on the approach to managing and responding to enquiries and complaints during the Project's construction. As set out in the **Code of Construction Practice** [REP4-007] (paragraph 5.8.2), any dust and air quality complaints will be made available to the relevant planning authorities when requested.
- 1.29.2 This is considered an appropriate arrangement on the basis that GAL is the responsible party for the delivery and management of the Project's construction and is therefore responsible for investigating and, where necessary, mitigating any complaints. The relevant planning authorities will be informed of any dust and air quality complaints, when requested, and therefore the information would not be unduly withheld from the authorities.

1.30 A.29. Method statement

Paragraph 2.1.2 of the ES Appendix 5.3.2 sets out that contractors will be required to provide the applicant with construction method statements to demonstrate compliance with the CoCP. This information should also be available to local authorities.

Agreement is sought that the method statement information will be available to local authorities.

- 1.30.1 As explained in paragraph 2.1.2 of the **Code of Construction Practice** (CoCP) [REP4-007], the construction method statements will be prepared to manage the work in compliance with the relevant provisions in the CoCP and its Annexes. It is therefore not necessary that such statements are provided to the local authorities, unless the works are to be completed on the Local Authorities assets where the requisite engagement will be undertaken and required documents made available.

1.31 A.30. Air quality monitoring

The monitoring portion of section 5.8 suggests one type of air quality monitoring, Osiris monitors; however, different types of monitoring may be required in addition to Osiris monitoring.

Different types of monitoring should be discussed and agreed through the preparation of the DMP.

- 1.31.1 The draft CDMP has been updated to include different types of monitoring which may be required in addition to Osiris monitoring and is submitted as part of the Applicant's submission to Deadline 5 (Doc Ref. 5.3).

1.32 A.31. Document cross referencing

The operating vehicle/machinery and sustainable travel section identifies the need for travel plans but does not cross reference the outline plans already developed. Application documents should be integrated and cross references should be updated.

1.32.1 The **Outline Construction Workforce Travel Plan** (oCWTP) [[APP-084](#)] is secured under the Requirement 13 of the **Draft DCO** (Doc Ref. 2.1) and therefore the Local Authorities can be assured its delivery.

1.33 A.32. Odour mitigation

The odour management section makes reference to best practice guidance without specifying what this is and only lists one specific measure to mitigate odour. It is therefore unclear how well secured odour mitigation is during the construction phase.

Clarification is required on how odour mitigation is secured.

1.33.1 Measures for odour management during construction are set out in Section 5.8 of the **CoCP** [[REP4-007](#)] and are based on best practice industry guidance, secured under DCO Requirement 7.

1.33.2 However, no odorous materials are expected to be excavated during construction of the Project. Large amounts of putrescible waste are not indicated to be present on the Project site that would likely give rise to significant odour issues.

1.33.3 The **Construction Resources and Waste Management Plan** [[REP4-009](#)] sets out measures for managing waste during construction to meet legislative and policy requirements.

1.34 A.33. Construction Traffic Management plan (CTMP) Consultation

A full CTMP will be developed and approved by the relevant highways authority, in conjunction with the relevant planning authority. However, information is not set out on how this will be secured within the DCO. Nor is it identified that multiple local authorities may be affected by traffic changes during the works and as such may require wider consultation.

Wider consultation is recommended in the development of the full CTMP

1.34.1 The **Outline Construction Workforce Travel Plan** (oCWTP) [[APP-084](#)] is secured under Requirement 13 of the **Draft DCO** (Doc Ref. 2.1). As specified in Requirement 13, the Construction Workforce Travel Plan will be submitted to and approved by Crawley Borough Council in consultation with West Sussex County Council, Surrey County Council and National Highways on matters related to

their function. The County Councils are the relevant Highway Authorities responsible for traffic management within their respective counties and on behalf of the relevant local authorities.

1.35 A.34. CTMP Access

Section 6.3 of the CTMP describes contingency access that would deviate from primary access arrangements. Concern over how much any contingency access could be used.

Further details on when this would be used is required during the examination.

1.35.1 Criteria for when contingency access would be used will be included in the CTMP (see paragraph oCTMP 6.3.1). The CTMP will need to be approved by the relevant highway authority (in consultation with the relevant planning authority where applicable). This will ensure that the use of contingency access is controlled.

1.36 A.35 CTMP Monitoring

Section 6.5 Restrictions and Monitoring of the CTMP identify risks associated with construction traffic utilising routes through the J10 M23 and Hazelwick Air Quality Management Areas. Reference is made to a monitoring system that 'it is envisaged' will be developed in the full CTMP.

Further details on the monitoring system are needed to understand how this would protect air quality.

- 1.36.1 The detailed Construction Traffic Management Plan will be prepared in collaboration with Local Authorities and National Highways during the detailed design and pre-construction stages, in accordance with the Outline Construction Traffic Management Plan. This secured via Requirement 12 of the **Draft DCO** (Doc Ref. 2.1).
- 1.36.2 The Applicant has provided a draft air quality action plan (AQAP) at Appendix 5 of Draft Section 106 Agreement [[REP2-004](#)]. Section 2 of the AQAP sets out measures and monitoring commitments related to the construction phase, controlled by the CoCP [[REP4-007](#)] secured by Requirement 7 of the Draft DCO. The current monitoring arrangements will allow the collection of air quality concentrations in the vicinity of the airport to support the understanding of air pollution effects in the construction period. The data will be used to compare against national standards.

1.37 A.36. CTMP measures

Section 7 of the CTMP includes Measures to Reduce Impacts. The use of low emission construction plant and fleet is identified in paragraph 7.2.15. This is welcomed as a potential measure. There may be the opportunity to reduce impacts further during construction from low emission plant and fleet.

Further discussion on how this can be further developed and secured within the DCO potentially as an additional construction fleet management deliverable is proposed.

Paragraph 7.5.2 of the CTMP identifies wheel washing will be provided where necessary. This is considered necessary for all egress points where unmade routes have been tracked through. The concern is how wheel washing will be secured.

Discussion required on how these measures will be secured is required in the DCO during the examination, potentially through the DMP.

1.37.1 The Code of Construction Practice [REP1-021], including its commitment to prepare Construction Dust Management Plans (CDMPs) for approval and the Outline Construction Workforce Travel Plan (oCWTP) [APP-084] are secured through Requirement 12 of the **Draft DCO** (Doc Ref. 2.1).

1.37.2 Mitigation measures, including those in relation to wheel washing are committed to and secured by the CoCP [[REP4-007](#)].

1.38 A.37. Buildability report clarity

Section 7 of the Buildability report (work and Traffic Management Areas) describes the sequence of works and associated traffic management in different areas of the surface access construction works. The text often refers to maintaining existing arrangements or existing traffic flows but does not make reference to the additional traffic that would be expected in the future situation.

It is unclear if the plan takes into account additional traffic associated with the natural growth of airport traffic, nor additional traffic growth associated with the additional capacity already created in the first phase of construction.

1.38.1 A summary of the approach to assessing the traffic during construction is set out in paragraphs 142 to 156 of the Transport Assessment [[REP3-058](#)]. Airfield and highway construction traffic has been assessed in the strategic modelling work and this is set out in Chapter 15 of [REP3-058](#). The assessment scenarios includes airport growth in the future baseline scenario (i.e. without Project) for the airfield construction, and vehicle trips associated with the Project in the highway construction scenario.

1.39 A.38. Travel plan monitoring framework

The travel plan refers to a monitoring framework that will be prepared to monitor how well the plan is performing and allow measures to be refined. This is helpful, but further information is needed as the monitoring framework is unclear.

More information is required during the examination on the monitoring framework.

1.39.1 Chapter 6 of the **Surface Access Commitments** [REP3-028] sets out the committed monitoring framework.

1.40 A.39. No reference to Environmental Permitting Legislation in reference to an Asphalt Plant

No reference to Environmental Permitting legislation is included in the Legislation and Policy section, Table 13.2.1. However, it is noted that within the List of Other Consents and Licences, Book 7 Table 2.2.1, under Geology and Ground Conditions, that appropriate reference to potential permit requirements are included for concrete batching and crushing. No reference to Asphalt batching is included herein the list of consents, but Asphalt batching is referenced in the Code of Construction Practice (CoCP). Reference to environmental permit requirements is also included within the Code of Construction Practice, Annex 5 Construction Resources and Waste Management Plan (para 4.5.7). There is uncertainty in relation to whether there will be an Asphalt plant and if this will require a permit. Clarification is required as to whether there will be an Asphalt plant, and if so, if this will require a permit.

Clarification is required as to whether there will be an Asphalt plant, and if so, if this will require a permit.

1.40.1 Asphalt batching plants would be required and the required licenses would be obtained where appropriate.

1.41 A.40 Clean Air Strategy 2023

The planning context section is incomplete as the reference to the 2023 Clean Air Strategy is not included in the Planning Policy Context section, Table 13.2.3.

The Clean Air Strategy 2023 should be included in the Planning Context section of the ES.

1.41.1 The air quality assessment [REP3-018] refers to the most recent references as of the submission of the ES in July 2023. The air quality strategy framework for local authority delivery¹ updated in August 2023 includes updates to refer to the

¹ <https://www.gov.uk/government/publications/the-air-quality-strategy-for-england/air-quality-strategy-framework-for-local-authority-delivery#annex-a-tables-of-pollutants-and-limits>

Environmental Improvement Plan (2023). The Environmental Improvement Plan (2023) is included in Table 13.2.3 of the air quality assessment. On this basis, ES Chapter 13 reflects most up to date planning policy.

2 Construction Dust Management Plan Review

- 2.1.1 Following the review of technical issues submitted at Deadline 3 addressed in Section 1 of this document, a review of the Draft Construction Dust Management Plan (CDMP) was undertaken by AECOM and submitted at Deadline 4.
- 2.1.2 The Applicant has considered all points raised within the review and has updated the Draft CDMP to address comments. A revised tracked version of the Draft CDMP will be provided at deadline five. Table 5 sets the Applicant’s position on points from the review that have not been explicitly included in the CDMP update.

Table 5: Applicants Position on points from the Draft Construction Dust Management Plan (CDMP) review not explicitly addressed in the Deadline 5 update

Section	CDMP Review Comment	Applicant’s Position
	<p>The dust management plan also needs to make clear that where the need for monitoring has been ruled out, a local authority can ask for monitoring equipment to be installed where:</p> <ul style="list-style-type: none"> more than 1 complaint has been received about dust, or where a council officer has visited the site and in their opinion there is a potential dust issue. This allows for the possibility that adverse unintended consequences to be addressed. 	<p>Paragraph 3.1.6 of the updated CDMP sets out that the contractor would work with the local authority to ensure monitoring is appropriate for the site based on dust impact risk.</p>