

Gatwick Airport Northern Runway Project

The Applicant's Response to Deadline 6 Submissions

Book 10

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Appendix A: Response on Design Matters



1 Introduction

- 1.1.1 This document has been prepared to set out the Applicant's response to submissions received at Deadline 6. As per previous deadlines, the Applicant is mindful of the volume of information already submitted into the examination and has sought to limit the duplication of submissions it has already made on certain subjects. As such, the Applicant has not responded to every submission or point made; instead, it has responded by exception where the submission raises a new matter and/or where the Applicant considers such a response may be helpful to the ExA. Silence on an issue, therefore, should not be interpreted as agreement but instead a recognition of the approach taken by the Applicant in this document.
- 1.1.2 This document has been structured by Interested Party. The specific Deadline 6 responses addressed are:
 - Aviation Environment Federation [REP6-119]
 - Communities Against Gatwick Noise Emissions [REP6-122]
 - Environment Agency [REP6-098]
 - Gatwick Area Conservation Campaign [REP6-124]
 - Joint Local Authorities [REP6-099]
 - Joint Surrey Councils [REP6-101]
 - Legal Partnership Authorities [REP6-103]
 - National Highways [REP6-114]
 - Stuart Roy Spencer [REP6-137]
 - West Sussex Joint Local Authorities [REP6-116]
- 1.1.3 The Applicant has also submitted an appendix (**Appendix A**) of this document which responds to the various submissions made at Deadline 6 on design matters.



2 Aviation Environment Federation

2.1 Overview

- 2.1.1 The **AEF's Deadline 6 submission** [REP6-119] uses information secured from the DfT to assert two conclusions;
 - "• Firstly, the DfT's demand and passenger allocation model assumes that while Gatwick Airport has available capacity with the current project to accommodate traffic up to 386,000 ATMs, the projected demand for air travel is met largely by the availability of capacity elsewhere in the UK airport system. Consequently, Gatwick Airport is forecast to handle fewer ATMs in 2050 than the 280,681 ATMs it handled in 2019 using its one existing runway.
 - Given the lower traffic forecasts for Gatwick, JZOYO forecasts approximately half the emissions estimated by GAL for 2050. Consequently, GAL cannot rely on Jet Zero or JZOYO as addressing or managing the climate impact from the forecast higher level of emissions associated with GAL's traffic predictions in this DCO process."
- 2.1.2 The Applicant has addressed these points in reverse order.

2.2 Forecast GHG Emissions

- 2.2.1 GAL is grateful to AEF for obtaining information from the DfT related to its Jet Zero modelling which GAL had not previously seen. The consequence of that data, however, is not what AEF claims it to be.
- 2.2.2 As AEF states, "GAL has asserted and relied upon the contention that the modelling undertaken for Jet Zero takes account of the airport's growth and therefore the emissions from the proposed expansion." AEF correctly characterises GAL's position, which derives, of course, from the Jet Zero Modelling Framework published alongside the Jet Zero Strategy in 2022. At paragraph 3.18 of the Modelling Framework it explains that "the capacity assumptions in our modelling reflect and are aligned with" MBU and other policies. These are listed in Appendix D and include the full proposed capacity of the NRP at 386,000 ATMs.
- 2.2.3 The trajectory and residual objective for the Jet Zero Strategy (JZS) were explained in the JZS as follows:



"3.58 Our economy-wide Net Zero Strategy considers that, even if there was no step-up in ambition on aviation decarbonisation (e.g. through our "continuation of current trends" scenario), we would still be able to achieve net zero by 2050. However, this is not the approach we are taking: instead we are committing to ambitious action to reduce in-sector aviation emissions. Our "High ambition" scenario, which we will use to monitor the sector's progress, has 19.3 MtCO2e residual emissions in 2050, compared to 23 MtCO2e in the Climate Change Committee's (CCC) Balanced Net Zero Pathway."

- 2.2.4 It was already known from the Modelling Framework, from the JZS and, for instance, from the Government's response to the CCC in October 2023 that:
 - "DfT analysis shows that, in all modelled scenarios, we can achieve our net zero targets by focusing on new fuels and technologies, rather than capping demand."
- In other words, the effect of the modelled growth at Gatwick and elsewhere (including the full scale expansion of a three-runway Heathrow) is consistent with the Government's JZS (High Ambition) trajectory and with the outcome modelled for the aviation sector in the Government's Net Zero strategy (i.e. consistent with 'Jet Zero'). It is not known how many scenarios were modelled by DfT, but we now know from **AEF's Deadline 6 submission** [REP6-119] that at least one modelled scenario assumed a throughput at Gatwick of 378,428 ATMs in 2050, or within 98% of the full NRP forecast and capacity. The information validates GAL's assertion¹ that (98% of the full) NRP capacity has been modelled by the Government and found to be consistent with its Jet Zero objectives.
- 2.2.6 That position is not changed by the modelling outcomes obtained by AEF using the growth assumptions in Jet Zero Strategy One Year On (JZSOYO).
- 2.2.7 The JZS has not changed. As JZSOYO explains (on page 10):
 - "To generate momentum for reducing emissions in one of the most challenging sectors to decarbonise, we set a CO2 emissions reduction trajectory in the Jet Zero Strategy. This sees UK aviation emissions peak in 2019, with interim targets of 35.4 MtCO2 e in 2030, 28.4 MtCO2 e in 2040, and 19.3 MtCO2 e in 2050."
- 2.2.8 JZSOYO reports progress against the same "in sector interim target of 19.3 MtC02e in 2050" (page 10). The High Ambition Scenario is explained on page

¹ The fact that DfT's modelled GHG output from the NRP is lower than GAL's suggests that GAL's assessment is conservative. Using the Government's modelled outputs, the GHG impacts reported in the ES would be less.



- 11, in the same terms as was used in the JZS. Updated modelling is reported to the following effect:
- "The updated High Ambition scenario has 18.7 MtCO2 e residual emissions in 2050 compared to 19.3 MtCO2 e in the original analysis."
- 2.2.9 In other words, the strategy is unchanged and the sector remains on target.
- 2.2.10 It was following JZSOYO, in March 2024, that the Government reconfirmed in its response to the Environment Audit Committee that Government did not intend to intervene to limit aviation growth, not least because:
 - "DfT analysis shows that in all modelled scenarios we can achieve our net zero targets by focusing on new fuels and technology, rather than capping demand, with knock-on economic and social benefits." (see Written Summary of Oral Submissions ISH6: Climate Change (including Greenhouse Gases) [REP4-032] paragraph 3.1.27).
- 2.2.11 A principal characteristic of DfT's modelling in 2023 was the application of lower aviation growth forecasts.
- 2.2.12 According to **AEF's Deadline 6 submission** [REP6-119], that modelling shows a modelled reduction of Gatwick ATMs to c.70% and a modelled reduction of Gatwick's GHG to c.80% of that modelled in 2022.
- 2.2.13 Without more information we do not know what the overall outcome of the DfT's JZSOYO modelling was we can reasonably assume, however, that it showed lower ATM and GHG contributions across the board, as a result of lower growth forecasts. That would cause aviation growth to come in comfortably below the assumed trajectory and overall CO2e allowance.
- 2.2.14 We do know that Gatwick's modelled GHG contribution was lower, i.e. 80% of its 2022 contribution, as a result of the lower demand / growth assumptions published alongside the JZSOYO document in 2023.
- 2.2.15 We already know from the JZS modelling that a more optimistic forecast for Gatwick with (98% of) the NRP fits within the government's JZS targets. In the context of GHG therefore, the analysis would have shown Gatwick's contribution well within the sector trajectory, with no threat to the Government's carbon objectives.



2.3 Projected demand

- 2.3.1 With respect to AEF, the information obtained does not demonstrate that "the projected demand for air travel is met largely by the availability of capacity elsewhere in the UK airport system."
- 2.3.2 There are several problems with that claim, not least that the information does not show any estimate of total demand or total capacity.
- 2.3.3 More particularly, the documents from DfT could not be clearer that they are not to be relied upon to reach conclusions like this about individual airports.
 - "The data requested is attached, along with some relevant caveats
 - Caveats that must be considered when viewing these forecasted figures
 - It should be noted that **there is uncertainty when considering results at the level of individual airports,** especially those subject to high levels of competition. Here local short-term, often commercial, drivers can have significant impact.
 - These airport level estimates should nevertheless be treated with caution, as the emphasis was national level forecasts when undergoing model calibration prior to publishing these forecasts. This approach was taken because local competition between airports for routes has little material effect on national level emissions
 - Airport level forecasts are therefore considered to have greater uncertainty and volatility, with the addition or removal of routes with competing airports.
 - This data should be viewed alongside all caveats outlined in the Jet Zero Strategy.
 - Caveats that must be considered when viewing these forecasted figures

As the Jet Zero Modelling Framework explains at para 3.19, the purpose of the modelling is not to forecast throughput at individual airports - 'Its purpose is limited to providing a consistent basis to better test the potential effectiveness of measures to meet net zero.' "

2.3.4 The fact that JZSOYO's modelling uses a lower growth trajectory for aviation is not a surprise. It was known when the revised growth forecasts were released in 2023 alongside DfT's SAF Update. The revised forecasts are acknowledged and applied directly by GAL, for example, in **Needs Case Technical Appendix** [REP1-052], at Sections 6.2, 6.3 etc. As explained in that document at paragraph 6.3.7, it is those forecasts which have been adopted for the purposes of the top down scenario and sensitivity testing.



2.3.5 If one wanted to understand the forecast consequences for Gatwick of the JZSOYO growth forecasts, therefore, it would be appropriate to look at GAL's forecasts, which use those forecasts and were intended for that purpose, rather than at the information presented in **AEF's Deadline 6 submission** [REP6-119], which expressly explains that it was not.



- 3 Communities Against Gatwick Noise Emissions
- 3.1 Noise
- 3.1.1 The following sets out the Applicant's response in relation to CAGNE's **Deadline 6 Submission Suono D5 and ISH8 noise responses** [REP6-122].
- 3.1.2 The Suono report prepared for CAGNE includes comments on the noise assessment. Many of these are repeated from their previous submissions and have already been responded to. The Applicant's response below focuses on the new comments made relating to the latest material submitted including that at Deadline 5.

UAEL

- 3.1.3 The Suono report states:
- 3.1.4 21. Through inspection of Table 3.2 within REP4-004, it can be seen that up to 300 people would be exposed to noise above UAEL were threshold values in line with other approved applications.
- 3.1.5 Table 3.2 of ES Addendum - Updated Central Case Aircraft Fleet Report [REP4-004] shows a population of approximately 100 during the day and 200 at night. The 100 during the day are a subset of the 200 at night so the total is approximately 200, not 300 people. The Applicant has provided a response to Examining Authority's Question NV2.1 concerning the UAELs raised by CAGNE for Heathrow, Bristol, Luton and Stansted in Response to Examining Authority's Questions - Noise submitted at Deadline 7 [Doc Ref. 10.56]. The Applicant notes therein that the Luton Airport expansion project ES deliberately refers to a 'precautionary UAEL' of Leg 16 hr 69dB, stating '69 dB LAeg,16h may therefore be considered a 'precautionary UAEL' for daytime noise (because this is the threshold for assisting with the costs of moving rather than mandatory acquisition of homes that would be expected to be required at a high level of noise exposure where the actual UAEL is reached)'. The Luton ES notes no houses are above this noise level. Hence the project could take a precautionary approach rather than deriving the actual UAEL as was done at Heathrow. The Applicant notes that the same is true in both the Bristol and Stansted airport expansion projects referred to where there was no population within these higher noise contours. As such the Applicant has used the actual UAELs used for Heathrow to identify what would be a UAEL, as is explained further in **The** Applicant's Response to ExQ2 - Noise (Doc Ref. 10.56.12).



3.1.6 As detailed in that response, the Northern Runway Project air noise modelling shows zero population counts for air noise above the UAEL values. There is therefore no requirement to prevent the noise impact at any properties as was the case at Heathrow. The Applicant's forecasts show there are approximately 35 properties above the precautionary UAELs referred to at Luton. All of these properties would be offered the Inner Zone noise insulation scheme that would reduce internal noise to acceptable levels.

Ground Noise

- 3.1.7 The Suono reports for CAGNE have been critical of the Applicant's approach to assessing ground noise because it takes ambient noise into consideration, and they maintain their position that ambient noise should not be considered. The Applicant's position is that ambient noise (i.e. noise from other sources) should be taken into account in assessing ground noise for an airport where it is relevant, and it is at Gatwick because of nearby major roads which form part of and will continue to form part of the noise environment. The Suono report refers to the Stansted ES. The Stansted expansion ES Addendum, 2020, Appendix 8.A reports the ground noise assessment. Paragraph 5.1.2 bullet point 2 states: The baseline background noise levels are compared to the calculated level for ground noise from the airport for all assessment scenarios. The assessment then provides a number of tables which include comparison of predicted levels of ground noise with both threshold levels and existing baseline ambient noise levels. The ES for the Stansted airport expansion was prepared by Cole Jarman, the company that has since become Suono, who clearly considered it necessary to consider ambient noise levels in the assessment at that airport, as the Applicant does at Gatwick.
- 3.1.8 Supporting Noise and Vibration Technical Notes to Statements of Common Ground [REP3-071] Appendix B assessed ground noise for the worst case Slower Transition Fleet and identifies those properties where noise mitigation at sources is not sufficient and noise insulation would be required. The Applicant will take a precautionary approach to mitigation for ground noise and include these properties in the Noise Insulation Scheme [REP4-017], rather than remodel ground noise for the Updated Central Case for which ground noise levels may be slightly lower. The properties will be clarified in the update to the Noise Insulation Scheme that the Applicant is working on in response to comments from CAGNE and the Joint Local Authorities.

Noise Envelope

3.1.9 Commenting on ISH8 discussions the Suono report reads:



- 3.1.10 13. Mr Rhodes on behalf of the Applicant also stated that Stansted, Bristol and Luton all have noise envelopes based solely on the summer period using the LAeg metric. This is not correct.
- 3.1.11 14. All three airports have a range of noise controls within their noise envelope, including LAeq noise contour area limits, movement limits, and Quota Count limits, each applying over different periods. All of the points raised by the Applicant as to why solely using an LAeq metric generates confidence can therefore be disregarded.
- 3.1.12 This is misleading as it implies that Stansted, Luton and Bristol have set noise limits in their noise envelopes in terms of Leq contour areas outside the 92 day summer season, and they have not, which is the point Mr Rhodes was making. The Applicant's approach to setting noise contour area limits for the day and night is consistent with that adopted in these other recent cases, in that the Leq noise contour area limits apply in the 92 day summer season in line with government and CAA guidance.
- 3.1.13 The Applicant notes that it has also set an annual limit on ATMs of 386,000 in the DCO, and the Night Flight Restrictions which limit movements and QCs in the summer and winter seasons will continue to apply.

Noise Insulation Scheme

3.1.14 The comments on the **Noise Insulation Scheme** [REP4-017] are noted and will be considered in the update to the Noise Insulation scheme that the Applicant is working on in response to comments from CAGNE and the local authorities.



4 Environment Agency

- 4.1.1 The below responds to the points raised by the Environment Agency in their Deadline 6 submission [REP6-098].
- 4.1.2 The Applicant's response to the Environment Agency's comments on the **Design Principles** (Doc Ref. 7.3 v5) is included within **Appendix A Response on Design Matters** (Doc Ref. 10.58).
- 4.1.3 The Environment Agency noted that in Table 6.3 in **ES Appendix 11.9.6: Flood Risk Assessment Annex 5: River Mole Fluvial Model Build Report** [REP5028] which sets out information around the Car Park X Flood Compensation
 Area, the row containing information on the peak flows in the River Mole appears
 to be blank. However, peak flows in the River Mole are set out for the Baseline
 and With-Project scenario in Table 6.3 and the blank row provides a heading for
 the section below.
- 4.1.4 With regards to the Environment Agency's concerns that the Wastewater Impact Assessment data included in paragraph 3.5.56 of **The Applicant's Response to Deadline 4 Submissions** [REP5-072] does not appear to consider the proposed new wastewater treatment facility onsite at Gatwick Airport (referred to as the 'On-airport WWTW'), should the facility become part of the final Project, all the daily volumes quoted as to be discharged 'to TW sewers with NRP' will be directed to the new On-airport WWTW.
- 4.1.5 As regards the Environment Agency's comments on version 7 of the **Draft Development Consent Order** [REP5-005]:
- 4.1.6 In respect of the need to secure the flood conveyance syphons which form part of several of the works, this is achieved by these syphons forming an integral part of the design of the relevant works, meaning that they must be delivered alongside the construction of the works. This is secured either through the **Design Principles** (Doc Ref. 7.3), secured by requirements 4 (detailed design) and 10 (surface and foul water drainage) of the dDCO, or by express reference in the work descriptions in Schedule 1 (authorised development) of the dDCO, which have been updated at Deadline 7 as described in **Appendix A Response on Design Matters** (Doc Ref. 10.58).
- 4.1.7 In respect of the Environment Agency's suggestion to secure the completion of Work No. 39(a) (divert and extend river course) prior to the commencement of Work No. 39(b) (construct and extend culverts and syphons), the Applicant does not consider this degree of rigidity in the construction sequence for Work No. 39



necessary or appropriate. Work No. 39(a) cannot be fully completed in advance of Work No. 39(b) as the two sub-works interface and the former is intrinsically linked to the latter. The extended culvert will connect at its downstream end into the newly realigned River Mole channel and thus 'completing' the realignment requires its connection to the extended culvert. In practice, the Applicant anticipates that it will have substantially completed the works for the realignment before connecting it upstream to the culvert extension in order that the realignment works can be carried out offline, but the Applicant does not consider it appropriate to introduce rigid and somewhat artificial sequencing to the elements of Work No. 39 by a DCO Requirement.

4.1.8 As regards the Environment Agency's comment on version 5 of the **Explanatory Memorandum** [REP5-007], the Applicant does not understand the amendment sought. Article 22(8) of the dDCO clarifies that nothing in article 22 overrides the requirement for an environmental permit where otherwise required. Article 22(10) is solely aimed at the situation where the Environment Agency, in addition to its statutory function issuing such permits, also owns a watercourse. In such a situation, the grant of an environmental permit would be deemed as the Environment Agency also granting consent to the discharge of water into that watercourse in its capacity as landowner under article 22(3).



5 Gatwick Area Conservation Campaign

5.1 Air Quality (UFP)

- In section 3 GACC signpost to a recent report by a green group organisation Transport & Environment (T&E) that advocates for clean transport and energy. T&E have produced and published on their website a report entitled "Can living near an airport make you ill?". This is an advocacy piece rather than a peer reviewed journal article. The article extrapolates a selection of ultra-fine particle related outcomes (including those that are self-reported rather than clinically derived) based on population numbers within 20km of 32 airports in Europe. It appears that the methods applied the UFP concentrations from Amsterdam Schiphol Airport, which has 6 runways, to all the other airports used in the extrapolation. No new evidence is presented in relation to the aetiology or epidemiology of UFP health outcomes.
- 5.1.2 **ES Chapter 18: Health and Wellbeing** [APP-043] provides an appropriate assessment of UFP, including as clarified in Action Point 17 of the Deadline 4 Submission The **Applicant's Response to Actions ISH7: Other Environmental Matters** [REP4-037]. These cite the published peer reviewed scientific literature on UFP health outcomes and signpost to monitoring proposals in the Draft Section 106 Agreement. The UKHSA, who have responsibility for environmental hazards and community safety, have confirmed in their relevant representation [RR-4687] that they are satisfied, and the proposed development should not result in any significant adverse impact on public health.



6 Joint Local Authorities

- 6.1 Overview
- 6.1.1 The below responds to the points raised in relation to noise, air quality and policy by the JLAs in their Deadline 6 submission [REP6-099].
- 6.2 Noise
- At paras 6.9, 6.10 and 6.37 the JLAs set out their case in relation to the appropriateness of local control of matters which are currently the responsibility of government. Their case seems to be both that existing aviation policy is wrong and must change whilst also not accepting that characterisation of their case, which they say does not conflict with current aviation policy. The Applicant has responded to these assertions before (particularly in Section 3 of its Response to the JLAs' Environmentally Managed Growth Framework Proposition [REP5-071] and only does so briefly again here as different assertions are now made, particularly that "The JLAs are not seeking to challenge any Government policy but to ensure that all government policy and UK legislation is complied with." (JLAs' Deadline 6 submission [REP6-099] paragraph 6.37).
- 6.2.2 With respect, the JLAs are seeking to directly challenge government policy and were unabashed about it when setting out their proposed approach to EMG:
 - "The JLAs are of the opinion that the concept of designated airport is a historical anomaly whereby state owned airports were designated for control by the Secretary of State." (Comments on responses to ExQ1 Response to Noise and Vibration [REP4-068] page 45)
 - "The JLAs' view is that overall there is a lack of adequate legislative control for aviation noise and that aviation noise policy is inadequate to deal with the issues communities face." (Comments on responses to ExQ1 Response to Noise and Vibration [REP4-068] page 6)
- 6.2.3 These are direct challenges to and criticisms of current government policy, which have no place in a DCO examination. And they are maintained at Deadline 6 despite the Applicant's criticism:
 - ""It remains the view that the "designated airports have some of the weakest controls in the UK but with the greatest potential for adverse impacts on local communities."" (JLAs' Deadline 6 submission [REP6-099] paragraph 6.9)



- 6.2.4 That is a direct criticism of the way in which the Government exercises control over designated airports, to support an assertion that, if government isn't going to do it properly, the JLAs must. It is clear that this is applied both to noise control generally but also to night noise, despite the existence of the Government's Night Flights Restrictions regime for designated airports:
 - "As well as specific noise limits, the noise envelope should incorporate operational limits upon which the achievement of the noise envelope limits is predicated or for reasons of certainty. An example of the former would be the proposal to incorporate DfT night noise ATM and quota count (QC) limits" (JLAs' Deadline 6 submission [REP6-100] Appendix II, paragraph 27)
- 6.2.5 What doesn't appear to be recognised is that the Government is fully aware of the way in which it manages noise control at designated airports and that it does so for the very reason that:
 - "These airports remain strategically important to the UK economy and we therefore consider that it is appropriate for the Government to take decisions on the right balance between noise controls and economic benefits, reconciling the local and national strategic interests." (Aviation Policy Framework, paragraph 3.10)
- 6.2.6 The JLAs do not accept that, and they should not pretend that their approach is anything other than an attempt to wrest control from government of an airport which Parliament has decided should be designated for its national importance, so that they can seek to impose more stringent control than the Government considers appropriate.
- 6.2.7 The JLAs go so far as to say that its EMG framework must be imposed because currently "no such regime exists and as such, without any comprehensive scheme formulated within the planning system such development is likely to be judged unacceptable." (JLAs' Deadline 6 submission [REP6-099] paragraph 6.10). Again, with respect, the JLAs should recognise that the acceptability or otherwise of the NRP depends on its effects and its compliance with national noise policy, not on whether the JLAs are to be given the ability to control its growth. The JLAs have not made out a case that the noise effects of the NRP conflict with the policy tests set in the NPS.
- 6.2.8 **Joint Local Authorities Response to the Applicant's Deadline 5 Submissions** [REP5-095] includes various comments on the noise assessment, and provides the following summary table of outstanding concerns and details required, into which the Applicant has added responses. The JLAs are also



referred to the 10 Statements of Common Ground (Doc Ref 10.1.1 to 10.1.10) updated at Deadline 5, that provide responses to many of the points noted that have already been raised and responded to.

6.2.9 The below table responds to the JLAs' suggested details for future submissions on noise.



Table 1 Summary of requested noise details from the JLAs

ID	Topic	Action	Applicant's Response
JLAD6N01 Ap	Documentation	All ES Chapter 14 documentation (including Appendices) should be updated to reflect all changes and amendments by D7. A clean and tracked version of each amended document is to be provided.	Please see the Applicant's response to Examining Authority Question GEN.2.11.
JLAD6N02 Ap	Replacement Noise Bund (NV.1.1)	Provide full engineering option appraisal of replacement bunds that achieve the same mitigation performance as the existing bund.	The proposed bund cannot provide the exact same performance in all locations as the existing bund due to safety constraints. However, the mitigation has been designed to provide the same level of protection (where possible) or better. The proposed bunds and barriers offer screening to areas where currently there is none and their effects are assessed fully in the ES.
JLAD6N03 Ap	Replacement Noise Bund (NV.1.2)	Identify any temporary likely significant increase noise effects at all potentially affected receptors for the period when no barrier is in place. during the construction of works 18.	The Applicant has provided this in response 2.16.5.4 of 10.1.1 Statement of Common Ground between Gatwick Airport Limited and Crawley Borough Council [REP5-037] The increase in ground noise whilst the existing bund is removed has been assessed



	,		(as presented in the ES). The traffic noise
-	(item 7)	table showing 2018 baseline road traffic	traffic noise has been modelled as contours
Ар	Aviation Noise (NV.1.5.)	level of detail to allow interpretation; and	significant additional work as baseline road
JLAD6N07	Sensitivity Test for Total	To provide material with the appropriate	A table of values is not possible without
		additional awakenings (not Leqs).	Valley District Council [REP5-048]
		disturbance using, amongst other things,	between Gatwick Airport Limited and Mole
Ар	Aviation Noise (NV.1.5.)	effect of air noise and ground noise on sleep	2.16.2.6 of Statement of Common Ground
JLAD6N06	Sensitivity Test for Total	To provide an assessment of the combined	The Applicant and provided this in response
			[REP3-101].
			- Noise and Vibration (Doc Ref 10.16)
			NV.1.5 in The Applicant's Response to ExQ1
		assessment years.	response to Examining Authority Question
Ар	Aviation Noise (NV.1.5.)	standards and overflight mapping for all	standards and has responded to this request in
JLAD6N05	Sensitivity Test for Total	To provide sensitivity modelling to the WHO	The Applicant notes the WHO do not set
			effects would be minor.
		in place.	noting the mitigation referred to above, any
		Juliet runway when there is no bund/ barrier	area is rare and during daytime only, and
Ар	Bund (NV.1.2)	ground running at the western end of the	to safety constraints. Engine testing in this
JLAD6N04	Replacement Noise	The Applicant to commit to no engine	The applicant is not able to commit to this due
			adverse effects.
			increases do not give rise to significant
			CoCP to ensure that any temporary noise
			and mitigation is secured section 5.9] of the



		noise levels compared against ground noise	contours have been used to derive the
		levels at all receptor locations.	numbers of properties within assessment areas where road traffic noise is the same as or greater than the worst-case predicted ground noise level. The assessment undertaken is sufficient for the baseline noise levels and impacts of the project to be properly understood.
JLAD6N08 Ap	Sensitivity Test for Total Aviation Noise (NV.1.5.) (item 8)	To provide: a) ground noise contours in 3dB increments from 51dB daytime and 45dB night-time for all assessment years.	The Applicant and provided this in response 2.16.2.4 of Statement of Common Ground between Gatwick Airport Limited and Crawley Borough Council [REP5-037]
JLAD6N08 Ap	Sensitivity Test for Total Aviation Noise (NV.1.5.) (item 9)	b) Change in ground noise contours. To provide the engine ground run noise monitoring results as a time-history plot with a summary showing measured noise levels for different engine settings and the duration of time spent at each engine setting in a table.	Time history plots were provided in the slides for the TWG meeting held on 7 th June 2022. Another TWG meeting on noise is planned when these can be explained in more detail if necessary.



JLAD6N09	Non Residential	To confirm:	A) The Applicant has provided information on
Ар	Receptors (NV.1.7)	a) Why only schools are considered to be	this in response to Examining Authority
		more sensitive to smaller changes in noise	Question NV.1.7 in The Applicant's
		at levels above 63dB LAeq,16h?	Response to ExQ1 - Noise and Vibration
		b) How their schools criteria accounts for	[REP3-101]. Schools are more sensitive
		LA01,30min noise, as per BB93 guidance?	because teaching is a noise sensitive activity
		c) Whether all non residential receptors	taking place throughout the day. Table 4.3.2 in
		within relevant screening criteria were	ES Appendix 14.9.2 Air Noise Modelling
		considered on a case by case basis?	[APP-172] shows only 4 noise sensitive
			buildings within the Leq 16 hr 63dB contour in
			the noisiest case, 2032 with the Project, as
			follows: 46 The Little House Montessori
			nursery which has a noise increase of 0.6dB,
			49 St Bartholomew C of E Church Rectory
			which has a noise increase of 0.7dB, 48 St
			Michael and All Angels' Church which has a
			noise reduction of 1.0dB, and 50 Touchwood
			Chapel which has a noise increase of 0.7dB.
			B) LA01 30 minutes is measured over a 30
			minute period. The Applicant noted in oral
			evidence at ISH5 'we should look at specific
			noise changes at schools in Section 9 of the

ES where we see all the Leq 16 hr noise



changes at schools are small, and we would not expect changes over shorter time periods to be much larger and so they would not be significant. There is nonetheless a specific Noise Insulation Scheme for schools provided in the Noise Insulation Scheme, ES Appendix 14.9.10.' Thus, any increase in Leg 16 hr would reveal an increasing LA01 30 minutes during teaching hours. The Noise Insulation Scheme has since been updated ES Appendix 14.9.10: Noise Insulation Scheme [REP4-017] to specifically require noise surveys to compare internal noise levels with the standards set out in Building Bulletin 93, Acoustic design of schools: performance standards, 2015. C) All non-residential receptors identified meeting the screening criteria were considered as described for construction noise, air noise, ground noise, road traffic noise in the Applicant's response to Examiners' question **NV.1.17 The Applicant's Response to ExQ1** - Noise and Vibration [REP3-101].



JLAD6N10	Description and	To provide full details of air noise validation	The information on the ANCON model
Ар	Character of Aviation	including but not exclusively the baseline	validation was shared with the TWG on 7th
	Noise (NV.1.8)	SEL and LAmax data for individual aircraft	June 2022 and is provided again in 10.38
		variants at each monitoring location.	Appendix G - Response to the JLAs'
			Comments at Deadline 4 on the Noise and
			Vibration Technical Notes [REP5-079].
			The Applicant notes that the JLA has noted
			'the use of ANCON is not disputed'. We refer
			back to the reports on the ANCON model
			including the following extracts referring to
			ECRD Report 2002: Noise Exposure Contour
			for Gatwick Airport 2019:
			2.1 Noise contours were calculated with the
			UK civil aircraft noise model ANCON (version
			2.4), which is developed and maintained by
			ERCD on behalf of the DfT. A technical
			description of ANCON is provided in R&D
			Report 9842 (Ref 5). The ANCON model is
			also used for the production of annual contours
			for Heathrow and Stansted airports, and a
			number of other UK airports.
			2.2 ANCON is fully compliant with the latest
			European guidance on noise modelling,



			ECAC.CEAC Doc 29 (Fourth edition), published in December 2016 (Ref 6). This guidance document represents internationally agreed best practice as implemented in modern aircraft noise models. The fourth edition introduced some minor changes to the modelling of start-of-roll noise, which were incorporated in the 2017 software update to ANCON (version 2.4).
JLAD6N11	Avoidance of significant	To state where, in the application document,	ES Chapter 14: Noise and Vibration [APP-
Ар	effects (NV.1.12)	the Applicant has taken into consideration	039] reports night noise effects above Leq
		night noise effects below 55 dB LAeq8h.	45dB LOAEL in Section 14.9, including the Table 14.9.11 and the discussion below it.
			Noise contours are plotted in various ES
			Figures above the same value and above N60
			at night with full details of changes in the
			population exposed in ES Appendix 14.9.2:
			Air Noise Modelling [APP-172].
JLAD6N12	Timing of NIS Opening	To provide a market feasibility study to	The Applicant advised in ISH8 that it had
Ар	(NV.1.14)	identify how long it would take for properties	provided noise insulation to over 400 homes in
		in the Inner Zone and the Outer Zone to be	a single year under the current noise insulation
		insulated to ensure that effects are avoided	scheme and that this gives the Applicant
		and minimised.	confidence that the scheme as proposed can



JLAD6N13 Ap	Eligibility Due to Total Aviation Noise (NV.1.15)	To provide an assessment that models all sources of ground noise for a reasonable worst-case day and provides suitable assessment criteria for identifying likely significant effects.	be delivered and a market feasibility study is not required. The Applicant went on to note that all insulation within the Inner Zone will be able to be rolled out before the significant adverse effects of the Project occur, but that this does not require the rolling out of insulation in the Outer Zone because of the nature of the assessed effects there that are not significant. See The Applicant's Written Summary of Oral Submissions ISH 8: Agenda Item 6 – Noise [REP6-080] The Applicant has responded to this in 2.16.2.8 of the Statement of Common Ground between Gatwick Airport Limited and Crawley Borough Council [REP5-037] explained how all sources of ground noise are accounted for in the assessment. The Applicant considers that the assessment criteria used for identifying significant ground noise effects are suitable.
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JLAD6N14	Schools NIS (NV.1.18)	To update the NIS demonstrating the	The Applicant has taken note of the JLA and
Ap		Applicant will take a more proactive	other comments on the NIS and is planning a
		approach.	noise Topic Working Group to discuss these
			on 18 th July and will revise the NIS.



6.3 Air quality

- 6.3.1 This section responds to points raised in section 10 of the **JLA's Deadline 6** submission [REP6-099] on air quality.
- A request to assess a new affected road network (ARNs) for each scenario was made. The premise being that without the ARNs the full impact of changes could not be sufficiently reviewed. However, as set out clearly in the **Response to Rule 17 Letter Future Baseline Sensitivity Analysis** [REP5-081] section 5.2 all scenarios were reviewed. Scenarios where the ES represents the greater (worst-case) project change compared to the sensitivity tests, were screened out. Therefore, it is considered that a proportionate assessment has been carried out by focusing on the worst case scenarios where changes could be greater than assessed in the ES.
- In terms of the approach requested for calculating ARNs it is also important to note that a proportionate assessment has been carried out by using the available data. As stated in paragraph 5.10.21 [REP5-081] full traffic modelling was not carried out, therefore traffic data on a link by link basis was not available for screening new ARNs. The air quality assessment took a worst-case approach by applying the largest potential changes to the receptors experiencing the maximum changes as a result of the project. To support the results a bottom-up approach of reviewing the headroom was also provided.
- 6.3.4 The assessment has demonstrated that based on a conservative assessment no new significant effects would be predicted.

6.4 Policy

6.4.1 At Appendix IV of **JLA's Deadline 6 submission** [REP6-099] York Aviation set out a policy response to some of the submissions made by the Applicant in **Appendix E – Response to York Aviation's Deadline 4 Submission** [REP5-077]. The position is becoming clearer but a further response is warranted as the Applicant's position is not fairly represented.

In principle policy support

- 6.4.2 The Applicant has been critical of the JLAs for not recognising the strength of government policy support for aviation and suggesting that support for making best use of existing runways is only "implicit" in government policy.
- 6.4.3 At Appendix IV, York recognise that policy is 'supportive of the principle of airports making best use of runways' which is helpful, but there is still no recognition of the strength of the government's policy support in view of the



importance which it attaches to aviation because of its economic benefits and the critical importance of international connectivity. These matters are set out in a number of places, including the Applicant's **Response to Written Representations: Appendix A Policy Response** [REP3-073], particularly Section 2.

6.4.4 York's position is not to comment on or accept or recognise the strength of policy support (although its submissions at Luton were different in character)² but to immediately point out that the in-principle policy support is subject to understanding the benefits and effects of any development, which is something GAL has never disputed. For example, in the Applicant's Response to Written Representations – Appendix E Letters of Support from Tourism Operators and Organisations [REP3-077] at paragraph 3.1.3:

"As GAL has consistently recognised, for the avoidance of doubt, the Applicant is not suggesting that the strength of these policies means that the detail of the benefits and impacts of its application do not need to be scrutinised – but the strength of policy support is clearly material in weighing that balance."

- 6.4.5 At paragraph 7 of Appendix IV, York criticise GAL for stating in paragraph 2.1.5 of **Appendix E Response to York Aviation's Deadline 4 Submission**[REP5-077] that the policy support for making best use in the ANPS and in MBU is "unequivocal", explaining that "there is still a requirement for airports seeking to make best use to set out robust forecasts of demand so as to demonstrate both the economic effects and environmental impacts."
- 6.4.6 A fair reading of paragraph 2.1.5 would find, however, that GAL had already recognised the importance of those issues in the preceding paragraph 2.1.4. Instead, the point made in 2.1.5 was directly addressing York's partial quotation from the ANPS that GAL must demonstrate a need different from Heathrow's need. GAL pointed out that the support set out in the ANPS at para 1.39 and in Making Better Use for airports including Gatwick making best use of their runways was not expressed conditionally on a requirement to demonstrate a need different from Heathrow. York's response in Appendix IV avoids that issue.
- 6.4.7 Helpfully, however, York does confirm that:

"Nor did we suggest that development of the NRP would of itself directly threaten the development of the hub at Heathrow, as proposals for its expansion are brought forward,...At paragraph 11 of REP4-052, we made clear that the more

² See Luton Needs Case, (reference AS-125 in the Luton examination library)



likely outcome is that demand for the NRP will be lower than assessed in the Applicant's core case demand forecasts. (Appendix IV paragraph 12).



7 Joint Surrey Councils

- 7.1 Outline Construction Traffic Management Plan (oCTMP)
- 7.1.1 The below table (Table 2) sets out the comments raised by the Joint Surrey Councils on the oCTMP, contained in **Appendix I** of the **Joint Local Authorities Response to the Applicant's Deadline 5 Submissions** [REP6-099], and the Applicant's response.

Table 2 Comments raised by the Joint Local Authorities on the oCTMP

Comment Originator	Section Reference	Comment	GAL Response
JSC	5.6.2	SCC are not prepared to accept a construction compound access onto Balcombe Road other than for active travel. All access (construction vehicles, delivery and workforce private vehicles) should be from the purpose built access off the South Terminal Roundabout, via the SRN. Active local travel can be provided for via a ped/cycle access off Balcombe Road. If this is provided, then Parking restrictions will be required on Balcombe Road as far north as	The details of how accesses to the construction compounds will be laid out and any required parking restrictions will be included in the CTMPs submitted for approval pursuant to DCO Requirement 12. The compound accesses to the South Terminal Roundabout Construction Compound will be designed in accordance with the relevant standards as confirmed in paragraph 5.6.2 of the oCTMP.



		existing regulations and south into West Sussex.	
JSC	5.7.2	Current access proposals are not satisfactory as they do not prohibit right turning into the site across the A217 immediately north west of the Longbridge Roundabout. The access should be designed to facilitate left in and left out only, with U-turns being undertaken at the two roundabouts either side of the access.	This level of detail about the accesses to the construction compounds will be set out in CTMPs, which will be submitted for approval pursuant to DCO Requirement 12. Paragraph 5.1.3 of the oCTMP requires the CTMPs to set out how "potential traffic impacts from construction traffic associated with the project will be managed in order to ensure the safe and efficient operation of the road network and minimise any negative environmental and community impacts".
JSC	7.8.2	Where will these holding areas be located?	Neither the version of the oCTMP submitted at Deadline 6 nor previously submitted version include references to "holding areas" in paragraph 7.8.2. The Applicant would be grateful for clarification on this comment.
JSC	8.2.1	I don't think that local residents would want any dust and dirt being deposited upon them.	GAL will use best practice to minimise as much as possible the deposition of dust to the roads and properties as set out in the oCTMP



	and the Code of Construction Practice
	(Doc Ref. 5.3 v4).



8 Legal Partnership Authorities

- 8.1 Deadline 6 submissions on the draft Development Consent Order
- 8.1.1 The Applicant has carefully considered the Legal Partnership Authorities' further submissions at Deadline 6 on the draft Development Consent Order (dDCO) and continues to engage in productive bilateral discussions on remaining outstanding points.
- 8.1.2 Where points raised at Deadline 6 have been incorporated, in whole or in part, into version 9 of the **dDCO** submitted at Deadline 7 (Doc Ref. 2.1 v9), these changes are discussed in the **Schedule of Changes to the dDCO** (Doc Ref. 2.1 v5), and this discussion is not repeated here. Select points requiring a response are addressed below.
- 8.2 Response to the Applicant's Schedule of Changes to the dDCO
- 8.2.1 The below table (Table 3) sets out the Applicant's response to the Legal Partnership Authorities' submission on the Schedule of Changes to the dDCO [REP6-103].

Table 3 Comments raised by the Legal Partnership Authorities on the Schedule of Changes to the dDCO

Provision	D6 submission from the Legal Partnership Authorities	Applicant's response
Requirement 3 (time limit and notifications)	The Authorities have previously welcomed the requirement to give notice but have said the notice period is too short. The Authorities have not, however, offered alternative time periods. I think we now need to try to do so, notwithstanding the difficulties in doing so. Turning to the periods mentioned, per the Authorities comments at D3, the Authorities should not be disadvantaged by	The Applicant understands that the JLAs did not mean to request amendments to (a), (c) or (e) in the manner set out, which would provide a longer time to the Applicant to give these notifications. The Applicant has therefore not adopted these proposed amends. In respect of (b) and (d), the Applicant continues to consider 28 days an adequate and



	the standardisation of terms to "days". So in Requirement 3(2): (a) Should be 14 days (b) Should be 42 days (c) Should be 14 days; and (d) Should be 42 days; and (e) Should be 9 days	appropriate period for these notifications, particularly given the anticipated timings of the Applicant's internal processes (e.g. board and final investment decisions) in the lead-up to commencement of the authorised development and of dual runway operations. A period of 28 days accords with the timings for these processes.
Requirement 21 (carbon action plan) Requirement 24 (flood resilience statement)	Drafting point: change "From" to "On and after"	The Applicant is not opposed to the principle of this change, but considers it unnecessary. Many provisions throughout the articles and requirements of the dDCO utilise the formulation "from the date/day" and changing the examples identified in this row would require significant changes to the rest of the dDCO for consistency. The formulation "from the date/day" is well precedented and clear in effect.
Requirement 25 (operational waste management plan)	Whilst these changes generally accord with the Authorities' proposals, the significance of the word "routine" is unclear and should be explained, preferably by further definition in order to provide clarity.	The word "routine" is used in its standard sense and is considered sufficiently clear. It is included to ensure that it is only the normal day-to-day operation of the replacement CARE facility that is conditioned to the prior submission of an operational waste management plan, rather than any testing or preparatory operations as part of the



	construction and completion of
	the facility.



- 9 National Highways
- 9.1 Outline Construction Traffic Management Plan (oCTMP)
- 9.1.1 The below table (Table 4) sets out the comments raised by National Highways on the oCTMP and the Applicant's response.

Table 4 Comments raised by National Highways on the oCTMP

Comment Originator	Section Reference	Comment	GAL Response
NH	5.6.2	National Highways Proposed Wording: Access to the compound will be through a new single main HGV entry point located on the South Terminal roundabout. Construction workforce privately owned vehicles will also be able to access to the site from a secondary entry point at Balcombe Road. That secondary point of access must not be open to the public, and the CTMP must set out how public access is to be avoided (e.g. through use of monitored gates and signage). The route to the compound will be via Junction 9 M23,	Paragraph 5.1.3 of the oCTMP requires the CTMPs to set out how "potential traffic impacts from construction traffic associated with the project will be managed in order to ensure the safe and efficient operation of the road network and minimise any negative environmental and community impacts". This could include setting back the entrance to ST Temporary Compound from the ST Roundabout to avoid potential queuing traffic and to ensure the
		followed by a turn onto the South Terminal roundabout. The CTMP must set out specific measures relating to safety in relation to this compound evidencing access and	safe operation of the Strategic Road Network. It will also ensure suitable signage is provided to prevent public access to the ST Temporary



egress to the compound is managed in accordance with [CD116], and [CD123]. The access point will be set back within the site to maximise vehicle stacking capacity in order to minimise the risk waiting vehicles blocking back onto south terminal roundabout.

Applicant's Amendments:

Access to the compound will be through a new single main HGV entry point located on the South Terminal roundabout. Construction workforce privately owned vehicles will also be able to access the site from a secondary entry point at Balcombe Road. This secondary access point will not be open to the public and the CTMP(s) will set out how public access is to be avoided (such as through signage). The route to the compound will be via Junction 9 M23, followed by a turn onto the South Terminal roundabout. The CTMP(s) will detail how public access to the South Terminal Contractor Compound will be avoided, how safety relating to the access and egress of the compound will be managed and how the control measures of queuing traffic will be implemented. The compound access will be designed in accordance with the relevant standards.

Compound as well as providing a controlled entrance to this area. As part of the detailed design stage of the Project, final CTMP(s) will be drafted for approval by Crawley Borough Council, in consultation with National Highways, West Sussex County Council and Surrey County Council. This approval and consultation mechanism on the content of the final CTMP(s) is secured through Requirement 12 of the **Draft DCO** (Doc Ref. 2.1 v9). The Applicant considers that it is through this mechanism that NH can be confident it will receive detailed information about this access point to comment on at the appropriate time.



		National Highways Comment: National Highways welcomes this amendment. However, the Applicant should consider including the final sentence of National Highways' proposed wording further. Setting the access point towards the back of the site only benefits the Applicant and avoids adverse impacts of queuing. While National Highways acknowledges that the specific location will be subject to detailed design, this concern should be considered as part of the design. Control	
		measures for queuing traffic does not address the National Highways concern on its own. National Highways notes that it's general concerns on the selection of this	
		compound have not yet been satisfied and is awaiting information from the Applicant.	
NH	6.3.2	National Highways Proposed Wording: Further information on the situations in which is it envisaged that construction traffic would be authorised to use a contingency access will be provided in the CTMP following consultation with the relevant planning authorities and National Highways. The CTMP must set out a clear set of thresholds for instances where contingency accesses and "restricted use" accesses	Paragraph 6.3.1 of the oCTMP explains that the contingency route may be used "in the event that the primary access is impaired". At this stage of the Project and without detailed design surveys, it is not possible to dictate the thresholds that will determine when contingency routes may be used, and as such, the Applicant



would be utilized. Unless a robust explanation is provided to the contrary, the Contractor must adopt measures and thresholds suggested by a highway authority as part of the presubmission CTMP which is the subject of consultation.

Applicant's Amendments:

Further information on the situations in which is it envisaged that construction traffic would be authorised to use a contingency access will be provided in the CTMP(s).

Applicant commentary:

Comment not accepted: The detailed CTMP will set out situations where the contingency access routes would be used. This is already made clear in para 6.3.1 of the oCTMP and therefore no further text is required. Further to this, para 6.3.2 of the oCTMP makes clear the detailed CTMP will define restrictions to apply to the restricted use access roads and the nature of such restrictions. It is not considered necessary to duplicate the consultation requirements which are already appropriately secured and set out in Requirement 12.n

National Highways Comment:

considers that including this level of detail in the oCTMP would be premature.

As the Applicant has previously noted, paragraph 6.3.2 of the oCTMP makes clear that the detailed CTMP(s) will define restrictions to apply to the restricted use access roads and the nature of such restrictions.

At the detailed design stage of the Project, final CTMP(s) will be drafted which will be approved by Crawley Borough Council, in consultation with National Highways, West Sussex County Council and Surrey County Council. This approval and consultation mechanism on the content of the final CTMP(s) is secured through Requirement 12 of the **Draft DCO** (Doc Ref. 2.1 v9). The Applicant considers that this mechanism should be sufficient for NH to be comfortable that it will receive detailed information about situations when contingency access routes would be used to comment on them at the appropriate time.



National Highways does not accept the Applicant's comment that paragraph 6.3.1 sufficiently sets out which situations where the contingency routes would be used. Rather, it sets out that Junction 10 of the M23 may be used as an alternative access whilst, the A23 London Road, A23 Brighton Road and the A2011 are other significant roads that provides connections to the airport for the construction traffic from the north and south, in the event that the primary access is impaired. We do not consider that such wording would provide the CTMP or contractors sufficient certainty as to when the contingency routes must be utilise, we do not consider 'impairment' of the primary access to be sufficiently precise. National Highways maintains the position that the specific thresholds are required to establish when contingency access would be utilised. We do not consider paragraph 6.3.1 with reference to the use of contingency routes where primary access 'is impaired' is sufficiently precise enough to inform the CTMP of instances in which contingency access must be utilised. National Highways disagrees that it is unnecessary to duplicate the consultation requirements which are already appropriately secured and set out in Requirement 12, rather the



proposed amendment would provide a robust framework
for how that consultation requirement is to be discharged
as it relates to the determination and use of contingency
routes. We consider it necessary for sufficient justification
to be secured through the oCTMP rather than be left to
implication on the assurance that it sufficient justification
will be provided as a matter of 'best practice'.



10 Stuart Roy Spencer

10.1 Noise

- 10.1.1 Mr Spencer asks if the Applicant in ISH8 [REP6-137] could not say what noise levels would be inside a house with the noise insulation scheme provided, how can the Applicant have assessed awakenings in the Environmental Statement?
- 10.1.2 **ES Appendix 14.9.2: Air Noise Modelling** [APP-172] paragraph 7.3.2 notes the methodology used as follows: 'ANCON models noise levels outside, whereas the dose/response relationship reported above is for internal noise levels. In order to provide a conservative estimate of additional awakenings due to the Project, internal noise levels were estimated by assuming all bedroom windows were partially open, so an outside to inside level difference of 15 dB was taken off the predicted external noise levels. In practice even on hot summer nights some windows will be closed, so this assumption leads to over-estimate of sleep disturbance.'



11 West Sussex Joint Local Authorities

- 11.1.1 The below responds to the points raised in relation to water and construction traffic management by the West Sussex Joint Local Authorities in their **Deadline 6 submission** [REP6-116].
- 11.2 Environmental Statement Appendix 11.9.3 Water Quality HEWRAT Assessment
- 11.2.1 West Sussex Joint Local Authorities' submission notes "the Applicant should use the SuDS manual approach it is adopting for the car park assessment as the primary assessment tool for the proposed highway works since the mitigation features are SuDS based, but as a minimum the Applicant should use the SuDS manual assessment as a secondary control measure to prove that water quality assessment has been properly covered. This approach will also provide a common assessment tool for all water quality related matters rather than cherry picking the assessment tool that suits them on the same water quality issue".
- 11.2.2 The adoption of HEWRAT for the water quality assessment during the operational phase of the proposed highways works is in line with DMRB LA 113 (formerly HD45/09) and reflective of the influence of highway traffic volumes. See Annex 1 of ES Appendix 11.9.3: Water Quality HEWRAT Assessment Report [REP5-026] for traffic volumes. The CIRIA SuDS Manual, footnote to Table 26.2 under the Simple Index Approach (Section 26.7.1) states that "motorways and trunk roads should follow the guidance and risk assessment process set out in Highways Agency (2009)" (reference to HD45/09 now superseded by DMRB LA 113). The Applicant therefore considers the use of the HEWRAT method appropriate to assess the risks associated with routine runoff from the highways component of the Proposed Scheme.
- 11.2.3 Within Section 3.2 of **ES Appendix 11.9.3: Water Quality HEWRAT Assessment Report** [REP5-026], an assessment, using HEWRAT, is presented of the pre-mitigation scenario. Table 3.2.2 indicates that all outfall locations 'pass' the routine runoff assessment for soluble pollutants and sediment-bound pollutants without the need for mitigation. Paragraph 3.2.4 highlights that although mitigation for water quality treatment is not required based on these results, mitigation (in the form of SuDS) is required for attenuation purposes. The selection of SuDS components in the drainage design associated with the highways component of the Proposed Scheme provides this required attenuation from a flood risk perspective, and depending on the SuDS component also provides a water quality treatment function.



- 11.2.4 The use of the SuDS Manual assessment (Simple Index Approach) was applied to the car park elements of the Proposed Scheme as the use of HEWRAT is not appropriate in this situation. The appropriate pollution hazard level was selected based on the land use classification reflecting the nature of the car park (i.e. non-residential car parking with frequent change, reference Table 26.2 of the SuDS Manual). The Applicant therefore considers the use of the SuDS Manual assessment method to consider the water quality risks associated with the car parks appropriate for that element of the Proposed Scheme.
- 11.2.5 The Applicant considers the application of separate assessment methods to different elements of the Proposed Scheme to be appropriate and proportionate for potential significant effects to be identified.
- 11.3 Environmental Statement Appendix 11.9.6 Flood Risk Assessment Annexes 3-6 Version 2
- 11.3.1 West Sussex Joint Local Authorities' raises concerns that residual risks have not been considered and used to influence the design of the mitigation features.
- Paragraph 1.1.1 of ES Appendix 11.9.6: Flood Risk Assessment Annex 5: River Mole Fluvial Model Build Report [REP5-027] indicates no new substantive impacts have been identified and the conclusions reported in the original report are unchanged. Therefore, the residual risks assessed in Section 7 of ES Appendix 11.9.6: Flood Risk Assessment [REP6-052] remain unchanged and residual risks have been taken into consideration in line with National Networks National Policy Statement (NNNPS) and Airports National Policy Statement (ANPS) requirements.
- 11.3.3 The West Sussex Joint Local Authorities note the surface access 100-year design life extends seven years beyond 2125, the end of the 2080s epoch for river flow and the 2070s epoch for rainfall intensity.
- The Applicant acknowledges in paragraph 0.1.19 of **ES Appendix 11.9.6: Flood Risk Assessment** [REP6-052] that the 100-year design life for the highways elements would extend to 2132. It is considered that, based on current predictions, an additional seven years of climate change beyond 2125 would not impact significantly on the assessment of flood risk for the Project. In any event, the Credible Maximum Scenario (CMS) would cover the additional seven years beyond 2025. The CMS sensitivity test of plus 40 per cent on the 1 per cent (1 in 100) AEP event has assessed the impact of the Project in the event of climate change impacts exceeding those currently predicted.



- 11.3.5 West Sussex Joint Local Authorities request further information regarding how airfield structures will be dealt with after 2072, given the adopted lifetime of 40 years.
- 11.3.6 The Executive Summary and Section 3.7 of **ES Appendix 11.9.6: Flood Risk Assessment** [REP6-052] provides further justification for the adopted airfield design life, noting that the 40-year design life follows review of the infrastructure being altered, the likelihood of the continued evolution of the airfield over the longer term, and of where flooding actually occurs. Gatwick cannot at this time speculate as to what will happen to these structures post 2069 (the end of a 40-year airfield design life) or even if they will exist then. But the fluvial mitigation strategy ensures that they will not increase fluvial flood risk beyond this date to at least 2132 based on current climate change projections.
- 11.4 The Applicant's Response to Deadline 4 Submissions Response to ExQ1
- 11.4.1 West Sussex Joint Local Authorities seek clarification of the QBAR greenfield runoff rates for each catchment to compare against the proposed post-development runoff rates for each catchment.
- Paragraph A2.21 in ES Appendix 11.9.6: Flood Risk Assessment Annex 2: Surface Access Highways Surface Water Drainage Strategy [APP-148] has been amended at Deadline 7 for clarity to state 'the runoff rates from development are proposed to be limited to the 1 in 1-year (Q1) greenfield rate (i.e. 100% AEP greenfield runoff rate) for storm events of up to 1 in 100 (1% AEP) plus 40%cc as per WSCC guidance (WSCC LLFA policy for the management of Surface Water' clause 5.4.4) for the catchments within the WSCC boundary where practicable. Note that the Q1 (100% AEP) greenfield runoff rate (4.52 l/s/ha) is lower than the Qbar,2.3 (43.5% AEP) greenfield runoff rates (5.32 l/s/ha).
- 11.4.3 Where this was not practicable, justification has been provided during technical engagement with the LLFAs.
- 11.5 Climate Change Allowance
- 11.5.1 With regards to West Sussex Joint Local Authorities' concerns regarding the peak rainfall intensity climate change allowance applied to the airfield works, Version 3 of **ES Appendix 11.9.6: Flood Risk Assessment** [REP6-052] provides further justification for the adopted airfield design life and climate change allowance.



- The climate change allowances applied for peak rainfall intensity are based on the Project's location (Thames River Basin District), vulnerability classification (Essential Infrastructure as a worst-case) and design life (40 years to 2069). Based on these criteria, developments with a lifetime between 2061 and 2100 adopt the Central allowance for the 2070s epoch, so as the design life for the airfield is 40-years to 2069 an uplift factor of plus 25 per cent is applied to the 1 per cent (1 in 100) AEP event.
- 11.5.3 Although the Environment Agency Guidance does not provide criteria for a CMS for rainfall intensity, the 40 per cent uplift has been tested (as a sensitivity analysis) for the airfield drainage, in order to test the impact of a larger than predicted change in rainfall as a result of climate change. This has not identified any new significant effects beyond those for the design (20 per cent) event: modelling demonstrates that there would be betterment or negligible change at all locations that previously experienced flooding (see **ES Appendix 11.9.6:**Flood Risk Assessment [REP6-052] Figure 7.3.5 and Figure 7.3.6), except for a very localised area of increase near Taxiway Juliet West that would not be expected to impact airport operations.
- 11.5.4 The Project would increase the impermeable area across the airfield.

 Consequently, the Project includes additional storage and attenuation within the airfield drainage network (including a significant new below-ground storage tank beneath Car Park Y) that mitigates for the additional runoff on the airfield for the 40-year design life including a corresponding allowance for climate change. The measures are described in Section 7.3 of the ES Appendix 11.9.6: Flood Risk Assessment [REP6-052]. These are all proposed to be secured through the Draft DCO (Doc Ref. 2.1 v9).
- 11.5.5 For those airfield drainage catchments that would experience an increase in impermeable area as a result of the project their discharge is restricted either by vortex flow controls or pumping capacity to the receiving watercourse. These will not be altered by the Project. Therefore, peak rates of discharge off-site cannot increase, resulting in no increase in flood risk to other parties for all flood events. The airfield surface water mitigation strategy has been designed for a 40-year design life but a sensitivity test has been undertaken with a 40 per cent uplift that is commensurate to a 100-year design life. This demonstrates that there would be increases in flood depths on the airfield compared to the baseline in such an event (see ES Appendix 11.9.6: Flood Risk Assessment [REP6-052] Figures 7.3.5 and 7.3.6). However the safety of passengers and staff would be maintained through existing GAL response procedures as set out in ES



Appendix 11.9.6: Flood Risk Assessment Annex 6: Flood Resilience Statement [REP5-027] which is secured by DCO Requirement 24.



- 11.6 Outline Construction Traffic Management Plan (oCTMP)
- 11.6.1 The below table (Table 5) sets out the comments raised by the West Sussex Joint Local Authorities on the oCTMP and the Applicant's response.

Table 5 Comments raised by the West Sussex Joint Local Authorities on the oCTMP

Comment Originator	Section Reference	Comment	GAL Response
WSCC	5.1.2	Does this list and appendix need to be updated to incorporate the Reed Bed Water Treatment Compound that was proposed via Project Change 3? Clarification should be provided that details the access routes o this compound and how it will be accessed. The status of the access route may also need to be amended. Should a compound be proposed in this location the status of Radford Road as an access route is changing from its current status of a Restricted Access route. If a compound is no longer being proposed in this location, the Applicant should explain which compound will be used to construct the Reed Bed Water Treatment system.	The oCTMP shows the location of the main temporary construction compounds which are anticipated to be operational for a number of years, as set out in the Indicative Construction Sequencing [REP2-016]. The temporary construction compound for the water treatment works (reed beds) would only be operational for a short period of time (from 2025 to 2026) and associated to the construction of these specific works. As there would be minimal traffic travelling to this compound and its use is related to this specific works area, it has not been explicitly listed in the oCTMP. Controls on additional temporary compounds, as well as the main compounds, are set out in the Code of



			Construction Practice (Doc Ref. 5.3 v4) secured by DCO Requirement 7. In response to WSCC's comment, the Applicant has amended paragraph 6.4.1 of the oCTMP to include an additional exception to the use of local areas to explicitly address cases where that local road is the only vehicular access to the site. This is applicable to the Reed Bed temporary construction compound in that the existing Radford Road provides access to the existing Thames Water Service Road, which leads onto the Reed Bed temporary compound, and therefore the use of Radford Road for construction vehicles is necessary.
WSCC	6.3.2	For the purposes of clarity, as has been done with the Local Roads (Restricted Access), it would assist if the situations the Contingency Access routes may be used was provided in the OCTMP.	Paragraph 6.3.1 of the oCTMP explains that the contingency route may be used "in the event that the primary access is impaired".
WSCC	8.2.2	Acknowledge and welcome the inclusion of this commitment but the wording should be amended to reflect the wider geographic scope of road sweepers. It is not just the immediate	This has been accepted and included in the updated version of the oCTMP (Doc Ref. 5.3 v2) submitted at Deadline 7.



		roads around the airport but should also include those around the compounds, some of which may have access points that aren't on the immediate roads around the airport.	
WSCC	8.7.1	This could be confused with the Transport Mitigation Fund (TMF) and therefore an alternative name for this forum should be established. i.e., Construction Traffic Management Forum (CTMF)	This has been accepted and updated in the oCTMP (Doc Ref. 5.3 v2) submitted at Deadline 7.
WSCC	Appendix A	As per earlier comments. Clarification is required in relation to construction access to the Reed Bed Water Treatment System and whether this result in changes to the proposed access routes.	An amendment has been made to paragraph 6.4.1 of the oCTMP (Doc Ref. 3.2 v2), as described above. As a result, no update is required to Appendix A .

- 11.7 Outline Construction Workers Travel Plan (oCWTP)
- 11.7.1 The below table (**Table 6**) sets out the comments raised by the West Sussex Joint Local Authorities on the oCWTP and the Applicant's response.

Table 6 Comments raised by the West Sussex Joint Local Authorities on the oCWTP

Comment	Section	Comment	GAL Response
Originator	Reference		



WSCC	4.1	Does the Reed Bed Treatment System	The oCWTP (Doc Ref. 5.3 v2) shows the location
		Compound, introduced under Project Change 3	of the main temporary construction compounds
		need to be included within this section of the	which are anticipated to be operational for a
		plan and figure 1 updated?	number of years as shown in the Indicative
			Construction Sequencing [REP2-016]. The
			temporary compound for the water treatment
			works (reed beds) would only be operational for a
			short period of time (from 2025 to 2026) and
			associated to the construction of these specific
			works. As there would be minimal traffic travelling
			to this compound and associated to the
			construction of these specific works, it has not
			been explicitly listed in the oCWTP. Controls on
			the additional temporary compounds as well as
			the main compounds are set out in the Code of
			Construction Practice (Doc Ref. 5.3 v4) secured
			by DCO Requirement 7.
WSCC	7.3	Can the Applicant provide a clear commitment	The controls on working hours for construction
		as to the minimum time period that shift start	are set out in Section 4.2 of the Code of
		and finish times would be staggered by?	Construction Practice (Doc Ref. 5.3 v4) which is
			secured by DCO Requirement 7.
WSCC	7.5 -	For clarity further detail as to what incentives	Yes, both of those are incentives and subsidies
	Incentives	and subsidies will be considered here would be	that may be considered within the CWTP(s). The



		useful. Would these be financial incentives such as contributions towards bus season tickets? Could financial incentives be offered to contractors if they achieve a certain percentage of trips via sustainable modes?	precise nature of the incentives and subsidies will be agreed with the contractors to: align with the scale and nature of their activities for the Project's construction; any existing incentives and subsidies that they operate; the number of workers required physically on site under that contract; and taking account of the nature of their attendance at site (e.g. if the contractor's involvement is only for a short period of time, a contribution to a season ticket would not be appropriate).
WSCC	7.6 - Incentives	For clarity it would be useful to provide further details as to what these financial incentives may be. Also, if financial incentives are being offered for car sharing should they be not done for those who choose to walk and cycle? It is noted that similar provision is made for those using public transport, paragraph 7.5.5.	The same bespoke nature of incentives and subsidies for contractors (as described above) will apply to public transportation and active travel. Reference to active travel has been explicitly added to the oCWTP submitted at Deadline 7 for clarity. Incentives relating to active travel are secured through paragraph 7.4.5 of the oCWTP (Doc Ref. 5.3 v2), to be confirmed through the CWTP(s).
WSCC	7.7	Additional measures that have not been referred to within the document but should be, are:	The oCWTP (Doc Ref. 5.3 v2) aims to promote sustainable travel behaviour among the



- The provision of EV charging infrastructure in contractor compounds. A percentage of the car parking spaces could be provided with EV charging.
- The EV charging car parking spaces could be provided closer to the welfare buildings, similar to the car share bays.
- No specific provision is made for powered two wheelers within the compounds. Secure and covered motorcycle parking should be provided such as ground anchors or rails or post which allow the vehicle to be secured.

construction workforce. This is included explicitly in the aims in paragraph 3.1.1 of the oCWTP. In that context, the oCWTP seeks to encourage active travel and the use of public transport above that of private vehicles as a primary focus. Beyond that, the use of EV will be encouraged and the CWTP will include details of any measures that are proposed to proactively encourage this mode of transport. Paragraph 4.5.6 of the **Code of Construction**Practice (Doc Ref 5.3 v4) has been updated at Deadline 7 to include "car/motorcycle parking" on construction compounds where necessary.