Regulation 25 request for additional information and clarifications

In accordance with Regulation 25 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 we are of the opinion that in order to satisfy the requirements of Regulation 18(2) and (3) it is necessary for the Environmental Statement to be supplemented with additional information, that is directly relevant to reaching a reasoned conclusion on the likely significant effects of the development described in the application in order to be an environmental statement.

The Council reserves the right to require additional information following the review of any submitted information or if this should result in other clarifications or information being received from consultees or arising from the new information being provided.

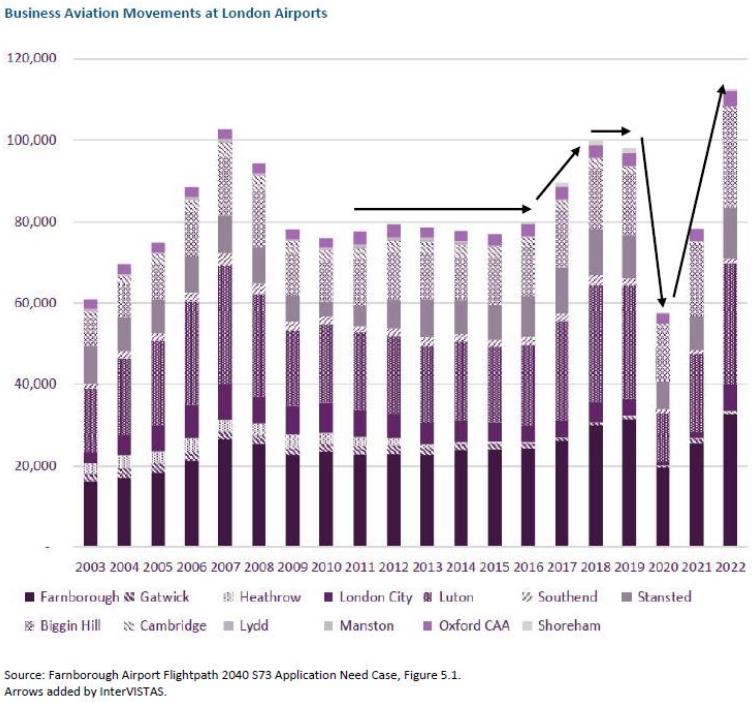
Code	Comment	Information Required
General ES Comments		
ES1	Embedded or 'inherent' mitigation measures are only discussed in the climate resilience assessment within Chapter 9. All technical assessment chapters should state whether inherent/embedded mitigation has been taken into account in the assessment and, if so, identify such measures and explain how they have been taken into account. While noted that very few additional mitigation measures are recommended through the technical assessments. The ES is required by Regulation 18(3) and Schedule 4 para 7 to include "a description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases". The description of each mitigation measure needs to be sufficient to ensure that the LPA has sufficient information to reach a reasoned conclusion on whether the likely significant effects will be avoided, prevented, reduced or offset. The level of detail needed will depend on the effects and the proposed mitigation but in general, for each mitigation measure, the following details are likely to be needed:	1. Provide an explanation of the inherent / embedded mitigation measures relevant to the With Development scenario that are considered in the ES. Confirm whether the other development at the airport is considered to be inherent to the assessment. 2. Provide an overall summary of mitigation measures (likely as a part of the summary recommended in relation to Item 6), in tabular format, including how mitigation or monitoring measures will be secured in planning terms. 3. Provide clarity on how mitigation and monitoring measures will be implemented and with whom the responsibilities for their delivery lies.

Code	Comment	Information Required
	• What the mitigation measure is; • Why it is needed and what it is designed to achieve; • Where it needs to be implemented; • How it will be implemented; • When it needs to be implemented; • Who will be responsible for implementing the measure; • An assessment of the likely effectiveness of the mitigation proposed and any residual impacts remaining; • A clear commitment to implementing the measures rather than mitigation being suggestions and how it will be secured (for example; condition/s106 obligation); • Whether any monitoring measures are proposed in respect of the proposed mitigation measures [monitoring measures are defined in Reg 2] The ES does not contain an overall summary of mitigation / one clear place for the reader to find this information without being required to read each chapter in detail. This would assist in identifying commitments proposed by the ES as a whole. Those measures that are identified as additional mitigation or monitoring have not included any explanation of delivery mechanism/how they will be secured in planning terms. This would assist the LPA in drafting any future planning permission for the proposed development.	
Chapters 1 to 5 (Introduction, Current State of the Environment, Description of the Proposal, Legislation and Policy, Approach to the ES) Comments		
ES2	Chapter 1 of the ES refers to a proposed phased annual cap limiting how the growth will be realised, the proposed phasing is not explained in Chapter 1 or Chapter 3 (Description of the Proposal).	Further clarity on the proposed phased annual cap as referenced in Chapter 1 within the description of the proposal.
ES3	Chapter 2 describes other development being brought forward at the Airport through other standalone planning applications and General Permitted Development, stated to be unrelated to the Proposals. Comments relating to this development:- - It should be clarified how these developments have been taken into account in the ES – for instance within the baseline, as part of the 'with	Further clarity on how the committed 'other development' has been taken into account within the ES. Further clarity on whether additional development is likely to be required to accommodate the proposed development at the airport, and consideration to be given within the ES as appropriate.

Code	Comment	Information Required
	development' scenario, within the cumulative assessment, or as embedded mitigation? - Permissions 23/00670/FULPP, 21/00902/FULPP and 23/00674/SCREEN refer to development which is required to accommodate aircraft within the current 50,000 ATM cap. The ESA should clarify whether the infrastructure at the airport including the committed 'other development' will be able to accommodate the proposed development up to the operation of 70,000 ATM per annum, or whether further development of a similar nature is likely to be required within the assessment years to facilitate the proposed growth of operations. The submitted ES concludes that the proposed development is not likely to have significant environmental effects on the environment, however consideration must be given as to the extent to which the works assessed by the ES may form part of a larger project to ensure that all impacts are assessed. If so, consideration should be given to this within the ES. - Generally, it is not clear what assumptions have been applied to the ES in relation to how the proposed development will operate. For instance, the Transport Assessment has applied the assumption of 2.6 passengers per aircraft, however it is queried whether this represents a worst-case scenario, and whether this has been applied to the ES as a whole. The ability of the existing infrastructure to accommodate the proposal should be described in this section. Within relevant assessment chapters this will form part of the baseline and should be recorded as such. The LPA will need to be satisfied that the existing infrastructure will be able to cope.	Clarity on the assumptions made in relation to the proposed development and how they have been applied to the ES.
ES4	Details of the scoping process are provided within Chapter 5, and the scoping report and opinion are appended to the ES. Chapter 5 clearly provides a response to the requirements of the Scoping Opinion (table 5.1). Justification is provided where requirements of the Scoping Opinion have not been completed. Transport was not proposed by the applicant to be scoped into the ES, and has been included as per the request within RBC's Scoping Opinion. Therefore, Chapter 10 would benefit from explaining the scope of the transport aspect chapter of the ES, and why the approach taken is appropriate and provides a robust assessment (with reference at a minimum	Provide clarification on how the scope of the transport chapter has been approached, with reference to the areas identified in the comments.

Code	Comment	Information Required
	to the study area, how the ES scoping comments relating to transport have been addressed, TA scoping and consultation, sensitive receptors, assessment years considered, and the IEMA guidance).	
ES5	Health – separate remarks have been made regarding the desirability of submitting a separate standalone Health Impact Assessment. The comments below relates specifically to demonstrating the choices made in scoping the ES and how health is presented in individual chapters of the ES. The ES states that the health of those employed at the airport will improve but does not consider any assessment of the health of residents near the airport, near roads serving it or below flightpaths. The application has scoped out certain areas of health and deals with others on a subject by subject by subject basis (e.g. Noise/Air Quality/Transport). The ES looks at the effects of health issues related to environmental hazards, for example, water and air quality. These considerations can sometimes be very narrow and the wider determinants of health on existing and new populations do not appear to be clear set out as part of the submission. It is unclear if a baseline health assessment of the local area has been carried out in advance of the ES or how the application assesses the cumulative impact of the proposals on population health. At present it is unclear how the following aspects have been comprehensively assessed to inform the application - The nature of the health impacts and if these will be direct or indirect - Setting out the likelihood of impacts and their possibility or probability - The scale and significance of any impacts - Timing of impacts in short and long term assessment - The distribution of effects and how this may impact different groups of the local population - How the proposal might seek to maximise health and wellbeing outcomes and full identify and mitigate any detrimental or unintended consequences - How might those who may be most affected by the proposal be helped //or have these impacts mitigated	Notwithstanding any review on the need for a separate standalone health impact assessment, additional information should be provided to confirm:- - Specific health receptors and the methodology for determining receptors - Any assumed embedded mitigation that has been taken into account to reach the conclusions that health effects are unlikely to be significant - A summary of likely residual effects including distribution, scale, significance, timing

Code	Comment	Information Required
Needs Case		
ATF1	The Needs Report is currently not appended to the ES but significant information within that document is relied upon as part of the ES.	The Needs Report should be appended to the ES and any updates necessary to reflect changes identified from the queries below should be provided.
ATF2	Paragraph 5.8.14 – Needs - think this needs explaining more, particularly with regards to the percentages used	Further explanation is required, particularly with regards to the percentages used
ATF3	**Overall London Market Forecast -** the report indicates that the forecast uses the results of a basic linear regression analysis of total London business aviation aircraft movements between 2011 and 2022. However, the chart in Figure 5.2 of the report shows only 8 data points, suggesting that the observations for 2020, 2021 and 2022 were not included in the analysis. This needs to be confirmed with York Aviation, but we would agree with the exclusion of those years as they were heavily distorted by the impacts of the COVID-19 pandemic (and bounce back in 2022).	This needs to be confirmed and further explanation of the methodology provided.
ATF4	The regression analysis relates aircraft movements to UK GDP, finding a positive relationship between UK GDP and traffic levels – as GDP increases, so does traffic. No explanation is given as why this variable was chosen rather than, say, London GDP, or whether other explanatory variables were also considered. GDP is commonly found to be (or assumed to be) a driver of traffic growth in airport forecasts since economic growth tends to drive increased traffic levels. However, it is often not the only factor and it is necessary to consider how the two variables are related in each case.	Explain why UK GDP was considered the most appropriate and only driver of future traffic growth.
ATF5	To illustrate, the chart below is taken from the Need Case report. As the added arrows indicate, traffic levels were fairly flat between 2011 and 2016, which was followed by rapid growth in 2017 and 2018 and a flattening off in 2019. Traffic then drops dramatically and then rebounds due to the COVID-19 pandemic and the associated restrictions on international travel. Setting aside the COVID-19 impacts, traffic development from 2011 to 2019 does not match the pattern of GDP growth in the UK. Over the that period, real UK GDP increased as a relatively steady rate, averaging 2.0% per annum – there was no rapid economic growth in 2017 and 2018, for example.5 This suggests that there may have been other factors also affecting business	Explain what drove the rapid growth in 2017 and 2018 and are those factors likely to persist in the future.

Code	Comment	Information Required
	aviation traffic development which has not been captured in the analysis.  Source: Farnborough Airport Flightpath 2040 S73 Application Need Case, Figure 5.1. Arrows added by InterVISTAS.	
ATF6	Section 5.3 states that the implied elasticity to GDP is 1.3 which compares closely with the DfT elasticity for air passenger demand. Firstly, it is not clear which elasticity the report is referring to as while the overall elasticity provided in the DfT report is 1.2, the elasticity for business travel is considerably lower at 0.9. Secondly, it is questionable whether the demand for business aviation can be compared with the demand of passengers on commercial air services, since these are very different markets. More generally, the report does not provide an context to the forecasts of the London market, which would help aid understanding of and confidence in the forecasts.	Discuss how does the forecast benchmarks against historical traffic trends (is it higher or lower than previously and why) and how does it benchmark with other comparable forecasts or other airports. Discuss what other factors could affect traffic growth in the future, such as new technology, climate change policy, etc.
ATF7	While Farnborough increasing its market share is a reasonable assumption given the reduction or removal of business aviation at commercial scheduled airports, the degree of market share growth forecast is not well	Explain the assumptions around the projected market share development (i.e., what %s were assumed) at Farnborough, Biggin Hill and other airports and the rationale behind them (e.g., why is

Code	Comment	Information Required
	substantiated and appears optimistic. The report states that Farnborough has "consistently grown its market share" (paragraph 5.6) but this is not clearly illustrated in either Chapter 3 or 5 of the report, making a comparison with historical trends difficult. It would also be useful to examine the trends in the market share of Biggin Hill and other airports (Figure 5.1 shows this to a degree but it is hard to determine the trend in the format provided).	assuming a constant market share for Biggin Hill the most plausible assumption). Again, benchmarking of the forecasts against other comparable forecasts or historical traffic trends at Farnborough or other airports would help understanding of the forecasts. A historical trend of the airport from the start of its life as a business aviation airport could be used to give context to the forecasts, e.g., how does forecast growth compare with historical growth and what are the reasons for any differences.
ATF8	The **without development** forecast needs explanation as the rationale and method for assuming growth is halved is not clear in the report. Furthermore, this forecast does not allow for any dynamic response to this restriction. If some flights with a preferred weekend leg are unable to fly on a weekend, they may switch to a less optimal all-weekday itinerary rather than not fly or fly elsewhere. In fact, the airport may incentivize this behaviour through marketing, pricing or other incentives.	Provide further explanation of the methodology and the rational for assuming no dynamic response to the restriction.
ATF9	The projections for zero emissions aircraft in the report lack substantiation or full explanation. Certainly, the assumption given that smaller aircraft are more likely to convert initially is reasonable since the technical challenges with larger and longer range aircraft are greater (Figure 5.7). However, it is not clear how the shares were determined. For example, 25% of super mid-size aircraft are projected to be zero emissions by 2045 – it is not clear whether this an aspiration of the manufacturers or the airport itself, an estimate by the forecaster or is based on manufacturer information.	Provide further explanation and rationale in the report.
ATF10	The report does not provide any alterative scenario forecasts (e.g., high, medium, low forecasts) as is common with many air traffic forecasts. Given the uncertain around key forecast assumptions, this would be appropriate.	Provide and explain alternative scenario forecasts.
Fleet Mix Projections		
FM1	The assumptions and calculations that underpin the fleet mix projections have not pulled together as a single chapter.	Provide clarity within a single place of the ES the assumptions and calculations where necessary to justify the resulting fleet mix projections.
Needs Case		
NC1	The Needs Case Report suggests that the approach adopted in calculating the economic impact of on-site and wider activities at Farnborough Airport	The report requires a detailed methodology annex which provides more detail on the approach to assessing economic impact,

Code	Comment	Information Required
	differs from that used previously in other studies jointly commissioned by RBC and FAL. However, whilst in some cases the Report does provide an overview of the approach used, this is often limited and is not presented as a single coherent section.	expands on the difference in the 2019 baseline (i.e. relative to the 2022 Report jointly commissioned by RBC and FAL), and how the economic impact estimates at 70,000 air traffic movements ('ATM') are generated. Please provide.
NC2	**Chapter 3, pg. 27, para. 32** states that in 2009 the Airport handled 22,800 ATMs, however the 2009 Report suggests that by 2008 the Airport had already reached 25,500 ATMs p/a, which suggests a decline (of -10.6%) between 2008 and 2009 respectively.	Clarification is needed on the difference in ATMs, and why the figure for 2009 is below that mentioned in the 2009 Report (i.e. for 2008). Please provide.
NC3	**Chapter 3, pg. 35, para. 3.24** implies that the approach used in the Needs Case Report differs from that of previous studies (i.e. 2009 and 2022) commissioned jointly by RBC and FAL. However, later sections (and numbers presented in Table 3.4) suggest that this is in line with the approach used in previous studies.	The report requires a detailed methodology annex which provides more detail on the approach to assessing economic impact, expands on the difference in the 2019 baseline (i.e. relative to the 2022 Report jointly commissioned by RBC and FAL), and how the economic impact estimates at 70,000 air traffic movements ('ATM') are generated. Please provide.
NC4	**Chapter 3, pg. 37, para. 3.31** provides commentary on how the Airport's impact changes between 2019 and 2022. Whilst the Report gives a high-level overview of why this change occurred, additional detail would help with the overall narrative on the size of impact.	Provide additional detail on the key drivers of growth in terms of employment estimates between 2019 and 2022.
NC5	**Chapter 3, pg. 38, Table 3.4** identifies a lower baseline for 2019, relative to the 2022 Report.	Provide clarification to the approach used in estimating the 2019 baseline, how and why this differs from the 2022 Report (which also uses a 2019 baseline).
NC6	Furthermore, it is unclear how the indirect and induced impacts identified in **Chapter 3, pg. 38, Table 3.4** are calculated.	Provide additional clarification on the approach to estimating the indirect and induced impacts at RBC level. It is estimated that these are equivalent to 27.6% of the direct impact at the Borough level (compared with 1.4% at the RBC level and 12.3% at the Hampshire and Surrey levels in the 2022 Report). Put another way, the report estimates that 23% of the indirect and induced impact at the South East and London levels accrues within Rushmoor Borough. The report does not provide information on the multipliers used and rational for this proportion of the supply chain impact to be retained in Rushmoor Borough. Whilst the induced effect retained within Rushmoor is likely to be high (due to the proportion of employees living in the Borough), an estimate of 23% for both supply chain and induced effects seems high,

Code	Comment	Information Required
		especially when RBC represents less than 1% of the South East and London economy.
NC7	**Chapter 3, pg. 51, para 3.70 and Figure 3.15** discuss growth in GVA per job, and notes correlation with growth in ATMs. Whilst it does not ascribe causation, the report does not make this point clear to the reader. There is a risk that nontechnical readers may ascribe a high degree of causality where this may only be partial.	Clarify language and make it clear that where there is correlation, this does not automatically constitute causality. The lack of clarity in language can be used to undermine the overall positive message the report makes.
NC8	**Chapter 6, pg. 76, Table 6.1** provides an overview of elasticity adjustments used to estimate employment impacts at 70,000 ATMs (for both "With Development" and "Without Development"). However, the table does not provide any justification and/or rationale for the estimates used. Furthermore, it is not clear whether the elasticity assumptions factor in the growth between 2019 and 2022	Provide additional context for the assumptions behind the elasticity adjustments used in economic impact at 70,000 ATMs. Furthermore, it is unclear whether the significant growth between 2019 and 2022 is part of these elasticity assumptions.
NC9	**Chapter 6, Table 6.2 and Table 6.3** show inconsistent figures for direct FTEs at 70,000 ATMs (of 2,650 and 2,550 respectively).	Clarify correct figure.
NC10	As a result of the rebasing of 2019 baseline, as well as the lack of clarity on how the indirect and induced impacts are calculated and elasticity assumptions, it is not possible to come to a view on future impact at 50,000 ATMs "Without Development" (see **Chapter 6, pg. 83-84, Tables 6.5-6.7**). A lower baseline would suggest a lower impact at 50,000 ATMs however this is considerably higher than that identified in the 2022 Report (of 2,750 FTE jobs vs 2,125-2,195 FTE jobs). This has implications of the economic impact estimates at 70,000 ATMs.	Provide additional clarity on what is driving change in economic impact estimates at 50,000 ATMs in the "Without Development" scenario. In particular, it is not clear how you get a significantly higher estimate (of 25%-29%) relative to the 2022 report when starting from a lower (2019) baseline.
NC11	It is unclear how NPV values for a 60-year period have been calculated, or how estimates for journey time savings and business productivity benefits, greenhouse gas ['GHG'] emissions and noise emissions have been generated.	Additional context and information about the approach to NPV is required. It is unclear how some of the figures shown (e.g. time savings, GHG emissions and noise emissions) have been derived. Details of calculations should be provided.
Chapter 6 Socio Economics Comments		
SE1	The Needs Case Report suggests that the approach adopted in calculating the economic impact of on-site and wider activities at Farnborough Airport differs from that used previously in other studies jointly commissioned by RBC and FAL. However, whilst in some cases the Report does provide an overview of the approach used, this is often limited and is not presented as a single coherent section.	The report requires a detailed methodology annex which provides more detail on the approach to assessing economic impact, expands on the difference in the 2019 baseline (i.e. relative to the 2022 Report jointly commissioned by RBC and FAL), and how the economic impact estimates at 70,000 air traffic movements ('ATM') are generated.

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SE2	**Chapter 3, pg. 27, para. 32** states that in 2009 the Airport handled 22,800 ATMs, however the 2009 Report suggests that by 2008 the Airport had already reached 25,500 ATMs p/a, which suggests a decline (of -10.6%) between 2008 and 2009 respectively.	Clarification is needed on the difference in ATMs, and why the figure for 2009 is below that mentioned in the 2009 Report (i.e. for 2008).
SE3	**Chapter 3, pg. 35, para. 3.24** implies that the approach used in the Needs Case Report differs from that of previous studies (i.e. 2009 and 2022) commissioned jointly by RBC and FAL. However, later sections (and numbers presented in Table 3.4) suggest that this is in line with the approach used in previous studies.	The report requires a detailed methodology annex which provides more detail on the approach to assessing economic impact, expands on the difference in the 2019 baseline (i.e. relative to the 2022 Report jointly commissioned by RBC and FAL), and how the economic impact estimates at 70,000 air traffic movements ('ATM') are generated.
SE4	**Chapter 3, pg. 37, para. 3.31** provides commentary on how the Airport's impact changes between 2019 and 2022. Whilst the Report gives a high-level overview of why this change occurred, additional detail would help with the overall narrative on the size of impact.	Provide additional detail on the key drivers of growth in terms of employment estimates between 2019 and 2022.
SE5	**Chapter 3, pg. 38, Table 3.4** identifies a lower baseline for 2019, relative to the 2022 Report.	Provide clarification to the approach used in estimating the 2019 baseline, how and why this differs from the 2022 Report (which also uses a 2019).
SE6	Furthermore, it is unclear how the indirect and induced impacts identified in **Chapter 3, pg. 38, Table 3.4** are calculated.	Provide additional clarification on the approach to estimating the indirect and induced impacts at RBC level. It is estimated that these are equivalent to 27.6% of the direct impact at the Borough level (compared with 1.4% at the RBC level and 12.3% at the Hampshire and Surrey levels in the 2022 Report). Put another way, the report estimates that 23% of the indirect and induced impact at the South East and London levels accrues within Rushmoor Borough. The report does not provide information on the multipliers used and rational for this proportion of the supply chain impact to be retained in Rushmoor Borough. Whilst the induced effect retained within Rushmoor is likely to be high (due to the proportion of employees living in the Borough), an estimate of 23% for both supply chain and induced effects seems high, especially when RBC represents less than 1% of the South East and London economy.
SE7	**Chapter 3, pg. 51, para 3.70 and Figure 3.15** discuss growth in GVA per job, and notes correlation with growth in ATMs. Whilst it does not ascribe	Clarify language and make it clear that where there is correlation, this does not automatically constitute causality. The lack of clarity

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	causation, the report does not make this point clear to the reader. There is a risk that nontechnical readers may ascribe a high degree of causality where this may only be partial.	in language can be used to undermine the overall positive message the report makes.
SE8	**Chapter 6, pg. 76, Table 6.1** provides an overview of elasticity adjustments used to estimate employment impacts at 70,000 ATMs (for both "With Development" and "Without Development"). However, the table does not provide any justification and/or rationale for the estimates used. Furthermore, it is not clear whether the elasticity assumptions factor in the growth between 2019 and 2022.	Provide additional context for the assumptions behind the elasticity adjustments used in economic impact at 70,000 ATMs. Furthermore, it is unclear whether the significant growth between 2019 and 2022 is part of these elasticity assumptions.
SE9	**Chapter 6, Table 6.2 and Table 6.3** show inconsistent figures for direct FTEs at 70,000 ATMs (of 2,650 and 2,550 respectively).	Clarify correct figure.
SE10	As a result of the rebasing of 2019 baseline, as well as the lack of clarity on how the indirect and induced impacts are calculated and elasticity assumptions, it is not possible to come to a view on future impact at 50,000 ATMs "Without Development" (see **Chapter 6, pg. 83-84, Tables 6.5-6.7**). A lower baseline would suggest a lower impact at 50,000 ATMs however this is considerably higher than that identified in the 2022 Report (of 2,750 FTE jobs vs 2,125-2,195 FTE jobs). This has implications of the economic impact estimates at 70,000 ATMs.	Provide additional clarity on what is driving change in economic impact estimates at 50,000 ATMs in the "Without Development" scenario. In particular, it is not clear how you get a significantly higher estimate (of 25%-29%) relative to the 2022 report when starting from a lower (2019) baseline.
SE11	It is unclear how NPV values for a 60-year period have been calculated, or how estimates for journey time savings and business productivity benefits, greenhouse gas ['GHG'] emissions and noise emissions have been generated.	Additional context and information about the approach to NPV is required. It is unclear how some of the figures shown (e.g. time savings, GHG emissions and noise emissions) have been derived. Details of calculations should be provided.
SE12	***Impact areas*** The socio-economic ES chapter determines effects at three impact areas, which it defines as Rushmoor Borough, a Local Impact Area ('LIA') comprising Rushmoor, Hart and Surrey Heath, and a larger impact area of South East & London. The Scoping Report also lists a UK/national impact area, albeit only "*for the purposes of comparison with previous study*".	It is recommended to include economic impact estimates at UK/national level.
SE13	***Methodology*** The ES chapter provides an overview of the method to the assessment, however this could be more detailed. In addition, whilst the ES chapter uses 2019 as the base year, it does not state that these figures differ (and how) from the figures in the 2022 Report. Furthermore, it is unclear what	1. Add clarity about the approach to the assessment, and include rationale for use of updated 2019 baseline. 2. Add clarity on the net additionality of impacts at the different impact areas considered.

Code	Comment	Information Required
	proportion of the impact assessment is net additional, and what proportion is based on ATMs displaced from other airports within the greater South East & London region.	
SE14	***Impact estimates 70,000 ATMs*** Economic impact estimates for "With Development" (i.e. 70,000 ATMs) by 2045 in **Table 6.13** of the ES chapter do not align, and are in fact lower than equivalent figures in Needs Case (**Table 6.2**)	Ensure consistency between ES chapter and Needs Case Report. More broadly, comparing the different scenarios between the two reports could be simplified, as currently a comparison between the two will require looking at several tables across different chapters in the Needs Case report.
SE15	On **Page 21, para 6.9.13-14** the ES chapter refers to the potential effects of the proposed development at the South East & London level as "significant". It is unclear whether this is significant in EIA terms, or whether this simply refers to the size of impact.	Ensure consistency throughout and clarify when an effect is significant in EIA terms.
SE16	When assessing the significance of operational impacts at the Rushmoor and LIA spatial levels, the assessment identifies a high and medium-high magnitude of impact respectively. Without contextualising this at the relevant spatial level (i.e. over and above the current baseline), it is not possible to sense-check whether the assessment of magnitude is sensible.	Wherever possible, add context relative to the current baseline
SE17	***Mitigation / Enhancement Measures*** The ES chapter identifies opportunities related to investment in skills and training, and highlights recent work undertaken by FAL in supporting the Farnborough College of Technology ('FCOT') and the wider aviation cluster. However, this section is mostly retrospective and lacks detail on how local skills levels can be improved, and any skills gaps locally (required to realise benefits) addressed.	Provide additional detail on how FAL will support development of the wider cluster and how skills gaps will be addressed.
SE18	Paragraph 6.6.17 sets out that a fixed number of passengers per aircraft movement has been used to generate a total estimated passenger volume for the With and Without Development scenarios in order to assess the value of the connectivity added With Development but doesn't say what this is or the justification for it	Justify passenger numbers. (implications for highways too)
SE19	Paragraph 6.8.8 refers to Table 6-10 but quotes different figures	Check and correct
SE20	Paragraph 6.9.5 refers to Table 6-14 but quotes different figures	Check and correct

Code	Comment	Information Required
SE21	Tables 6-13 to 6-15 do not total correctly and it is unclear whether this is due to rounding or an error – if it is due to rounding then this should be clearly stated in the chapter	Check and correct
Chapter 7 Air Quality Comments		
AQ1	Chapter 7: no description of the baseline or discussion on sensitivity is included.	Clarification of the approach to evaluating the sensitivity of the air quality baseline.
AQ2	S.7.1 background. The text provides a list of emissions to air that are considered in the assessment. Are there emissions from other airport-related sources that should be included in the assessment, for example, on-site energy plant, aircraft engine testing, fire training, etc.	Applicant to confirm whether there are additional emissions to air associated with the operation of Farnborough Airport. Where specific emission sources have not be considered quantitively within the air quality assessment, the sufficient justification should be provided by the Applicant.
AQ3	Section 7.2 Table 7-1 lists the Rushmoor Borough Council (RBC) Local Plan that was adopted in 2019. Table 7-2 then lists the Local Plan policies relevant to this planning application, but 'Policy DE10 – Pollution' is not included. DE10 states: "*Development will be permitted provided that:* 1. *It does not give rise to, or would be subject to, unacceptable levels of pollution; and* 2. *It is satisfactorily demonstrated that any adverse impacts of pollution, either arising from the proposed development or impacting on proposed sensitive development or the natural environment will be adequately mitigated or otherwise minimised to an acceptable level.* *Where development is proposed on or near a site that may be impacted by, or may give rise to, pollution, such a proposal shall be supported by a report that investigates the risks associated with the site and the possible impacts on the development, its future users and the natural and built environment. The report shall propose adequate mitigation or remediation when required to achieve a safe and acceptable development. This report shall be written in line with best practice guidance."* See https://www.rushmoor.gov.uk/planning-and-building- control/planning-policies/the-rushmoor-local-plan/ Table 7.3 should also refer to the Local Plan Policy DE10 – Pollution.	Confirm why Policy DE10 is not considered relevant for this assessment.

Code	Comment	Information Required
AQ4	Ultrafine Particulate Matter (UFP): The assessment is correct in confirming that there is currently no robust manner by which to quantify UFP emissions from aircraft or other combustion sources, and it is not possible to quantify the impacts of these sources using traditional modelling approaches. In addition, there are no guidelines or standards against which to compare UFP concentrations. The issue of UFP was recently discussed at the Stansted Airport appeal (Ref. APP/C1570/W/20/3256619), where the Planning Inspector concluded that: "there was no reliable methodology for assessing the quality of UFPs that would result from the development", but that "the Health Impact Assessment considered epidemiological research which includes the existing health effects of PM2.5 and thus UFPs as a subset; this concluded there would be no measurable adverse health outcomes per annum". For this reason, predictions of UFP concentrations will not be included in the assessment. Paragraph 7.4.7 states the following: "The most important consideration for UFPs at Farnborough is the potential for reducing emissions where possible and appropriate." There is no Health Impact Assessment accompanying this application (assumed Scoped Out) and these are particles with a diameter of less than 0.1 microns and while they are a component of PM2.5 they can have independent effects and be harmful to health through penetrating deep into the respiratory system and which may have a greater health impact at smaller exposure levels. Importantly, there is no information included within the application about mitigation measures to reduce emissions of UFP or to measure UFPs as methodologies become established which would provide RBC with comfort in respect of concerns over these particulates.	Applicant to agree to include obligation to review, on an ongoing basis, advancements measuring UFPs and for the airport to adopt an appropriate measurement, recording and assessment method (to be agreed by LPA).
AQ5	ES Chapter does not include tabulated modelled results for PM10 and PM2.5.	Provide tabulated modelled results for PM10 and PM2.5
AQ6	Paragraphs 7.4.8 – 7.4.10. The odour surveys referenced in these paragraphs, and presented in Appendix 7.4, do not comment on whether there have been any complaints associated with odours from Farnborough	Applicant to provide number of complaints received formally to the airport regarding Odour and comment on how this is number may change in the future

Code	Comment	Information Required
	Airport, and whether complaints are likely to increase with the proposed increase in aircraft movements.	
AQ7	Para 7.6.6. Can the Applicant provide confirmation of the road traffic data used in the modelling assessment.	Applicant to provide confirmation of the specific road traffic data used in the air quality modelling assessment. For each section of road included within the modelling assessment, the Applicant is to provide baseline, future baseline and future 'with development' traffic data and a break down of the assumed vehicle fleet mix to include percentages of light duty and heavy duty vehicles.
AQ8	Para 7.6.7 The Emissions Factor Toolkit (EFT) has recently been updated to version 12. Version 11 was used in this assessment.	Applicant to provide a summary of the implications for EFT v12 on the calculation of emissions, the resultant concentrations at receptor locations as well as the any implications for the impact assessment and significance evaluation
AQ9	Paragraph 7.6.14 – 7.6.15. The assessment is based on the future assessment years of 2045 (Principal Assessment Year) and 2040 (worst-case assessment year for air quality. However, as partially discussed in 7.6.15, air quality impacts are assessed through consideration of the baseline conditions in any given year combined with the impact of the proposal. Considerable growth in aircraft movements takes place before 2040 at a time when baseline concentrations of air pollutants will be higher than in the first assessment year of 2040. The assessed scenarios may not therefore truly represent 'worst-case' in the context of impacts at air quality sensitive receptors. It is stated that the EFT allows for the calculation of emission factors arising from road traffic for all years to 2030. This contradicts the statement in 7.7.1 (5th bullet) that correctly identifies that the EFT fleet projections and emission rates are provided for 2018 through to 2050, albeit supporting tools prepared by Defra for use by air quality practitioners (e.g. Background Mapping Data, NO2 Adjustment for NOx Sector Removal Tool, and the NOx to NO2 Calculator, currently only support assessment years 2018-2030 inclusive.	Applicant to review comment and consider likely air quality impacts between the first year when there will be an increase in flight movements and the year 2040.
AQ10	Paragraph 7.7.1. The third bullet point identifies limitations associated with the availability of road traffic data.	The absence of road traffic data is not a reason to exclude roads from the air quality assessment.

Code	Comment	Information Required
		Applicant to provide further information to support the statement that 'data from other road links in the surrounding area' that was not available, does not undermine the assessment.
AQ11	Paragraph 7.7,1 Further detail has been provided in terms of assumptions relating to calculating emissions from aircraft. Additional information is provided in Appendix 7.2. No information is provided about the use of APUs on aircraft. On page 20, the third bullet point infers that emissions from brake and tyre wear associated with zero emissions aircraft have not been considered. The fourth bullet point states that emissions from GSE will not change. Will increased movements require increased use of non-electric GSE? The use of year 2019 meteorological data is discussed in Appendix 7.2 paragraph 1.1.5. However, what is not considered is the effect of varying meteorological conditions on emissions and predicted concentrations of air pollutants. The assessment makes the inherent assumption that the activity data are not affected by changing meteorology. For airports, this is not the case for all activities, as the frequency of easterly and westerly operations is affected by the wind direction. However, this only affects the direction of take-off and landing; all other airport sources are not affected, and landside traffic emissions are also not affected. Such a spatial realignment of take-off and landing geometries is likely to affect predicted concentrations at the closest sensitive receptors, and no sensitivity test has been undertaken.	Applicant to provide further information regarding assumptions made in the assessment to calculate APU emissions, including run times. Applicant is to confirm whether emissions from brake and tyre wear associated with zero emission aircraft, have been considered in the assessment. Application to provide further evidence to the support the assumption that emissions from GSE will remain unchanged with increase aircraft movements. Applicant to provide evidence to justify why only 1 year of meteorology has been applied in the modelling and not 3-5 years which is common practice to ensure assessment of a likely worst-case scenario). Include sensitivity testing to consider the varying meteorological conditions on emissions (quantum and location) and predicted concentrations of air pollutants at receptors closest to the airport.
AQ12	7.8 graphic 7-7 The scale of the map is such that it is not possible to see the location of the receptors in any detail and to confirm whether they are positioned at representative worst-case locations.	To support this review, the Applicant is to provide detailed / large-scale maps that clearly show the location of modelled receptor locations.
AQ13	Paragraph 7.8.12 – Where does the background NOx concentration come from for 2040/45 as Defra background mapping only goes up to 2030? RBC assume that background concentrations of all pollutants in 2040 and 2045 are based on Defra's published 2030 values.	Provide clarity regarding the approach to deriving ambient background concentrations of pollutants in 2040 and 2045.
AQ14	Table 7-18 s.7.0 The table appears incorrect as the numbers in the final column 'Total Nitrogen Deposition' are not the sum of the third column (Baseline Nitrogen Deposition) and the sixth column (Maximum Impact on Nitrogen Deposition from Scheme Alone).	RBC finds the table and the accompanying discussion confusing and are concerned that there are errors in the data presented.

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	The numbers presented in the third column (Baseline Nitrogen Deposition) are also not for the assessment year, and instead match the 2019 values presented in Table 7-11. Even if the assessment year baseline values are substituted for the values in Table 7-11, it's still not possible to derive the numbers in the final column 'Total Nitrogen Deposition'.	Applicant to review the tabulated data, address any inconsistencies and represent the data in a clear and consistent manner.
AQ15	The same issue with table 7-18 exists with table 7-23	Applicant to review the tabulated data, address any inconsistencies and represent the data in a clear and consistent manner.
AQ16	Paragraph 7.10.14 – 7.10.17 It should be noted that the ES Chapter does not include tabulated modelled results for PM10 and PM2.5. The modelling has been undertaken, but it appears that they have not been included in the chapter or appendices The summary of the results is included in 7.10.14 – 7.10.17, but there's no accompanying data.	Applicant to provide modelled PM10 and PM2.5 concentrations.
AQ17	Paragraph 7.11.1. The assessment states there are no mitigation measures for air quality required as part of the proposal.	Further justification sought as to why further mitigation is not considered necessary when NOx emissions are shown to increase by 32% and PM emissions by 44%. Also, please provide details of current FAL air quality monitoring and future plans for mitigation linked to this application, including for UFPs.
AQ18	Paragraph 7.11.2. The text refers to FAL commitment to SAF and electric vehicles / GSE, but no detail is provided.	The Applicant is to provide further information in relation to FAL's commitments to SAF and EVs, and its wider strategy to continue to reduce the air quality impacts of its operations.
AQ19	Health – it is understood in the ES Volume 1 that an annual mean level of exposure to pollutants is measured, however it would be useful to understand the peaks and means of exposure in shorter timeframes. The report continues to acknowledge Particulate Matter exceedances at some receptor points in modelling, blaming background levels. Hampshire Public Health would seek the identification and implementation of measures to reduce or mitigate exceedances that the applicant's modelling has identified	Hampshire Public Health request that the applicant indicate the reasoning for the locations identified for monitoring, modelling purposes
Chapter 8 Noise Comments		
N1	In reviewing whether the ES contains sections that describe the likely significant effects, it has been found that Chapter 8: Noise does not describe	Provide an overall summary of the likely significant effects in tabular format.

Code	Comment	Information Required
	whether effects are short/medium/long term which would be useful in understanding the impacts identified.	
N2	Policy SP4.2 – Noise Contours 1. Lead to a noise contour budget smaller than the agreed noise contour budget determined as current at the time of the application for change; 2. Set an overall annual maximum movement limit; 3. Set a maximum noise level for business aviation aircraft using the Airport; and 4. Maintain the same differential movement limit between weekday and weekends and bank holidays so that the proportion of weekend and bank holiday movements will not exceed 18% of the total overall maximum annual flight movement limit, excluding 'Other Aviation Activity'. As per Policy SP4.2, the annual agreed noise contour budget is defined by the total land within both the 55 dB(A) Leq contour (being 6.6 km2) and the total land within the 60 dB(A) Leq contour (being 2.4 km2) up to 2032. Policy SP4.2 requires, for planning application to change the pattern, nature and/or number of business aviation movements, to remodel the noise contour budget to account for any changes (modelling software or operational procedures) and these revised contours are to become the new agreed baseline against which the application will be assessed. The outcome of the remodelling is to become the new agreed noise contour budget. The annual agreed noise contour budget is derived from the modelling undertaken by BAP and produced in evidence at the 2010 Appeal. This modelling led to a 27% reduction on the existing 1997 noise budget for 55 dB LAeq,16h and a reduction of 40% for 60 dB LAeq,16h. These percentage reductions were subsequently drafted into the S106 agreement when it was amended. It is these contour areas (6.6km2 for the 55dB(A) Leq contour and 2.40km2 for the 60dB(A) Leq contour), modelled by BAP In 2010 that required remodelling under LP Policy 4.2. However, the submission has modelled the 1997 contour areas, based on the 1997 fleet mix for 20,000 movements per annum, which included Chapter II aircraft banned from the airport in 2001 and which had a significant and disproportionate impact on the size of the noise contours. The resulting contours have then been reduced by 72.5% for the 55dB contour and 60% for the 60dB contour to	The agreed noise contour budget should be remodeled using AEDT updated to account for changes to operating procedures. All other input parameters and assumptions used within the 2010 modelling should remain the same. The modelled outputs can then be used to recalculate what percentage reductions are required to update the noise budget within any future amended S106 agreement.

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	derive a new 'indicative' Noise budget but this approach is completely inappropriate.	
N3	**Maximum noise levels – SP4.2** Policy SP4.2 (3) also requires the applicant to set a maximum noise level for business aviation aircraft using the Airport. The accompanying text advises that: "*should an application be received in the future to change the pattern, nature and/or number of business aviation movements, it should be a requirement that an assessment be undertaken of the measured maximum noise level data from current operations (or a period of time prior to receipt of any such application) so that an appropriate maximum noise level can be determined and put in place. Aircraft exceeding this approved noise limit, as measured at a defined location, would be subject to an appropriate financial penalty, with such fines contributing to the Farnborough Airport Community Environmental Fund.(71) Any such penalty will be set at a level designed to deter regular non-compliance but will give some scope for a small number of exceedances annually in exceptional circumstances*".	Clarity should be provided to which this revised maximum noise level shall be, along with compliance mechanism.
N4	The primary noise metrics used relate to the summer period and there is some evidence provided in Appendix 8.2, Volume II showing that the average daily movements in the summer period of 2022 was higher than the 2022 annual daily average. (**Appendix 8.2, Volume II)**	However, there is no corresponding evidence to demonstrate that summer weekends are busier than week days throughout the rest of the year. Can this be provided please.
N5	In the without development scenario, weekend noise levels are predicted to increase in 2031, along with their relative contour areas in comparison to the 2022 baseline. The airport is already near its cap of 8,900 movements in 2022 so this increase in noise must be a result of other changes, such as a transition to heavier and therefore potentially noisier aircraft at weekends.	Please Justify and explain within the ES.
N6	**Ground noise** The ground noise survey only assessed noise within the operational area of the airport and there is no indication that current noise levels have been assessed in surrounding residential areas. I would have thought this necessary to validate the outputs from the modelling. In addition, paragraph 8.6.44 of the report states that the "ground noise level assessed at various receptors can be compared to the existing ambient environmental noise and published guidelines for the assessment of environmental noise".	Demonstrate that the noise modelling is consistent with actual ground noise.

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N7	In terms of the ground noise sources modelled, can we get clarity on whether engine running and APU usage on aprons, stands and during routine servicing & maintenance has been modelled appropriately? Over what timeframes are these individual events modelled over and are these representative of what actually happens during normal operations? There is some debate as to the uptake or use of fixed electrical ground power points by aircraft operators on stands and suspicion that aircraft engines or APUs are left running for prolonged periods unnecessarily. How can usage of the fixed electrical ground power points be better enforced or managed? Routine usage would reduce noise, emissions and odours, and improve air quality.	Clarity regarding the engine running and APU usage on aprons, stands and during routine servicing & maintenance, including timescales
N8	Ground noise is assessed on the basis of a $L_{Aeq,16hr}$ metric. There is no consideration for use of the BS 4142 Assessment methodology. The provides a method for assessing and rating noise of an industrial nature and its likely effect on residents. Ground noise encompasses noise produced by aircraft activities on the ground, such as taxiing, manoeuvring, running engines and auxiliary power units (APUs) whilst on the stands, as well as engine running for testing and maintenance purposes. Given an airport's specific characteristics, it can be likened to an industrial source and, as a worst case, could be assessed on this basis using BS 4142. At the very least BAP need to justify why in this instance it is not appropriate to do so.	There is no consideration for use of the BS 4142 Assessment methodology or BAP need to justify why in this instance it is not appropriate to do so
N9	Paragraph 8.6.45 is BAPs justification for not considering WHO recommended guideline values. This justification may well be true of city environments, but Farnborough does have many areas away from the busier roads that achieve at least the upper guideline value of 55 dB $L_{Aeq,16h}$ for 'serious community annoyance' and possibly even the lower 50 dB $L_{Aeq,16h}$ guideline value for 'moderate, annoyance. This is important as whilst the report accepts guideline values contained within BS8233 and WHO for some aspects of the assessment, there has been no consideration nor comment on the impact of air or ground noise on private external amenity space. The report addresses some public outdoor amenity areas but BS 8233 states that for areas used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB LAeq,T, with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. There is no mention of garden	Report and map properties with gardens fall within this 55 dB upper guideline value by reference to the modelled contour maps within the appendices as the various tables (the tables only report on numbers falling between 51 to 62.9 dB.)

Code	Comment	Information Required
	space which is a significant oversight as residents will be expected to be able to enjoy their gardens during the warmer months and this is where most will be impacted by noise from airport operations. We can only infer how many properties with gardens fall within this 55 dB upper guideline value by reference to the modelled contour maps within the appendices as the various tables only report on numbers falling between 51 to 62.9 dB.	
N10	The threshold values used (Table 8-5) hides a lot of detail as the 'low' impact criteria covers a range of 12 dB (51 -62.9 dB). A 10 dB change in noise level is large and is perceived as a doubling in loudness. Within this range, we do not know the population who may will fall within the 54 db contour, which signifies the onset of community annoyance, with the development in place, nor those areas that fall within the BS 8233 upper guideline value of 55 dB as mentioned above. 2. The magnitude of absolute and relative impact criteria are as follows: Table 8-5 - Magnitude of Impact (Absolute) – Residential, Outdoors Subjective description of impact / Daytime Criteria, dB $L_{Aeq,16h}$ Negligible / < 51 Low / 51 (LOAEL) – 62.9 Medium / 63 (SOAEL) – 68.9 High / ≥ 69 (UAEL) Table 8-6 - Magnitude of Impact (Relative) – Residential, Outdoors Subjective description of impact / Change in Daytime Noise Level, dB $L_{Aeq,16h}$ Negligible / 0 – 0.9 Low / 1 – 2.9 Medium / 3 – 5.9 High / ≥6 3. The scale of effects matrix criteria are as follows: **Table 8-7 - Scale of Effect Matrix– Air Noise** Absolute Impact / Relative Impact: Negligible / Low / Medium / High Negligible: Negligible / Negligible / Negligible / Minor Low: Negligible / Minor / Moderate / Moderate Medium: Negligible / Moderate / Moderate / Moderate High: Minor / Moderate / Moderate / Major The semantic scale as adopted has the potential to understate effects. We have therefore suggested changes to address the issue, which would ensure the local communities surrounding Farnborough better understand the likely scale of effects.	Clarify thresholds Alter impacts so that UAEL is regarded as 'very high', above SOAEL is regarded as 'high' and then between LOAEL and SOAEL is regarded as 'low' to 'medium'. Separate out Non-weekday assessments. A penalty needs to be applied to the non-weekday SOAEL, as a minimum, to reflect the perceived greater sensitivity of the community to noise at these times.

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	We recognise the Applicant's position that no residents live within the UAEL or SOAEL contours, as they currently fall, but their inclusion within the proposed scale limits the descriptors available. For example, 'major' can only be achieved by a +6 dB increase above UAEL for Farnborough (or four times as many aircraft if all else remains the same) . None of the examples below limit the highest level descriptor in the same way. As set out in Aviation Policy Framework 2013, airports are expected to offer assistance with the costs of moving when a property is within the 69 dB LAeq,16hour, used here as the UAEL. Planning Practice Guidance: Noise also adds to this, stating: *"At the highest extreme, noise exposure would cause extensive and sustained adverse changes in behaviour and / or health without an ability to mitigate the effect of the noise. The impacts on health and quality of life are such that regardless of the benefits of the activity* *causing the noise, this situation should be avoided."* Therefore, in terms of significance, theoretically any noise increase (or decrease) resulting in noise levels above the UAEL should be classed as 'major'. Use of the 'moderate' descriptor for high (above UAEL) absolute impacts is therefore viewed as an underestimate of effects. The technical assessment indicates that the highest noise effect is no more than 'moderate' with 'minor' and 'negligible' being the only other descriptors that apply . As a consequence, the Applicant stated in the meeting on Thursday 4th January that they would not want to use other descriptors so as to avoid the perception that Farnborough is a noisy airport. As can be seen from the descriptors set out below, however, airports do use the same descriptors for lower levels of noise and this position is not taken to be evidenced. We would propose that above UAEL is regarded as 'very high', above SOAEL is regarded as 'high' and then between LOAEL and SOAEL is regarded as 'low' to 'medium'. At this stage, these changes are to some degree arbitrary as they do not affect assessed numerical outputs within the application. Therefore, the	

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	changes would not lead to any dwellings becoming subject to a significant effect. We have two concerns, however, the first being that decision makers will not have a clear understanding of what each noise banding relates to using the current descriptors and there could be an underestimation of effects due to this. The second is that we are still of the opinion that some penalty needs to be applied to the non-weekday SOAEL, as a minimum, to reflect the perceived greater sensitivity of the community to noise at these times. Justification provided in the meeting by the applicant was that weekends are not identified in government policy as being more noise sensitive when compared to any other day of the week. In contrast, however, we would point out that in Aviation 2050: flightpath to the future, December 2018, the Government states in 7.48 and 7.49 (our emphasis): *Many who fly in light aircraft note that it increases their appreciation of the UK's natural and heritage environment. Some modes of GA such as balloons and gliders are noted for their quietness compared to other transport modes. However, GA can also have adverse noise and other environmental impacts.* ***This is particularly the case where arrivals, departures and circular flights can lead to periods of intense or consistent activity at aerodromes, including at weekends, that can be disturbing for some local residents**. Helicopter activity can also be particularly intrusive due to the fact that helicopters tend to fly at low altitudes and can hover for some time at a single location.* Within Aviation 2050, the definition of 'GA' is given in 7.1, which is taken to describe Farnborough Airport: *The GA sector covers all kinds of non-scheduled civil aviation. It includes, amongst other things, business jets, aerial photography, pilot training, emergency service flights and air displays as well as private flying. The aircraft involved include single and multiengine fixed wing aeroplanes, helicopters, gliders, balloons, microlights, paragliders and model aircraft.* *GA activity falls into two main types – commercial aviation, predominantly represented by business aviation and non-commercial activity, predominantly covering sport, recreational and personal transport aviation. The GA community is a diverse group and different sections within it may have differing, sometimes conflicting, priorities.*	

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	It is therefore clear, as agreed with the Applicant, that weekends should be assessed separately in this instance (given the Local Plan stipulations), but also that weekends should be considered a more sensitive time and this needs to be reflected in the scale of effects. Without any knowledge of the Noise Insulation Scheme proposed by the Airport, the speed at which it would be rolled out or to whom it would apply, we would recommend the above changes to the scale of effects are introduced. This would ensure the noise assessment takes a more cautious approach and therefore more adequately protects those living near the Airport.	
N11	Section 8.10.25 states that the scheme will be extended to cover the 55 dB LAeq,16hour contour for residences, but no reference is made to non-residential noise-sensitive receptors, which the ES does acknowledge exist and are subject to sufficiently elevated noise levels.	Consider including non-residential noise-sensitive receptors
N12	We note Section 8.3.2 states that the expansion of the NIS would result in a scheme with the most generous eligibility of any UK airport. We would respond that Luton and Gatwick Airports both propose to extend their NIS down to 54 dB LAeq,16hour as part of their respective DCO applications.	Consider extending to 54dBLAeq16
N13	Planning Statement refers to a new Noise Levy (para 7.2.10).	Only details of this I can find refer to a noise levy on specific aircraft to incentivize a move to quieter aircraft. Please confirm how this would work in practice?
N14	Health: It is not clear that sustained exposure to increased noise by volume, pattern duration, frequency, etc and its impact on mental health has been considered when assessing noise.	Hampshire Public Health request that the applicant provide an assessment on this issue.
N15	Health: It should be noted than any reliance on householders closing windows or reducing their time outside should not be counted as an effective mitigation against exposure to aircraft noise.	Confirmation should be provided that reliance is not being placed on householders closing windows or reducing their time outside.
Chapter 9 Climate Change Comments		
CC1	The contribution of non-CO2 warming effects (i.e. radiative forcing effects) have been scoped out of the assessment. This approach is consistent with other recent aviation climate change assessments and consistent with current Government policy. The Chapter does however only make reference to a relatively dated resource (the 2013 Aviation Policy	Confirm justification to scope out non- CO2 impacts is consistent with more recent Government publications and advice such as Jet Zero Strategy, Climate Change Committee (CCC) advice, etc.

Code	Comment	Information Required
	Statement) in the justification	
CC2	The Chapter states that the CCR considers both the RCP4.5 and RCP8.5 climate projection scenarios in the assessment. It is implied that the resilience assessment has been carried out twice, once for each scenario, however there is no evidence later in the Chapter that this is the case	Provide further explanation of how the RCP4.5 and RCP8.5 climate projections scenarios have independently been considered in the CCR assessment or the weight given to each scenario in the assessment.
CC3	The Chapter explains that impacts on receptors outside the boundary of the airport have been considered with reference to other technical chapters. This appears to be a reference to In Combination Climate Change Impacts (ICCI), however it is not clear from review of the Chapter whether this is considered in Chapter 9 or individual technical chapters (IEMA guidance allows for either approach).	Explain how In Combination Climate Change Impacts (ICCI) have been considered in the assessment
CC4	Line 2 of Table 9-2 (9.3 consultation) reports that during public consultation on 21st September 2023, concerns were raised about low occupancy of flights and associated carbon emissions. The applicants response is that Farnborough has an opportunity to provide education for larger airports on decarbonisation and carbon savings. It is not clear if this is being proposed as a mitigation measure, or how it relates to the GHG assessment	Explain how the proposed education for airport decarbonisation would operate and be secured, and how this is considered an appropriate mitigation or response to low occupancy air traffic movements?
CC5	Table 9-3 (of GHG assessment) makes reference to Publicly Available Standard (PAS) 2080:2016, which was withdrawn in April 2023 and replaced with PAS 2080:2023	Is the reference to PAS 2080:2016 intentional or has the 2023 version of the standard been used to guide the assessment?
CC6	The GHG emission sources scoped in and out of the assessment are all appropriately justified (where scoped out). As noted in Section 9.1, emissions from water consumption and aircraft engine testing (ground running) are neither clearly scoped in to or out of the GHG footprint. (Table 9-4 and Table 9-5)	Explain if and why GHG emissions from water consumption (supply and treatment) and aircraft engine testing have been scoped out of the assessment.
CC7	The Scope of the Assessment section sets out the scope of the CCR assessment in greater detail than summarised in Section 9.1. The scope and boundaries described for the CCR are all appropriate and key future climate hazards relevant to the assessment are suitably identified. The assessment uses Met Office UKCP18 climate change projections, which are widely adopted to inform CCR assessments in the UK (Paragraphs 9.4.23 – 9.4.29)	These paragraphs expand on the Representative Concentration Pathways (RCP) considered in the assessment and clarifying that both RCP4.5 and RCP8.5 are considered in the assessment. It is not clear later in the Chapter exactly how both pathways have been considered or what weight is given to each. (see CC2)
CC8	Paragraph 9.5.14 states that the rollout of Zero Emission Aircraft will occur at higher rates with the Development than without the Development. This is key assumption which would warrant further justification. Section 5.36 is	Clarify the reference to Section 5.36 and provide further justification for the assumption that rollout of Zero Emission

Code	Comment	Information Required
	referenced for more details, but it is not clear where in the ES Section 5.36 can be found (it is not a valid reference to Chapter 5 for example). (Paragraph 9.5.14)	Aircraft is more rapid in the with development scenario (as shown in Paragraphs 9.5.27 and 9.5.28)
CC9	A number of resources have been used for the calculation of flight emissions, likely to be due to the mix of turbo prop and small jet aircraft, and helicopters operating from Farnborough. There is very little detail in the Chapter or appendices on what resources have been used to calculate emissions from which aircraft (e.g. what approach is taken for aircraft not in the EEA/EMEP LTO tool). (Paragraphs 9.5.21 – 9.5.24)	Provide further explanation of the GHG modelling methodology and assumptions for aircraft movements (aircraft and helicopters)
CC10	Paragraph 9.5.30 explains that a 10% reduction in taxi times has been assumed due to taxiway improvements. It is not clear what the proposed improvements are and may be at odds with the earlier explanation that the project does not involve any new infrastructure.	Explain the proposed taxiway improvements and whether these have been modelled into both the with and without development scenarios.
CC11	It is described that the assessment of significance is aligned with IEMA guidance and assessed in light of Paragraph 5.82 of the Airports National Policy Statement (ANPS). The overall approach focuses on alignment with net zero, but IEMA guidance also recommends consideration to policy compliance and mitigation as part of the assessment of significance. It is not explained in the Chapter why only part of the IEMA recommended approach to determining significance has been adopted (Table 9-10 and Paragraph 9.5.46)	Provide further justification for the exclusion of an assessment of policy compliance and mitigation in the assessment of significance as guided by IEMA.
CC12	The assessment adopts an assumption that emissions from non-aircraft activities grow at a rate of 25% (¼) of the growth in aircraft movements. No evidence to support this assumption is provided. (Paragraph 9.6.3)	Provide evidence or further justification for the assumption that emissions from non-aircraft activities will grow by 25% of the change in aircraft movements
CC13	Key assumptions regarding SAF and ZEA rollout are explained and linked to Jet Zero, but it is not clear if any assumptions have been made regarding aircraft fuel efficiency improvements or introduction of newer generation aviation-fuel aircraft into the fleet. (Paragraphs 9.6.1 – 9.6.7)	Clarify whether the assessment accounts for any aircraft fuel efficiency improvements such as those assumed in the Jet Zero Strategy.
CC14	Paragraph 9.7.4 states 95.5% of emissions are from aircraft, but Table 9-15 quotes 96.5%. This is assumed to be a typo.	Please clarify
CC15	Table 9-17 (Climate Chanmge Resilience Assessment) provides climate projections from UKCP18 for the RCP4.5 and RCP8.5 scenarios for two time horizons (2040-2059 and 2070-2089) but does not explain how the range in data have been used (See Clarification 2).	Please provide clarification (see CC2)

Code	Comment	Information Required
CC16	These paragraphs appear to be transposed almost word for word from paragraphs 11.12.8 to 11.12.13 of Chapter 11 of the ES submitted in support of a 2022 Section 73 application by London City Airport (Newham application ref: 22/03045/VAR).	Please confirm relevance to this proposal.
CC17	Paragraph 9.88 refers to ZEA uptake in relation to Jet Zero Strategy assumptions, but does not mention any difference between with and without development scenarios as covered elsewhere	Clarify the reference to Section 5.36 and provide further justification for the assumption that rollout of Zero Emission Aircraft is more rapid in the with development scenario (as shown in Paragraphs 9.5.27 and 9.5.28).
CC18	Paragraph 9.8.9 discusses ground movement optimisation and use of electric tugs for taxiing aircraft. It is not explained if these are the taxiway improvements mentioned in Paragraph 9.5.30 (see Clarification 9)	Explain the proposed taxiway improvements and whether these have been modelled into both the with and without development scenarios.
CC19	Paragraph 9.9.4 states that emissions have been split into traded (UKETS) and non-traded (non-UKETS) sectors and distinguished by international and domestic emissions in accordance with the ANPS. Paragraph 9.9.8 provides the proportion of emissions within the UKETS, but there is no breakdown of domestic and international emissions (it should be noted that international flights may be split between the UKETS and non-UKETS). It is not clear if the values in Table 9-18 (and subsequent tables to Table 9-29) are for all flights, or just the UKETS flights, nor is it clear how the proportion of emissions that fall within the UKETS have been considered in the assessment. Paragraph 9.9.4 also explains that data on the traded and nontraded emissions and domestic and international flights is www.logikaconsultants.co.uk www.aqconsultants.co.uk www.noiseconsultants.co.uk Logika Group is a Trading Name of Air Quality Consultants Limited. Registered Office: 23 Coldharbour Road, Bristol, BS6 7JT Registered No: 02814570 included in Appendix 9-2, however no such data appears in the appendix.	Clarify whether Tables 9-18 to 9-29 include all flight emissions or are limited to traded or non-traded emissions
CC20		Explain how traded emissions have been considered in the assessment
CC21		Confirm where the aircraft data referred to in Paragraph 9.9.4 can be found within the ES and supporting information
CC22	The principal assessment of significance is provided at Paragraphs 9.9.13 and 9.9.14 and subsequent paragraphs for other assessment years. The assessment appears to rely upon IEMA guidance which states in relation to the "largest- scale developments" that: "An indicative threshold of 5% of the UK or devolved administration carbon budget in the applicable time period is proposed, at which the magnitude of GHG emissions irrespective of any reductions is likely to be significant." This means the effects are considered automatically significant above a 5% threshold. In the GHG	Provide a more robust justification for the assessment that the GHG effects and Minor Adverse and Not Significant. This should make reference to the trajectory to net zero and address the fact that final emissions in 2050 with the development are higher than the 2019 baseline (Graphic 9-1) and greater than the without development scenario. It should also explain how Paragraph 5.82 of ANPS is considered in the assessment.

Code	Comment	Information Required
	assessment, this seems to have been used to infer that any contribution under 5% (as compared to carbon budgets for the South East region) is therefore not significant. This judgement is fundamentally flawed and requires some careful reflection. Referring to Table 9-10 of the Climate Change Chapter, the threshold for Moderate Adverse effects is defined by the authors as "Falls short of fully contributing to the UK's trajectory towards net zero (GHG impacts are partially mitigated and does not fully contribute to decarbonisation)". Given the assessment demonstrates that the Airport's emissions are greater in 2050 than in 2019 (see Graphic 9-1 in Assessment Summary section) and are up to 25% higher than the without development scenario, it would not seem unreasonable to conclude the effect is Moderate Adverse and Significant. Despite references in earlier sections of the Chapter, it is also unclear how Paragraph 5.82 of ANPS is considered in the assessment of significance nor the weight given to this and the guidance in Table 9-10 in drawing conclusions.	
CC23	Table 9-30 (of S 9.10) makes reference to planned drainage developments to improve the Airport's resilience to flood risk. It is not clear if these are part of the scheme, planned in the BAU pipeline, or would require a separate planning permission.	Confirm if the planned drainage developments would require separate planning permission and if not secured by this application, would the exclusion of these measures affect the CCR.
CC24	Tables 9-31 and 9-32 do not differentiate between RCP4.5 and RCP8.5 scenarios as implied in the assessment methodology sections (see Clarification 2). (Section 9.10 Assessment of Potential Effects, Mitigation and Residual Effects: etc)	Provide further explanation of how the RCP4.5 and RCP8.5 climate projections scenarios have independently been considered in the CCR assessment or the weight given to each scenario in the assessment.
CC25	Summary data in the Assessment Summary section shows that the development would lead to higher emissions in 2050 than the 2019 baseline (where without development emissions would be lower) and will increase emissions relative to the without development scenario by 0.03-0.04 MTCO2e per year, but does not comment on the overall trend and trajectory (see Clarification 16). Table 9-33 and Graphic 9-1	Provide a more robust justification for the assessment that the GHG effects and Minor Adverse and Not Significant. This should make reference to the trajectory to net zero and address the fact that final emissions in 2050 with the development are higher than the 2019 baseline (Graphic 9-1) and greater than the without development scenario. It should also explain how Paragraph 5.82 of ANPS is considered in the assessment.
CC26	Despite its name, Appendix 9.2 does not contain any aircraft emissions data, but simply aircraft numbers by scenario. Tables 1 and 2 have a breakdown of aircraft movements by those included in planning limits and those excluded from planning limits.	It would be helpful to have further clarification of the classification of aircraft movements and whether the GHG assessment includes all movements, or just those included within the planning limits. (Aircraft Emissions Data – Appendix 9.2)

Code	Comment	Information Required
Chapter 10 Traffic and Transport Comments		
H1	The structure of the ES is such that most of the technical chapters (6-11) include a section on Baseline conditions. Chapter 10 (Traffic and Transport) does not clearly signpost the 'baseline' or 'current state of the environment' in the same way that each other technical chapter does.	Sign-posting of the baseline conditions and sensitive receptors within Chapter 10, by including this information within its own section of the Chapter, as per Chapters 6-9 and 11.
H2	In reviewing whether the ES contains sections that describe the likely significant effects, it has been found that Chapter 10: Traffic and Transport does not clearly set out the sensitive receptors that are scoped into the assessment in reference to the aspects identified in the 2023 IEMA Guidance, and therefore it is not clear what the effects identified relate to within the aspect of traffic and transport.	Provide further clarity on the transport chapter assessment in terms of sensitive receptors considered.
H3	The need for additional mitigation measures is generally discussed within the 'assessment' sections of the technical chapters (6-11). Chapter 10 has not included this sub-heading or discussion. While it can be inferred from the statement regarding insignificant effects that mitigation is not required, it is considered that a statement should be included for consistency across the ES.	Provide a statement to confirm whether additional mitigation measures are required in relation to traffic and transport.
H4	Chapter 10 (Transport) does not contain a section that outline any difficulties, assumptions or limitations encountered by the developer in compiling the information presented in the ES?	Provide an outline of any difficulties, assumptions or limitations relating to the transport chapter (Chapter 10).
H5	In technical chapters 6-9 and 11 it is clear that appropriate sub-topics have been assessed. The baseline section sets the context for the sub-issues which are relevant to the environmental context and the proposals, and these follow through clearly into the assessment. The sub-issues assessed within Chapter 10 should be clarified in relation to relevant policy and guidance (relating to the commentary and review information requirements at ES8H).	Provide clarification on how Chapter 10 has focused on sub-issues relevant to the proposed development for this topic.
H6	Chapter 10: no topic specific methods for establishing the 'magnitude' of effects on the environment are included, clarity should be provided as to whether the generic methodology included in Chapter 5 has been applied.	Clarification on the methodology applied to the assessment within the transport chapter (Chapter 10) and how magnitude has been ascribed.

Code	Comment	Information Required
H7	Chapter 10: no topic specific methods for evaluating significance are included, clarity should be provided as to whether the generic methodology included in Chapter 5 has been applied to this assessment.	Clarification on the methodology for evaluating significance applied to the assessment within the transport chapter (Chapter 10).
H8	The approach to assessing cumulative developments within Chapter 10 is unclear, it is stated that some schemes were not included however the author should clearly state which schemes have been discounted providing justification for this.	Clarify the scope of the cumulative schemes taken into account within the Chapter 10 of the ES.
H9	The TA refers to the opening hours for the airport are between 07:00 and 22:00 on weekdays and 08:00-20:00 on weekend days. With the airport currently directly employing 177 staff that work in operations and administration departments. Figure 10.1-2 shows the average daily profile of flights to and from the airport with just over 8 two-way flight trips during the airport peak of 10:00-11:00 and just under 8 flights between 16:00 – 17:00 the airports apparent afternoon peak.	It is requested that data and a graph be provided showing the average daily profile of flights to/from the airport separately for weekdays and weekend days. It would also be helpful to understand how many arrivals and departure flights took place whilst the traffic surveys took place during both August and October to understand how the two relate.
H10	The TA makes reference to Figure 10.1-1, although this figure appears to be missing from the document and therefore clarification is sought on this.	Provide Clarity
H11	As part of the local highway authority pre-application advice, it was requested that a Walking, Cycling and Horse-Riding Assessment and Review (WCHAR) be provided of the pedestrian and cycle routes between the site and key origins / destinations. Although an overview of the available facilities has been provided this remains quite high level and doesn't detail any deficiencies or highlight any improvements as previously requested.	Please provide details
H12	The TA and Travel Plan both refer to Links along Elles Road and Links to the Airport beyond Invincible Road as potential links which would benefit from funding. These findings are noted but it is considered that further work is needed including a more detailed review of the pedestrian and cycle routes between the site and key facilities before being in a position to comment further.	Provide a more detailed review of the pedestrian and cycle routes between the site and key facilities.
H13	the TA does not reference the Rushmoor Local Cycling and Walking Infrastructure Plan (LCWIP) document, or the routes contained within the document and should be a consideration at the planning stage.	Add reference to LCWIP

Code	Comment	Information Required
H14	The nearest rail station to the site is Farnborough Main located 2.5km from the site. The frequency of services is noted, however it is not made clear when the earliest and latest rail services arriving / departing the station are and how these compare to working hours, to consider whether they are a realistic option for some staff.	Please clarify
H15	The August 2023 gate traffic surveys indicate 71 vehicular movements arriving at the airport between 05:00 and 07:00 prior to the shuttle bus operating and prior to some rail services being operational. The working hours of staff and the proportion that work shift patterns or work a standard day should be detailed.	Please provide details
H16	The flight related traffic data was collected at Ively, Meadow and East access gates to the airport between 17th-20th August 2023. It is noted that August falls within the school holiday period and therefore not what is considered to be a neutral month for the highway network. The traffic flows in Table 10.1-6 and 10.1-7 are referred to as existing "flight-related" traffic movements. It has not been made clear within the TA how flight and non-flight movements, as well as the breakdown of flight-related movements by user type were identified during the surveys. The traffic movements presented are much lower than those gathered as part of the 2008 Transport Assessment. It is assumed this is due to the 2023 only referring to "flight-related" traffic movements and therefore exclude other users of the site not related to the airport.	Answer the questions presented: • was this through ANPR data collection or a log kept at each gate? • Were all traffic (both flight and non-flight) movements collected at the time of the August survey to enable comparison to the October Traffic surveys? Assumed this is due to the 2023 only referring to "flight-related" traffic movements and therefore exclude other users of the site not related to the airport.' – please clarify this assumption and justify.
H17	The 24-hour traffic flows show Thursday to experience the highest flows with 762 total movements, and usage being higher on a Sunday compared to Saturday with 500 traffic movements. It is noted that there are more traffic movements leaving the site on Thursday, Friday and Sunday than arriving at the site. The total traffic movements in and out of the development during the network AM and PM peaks amount to 56 and 79 two- way movements respectively.	Further explanation is requested why the flows are not 'balance' and why this might be occurring?
H18	The proposals seek to increase the amount of aircraft movements per annum which are permitted to take place from 50,000 to 70,000 during weekdays and from 8,900 to 18,900 on weekend days and banks holidays. The proposals do not include any changes to the site access arrangements or changes to the parking arrangements.	Provide parking accumulation survey.

Code	Comment	Information Required
	Further information is required on the car parking provision and usage currently on the site and the impact that the additional staff and visitors will have through provision of a parking accumulation survey.	
H19	The TA refers to the site currently employing approximately 177 members of staff. With the current cap of 50,000 ATM this is anticipated to increase to 260 members of staff and with the proposed cap of 70,000 ATM, this is anticipated to increase to 320 staff members, an increase of 60 staff members as a result of the current application. The previous 2008 application referred to 1,074 being employed by the site with 25,504 aircraft movements, this was projected to increase from 962 to 1566 increasing the cap from 28,000 to 50,000, resulting in a 492 to 604 increase in staff. It is understood that the previous number referred to all staff employed on the site including contract staff who provide security, air traffic control and other essential services and additional people who work for Farnborough Airport tenants which may provide some reasoning for the staffing numbers differing between the current and previous applications.	Clarification is sought to provide reassurance to the local highway authority on the staff numbers referred to in the current application. The number of staff working on site during the survey period have not been disclosed and should be detailed together with details of shift patterns/ working hours, to provide a better understanding of how the site operates.
H20	The TA notes that there are also anticipated to be indirect increases in tenant company staff numbers resulting from the proposals, however these would be an intensification of use accommodated within the approved capacities of the existing uses.	Further clarification is required concerning the current and future staffing numbers and what tenant companies the intensification is referring to, in order to confirm whether the approach taken is appropriate.
H21	It was requested at the pre-application stage that the basis for the 2.6 passengers per flight should be provided, therefore further information is requested. At the time of the August survey there were shown to be 5 and 26 two-way passenger traffic movements during the AM and PM peaks respectively, and 22 two-way traffic movements during the weekend day peak, therefore it should be detailed how many flights these traffic movements related to. It is considered reasonable that the increase in passenger numbers is anticipated to proportionately increase in line with extended aircraft movement limit to 70,000, although further information is requested on how the average passenger numbers have been derived.	Clarification is also sought on the number of flights that took place on the day of both the August gate surveys and October MCC surveys. Further information is required on how the average passenger numbers have been derived.

Code	Comment	Information Required
H22	The TA refers to the airport Clientele being primarily drawn from London, and that due to the low flight occupancy that staff and supporting services are anticipated to result in greater daily trip generation than passengers.	Further information is required on passenger numbers prior to commenting on this position.
H23	The TA refers to the level of flights in August to be typically lower than the 85th percentile and therefore a 20% seasonality factor has been identified to be applied to the trip generation. This information is required prior to the HA commenting on whether an uplift to the 85th percentile is appropriate.	Details are required of the month by month flight numbers and how the 20% uplift referred to has been calculated.
H24	Although it is recognised that flight numbers are lower in August and an adjustment has been applied to the trip generation to reflect this, it is not clear whether there were fewer staff working on site during August and whether the uplift applied is sufficient to compensate for this.	Clarification is sought on seasonality of staff numbers during August compared to other months. Do staff numbers on site vary generally dependant on programmed flight operations?
H25	The staff/ contractor distribution utilised identifies 62% of trips travelling north/ east via A327 to/ from J4a of the M3, with 38% travelling east via Elles Road. The distribution and assignment of trips has been based on staff postcode data. The spreadsheet detailing the postcode destinations and route choice should be provided for this to be reviewed and checked.	Provide spreadsheet detailing the postcode destinations and route choice
H26	The passenger distribution utilised identifies 90% of trips travelling north/ east via A327 to/ from J4a of the M3, with 10% travelling east via Elles Road. The distribution of passenger trips has been based on “general assumptions”.	Further information is requested on passenger origin/destination (for land-based travel to/ from the airport) in order to establish whether an appropriate distribution has been applied in this instance.
H27	The assessment scenarios detailed along with the weekday AM and PM, and non-weekday peak are considered acceptable subject to raw survey data being provided to confirm the network peak periods.	Provide the raw data.
H28	It is noted that the airport traffic movements were shown to be higher on a Sunday than Saturday.	Please provide the ATC data - in order to understand how the network flows compare on Saturday and Sunday.
H29	The gate traffic survey and the MCCs were not conducted during the same period.	Further information is required concerning the flight operations at the time of both surveys to understand how the two compare and how representative traffic movements were in October compared to August to provide a base traffic level for the airport operations as they currently stand.

Code	Comment	Information Required
H30	The growth factors identified are considered to be acceptable in this instance. It is noted that Tempro 8.1 datasets are now available, however the Tempro growth presented is considered robust for the purposes of this assessment.	It is not clear whether any adjustments have been made to the TEMPRO growth factors to account for committed development, therefore this should be clarified.
H31	The TA refers to some schemes not being included in the assessment either due to a new reduction in flows or being considered to be located outside of significant influence. The sites that have been selected for inclusion are considered to be acceptable.	It is requested that flow diagrams be provided which detail the trips identified for each of the committed developments and how they have been distributed on the network.
H32	It is noted that the Farnborough Civic Quarter (22/00193/OUT PP) development has not being included in the assessment as the application is yet to be determined. The impact of the development trips within the study area of the proposed development is primarily the Pinehurst Roundabout and Clockhouse Roundabout. At present the proposed development is showing few trips passing through these junctions negating the need to model these junctions further at this time, subject to further information being provided to confirm these findings.	This application has been approved subject to S106, which is due to be signed in the coming weeks. It is a Council led scheme and is likely to be delivered. Therefore, this should form part of the assessment.
H33	The use of industry standard Junctions 10 and LinSig 3 are considered acceptable for use in the assessment. It was requested at the pre-application stage that drawings showing the geometric measurements used in the modelling be provided in order for these to be checked.	It is requested that this information be provided. The drawings along with a response to earlier queries raised is required in advance of comments being provided on the modelling findings.
H34	Table 10.1-14 outlines that the Pyestock Roundabout and Summit Roundabout have been calibrated and adjustments made to the capacity on some arms. It is not made clear what the junction arms have been calibrated against. If this is queue length surveys then the queue comparison (modelled vs surveyed) before and after the adjustment should be presented. The LinSig files have be provided and are with the County Council's ITS team for review, however traffic flows will need to be agreed prior to a full model review being undertaken.	Provide the requested information.
Chapter 11 Biodiversity Comments		
BIO1	Table 7-18 also gives nitrogen deposition onto Thames Basin Heaths of 0.03 kg/ha/y for short habitats and 0.01 for long habitats.	Applicant to provide updated table and to confirm that appropriate deposition velocities have been used for the two habitat types and the difference is due to the greater distance from sources to any long habitats.

Code	Comment	Information Required
BIO2	Paragraph 11.6.23 - It is stated "This assessment of nitrogen deposition has been used to screen potential acid deposition impacts".	It is not clear that that the assessment of nitrogen deposition is an appropriate proxy for the screening of acid deposition impacts. But this approach further clarification and justification. Please provide this clarity.
BIO3	Assessment of S02 has been scoped out on the basis of the low sulpher content of aviation fuel. However, Aviation fuel typically has a sulphur content of around 600 parts per million (ppm) whereas low sulphur diesel for road vehicles has a sulphur content of around 15 ppm, so the statement in the ES is inconsistent.	Provide greater clarity of justification in relation to whether there would be any adverse environmental impacts.
BIO4	However, the 'Habitat Type' given in Tables 11-10 and 11-11 does not always appear to be correct, or reflect the most sensitive qualifying feature habitat type (i.e Basingstoke Canal, 'dry heaths').	We advise that you use the most sensitive habitat type for clarity, to reflect the values shown on the tables.
BIO5	Table 11-10 appears to present the same information as Table 7-17, while Table 11-11 appears to present the same information as Table 7-18. Data is also inconsistent between Tables 7-17 and Table 11-10; and between Tables 7-18 and 11-11. Critical level and load exceedances therefore differs between these Tables. No explanation for this inconsistency is given.	Inconsistencies between the tables occur, please provide a set of tables that relates clearly to Biodiversity and Air Quality, using the same year (e.g. 2040).
BIO6	Table 11 – 10, Table 7-17, Table 11-11 All of the above Tables present an above 1% exceedance (critical level for NOx and nitrogen deposition critical load) at Thames Basin Heaths SPA and Eelmoor Marsh SSSI. APIS data shows that existing baseline nitrogen deposition significantly exceeds the minimum critical load (5kg N/ha/year) for the qualifying habitats at the above referenced designated sites. The applicant states that full model results are provided in Appendix 7.3, however this is not correct as Appendix 7.3 provides information for non-ecological receptors only. I have therefore not been able to substantiate conclusions drawn as I have not seen source data or clarity of methodology. No process contribution data for SO2 critical level is presented. It is therefore not possible to assess if the proposed development would result in a process contribution of 1% or above SO2 critical level at protected ecological receptors. Where a process contribution of above 1% of critical level or load is identified, in line with EA guidance, the applicant should therefore now	Provide relevant data or clarity in methodology and provide source data Provide the Predicted Environmental Contribution of the proposed development against relevant protected site standards Resolve data errors

Code	Comment	Information Required
	evaluate the Predicted Environmental Contribution of the proposed development against relevant protected site standards.	
BIO7	Nitrogen deposition critical load For all statutorily protected sites referenced (Eelmoor Marsh SSSI, Foxlease to Ancells Meadows SSSI, Ash to Brookwood Heaths SSSI, Bourley and Long Valley, Thames Basin Heaths SPA and Thursley, Ash, Pirbright and Chobham Common SAC) the most sensitive qualifying habitat against which to evaluate nitrogen deposition critical load exceedance is 'raised and blanket bog'. The critical load range for nitrogen deposition for this habitat type is given as 5-10 kg N ha-1 year-1. In line with statutory obligations of The Conservation of Habitats and Species Regulations (as amended) and accepted best practice, the screening threshold for a conclusion of no likely significant effect on raised and blanket bog habitats at these protected sites is where 'with development' scenarios result in a precautionary increase in nitrogen deposition loads below 1% of the minimum referenced critical load of 5 kg N ha-1 year-1 . A development process contribution of above 0.05 kg N ha-1 year-1 of nitrogen deposition would therefore constitute a likely significant effect and require further appropriate assessment. Data presented is inconsistent between submitted Chapter of the ES (see AQ27 below). However, the applicant has modelled 'with development' process contribution of above 1% of the critical load at TBH SPA and Eelmoor Marsh SSSI. The development process contribution at these protected sites therefore constitutes a likely significant effect and requires further appropriate assessment. Paragraph 11.6.42 onwards of the Biodiversity Chapter provides a justification for 'negligible' effect on the area of land affected by a process contribution of above 1% of the critical load. However, as detailed in AQ26 below, modelled and supporting data is not provided. This conclusion is not therefore substantiated. Section 28G (2) of the Wildlife and Countryside Act 1981, as amended, states that local authorities have a duty to "take reasonable steps, consistent with the proper exercise of the authorities functions, to further the conservation	An appropriate assessment of the implications of critical load nitrogen deposition exceedance on Thames Basin Heaths SPA, in view of the site's conservation objectives of its designated features, must now be undertaken. In line with government guidance, "the appropriate assessment must include an explicit and detailed statement of reasons which is capable of dispelling all reasonable scientific doubt on the effects of the proposal on the site." Evidence based measures to avoid or mitigate exceedances at both TBH SPA and Eelmoor Marsh SSSI should also be presented to demonstrate that the proposal will not adversely affect the integrity of the site on implementation of these measures.

Code	Comment	Information Required
	and enhancement of the flora, fauna … by reasons of which the site is of special scientific interest." The National Planning Policy Framework (paragraph 175) states "development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted." Documentation submitted with this application has not appropriately demonstrated that the proposed development would not have a likely adverse effect on Eelmoor Marsh SSSI.	
BIO8	NOx critical level Table 11-10 presents process contribution NOx concentrations that also exceed the 1% likely significant effect screening threshold (0.3 ug/m3) for NOx critical level at Thames Basin SPA and Eelmoor Marsh SSSI. The development process contribution at these protected sites therefore constitutes a likely significant effect and requires further appropriate assessment. Paragraph 11.6.39 identifies that the area of Thames Basin Heaths SPA affected by the above 'with development' 1% exceedance extends for approximately 0.31km. Modelled data is not provided (see AQ26 below), so location and extent of this exceedance cannot be verified. Paragraph 11.6.41 concludes that this exceedance is negligible and therefore disregards a conclusion of likely significant effect. The argument for this conclusion is unsubstantiated in absence of supporting modelled data. However, this argument appears to be predicated on the fact that habitats within the area affected by the exceedance already hosts botanical species characteristic of existing eutrophication and therefore already failing the Natural England targets for conserving or restoring SPA features. I question a conclusion of 'no likely significant effect' where the exceedance is identified in a location already showing adverse effects on the integrity of the site that 'might be attributable to aerial pollution'. The precautionary principle of The Conservation of Habitats and Species Regulations does not appear to have been met.	An appropriate assessment of the implications of critical level NOx exceedance on Thames Basin Heaths SPA, in view of the site's conservation objectives of its designated features, must now be undertaken. In line with government guidance, "the appropriate assessment must include an explicit and detailed statement of reasons which is capable of dispelling all reasonable scientific doubt on the effects of the proposal on the site." Evidence based measures to avoid or mitigate exceedances at both TBH SPA and Eelmoor Marsh SSSI should also be presented to demonstrate that the proposal will not adversely affect the integrity of the site on implementation of these measures.

Code	Comment	Information Required
	As for AQ24 above, documentation submitted with this application has not appropriately demonstrated that the proposed development would not have a likely adverse effect on Eelmoor Marsh SSSI.	
BIO9	The applicant states that models and supporting data are provided in Appendix 7.3, however this is not correct as Appendix 7.3 provides information for non-ecological receptors only. I have therefore not been able to substantiate conclusions drawn for nitrogen deposition or NOx concentrations, as I have not seen source data or clarity of methodology.	Provide source and modelled data
BIO10	Table 11-10 appears to present the same information as Table 7-17, while Table 11-11 appears to present the same information as Table 7-18. Data is also inconsistent between Tables 7-17 and Table 11-10; and between Tables 7-18 and 11-11. Critical level and load exceedances therefore differs between these Tables. No explanation for this inconsistency is given.	Inconsistencies between the tables occur, please provide a set of tables that relates clearly to Biodiversity and Air Quality, using the same year (e.g. 2040).
BIO11	Habitats Regulations Assessment report conclusions – air quality conclusions are unsubstantiated In view of AQ24 and AQ25 above, I do not support the conclusions of 'no likely significant effect' presented in Table 6-1 of the submitted Report to Inform a Habitats Regulations Assessment with regards to; indirect effects of air pollution on the qualifying bird species through effects on habitat quality.	HRA conclusions require revision to have regards to the above.
BIO12	SO2 critical level No process contribution data for SO2 critical level is presented. It is therefore not possible to assess if the proposed development would result in a process contribution of 1% or above SO2 critical level at protected ecological receptors. No assessment of likely significant effect or further appropriate assessment is therefore provided.	Present modelled evaluation of SO2 data. Conclusions will need evaluation within the Report submitted to support a Habitats Regulations Assessment.
BIO13	Acidification Paragraph 11.6.23 - It is stated "This assessment of nitrogen deposition has been used to screen potential acid deposition impacts".	It is not clear that that the assessment of nitrogen deposition is an appropriate proxy for the screening of acid deposition impacts. But this approach further clarification and justification. Please provide this clarity. Conclusions may need evaluation within the Report submitted to support a Habitats Regulations Assessment.
BIO14	Sound level to give rise to negative impacts to birds	It is recommended that further evidence is provided to justify robustly why a level of 85dB LAmax should be used as the point at

Code	Comment	Information Required
	Para 5.4.5 of the HRA references a level of 85dB LAmax above which noise level is 'likely to give rise to negative impacts on birds from irregular activities such as aircraft'. What constitutes 'negative impacts' is not clarified, however the HRA does state that this figure is based on 'a small number of studies'. The studies referenced date from 1990 and 1997. Since this time, further research into disturbance responses to aircraft has indicated that "Minimum responses (head turning scanning behaviour) were observed at all levels of noise exposure from 65dB(A)" [Cutts, N., Phelps, A. & Burdon, D. 2009. Construction and Waterfowl: Defining sensitivity, response, impacts and guidance. Report to Humber INCA. Institute of Estuarine and Coastal Studies, University of Hull]; Other research into behavioural responses of birds to impulsive noise states "at above 65.5dB(A) a behavioural response of some kind becomes more likely to occur than no response. At above 72.2dB(A) flight with abandonment of the site becomes the most likely outcome of the disturbance. If non-response and non-flight response were taken to be relatively harmless, and flight responses potentially costly (in terms of energy expenditure), then for those species studied at the site a costly outcome becomes more likely at = 69.9 dB(A)" [Wright, D., Goodman, P., Cameron, T. 2010. Exploring behavioural responses of shorebirds to impulsive noise. Wildfowl and Wetlands Trust. The applicant draws a conclusion of no likely significant effect on the qualifying bird features of the SPA for irregular noise events based on a 85dB LAmax at least once per day impact threshold. This would appear inconsistent with the above referenced research which indicates that costly negative impacts on birds occurs at noise levels much lower than this. I recommend a figure of 69.9dB LAmax as a more appropriate level for modelling likely significant effects. Table 5-3 of the HRA is clear that the 'with development' scenario results in an increase in hectares of Thames Basin Heaths SPA exposed to noise levels above 85dB LAmax, above 'without development' scenarios for all years modelled. However, Table 6-1 of the HRA draws the conclusion of no likely significant effect, apparently on the basis that expected technological innovation is expected to result in quieter aircraft over time reducing levels below those of current, even in a 'with development' scenario. However, this does not account for the modelled conclusions that reduction in noise	which noise level is likely to cause negative impacts on birds, and why this is appropriate for this application. Or reappraise subject to the recommended 69.9dB LAmax. Further Appropriate Assessment is required for either chosen level, including an assessment of alternative solutions to avoid or mitigate for potential adverse effect. The applicant still needs to demonstrate with appropriately quantified evidence, that no adverse effect on the integrity of the SPA occurs as a result of proposed Condition changes.

Code	Comment	Information Required
	and therefore reductions in adverse effects on the qualifying bird species, will reduce faster in the 'without development' scenario. I argue that it is inappropriate to conclude 'no likely significant effect' where proposed development is modelled to result in additional hectares of SPA (e.g. 5.6ha in year 2031) subject to 85dB LAmax above which the applicant suggests noise level is 'likely to give rise to negative impacts on birds'. The applicant's argument therefore appears to accept that noise generated by the Airport is already adversely affecting the integrity of the SPA qualifying features. The 'with development' scenario would slow any potential reduction in noise and therefore hinder opportunities to meet the SPA Conservation Objectives. This is inconsistent with a conclusion of 'no likely significant effect' for the 'with development' scenario, which I dispute. I conclude that submitted documentation has not demonstrated that noise generated as a result of the proposed change of planning Conditions would not *'cause a material change in behaviour, attitude or other physiological response'* and therefore result in an 'Increasing Effect Level' of 'Significant Observed Adverse Effect', in the Qualifying bird Features of Thames Basin Heaths SPA, in accordance with the impact classification presented by the applicant in ES Appendix 8.1, Table 8.1.1 'Noise Exposure Hierarchy Based on Likely Average Response'. I argue that quantitative data presented within documentation currently submitted in support of this application is not sufficiently robust to draw a clear extrapolation that the proposed planning Condition changes will not result in an adverse effect on the integrity of the SPA, as required to meet the statutory obligations of Regulation 63 (5) of The Conservation of Habitats and Species Regulations 2017 (as amended). The precautionary principle therefore applies to this application.	
BIO15	Habitats Regulations Assessment report conclusions – noise In view of N01 above, I do not support the conclusions presented in Table 6-1 of the submitted Report to Inform a Habitats Regulations Assessment, that direct effects of aircraft noise on the qualifying bird species are demonstrated to have no likely significant effect.	HRA conclusions require revision to have regards to the above.

Code	Comment	Information Required
Chapter 12 Cumulative Effects Comments		
CE1	Chapter 12 (Cumulative Effects) considers intra-project combined effects of the technical topics scoped into the ES. The qualitative approach is explained clearly, and considered appropriate. Recommendations are made on the overall presentation to enhance legibility of the ES, however overall the information provided meets the requirement. It is considered that the intra-project effects in relation to biodiversity should be included in Chapter 12 (as well as Chapter 11) to allow the reader a clear overview of all intra-project effects together, to assist with legibility.	To improve legibility of the ES, it is considered that all intra-project effects should be summarised together in tabular format.
CE2	Committed developments list – this list has not considered all developments listed at Section 2.5 of Chapter 2 under 'other future development at the Airport'. Clarification is needed to explain whether those developments not discussed in the long list at Appendix 5.3 are scoped in or out of the cumulative assessment, with justification provided for the approach taken (i.e. 23/00670, 23/00674, 2300617, and 23/00550). This comment relates to Item 1 of this review.	Clarify whether the other development proposals located within the Site as described in Chapter 2 have been scoped into the cumulative assessment, and provide justification for the approach.
Non Technical Summary Comments		
NTS1	Figures are included to illustrate the location of the application site, the boundary of the proposed development, however no figures are included to show the location of key environmentally sensitive receptors, including in the context of the cumulative assessment.	Provide figures to support the NTS to illustrate the location of key sensitive receptors for the ES, including figure(s) to support the cumulative assessment.
NTS2	The NTS should be updated and resubmitted to ensure consistency with updated information provided in response to other Regulation 25 queries	Provide updated version of NTS