Gatwick Airport Northern Runway Project

The Applicant's Response to Actions
ISH6: Climate Change (including Greenhouse Gases)

Book 10

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Introduction

1.1.1 This document provides the Applicant's response to the actions arising from Issue Specific Hearing (ISH) 6: Climate Change (including Greenhouse Gases [EV12-009]. The actions relevant to the Applicant are as follows:

No.	Action	Deadline
Agenda Item 5		
1	Confirm whether all consented development is included in the construction future baseline. This will include an explanation of the implications of the works in Schedule 1 on the surface access future baseline.	Deadline 4
Agenda Item 6		
2	Explain the position that the reporting does not align with the decision-making framework in the NNNPS to result in minor adverse effect in respect of GHGs in the light of the Applicant's comments.	Deadline 4
3	In response to Mr Johnson, clarify the details of the Climate Change Committee reference to 1.5oC compliance trajectory as opposed to less than 2oC referred to in Paris Agreement.	Deadline 4
4	Respond to Morag Warrack about carbon budgets questions.	Deadline 4
5	Further information to be provided on Well to Tank emissions, but not relating to non UK supply chain sourced fuels.	Deadline 4
6	Explain how whole life carbon assessment have been applied in the submission.	Deadline 4
7	CAGNE to consider whether Green Controlled Growth method may help reduce the GHG emissions/ climate risks of the project.	Deadline 4
8	Clarify how Green Controlled Growth would operate at Luton Airport and explain why it would not relate to GHGs.	Deadline 4
Agenda Item 7		

9	Explain how the construction emission assessment has taken into account Crawley Local Plan policies.	Deadline 4
Agenda Item 8		
10	Provide details of relevant carbon budgets/ targets in relevant Local Transport Plans	Deadline 4
11	Set out issues related to contextualising carbon budgets and targets from local plans and their assessments already undertaken.	Deadline 4
12	Confirm the rationale with respect to emissions from inbound flights and whether the inbound flights of the potential 13mppa as part of scheme should be included.	Deadline 4
13	Which provision of the ACA accreditation scheme preclude the use or supplementing for other schemes. For information relating to local schemes at suggestion of JLA.	Deadline 4
14	Respond to points raised by Mr Johnson of Aviation Environment Federation concerning risk.	Deadline 4
Agenda Item 9		
15	Submit the carbon budget assessment which indicated that emissions attributable to Gatwick could grow to over 5.5% of the CCC's recommended total UK emissions in 2038.	Deadline 4
16	Respond to assessment submitted by Cllr Essex	Deadline 5
Agenda Item 10		
17	Respond to Cllr Essex about implications of SAC and CAT* on local transport issues *We consider that this is a typo and should be a reference to the CAP, so have responded on that basis.	Deadline 4

1.1.2 The below sections provide the Applicant's response. For actions which require a more detailed response, a reference to the appropriate document is included.

1 Action Point 1

1.1 Confirm whether all consented development is included in the construction future baseline. This will include an explanation of the implications of the works in Schedule 1 on the surface access future baseline.

1.1.1 The future baseline of Construction and ABAGO GHG emissions does not include any of the works listed in Schedule 1 to the DCO, as those are the works which are proposed as part of the Northern Runway Project and so do not form part of the future baseline (which reflects projects expected to be constructed at Gatwick within the timescales of the GHG assessment but outside the scope of the DCO).

1.1.2 The future baseline for construction reflects the planned development set out in Section 4.4 of **ES Chapter 4: Existing Site and Operations** [APP-029]. This section sets out the development which is currently consented or under construction and would proceed in the absence of the Project. These Projects are as follows:

a. Airfield Projects.

   i. Pier 6 extension.

   ii. Rapid exit taxiway.

   iii. Planned maintenance (includes resurfacing of both runways and taxiways in accordance with usual maintenance schedules, and replacement of the ILS equipment).

b. Car Parking.

   i. South Terminal Hilton Hotel multi-storey car park. As set out in at Section 4.6 of **The Applicant's Response to Actions ISHs 2-5** [REP2-005], the permission has now lapsed and therefore the parking provision of 820 additional spaces no longer forms par to the Future Baseline. However, as the Hilton car park is co-located with other car parks (in terms of access points), the loss of spaces is not considered to lead to any potential traffic redistribution effects and the loss of 820 spaces is no significant within the wider parking capacity on offer for passengers and does not materially impact on traffic volumes or mode shares.

   ii. MSCP7.

iii. Use of robotics technology within existing South Terminal long ta parking areas (up to 2,500 additional spaces).

c. Electric vehicle charging forecourt.

d. Highway improvements (including widening on the junction entry/exit lanes for both the North Terminal and South Terminal roundabouts, signalisation of the roundabouts and provision of enhanced signage.

e. Improvements to Gatwick Airport Railway Station.

1.1.3 The future baseline for ABAGO reflect the current airport operations, plus the development listed above, and includes energy use associated with passenger forecasts in the absence of NRP.

1.1.4 The future baseline for surface access is derived from passenger forecasts in the absence of NRP.

1.1.5 The future baseline for aviation emissions is derived from passenger forecasts in the absence of NRP.

2 Action Point 2

2.1 Explain the position that the reporting does not align with the decision-making framework in the NNNPS to result in minor adverse effect in respect of GHGs in the light of the Applicant's comments.

The Applicant explained this position orally as part of its submissions against agenda item 6 at Issue Specific Hearing 6. Please refer to paragraphs 6.1.11 to 6.1.13 in the Applicant's **Written Summary of Oral Submissions - ISH6 - Climate Change (including Greenhouse Gases)** (Document Ref. 10.25.1).

3 Action Point 3

3.1 In response to Mr Johnson, clarify the details of the Climate Change Committee reference to 1.5°C compliance trajectory as opposed to less than 2°C referred to in Paris Agreement.

3.1.1 The IEMA Guidance includes, with reference to contextualisation, the need to consider the net zero trajectory in line with the Paris Agreement's 1.5°C trajectory.

3.1.2 Equivalence was drawn in **ES Chapter 16: Greenhouse Gases** [APP-041] between compliance with UK carbon budgets, and compliance with a 1.5°C trajectory. This was challenged during ISH6.

3.1.3 In response to challenge, the following from the IEMA was quoted:

"The UK has set a legally binding GHG reduction target for 2050 with interim five-yearly carbon budgets which define a trajectory towards net zero. The 2050 target (and interim budgets set to date) are, according to the CCC, compatible with the required magnitude and rate of GHG emissions reductions required in the UK to meet the goals of the Paris Agreement, thereby limiting severe adverse effects."

3.1.4 The Paris Agreement was adopted on 12 December 2015. It set long-term goals to *"substantially reduce global greenhouse gas emissions to hold global temperature increase to well below 2°C above pre-industrial levels and pursue efforts to limit it to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change"*.

3.1.5 The Fourth and Fifth UK carbon budgets were established prior to the revision to the UK's 2050 carbon target, which amended the target from an 80% reduction by 2050, to Net Zero by 2050.

3.1.6 In the Sixth Carbon Budget report the CCC responded to the revision in the UK 2050 target by recommending a 78% reduction in UK territorial emissions between 1990 and 2035, effectively bringing forward the previous 80% target by nearly 15 years.

3.1.7 The CCC stated in the Sixth Carbon Budget (p433) that it did not consider it necessary to revise the (then) legislated Fourth and Fifth carbon budgets on the basis that the setting of an appropriate level of the Sixth Carbon Budget (for the period 2033-37) would require the UK to cut emissions in line with the 2030 Nationally Declared Contribution (NDC) to remain on track.

3.1.8 The Sixth Carbon Budget, therefore, re-established the trajectory for emissions levels required within the UK to remain on track for Net Zero in 2050.

4 Action Point 4

4.1 Respond to Morag Warrack about carbon budgets questions.

4.1.1 It is understood that Ms Warrack's query, raised on behalf of Horsham Trafalgar Neighbourhood Council, was specific to whether there was an individual 'budget' for Gatwick Airport allocated within the Government's national carbon budgets, including Carbon Budget 6 which specifically incorporates international aviation emissions for the first time.

4.1.2 The Applicant confirms there is no specific budget for Gatwick, or any other individual airport, within the carbon budgets. The Applicant provided further clarification on the incorporation of international aviation emissions within its oral submissions at ISH6, as recorded in its summary of oral submission submitted at this Deadline 4 (see in particular section 3.1 of **Written Summary of Oral Submissions - ISH6 - Climate Change (including Greenhouse Gases)** (Document Ref. 10.25.1).

5 Action Point 5

5.1 Further information to be provided on Well to Tank emissions, but not relating to non UK supply chain sourced fuels.

5.1.1 A response to this question is provided in the **Greenhouse Gas Technical Note: Well-to-Tank Emissions** (Doc Ref. 10.22).

6 Action Point 6

6.1 Explain how whole life carbon assessment have been applied in the submission.

6.1.1 A response to this question is provided in the **Greenhouse Gas Technical Note: Life Cycle Assessment Considerations** (Doc Ref. 10.22).

8 Action Point 8

8.1 Clarify how Green Controlled Growth would operate at Luton Airport and explain why it would not relate to GHGs.

8.1.1 The Applicant understood the focus of this question in the hearing to be the application of Luton Airport's proposed GCG framework to GHG emissions, and particularly Scope 3 aviation emissions, and has answered this narrow point below for succinctness.

8.1.2 To the extent, however, the ExA is seeking a more general description of the proposed GCG framework, then the Applicant considers it would be most appropriate to review the Green Controlled Growth Framework document (included as **Appendix A** to this Deadline 4 for the purposes of responding to this Action point) submitted by the applicant to that DCO, and particularly the 'How will Green Controlled Growth work' section within the Executive Summary, as GAL (as Applicant to this DCO) would not wish to otherwise mischaracterise those proposals, which the ExA will note are still to be consented, less still implemented.

8.1.3 The Applicant is similarly mindful of not mis-stating the Luton's applicant's proposed GCG approach in the context of GHG emissions, and so appends the most recent examination version of the *Green Controlled Framework* document (REP11-013 of that examination document library) and directs the ExA to section 5, where the approach of the GCG framework in respect of GHG is prescribed, both in terms of the 'thresholds' and 'limits' set and the emissions to which they relate. The ExA will note (pursuant to Table 5.1) that emissions arising from Airport Operations and Surface Access are incorporated within the framework, with their scope subsequently detailed in the subsequent paragraphs.

8.1.4 Whilst not secured as part of a 'GCG Framework' type document, the Applicant considers the effect of the committed outcomes secured in the Carbon Action Plan (which also includes binding construction emissions commitments) and the Surface Access Commitments are broadly equivalent in substance and effect.

8.1.5 Importantly, however, Scope 3 Aviation emissions are not included within the Scope at Luton, with their omission explained in the separate '*Green Controlled Growth Explanatory Note*' [REP11-011] at paragraphs 3.4.22 to 3.4.29:

"it is proposed to exclude Scope 3 aviation GHG emissions from the GCG Limit in the context of the UK Emissions Trading Scheme (UK ETS), launched in January 2021, and the commitment in the Jet Zero Strategy to fully implement

the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) in the UK by 2024…

…Given that an external offsetting mechanism exists in the form of the UK ETS, and that compliance with it is a legal requirement for airlines, it is not believed that provision of this mechanism through the GCG Framework would be appropriate, as the Government has confirmed its position that aviation emissions are best dealt with at a national level.

In addition, setting a GCG Limit that goes beyond the ambition of the UK ETS may lead to undesirable outcomes both for the airport and the wider environment. Any further reduction in allowable emissions arising from such a Limit would result in fewer aircraft operators using their UK ETS emissions allowances to operate flights to or from the airport. They will however be free to use these allowances to operate to or from other airports.

As such, any decreases in GHG emissions from flights operating to or from the airport would simply be offset by equivalent increases elsewhere. This would not help the UK meet its goal of achieving net zero by 2050, nor would it help to address the global effects of climate change. It could also lead to longer surface transport journeys overall as people travel to less convenient airports for flights that might otherwise have been offered at Luton, resulting in greater energy use and therefore GHG emissions."

8.1.6 The Applicant agrees with the Luton applicant's rationale and analysis, and it is for the same reason that Scope 3 Aviation emissions are not proposed to be individually 'controlled' under the Applicant's Carbon Action Plan. It is in the context of the above comparison that the Applicant considers any unfavourable comparison with Luton's GCG approach is misguided and/or misleading in the context of the NRP's examination.

9 Action Point 9

9.1 Explain how the construction emission assessment has taken into account Crawley Local Plan policies.

9.1.1 The question of local plan policies in the *context* of carbon was raised in the Local Impact Report at Matter 16.1b: '*The unsustainable growth of airport operations may result in significant adverse impacts to the climate' raised in the Sussex Authorities.'* Where the **Local Impact Report** [REP1-068] addressed matters in its text which related to the effect and application of the Jet Zero Strategy, the **Applicant's Response to the Local Impact Reports** [REP3-078] responded on that basis.

9.1.2 At ISH6 the JLAs referred to the Local Plan policies listed under that heading – which are CBC 2030 Local Plan (2015-2030): Policy ENV6 and GAT1.

9.1.3 GAT 1 is not concerned directly with greenhouse gases or climate change. It provides:

"...the council will support the development of facilities which contribute to the safe and efficient operation of the airport as a single runway, two terminal airport up to 45 million passengers per annum."

9.1.4 It is presumably referenced to signal that growth beyond 45mppa and a single runway does not have Local Plan support (although the Local Plan does recognise that "any decision about the significant growth of the airport (such as a second runway) would be a matter for government policy" – at paragraphs 1.38 and 9.5).

9.1.5 Policy ENV6 is as follows:

Policy ENV6: Sustainable Design and Construction

"*In order to maximise carbon efficiency, all homes will be required to meet the strengthened on-site energy performance standards of Building Regulations, and any subsequent increased requirements. Proposals for new non-domestic buildings should achieve BREEAM Excellent (for water and energy credits) where technically and financially viable.*

All development, including the alteration and extension of existing buildings, should consider how it may achieve the following sustainability objectives: In relation to carbon:

i. *Take an active approach to reducing its need to consume energy;*
ii. *Utilise renewable and low carbon energy technologies where appropriate;*
iii. *Look at ways to improve the existing building when adding improvements or extensions;*
iv. *Minimise the amount of carbon emitted throughout the implementation and construction process and ensure any existing embedded carbon onsite is retained;*
v. *Consider the establishment of district energy networks within heat priority areas or near potential sources of waste energy and consider connection or futureproofing developments for connection (see Policy ENV7);*
vi. *For other locally-specific climate change issues relating to Crawley, all development should consider how it will: vi. Tackle the serious water stress in the borough (see Policy ENV9);*
vii. *Cope with future temperature extremes, and ensure it does not unduly increase the impact of heatwave events.*

All development involving the creation of a new dwelling or the creation, change of use, or refurbishment of over 100sqm of internal floorspace should submit a Sustainability Statement demonstrating how the sustainability objectives above have been addressed during the design and construction processes. Further details on how these objectives can be addressed can be found in the Planning and Climate Change SPD."

9.1.6 The policy is addressed in the Applicant's Deadline 3 Submission **Local Planning Policy Compliance Tables** at page 35 [REP3-055], which gives detailed references to where the components of the policy are addressed in the application documents.

9.1.7 In relation to the particular concern expressed in the LIR (significant adverse impacts to the climate), it is not understood that the JLAs are suggesting that the NRP could have that effect. As the LIR makes clear at paragraph 16.23:

"It is acknowledged that the Jet Zero Strategy enforces the position that national/international policy such as the UK Emission Trading Scheme / Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) will be used to manage emissions from aviation to align with the broader UK Governments net zero target."

9.1.8 In the context of the built environment, however, it is relevant to record that the principal commitments in the Carbon Action Plan [APP-091] include:

- Net zero for GAL Scope 1 and 2 GHG emissions by 2030
- Zero emissions for GAL Scope and 2 GHG emissions by 2040
- A budget of 1.15MtCO_2e for construction carbon and a commitment to PAS 2080 for construction works.

9.1.9 As the **Carbon Action Plan** [APP-091] makes clear at paragraph 1.2.2, GAL's commitment is not contingent on the approval and implementation of the NRP. The net zero and zero emissions commitments apply to the whole of GAL's estate, including any new build, which will be constructed in accordance with the low carbon behaviours of PAS 2080.

9.1.10 These commitments (and GAL's track record in carbon reduction which has been achieved without the influence of the Local Plan) go well beyond Local Plan policies and well beyond CBC's own carbon commitments.

9.1.11 The most up to date statement of those commitments is set out in the Local Plan Review, currently completing its examination. The Review explains:

"2.34 Crawley borough has some unique characteristics and opportunities that enable the delivery of a clear approach to mitigation against, and adapting for a changing climate, whilst positively embracing the borough's ambitious targets of being carbon neutral by 2050, while achieving net zero greenhouse gas emissions from council activities by 2040 at the latest."

9.1.12 The background is set out at paragraph 2.51:

"*Net Zero Carbon Commitment*
Crawley Borough Council declared a Climate Emergency by a unanimous vote at Full Council on 17 July 2019. This pledged to reduce carbon emissions generated by Crawley Borough Council activities by at least 45% by 2030 and to zero by 2050 as recommended by the Inter-governmental Panel on Climate Change (IPPC). On 15 December 2021 Full Council unanimously passed a further resolution amending these targets so as 'to pledge to reduce carbon emissions by at least 50%, and as close to net zero as possible by 2030, and to reach net zero by 2040 as the very latest."

9.1.13 In terms of requirements for new development, Policy EC4 is concerned with the new Strategic Employment Location at Gatwick Green and its requirements include:

"…demonstrating how the development will achieve Net Zero emissions and carbon neutrality by 2050."

9.1.14 Gatwick, therefore, is committing itself to significantly more ambitious carbon reduction targets than CBC is applying to its own activities or to development in the borough.

11 Action Point 11

11.1 Set out issues related to contextualising carbon budgets and targets from local plans and their assessments already undertaken.

11.1.1 IEMA Guidance on p24 notes:

- *"…it is essential to provide context for the magnitude of GHG emissions reported in the EIA in a way that aids evaluation of these effects by the decision maker"*
- *"the specific context for an individual project and the contribution it makes must be established through the professional judgment of an appropriately qualified practitioner, drawing on the available guidance, policy and scientific evidence"*

11.1.2 It reiterates later:

- *"It is down to the practitioner's professional judgment on how best to contextualise a project's GHG impact…the starting point for context is therefore the percentage contribution to the national… budget as advised by the CCC"*

11.1.3 There is no level below national/devolved scale at which carbon budgets have any statutory role, and where budgets do exist then the extent to which they are intended to reflect the impacts of national infrastructure projects are unclear.

11.1.4 Figure 6 within the IEMA guidance lists *"Good practice approaches for contextualising a project's GHG emissions"* but this presented as a range of potential contextualisation sources as, clearly, not all will be applicable to all types of project.

11.1.5 However, Table 1 within IEMA guidance provides further sources of contextual information. It notes that:

- *"Local or regional carbon budgets developed by local authorities"* are pertinent for "*individual projects and local decision-making*".

11.1.6 But notes the limitations that:

- *"Effects of GHG emissions are not geographically circumscribed, so a geographic budget (below a national budget)… is not very meaningful"*, and
- *It's unclear whether emerging local authority or regional budgets will add up coherently to the UK budget".*

11.1.7 On this basis it is considered appropriate, given the decision-making level for the DCO, the geographic extent of impacts arising from the Project, and the uncertainty about the coherence and value of the local carbon budget setting that it provides limited scope for contextualising emissions arising from the Project.

11.1.8 Therefore, reflecting the IEMA guidance set out in 11.1.2 above, it is the expert practitioner's view that contextualisation for a project of this type and scale can be carried out by examining the percentage contribution to the UK's national carbon budgets as advised by the CCC, as has been carried out within ES Chapter 16: Greenhouse Gases [APP-041] at Table 16.9.13.

12 Action Point 12

12.1 Confirm the rationale with respect to emissions from inbound flights and whether the inbound flights of the potential 13mppa as part of scheme should be included.

12.1.1 The approach adopted to quantification of inbound flights is set out in Paragraph 16.4.16 which notes only departing aircraft emissions have been quantified within the ES.

12.1.2 This approach applies both to domestic and international flights – in both cases the ES accounts for outward/departing flights only within the assessment.

12.1.3 Within a national context this is considered appropriate as it avoids double counting when considering the impact of flights between UK airports. The UK Emissions Inventory calculates the impacts arising from domestic aviation through use of Civil Aviation Authority (CAA) data on aircraft movements and modelling journey modes (taxi, take-off, CCD, descent etc). As noted in the aviation methodology for inventory reporting[1] considering only outward flights allows for compatibility between estimated GHG emissions and records on aviation fuel used within the UK.

12.1.4 At an international context the consideration of only departing aircraft allows for contextualisation against the UK greenhouse gas inventory, against the emissions within scope of the UK carbon budgets, and against the Jet Zero trajectory, all of which align with the approach within the UK emissions inventory approach based on modelling 'bunker fuel' consumption of jet fuel. While it would be technically feasible to estimate emissions from inbound international flights these would not provide a meaningful quantification for comparison and contextualisation; the relevant contextualisation metrics from the UK carbon budgets; the ANPS; the NNNPS; and the Jet Zero Strategy do not include emissions from inbound international flights. Contextualising against global emissions would not be meaningful.

[1] https://uk-air.defra.gov.uk/assets/documents/reports/cat09/2304171441_ukghgi-90-21_Main_Issue1.pdf

13 Action Point 13

13.1 Which provision of the ACA accreditation scheme preclude the use or supplementing for other schemes. For information relating to local schemes at suggestion of JLA.

13.1.1 The ACA Offsetting Guidance[2] does not preclude the use of other schemes, rather it specifies the schemes from which offsets can be bought. Paragraph 4.11 of the ACA Offsetting Guidance (2023) states:

"Airports shall choose offset reduction projects from specific programmes.

Rationale: Only the most established and credible offset programmes that meet strict methodological and quality criteria are eligible under Airport Carbon Accreditation. Airports shall choose projects from the following list:

- Verified Carbon Standard
- Gold Standard
- Climate Action Reserve
- American Carbon Registry
- UK Woodland Carbon Code (for UK-based airports only)
- Label Bas Carbone (for French airports only)"

13.1.2 As GAL transitions from carbon neutral to net zero status, absolute carbon reductions are being achieved. Consequently, residual emissions, and the amount of offsets required, are reducing. For net zero status, only removal offsets are allowed. GAL is in the process of transitioning from reduction to removal offsets. For 2023, GAL bought 25% removal offsets and 75% reduction offsets.

13.1.3 Currently GAL buys offsets annually in arrears from the voluntary carbon market (VCM). GAL is investigating developing a local removal offsetting project which would, ideally, provide all offsets from 2030. It should be noted that any local offsetting scheme will have to be accredited by an ACA recognised programme.

[2] *Offsetting Guidance Document*, Airport Carbon Accreditation, December 2023.

13.1.4 Consequently, it is not possible to identify what specific offset project(s) GAL will be using in 2030. GAL cannot identify what projects will be available on the VCM in 2030, nor whether a suitable local scheme will have been established.

14 Action Point 14

14.1 Respond to points raised by Mr Johnson of Aviation Environment Federation concerning risk.

14.1.1 Paragraphs 16.4.12 to 16.4.14 of **ES Chapter 16: Greenhouse Gases** [APP-041] set out the primary rationale for not including non-CO2 emissions in the assessment of impact. It notes the recognised uncertainty on the mechanisms and effects of these emissions on atmospheric warming.

14.1.2 The representation from AEF acknowledged a risk regarding their exclusion from the assessment, and proposed use of a multiplier to estimate these impacts. A multiplier is included within the UK Government Greenhouse Gas Conversion Factors for Company Reporting. These conversion factors have been developed as part of the National Atmospheric Emissions Inventory (NAEI) to support the UK Greenhouse Gas Inventory.

14.1.3 The Methodology Paper supporting the Company Reporting factors provides further information on Non-CO2 impacts and radiative forcing[3]. It notes the current uncertainty over the magnitude of these and refers to the indicative use of a multiplier. It notes that the approach used to develop CO2-equivalent metrics (used as the standard approach for reporting emissions of the Kyoto basket of greenhouse gases) is not directly applicable to short-lived climate pollutants (which is used in reference to non-CO2 emissions such as water vapour, contrails, NOx etc). It notes the impacts aviation has beyond the emissions of CO2 only.

14.1.4 It further notes that “a multiplier is not a straightforward CO_2 equivalent metric” and that they do not “*reflect accurately the different relative contributions of emissions to climate change over time, or reflect the potential trade-offs between the warming and cooling effects of different emissions*.” It does, however, suggest the use of a 1.7 multiplier (while noting it is subject to significant uncertainty).

14.1.5 The risks arising from non-CO2 emissions are recognised by the Applicant. The Government's multiplier is for companies to use when considering their own travel emissions, it does not represent the actual impact of non-CO2 emissions because the science behind how to calculate and assess these is unclear, and furthermore there is no agreed scientific consensus. Rather than using a multiplier that is known to be inaccurate, the quantification of non-CO2 has been

[3] https://assets.publishing.service.gov.uk/media/647f50dd103ca60013039a8a/2023-ghg-cf-methodology-paper.pdf

excluded from the Environmental Statement. Presenting a value for the impact of these serves little purpose beyond further highlighting that aviation-related emissions are more material than those from other emissions sources within the GHG assessment.

14.1.6 Furthermore, a modified emissions estimate cannot be contextualised as directed by IEMA guidance. There is no recognised benchmark against which to compare the impact of non-CO2 emissions. They are not reflected within the Nationally Determined Contributions declared in line with the 2015 Paris Agreement, nor are they included within UK carbon budgets, nor the Jet Zero trajectory.

14.1.7 Similarly, the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 recognise that an environmental statement should only contain the information reasonably required for reaching a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment (regulation 14(3)(b)); and they recognise (Schedule 4 paragraph 6) that there may be difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the relevant environmental information.

14.1.8 The Applicant does not seek to diminish the recognition that non-CO2 emissions have, and has committed (within the CAP) to monitor and respond to emerging policy relating to non-CO2 emissions as this comes forward.

14.1.9 The uncertainty around the effect of non-CO2 emissions is recognised by the Government. The Jet Zero Strategy at paragraph 3.64 states that "*the uncertainties are real*". The JZS recognises that more research is necessary but reports that: "*The research and analysis carried out thus far suggests that many of the measures to improve efficiencies, rollout of SAF, and the acceleration of zero emission flight are expected to also have a positive impact on reducing non-CO2 impacts*." (paragraph 3.66)

14.1.10 The JZS commits the Government to take a leading role in that research and states:

"*We will work closely with atmospheric scientists, other researchers, industry and internationally to better understand the science and potential mitigations of non-CO2 impacts from aviation. Furthermore, we will carefully consider any need for additional research and development activity on non-CO2, including working with UK Research and Innovation (UKRI). We are also committed to working through ICAO to lead research into the non-CO2 impacts of international aviation and their mitigation. As the evidence base develops we will support the consideration*

of appropriate international measures to address non-CO2 impacts alongside reducing CO2 emissions." (paragraph 3.68)

14.1.11 An update is provided on page 33 of Jet Zero Strategy: One Year On which also reports that the Government's next steps include:

"*Undertake further work on how non-CO2 impacts could be monitored and included in the UK ETS, in line with our aim to price aviation's non-CO2 climate impact once scientific understanding sand consensus permit*."

14.1.11 The issue is fully recognised by Government and it is apparent that policies will be developed and put in place to address non-CO2 impacts alongside reducing GHG emissions.

17 Action Point 17

17.1 Respond to Cllr Essex about implications of SAC and CAT*[4] on local transport issues

17.1.1 It is understood the concern from Cllr Essex is that highways improvements put in place to support the Project may, inadvertently, cause adverse impacts on traffic demand and – in turn – lead to increases in GHG emissions that impact upon local carbon targets.

17.1.2 To address the policy question first, as noted within Action Point 11 the assessment of GHG emissions has contextualised emissions with regard to national carbon budgets, and while many other stakeholders have developed their own commitments, targets, and trajectories towards Net Zero (or other carbon targets) these are not statutory targets and national policy, guidance and precedent is clear that there is no need to assess the Project's impacts against such local policy in this context.

17.1.3 The **Transport Assessment** [REP3-058] carried out for the Project has assessed in full the likely impacts on the road network arising from the Project. It concludes that the mitigation measures, including the delivery of the highway improvement works, active travel improvement works and the significant sustainable travel measures and investments proposed in the SAC will have the overall effect of reducing congestion but also encouraging more sustainable travel patterns.

[4] We consider that this is a typo and should be a reference to the CAP, so have responded on that basis.

Appendix A: Luton Luton Airport Expansion – 7.08 Green Controlled Growth Framework

Luton Rising

Our airport.
Our community.
Our planet.

February 2024

London Luton Airport Expansion

Planning Inspectorate Scheme Ref: TR020001

Volume 7 Other Documents

7.08 Green Controlled Growth Framework

Application Document Ref: TR020001/APP/7.08

APFP Regulation 5(2)(q)

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

London Luton Airport Expansion Development Consent Order 202x

7.08 GREEN CONTROLLED GROWTH FRAMEWORK

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Author:	Luton Rising

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Revision 2	November 2023	Additional Submissions – Deadline 5
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Revision 4	February 2024	Additional Submissions – Deadline 10
Revision 5	February 2024	Additional Submissions – Deadline 11

EXECUTIVE SUMMARY

Green Controlled Growth

Airports do much that is good. They are gateways to the world for business and leisure. They are very important economic hubs. They can generate tens of thousands of jobs.

Airports can also generate negative environmental effects that, unless controlled and managed, can impact on surrounding communities.

Luton Rising (a trading name of London Luton Airport Limited) is a business and social enterprise owned by a sole shareholder, Luton Borough Council, for community benefit, and is at the heart of a movement for positive change in the Luton community. Green Controlled Growth (or GCG) is a key value of Luton Rising in its ambition to enable the sustainable expansion of Luton Airport, in alignment with the Government's Jet Zero Strategy. Luton Rising has developed a unique Green Controlled Growth (GCG) Framework to make sure that airport growth takes place within environmental Limits. Crucially, these Limits are not vague aspirations – they will be secured through the legally binding GCG Framework and overseen by an independent body called the Environmental Scrutiny Group (ESG).

This document is the **Green Controlled Growth (GCG) Framework [TR020001/APP/7.08]**, which sets out the necessary processes required for the functioning of the GCG approach and the values of the Limits and Thresholds. It supports this application by Luton Rising (hereafter referred to as 'the Applicant') for development consent to expand the airport.

This document, including its appendices, will be secured through the Development Consent Order (DCO), with specific requirements set out in the Order relating to the implementation of GCG. This document is accompanied by the Green Controlled Growth (GCG) Explanatory Note, which sets out how and why the GCG Framework has been developed, and how it will work in future.

How will Green Controlled Growth work?

Green Controlled Growth will place controls on four key categories of environmental effect: air quality, greenhouse gas emissions, aircraft noise, and surface access. These topics have been selected as the areas where environmental effects will continue to change over time, as passenger numbers grow and technology improves.

Limits that are not to be exceeded have been defined, based on the following environmental effects:

a. **aircraft noise** – by the total area of land experiencing noise above a certain threshold;

b. **air quality** – by the concentrations in the air of the pollutants most relevant to human health;

c. **greenhouse gas emissions** – by emissions from airport operations and surface access; and

d. **surface access** – by percentage of passengers and staff travelling by unsustainable modes of transport.

This document sets out the numerical values for these Limits, how they've been developed, and two threshold levels that are lower than the Limits themselves. The thresholds provide an early warning of any potential increase in environmental effects, with the aim of ensuring that these Limits are not breached.

The airport operator will be required to continually monitor and periodically report on the extent of the environmental effects associated with the airport in the four areas.

Luton Rising, as the Applicant, will not be marking its own homework – there will be a new, independent, body called the Environmental Scrutiny Group (ESG) to oversee Green Controlled Growth and make sure that it works in practice. The ESG is proposed to include independent members, and representatives from Luton Borough Council and neighbouring councils. The ESG will be supported by four Technical Panels, one for each of the environmental topics. The Green Controlled Growth process has also been designed to ensure that community views are taken into account.

If monitoring were to indicate at any point that a Limit was in danger of being breached, then plans must be produced by the airport operator to set out how that breach will be avoided, for approval by the ESG. If any one of the environmental Limits were breached (unless for reasons outside the airport operator's control), further growth will be stopped, mitigation will need to be implemented if required, and ultimately, airport capacity would be constrained until environmental performance returned below the Limits.

The key elements of the legally binding GCG Framework are therefore:

a. limits on environmental effects in four key areas;
b. a series of processes to be followed as environmental effects reach Thresholds defined below these Limits;
c. ongoing monitoring of the actual environmental effects of expansion and operations at the airport;
d. independent oversight of environmental effects associated with the operation of the airport; and
e. an explicit commitment to link environmental performance to growth at the airport.

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1 INTRODUCTION

1.1 Purpose of this Document

1.1.1 This document is the **Green Controlled Growth (GCG) Framework [TR020001/APP/7.08]**, which sets out the necessary processes required for the functioning of the GCG approach and the values of the Limits and Thresholds. It supports this application by Luton Rising (a trading name of London Luton Airport Limited) and the owners of Luton Airport, for development consent to expand the airport. Luton Rising (hereafter referred to as the Applicant), is a business and social enterprise owned by a sole shareholder, Luton Borough Council, for community benefit. Luton Rising is at the heart of a movement for positive change in Luton and the Luton community.

1.1.2 As part of the application for development consent, the GCG Framework is accompanied by the **Green Controlled Growth (GCG)Explanatory Note [TR020001/APP/7.07]**, which is intended to act as a narrative to explain the GCG approach which forms part of the application for development consent, setting out the reasons why the Applicant has developed this approach, how the proposals have been developed and refined based on feedback from stakeholders, and how GCG is proposed to work.

1.1.3 This document, along with the **Terms of Reference** and **Monitoring Plans** included as appendices, will be secured by **Schedule 2** and be a 'certified document' identified in **Schedule 9** of the **Development Consent Order (DCO) [TR020001/APP/2.01]**.

1.1.4 Part 3 of **Schedule 2** of the **DCO** will secure the processes necessary to implement GCG including requirements to undertake monitoring and reporting, requirements when Level 1 Thresholds, Level 2 Thresholds and Limits are reached, and review processes.

1.1.5 As set out in the **GCG Explanatory Note [TR020001/APP/7.07]**, the airport operator will be responsible for implementing the GCG provisions in the DCO and the DCO contains the power to transfer or grant the benefit of the Order from the Applicant to the airport operator to enable this. Therefore, within this document, when referring to the processes and requirements of the GCG Framework, reference is made to the airport operator, rather than the Applicant, as if the benefit of the order has been transferred/granted and the airport operator is the undertaker for the purposes of the Part 3 of **Schedule 2** to the **DCO.**

1.2 GCG Limits and Thresholds

1.2.1 The GCG Framework includes Limits and Thresholds that apply to four key environmental topics:

a. aircraft noise;

b. air quality;

c. greenhouse gas emissions; and

d. surface access.

1.2.2 The GCG Framework only applies to any growth that occurs at the airport beyond the consented baseline position (i.e. above the existing consented passenger cap). This is triggered by notice under article 44(1) of the **DCO [TR020001/APP/2.01]** being served. When the notice is served under article 44(1) of the DCO the existing planning conditions will cease to apply and the GCG Framework will be required to be implemented as per the provisions of the DCO.

1.2.3 The Level 1 Thresholds, Level 2 Thresholds and the Limits correspond to:

a. Phase 1 – from the point at which notice under article 44(1) of the **DCO [TR020001/APP/2.01]** is served, to the point at which commercial passenger throughput reaches 21.5 mppa, consistent with the assessment of Phase 1 in the EIA;

b. Phase 2a – from the end of Phase 1 to the point at which commercial passenger throughput reaches 27 mppa, consistent with the assessment of Phase 2a in the EIA;

c. Phase 2b – from the end of Phase 2a to the point at which commercial passenger throughput of 31.5 mppa is reached; and

d. full capacity operation – from the end of Phase 2b on an ongoing basis.

1.2.4 These phases have been selected to align with the definition of assessment phases and scenarios assessed in the **Environmental Statement (ES) [TR020001/APP/5.01]** in order to ensure that the Limits are based on quantified forecasts of the effects of the expanded airport.

1.2.5 Note that while the Phase 1 is the point at which commercial throughput reaches 21.5 mppa, the value of the Limit for this phase is based on the 'Faster Growth Case', which assumes a passenger throughput of 23 mppa and which represents a 'reasonable worst case'.

1.2.6 Once a particular Phase has been reached, there will be no 'stepping back' to the previous Limit if throughput at the airport decreases back below that for any milestone.

1.2.7 Performance against each Limit and Threshold will be considered independently of the others, and the processes for a breach of Limit or exceedance of a Threshold will apply to each individual exceedance or breach, though each may be noted in the same Monitoring Report and addressed in the same Level 2 Plan or Mitigation Plan where exceedances or breaches are considered by the airport operator to be linked. Controls on growth would be based on the highest adverse impact observed, and thus, growth at the airport would stop if any one Limit was breached, irrespective of the performance against the remaining Limits.

2 GOVERNANCE

2.1 Environmental Scrutiny Group

2.1.1 Paragraph 19 of **Schedule 2** to the **DCO [TR020001/APP/2.01]** sets out the need to establish a new body to oversee the governance of GCG – the Environmental Scrutiny Group (ESG).

2.1.2 The ESG will have the following powers, which must be exercised in accordance with its **Terms of Reference** included at **Appendix A**:

a. providing commentary on periodic **Monitoring Reports** produced by the airport operator following reviews by the relevant Technical Panels;

b. approving or refusing Level 2 Plans or Mitigation Plans put forward as required by the airport operator if any GCG environmental effect has exceeded a Level 2 Threshold or Limit respectively;

c. where the airport operator can demonstrate that this is the case, certifying that an exceedance of a Level 2 Threshold or Limit is due to circumstances beyond the operator's control;

d. forum for consideration of statutory enforcement representations;

e. mutually agreeing to modifications to the **Terms of Reference** included at **Appendices A and B** and Monitoring Plans included at **Appendices C to F**; and

f. approving or refusing applications by the airport operator to modify timescales within the GCG process, or Level 1 Thresholds, Level 2 Thresholds or Limits.

2.2 Technical Panels

2.2.1 In exercising these powers and functions, the ESG will be supported by four new Technical Panels, one for each of the environmental topics covered by GCG. The Technical Panels will provide technical expertise to ESG in interpreting monitoring outputs and determining the suitability and effectiveness of Level 2 Plans and Mitigation Plans put forward by the airport operator.

2.2.2 The **Terms of Reference** for these Technical Panels is included at **Appendix B**.

2.3 Review of GCG Processes

2.3.1 In order to ensure that GCG remains relevant over time, paragraph 24 of **Schedule 2** to the **DCO [TR020001/APP/2.01]** sets out that the GCG process should be reviewed periodically by the airport operator. The first such review must be undertaken no later than three years from the date notice is served under article 44(1) of the DCO, and then on a five-yearly basis from this point.

2.3.2 The review should identify whether any improvements to the GCG process could be made and, where this is the case, this should be summarised in a report to be submitted to the ESG for comment, and the ESG may request advice from relevant Technical Panels. This could include improvements to

process (including consideration and where reasonably practicable incorporation of new and emerging best practice in monitoring techniques) and should also consider whether the funding made available to ESG and Technical Panel members secured through a separate legal agreement is sufficient to cover the costs of their involvement.

2.3.3 Following such a review the airport operator may apply to the ESG to modify any of the specified time periods in Part 3 of **Schedule 2** to the **DCO** where it considers it necessary for the effective implementation of the GCG process.

2.3.4 As set out in sections 3.3, 4.4, 5.4 and 6.3 of this document, the airport operator will undertake reviews of the Thresholds and Limits associated with particular environmental topics in specific circumstances. Where these reviews identify grounds to change Thresholds or Limits the airport operator will have the ability to apply to the ESG to do so. There will be no ability to change any of the Level 1, Level 2 Thresholds or Limits to permit materially worse environmental effects than those identified in the Environmental Statement (ES). This ensures that GCG can operate effectively over time.

2.3.5 To avoid multiple reviews of GCG happening during the initial stages of growth, where any of the topic-specific reviews referenced in sections 3.3, 4.4, 5.4 and 6.3 of this document are triggered ahead of the first GCG process review referenced in paragraph 2.3.1, the topic-specific review(s) will be incorporated into this first process review, notwithstanding any timescales for the review to take place that would otherwise apply.

3 AIRCRAFT NOISE (THE NOISE ENVELOPE)

3.1 Limits and Thresholds

3.1.1 The Noise Envelope and the GCG Framework have similar principles and functions and hence the noise section of GCG is being defined as the Noise Envelope for the Proposed Development, so there is single control process for aircraft noise and this is integrated with the wider control processes which form GCG.

3.1.2 The measure for the aircraft noise Limits and Thresholds is the L_{Aeq} noise contour area for day (0700 -2300) and night (2300-0700).

3.1.3 The exact shape of noise contours can change year on year dependent on factors such as wind direction, which can influence the direction in which the runway operates and therefore the shape of the contours. It is therefore proposed to use the total area enclosed by the noise contour as the basis for the Limit, rather than the specific areas of land enclosed by a particular contour.

3.1.4 The size of noise contours can also be affected by runway 'modal split', the direction in which aircraft use the runway (east to west or west to east). In general, aircraft take-off and land into a headwind to maximise lift. As such, the runway modal split is affected by wind direction, which in turn can affect the size of noise contours.

3.1.5 As wind direction is outside the control of the airport operator, it is proposed that noise contours calculated annually to determine compliance with the Limits should be calculated using a 'standard' modal split, calculated from a 10-year average (2010 – 2019) as used for modelling in the ES. This will allow year on year comparisons of noise performance to be made and compared against Limits.

3.1.6 The Limits are aligned to the five-year **Noise Action Plan (NAP)** cycle. Table 3.1 defines the Thresholds and Limits for aircraft noise.

3.1.7 Each year, the airport operator will convert current and future Threshold and Limit noise contour areas (see Table 3.1) into equivalent total 16-hour daytime and total 8-hour night-time quota counts[1]. The airport operator will use total scheduled and forecast daytime and night-time quota counts (and their comparison to the relevant Threshold Equivalent QC and the Limit Equivalent QC):

a. to inform forward planning of airport operations (both annual and five-year forward plan);

b. to incentivise airlines to operate the quietest aircraft available in response to the opportunity of growth;

[1] The conversion factor from contour area to QC will be based on regression analysis of the relationship between scheduled QCs and actual noise contours from the previous five-years of operation.

c. as part of the bi-annual process[2] of slot management and capacity declaration; and

d. where in the forward plan the Level 2 Threshold Equivalent QC or Limit Equivalent QC is exceeded, to include within the annual Monitoring Report proposals for slot management measures, additional interventions or mitigation to ensure that the Limit will not be exceeded.

Table 3.1: GCG Limits and Thresholds for aircraft noise

Limit	Up to 2028	2029 – 2033	2034 – 2038	2039 - 2043*	2044 onwards (in 5 year cycles)*
Average summer day-time noise levels, as measured by size (km^2) of 54 dB $L_{Aeq,16hr}$ noise contour	**Limit**				
	33.0	32.0	30.4	32.6	32.6
	Level 2 Threshold (95% of limit)				
	31.4	30.4	28.9	31.0	31.0
	Level 1 Threshold (85% of Limit)				
	28.1	27.2	25.8	27.7	27.7
Average summer night-time noise levels, as measured by size (km^2) of 48 dB $L_{Aeq,8hr}$ noise contour	**Limit**				
	43.3	42.1	39.8	43.2	43.2
	Level 2 Threshold (95% of limit)				
	41.1	40.0	37.8	41.0	41.0
	Level 1 Threshold (85% of Limit)				
	36.8	35.8	33.8	36.7	36.7

3.2 Monitoring

3.2.1 Monitoring of the aircraft noise Limits is to be undertaken in accordance with the **Aircraft Noise Monitoring Plan** at **Appendix C.**

3.3 Noise Limit Review

3.3.1 Once the DCO is granted and implemented, the airport operator will adopt the Aviation Environmental Design Tool (AEDT) noise model used to prepare the forecasts relied upon in making the DCO (the forecasts presented in the ES). This 'DCO noise model'[3] will then be maintained and used as the basis for planning for growth and noise control at the airport to ensure that future noise

[2] Twice each year, once for winter and once for summer

[3] The 'DCO noise model' is defined in the Aircraft Noise Monitoring Plan in Appendix C, and will be updated in line with any approved Airspace Change Proposal.

forecasts can be consistently compared with the noise Limits and Thresholds set by the DCO using the same model (comparing 'like with like').

3.3.2 Once the DCO is made and implemented, the airport operator will review, and as necessary update, the noise forecasts every five years. The airport operator will review and as necessary update its noise forecasts around the mid-point of each five-year Noise Action Plan period. The five-yearly forecasts will be based on the latest available information for matters such as predicted ATM growth; fleet mix; and aircraft noise source levels and will be informed by annual monitoring of noise performance.

3.3.3 The airport operator will also update forecasts when the International Civil Aviation Organization (ICAO) publish a new 'noise chapter' for the Next-Gen, low carbon, aircraft (i.e. the next 'Chapter' following on from the current 'Chapter 14') or on the approval of an Airspace Change Proposal[4].

3.3.4 In response to a new ICAO noise chapter, the airport operator will create an alternative noise forecast that will be based on the most up to date five-yearly forecast available at the time aligned with any parallel requirements to provide noise information as part of any airspace change process. The alternative noise forecast will be used to evaluate how aircraft noise around the airport could change as a result of the progressive introduction of latest noise 'Chapter' aircraft. The alternative forecast should include sensitivity tests as appropriate (e.g. for the rate at which new Chapter aircraft will enter into the fleet mix).

3.3.5 The alternative noise forecast will be used to progressively test whether the DCO Noise Limits (and corresponding thresholds) could be reduced from 2039 onwards. No change in DCO Noise Limits or Thresholds is envisaged before 2039[5] to ensure that the limits set by the DCO up to 2039 (particularly as set for the 2034-2038 five-year period), as adjusted for any approved Airspace Change Proposal, to drive the continuing introduction of New-Gen aircraft into the growing fleet using the airport.

3.3.6 The airport operator will present the alternative noise forecasts to the Noise Technical Panel at the earliest opportunity. The Noise Technical Panel should have due regard to the CAA's parallel consideration of noise information with regard to any Airspace Change Process.

3.3.7 Within six months of a change and based on the alternative noise forecasts, the airport operator must prepare a Noise Limit Review. This is a document that should set out the airport operator's proposal to reduce, where reasonably practicable, the DCO Noise Limits or Thresholds. For airspace change, this would be in response to an approved Airspace Change Proposal. For a new ICAO noise chapter and associated new aircraft technology, the Noise Limit Review would present proposed noise Limit and Threshold reductions from

[4] Either promoted by the airport operator or in response to a CAA instruction as needed to optimise airspace design across the SE of England.
[6] Other than as a result of an airspace change which could require noise limits to be increased where the airspace change is a direct consequence of CAA instruction to optimise the airspace in SE England balancing the needs of different airports.
[6] The short term day and night noise contour area limits set by condition 10 to the planning permission 15/00950/VARCON dated 13 October 2017 as calculated using the 'DCO noise model'.

2039 onwards in five-year steps based on the alternative noise forecast and discussions with the Noise Technical Panel.

3.3.8 The proposal made in the Noise Limit Review in response to a new ICAO noise chapter and associated new aircraft technology must:

a. Permit the airport growth granted by the DCO.

b. Reduce the Noise Limits and corresponding Thresholds if reasonably practicable (as informed by the alternative noise forecasts and dialogue with the Noise Technical Panel as set out in preceding paragraphs and if reasonably practicable what the new Noise Limits and Thresholds would be and when the Noise Limits and Thresholds would be changed).

c. Where (b) identifies opportunities to reduce Noise Limits and corresponding Thresholds, reduce the Noise Limits and corresponding Thresholds so they are below the '2019 cap'[6] as quickly as is reasonably practicable to share the benefits of the technology improvement with the communities affected by aircraft noise.

d. Identify whether changes to the forecast shape of the 54dBLAeq,16h and 48dBLAeq,8h noise contours have occurred, such that noise impacts are experienced by different local authorities from those originally identified and included as part of the Noise Technical Panel.

e. Where (d) identifies changes to the forecast shape of the 54dBLAeq,16h and 48dBLAeq,8h noise contours, set out any necessary amendments to the local authorities included as part of the Noise Technical Panel.

3.3.9 The draft Noise Limits Review must be submitted to the Noise Technical Panel for review. The Noise Technical Panel must complete its review within one month. The Noise Technical Panel review must have due regard to parallel consideration of noise information by the CAA with regard to any Airspace Change Process.

3.3.10 Within two months, the airport operator then updates the Noise Limits Review where it considers necessary having regard to the Noise Technical Panel review and formally submits it to the ESG for determination in accordance with paragraph 24(3) of **Schedule 2** to the **DCO.** The airport operator will provide a note documenting its response to the Noise Technical Panel's review on the draft Noise Limits Review and any parallel consideration of noise information by the CAA and this note is submitted to ESG in support of the application for ESG to approve the final Noise Limits Review.

3.3.11 The ESG must determine the airport operator's request for approval within 56 days, or the application is deemed to have been approved.

3.3.12 The decision of the ESG to accept or reject the Noise Limits Review will be published on the airport operator's website.

3.3.13 Following the determination of the first Noise Limits Review, the airport operator must prepare a Noise Limits Review and submit for ESG approval every five-

[6] The short term day and night noise contour area limits set by condition 10 to the planning permission 15/00950/VARCON dated 13 October 2017 as calculated using the 'DCO noise model'.

years following the same steps set out above always taking account of the latest information available and taking account of any further changes (i.e. further ICAO noise chapters and / or airspace change approvals).

4 AIR QUALITY

4.1 Air Quality Locations

4.1.1 As detailed in the **GCG Explanatory Note [TR020001/APP/7.07]**, a sifting methodology was applied to reduce the number of modelled locations down to a proportionate number of locations to be monitored and where the GCG Limits and Thresholds will apply, based on that monitoring.

4.1.2 This resulted in a simplified list of 15 key locations, with a representative receptor identified for each one, shown in Figure 4.1 and listed in Table 4.1.

Figure 4.1: Locations for ongoing monitoring of air quality concentrations

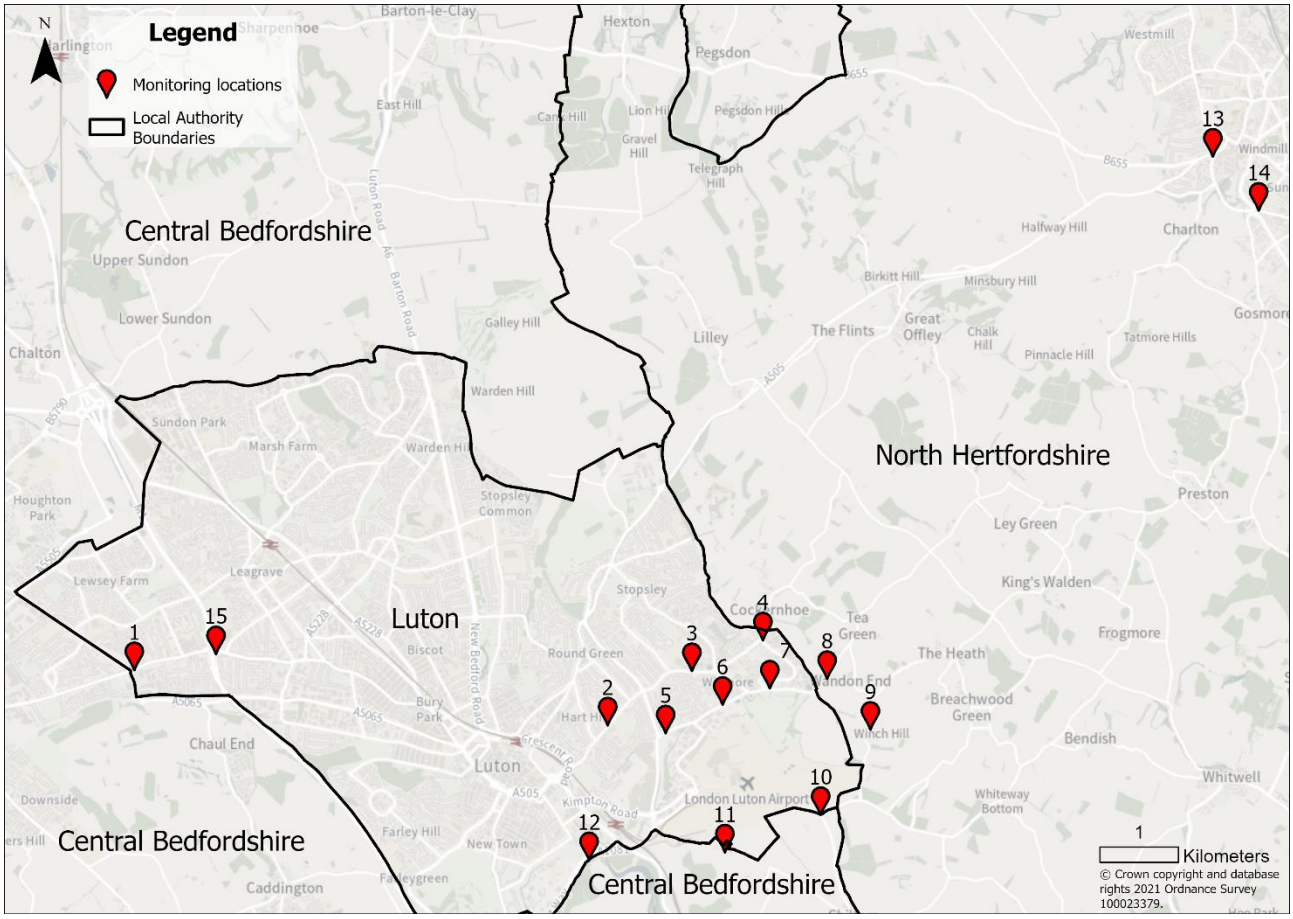


Table 4.1: Air quality monitoring locations

ID	X	Y	Site type	Owner	Name
1	504408	222509	Additional	-	A505
2	510431	221806	Additional	-	Crawley Green Road 1
3	511502	222497	Additional	-	Crawley Green Road 2
4	512405	222887	Additional	-	Crawley Green Road 3
5	511168	221706	Existing: LLA 15	LLAOL	Eaton Green Road 1 (LLA15)

ID	X	Y	Site type	Owner	Name
6	511893	222068	Existing: LN25	LBC	Eaton Green Road 2 (LN25)
7	512493	222276	Additional	-	Eaton Green Road 3
8	513223	222397	Existing: L4	LR	Darley Road (L4)
9	513773	221752	Existing: L6	LR	Winch Hill (L6)
10	513140	220669	Existing: LLA 11	LLAOL	Dane Street (LLA11)
11	511922	220193	Additional	-	Someries Castle
12	510194	220093	Additional	-	New Airport Way
13	518130	229036	Existing: NH93	NHDC	Hitchin 1 (NH93)
14	518713	228349	Existing: NH2	NHDC	Hitchin 2 (NH2)
15	505447	222712	Additional	-	M1

4.1.3 Table 4.2 sets out which of the 15 potential air quality locations are in and out of scope of GCG for each phase, based on the air quality forecasts included in **Chapter 7** of the **ES [TR020001/APP/5.01].** The detailed results are included as Appendix A to the **GCG Explanatory Note [TR020001/APP/7.07]**. This determination is based on the results of the air quality assessment for each assessment phase, which considers the relevant UK legal air quality limit in force for the forecast year utilised for each assessment phase (2026 for assessment phase 1, 2039 for assessment phase 2a, 2042 for assessment phase 2b, based on the Faster Growth Case sensitivity test). The percentage airport contributions stated therefore reflect the total airport-related contribution relative to the UK legal air quality limit in force for the corresponding assessment phase.

4.1.4 In practice, passenger growth may be faster or slower than assumed (provided at all times that environmental impacts do not exceed Green Controlled Growth Limits). As such, there may be a need in the future to recalculate airport contributions with respect to the proposed time-bound $PM_{2.5}$ Limits. To reflect this possibility, there is a mandatory review process of in scope locations set out in section 4.4 when (or prior to) new Limits come into effect.

4.1.5 Limits and Thresholds will only apply to those locations listed as being in scope. For out of scope locations, the monitoring results are required to be reported, but no further action is required as part of the GCG Framework. As shown in the table, not all of these locations will experience impacts across all three pollutants being considered (NO_2, PM_{10}, and $PM_{2.5}$) and across all forecast years.

Table 4.2: Air quality monitoring requirements by location

ID	Name	Pollutant	Phase 1	Phase 2a	Phase 2b	Full Operating Capacity
1	A505	NO_2				

ID	Name	Pollutant	Phase 1	Phase 2a	Phase 2b	Full Operating Capacity
		PM_{10}	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		$PM_{2.5}$				
2	Crawley Green Road 1	NO_2	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}				
		$PM_{2.5}$				
3	Crawley Green Road 2	NO_2	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}				
		$PM_{2.5}$				
4	Crawley Green Road 3	NO_2	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}				
		$PM_{2.5}$				
5	Eaton Green Road 1 (LLA15)	NO_2	In Scope (9% airport contribution)	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}	Out of Scope – Monitoring Only			
		$PM_{2.5}$			In scope (1% airport contribution)	In scope (1% airport contribution)
6	Eaton Green Road 2 (LN25)	NO_2	In Scope (11% airport contribution)	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}	Out of Scope – Monitoring Only			
		$PM_{2.5}$			In scope (1% airport contribution)	In scope (1% airport contribution)
7	Eaton Green Road 3	NO_2	In Scope (10% airport contribution)	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}	Out of Scope – Monitoring Only			
		$PM_{2.5}$			In scope (1% airport contribution)	In scope (1% airport contribution)
8	Darley Road (L4)	NO_2	In Scope (6% airport contribution)	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}	Out of Scope – Monitoring Only			
		$PM_{2.5}$				

ID	Name	Pollutant	Phase 1	Phase 2a	Phase 2b	Full Operating Capacity
9	Winch Hill (L6)	NO_2	In Scope (7% airport contribution)	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}	Out of Scope – Monitoring Only			
		$PM_{2.5}$				
10	Dane Street (LLA11)	NO_2	In Scope (13% airport contribution)	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}	Out of Scope – Monitoring Only			
		$PM_{2.5}$				
11	Someries Castle	NO_2	In Scope (8% airport contribution)	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}	Out of Scope – Monitoring Only			
		$PM_{2.5}$				
12	New Airport Way	NO_2	In Scope (6% airport contribution)	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}	Out of Scope – Monitoring Only			
		$PM_{2.5}$				
13	Hitchin 1 (NH93)	NO_2	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}				
		$PM_{2.5}$				
14	Hitchin 2 (NH2)	NO_2	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}				
		$PM_{2.5}$				
15	M1	NO_2	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}				
		$PM_{2.5}$				

4.2 Limits and Thresholds

4.2.1 The Air Quality Limits are linked to current UK National Air Quality Objectives for the average annual concentrations of three pollutants relevant to human health are associated with operations at the airport, as identified by **Chapter 7** of the **ES [TR020001/APP/5.01]**. These are different sizes of Particulate Matter (PM_{10}, $PM_{2.5}$) and Nitrogen Oxides (NO_x) – in particular Nitrogen Dioxide (NO_2). The GCG Limits and Thresholds for air quality are shown in Table 4.3. These Limits and Thresholds will apply at the locations listed in Table 4.2.

4.2.2 In response to the new long term legal target and interim target for $PM_{2.5}$ levels, as set out in the Government's Environmental Improvement Plan, Limits and associated Thresholds for $PM_{2.5}$ concentrations will also change over time, irrespective of Phasing, to align with the dates for these Government targets. The locations shown as being in scope in Table 4.2 must be reviewed within six months of the new legal or interim targets coming into effect.

Table 4.3: GCG Limits and Thresholds for air quality

Limit	Up to 2026 (all Phases)	2027 to 2039 (all Phases)	2040 onwards (all Phases)
Annual average $PM_{2.5}$ concentration	**Limit**		
	20 µg/m^3	12 µg/m^3	10 µg/m^3
	Level 2 Threshold		
	19 µg/m^3	11.4 µg/m^3	9.5 µg/m^3
	Level 1 Threshold		
	15 µg/m^3	9 µg/m^3	7.5 µg/m^3
Annual average PM_{10} concentration	**Limit**		
	40 µg/m^3	40 µg/m^3	40 µg/m^3
	Level 2 Threshold		
	38 µg/m^3	38 µg/m^3	38 µg/m^3
	Level 1 Threshold		
	30 µg/m^3	30 µg/m^3	30 µg/m^3
Annual average NO_2 concentration	**Limit**		
	40 µg/m^3	40 µg/m^3	40 µg/m^3
	Level 2 Threshold		
	38 µg/m^3	38 µg/m^3	38 µg/m^3
	Level 1 Threshold		
	30 µg/m^3	30 µg/m^3	30 µg/m^3

4.2.3 If monitoring were to show that the Limit or Level 2 Threshold was exceeded at any one of the locations listed as being in scope in Table 4.2, this does not immediately trigger the controls on growth required as part of the GCG Framework. Instead, this will trigger a requirement for the airport operator to determine the cause of the exceedance. Further detail on the necessary methodology is set out in the Air Quality Monitoring Plan at **Appendix D**.

4.2.4 If the breach was a result of factors unrelated to the airport's operation, as certified by the ESG in accordance with its Terms of Reference, this will not trigger the GCG process (i.e. no exceedance of the Level 2 Threshold or breach of a Limit) and growth could continue.

4.2.5 If it cannot be shown that the breach is due to factors unrelated to the airport, the airport operator will be required to undertake further analysis to determine the extent of the airport's contribution to the exceedance.

4.2.6 The GCG process will only be triggered (i.e. a Level 2 Plan or Mitigation Plan will need to be submitted to the ESG, and the appropriate processes followed) where this analysis shows that the airport's contribution to concentrations of a pollutant (relative to the Limit) is at least five percentage points greater than was forecast in Table 4.2.

4.3 Monitoring

4.3.1 Monitoring of the air quality limits must be undertaken in accordance with the Air Quality Monitoring Plan at **Appendix D**.

4.4 Air Quality Limit Review

4.4.1 It is acknowledged that UK legal limits for the three pollutants in scope for GCG could change in future, and new interim targets are likely to be published once the deadlines for those interim targets set out in the Environmental Improvement Plan are reached. It is proposed that if legal limits or interim targets change, this will trigger a review of GCG Air Quality Limits and Thresholds. It is proposed that this review should be carried out by the airport operator within six months of new legal limits being published, and the findings of this review should be submitted to the Air Quality Technical Panel and the ESG for comment. Such a review cannot introduce new pollutants to the GCG Framework.

4.4.2 This review will consider the appropriateness and practicality of revising the Air Quality Limits and Thresholds to align with the new UK legal limits (or interim targets); however, there will be no absolute requirement to do so. Where changes to Limits are proposed, this would also require a review of the relevant pollutant(s) at each of the locations in section 4.1 (including those out of scope), in order to determine if any locations would move in or out of scope. This review will also need to consider the appropriateness of proposed monitoring equipment specified as part of the Air Quality Monitoring Plan included as **Appendix D**, with respect to any new Limit(s).

4.4.3 A five-yearly review of pollutants at each of the locations in section 4.1 (including those out of scope) must be carried out by the airport operator,

starting from 2027 (aligned to the first reduction in $PM_{2.5}$ Limit). If the total concentrations are no more than 20% higher than was forecast in the ES (where the Limit has not reduced), no further action is required. Where the concentration of any given pollutant is 20% or more higher than was forecast, this will trigger a review of whether this location should be brought into scope of GCG. Where the Limit has reduced or will do before the next five-yearly review, the airport-related contributions (in percentage terms, relative to the new, lower Limit) must be recalculated to identify if any locations should be brought into scope of GCG.

4.4.4 On the basis of the air quality assessment summarised in Table 4.2, eight locations are in scope for GCG for NO_2 only up to Phase 2a, when airport passenger throughput reaches 27 mppa. Similarly, for $PM_{2.5}$ three locations are in scope from 2040 only when the UK legal limit reduces to 10 $\mu g/m^3$.

4.4.5 Therefore, a review of pollutant concentrations will be carried out to determine whether any locations should remain in scope of GCG when airport passenger throughput reaches 27 mppa, and within six months of the new limit coming into force in 2040, provided that a periodic review pursuant to paragraph 4.4.3 has not been carried out in the preceding 24 months.

4.4.6 A report setting out the process and outcomes of any review will be submitted to the ESG within six months of the review being triggered. The ESG will review this submission (involving the Air Quality Technical Panel where needed) and respond in writing within one month of submission.

4.4.7 Where the review identifies the need for changes to the Monitoring Plan, including in and out of scope locations, or monitoring equipment, these will be taken forward using the process set out in paragraph 20(4) of **Schedule 2** to the **DCO [TR020001/APP/2.01].**

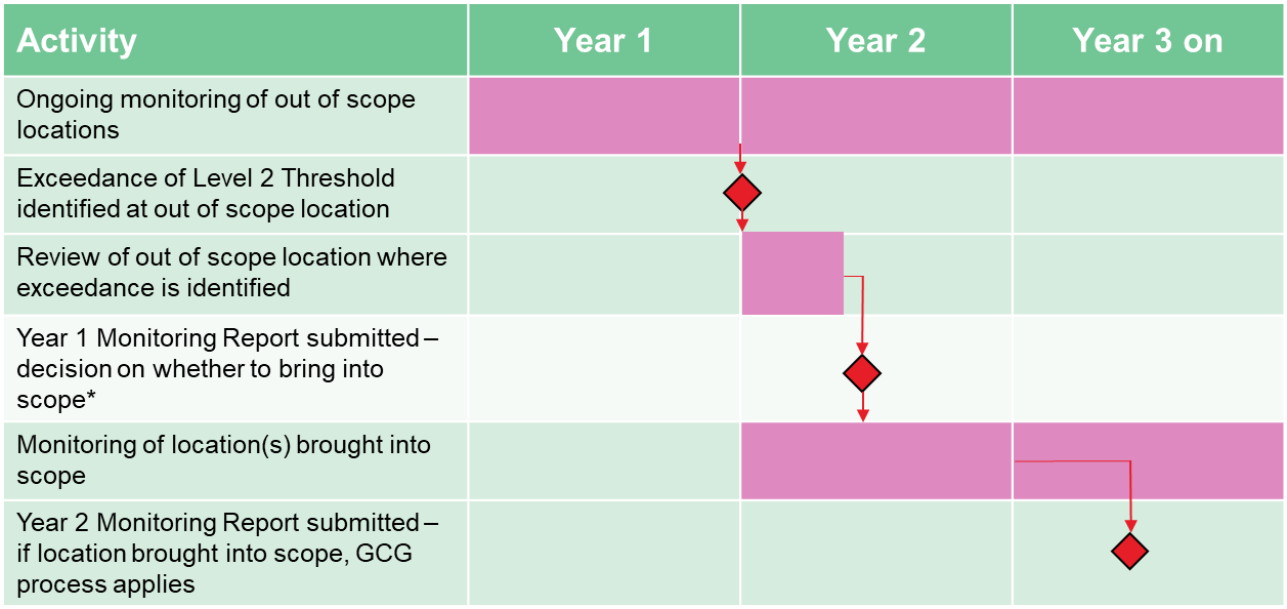
4.4.8 Where the review identifies the need for changes to the Air Quality Limits or Thresholds, these will be taken forward using the process set out in paragraph 24(3) of **Schedule 2** to the **DCO [TR020001/APP/2.01].**

4.4.9 Further to this five yearly review process, an additional review process applies for Phase 2a to determine if new locations should be brought in scope for GCG. Where an air quality Level 2 Threshold (or Limit) at an out of scope location has been exceeded, then a review of the airport's contribution to any increase in the pollutant concentration at that location will be carried out by the airport operator. This review will be included as part of the annual Monitoring Report for the year in which the exceedance occurred (unless otherwise agreed with the ESG that more time is required).

4.4.10 The criteria applied as part of that review for determining whether a location should change from out of scope to in scope will be the same as those applied originally for determining in scope vs out of scope monitoring locations (as described in paragraphs 3.3.7 – 3.3.11 of the **GCG Explanatory Note [TR020001/APP/7.07]**), with reference to the IAQM guidance on describing air quality impacts (see Table 3.2 of the **GCG Explanatory Note [TR020001/APP/7.07])** – i.e. locations where total airport impacts have remained negligible will remain out of scope.

4.4.11 This review process for Phase 2a is summarised in Figure 4.2.

Figure 4.2: Proposed approach to monitoring and review of out of scope location in Phase 2a



5 GREENHOUSE GASES

5.1 Limits and Thresholds

5.1.1 Greenhouse gases (GHG) Limits and Thresholds are defined with reference to Scope 1, Scope 2 and Scope 3 emissions. As Scope 1 and 2 emissions are those directly within an airport operator's control, limits are placed on gross Scope 1 and Scope 2 GHG emissions associated with airport operations. As Scope 3 emissions are not within the airport operator's direct control, limits are expressed as net Limits, inclusive of any offsetting that the airport operator may choose to implement.

5.1.2 The GCG Limits and Thresholds for GHG emissions is set out in Table 5.1.

Table 5.1: GCG Limits and Thresholds for GHG emissions

Limit	Limit Values (tCO_2e/yr)			
	Phase 1	**Phase 2a**	**Phase 2b**	**Full Operating Capacity**
Airport Operations CO_2e emissions (Scope 1 and Scope 2, no offsetting permitted)	**Limit**			
	Note that as per paragraph 5.4.2 these Limits (and Thresholds) will be reviewed to align with the Jet Zero Strategy ambition of zero-emissions airport operations by 2040			
	7,644	4,969	280	280
	Level 2 Threshold			
	7,262	4,721	266	266
	Level 1 Threshold			
	6,880	4,472	252	252
Airport Operations CO_2e emissions (Scope 3, offsetting allowable)	**Limit**			
	Note that as per paragraph 5.4.2 these Limits (and Thresholds) will be reviewed to align with the Jet Zero Strategy ambition of zero-emissions airport operations by 2040			
	8,938	7,204	2,884	2,699
	Level 2 Threshold			
	8,492	6,844	2,739	2,564
	Level 1 Threshold			
	8,045	6,484	2,595	2,429
Surface Access CO_2e emissions (Scope 3, offsetting allowable)	**Limit**			
	Note that from 2040 onwards, the Limit (and Thresholds) will be zero, irrespective of which Phase the airport is in			
	199,440	199,440	114,179	86,557
	Level 2 Threshold			
	189,468	189,468	108,470	82,229
	Level 1 Threshold			
	179,496	179,496	102,761	77,901

5.1.3 The following activities fall within the definitions used in Table 5.1:

5.1.4 Scope 1 and Scope 2 Airport Operations emissions:

a. Emissions from generation of grid electricity consumed at the airport by the airport operator[7,8.]

b. Emissions from the combustion of natural gas consumed at the airport by the airport operator[9].

c. Emissions from the combustion of liquid fuel consumed at the airport (including for on-airport fire training)[9].

d. Emissions from the combustion of fuel used in Internal Combustion Engine (ICE) airport vehicles[9.]

e. Emissions from the generation of electricity used to charge electrically powered airport vehicles[7.]

f. On-airport fugitive refrigeration emissions.

g. Emissions from airport usage de-icer.

5.1.5 Scope 3 Airport Operations emissions:

a. Emissions from generation of grid electricity consumed at the airport third parties[7,8.]

b. Emissions from transmission and distribution losses associated with grid electricity (including that used to charge electrically powered airport vehicles) consumed at the airport by third parties.

c. Emissions from the combustion of liquid fuel consumed at the airport by third parties[9.]

d. Emissions from the combustion of fuel used in Internal Combustion Engine (ICE) third party vehicles[9.]

e. Emissions from the generation of electricity used to charge electrically powered third party vehicles[7.]

f. Emissions from aircraft engine tests.

g. Emissions from business travel by employees of the airport operator.

h. Emissions from the processing of on-airport waste.

i. Emissions from the processing of on-airport wastewater.

j. Emissions from the third party usage of de-icer.

[7] These emissions are Scope 2 where emissions arise from activity under the direct control of the airport operator, and Scope 3 where they arise from activity that is not under the airport operator's direct control, for example electricity consumed by a tenant that is subject to separate metering.

[8] This excludes electricity use associated with the charging of electric vehicles, include any potential future electrically powered aircraft. This is to avoid double-counting emissions, given that emissions associated with EV charging are accounted for separately.

[9] These emissions are Scope 1 where emissions arise from activity under the direct control of the Airport operator, and Scope 3 where they arise from activity that is not under the Airport operator's direct control, for example the use of ICE vehicles by a third party with an operational presence at the airport.

5.1.6 Scope 3 Surface Access emissions:

a. emissions from the transportation of passengers to/from the airport;
b. emissions from the transportation of staff to/from the airport; and
c. emissions from the electricity usage for the operation of the Luton DART.

5.2 Offsetting

5.2.1 In determining how the airport can use carbon offsets to avoid exceeding the Scope 3 limits, regard has been had to ACA guidance (Ref 5.1). Offsets used to meet the Scope 3 limits should meet key offsetting principles, i.e. they should be:

a. additional (i.e. that the offset project and resulting emissions reductions would not have occurred in the absence of the offset project and the revenue from selling offsets);
b. monitored, reported and verified;
c. permanent and irreversible;
d. without leakage (i.e. they do not cause increased GHG emissions outside the project boundary);
e. with a robust accounting system to prevent double counting of offsets; and
f. without negative environmental or social externalities.

5.2.2 It is not considered appropriate to restrict offsets to a specified list of accreditation schemes as the ability to revise the offsetting strategy in the future as best practice evolves will lead to better environmental outcomes. However, at the time of writing the following offset programmes are considered to meet the above criteria:

a. Clean Development Mechanism.
b. Verified Carbon Standard.
c. Gold Standard.
d. Climate Action Reserve.
e. American Carbon Registry.
f. UK Woodland Carbon Code.

5.2.3 Where reasonably practical, and in line with the principles outlined in paragraph 5.2.1, the airport will seek to utilise local offsetting schemes that can deliver environmental benefits to the areas around the airport.

5.2.4 Where offsets are required where a Scope 3 Level 2 Threshold or Limit has been exceeded or breached respectively, the timing of the purchase of offsets can take place in one of two ways:

a. before the end of an annual monitoring period, prior to the submission of a Monitoring Report to the ESG; or
b. included as a mitigation measure in a Level 2 Plan or Mitigation Plan.

5.2.5 In the first scenario, use of offsets must be reported within the Monitoring Report as described as paragraph E3.1.3 of the **Greenhouse Gases Monitoring Plan** included as **Appendix E**. The purchasing of offsets at this point would negate the requirement for the airport operator to produce a Level 2/Mitigation Plan, as the reduction in net emissions to below the Level 2 Threshold or Limit would be reflected in the Monitoring Report.

5.2.6 In the second scenario, the Level 2 Plan or Mitigation Plan would need to set out how much offsetting is required, the intended scheme(s) and when the offsets will be purchased by. Provided the plan for the purchase of offsets is in accordance with the principles set out in this section on the use of offsets, the ESG should approve the Level 2 Plan or Mitigation Plan. However, the restrictions placed on capacity growth by the breaching of a Level 2 Threshold would remain in place until the Level 2 Plan is approved. The restrictions placed on capacity growth and slot allocation by the breaching of a Limit would remain in place until offset purchasing has decreased the relevant net emissions to a value below the Limit.

5.3 Monitoring

5.3.1 All monitoring, calculation and reporting will be carried out in accordance with the **Greenhouse Gases Monitoring Plan** included at **Appendix E**, which follows guidance on monitoring and reporting published by the Airport Carbon Accreditation scheme. This includes a requirement to provide a minimum set of information about any carbon offsets used to meet Scope 3 limits.

5.4 GHG Limit Review

5.4.1 Both the Jet Zero Strategy and Decarbonising Transport: A Better, Greener Britain include an ambition to achieve zero emissions airport operations by 2040, and the Jet Zero Strategy includes a commitment to publish a Call for Evidence to gather further information to support further development of the definitions used in this target.

5.4.2 Given the current uncertainty around the definitions used for the ambition, the Airport Operations Limits outlined in Table 5.1 do not currently reflect the 2040 ambition. The airport operator must undertake a review of both the definition of ‘Airport Operations’ and the associated limit from 2040 onwards within three months of the government publishing updated policy or guidance that clarifies the scope and pathway to achieving zero emissions airport operations by 2040.

5.4.3 This review will consider how to align the GHG limits and thresholds with this policy objective. This may include changes to the definition of ‘Airport Operations’.

5.4.4 A report setting out the process and outcomes of this review will be submitted to the ESG within the three-month timescale set out in paragraph 5.4.2. The ESG will review this submission (involving the GHG Technical Panel where needed) and respond in writing within one month of submission.

5.4.5 Where the review identifies the need for changes to the GHG limits or thresholds, these will be taken forward using the process set out in paragraph 24(3) of **Schedule 2** to the **DCO [TR020001/APP/2.01]**.

6 SURFACE ACCESS

6.1 Limits and Thresholds

6.1.1 The GCG Framework includes two surface access limits to control changes in mode share. The two mode share limits include maximum percentage mode shares for 'non-sustainable' passenger travel and 'non-sustainable' staff travel not to be exceeded.

6.1.2 The detailed definitions of 'sustainable travel' and 'non-sustainable travel' in the context of passenger and staff travel are given in paragraph 6.1.4 below.

6.1.3 Table 6.1 sets out the GCG Limits and Thresholds for surface access.

Table 6.1: GCG Limits and Thresholds for surface access

Limit	Limit Values			
	Phase 1	Phase 2a	Phase 2b	Full Operating Capacity
Air passenger non-sustainable travel mode share	**Limit**			
	62%	60%	55%	55%
	Level 2 Threshold			
	60%	58%	53%	53%
	Level 1 Threshold			
	58%	56%	51%	51%
Airport staff non-sustainable travel mode share	**Limit**			
	70%	68%	64%	60%
	Level 2 Threshold			
	69%	66%	62%	58%
	Level 1 Threshold			
	67%	64%	61%	56%
Note: all Limit and Threshold values have been rounded to zero decimal places				

6.1.4 As part of these Limits, the following definitions are included:

a. "air passenger" only refers to non-transfer passengers;

b. "airport staff" refers only to those employees holding an airside or landside security pass;

c. "mode share" refers to the weighted percentage of passengers and staff travelling by different modes of transport;

d. “passenger non-sustainable travel” refers to travel by car, taxi (hackney carriage), private hire vehicle (minicab/Uber etc)[10], motorcycle, and any other modes, with the exception of minibus, bus, coach, rail and tube (also referenced as metro, subway, tram in the CAA survey), walking, wheeling[11], cycling and other active travel modes (e-bikes, e-scooters etc); and

e. “staff non-sustainable travel” refers to travel by car (drivers only), taxi (hackney carriage), private hire vehicle (minicab/Uber etc) and motorcycle, and any other modes, with the exception of minibus, bus, coach, rail and tube (also referenced as metro, subway), car sharing (passengers only), walking, wheeling, cycling and other active travel modes (e-bikes, e-scooters etc). The number of days staff work from home vs at the airport will also be included within the weighted total mode share used to determine compliance with the limit and threshold.

6.2 Monitoring

6.2.1 Monitoring of air passengers and staff is to be undertaken in accordance with the **Surface Access Monitoring Plan** at **Appendix F.**

6.3 Surface Access Limit Review

6.3.1 To reflect the potential for technological changes in the future that could result in new modes of transport not otherwise listed in the Surface Access Monitoring Plan, for example autonomous vehicles, the definitions of the surface access mode share limits may be reviewed and an application made to the ESG to update them where necessary.

[10] Private Hire Vehicles (PHVs) must have fewer than nine passenger seats. Vehicles with nine or more passenger seats (e.g. minibuses, minicoaches) are not PHVs and are therefore considered as a ‘sustainable’ mode.

[11] Wheeling refers to an equivalent alternative to foot/pedestrian-based mobility for people who use wheeled mobility aids - for example a wheelchair or mobility scooter user. Wheeling is defined to only cover modes that use pavement space at a similar speed to walking. It does not include the use of e-scooters or cycles.

REFERENCES

Ref 5.1 Offsetting Manual Issue 3, Airport Carbon Accreditation Scheme, March 2022

GLOSSARY AND ABBREVIATIONS

Term	Definition
2019 Cap	The short term day and night noise contour area limits set by condition 10 to the planning permission 15/00950/VARCON dated 13 October 2017 as calculated using the 'DCO noise model'
DCO	Development Consent Order
EIA	Environmental Impact Assessment
ESG	Environmental Scrutiny Group. The ESG will be established through the DCO to independently oversee operation of the GCG Framework. Its membership will include an independent chair, an independent aviation expert, representatives of local authorities and an airline industry body. The ESG will have a range of powers enshrined in its Terms of Reference, that can be utilised at its discretion.
ICAO	International Civil Aviation Organisation
Level 1 Threshold	A defined level of environmental effect, below the Limit and Level 2 Threshold levels, which triggers additional requirements for the airport operator, to avoid a future exceedance of a Limit.
Level 2 Plan	A report produced by the airport operator, which is triggered by an environmental effect being demonstrated to be in excess of a Level 2 Threshold, but below a Limit. It must contain details of how an exceedance of a Limit will be avoided, including what, if any, additional growth can be implemented, and any mitigation measures required to be delivered.
Mitigation Plan	A report produced by the airport operator, which is triggered by an environmental effect being demonstrated to be in excess of a Limit. It must set out the airport operator's plan for bringing the environmental effect(s) back below the Limit.
Monitoring Plan	Individual plans secured through the DCO for each of the four environmental topics of the GCG Framework, setting

Term	Definition
	out the monitoring and reporting requirements associated with the relevant Limits of that topic.
mppa	million passengers per annum
Technical Panel	Technical Panels will be established through the DCO for each of the four environmental topics within the GCG Framework. They will be staffed by a combination of independent experts and representatives of local authorities, in order to review information submitted by the airport operator (Monitoring Reports, Level 2 Plans, Mitigation Plans) and providing comment and recommendations to the ESG.