Luton Rising

Our airport.
Our community.
Our planet.

October 2023

London Luton Airport Expansion

Planning Inspectorate Scheme Ref: TR020001

Volume 7 Other Documents

7.08 Green Controlled Growth Framework (Tracked Change Version)

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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 (TRACKED CHANGE VERSION)

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Revision 2	October 2023	Additional Submission - Deadline 3

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 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).

~~Green Controlled Growth (GCG) is a key value of Luton Rising in its ambition to enable the sustainable expansion of Luton Airport.~~

~~Luton Rising (a trading name of London Luton Airport Limited) and owner of Luton Airport, has developed a unique GCG Framework to make sure that airport growth takes place within environmental Limits, which aligns with the Governments Jet Zero Strategy. Crucially, these Limits are not vague aspirations – they will be legally binding, 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. ~~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~~

This document, including its appendices, will be secured through the~~a~~ Development Consent Order (DCO), with specific requirements set out in the Order relating to the implementation of GCG. This document is accompanied by the ~~GCG Framework Explanatory~~ 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~~community.

1.1.2 As part of the application for development consent, the GCG Framework is accompanied by the ~~**GCG Framework Explanatory**~~ **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 8** of the **Draft 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 2) Thresholds and Limits are reached, and review processes.

1.1.5 As set out in the ~~**GCG Framework Explanatory**~~ **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 Luton Rising 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 Luton Rising, 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 L~~l~~imits and t~~T~~hresholds

1.2.1 The GCG Framework includes L~~l~~imits and t~~T~~hresholds 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. the current 18 mppa passenger cap, or the proposed 19 mppa passenger cap, pending the outcome of the planning inquiry to determine the called-in planning application[1]). This is triggered by notice under Article 44(1) of the **Draft DCO [TR020001/APP/2.01]** being served. When the notice is served under Article 44(1) of the Draft 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 Draft 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)** 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.

~~1.2.5~~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 it relates to the same topic. 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.

[1] Luton Borough Council planning application 21/00031/VARCON – *'Application to vary Conditions 8 (passenger throughput cap), 10 (noise contours), 22 (car parking management), 24 (travel plan) and 28 (approved plans and documents) to Planning Permission 15/00950/VARCON (dated 13th October 2017) to accommodate 19 million passengers per annum and to amend the day and night noise contours'*

2 GOVERNANCE

2.1 Environmental ~~s~~Scrutiny ~~g~~Group

2.1.1 Paragraph 20 of **Schedule 2** to the **Draft 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 ~~p~~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 25 of **Schedule 2** to the **draft DCO [TR020001/APP/2.01]** sets out that the GCG process should be reviewed periodically by the airport operator. The first such review should be undertaken within 12 months of the end of the Transition Period[2], and then on a five-yearly basis from this point.

[2] The Transition Period will apply for the remainder of the calendar year in which notice under Article 44(1) of the Draft Development Consent Order **[TR020001/APP/2.01]** is served, and the subsequent full calendar year

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 monitoring).

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.

3 AIRCRAFT NNOISE (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 When a Level 1 Threshold is exceeded, the airport operator will convert current and future Level 2 Threshold and Limit noise contour areas (see **Error! Reference source not found.**) into equivalent total 16-hour daytime and total 8-hour night-time quota counts[3]. The airport operator will use total scheduled and forecast daytime and night-time quota counts (and their comparison to the relevant Level 2 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;

[3] 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[4] 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 ~~prepare a~~include within the annual Monitoring Report ~~that includes~~ proposals for slot management measures, additional interventions or mitigation to ensure that the Limit will not be exceeded.

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

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**				
	33.6	32.8	30.7	32.6	32.6
	Level 2 Threshold (95% of limit)~~Level 2 Threshold (95% of limit[5])~~				
	31.933.3	31.232.4	29.230.4	31.032.1	31.032.1
	Level 1 Threshold (85% of Limit)~~Level 1 Threshold (90% of Limit)~~				
	28.633.0	27.932.1	26.130.0	27.731.6	27.731.6
Average summer night-time noise levels, as measured by size (km^2) of 48 dB $L_{Aeq,8hr}$ noise contour	**Limit**				
	44.8	42.8	40.1	43.2	43.2
	Level 2 Threshold (95% of limit)~~Level 2 Threshold~~				
	42.644.3	40.742.3	38.139.6	41.042.5	41.042.5
	Level 1 Threshold (85% of Limit)~~Level 1 Threshold~~				
	38.143.7	36.441.7	34.139.1	36.741.7	36.741.7

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 L~~l~~imit r~~R~~eview

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'[6] will then be maintained and used as the basis for planning for growth and noise control at the airport to ensure that future noise forecasts can be consistently compared with the noise Limits and Thresholds set by the DCO using the same model (comparing 'like with like').

~~[5] % of the difference between the Limit and the equivalent do-nothing noise contour area for the same time period~~

[6] 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.

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[7].

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[8] 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 2039 onwards in five-year steps based on the alternative noise forecast and discussions with the Noise Technical Panel.

[7] 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.

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'[9] as quickly as is reasonably practicable to share the benefits of the technology improvement with the communities affected by aircraft noise.

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 25(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-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).

[9] 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'.

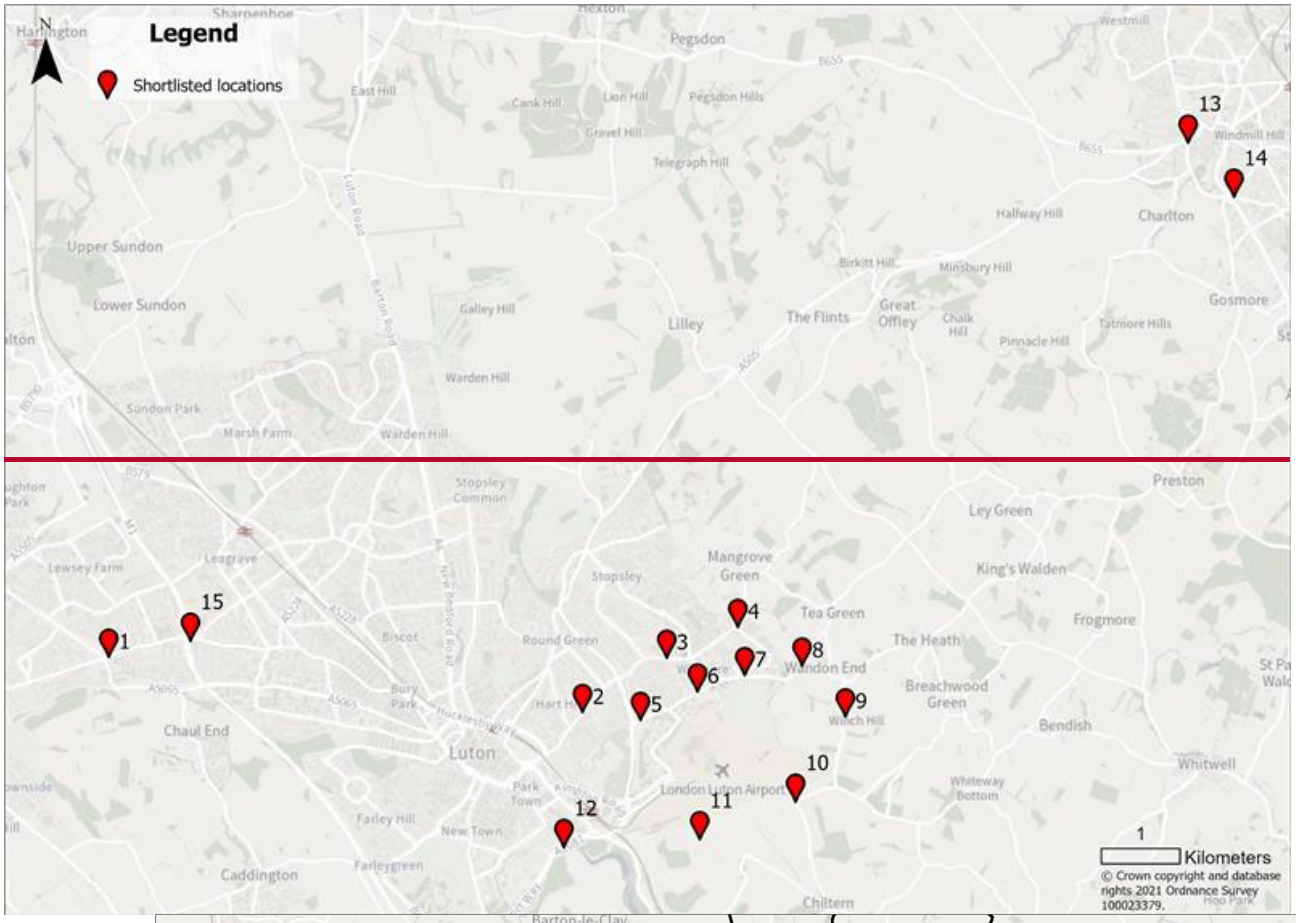
4 AIR QQUALITY

4.1 Air qQuality lLocations

4.1.1 As detailed in the ~~GCG Framework Explanatory~~ 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


N
Legend
Shortlisted locations
Pegsdon
Upper Sundon
Lower Sundon
Lilley
The Flints
Great Offley
Chalk Hill
Pinnacle Hill
Tatmore Hills
Halfway Hill
Charlton
Gosmore
Minsbury Hill
Birkitt Hill
Galley Hill
Warden Hill
Sundon Park
Marsh Farm
13
14
Stopsley Common
Preston
Ley Green
Lewsey Farm
Leagrave
Mangrove Green
Stopsley
King's Walden
Tea Green
Frogmore
Round Green
The Heath
Biscot
Windon End
Breachwood Green
Bendish
Chaul End
Luton
Whitwell
Whiteway Bottom
Caddington
Farley Hill
New Town
Farleygreen
Chiltern
1
15
2
3
4
5
6
7
8
9
10
11
12
1
Kilometers
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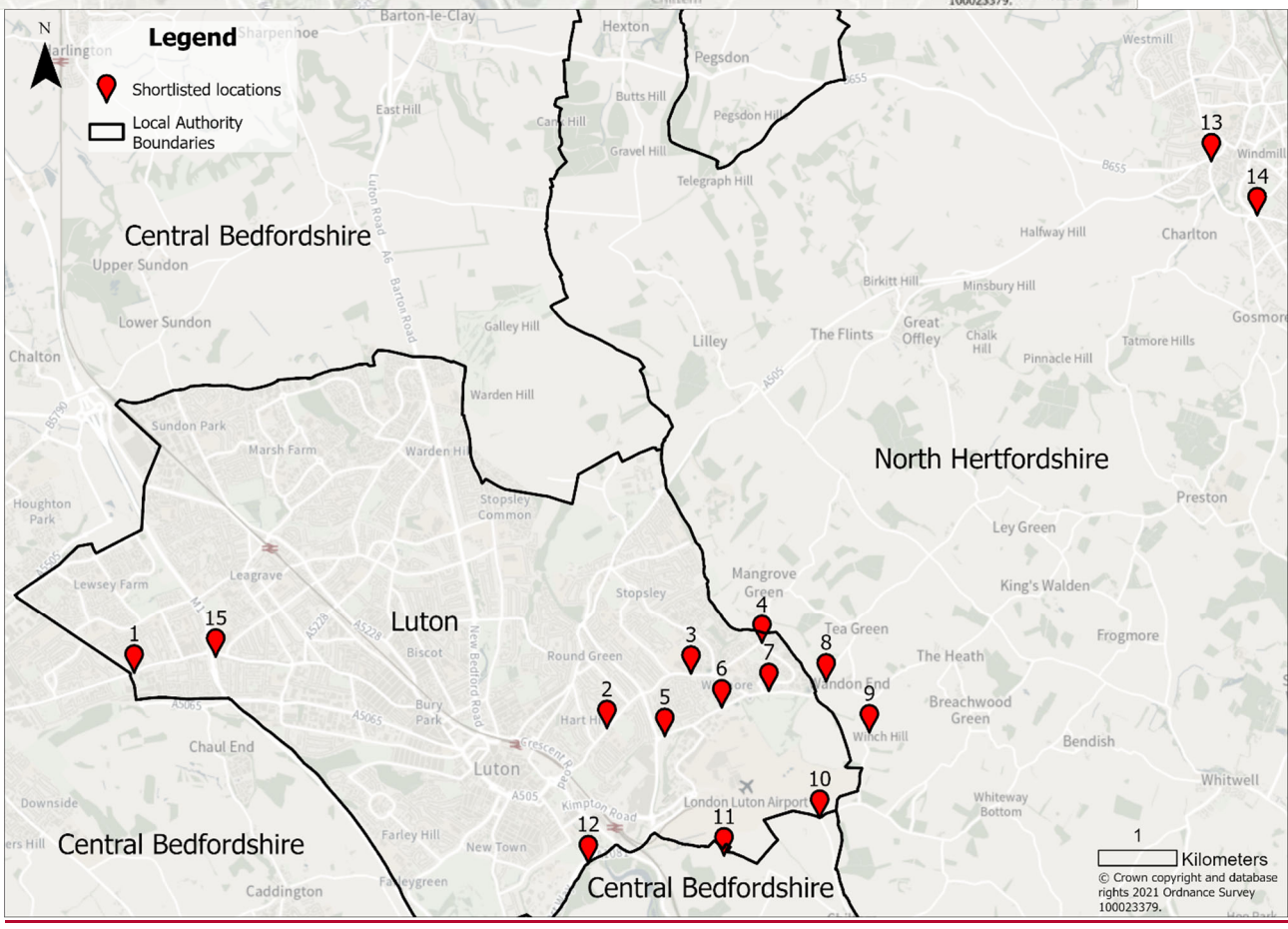
N
Legend
Shortlisted locations
Local Authority Boundaries
Central Bedfordshire
North Hertfordshire
Luton
Central Bedfordshire
Central Bedfordshire
Barton-le-Clay
Hexton
Pegsdon
Butts Hill
East Hill
Gravel Hill
Telegraph Hill
Pegsdon Hills
Westmill
Windmill Hill
13
14
Halfway Hill
Charlton
Upper Sundon
Lower Sundon
Chalton
Galley Hill
Lilley
The Flints
Great Offley
Chalk Hill
Pinnacle Hill
Tatmore Hills
Birkitt Hill
Minsbury Hill
Gosmore
Warden Hill
Sundon Park
Marsh Farm
Houghton Park
Stopsley Common
Preston
Ley Green
Lewsey Farm
Leagrave
Mangrove Green
Stopsley
King's Walden
Tea Green
Frogmore
Round Green
The Heath
Biscot
Windon End
Breachwood Green
Bendish
Chaul End
Luton
Whitwell
Whiteway Bottom
Downside
Caddington
Farley Hill
New Town
Farleygreen
1
15
2
3
4
5
6
7
8
9
10
11
12
1
Kilometers
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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)
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 ~~However, where those limits reduce over time (i.e. for $PM_{2.5}$), airport related contributions could change (in percentage terms, relative to the limit), if actual passenger throughout deviates from the assumed rate in passenger growth. For example, if Phase 2a extends beyond 2040 (representing slower growth than forecast), then the percentage contributions would need to~~ recalculated airport contributions with respect to the ~~new, lower~~proposed time-bound $PM_{2.5}$ Limits. ~~In this example, the three locations in scope for $PM_{2.5}$ in Phase 2b would come into scope for the remainder of Phase 2a from 2040 onwards.~~ 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.

4.1.34.1.5 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. ~~However,~~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	~~Assessment~~ ~~P~~Phase 1	~~Assessment~~ Phase 2a	~~Assessment~~ Phase 2b	Full Operating Capacity
1	A505	NO_2	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}				
		$PM_{2.5}$				
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 ~~In Scope (6% airport contribution)~~ ~~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 (~~12~~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~~4~~% 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~~2~~% 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)

ID	Name	Pollutant	~~Assessment~~ PPhase 1	~~Assessment~~ Phase 2a	~~Assessment~~ Phase 2b	Full Operating Capacity
8	Darley Road (L4)	NO_2	In Scope (~~86~~% airport contribution)	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only	Out of Scope – Monitoring Only
		PM_{10}	Out of Scope – Monitoring Only			
		$PM_{2.5}$				
9	Winch Hill (L6)	NO_2	In Scope (7~~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			
		$PM_{2.5}$				
10	Dane Street (LLA11)	NO_2	In Scope (13~~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			
		$PM_{2.5}$				
11	Someries Castle	NO_2	In Scope (~~10~~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~~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			
		$PM_{2.5}$				
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 Llimits and tThresholds 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 ~~required by the Environment Act 2021~~set out in the Government's Environmental Improvement Plan, ~~two~~ Limits and associated Thresholds ~~are specified~~ for $PM_{2.5}$ concentrations will also change over time, irrespective of Phasing, to align with the dates for these Government targets.~~:~~ ~~one up to 2040, and one from 2040 onwards, when the new target takes effect. This reduction in the limit will apply irrespective of which phase the airport is in, although t~~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~~are based on an assumption of the new limits coming into force in Phase 2b~~.

Table 4.3: GCG Limits and Thresholds for air quality

Limit	Phase 1	Phase 2a	Phase 2b	Full Operating Capacity
Annual average $PM_{2.5}$ concentration (up to ~~2040~~2026)	**Limit**			
	20 µg/m^3	20 µg/m^3	20 µg/m^3	20 µg/m^3
	Level 2 Threshold			
	19 µg/m^3	19 µg/m^3	19 µg/m^3	19 µg/m^3
	Level 1 Threshold			
	15 µg/m^3	15 µg/m^3	15 µg/m^3	15 µg/m^3
Annual average $PM_{2.5}$ concentration (from 2027 to 2039)	**Limit**			
	12 µg/m^3	12 µg/m^3	12 µg/m^3	12 µg/m^3
	Level 2 Threshold			
	11.4 µg/m^3	11.4 µg/m^3	11.4 µg/m^3	11.4 µg/m^3
	Level 1 Threshold			
	9 µg/m^3	9 µg/m^3	9 µg/m^3	9 µg/m^3
Annual average $PM_{2.5}$ concentration (from 2040)	**Limit**			
	10 µg/m^3	10 µg/m^3	10 µg/m^3	10 µg/m^3
	Level 2 Threshold			
	9.5 µg/m^3	9.5 µg/m^3	9.5 µg/m^3	9.5 µg/m^3
	Level 1 Threshold			
	7.5 µg/m^3	7.5 µg/m^3	7.5 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	40 µg/m^3
	Level 2 Threshold			
	38 µg/m^3	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	30 µg/m^3
Annual average NO_2 concentration	**Limit**			
	40 µg/m^3	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	38 µg/m^3

Limit	Phase 1	Phase 2a	Phase 2b	Full Operating Capacity
	Level 1 Threshold			
	30 µg/m^3	30 µg/m^3	30 µg/m^3	30 µg/m^3

4.2.3 If monitoring were to show that the Llimit or Level 2 threshold was exceeded at any one of the locations listed as being in scope in Table 4.2, this does not ~~in itself~~ immediately trigger the controls on growth required as part of the GCG ~~process~~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. ~~(for example, by using Automatic Number Plate Recognition technology to determine the amount of airport-related traffic at a given location).~~

4.2.6 The GCG process will only be triggered (~~e.g~~i.e. a Level 2 Plan or Mitigation Plan will need to be submitted to the ESG, and the appropriate processes followed) where this ~~second stage of monitoring~~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.

~~d.~~

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 ~~q~~Quality ~~l~~Limit ~~r~~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 ~~coming into force~~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 ~~It is acknowledged that UK legal limits for the three pollutants in scope for GCG could change in future. It is proposed that if legal limits change, this will trigger a review of GCG limits. It is proposed that this review should be carried out by the airport operator within six months of new legal limits coming into force, and the findings of this review should be submitted to the Air Quality Technical Panel and ESG for comment.~~ 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).

~~In particular, the UK government has announced its intention to lower the UK legal limit for PM2.5 to 10 µg/m^3 from 2040. The Limits and Thresholds shown in Table 4.3 reflect this change. However, based on the assumed assessment phasing it is forecast that the airport contribution to $PM_{2.5}$ concentrations by 2040 will be negligible at the majority of shortlisted locations, and therefore only locations 5, 6 and 7 will be in scope for PM2.5 by this point (see Table 4.2). To validate this, a review of PM2.5 concentrations at the 15 locations shown in Table 3.4 should be carried out within six months of the new limit coming into force.~~

~~4.4.1~~

~~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; however, there will be no absolute requirement to do so.~~

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, ~~nine~~ eight locations are in scope for GCG for NO_2 only up to Phase 2a, ~~achieved~~ 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 µg/m^3.

4.4.5 Therefore, ~~When airport throughput reaches 27 mppa~~ 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.

~~4.4.4~~

~~4.4.5 It is acknowledged that UK legal limits for the three pollutants in scope for GCG could change in future. It is proposed that if legal limits change, this will trigger a review of GCG limits. It is proposed that this review should be carried out by the airport operator within six months of new legal limits coming into force, and the findings of this review should be submitted to the Air Quality Technical Panel and ESG for comment. This review will consider the appropriateness and practicality of revising the Air Quality Limits and Thresholds to align with the new UK legal limits; however, there will be no absolute requirement to do so.~~

~~4.4.6 In particular, the UK government has announced its intention to lower the UK legal limit for PM2.5 to 10 µg/m^3 from 2040. The Limits and Thresholds shown in Table 4.3 reflect this change. However, based on the assumed assessment phasing it is forecast that the airport contribution to $PM_{2.5}$ concentrations by 2040 will be negligible at the majority of shortlisted locations, and therefore only locations 5, 6 and 7 will be in scope for PM2.5 by this point (see Table 4.2). To validate this, a review of PM2.5 concentrations at the 15 locations shown in Table 3.4 should be carried out within six months of the new limit coming into force.~~

~~4.4.7~~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 21(3) of **Schedule 2** to the **Draft DCO [TR020001/APP/2.01].**

4.4.8 Where the review identifies the need for changes to the Air Quality Limits or Thresholds~~, or the locations in scope~~, these will be taken forward using the process set out in paragraph 25(3) of **Schedule 2** to the **Draft DCO [TR020001/APP/2.01].**

5 GREENHOUSE GGASES

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 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 will be reviewed to align with the Jet Zero Strategy ambition of zero-emissions airport operations by 2040			
	7,644	4,969	236	280
	Level 2 Threshold			
	7,262	4,721	224	266
	Level 1 Threshold			
	6,880	4,472	212	252
Airport Operations CO_2e emissions (Scope 3, offsetting allowable)	**Limit**			
	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 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[10,11.]
b. Emissions from the combustion of natural gas consumed at the airport by the airport operator[12].
c. Emissions from the combustion of liquid fuel consumed at the airport (including for on-airport fire training)[12].
d. Emissions from the combustion of fuel used in Internal Combustion Engine (ICE) airport vehicles[12.]
e. Emissions from the generation of electricity used to charge electrically powered airport vehicles[10.]
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[10,11.]
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[12.]
d. Emissions from the combustion of fuel used in Internal Combustion Engine (ICE) third party vehicles[12.]
e. Emissions from the generation of electricity used to charge electrically powered third party vehicles[10.]
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.

[10] 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.
[11] 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.
[12] 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~~at~~ 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.

~~5.2.3~~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.~~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. 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 ~~l~~Limit ~~r~~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 25(3) of **Schedule 2** to the **Draft DCO [TR020001/APP/2.01]**.

6 SURFACE AACCESS

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)[13], 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[14], 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 Aaccess lLimit rReview

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.

[13] 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.

[14] 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.