

February 2023

# London Luton Airport Expansion

Planning Inspectorate Scheme Ref: TR020001

Volume 5 Environmental Statement and Related Documents  
**5.02 Appendix 7.5 Outline Operational Air Quality Plan**

Application Document Ref: TR020001/APP/5.02  
APFP Regulation: 5(2)(a)

**The Planning Act 2008**

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

**London Luton Airport Expansion Development Consent  
Order 202x**

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**5.02 ENVIRONMENTAL STATEMENT APPENDIX 7.5 OUTLINE  
OPERATIONAL AIR QUALITY PLAN**

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<b>Regulation number:</b>	Regulation 5(2)(a)
<b>Planning Inspectorate Scheme Reference:</b>	TR020001
<b>Document Reference:</b>	TR020001/APP/5.02
<b>Author:</b>	Luton Rising

<b>Version</b>	<b>Date</b>	<b>Status of Version</b>
Issue 01	February 2023	Application issue

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## 1 INTRODUCTION

- 1.1.1 This document has been prepared by Luton Rising (a trading name for London Luton Airport Limited ('the Applicant')) as part of the Environmental Statement submitted in support of the application for development consent for the expansion of London Luton Airport (the airport) from 18 million passengers per annum (mppa) to accommodate 32 mppa (hereby referred to as the 'Proposed Development').
- 1.1.2 This Outline Operational Air Quality Plan describes the mitigation measures proposed to reduce and control impacts on air quality arising from the Proposed Development. Mitigation measures proposed during construction are described in the Code of Construction Practice (CoCP) provided as **Appendix 4.2** of this ES [TR020001/APP/5.02]. A requirement in Schedule 2 of the draft Development Consent Order requires a final Operational Air Quality Plan to be submitted and approved in writing, which must be substantially in accordance with this Outline Operational Air Quality Plan.
- 1.1.3 The measures described in the **Green Controlled Growth** document, also submitted as part of the application for development consent [TR020001/APP/7.08], provide an additional and supplemental mechanism through which the operation of the Proposed Development is monitored, independently reviewed, and measures taken should the environmental effects of the Proposed Development approach or exceed those predicted by the environmental assessment. The air quality monitoring as part of the **Green Controlled Growth Framework** is detailed in Green Controlled Growth Appendix D Air Quality Monitoring Plan [TR020001/APP/7.08].

## 2 OPERATIONAL PHASE IMPACTS

- 2.1.1 This operational air quality plan includes mitigation for the following sources:
- a. aircraft emissions;
  - b. airside vehicles;
  - c. surface access;
  - d. energy and fixed plant;
  - e. miscellaneous emissions; and
  - f. odour emissions.

### 2.2 Aircraft Emissions

- a. The new terminal stands will have fixed electrical ground power (FEGP) available and therefore ground power units (GPUs) will not be required.
- b. Retrofit all existing stands with FEGP or non-diesel GPUs by 2037.
- c. Develop a strategy/operational guide to reduce emissions from the aircraft during the Landing Take Off (LTO) cycle by 2037 which may include reducing auxiliary power unit (APU) running time allowance;

engine shut down following arrival and during delays; single/reduced engine taxiing and reducing hold times.

- d. Encourage the take up of more efficient aircraft through operating policy/strategy.
- e. Encourage the take up of SAFs through operating policy/strategy.
- f. Implement infrastructure to allow aircraft able to refuel with SAFs available by 2030.

## 2.3 Airside vehicles

- a. All new contracts with Ground Handling Agencies to require electric vehicles or other zero emissions options where this is feasible for the vehicle type by 2032.
- b. All new and replacement fleet light and medium duty vehicles to be zero emission (electric, hydrogen or other zero emissions technology) by 2030.
- c. Provide infrastructure to facilitate the use of zero emission airside equipment, such as electric vehicles by 2035; including for example, the provision of charging points within Ground Support Equipment (GSE) compounds; and hydrogen fuelling and the like, subject to low carbon vehicle strategy established.
- d. All airside vehicles will be zero emissions (including Ground Support Equipment (GSE), tugs, buses etc) where electric or other zero emission option, where versions are available for the vehicle type by 2035.
- e. Provide staff with training materials such as eco-driving guidance.
- f. All purchased airside vehicles to meet the latest emission standards (e.g. currently Euro 6/VI). No Airside Vehicle Permits (AVPs) should be provided to newly purchased vehicles which do not comply unless there is a specific technical reason for the non-compliance. Keep a register of all non-compliant and older vehicles (pre-Euro 4) and work with operators to develop plans to reduce the emissions from airside vehicles (e.g. plans to update vehicle fleets and increase the use of low emission alternatives).
- g. Minimise idling of vehicles on-site.
- h. Carry out ad hoc emission testing, for example using portable emissions measurement system equipment, of airside vehicles to confirm they meet the emission limits specified.

## 2.4 Surface access

- a. Develop options to incentivise the future uptake of low and zero emission fuels for vehicles using the airport by 2025.
- b. An EV Charging strategy will be developed by 2025 to optimise the use of the charging network.

- c. Aim for a maximum of 55% of passengers, and an reduced proportion of staff, using non-sustainable forms of transport (e.g. personal vehicles) by 2039.
- d. Set surface access journey targets for percentage of passengers and employees travelling to and from the airport by sustainable means. To be determined in accordance with the **Framework Travel Plan [TR020001/APP/7.13]**
- e. Seek to implement emissions-based car parking charges in 2029.
- f. Seek to implement emissions-based charges for drop off and pick up to in 2029.
- g. Encourage all freight vehicles (logistics and cargo) to be Euro VI or better by 2030.
- h. All car park to terminal shuttle buses to be zero or low emissions by 2025.
- i. Support improvement of access for pedestrians and cyclists to the airport from the local area.
- j. Investigate participating in a car sharing service by 2025, including for electric cars, and having a number of dedicated bays at the airport for the car sharing service.

## 2.5 Energy and fixed plant

- a. No new fossil fuel heating or generator equipment to be purchased, where permissible, where practicable alternatives are available, and excluding emergency repairs by 2025.
- b. The new terminal building will utilise efficient building design to reduce operation emissions including electric reverse heat pumps for heating and cooling supported with ground source heat pump technology; and storage of heat using water storage facilities.
- c. Remove all diesel generators where regulations allow, by 2037. Where standalone generators are required by regulations, lower emission fuels are to be considered.

## 2.6 Miscellaneous emissions

- a. The proposed fire training ground and engine testing areas have been located so that they do not significantly impact sensitive receptor locations.

## 2.7 Odour emissions

- a. Apply best practice handling methods for fuels as required by the Civil Aviation Authority (Ref. 1).
- b. Implement a system to record odour complaints and take action to identify the cause and what mitigation can be implemented and review

the record of complaints on an annual basis. Record any instances of fuel dumping from aircraft and any fuel spills for annual review.

## 2.8 Monitoring

- 2.8.1 Air quality monitoring is a suitable method for future review of air pollution concentrations in the local area. Details of the air quality monitoring which will be carried out as part of the **Green Controlled Growth Framework** are detailed in Green Controlled Growth Appendix D Air Quality Monitoring Plan **[TR020001/APP/7.08]**.
- 2.8.2 Air quality monitoring is currently carried out across the Luton area by Luton Rising, LLAOL and Luton Borough Council and this will continue post-consent. The details of the monitoring are provided in **Appendix 7.2** of this ES **[TR020001/APP/5.02]**, including the locations and type of monitoring equipment.
- 2.8.3 Discussions to align the monitoring equipment type and management procedures have been held with the long term aim of hosting all results on a single platform available to the public.
- 2.8.4 Additional commitments for on-going air quality monitoring include:
- a. Commit to construction phase monitoring as detailed in the CoCP, **Appendix 4.2** of this ES **[TR020001/APP/5.02]**.
  - b. Commit to continue the current Luton Rising air quality monitoring (as detailed in **Appendix 7.2** of this ES **[TR020001/APP/5.02]**) beyond 2043 and undertake annual air quality monitoring results to be available to the public and the local authority.
  - c. Carry out monitoring as detailed in **Green Controlled Growth Framework [TR020001/APP/7.08]** Appendix D Air Quality Monitoring Plan at fifteen locations around the airport starting in 2026 and continuing to 2045.
  - d. Complete an annual aircraft emission inventory.

## 2.9 Future review

- 2.9.1 The air quality monitoring will include PM<sub>10</sub>, PM<sub>2.5</sub> and NO<sub>2</sub> concentrations at each of the fifteen sites continually throughout the year. This will be helpful for determining the total concentrations around the airport. As air quality modelling results are based on traffic modelling and future year predictions of emission factors there is an inherent level of uncertainty in the results. This uncertainty is managed, as detailed in **Chapter 7** of the ES **[TR020001/APP/5.01]**, through conservative use of background concentrations and model verification. Therefore, an initial review in 2027 is recommended to assess if the annual concentrations measured are 20% higher than the modelled concentration in that location. The value of 20% is selected to provide a reasonable estimate of risk from potential changes compared to the results in the ES which had already made conservative assumptions in the modelling. This review would

subsequently be repeated every five years. The process for undertaking this review is set out in the GCG Framework **[TR020001/APP/7.08]**.

- 2.9.2 Where considered necessary, dependent on the magnitude of any increase, the Operational Air Quality Plan will be reviewed and where reasonably practicable updated to strengthen the measures to help drive emission reductions.



## GLOSSARY AND ABBREVIATIONS

<b>Term</b>	<b>Definition</b>
APU	Auxiliary Power Unit
AVP	Airside Vehicle Permits
CoCP	Code of Construction Practice
ES	Environmental Statement
FEGP	Fixed Electrical Ground Power
GPU	Ground Power Unit
GSE	Ground Support Equipment
LLAOL	London Luton Airport Operations Limited
mppa	Million passengers per annum
SAF	Sustainable Aviation Fuel

## REFERENCES

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Ref 1. Civil Aviation Authority CAA CAP 748 Aircraft fuelling and fuel installation management 2004