Appendix 5-14 Draft Air Quality Plan

London Luton Airport Ltd
A Luton Council company

Future LuToN: Making best use of our runway

Preliminary Environmental Information Report
Volume 3: Appendices
Appendix 5-14 Draft Air Quality Plan

11 September 2019

LLADCO-3B-ARP-00-00-RP-YE-0009 | Issue 1

Contents

1 INTRODUCTION

1.1.1 London Luton Airport Limited (LLAL) is proposing to expand London Luton Airport (LTN) by submitting a Development Consent Order (DCO) application for works that will allow LTN to grow to accommodate 32 million passengers per annum (mppa). A current planning permission for works at LTN, called Project Curium (LBC ref: 12/01400/FUL), limits passenger throughput to 18mppa.

1.1.2 LLAL recognises that air quality is a key environmental issue and understands the importance of mitigating air quality impacts. It was also found to be a key consideration in the comments received from stakeholders during non-statutory consultation.

1.1.3 This report provides a commentary on the measures to be employed to manage impacts on air quality as a result of the Proposed Development for which the DCO is being sought. It forms part of the Preliminary Environmental Information required under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 and forms part of the suite of Statutory Consultation material. The project design will continue to evolve to reflect the outcomes of the consultation, and the process of information gathering as the assessment progresses until the DCO submission. The information within this document is therefore preliminary and may be subject to change as assessment work continues.

1.1.4 The emerging Aviation Strategy[1], published for consultation in December 2018, proposes all major airports to develop air quality plans to manage emissions within the national air quality objectives. This document will be the basis for the Air Quality Plan which will be submitted alongside the Environmental Statement (ES), in order to secure the delivery of air quality mitigation measures.

1.1.5 The air quality assessment reported in Chapter 5 of Volume 1 of the Preliminary Environmental Information Report (PEIR) has found no significant impacts. Therefore, it is considered that no additional mitigation is required. However, the following provides recommendations for mitigating possible effects to air quality for the construction and operational phase of the Proposed Development. The recommendations are based on industry best practice and examples from other UK airports.

1.1.6 The main issues and impacts assessed in the PEIR, associated with the Proposed Development, include:

[1] Department for Transport (2018) Aviation 2050 – the future of UK aviation. Published December 2018.

- The generation of dust and elevated levels of particulate matter (PM_{10}, $PM_{2.5}$) arising from demolition and construction works;
- Increased staff and passenger journeys to and from the airport on the road network;
- Increased emissions from aircraft engines;
- Increased exhaust emissions from vehicles operating at the airport, airside and landside;
- Potentially increased emissions from energy and heating plant (i.e. generators and boilers); and
- Miscellaneous emissions from other airport activities, such as aircraft fire training and engine testing.

1.1.7 These are the likely issues that will need to be considered for mitigation. The following sections set out the recommendations to reduce impacts on local air quality. The mitigation measures focus mainly on reducing emissions of NOx and particulate matter (PM). However, other pollutants (such as VOCs) will also be reduced by the mitigation measures.

2 CONSTRUCTION PHASE IMPACTS

2.1.1 There will be volumes of demolition, earthworks, construction and construction vehicle movements associated with the Proposed Development.

2.2 Construction phase mitigation measures

2.2.1 The effects of the demolition, earthworks and construction were assessed following the IAQM guidance. The guidance provides recommendations for best practice mitigation which, when implemented, will reduce dust impacts to a negligible level.

2.2.2 Details of the mitigation measures are provided in the Draft Code of Construction Practice (CoCP) provided as Appendix 2-1 to the PEIR.

3 OPERATIONAL PHASE IMPACTS

3.1.1 This document represents a draft air quality plan (AQP) for consultation which will be updated and submitted as part of the ES. This draft AQP includes mitigation measures for the following sources:

- Aircraft emissions;
- Airside vehicles;
- Surface access;
- Energy and fixed plant;

- Miscellaneous emissions; and
- Odour emissions.

3.2 Aircraft emissions

- All new stands fitted with fixed electrical ground power (FEGP).
- Review auxiliary power unit (APU) running time allowances and reduce to the minimum level practicable.
- Shut down all engines as soon as possible following arrival.
- If a delay occurs subsequent to engine start-up, shut down engines whenever possible.
- Recommend single/reduced engine taxiing.
- Develop a best practice operational guide for ground operations and departures to reduce emissions due to aircraft idling and hold.
- Work with the National Air Traffic Service and airlines to reduce hold times in the air and on the ground.
- Incentivise the take up of sustainable aviation fuels.
- Incentivise newer more efficient aircraft through operating policy and strategy.

3.3 Airside vehicles

- Encourage the use of zero or low emission vehicles and seek to provide appropriate fuelling infrastructure based on a cost-benefit approach.
- Provide staff with training materials such as eco-driving guidance.
- All purchased airside vehicles to meet the latest emission standards, as a minimum. No Airside Vehicle Permits (AVPs) should be provided to 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).
- Minimise idling of vehicles on-site.
- Carry out ad hoc emission testing of airside vehicles to confirm they meet the emission limits specified.

3.4 Surface access

- Develop a Surface Access Strategy and review surface access options for the future airport use.
- Increase the total number of vehicle electrical charging points in staff and passenger car parks.
- Aim for 45% of passengers and increased staff using sustainable transport (including electric vehicles) rather than personal vehicles.
- Increase awareness of the cycle to work scheme.
- Promote the use of the car sharing scheme to decrease single occupancy vehicle trips.
- Install dedicated electric charging points for taxis.

3.5 Energy and fixed plant

- Reduce the use of fixed combustion plant (boilers and generators) and mobile generators. Provide electrical power at all permanent locations.
- If fixed plant are required, use low emission gas boilers which balance fuel efficiency, emissions and cost.

3.6 Miscellaneous emissions

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

3.7 Odour emissions

- Apply best practice handling methods for fuels as required by the Civil Aviation Authority[2].
- Implement a system to record odour complaints and review the record of complaints on a quarterly basis.

4 MONITORING OF AIR QUALITY

4.1.1 London Luton Airport Operations Limited (LLAOL) operates 17 diffusion tube sites in the vicinity of Luton and at the airport and it also operates a continuous monitoring site on the airport, measuring PM_{10}. LLAL are currently operating 11 NO_2 diffusion tube sites and five volatile organic compound diffusion tube sites to inform the baseline study of the ES.

[2] Civil Aviation Authority CAA CAP 748 Aircraft fuelling and fuel installation management 2004

4.1.2 LLAL have invested in a new 'supersite', which has been in operation from June 2019 and provides continuous air quality monitoring for a wide range of pollutants[3]. The monitoring will help develop strategies that will direct efforts for targeted improvements in air quality. Live data from the monitoring site is published on the Air Quality England[4] website, which is publicly accessible.

- The monitor will measure NO, NOx, NO_2, PM_{10}, $PM_{2.5}$, PM_1, black carbon, SO_2, CO, ozone, benzene, naphthalene and toluene.
- To indicate the effectiveness of measures, it is planned for air quality monitoring to be undertaken on an ongoing basis with yearly reviews to determine whether the monitoring network can be reduced based on the emerging evidence.
- Data will be reviewed monthly and annual reports will be published of findings and any required mitigation action.
- Shorter reports will also be published on a quarterly basis.
- Monitoring results will be provided periodically to the local authority.
- The instruments will comply with the relevant Environment Agency's Monitoring Certification Scheme (MCERT) and European standards.
- Data will be quality assured to the relevant United Kingdom Accreditation Service (UKAS) and European standards, following Defra guidance[5].

[3] https://www.llal.org.uk/airquality.html
[4] https://www.airqualityengland.co.uk/
[5] Defra (2018) Local Air Quality Management Technical Guidance (TG16), February 2018