

11. Summary of likely effects

11.1 Introduction

- 11.1.1 This ES has been prepared on behalf of LLOAL, in support of a Section 73 application to vary Condition 8 and Condition 10 of the 2014 Planning Permission. The proposed variations to Condition 8 and Condition 10 seek to, increase the permitted passenger throughput to 19 mppa, and to increase the existing noise contours.
- 11.1.2 This chapter summarises the likely effects which are reported in full in each of the individual topic chapters described below.
- 11.1.3 A detailed description of the proposed variation to Condition 8 is provided in **Chapter 3: Description of the Proposed Scheme**. However, in broad terms LLA has experienced rapid growth and has already reached the 18 mppa cap in 2019, nine years earlier than predicted. The proposed variation to Condition 8 has been sought to accommodate the expected growth in capacity by increasing passenger throughput from 18 mppa to 19 mppa.
- 11.1.4 A detailed description of the proposed variation to Condition 10 is also provided in **Chapter 3: Description of the Proposed Scheme**. Put briefly, the noise contours set out in the 2014 Planning Permission made assumptions regarding fleet modernisation of aircraft operation out of LLA which have not kept pace with passenger demand. Variation to Condition 10 is being sought to provide a less restrictive day and night noise contour than is currently set out for the period until 2027 and for 2028 onwards.
- 11.1.5 The scope of the EIA has been discussed with LBC and it is considered that all necessary environmental technical topics, from which a likely effect could occur, have been given due consideration.
- 11.1.6 A summary of the topic requirements of *2017 EIA Regulations*, and the chapters in which they are addressed, is included in **Table 1.2** within **Chapter 1: Introduction**. However, for comprehension within this summary, the environmental chapters or topics which are the subject of this EIA are as follows:
- **Chapter 6: Air quality;**
 - **Chapter 7: Climate;**
 - **Chapter 8: Noise;**
 - **Chapter 9: Health;** and
 - **Chapter 10: Transport.**
- 11.1.7 Each of the environmental topics above have been the subject of an assessment and include consideration of any necessary mitigation measures, and report on the likely significant effects following the implementation of such mitigation measures.

Overall summary of effects

- 11.1.8 A summary of the effects arising due to the proposed variations to Condition 8 and Condition 10, as assessed within this ES Addendum, is provided in **Table 11.1**.

Table 11.1 Summary of effects

Receptor and summary of predicted effects	Significance	Summary rationale
Air quality		
Human health effects: Annual mean NO ₂ , PM ₁₀ , and PM _{2.5}	Not significant	All impacts on human receptors are classified as negligible in terms of the IAQM/EPUK guidance.
Effect to Ecological receptors.	Not significant	All impacts on ecological receptors are classified as not significant under Environment Agency guidance.
Climate		
GHG emissions from the Proposed Scheme will have a low GHG emissions magnitude, and the overall effect of projected GHGs associated with the Proposed scheme on the global climate is considered minor adverse.	Not significant	<p>The emissions from the Proposed Scheme itself are only 0.05% - 0.06% of the planning assumption. Thus, the proposed Scheme will not materially affect the ability of the UK to meet the 37.5 MtCO₂/yr planning assumption. Therefore, the Proposed Scheme is very unlikely to materially affect the ability of the UK Government to meet the 37.5 MtCO₂/yr 'planning assumption' for UK international aviation GHG emissions in 2050, and its carbon targets for net zero in 2050, on the basis that a Carbon Reduction Plan is produced.</p> <p>The Proposed Scheme is also unlikely to materially affect the ability of Luton Borough Council to meet its aim to be a carbon neutral borough by 2040, also on the basis that a Carbon Reduction Plan is produced.</p> <p>Lastly the Proposed Scheme would be consistent with the National Planning Policy Framework (NPPF) requirement for developments to 'support the transition to a low carbon future in a changing climate', on the basis that a Carbon Reduction Plan is produced.</p>
Noise		
Residences: dwellings exposed to night-time noise above SOAEL	Significant Adverse	With the Proposed Scheme, residents in 1,877 dwellings would experience a night-time noise level above SOAEL (55 dB L _{Aeq, 8 hour}) 1 - 1.9 dB higher than existing Condition 10 limits allow.
Non-residential receptors: exposure to daytime and night-time noise levels	Significant Adverse	The assessment shows increases in noise level of at least 1 dB and above threshold effect criteria for non-residential receptors at Caddington (schools), Park Town (academy and nursery) in Luton, Breachwood Green (school), St Pauls Walden (church), Slip End (school), and Stevenage Station (college). These significant effects are mainly predicted in 2022, except for ongoing significant effects in Park Town, Luton to 2024 and at Slip End to 2023.
Health		

Receptor and summary of predicted effects	Significance	Summary rationale
2021 and 2022 18 mppa scenario compared with existing Condition 10 short term health effects		
Human: residents exposed to noise between 51 – 62 dB LA _{eq,16hr} (daytime) and 45-54 dB LA _{eq,8hr} (night-time).	Significant	The increase in noise exposure to a large number of people indoors and out outdoors will change the amenity value of public space having a low magnitude of change on children learning and on social capital through a small reduction in social interaction and helpful behaviours.
Human: residents exposed to noise between 63 - 68 dB LA _{eq} 16hr (daytime) 55 - 62 dB LA _{eq} 8hr (night-time)	Significant	As for residents above, the noise exposure has the potential to a number of residents. LLA will provide noise insulation to reduce noise exposure indoors though this insulation will not reduce the noise exposure indoors with windows open and noise exposure outdoors. The judgment on the magnitude of change takes account of the embedded proposed mitigation.
Workers and visitors exposed to between 51 - 62 dB LA _{eq} 16hr (daytime), noise between 45 - 54 dB LA _{eq} 8hr (night-time)	Not significant	The individual noise increase is small across the whole affected population, the change in magnitude is judged to be minor for workers and visitors because they have a specific reason to be in the area with immediate short-term benefits which make it easier for them to adapt to, or not discern, small increases in noise.
Noise-sensitive non-residential facilities (hospitals, nursing homes, schools)	Significant	Users of hospitals and nursing homes are highly sensitive to noise. Schools could experience a moderate change when taking account of children's activities outdoors in school playgrounds and playing fields.
Public open spaces and recreational green spaces	Potentially Significant	Public open spaces and recreational green spaces have a moderate to high sensitivity when taking into account children and older people and those with pre-existing health conditions and disabilities who may use these spaces.
2028 19 mppa scenario compared to 12.5 mppa revised baseline and future Condition 10 long term health effects		
Human: residents exposed to between 51 – 62 dB LA _{eq,16hr} (daytime) and 45-54 dB LA _{eq,8hr} (night-time).	Significant	The increase in noise exposure to a large number of people indoors and out outdoors will change the amenity value of public space having a minor magnitude of change on children learning and on social capital through a small reduction in social interaction and helpful behaviours.
Human: residents exposed to noise between 63 - 68 dB LA _{eq} 16hr (daytime) 55 - 62 dB LA _{eq} 8hr (night-time)	Significant	As for residents above, the noise exposure has the potential to a number of residents. LLA will provide noise insulation to reduce noise exposure indoors though this insulation will not reduce the noise exposure indoors with windows open and noise exposure outdoors. The judgment on the magnitude of change takes account of the embedded proposed mitigation.
Workers and visitors exposed to between 51 - 62 dB LA _{eq} 16hr	Not significant	The individual noise increase is small across the whole affected population, the change in magnitude is judged to be minor for

Receptor and summary of predicted effects	Significance	Summary rationale
(daytime), noise between 45 - 54 dB LAeq 8hr (night-time)		workers and visitors because they have a specific reason to be in the area with immediate short-term benefits which make it easier for them to adapt to, or not discern, small increases in noise.
Noise-sensitive non-residential facilities (hospitals, nursing homes, schools)	Not significant	Users of hospitals and nursing homes are highly sensitive to noise. Schools could experience a moderate change when taking account of children's activities outdoors in school playgrounds and playing fields.
Public open spaces and recreational green spaces	Potentially significant	Public open spaces and recreational green spaces have a moderate to high sensitivity when taking into account children and older people and those with pre-existing health conditions and disabilities who may use these spaces.
Transport		
Transport network	Not significant	No significant effects are anticipated with a less than 4% increase in traffic movements at both AM and PM peak times and the introduction of the DART aiming to increase percentage of rail use to the airport.

Source: Wood Environment & Infrastructure Solutions UK Limited, 2020

