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London Luton Airport Expansion

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Volume 8 Additional Submissions (Examination)

8.191 Closing Submissions

Infrastructure Planning (Examination Procedure) Rules 2010

Application Document Ref: TR020001/APP/8.191



The Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

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

8.191 CLOSING SUBMISSIONS

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GLOSSARY AND ABBREVIATIONS

Acronym	Description
AAR	Airport Access Road (formerly CPAR)
AGI	Above Ground Installation
ALARP	As Low As Reasonably Practicable
ANPS	Revised draft Airports National Policy Statement: new runway capacity and infrastructure at airports in the south east of England
AONB	Area of Outstanding Natural Beauty
APD	Air Passenger Duty
APF	Aviation Policy Framework
AQMA	Air Quality Management Area
ATM / ATMs	Air Transport Movement(s)
BMV	Best and Most Versatile
CAA	Civil Aviation Authority
CBC	Central Bedfordshire Council
COMAH	Control of Major Accidents Hazards
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
CPO	Compulsory Purchase Order
CWS	County Wildlife Site
DAS	Design and Access Statement
DCO	Development Consent Order
DDS	Drainage Design Statement
DPD	Development Plan Document
EA	Environment Agency
EPA	Environmental Protection Act
ES	Environmental Statement
ESG	Environmental Scrutiny Group
ETS	Employment and Training Strategy
FRA	Flood Risk Assessment
FTP	Framework Travel Plan
FttF	Flightpath to the Future
FWRA	Foundation Works Risk Assessment
GCG	Green Controlled Growth

Acronym	Description
GHG	Greenhouse Gases
GVA	Gross Value Added
HCC	Hertfordshire County Council
HE	Historic England
HRA	Habitats Regulations Assessment
ICAO	International Civil Aviation Organization
LBC	Luton Borough Council
LBMP	Landscape and Biodiversity Management Plan
LDF	Local Development Framework
LIR	Local Impact Report
LLAOL	London Luton Airport Operations Limited
LLFA	Lead Local Flood Authority
LLP	Luton Local Plan 2011-2031
LOAEL	Lowest Observed Adverse Effect Level
LPA	Local Planning Authority
LTP	Local Transport Plan
Luton DART	Luton Direct Air to Rail Transit
LVIA	Landscape and Visual Impact Assessment
LWS	Local Wildlife Site
MA&D	Major Accidents or Disasters
MBU	Beyond the Horizon - The future of UK aviation, making best use of existing runways
MMP	Materials Management Plan
mppa	million passengers per annum (with space after number, ie 32 mppa)
NE	Natural England
NH	National Highways (formerly Highways England)
NHDC	North Hertfordshire District Council
NO2	Nitrogen dioxide
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NPSE	Noise Policy Statement for England
NSIP	Nationally Significant Infrastructure Project
OSWMP	Outline Site Waste

Acronym	Description
PINS	Planning Inspectorate
PM10	Particulate Matter (particles less than 10 µm in diameter)
PM2.5	Particulate Matter (particles less than 2.5 µm in diameter)
PPG	Planning Practice Guidance
PRoW	Public Rights of Way
PSZ	Public Safety Zone
SMR	Surface Movement Radar
SRN	Strategic Road Network
SuDS	Sustainable Drainage Systems
SWMP	Site Waste Management Plan
UK ETS	UK Emissions Trading Scheme
UXO	Unexploded Ordnance
WFD	Water Framework Directive

1 INTRODUCTION

1.1 Purpose of the document

- 1.1.1 This document has been prepared by the Applicant to summarise the principal issues that have been raised throughout the Examination of this application for development consent.
- 1.1.2 The document is intended to supplement existing submission documents to assist the Examining Authority (ExA) and the Secretary of State in their reporting and decision-making on the application for a Development Consent Order (DCO) for the expansion of London Luton Airport (the Proposed Development).
- 1.1.3 Without introducing new matters, it explains the Applicant's position on matters which have been considered during the Examination, and signposts the reader to existing submission material as appropriate. Where necessary, this has been supplemented by commentary from the Applicant to reflect any changes and additional commitments made during Examination, to accurately reflect the final position of the Applicant.
- 1.1.4 It is not the purpose or intention of this document to replicate or replace existing submission documents, which continue to fully articulate the Applicant's case and should be referred to on that basis.

1.2 Structure of the document

- 1.2.1 The following structure has been followed for the remainder of the document, to provide a comprehensive summary of all relevant matters;
- a. **Chapter 2 Statutory and policy framework for determining the application** – provides a high-level summary of the legislative and policy framework which the Proposed Development sits within.
 - b. **Chapter 3 Overview of the Proposed Development** – describes the form of the Proposed Development and the benefits it will bring.
 - c. **Chapter 4 The Need Case** – sets out the argument for growth underlying the necessity of the proposals and explains the Applicant's approach to demand forecasting and the fleet mix.
 - d. **Chapter 5 Consideration of alternatives** – provides evidence of the Applicant's approach to considering reasonable alternatives to the Proposed Development.
 - e. **Chapter 6 Good design** – considers the Applicant's approach to, and matters related to, good design. It also explains how good design will be embedded into the detailed design of the Proposed Development.
 - f. **Chapter 7 Compulsory acquisition and temporary possession** – considers issues related to the compulsory acquisition and temporary possession of land, including statutory undertaker land and Special Category Land. It also outlines the compelling case for the acquisition of

land for the public benefit, including for environmental purposes, as well as a demonstration of how this will be funded.

- g. **Chapter 8 Surface access matters** – considers surface access related matters raised in the Examination and how they have been addressed by the Applicant.
- h. **Chapter 9 Environmental and social matters** – considers Environmental and social matters in the Examination and how they have been addressed by the Applicant.
- i. **Chapter 10 The Draft Development Consent Order** – summarises the Applicant's approach to, and key provisions of, the draft DCO and any remaining matters at the end of Examination.
- j. **Chapter 11 Section 106 Agreement** – provides an overview of obligations secured by the s106 agreement and a summary of the final positions proposed at the end of Examination.
- k. **Chapter 12 Green Controlled Growth (GCG)** – explains the GCG Framework proposal by the Applicant and its consideration in the Examination.
- l. **Chapter 13 Control documents** – sets out the control documents which mitigate impacts of the Proposed Development, and matters raised in relation to them during Examination.
- m. **Chapter 14 Stakeholder engagement** – summarises the engagement undertaken by the Applicant during the pre-application and Examination stages.
- n. **Chapter 15 The planning balance and conclusions** – provides the Applicant's final view on the overall planning balance to that presented in Chapter 9 of the **Planning Statement [TR020001/APP/7.01]**.

2 STATUTORY AND POLICY FRAMEWORK FOR DETERMINING THE APPLICATION

2.1.1 A full consideration of the legislative framework in which this application for development consent sits within is provided in Chapter 6 (Legal and Policy Context) of the **Planning Statement [TR020001/APP/7.01]**, and **Appendix E – Policy Compliance Tables [REP5-018]** of the Planning Statement. This section provides a brief summary of this context.

2.2 The Planning Act 2008

2.2.1 As the Proposed Development comprises the alteration of an English airport to the effect of increasing by at least 10 million per year the number of passengers, it is defined as a ‘Nationally Significant Infrastructure Project’ under the Planning Act 2008 (‘the Act’) – the primary legislation dictating the statutory framework for the Proposed Development. As such, a Development Consent Order prescribed by the relevant Secretary of State must be granted in order for the proposals to be constructed, operated and maintained.

2.2.2 In accordance with Section 104(2) of the Act, the Secretary of State is required to have regard to any relevant National Policy Statement (NPS) where it has effect, amongst other matters, when deciding whether to grant a DCO. However, the current Airports National Policy Statement (ANPS) (Ref 2.1) only has ‘effect’ in relation to the delivery of additional airport capacity at Heathrow Airport through the Heathrow Northwest Runway project and so Section 104 of the Act does not apply.

2.2.3 The application will, therefore, be determined under section 105 of the Act, which provides that the Secretary of State must have regard to any local impact report prepared by the relevant local authorities, matters that may be prescribed and any other matters which the Secretary of State “*thinks are both important and relevant*” to their decision. Chapter 6 Legal and Policy Context of the **Planning Statement [TR020001/APP/7.01]** provides further detail in relation to Sections 104 and 105 of the Act.

2.2.4 The Proposed Development is also subject to secondary legislation by means of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref 2.2), which necessitates that the proposals are to be considered ‘EIA development’ and assessed as such by an Environmental Statement.

2.3 Policy context

2.3.1 Aviation growth is supported in principle by the Government, and the Proposed Development is in full compliance with the following aviation planning policy:

- a. Aviation Policy Framework 2013 (Ref 2.3);
- b. Airports National Policy Statement 2018 (Ref 2.1);
- c. Beyond the horizon: making best use of existing runways 2018 (Ref 2.4);
- d. Aviation 2050 – the future of UK aviation 2018 (Ref 2.5);
- e. Flightpath to the Future 2022 (Ref 2.6);

- f. Jet Zero Strategy 2022 (Ref 2.7);
- g. Jet Zero Strategy: one year on 2023 (Ref 2.8); and
- h. Overarching Aviation Noise Policy 2023 (Ref 2.9).

2.3.2 Demonstration of how the Proposed Development aligns with the above policies, as well as other relevant policy documents at a national and local level, is provided in the **Planning Statement [TR020001/APP/7.01]**. A detailed summary of how the Proposed Development delivers against the above aviation and economic policy can be found under section 4.2 of **Chapter 4 The Need Case**.

2.3.3 Consideration of policy specific to environmental matters is included in **Chapter 9 Environmental and social matters**.

2.3.4 The overall planning balance for the Proposed Development, weighing up the degree to which all relevant policy is met, or surpassed, is provided as a summary at **Chapter 15 The planning balance and conclusions**. A full consideration is provided in the **Planning Statement [TR020001/APP/7.01]**.

2.4 Other relevant and important matters

2.4.1 As prescribed under Section 105 of the Act, the Applicant has had due consideration of policy matters likely to be considered “important and relevant” in the determination of the application for development consent. This can be found within Chapter 6 Legal and Policy Context of the **Planning Statement [TR020001/APP/7.01]**, as well as **Appendix E – Policy Compliance Tables [REP5-018]** of the Planning Statement. Both documents demonstrate the Proposed Development’s accordance with relevant local and national policy.

2.5 Matters raised during the Examination

2.5.1 Consideration of the matters raised in relation to planning policy throughout the Examination are discussed at **Chapter 15 The planning balance and conclusions**. As a result of these matters, several changes were made to the **Planning Statement** at Deadline 5 **[REP5-016]**.

2.6 Consideration of policy in practice

2.6.1 To satisfy questions raised by the ExA at Issue Specific Hearing (ISH) 2 in relation to the practical consideration of policy in the context of relevant applications at London Luton Airport and others, the Applicant submitted the **Applicant’s response to Issue Specific Hearing 2 Actions 11, 12 and 13: New Policy Status Paper [REP4-074]** at Deadline 4.

3 OVERVIEW OF THE PROPOSED DEVELOPMENT

3.1 The Proposed Development

3.1.1 The Proposed Development builds on the current operational airport with the construction of a new passenger terminal and additional aircraft stands to the northeast of the runway. This will take the overall passenger capacity to 32 million passengers per annum (mppa).

3.1.2 In addition to the above and to support the initial increase in demand, the existing infrastructure and supporting facilities will be improved in line with the short-term requirements for additional capacity.

Key elements of the Proposed Development include:

- a. extension and remodelling of the existing passenger terminal (Terminal 1) to increase the capacity;
- b. new passenger terminal building and boarding piers (Terminal 2);
- c. earthworks to create an extension to the current airfield platform; the vast majority of material for these earthworks would be generated on site;
- d. airside facilities including new taxiways and aprons, together with relocated engine run-up bay and fire training facility;
- e. landside facilities, including buildings which support the operational, energy and servicing needs of the airport;
- f. enhancement of the existing surface access network, including a new dual carriageway road accessed via a new junction on the existing New Airport Way (A1081) to the new passenger terminal along with the provision of forecourt and car parking facilities;
- g. extension of the Luton Direct Air to Rail Transit (Luton DART) with a station serving the new passenger terminal;
- h. landscape and ecological improvements, including the replacement of existing open space; and
- i. further infrastructure enhancements and initiatives to support the target of achieving zero emission ground operations by 2040¹, with interventions to support carbon neutrality being delivered sooner including facilities for greater public transport usage, improved thermal efficiency, electric vehicle charging, on-site energy generation and storage, new aircraft fuel pipeline connection and storage facilities and sustainable surface and foul water management installations.

3.1.3 A detailed description of the Proposed Development is provided in **Chapter 4** of the **Environmental Statement (ES) [AS-074]**.

¹ This is a Government target, for which the precise definition will be subject to further consultation following the *Jet Zero Strategy*, and which will require further mitigations beyond those secured under the DCO.

3.2 Benefits of the Proposed Development

3.2.1 The remainder of this chapter sets out the benefits of the Proposed Development, other than the economic benefits, which are set out under Section 4.4.

Green Controlled Growth

3.2.2 The Applicant takes seriously its responsibility to manage the impacts of the airport on communities around the airport. Green Controlled Growth (GCG) is an innovative new framework that the Applicant has developed since the 2019 Statutory Consultation to address the feedback received on environmental concerns. The Applicant considers it to be one of the most far-reaching commitments to managing environmental effects ever voluntarily put forward by a UK airport.

3.2.3 GCG will mean that the ongoing growth of the airport can only take place where it can be done so within the reasonable worst case envelope of environmental effects that formed the basis for granting development consent. It requires the airport operator to take a proactive approach to managing the environmental effects of expansion, by defining Limits and Thresholds for aircraft noise, greenhouse gas emissions, air quality and surface access.

3.2.4 GCG requires monitoring and reporting of those impacts, and that the airport operator takes steps to address them before those Limits are exceeded. By taking this proactive approach, it will ensure that plans for growth are adjusted in response to the prevailing circumstances at the time, rather than waiting for a problem to occur and then reacting.

3.2.5 More information on the Green Controlled Growth Framework is set out in Chapter 12.

Community First

3.2.6 The Applicant considers itself to be a social enterprise and is committed to ensuring that the benefits arising from its ownership of the airport are shared with nearby communities. Through the introduction of a new funding stream, Community First, the Applicant aims to tie together its commitment to sharing the benefits of airport growth with its neighbours and its commitment to contributing to the Luton 2040 Vision. As its first declared themes, Community First is aimed at providing grant funding to local organisations to assist with the delivery of interventions which address the objectives of tackling deprivation and achieving carbon neutrality by 2040.

3.2.7 Community First will be provided at a fixed rate of £1 of funding for every additional passenger above the planning cap current at the time that the Development Consent Order is made, per year. This will result in up to £13m per year by the time the airport reaches a throughput of 32 mppa. This will make a significant positive difference to the area and continue the Applicant's longstanding commitment to supporting local communities.

3.2.8 Further detail on Community First can be found in **Compensation Policies, Measures and Community First [TR020001/APP/7.10]**.

Sustainable transport benefits

- 3.2.9 A Sustainable Transport Fund (STF) has been proposed to fund interventions aimed at improving sustainable travel options for accessing the airport. Details of the STF are provided in the **STF document [REP10-039]**. It will support the implementation of interventions proposed in the Travel Plans.
- 3.2.10 The STF is generated through levies on on-site airport passenger parking transactions and is secured by requirement 32 of the draft DCO which states “*From the date that notice is served in accordance with article 44(1) (interaction with LLAOL planning permission) of this Order, the undertaker must implement and operate the sustainable transport fund.*” Fund size projections are provided in section 2.3 of the **STF [REP10-039]** and these reflect the level of ambition that the Applicant must deliver high-quality sustainable transport interventions as the airport expands.
- 3.2.11 The airport operator will make funds available from the STF according to the recommendations of the Airport Transport Forum (ATF) Steering Group. The ATF Steering Group will consider a proposed intervention against agreed criteria (to be defined by the ATF Steering Group upon their establishment).

Enhanced Noise Insulation Scheme

- 3.2.12 The Applicant has proposed a new and enhanced noise insulation policy, the detail of which is set out in **Compensation Policies, Measures and Community First [TR020001/APP/7.10]**. The policy will be secured in a section 106 agreement and will provide what the Applicant believes to be industry-leading protection for residents from airborne noise, ground noise and noise from highway improvements carried out as part of the Proposed Development.
- 3.2.13 The noise insulation policy will provide enhanced measures for owners of listed buildings and protection for community buildings that are close to the airport.
- 3.2.14 The noise insulation policy will be significantly more generous and reach significantly more residents than currently covered by the existing noise policy being delivered by the current airport operator. Under the current policy grants are capped at £3,800 soon to be £4,500 per property. Under the new policy the fixed sum grants will be up to £20,000 per property and under two of the schemes the contribution will be uncapped so that full insulation of the properties will be provided.
- 3.2.15 The new policy introduces a testing regime and passes significant responsibility for governance and decisions to the Noise Insulation Sub-Committee of London Luton Airport Consultative Committee (LLACC) for both ongoing scrutiny of the approach and independence.
- 3.2.16 The Applicant has made firm commitments (via a section 106 agreement) that will enable it to rollout the noise insulation as quickly as possible under a detailed rollout plan that will be subject to consultation and then approved by the relevant local planning authority prior to implementation. The rollout plan will be closely monitored, an annual report on progress will be provided and there

will be a mechanism in place for continual improvement so that it will meet its objectives of reaching as many households as possible in the first four years after the article 44(1) notice to lift the current passenger cap has been served.

Environmental benefits

- 3.2.17 The environmental effects of the Proposed Development, both adverse and beneficial, are reported in **Chapters 6 to 21 [APP-033 to APP-046 and AS-032]** (as amended) of the **ES** and summarised in Section 14 of each chapter. A description of each effect, whether it is significant or not, and a summary of any proposed mitigation is provided in each assessment. A general summary of benefits includes:
- a. Benefits for biodiversity, including:
 - i. Long-term increase in broadleaved woodland, scattered and dense scrub, neutral semi-improved grassland, calcareous grassland, poor semi-improved grassland, and species rich hedgerows.
 - ii. Removal and management of Japanese knotweed.
 - iii. Long-term habitat creation and management to the benefit of badger, breeding birds, barn owl and red kite, and reptiles.
 - iv. Biodiversity net gain of at least 10%.
 - b. Major benefits from employment (direct and indirect/induce), Gross Value Added (direct/indirect/induced), Gross Domestic Product (GDP), and wider impacts for tourism GDP, jobs, journey time savings and Air Passenger Duty revenue. Please refer to Chapter 4 The Need Case for further detail.
 - c. Beneficial health effects from access to open space, recreation and physical activity, employment and income.
 - d. Beneficial landscape impacts on the Public Right of Way network, mixed ancient deciduous and plantation woodlands, mixed ancient deciduous and plantation woodlands east of the airport.
 - e. Long-term overall improvements in Wigmore Valley Park provision.
 - f. Beneficial impacts on the landscape character areas of Kimpton and Whiteway Bottom and Breachwood Green Ridge.
 - g. Improvements in potential ground gas migration from the former Eaton Green Landfill.
 - h. Reduce severance associated with traffic on parts of Percival Way and Eaton Green Road, as well as reduced risk of collisions and improved safety at Eaton Green Road/Frank Lester Way.
 - i. Reduced risk to groundwater and surface water with remediation and capping of landfill, and reduced flood risk on-site due to proposed drainage infrastructure.

Transparency and community involvement

- 3.2.18 Empowering local people to shape the form of growth at the airport, as well as influence how its future operations will be managed, has been a central theme to the Applicant's approach to developing the Proposed Development. A detailed report of how the Applicant has considered and made changes to the Proposed Development in response to feedback gathered from three rounds of public consultation can be found in the **Consultation Report [AS-048]**.
- 3.2.19 The **GCG Framework [TR020001/APP/7.08]**, which itself was created in response to feedback trends identified at the 2019 public consultation, has continued to be heavily influenced by feedback from the public, local authorities and other interested parties. Perpetual involvement of the community is embedded in GCG via local planning authority representation on the Environmental Scrutiny Group (ESG) – the key monitoring body for GCG. Along with representation from independent experts and overseen by an independent chair, the Applicant believes this results in a robust and transparent governance framework for the airport to responsibly grow within.
- 3.2.20 In addition to the ESG, Technical Panels for each of the four environmental topics will be established. These panels have more wide-reaching representation than the ESG, incorporating membership from additional local authorities and independent technical experts.
- 3.2.21 To ensure that local communities have a direct voice in GCG, the framework also includes a requirement for the airport operator to organise public meetings for each of the four environmental effects within GCG. These meetings provide the opportunity for the public to offer feedback relevant to the airport's performance against the associated Limits, which will be used to inform the deliberations of the Technical Panels and ESG. Further information on the ESG and Technical Panels is provided in Chapter 12 Green Controlled Growth.
- 3.2.22 Beyond GCG, further local influence upon the management of impacts from the Proposed Development is facilitated by the following:
- a. **Airport Transport Forum (ATF)**: A forum to enable partnership between the airport operator, relevant authorities, transport providers, and other relevant parties. It provides a collaborative environment to engage relevant stakeholders on surface access matters for the airport and collate proposals for transport interventions and initiatives.
 - b. **ATF Steering Group**: This is a sub-committee of the ATF that plays a greater role in decision-making regarding surface access to the airport, including administration and decision-making on the use of the ATF. Its members include the airport operator and the relevant highway authorities.
 - c. **Community First**: the Applicant's proposed fund for local and community investments, providing £1 per passenger from growth above 19 mppa, will be administered via an independent charitable body. The awards panel that will determine applications for grant funding shall consist of members with sufficient understanding of the local area and its needs. Further detail

can be found within Chapter 10 of **Compensation Policies, Measures and Community First [TR020001/APP/7.10]**.

- d. **Employment and Training Strategy (ETS):** the Applicant has recognised the importance of collaborating with a range of stakeholders in preparing the ETS, and has embedded these relationships in the governance structure regarding implementation of the ETS. Further details can be found in the **Employment and Training Strategy [REP8-020]**.
- e. **Wigmore Valley Park Community Trust:** this new Community Trust will be established by the Applicant as a registered charity to manage and maintain the extended Wigmore Valley Park and be responsible for the annual fund provided by the Applicant.
- f. **Noise Insulation Sub-Committee of London Luton Airport Consultative Committee:** please refer to paragraph 3.2.14.

3.2.23 In summary, the above interventions combine to ensure that the Proposed Development, whilst of national significance, is also grounded in local sensitivities. The Applicant recognises that London Luton Airport is not detached from its locality, but a key player in Luton's economy, culture and community. Committing to the ongoing involvement of local people in the airport's growth is testament to the Applicant's investment in Luton and the surrounding areas.

4 THE NEED CASE

4.1 Introduction

4.1.1 The need for the Proposed Development is founded in national aviation policy, which supports the growth of aviation to support broader economic growth so long as its environmental impacts are mitigated and managed. Ultimately, the need for the Proposed Development is expressed in terms of the forecasts of demand to use London Luton Airport and the benefits that meeting that demand at the airport will deliver to the local area and beyond.

Key Documents

- a. Need Case **[AS-125]**;
- b. Need Case Appendices **[APP-213]**;
- c. Applicant's Response to Written Representations – Part 4 – Appendix (NEF) **[REP2-039]**;
- d. Response to Chris Smith Aviation Consultancy Limited – Initial Review of DCO Need Case **[REP2-042]**;
- e. Applicant's Post Hearing Submission – Issue Specific Hearing 2 **[REP3-049]**;
- f. Applicant's Response to Written Questions – Need Case **[REP4-059]**;
- g. Applicant's Response to Written Questions – Socio-economic Effects **[REP4-067]**;
- h. Applicant's Response to Deadline 3 Submissions – Appendix A New Economics Foundation **[REP4-096]**;
- i. Applicant's Response to Deadline 4 Submissions Appendix D Dacorum Borough Council, Hertfordshire County Council and North Hertfordshire Council (CSACL Response) **[REP5-050]**;
- j. Applicant's Response to Written Questions – Need **[REP7-055]**;
- k. Applicant's Response to Written Questions – Socio-economic Effects **[REP7-058]**; and
- l. Applicant's Response to Written Questions NE.2.1 and NE.2.2 Demand Forecasts **[REP8-037]**;

4.2 Policy context

Aviation policy

4.2.1 The policy context for the Proposed Development is founded in Government aviation policy, which is set out more fully in Section 3 of the Need Case **[AS-125]**. Key policy documents include:

- a. Aviation Policy Framework 2013 (Ref 4.1)
- b. Airports National Policy Statement 2018 (Ref 4.2)
- c. Beyond the horizon: making best use of existing runways 2018 (Ref 4.3)

- d. Aviation 2050 The future of UK aviation 2018 (Ref 4.4)
- e. Flightpath to the Future 2022 (Ref 4.5)
- f. Jet Zero Strategy 2022 (Ref 4.6)
- g. Jet Zero Strategy: one year on 2023 (Ref 4.7)
- h. Overarching Aviation Noise Policy 2023 (Ref 4.8)

4.2.2 The principal policy context for the Proposed Development lies in the overarching support given to growth in aviation activity because of its important role within the economy. The reasons why aviation growth and growth in airport capacity is supported is made clear in Flightpath to the Future (Ref 4.9):

“Airport expansion has a key role to play in realising benefits for the UK through boosting our global connectivity and levelling up. We continue to be supportive of airport growth where it is justified, and our existing policy frameworks for airport planning provide a robust and balanced framework for airports to grow sustainably within our strict environmental criteria. They continue to have full effect, as a material consideration in decision-taking on applications for planning permission. The Government is clear that the expansion of any airport must meet its climate change obligations to be able to proceed.” (page 7)

“Airports have a key role to play in boosting our global connectivity and we continue to be supportive of sustainable airport growth. Our existing planning frameworks for airport growth provide a robust and balanced framework for airports that want to grow within our strict environmental criteria.” (page 4)

“Enhancing our global connectivity, including both making the UK more accessible to visitors, and making the rest of the world more accessible for people living in the UK, is essential for the future success of the sector. The pandemic has demonstrated more than ever the importance of human connection, and the Government is committed to working with the sector to ensure UK aviation delivers the best possible global connectivity.” (page 19)

“Aviation also has a central role in delivering local benefits across the UK. This includes championing the levelling up agenda, strengthening union connectivity, boosting economic success, and supporting local jobs. It is important to recognise the role our extensive airport, airfield and aviation infrastructure network plays in providing benefits to local communities, as well as supporting associated supply chains.” (page 7)

4.2.3 The specific policy context for the Proposed Development is the policy support given for airports, beyond Heathrow, to make best use of their existing runways set out in the Airports National Policy Statement (ANPS) (Ref 4.2):

“the Government has confirmed that it is supportive of airports beyond Heathrow making best use of their existing runways.” (paragraph 1.39)

“it may well be possible for existing airports to demonstrate sufficient need for their proposals, additional to (or different from) the need which is met by the provision of a Northwest Runway at Heathrow.” (paragraph 1.42)

- 4.2.4 The policy regarding the tests for airports seeking to make best use of existing runway(s) is set out in full in Beyond the horizon; making best use of existing runways (MBU) (Ref 4.3). As the ANPS is not directly applicable to any airport development other than the proposed northwest runway at Heathrow, the principal policy under which the Proposed Development should be determined is MBU.
- 4.2.5 MBU is clear that applications to make best use of an existing runway, as is the case with the Proposed Development, should be judged *“taking careful account of all relevant considerations, particularly economic and environmental impacts and proposed mitigations.”* Consistent with aviation policy from 2013, the Government is clear that there is a balance between environmental impacts and economic benefits that must be considered by the decision-maker. The Applicant considers that the economic benefits outweigh the environmental impacts of the Proposed Development when mitigations and the Green Controlled Growth Framework are taken fully into account.
- 4.2.6 The theme of balancing environmental impacts against economic and consumer benefits was also made clear in the Overarching Aviation Noise Policy Statement (Ref 4.8):
- “The government’s overall policy on aviation noise is to balance the economic and consumer benefits of aviation against their social and health implications”*
- 4.2.7 Further information on compliance with noise policy is covered in Chapter 9 of this Closing Submissions.
- 4.2.8 Whilst highlighting that the local environmental impacts of the Proposed Development should be considered in their context, MBU (paragraph 1.11) is clear that carbon emissions from air traffic are a matter to be addressed by national policy. This is reinforced in the ANPS, which states:
- “Any increase in carbon emissions alone is not a reason to refuse development consent, unless the increase in carbon emissions resulting from the project is so significant that it would have a material impact on the ability of Government to meet its carbon reduction targets, including carbon budgets.”* (paragraph 5.82)
- 4.2.9 This position in relation to carbon emissions from aircraft being a matter for Government at a national level was restated in the Jet Zero Strategy (Ref 4.6), which makes clear that:
- “achieve Jet Zero without the Government needing to intervene directly to limit aviation growth. The analysis uses updated airport capacity assumptions consistent with the latest known expansion plans at airports in the UK. The analysis indicates that it is possible for the potential carbon emissions resulting from these expansion schemes to be accommodated within the planned trajectory for achieving net zero emissions by 2050, and consequently that our planning policy frameworks remain compatible with the UK’s climate change obligations.”* (paragraph 3.57)
- 4.2.10 The Applicant would highlight that the possibility for London Luton Airport (the airport) growing to 32 million passengers per annum (mppa) was considered within the Government’s modelling of known airport expansion plans to ensure

that growth could be accommodated without placing carbon reduction targets in jeopardy.

- 4.2.11 The above paragraphs summarise the aviation policy context in which the need for the Proposed Development falls to be considered. However, the Applicant also considers it important to understand how ‘need’ has been construed by the Secretary of State in other airport development decisions. In relation to the Manston DCO, the Secretary of State (Ref 4.10) made clear that:

“the MBU policy, which is relevant to this Application, does not require making best use developments to demonstrate a need for their proposals to intensify use of an existing runway or for any associated Air Traffic Movements (“ATMs”).” and

“Therefore, in order to assess whether the expected economic benefits will outweigh the expected environmental and other impacts from this Development, the Secretary of State has considered need in the context of identifying the likely usage of the Development” (paragraph 37).

- 4.2.12 Hence, the key test of need relates to the robustness of the demand forecasts for the Proposed Development and to the economic benefits flowing from those forecasts of future usage.
- 4.2.13 Overall, the Applicant believes that the Proposed Development fully accords with aviation policy and that the tests of need set out therein are met.

Economic Policy

- 4.2.14 The economic policy context for the Proposed Development is set out in Section 2 of the **Need Case [AS-125]**. As noted above in relation to aviation policy, the Government is supportive of the growth of aviation nationally because of the benefits that it brings in terms of connectivity, both nationally and locally, and in terms of the local benefits, particularly in terms of employment, deriving from the operation of airports.
- 4.2.15 In the case of London Luton Airport, a particular context, as highlighted in Flightpath to the Future in paragraph 4.2.2 above is the role of airport expansion in supporting ‘Levelling Up’, for which the Borough of Luton is a Priority 1 area and there are other priority areas in the employment catchment area for the airport where growth in jobs and reductions in deprivation are targeted.
- 4.2.16 The important role of the airport is highlighted in the vision for Luton – Luton 2040 A place to thrive (Ref 4.11):
- “The growth of our airport will continue to be at the heart of our economy and we must continue to balance the benefits of this against the need to protect our environment.”* (page 25)
- 4.2.17 There is also a broader economic context for the Proposed Development in terms of the contribution that it can make to improving connectivity to the Oxford-Cambridge Arc, which is an economically significant area seen as having the potential to drive productivity and wider economic benefits to the UK economy as a whole.

Consideration of policy context during the Examination

Matters agreed

- 4.2.18 Through the Examination, there has been no significant challenge to the broader aviation policy context for the Proposed Development. General compliance with aviation policy has been agreed in Statements of Common Ground (SoCG) with the Host Authorities [TR020001/APP/8.13-17], without reservation in the case of Luton Borough Council and Central Bedfordshire Council.

Matters not agreed

- 4.2.19 The Hertfordshire Host Authorities [TR020001/APP/8.15-17] do not, however, consider that the Proposed Development is consistent with MBU (Ref 4.3), noting that it requires consideration of economic and environmental impact (paragraph 4.2.5 above) and that, in their view, the forecasts do not demonstrate sufficient need and that the environmental impacts are considered by them to be unacceptable.
- 4.2.20 The Applicant does not agree with this position and considers that the demand forecasts are robust and demonstrate a clear need, as is explained below, and that the environmental impacts are not unacceptable, as explained in Chapter 9, and are fully managed and mitigated.
- 4.2.21 Several Interested Parties, such as LADACAN and the New Economics Foundation (NEF), have raised concerns about the compliance of the Proposed Development with the UK's climate change policy and the target to achieve net zero greenhouse gas emissions by 2050. The Applicant considers that these are principally challenges to the Government's Jet Zero Strategy and so are not matters for the decision-maker in relation to the application for development consent.
- 4.2.22 LADACAN and other Interested Parties have also argued that the need for growth, in terms of supporting economic growth in Luton and levelling up locally, is satisfied by the 'Project Curium' expansion of the airport to 18 mppa or in the alternative, that there is no evidence that growth of the airport has delivered economic benefits to Luton.
- 4.2.23 The Applicant responded to this point in [REP4-075] considering the past employment estimates and the impact of growth to 18 mppa on employment in Luton, which demonstrated that growth of employment at the airport prior to the pandemic had made a significant contribution to employment in Luton, particularly in the light of reductions in employment at Stellantis. The Applicant considers that further growth at the airport will support employment and economic growth locally and that this will make a substantial contribution to levelling up and the broader objective to reduce deprivation in Luton. This is addressed further later in this chapter in relation to the economic benefits.
- 4.2.24 LADACAN and other Interested Parties have suggested that the Proposed Development does not 'share the benefits' of noise reduction from aircraft with the communities. The Applicant would highlight that the latest Government

policy on aviation noise (Ref 4.8) is clear that sharing the benefits also refers to economic and consumer benefits, which may be considered to offset harm if the overall outcome is sustainable development:

“in the context of sustainable growth an increase in total adverse effects may be offset by an increase in economic and consumer benefits.”

4.3 Demand forecasts

Overview of approach

Passenger forecasts

- 4.3.1 The methodology for producing the demand forecasts for the Proposed Development is set out in Section 6 of the **Need Case [AS-125]**. The approach follows a methodology similar to that adopted by the Department for Transport (DfT) in preparing its forecasts of demand at UK airports and draws on several of the same assumptions, including the elasticity of passenger demand to economic growth and the costs of air travel, and the future costs of carbon or its abatement through sustainable aviation fuels or new technologies. The methodology has been tested and accepted at previous airport planning inquiries, including specifically in relation to Bristol Airport (Ref 4.12) (paragraphs 105-142).
- 4.3.2 The methodology is a two-stage process, with the first stage being to establish the forecast rate of growth in the underlying demand for air travel across the whole of the UK and applying this to the total pool of demand to travel to and from the wider catchment area served by the airport using Civil Aviation Authority survey data to establish passenger origins and destinations and other characteristics. This establishes the total pool of demand from which the airport competes to attract its share.
- 4.3.3 The forecast growth rate is calculated for each segment of the market, e.g. domestic business passengers, UK resident leisure passengers to southern Europe, foreign resident business passengers from the rest of Europe (a full breakdown is set out at Table 6.1 of the **Need Case [AS-125]**) using a Monte Carlo simulation approach, which considers a range of projections of economic growth for the UK and elsewhere (income) and a range of projections of the factors, such as fuel or carbon, likely to affect airfares (cost) (Appendix B to the **Need Case [APP-214]**). The model uses DfT’s elasticities applied to consider the potential impact of varying assumptions about future economic growth, fuel prices or carbon costs, taking into account uncertainty and risk, to define the potential range of the future growth rates for air travel demand. These forecasts were based on the most up-to-date projections of income and cost as of March 2022.
- 4.3.4 To produce a more detailed forecast for the Proposed Development, the 50th percentile was taken as the ‘most likely’ growth rate for passenger demand, with the 80th percentile taken as the realistic upper bound and the 20th percentile taken as the realistic lower bound.

- 4.3.5 The second stage of the process is to model London Luton Airport's share of the underlying market for air travel. This is undertaken using a detailed passenger allocation model, similar to that used by the DfT, to estimate the airport's share of the market taking into account that passengers will make a choice between airports based on the level of utility (a function of access time/cost, frequency of service and air fares/type of airline) that each airport offers.
- 4.3.6 Given the current uncertainty as to whether additional runway capacity will be provided at the London airports, the provision of an additional runway at Heathrow and/or the bringing into use of the northern runway at Gatwick were tested individually and in combination, as well as the scenario where neither project is implemented. Stansted was assumed to remain limited by its current consented throughput of 43 mppa using its single runway. Other airports were assumed to be able to expand in line with the demand, i.e., not capacity constrained within the model.
- 4.3.7 For the reasons explained at paragraph 6.3.27 of the **Need Case [AS-125]**, the potential for long haul services to develop at the airport over time was considered outside of the allocation model due to the inherent calibration difficulties when there have been few such services in the past. The scope for such services was considered by reference to the underlying base of passenger demand in the airport's catchment area and realistic thresholds of viability. The airport is not expected to attract long haul services to any degree until the Phase 2 infrastructure is in place providing adequate terminal, apron and taxiway facilities to accommodate larger aircraft on a regular basis.
- 4.3.8 This process produced a range of passenger forecasts for London Luton Airport dependent on the underlying demand scenario and what assumption was made regarding capacity at Heathrow and Gatwick. Figure 6.3 of the **Need Case [AS-125]** illustrates the reasonable range of outcomes for how passenger demand at the airport might grow up to 32 mppa if capacity is available to meet demand having regard to faster, most likely and slower growth and different permutations of capacity provision at Heathrow and Gatwick.
- 4.3.9 Three scenarios were established to reflect a central demand scenario and faster and slower growth scenarios. Given the uncertainties regarding capacity elsewhere and how likely it is to come forward given the costs of implementing additional runway capacity, which in turn depends on the underlying level of market growth (**Need Case [AS-125]**, paragraph 6.4.5), three cases for assessment are defined by considering the different permutations of outcome. These were:
- a. a central demand growth scenario based on the 'most likely' growth combined with allowance for one new runway at either Heathrow or Gatwick is considered to represent the most robust basis for considering the need for additional capacity at the airport as there is no certainty that both new runways could be viably brought forward over the same timescale;
 - b. a slower demand growth scenario, which is a hybrid of 'reasonable lower bound' market growth with no additional runways and 'most likely' growth

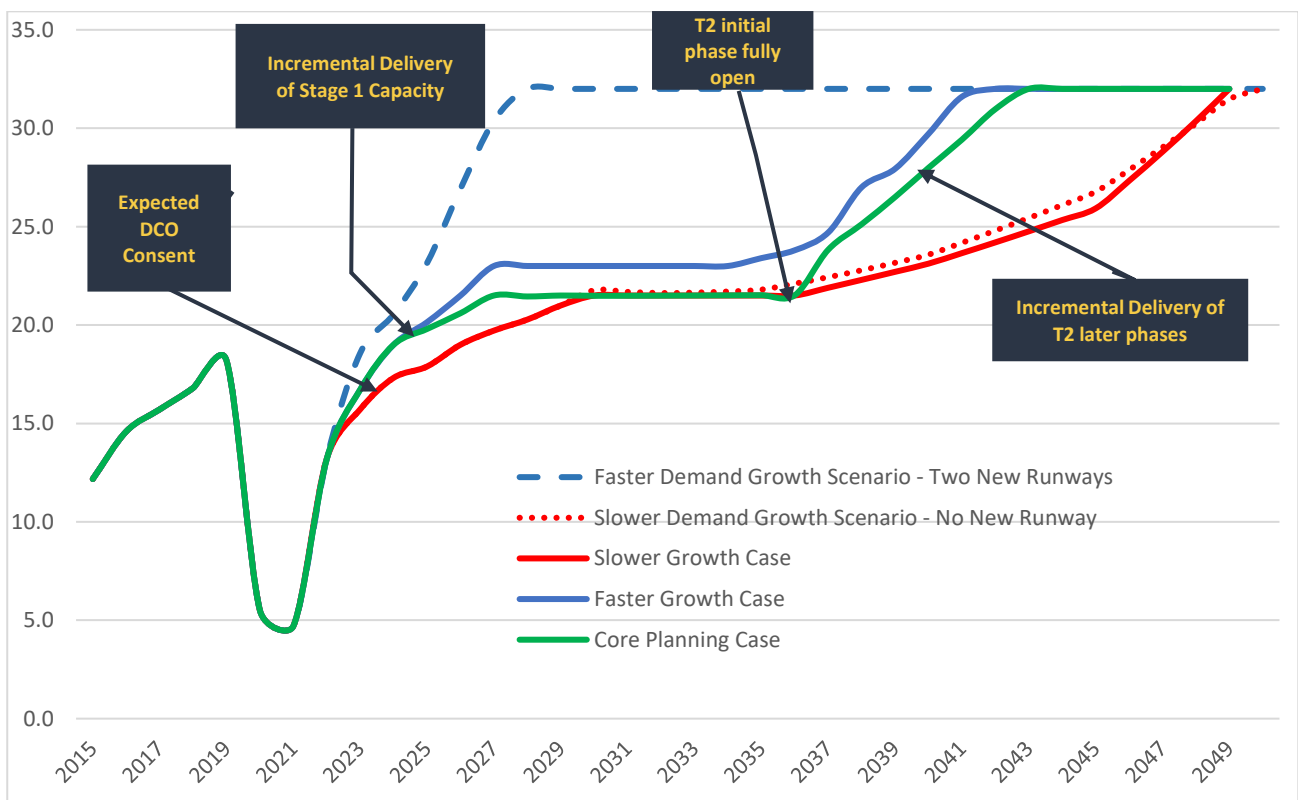
with two additional runways in the south east of England, as it would be expected that with slower overall growth in the market both the additional runways at both Heathrow and Gatwick would be substantially delayed or, potentially, not delivered at all; and

- c. a faster demand growth scenario broadly equivalent to the ‘reasonable upper bound’ market growth with two additional runways or ‘most likely’ growth with no additional runways delivered. This would potentially represent the reasonable worst case for the assessment of environmental impacts, as the 32 mppa limit proposed in the application for development consent would be attained at an earlier date.

4.3.10 The principle of these assessment scenarios as being appropriate has not been challenged by Interested Parties.

4.3.11 These demand scenarios were then adjusted, having regard to the anticipated phasing of works for the Proposed Development to form the forecast cases for assessment as illustrated in Figure 4.1 below (Figure 6.4 of the **Need Case [AS-125]**).

Figure 4.1: Planning forecast cases for assessment



Source: York Aviation

4.3.12 The defined assessment cases were the Core Planning Case based on the central demand growth scenario above, the Slower Growth Case based on the slower demand growth scenario and the Faster Growth Case based on the faster demand growth scenario.

- 4.3.13 The **Need Case [AS-125]** provides further information on the changes in the characteristics of passengers expected to use the airport in future and the extent to which the overall catchment area for the airport might change in future to inform the surface access analysis.

Detailed outputs for assessment

- 4.3.14 The passenger forecasts were then disaggregated into more detailed parameters required for the assessment of environmental effects. The detail is set out in sub-sections 6.5 and 6.6 of the **Need Case [AS-125]**. This includes:
- a. derivation of aircraft movement projections having regard to the anticipated growth in the number of passengers per aircraft movement in future;
 - b. projections of cargo and business aviation aircraft movements;
 - c. the anticipated future fleet mix;
 - d. busy day and October day timetables for the assessment of capacity requirements at the airport and on the surface access network more generally; and
 - e. detailed projections of movements in the 92-day period for noise assessment, including day and night-time movements.
- 4.3.15 These detailed outputs necessarily involve a degree of professional judgement, particularly regarding the transition to the new generation fleet of aircraft (Airbus neo family and B737Max aircraft) and next generation/zero carbon aircraft. In particular, the fleet mix forecasts were prepared based on known airline orders and delivery plans for the period to 2030 and further detail is provided in **[REP6-066]**. The projections for next generation aircraft to enter the fleets were based on the assumptions that informed the *Jet Zero Strategy* (Ref 4.7).
- 4.3.16 Nonetheless, the Applicant considers that the detailed projections set out a reasonable view of how the airport will be used in future and, taken in the round, are a robust basis for assessing the environmental impacts. To the extent that there is some inevitable uncertainty as to precisely which aircraft the airlines will operate at the airport in future and, hence, the precise number of aircraft movements in any particular time period, the impacts will nonetheless be controlled through the **Green Controlled Growth Framework [TR020001/APP/7.08]**.

Consideration of demand forecasts during the Examination

Passenger forecasts

- 4.3.17 During Examination the following issues were raised:
- a. The Chris Smith Aviation Consultancy Ltd (CSACL) for the Host Authorities challenged certain aspects of the passenger forecasts **[REP2-042, REP4-162, REP9-064]**:
 - i. the underlying market growth rates by reference to the assumptions used by the DfT in 2017 (Ref 4.13) regarding fuel

- costs and whether these account for the higher cost of sustainable aviation fuels;
 - ii. the implications of using more up to date economic forecasts, considering the effect of the Ukraine War, by reference to the DfT's updated passenger demand forecasts set out in the Jet Zero Strategy: one year on (Ref 4.7); and
 - iii. whether the capacity assumptions for Heathrow and Gatwick, in the absence of additional runway capacity are robust based on CSACL's expectation of greater growth in the numbers of passengers per aircraft movement.
- b. Several Interested Parties have questioned growth in air travel more generally in the light of Brexit, the Ukraine War, the cost of living and changing travel behaviours post-Covid, as well concerns about climate change more generally.
- c. The NEF has questioned the growth in business air passenger demand, but this is less a comment on the overall demand projections or need for the Proposed Development but rather whether the benefits from business travel growth have been overstated as discussed in relation to the economic benefits from the Proposed Development.

4.3.18 In response:

- a. The Applicant has produced several documents to rebut the points made by CSACL, including in response to the ExA's Written Questions **[REP2-042, REP4-059, REP5-050, REP7-055, REP8-037, REP10-045]**. Specifically, in response to Further Written Questions **[PD-015]** NE.2.1 and NE.2.2, the Applicant has undertaken sensitivity testing of the alternative assumptions put forward by CSACL **[REP8-037]**. This detailed sensitivity testing demonstrates clearly that the adoption of alternative assumptions has no material effect on the timing when the airport would reach 32 mppa, which still lies within the range assessed.
- Furthermore, in relation to the contention that each airport needs to fill up in turn before additional capacity is justified, the Applicant notes that the Secretary of State in the Manston appeal decision (Ref 4.10) found that MBU policy *"does not limit the number of MBU airport developments that might be granted and does not include a cap on any associated increase in ATMs as a result of intensifying use at MBU developments"* (paragraph 47). It does not follow that simply because there might be spare capacity at the other London airports that there would not be demand specific to London Luton Airport which would be best met at the airport, having regard to economic and consumer needs. If demand had to be met at the other airports, then this would not support levelling up at Luton or other local priority areas.
- b. The sensitivity tests also demonstrate that the demand forecasts are robust to all reasonable alternative economic projections, even the most recent forecasts from November 2023.
- c. In relation to NEF, the Applicant has noted that business travel recovery has been strong at London Luton Airport but, ultimately, this makes up

only a relatively small part of the overall growth forecasts for the airport. The Applicant has explained why it considers that there will be recovery and growth in business air travel demand such that the forecasts are robust in this regard **[REP4-096]**.

4.3.19 For this topic, the only aspect of the passenger demand forecasts that is not agreed is the implication of varying assumptions on the timing of when London Luton Airport will reach 32 mppa:

- a. The methodology by which the demand forecasts have been produced is agreed as appropriate via SoCGs with LBC **[TR020001/APP/8.13]**, CBC **[TR020001/APP/8.14]** and the Hertfordshire Host Authorities **[TR020001/APP/8.15-17]**, albeit downside risks are noted.

4.3.20 The Applicant notes National Highways has agreed that the passenger demand forecasts are reasonable **[TR020001/APP/8.11]**.

Detailed outputs for assessment

4.3.21 During the Examination the following issues were raised:

- a. CSACL, questioned the underlying assumptions about the number of passengers per aircraft movement in future at Luton as well as at Heathrow and Gatwick **[REP5-063]**. This has been used to inform the Host Authorities position in relation to aircraft movement limits for both the year as a whole and in the shoulder periods.
- b. The Harpenden Society raised some queries regarding the pace of fleet transition, suggesting that the noise assessment may not be robust **[REP9-093]**.

4.3.22 In response:

- a. The Applicant has provided a detailed response regarding annual and shoulder aircraft movement limits in **[REP9-055]** concerning noise contours and controls. The Applicant is of the view that the movement limits put forward by CSACL are not robust and do not allow sufficient flexibility for the airport to respond to demand in the most efficient way and could prevent the growth authorised by the DCO from being realised. The Applicant considers that the impacts of growth are adequately managed through the **Green Controlled Growth Framework [TR020001/APP/7.08]** without the need for further limits on aircraft movement and that, if such movement limits are to be imposed, they must allow sufficient flexibility for demand to be met efficiently within defined environmental Limits.
- b. The same applies to any inherent uncertainties in relation to the rate of fleet transition to new generation aircraft as, if the fleet transition were to be slower, the rate of growth would ultimately be controlled by the **Green Controlled Growth Framework [TR020001/APP/7.08]**, which provides a powerful incentive on the airlines to modernise their fleets of aircraft at the airport in order to be able to grow.

4.3.23 For this topic, all matters are agreed at the end of Examination except in relation to the appropriate number of annual and morning shoulder period aircraft movements that would be appropriate if the ExA was minded to impose aircraft movement limits. The Applicant would note that the Host Authorities have agreed that the conversion of passenger demand forecasts to projections of aircraft movement and fleet mix is appropriate, and the outputs reasonable for the Core Planning Case in their Statements of Common Ground with the Applicant **[TR020001/APP/8.13-17]**.

4.4 The economic benefits of the Proposed Development

4.4.1 Section 8 of the **Need Case [AS-125]** sets out the economic benefits arising from the Proposed Development. These benefits are the same as references in **Chapter 11 of the Environmental Statement [APP-037]** and draw on the Oxford Economics Report appended to that chapter **[APP-079]**.

4.4.2 In summary, the Proposed Development has the potential to generate substantial additional employment and Gross Value Added (GVA) in the economy of Luton and surrounding areas. The benefits are presented at four spatial levels:

- a. Luton;
- b. Three Counties – Bedfordshire, Buckinghamshire and Hertfordshire;
- c. Six Counties - Bedfordshire, Buckinghamshire, Cambridgeshire, Essex, Hertfordshire and Oxfordshire; and
- d. The UK.

4.4.3 The principal areas for assessment have been the impacts more locally in Luton and the Three Counties area.

Operational employment and Gross Value Added (GVA)

4.4.4 The impact of the airport's growth to 32 mppa has been presented in terms of its economic footprint in terms of:

- a. Direct employment and GVA deriving from the operation of the airport; and
- b. Indirect and induced employment and GVA derived from the supply chain and secondary rounds of spending.

4.4.5 The outputs are presented in gross terms as this reflect the impact locally in terms of additional jobs and economic activity that would arise in the area around the airport. At this local scale, issues of displacement do not arise² and the additional jobs and economic activity are considered to make a material contribution to levelling up and the reduction of deprivation in Luton, which is a policy priority. Compared to 2019, there would be 4,400 more jobs created in Luton generating £698m in additional economic activity (**Need Case [AS-125] Table 8.2**) or an additional 6,100 jobs and £906m of additional economic activity

² Except in so far as there is some displacement of activity due to the construction works which has been accounted for in the Environmental Statement.

measured across the Three Counties area as a direct consequence of the airport growing to 32 mppa by 2043.

- 4.4.6 To ensure that these benefits are realised locally and that individuals can take up these opportunities, the Applicant has proposed a detailed **Employment and Training Strategy [REP8-020] (ETS)**.

Employment and Training Strategy

- 4.4.7 The ETS intends to help shape a brighter future for local people, create quality careers, and make the airport an inclusive and aspirational place to work. The ETS sets out in greater detail the strengths and needs of the local area around skills and training, the job opportunities expected to be created through the Proposed Development, and the goals and actions proposed to prepare the community to take advantage of the identified economic opportunities.
- 4.4.8 The key purpose of the ETS is to ensure that as many of the jobs and economic opportunities generated by the Proposed Development as possible go to residents in the local area because they will have the skills and training required to do the jobs well. The ETS sets out how the Applicant and its strategic partners can maximise employment benefits from the expansion through collaborative and good practice approaches to employment and training support for residents and businesses at the airport. The ETS recognises that many of the jobs created by the Proposed Development will be within Luton, where the airport is located, including all directly created jobs at the airport and some indirect supply chain jobs and jobs induced by the additional spending power. There will also be indirect and induced jobs created throughout the wider area. All these opportunities can benefit both residents of Luton and residents of the wider area defined within the ETS.

Wider economic benefits

- 4.4.9 Growth at the airport will also deliver wider economic benefits through the connectivity that it provides to support business and tourism growth. This is consistent with Government policy referenced earlier in this chapter, which supports aviation growth partly due to the direct impact of operations in terms of employment and GVA, but also as enhanced air connectivity is vital to securing Britain's economic growth in an increasingly global world. The context for the importance of connectivity to businesses in the local area is set out in Section 4 of the **Need Case [AS-125]**.
- 4.4.10 Several measures of wider economic benefits have been set out by the Applicant, including business productivity benefits, benefits from inbound tourism and an indicative socio-economic cost benefit analysis. These all show substantial wider economic benefits would be derived from the proposed developments.

Consideration of economic benefits during the Examination

- 4.4.11 There has been no challenge to the scale of economic benefits from any of the statutory parties, although some other Interested Parties have queried the job generation arising from the Proposed Development. The broad scale of

economic benefits likely to arise from growth of the airport to 32 mppa has been agreed by the Host Authorities [TR020001/APP/8.13-17].

4.4.12 During Examination the following issues were raised:

- a. Several Interested Parties questioned the generation of employment from airport growth with particular reference to the creation of jobs from the earlier Project Curium expansion to 18 mppa. This was also the subject of questions from the ExA.
- b. Some doubts were also expressed about the airport's relevance to the Oxford-Cambridge Arc.
- c. NEF has questioned several aspects of the economic case:
 - i. whether airport growth will generate the level of employment set out in the Oxford Economics Report [APP-079];
 - ii. whether the business productivity benefits are overstated;
 - iii. the need to account for the balance of payments deficit arising from outbound tourism; and
 - iv. the requirement for a full WebTAG economic appraisal to be undertaken including environmental costs.

4.4.13 The Applicant has addressed these points in many responses throughout the Examination. Points relating to the employment generated by the growth of the Airport to 18 mppa were addressed in [REP4-075]. The Applicant considers that there have been demonstrable employment and local economic benefits from growth of the airport to 18 mppa and that the estimates of future employment arising from the Proposed Development are robust. This is agreed by the Host Authorities [TR020001/APP/8.13-17].

4.4.14 In relation to the point regarding the Oxford-Cambridge Arc, the Applicant has addressed this point most recently in their **Response to Deadline 9 Submissions [REP10-045]** pointing out that the airport is the only one within the Arc and that it clearly plays a role in delivering connectivity to the central part of the Arc, which is an important economic area for the whole of the UK in terms of delivering badly-needed growth in productivity.

4.4.15 In relation to the points made by NEF, the Applicant has submitted two detailed responses [REP2-039 and REP4-096]. The Applicant does not consider that there is any merit to these points:

- a. The employment estimates have been externally reviewed by the Host Authorities and are considered robust.
- b. The business productivity benefits have been derived using an established methodology and, if anything, may be conservative to the extent that there is, as NEF claims, a declining relationship between the number of business trips and GDP.
- c. It is not part of Government policy to constrain outbound tourism to improve the UK's balance of payments. The Applicant notes that the Government, in its aviation policy, positively supports the ability of people to travel abroad for whatever purpose. The Applicant would further note

that consideration of the tourism deficit was scoped out of the assessment and this was not challenged by any party, as shown by the SoCGs with the Host Authorities [TR020001/APP/8.13-17].

- d. In relation to the need for a full WebTAG appraisal, the Applicant would draw attention to the fact that the WebTAG guidance in relation to aviation (Ref 4.14) is clear that such an appraisal is not required in connection with a planning application:

“Decisions on planning applications for airport development will be considered in the normal way, including to take account of relevant material considerations which may include evidence relating to the strategic, commercial, financial and management case of a development proposal.” (paragraph 1.1.4)

Furthermore, the decision made by the Secretaries of State in respect of the inquiry into the P19 application³ (Ref 4.15) was clear that:

“They further agree, for the reasons given in IR15.188-15.191 that the absence of an appraisal following a web-based transport analysis guidance (WebTAG) or similar methodology does not weigh against the proposal (IR15.190).” (paragraph 37)

In any event, the Applicant is confident that if properly undertaken in accordance with the latest guidance, a WebTAG appraisal would continue to demonstrate substantial socio-economic welfare benefits.

- 4.4.16 Hence, for this topic, there is no area of disagreement with any statutory body.

4.5 Conclusion on the Need Case

- 4.5.1 Overall, there has been little challenge to the Need Case for the Proposed Development. The only outstanding issue is regarding the timescale over which 32 mppa would be attained. The Applicant does not consider this to be a material consideration and has submitted detailed sensitivity analysis which demonstrates that, to the extent that risks exist, the timing when the airport would reach 32 mppa would be within the range assessed between the Faster and Slower Growth Cases.

³ The ‘P19 application’ refers to a planning application made by the airport operator, London Luton Airport Operations Limited (LLAOL), on 11 January 2021 under the Town and Country Planning Act (TCPA) 1990. The application (Reference 21/00031/VARCON) sought to vary conditions 8, 10, 22, 24 and 28 of the previous permission (Reference 15/00950/VARCON). It was granted by the Secretaries of State, subject to several further planning conditions, on 13 October 2023.

5 CONSIDERATION OF ALTERNATIVES

5.1 Legal and policy context for consideration of alternatives

5.1.1 The principles set out in paragraph 4.28 of the Airports National Policy Statement (ANPS) (Ref 5.1) require applicants to comply with all legal obligations and policy on the assessment of alternatives. Paragraph 4.35 requires applicants to demonstrate how the design process was conducted and explain how the scheme design has evolved. It is noted that the general principles set out in Chapter 4 of the ANPS are specific to a Northwest Runway at Heathrow, however the principles are an important and relevant consideration for the Proposed Development.

5.1.2 Regulation 14(2)(d) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ('the EIA Regulations') (Ref 5.2) requires an Environmental Statement (ES) submitted with an application for development consent to contain "*a description of the reasonable alternatives studied by the applicant*".

5.2 The Applicant's approach to considering alternatives

5.2.1 The consideration of alternatives for the Proposed Development is presented in several application documents including **Chapter 3** of the **ES [AS-026]**, the **Design and Access Statement (DAS) [AS-049, AS-124]** and **Appendix B** of the **DAS [APP-209 to APP-212]**. The DAS sets out the relevant design policies, the site context and explains how these were considered in developing the design of the Proposed Development in conjunction with the future passenger demand, as set out in the **Need Case [AS-125]**. Given the policy support contained in the ANPS (paragraph 1.39) and wider Government aviation policy for airports to make best use of their runways, alternatives that did not seek to make best use of the existing runway at the airport were not considered further.

5.2.2 The documents referred to in paragraph 5.2.1 explain the design process the Applicant has followed as the design has progressed from a series of high-level concepts through to choosing the preferred option which evolved into the Proposed Development through a series of public consultations and stakeholder engagement as described in the Sift Reports which were submitted as **Appendix B** of the **DAS [APP-209 to APP-212]**. They explain the approach and criteria used by the Applicant to consider the alternative designs and include the consideration of individual elements of the Proposed Development.

5.2.3 In December 2017, the Applicant publicly launched its '*Vision for Sustainable Growth 2020-2050*' for the airport (Ref 5.3). Since then, the principles for the Proposed Development have been developed through an iterative process.

5.2.4 Initially, an examination of strategic alternatives, was undertaken to identify a preferred strategic option. This used a process referred to as 'sifting': a set of strategic objectives for design were identified for the Sift 1 process to enable the Applicant's vision to be achieved. These objectives directly relate to different elements within the vision statement and headings identified in the Airports

Commission Appraisal Framework (Ref 5.4) as detailed in **Appendix B** of the **DAS [APP-209]**.

- 5.2.5 Sift 2 appraised the options which remained under consideration following Sift 1. These options were developed further to inform the optioneering process and the appraisal process designed to an improved level of detail as detailed in **Appendix B** of the **DAS [APP-210]**. A preferred option emerged at Sift 2, comprising a new second terminal to the east of the existing terminal campus. The Sift 2 options were consulted on at a non-statutory consultation held in 2018.
- 5.2.6 Subsequently, outline design development was undertaken and a Sift 3 process completed. At Sift 3, a new option was considered (Option 1d) in response to feedback regarding the impact of the preferred option on Wigmore Valley Park. However, this option scored very poorly as described in **Appendix B** of the **DAS [APP-212]**.
- 5.2.7 At the end of Sift 3 the emerging preferred option, based on performance against the majority of the sift criteria and the information available at the time, was an option with two terminals proposed to the north of the runway.
- 5.2.8 Following Sift 3, the preferred option was then the subject of further optioneering exercises to consider alternative design solutions. Key design components were selected for optioneering, based on their potential to affect the footprint, feasibility and cost of the Proposed Development. These included:
- a. landform – the earthworks solution required to deliver the expansion to the airfield and landside facilities;
 - b. terminal, apron and supporting facilities – location and configuration of terminal, apron and supporting facilities;
 - c. car parks – the location, scaling and makeup of car parks to continue to serve the airport;
 - d. drainage – the approach to water treatment;
 - e. fuel farm – options to deliver fuels to aircraft; and
 - f. terminal, apron and supporting facilities – location and configuration of terminal, apron and supporting facilities.
- 5.2.9 In addition to the design appraisals, mitigation was embedded within the design through the integrated design and Environmental Impact Assessment (EIA) process and following technical stakeholder engagement. The outcome of the design appraisals and the iterative EIA process was presented at the 2019 statutory consultation. For further information on stakeholder consultation refer to the **Consultation Report [TR020001/APP/6.01]**.
- 5.2.10 A further Sift 'back check' process was completed in 2020-2021 as several changes had been made to the Proposed Development in response to a range of factors, including Brexit, the Covid-19 pandemic and the responses to the 2019 statutory consultation, as set out in Section 4.7 of the **DAS [AS-049]**. This back check of the previous Sift exercises was completed to understand whether these changes would have altered the earlier findings or shortlisting of options.

It confirmed that even considering the changes to criteria the preferred option remained the same as detailed in **Appendix B** of the **DAS [APP-211]**.

- 5.2.11 Throughout the consideration of alternatives, the design has been informed by the EIA process. In the preparation of the ES, full consideration has been given to the reasonable alternatives studied (in terms of engineering design, including technology, location, size and scale). Details of the reasoning behind the preferred option for the Proposed Development, considering environmental, social and economic effects, are described within **Chapter 3** of the **ES [AS-026]**.

5.3 Matters raised during the Examination on consideration of alternatives

- 5.3.1 During Examination the following principal issues were raised by Interested Parties and the Examining Authority (ExA):
- a. The Hertfordshire Host Authorities' response at Deadline 5 **[REP5-067]** asked the Applicant, in response to Written Question PED.1.6 **[PD-010]**, to explain to the ExA the evolution of the master planning process more generally.
 - b. Compulsory Acquisition Hearing 1 Action Point 19 **[EV5-007]** and Written Question CA.2.2 **[PD-015]** requested information regarding the assessment of alternative locations for car parking in Wigmore Valley Park.
 - c. The Environment Agency (EA) issued a Principal Areas of Disagreement Summary Statement (PADSS) **[AS-056]** in relation to treated foul effluent and surface water runoff discharge to ground via infiltration and requested the Applicant provide evidence that every opportunity to discharge foul and surface water runoff to the sewage treatment infrastructure operated by Thames Water (TW) had been exhausted.
 - d. A post hearing submission on behalf of the Eldridge Family **[REP3-134]** questioned the routing of the proposed fuel pipeline and why it could not be routed around their property.
 - e. Written Question PED.1.37 **[PD-010]** asked for confirmation that the existing fuel pipeline is located only within the Green Belt (in proximity to the airport) and to provide an explanation of whether a connection that avoided any work within the Green Belt had been considered.
 - f. Written Question PED.1.36 **[PD-010]** asked why the Surface Movement Radar (SMR) must be located in its proposed position within the Green Belt.
 - g. At Issue Specific Hearing 8, and via subsequent hearing Action Points, the ExA sought clarification on whether Best and Most Versatile (BMV) agricultural land was considered during optioneering and to explain how the retention of Wigmore Valley Park would have resulted in greater loss of BMV agricultural land.

- h. Friends of Wigmore Park **[REP6-125]** identified some of the land at the Airport Business Park on Provost Way as a location for airport parking and a new business park.
- i. Stop Luton Airport Expansion (SLAE) **[REP6-143]** suggested there was an opportunity to re-plan Green Horizons Park (GHP), Terminal 2 and associated airport infrastructure and save on the cost of building the Airport Access Road (AAR) by reconsidering GHP, Bartlett Square and the Proposed Development. They suggested that this would present an alternative option for additional car parking and avoid building on Wigmore Valley Park.

5.3.2 The Applicant's response to each point is set out below:

- a. In response to the Hertfordshire Host Authorities' response to Written Question PED.1.6 the Applicant explained in **[REP6-061]** that the landform design has been considered throughout the evolution of the design with a landform appraisal undertaken to identify a preferred earthworks solution and consider a range of alternative sources for fill material needed to create a suitable site platform on which to construct the airport extension. This landform appraisal is summarised in paragraphs 3.3.4 to 3.3.6 in **Chapter 3** of the **ES [AS-026]**.
- b. The Applicant notes that details of locations/alternatives considered for the provision of parking, are contained within the response to Action Point 19 in the **Applicant's Response to Deadline 4 Hearing Actions [REP4-070]**, and further discussed in the Applicant's response to Written Question CA.2.2 **[REP7-051]** issued at Deadline 7. In summary, the Applicant introduced an alternative option (Option 1d) retaining Wigmore Valley Park which was assessed at Sift 3 but this option performed very poorly compared to other options and was recommended to be discontinued at that stage (please see Section 6 within **Appendix B** of the **DAS [APP-211]**). The Applicant also completed a car parking appraisal as detailed in **Chapter 3** of the **ES [AS-026]** which shows the alternative car parking sites reviewed, details how each site was appraised in terms of suitability for parking arrangements and details the key considerations in determining the combination of car parking sites to include in the Proposed Development.
- c. Following extensive engagement with the EA and other key stakeholders, including TW, the Applicant considered alternative options for the discharge of foul and contaminated surface water and made amendments to the **Drainage Design Statement [REP5-096]** and associated documentation to include a preferred and reserved option such that the EA has removed their principal area of disagreement in relation to this in their updated PADSS **[REP6-111]**.
- d. The Applicant's response to the Eldridge Family is included in **[REP1-026]** and **[REP4-102]**. These responses set out the engineering, design and environmental factors and constraints which were considered when looking at alternative locations for the above ground installation and routing of the pipeline and informed the proposed design. These have

been discussed with the Eldridge Family. The final position is detailed in the final **Status of Negotiations/Compulsory Acquisition Schedule [TR020001/APP/8.34]** submitted at Deadline 11.

- e. The Applicant's response to Written Question PED.1.37 **[REP4-064]** provided confirmation that the existing fuel pipeline is entirely within the Green Belt over 3km north and south of the proposed connection point. This left the Applicant with no reasonable alternative to locate the above ground installation outside the Green Belt. No further written questions were raised by the ExA in relation to the Green Belt.
- f. The Applicant's response to Written Question PED.1.36 **[REP4-064]** explains the operational and technical constraints which had been taken into consideration when reviewing alternative locations for the SMR and the reasons for its proposed position. Alternative locations considered for the SMR are shown within section B3 of **Appendix B of the Planning Statement [APP-196]**.
- g. The Applicant responded to questions regarding BMV agricultural land at Deadline 6 **[REP6-066]** confirming that this was considered appropriately during optioneering appraisals and how retention of Wigmore Valley Park would have resulted in a greater loss of BMV agricultural land.
- h. The **Applicant's Response to Deadline 6 Submissions Appendix A – Friends of Wigmore Park [REP7-064]** in relation to the area highlighted at section 5.1.3.g above explained that this area is currently in use by the airport operator and will be affected by the construction of the AAR and associated replacement parking and, therefore, is not suitable for airport parking.
- i. The Applicant's response to SLAE is set out in the **Applicant's Response to Deadline 6 Submissions [REP07-063]** and confirms that GHP and Bartlett Square are subject to their own planning permissions and do not form part of the Proposed Development. The AAR is included within the Proposed Development as it is required to access the expanded airport.

5.4 Conclusion on consideration of reasonable alternatives

- 5.4.1 The consideration of alternative designs, individual elements and design evolution of the Proposed Development has been informed by the potential for likely significant environmental effects arising from the Proposed Development and the need to mitigate these effects.
- 5.4.2 Full consideration has been given to feedback received from consultation events and engagement with stakeholders in considering the reasonable alternatives through a detailed and thorough Sift process which describes how the final form of the Proposed Development was selected from different alternatives.
- 5.4.3 The Applicant concludes that its approach to the consideration of alternatives has demonstrated accordance with all relevant legal and policy requirements in respect of the consideration of alternatives, and that the strategic objectives are

delivered by the Proposed Development. The Applicant's consideration of alternatives is set out in **Chapter 3** of the **ES [AS-026]** and within the **DAS [AS-049, AS-124]**.

- 5.4.4 The Applicant's view is that no Interested Party has mounted a credible challenge to this conclusion during the Examination.

6 GOOD DESIGN

6.1 Introduction

- 6.1.1 The principles set out in Chapter 4 of the Airports National Policy Statement (ANPS) (Ref 6.1) include the criteria for 'good design' in airport projects. These criteria have been established having regard to the specific characteristics of airport projects, the range of operational and other requirements that need to be met and the Government's objectives for the development of aviation infrastructure. It is noted that the general principles set out in Chapter 4 of the ANPS are specific to a Northwest Runway at Heathrow, however the principles are an important and relevant consideration for the Proposed Development.
- 6.1.2 The National Planning Policy Framework (NPPF) (Ref 6.2) sets out the Government's planning policies for new development more generally, including for the creation of high quality, beautiful and sustainable buildings and places (refer to Chapter 12 of the NPPF, paragraphs 131-141). The National Design Guide (Ref 6.3) and the National Model Design Code (Ref 6.4) provide planning practice guidance on the creation of well-designed places that are beautiful and sustainable.
- 6.1.3 The Luton Local Plan (2011 – 2031) (Ref 6.5), the Central Bedfordshire Local Plan (2015 – 2035) (Ref 6.6), the North Hertfordshire Local Plan (2011 – 2031) (Ref 6.7), and the Dacorum Local Plan Core Strategy (2006 - 2031) (Ref 6.8) set out local policies for their respective areas. Luton Local Plan Policy LLP6 F (ii) in respect of height and design of buildings and justification for the landform and how it relates to landscape character is particularly relevant to the design of the Proposed Development.
- 6.1.4 Additionally, Beyond the Horizon: The future of UK aviation – Making best use of existing runways (Ref 6.9) and the Airports Commission: Appraisal Framework (Ref 6.10) are two key documents that complete the range of policy requirements and industry specific best practice.

6.2 The Applicant's approach to achieving good design

- 6.2.1 The Applicant's Vision for the Proposed Development, published in 2017 (Ref 6.11) and the subsequent Sustainability Strategy (Ref 6.12) (updated and published in January 2022) recognised the various constraints and issues affecting the growth of the airport and included a series of commitments in relation to:
- a. sustainable access;
 - b. air quality;
 - c. noise;
 - d. climate change and sustainability;
 - e. landscape and ecology; and
 - f. archaeology and heritage.

- 6.2.2 Recognising that good design encompasses all aspects of the Proposed Development, the Applicant was advised by a highly experienced multi-disciplinary technical team with all relevant expertise needed to inform design development. This multi-disciplinary team has worked in an integrated way from the early stages of the Proposed Development to:
- a. develop the need case and demand forecasts for the Proposed Development;
 - b. undertake baseline assessments for each topic;
 - c. develop alternative strategic options for the expansion of the airport and appraise these through the Sift process (refer to Chapter 5 of this document);
 - d. carry out an Environmental Impact Assessment (EIA) to inform the design development process, seeking to limit the adverse environmental effects of the Proposed Development through application of the mitigation hierarchy;
 - e. engage extensively with stakeholders and carefully consider the feedback from three rounds of public consultation (refer to Chapter 14 of this document);
 - f. develop the design of the preferred option which establishes the spatial parameters for the Proposed Development;
 - g. consider how the necessary mitigation measures can be secured including through the **Design Principles** document [REP9-030]; and
 - h. refine and further strengthen the mechanisms for securing good design through the Examination process.
- 6.2.3 Through this integrated process, the Applicant's design team has provided specialist recommendations to ensure good design is secured across the Proposed Development. This is informed by robust contextual analysis of the existing airport, and surrounding area including landscape, ecology and heritage assets, residents and communities, a four-stage Sift process, the EIA process, national and international design standards for aviation infrastructure, as well as outcomes from public consultation and engagement.
- 6.2.4 From the outset, this integrated multi-disciplinary design process has prioritised the avoidance of potential impacts where practicable. Where it has not been possible to avoid impacts, mitigation measures and plans have been developed and are described in various chapters of the Environmental Statement (ES) and supporting appendices and management plans, including in respect of landscape, ecology, lighting, noise, and pollution. This demonstrates how the delivery of good design is achieved to minimise environmental impacts to the surrounding area.
- 6.2.5 The **Design and Access Statement (DAS) [AS-049 and AS-124]** was submitted in support of the application for development consent to set out, inter alia, how the Applicant has responded to the need for good design in the Proposed Development. The DAS explains the process of design evolution from the sifting of alternative strategic options to the development of the preferred option through

several design iterations and three rounds of public consultation. The final indicative design is shown in Figure 4.6 of the **DAS Volume I [AS-049]** which outlines the scheme masterplan and demonstrates the relationships between individual elements of the Proposed Development.

- 6.2.6 The DAS includes signposting to other plans and drawings submitted as part of the application for development consent, including those as set out in the **Scheme Layout Plans [AS-073]** and **Work Plans [APP-016 to APP-021]**.
- 6.2.7 Due to the long-term nature of the Proposed Development, and in recognition of the rapidly changing nature of aviation, the Applicant has sought to build flexibility and adaptability into the design. This will allow the development of detailed designs and provision of facilities that appropriately meet the future needs of passengers and airlines. Flexibility built into the design will allow for potential changes in aviation policy, regulatory and operational requirements over the period of a long build out programme.
- 6.2.8 To provide this necessary flexibility, a 'Rochdale Envelope' approach has been employed with detailed parameters secured via requirement 7 in Schedule 2 of the **draft Development Consent Order (draft DCO) [REP10-003]**, outlining elements of the authorised development with maximum dimensions provided in relation to each. This approach enables flexibility for assets to be delivered following the detailed design stage, provided they are within these parameters and other relevant controls are complied with.
- 6.2.9 A **Design Principles** document **[REP9-030]** was submitted as part of the application for development consent to establish the principles that will be followed in the future detailed design of the Proposed Development. It will be certified under article 50 of the **draft DCO [REP10-003]** and is secured by requirements 6, 9 and 13 of Schedule 2 to provide assurance to all stakeholders on how good design outcomes will be achieved.
- 6.2.10 The **Design Principles [REP9-030]** provide a comprehensive schedule of all design principles that will be followed across the full range of design and technical topics. They have been drafted with regard to issues identified through the EIA process and taking into account the level of design development and the need to ensure an appropriate degree of flexibility for future design. It is therefore appropriate that some principles are very specific and detailed, while others provide a clear framework for future design development.
- 6.2.11 The role and purpose of the design principles is set out in Chapter 1 of the **Design Principles** document **[REP9-030]**. The scheme wide design principles are set out in Chapter 2 of the **Design Principles [REP9-030]** and relate to:
- a. design quality;
 - b. sustainability;
 - c. biodiversity; and
 - d. noise and vibration.

- 6.2.12 These overarching design principles are informed by all relevant national and local policy requirements on design, as well as by the Applicant's responses to consultation and stakeholder engagement outcomes.
- 6.2.13 The landscape design principles which also have scheme wide application are set out in Chapter 3 of the document **[REP9-030]**.
- 6.2.14 The 'works' design principles are set out in Chapter 4 of the document **[REP9-030]** and address:
- a. site wide works;
 - b. airfield works;
 - c. terminal works;
 - d. airport support facilities works; and
 - e. highways works.
- 6.2.15 The drainage design principles which also have scheme wide application are set out in Chapter 5 of the document **[REP9-030]**.
- 6.2.16 This comprehensive schedule of design principles is supported by a number of illustrative visualisations showing the design intent in relation to the key public facing elements of the Proposed Development. These visualisations show what the buildings and public spaces could look like as a result of applying the design principles.
- 6.2.17 The **Design Principles** document **[REP9-030]** has remained a live document over the course of the Examination and the principles have been updated to respond to ongoing feedback from stakeholders. This has resulted in a robust and effective set of principles at the end of the Examination, that will secure an aesthetically pleasing and well-functioning airport design.
- 6.2.18 As a further commitment, the Applicant has also incorporated into the **Design Principles [REP9-030]** an Independent Design Review process for five specified works comprising:
- a. Terminal 2 (Work No.3b (01&02));
 - b. Terminal 2 plaza (Work No. 3f);
 - c. Coach station (Work No. 3d);
 - d. Luton DART Terminal 2 station (Work No. 3g); and
 - e. the proposed hotel (Work No. 4a).
- 6.2.19 This is a further mechanism to ensure that the highest standards of design are secured for the key public-facing elements of the Proposed Development. This process is set out in Chapter 1 of the **Design Principles [REP9-030]**, with the Terms of Reference for the Design Review Body and Design Review Panel set out in Appendix A.

6.3 Matters raised during the Examination regarding good design

6.3.1 Prior to the Examination, as part of the Rule 6 letter **[PD-007]** the Examining Authority (ExA) set out an Initial Assessment of Principal Issues (IAPI) and identified 'good design' as one of five overarching matters. The ExA confirmed "the achievement of good design" is a matter that will be taken into account as an overarching component of the IAPI and the ExA will conduct all aspects of the Examination with this in mind.

6.3.2 In that context the following issues were raised during the Examination:

- a. At Issue Specific Hearing 6, the ExA asked the Host Authorities to comment on the suitability of the original **Design Principles** document **[APP-225]** and this was captured via Action Point 31 **[EV11-009]**. Through a series of meetings and written responses the Host Authorities have identified the need for the refinement of several design principles and requested more detail on the Applicant's design intent in terms of scale, massing and visual appearance of the key public-facing buildings.
- b. At Issue Specific Hearing 6, via Action Point 33 **[EV11-009]**, the ExA asked the Applicant to "*demonstrate further how the principles of good design have been met through the proposals including how aspects of the proposal have addressed design policies*".
- c. After discussions at Issue Specific Hearing 6, in Action Point 34 **[EV11-009]**, the ExA asked the Applicant to consider expanding the wording of the detailed design requirement in Schedule 2 of the draft DCO to more precisely set out the information required in respect of specific works.
- d. In Written Question PED.1.5 **[PD-010]**, the ExA asked Luton Borough Council (LBC) whether they believed that it would be appropriate for any post consent approval process to be subject to a design review process that would be carried out by an independent design review panel. LBC, as well as the other Host Authorities, agreed that this would be beneficial for the Proposed Development.
- e. After Issue Specific Hearing 6, via Action Point 31 **[EV11-009]**, the ExA asked the Applicant to consider the need for a 'Design Code'.
- f. In Written Question PED.1.2 **[PD-010]**, the ExA asked the Applicant and the Host Authorities if there should be a requirement added to Schedule 2 of the draft DCO for a detailed masterplan to be developed post consent, to set out in more detail how the Proposed Development will be delivered.

6.3.3 In response to issues raised during the Examination, the Applicant has undertaken the following:

- a. Throughout the Examination the **Design Principles [REP9-030]** has been designated by the Applicant as the key securing document for achieving good design. This document has remained 'live' throughout the Examination to enable its revision and refinement in response to feedback from the Host Authorities and other Interested Parties. Several stakeholder workshops have been held to review the Design Principles and this collaborative process has enabled the **Design Principles** document

[REP9-030] to evolve into a stronger mechanism, and one that is fit for purpose for securing good design at the detailed design stage. The key changes to the Design Principles are summarised as follows:

- i. Revision 1 of the **Design Principles [REP5-034]** was submitted at Deadline 5 to expand on the existing principles, drawing on engagement with the Host Authorities and other stakeholders. The Deadline 5 update included the drainage design principles which were originally included in the **Drainage Design Statement [APP-137]**, and the landscape design principles which were originally in the **Strategic Landscape Masterplan [APP-172]**. This consolidation ensured that all the design principles are contained in a single source document for the benefit of future users including the relevant planning authorities when it comes to discharging the design requirements.
- ii. Revision 2 of the **Design Principles [REP7-034]** was submitted at Deadline 7. The updates included a substantial strengthening of the design principles in relation to Terminal 2 and associated works to provide assurance of high-quality design outcomes in relation to the key public-facing buildings. Additionally, a section was added explaining how a process of Independent Design Review would work alongside the principles to secure good design in relation to specified elements of the Proposed Development (refer to paragraph 6.2.18 above). This revision of the Design Principles was also supported by illustrative visualisations showing how the design of the key public-facing buildings could be developed to meet the design principles in the future (refer to paragraph 6.2.16 above). The illustrative visualisations were included in response to requests from the Host Authorities (refer to **[REP4-161]** in response to Action Point 31 from Issue Specific Hearing 6) to have a clearer indication of design intent in relation to the key public-facing buildings. The visualisations are indicative and not intended to define a detailed design approach, however they do accurately depict the scale of the parameters for which consent is sought and therefore represent a worst case scenario in terms of massing.
- iii. Revision 3 of the **Design Principles [REP8-022]** was submitted at Deadline 8 including further updates to specific design principles such as in relation to 'glint and glare'. The draft Terms of Reference for the Design Review Body and Design Review Panel was also set out in Appendix A to provide clarity on how the process of independent design review will be undertaken (refer to paragraph 6.2.19 above).
- iv. Revision 4 of the **Design Principles [REP9-030]** was submitted at Deadline 9. This revision included further development of the design principles related to the treatment of façades for multi-storey car parks P1 and P12. This was in response to comments made by LBC and Central Bedfordshire Council (CBC), to ensure coherence in design with the Terminal 2 building and plaza, and to minimise impact on the setting of surrounding heritage assets. The design principle relating to the new Fire Training Ground was also

strengthened to minimise the impact of smoke on the airport and adjacent heritage assets, in response to CBC's comments at Deadline 8 [REP8-051]. CBC has reviewed the updated **Design Principles** submitted at Deadline 9 [REP9-030] and consider this is suitably robust to address concerns raised. The draft Terms of Reference for the Independent Design Review Body and Design Review Panel (Appendix A of the **Design Principles [REP9-030]**) was also refined further at Deadline 9 in response to comments from LBC.

- b. In response to Action Point 33 from Issue Specific Hearing 6 [EV11-009] the Applicant produced and submitted a document on the **Principles of Good Design [REP5-043]**. This document demonstrates how the design of the Proposed Development has met the relevant national and local policy design requirements. It demonstrates that, from the outset, the design of the Proposed Development has been informed by the design advice in the policy documents referred to in Section 6.1 of this document. The submission concluded that the Proposed Development was in alignment with all relevant policy requirements on design. This has been achieved through the four-stage Sift process, the **DAS [AS-049 and AS-124]**, **Design Principles [REP7-034]** and the EIA process as reported in the ES. No further questions were raised by the ExA or Interested Parties in relation to this issue following the submission of the **Principles of Good Design [REP5-043]**.
- c. The Applicant followed advice from the ExA and has added more detail to the **draft DCO [REP10-003]** on detailed design. The changes to the draft DCO are summarised comprehensively in Chapter 10 of this document, however of note to securing good design is that requirement 6 has been strengthened to state that detailed design submissions must be "in accordance" with the design principles, rather than "in general accordance" with them. This strengthening of requirement 6 supports the **Design Principles** document [REP9-030] as an effective mechanism to secure good design.
- d. As noted in paragraph 6.2.18, the Applicant has developed an Independent Design Review process as a mechanism to provide assurance that the **Design Principles [REP9-030]** will be appropriately applied and that the eventual built design is of appropriate quality. The Independent Design Review process will apply in relation to the key public-facing buildings identified by the ExA and through engagement with the Host Authorities. The following elements to which the process will apply are agreed between the parties.
- e. In response to Issue Specific Hearing 6 Action Point 31 [EV11-009] regarding the need for a 'Design Code' to further inform the detailed design stage, the Applicant gave the following reasons to reassure stakeholders that the framework for good design as summarised above is an appropriate and effective approach to securing good design:
 - i. The **Design Principles [REP9-030]** has remained a live document throughout the Examination and has been updated in response to

stakeholder feedback. As a result, the Design Principles are a robust and effective means of capturing the issues and corresponding principles needed to secure good design at the detailed design stage.

- ii. The preferred approach of submitting **Design Principles [REP9-030]** at the application stage has been chosen to provide some flexibility for future design stages, which is necessary because the Proposed Development is planned to be constructed in increments over a long build-out programme. The approach allows for potential changes in policy, regulatory and operational requirements, innovation (for example, in materials and technologies) and will enable the needs of passengers and airlines to be met at the relevant time.
 - iii. Further, design codes are not identified in the ANPS as a policy requirement for aviation projects, so the Applicant chose to use the **Design Principles [REP9-030]** and the process of Independent Design Review for specified elements of the Proposed Development to secure good design at the detailed design stage. As a result of the development of the Design Principles during the Examination, the Host Authorities have agreed with the Applicant that a Design Code is not required. This position is confirmed in the final Statements of Common Ground submitted at Deadline 11 **[TR020001/APP/8.13, TR020001/APP/8.14, TR020001/APP/8.15, TR020001/APP/8.16, TR020001/APP/8.17]**.
- f. Regarding Written Question PED.1.2 **[PD-010]**, the Applicant believes that the illustrative masterplan **[AS-072]** and associated supporting documents submitted with the application for development consent provide details significantly beyond the level of information that would be typically provided in an 'Airport Masterplan'. The Applicant's masterplan supersedes the previous masterplans by the airport operator and safeguards the longer-term aspirations for the airport. It is the intention to certify the **Scheme Layout Plans [AS-072]** under the **draft DCO [REP10-003]** to allow the progressive discharge of 'parts' of the Proposed Development as identified and described against the masterplan to which they are drawn from. This is secured by requirement 6 in Schedule 2 of the **draft DCO [REP10-003]**. The Applicant has also made a commitment to provide five-yearly updates to the Local Planning Authorities and within the **Design Principles [REP9-030]** the Applicant and the airport operator have committed to publishing similar details on their respective websites.

6.3.4 For this topic, the only area that is not agreed at the end of Examination is that the Hertfordshire Host Authorities are of the view that the **Design Principles [REP9-030]** will not secure good design at the detailed design stage. Specifically, they consider that there is an absence of landform and built form considerations informing the design of the Proposed Development and consider Design Principles LAND 14 and LAND15 to be insufficient.

6.4 Topic conclusion

- 6.4.1 Developing a good design, with good design processes and engagement, has been a key focus of the Applicant. The design of the Proposed Development has been informed by a comprehensive and integrated process of technical design advice from the Applicant's multi-disciplinary team. This has been supplemented through three rounds of public consultation and extensive engagement with the Host Authorities, statutory consultees and other stakeholders.
- 6.4.2 Feedback has been incorporated into the design of the Proposed Development as set out in the **DAS [AS-049 and AS-124]** and has enabled the ANPS criteria for good design and all relevant policies at the national and local levels to be met.
- 6.4.3 The **Design Principles** document [**REP9-030**] has been prepared to secure good design at the detailed design stage. The **Design Principles [REP9-030]** have been strengthened substantially during the Examination process through engagement with the Host Authorities and other Interested Parties. This has been done while retaining sufficient flexibility for the long build-out programme in the case of any changes to policy, regulatory and operational requirements, innovation and to allow the airport operator to meet the needs of passengers and airlines at the relevant time.
- 6.4.4 The Applicant has also responded positively to feedback from the ExA and the Host Authorities on how the framework for securing good design could be further strengthened. In particular, a process of Independent Design Review has been introduced and agreed with the Host Authorities in relation to the key public-facing buildings. This is a further and important safeguard to secure good design at the detailed design stage.
- 6.4.5 This framework for good design is further supported by the strengthening of requirement 6 in Schedule 2 of the **draft DCO [REP10-003]** as described in paragraph 6.3.3 above and Chapter 10 below.
- 6.4.6 As a result, except for the one matter set out in paragraph f, there is agreement between the various stakeholders that the approach to securing good design through the DCO is robust and effective.

7 COMPULSORY ACQUISITION AND TEMPORARY POSSESSION

7.1 Summary of engagement and progress with voluntary agreements

Relevant guidance

- 7.1.1 The relevant guidance (Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land, DCLG, September 2013) (the Guidance) (Ref 7.1) explains that early consultation with people who could be affected by the compulsory acquisition can help build up a good working relationship with those whose interests are affected, by showing that the Applicant is willing to be open and to treat their concerns with respect.
- 7.1.2 Applicants should seek to acquire land by negotiation wherever practicable. As a general rule, authority to acquire land compulsorily should only be sought as part of an order granting development consent if attempts to acquire by agreement fail. Where proposals would entail the compulsory acquisition of many separate plots of land (such as for long, linear schemes) it may not always be practicable to acquire by agreement each plot of land. Where this is the case it is reasonable to include provision authorising compulsory acquisition covering all the land required at the outset.
- 7.1.3 Applicants should consider at what point the land they are seeking to acquire will be needed and, as a contingency measure, should plan for compulsory acquisition at the same time as conducting negotiations. Making clear during pre-application consultation that compulsory acquisition will, if necessary, be sought in an order, will help to make the seriousness of the applicant's intentions clear from the outset, which in turn might encourage those whose land is affected to enter more readily into meaningful negotiations.
- 7.1.4 The Applicant considers it has followed the Guidance and is confident all those landowners and occupiers whose property interests are included in the limits of the land identified for compulsory acquisition are aware and advised of the implications that would result. The Applicant will continue to update and engage with all landowners and occupiers in the interim period, operating with flexibility to maintain relations and manage practical challenges such as might arise over time between now and any exercise of compulsory acquisition powers should the Order be made.

Impact of the Proposed Development on land and property

- 7.1.5 The impact the Proposed Development will have on land and property held by third parties can be summarised as follows:
- a. Five commercial buildings must be demolished to make way for the new Airport Access Road, a sixth will have so much of the demise included in the acquisition that the Applicant has reached an agreement with the owner to acquire the whole property at the point at which it is required.
 - b. Ten owners of land where existing and new hedgerows are identified to provide landscape mitigation and enhance visual screening of the

Proposed Development from property and footpaths in the countryside surrounding the airport. Access will be taken to complete the planting of these hedgerows followed by a routine maintenance regime until the hedges are established. The Applicant will maintain or offer agreements for landowners to maintain these in return for a fixed payment.

- c. Thirty-three other owners and occupiers will lose small areas of their property to facilitate road improvements and widening. Their ownership and occupation will only be marginally impacted and improvements to the road will offer long-term benefits for their premises.

- 7.1.6 The Proposed Development will have a positive commercial impact for the region and for many of the businesses affected who are operating in premises near the airport; the prosperity of the airport will have a direct benefit due to the airport related nature of the business activities.

Approach to engaging with landowners

- 7.1.7 The **Statement of Reasons [AS-071]** and the **Schedule of Negotiations [TR020001/APP/8.34]** demonstrate how the Applicant has worked closely with landowners and sought to engage in negotiations to reach agreements. The Applicant has over several years engaged with the landowners and occupiers whose land would be required to deliver the Proposed Development.
- 7.1.8 Prior to this application for development consent previous development proposals for CPAR (Century Park Access Road) that would have required the same or similar rights and interests in land were the subject of detailed consultation by the Applicant. When consultation in respect to the Proposed Development was launched, many of the landowners and occupiers were already known to the Applicant and engagement with them continued from the beginning of 2022, having started, albeit under the guise of different development proposals in 2017-2018.
- 7.1.9 The Applicant identified from an early stage three categories in which the interests required from landowners and occupiers could be identified:
- a. Permanent acquisition of the whole property interest.
 - b. Part permanent acquisition and temporary possession of frontage land to facilitate road improvements and widening works.
 - c. Permanent acquisition of rights only to facilitate planting, maintaining and retaining landscape mitigation works.
- 7.1.10 In all cases, following opening correspondence to introduce the Proposed Development, meetings were arranged to discuss and answer questions about the Proposed Development and how it would impact the property interests held. The Applicant explained the milestones in its programme and the policy in place to support occupiers who might need to relocate as a result. In most cases the timing of the proposed acquisition was explained as being up to eight years away and therefore the immediate need was to give assurances about how the Applicant would programme the activities required in the lead up to a future acquisition. Agreements were put in place to guarantee continued access to premises, provide temporary alternative car parking spaces, give minimum

notice periods before commencement of works and to clarify entitlements to compensation.

- 7.1.11 Engagement and the offer of negotiations with all landowners and occupiers has been continuous since 2022 and throughout the Examination. Many of those who would be affected have chosen not to pursue agreements with the Applicant at this stage, satisfied with the information provided, supportive in principle of the Proposed Development and prepared to work with the Applicant nearer the time when the acquisitions will be required.
- 7.1.12 The Applicant has agreed positions with all those who own or occupy premises that would need to be wholly acquired for the Proposed Development. These premises are industrial or commercial office buildings including one that is converted for use as a children's day nursery.
- 7.1.13 The Applicant has also worked with the landowners who would be affected by the requirement for landscape mitigation works. Positions reached are still being documented but engagement undertaken to date, the Applicant is confident that it will be able to conclude voluntary agreements in preference to using the powers conferred by the Development Consent Order (DCO). The Applicant will however need to rely on the powers in reserve to ensure it is able to deliver and maintain the landscape mitigation works in the event cooperation from the landowners (who may have changed, for example) is not forthcoming at any point in the future.

Acquisition of land for environmental purposes

- 7.1.14 As noted above, the Applicant identified in its application for development consent the need to provide visual landscape screening of the Proposed Development from residential properties and users of public rights of way in the areas of countryside surrounding the airport. The rights sought would provide the ability for the Applicant to access land to plant new and enhance existing hedgerows and to retain and maintain them thereafter through to full establishment. This would be done through the acquisition of rights rather than through freehold acquisition.
- 7.1.15 The Applicant engaged with the respective landowners prior to and during the Examination. In one area the proposed hedgerows were on land designated for residential development, albeit where planning permission has not yet been secured. The Applicant was able to agree with these owners that if the planning consent is secured the need for these hedgerows would fall away. An appropriate interim arrangement should events not progress as planned was also agreed.
- 7.1.16 Other landowners thought the extent of land identified for access to be gained to the hedgerows was excessive. The Applicant has subsequently worked with the respective landowners to agree appropriate means of access to the new and enhanced hedgerows so that, subject to the landowners continuing to grant such access, there will be no requirement to exercise the powers sought in the DCO. The powers must remain as drafted to ensure that the ability to plant, retain and maintain the hedgerows would be possible in circumstances where

landowner cooperation was to cease, even if there is a relatively low likelihood of that occurring that might be.

- 7.1.17 The Applicant has provided written assurances to the various landowners that provide the structure for reaching an agreement which enables the Applicant to deliver, maintain and retain the landscaping works whilst affording the flexibility for landowners to control access and where willing, take responsibility for future maintenance, without exercising the powers in the application for development consent.

Hearings

- 7.1.18 From the parties potentially impacted by compulsory acquisition there were 13 who made relevant representations and of those only four went on to make written representations. During the Examination there were two Compulsory Acquisition Hearings (CAH1 and CAH2). At CAH1, three landowners were represented and at CAH2, no landowners were represented.
- 7.1.19 The Applicant has remained engaged with all participating landowners throughout the Examination. Meetings and site inspections have been held with a number of landowners and progress with issues raised has generally been positive. In all cases terms for agreement have been offered and in most cases those agreements have been completed. A number of Letters of Assurance given by the Applicant are in the process of being converted into legal agreements. Though this process has not concluded by the close of the Examination, the Applicant is confident it soon will be. Table 7-1 shows the status of voluntary agreements with Interested Parties at Deadline 11.

Table 7-1 Summary of status of voluntary agreements

Interested Party	Category of Acquisition	Status of Agreement	Commentary
Prospect House Day Nursery Limited	Full acquisition	Completed - Signed Assurance Letter	This was in place prior to the Examination and the Interested Party made no representations during the Examination process.
Bartholemew Richard Pleydell-Bouverie, Harriot Isobel Pleydell-Bouverie	Rights only	Completed - Signed Assurance Letter	The Interested Party has withdrawn their representations to the Examination.
Jaison Property Development Co. Limited	Full acquisition	Letter of Assurance given Deed of assurance being entered into	An assurance has already been given. The agent will write to withdraw the representations made once the legal agreement recording the assurance is complete. If this does not happen prior to the close of the Examination the agent has informed the Applicant that they will write to acknowledge the positive position reached.
John Andrew Jason and Jane Ninot Jason	Full acquisition	Letter of Assurance given Deed of assurance being entered into	An assurance has already been given. The agent will write to withdraw the representations made once the legal agreement recording the assurance is complete. If this does not happen prior to the close of the Examination the agent has informed the Applicant that they will write to acknowledge the positive position reached.
Follett Property Holdings Limited	Temporary Possession and Permanent rights	Letter of Assurance given Deed of assurance being entered into	An assurance has already been given. The agent will write to withdraw the representations made once the legal agreement recording the assurance is complete. If this does not happen prior to the close of the Examination the agent has informed the Applicant that they will write to acknowledge the positive position reached.

Interested Party	Category of Acquisition	Status of Agreement	Commentary
ATO Holdings Limited	Rights only	Completed - Signed Assurance Letter	The Interested Party has withdrawn their representations to the Examination.
Dean Clive Eldridge, Linda Anne Eldridge	Rights only	Letter of Assurance signed by Applicant sent. Not signed by Interested Party	<p>The Applicant has continued to try and reach agreement but at the time of writing it has not been possible to resolve all the issues raised. The one remaining concern held by the Interested Party is the need for the Applicant to lay a fuel pipeline across a strip of their woodland. The Applicant has provided a detailed engineering explanation for the reasons why the route of the fuel pipeline needs to go through the Interested Party’s land, but this has not satisfied the Interested Party (see the Applicant’s response to Deadline 3 Submissions – Appendix G The Eldridge Family [REP4-102]).</p> <p>The Applicant has received no clear explanation or challenge other than that the Interested Party does not accept the position. In all other respects the terms for agreement are in place but the Applicant does not expect the Interested Party to withdraw their representations in respect of the fuel pipeline. The Applicant has issued a signed assurance excluding any reference to the fuel pipeline so that all other commitments are secured for the Interested Party.</p>
Bloor Homes Limited	Rights only	Letter of Assurance in agreed form sent in draft, being converted into a Deed	The Interested Party has requested this assurance be converted into a legal agreement and this process is ongoing. The Applicant hopes to conclude the agreement prior to the close of Examination but if this does not occur, the Applicant expects an agreement to conclude shortly after.

Interested Party	Category of Acquisition	Status of Agreement	Commentary
			<p>At the time of writing, the draft currently sits with the Interested Party’s solicitors. Should an agreement not be reached by the end of Examination, the Applicant will update the Secretary of State on conclusion of the agreement. The Applicant will request that the Interested Party withdraw its representations directly to the Secretary of State if an agreement is reached after the Examination period.</p>
<p>Cella UK Property Trust (formerly Kennedy Wilson)</p>	<p>Full Acquisition</p>	<p>Part completed; written assurance on part given</p>	<p>In response to the representations a commitment has been made for the Applicant to acquire the whole property at the point at which it requires the loading yard for the new Airport Access Road. This substantively removes the concerns raised in the representations. The Interested Party has subsequently sought an accelerated acquisition of the entire investment property subject to the DCO being confirmed, despite it being subject to a secure lease to Luton Borough Council (LBC) to 2029 and an acquisition by the Applicant would at the time of confirmation be premature. Despite this the Applicant understands that LBC is considering acquiring the property from the Interested Party and it is the council’s financial approvals that are awaited, not those of the Applicant. Whilst this remains unresolved the Interested Party has indicated that it means the withdrawal of representations before the close of the Examination is unlikely to be forthcoming. The Applicant does not consider the investment held in the property by the Interested Party is currently prejudiced and having agreed to buy the whole property at the time required for the Proposed Development considers it has</p>

Interested Party	Category of Acquisition	Status of Agreement	Commentary
			<p>addressed the points of concern set out in the representations.</p> <p>The Applicant notes the concerns from the Interested Party on its ability to rely upon the written assurance. The Applicant disagrees that the assurances cannot be necessarily relied upon. Such assurances are widely used across DCOs and act as a constraint on the exercise of statutory powers (compulsory acquisition).</p>
GKN Aerospace Services Limited	Full acquisition	Memorandum of Understanding	<p>Representations were made by the Interested Party who occupy a substantial site near the airport and would lose one of its production buildings for the new Airport Access Road. There is a strong and enduring relationship between the Interested Party and the Applicant, and a Memorandum of Understanding has been exchanged which sets out the parties' positions. The Interested Party is willing to work with the Applicant to achieve its objectives subject to actions being taken that will mitigate impact on production and enable a seamless transition of production from the existing building into a replacement which needs to be purpose built.</p>
Ace Sandwich Bar	Full acquisition	Completed - Signed Surrender of Lease Agreement	<p>The Applicant has now completed an agreement with the Interested Party who has surrendered its lease and vacated the premises.</p>

7.2 Legal tests

7.2.1 The Applicant has set out the legal tests for compulsory acquisition in its **Statement of Reasons [AS-071]**. In summary, Section 122 of the Planning Act 2008 (the Act) (Ref 7.2) provides that a DCO that includes compulsory

acquisition powers may be granted only if the conditions in sections 122(2) and 122(3) of the Act are met.

- 7.2.2 The conditions set out in section 122(2) requires one of three criteria to be met: (a) the land is required for the development to which the development consent relates; or (b) the land is required to facilitate or is incidental to that development; or (c) the land is replacement land to be given in exchange under section 131 or 132 of the Act.
- 7.2.3 The condition set out in section 122(3) is that there is a compelling case in the public interest for compulsory acquisition.
- 7.2.4 The Guidance related to procedures for compulsory acquisition (Ref 7.1), as discussed above in connection with engagement, set out further general matters which a promoter must be able to demonstrate to the satisfaction of the Secretary of State. These relate to alternatives to compulsory acquisition, legitimate purpose for acquisition, a clear idea for use of land, a reasonable prospect of funds becoming available, and justification for interfering with human rights.
- 7.2.5 The Applicant considers that it has met the relevant tests, as evidenced by the information set out in the **Statement of Reasons [AS-071]**. The following paragraphs summarise how these conditions are met.

Requirement for land – section 122(2)(a) and (b) of the Planning Act 2008

Alternatives

- 7.2.6 As set out in **Chapter 3** of the **Environmental Statement (ES) [AS-026]** and in the **Consultation Report [AS-048]**, the Applicant has considered various alternatives in terms of both an alternative location of Terminal 2 and internal layouts of the Application Site prior to the making of the application for development consent. The design evolution of the Proposed Development is set out in in the **Design and Access Statement [AS-049]**, and further summarised in Chapter 5 of this document. The Applicant set out the alternatives to Wigmore Valley Park in response to Compulsory Acquisition Hearing Action 19 in the **Applicant's response to Deadline 4 Hearing Actions [REP4-070]**.
- 7.2.7 In order to construct, operate and maintain the Proposed Development, land and rights in the ownership of parties other than the Applicant need to be acquired. Given the location and the nature of the Application Site, acquisition and/or use of third-party land cannot be avoided. However, as set out in the **Statement of Reasons [AS-071]**, the Applicant already owns or controls much of the land and rights in land required for the Proposed Development.
- 7.2.8 During the Examination, the Applicant has regularly updated its Schedule of Negotiations, to inform the ExA of progress made in seeking to acquire land/rights voluntarily. As set out above, significant progress has been made and a number of assurances have been given by the Applicant to ease the concerns of businesses impacted by the Proposed Development.

7.2.9 The Applicant will continue to seek to acquire all land and rights it needs by voluntary agreement. Notwithstanding its preference, the Applicant still seeks to acquire land and rights compulsorily through the DCO in circumstances where the voluntary acquisition of land or rights is ultimately unsuccessful.

The proposed interest in the land is legitimate, necessary and proportionate

7.2.10 The need for the Proposed Development is explained in the **Need Case [AS-125]** and compulsory acquisition of land and rights in land is necessary to enable the Applicant to meet that need and deliver the Proposed Development.

7.2.11 Without the compulsory acquisition of the necessary interests in land, the delivery of the Proposed Development and the realisation of its benefits cannot be guaranteed.

7.2.12 The Applicant has taken steps to ensure that the land and interests acquired are proportionate. Where appropriate, the Applicant has sought to take powers to temporarily use land, rather than the compulsory acquisition of land or rights.

Intentions of how land proposed to be acquired will be used

7.2.13 The Applicant has a clear idea of how the land is intended to be used. This is set out in Appendix A to the **Statement of Reasons [AS-071]**. During the Examination, the Applicant has also offered assurances to landowners so it is clear to them when land would be required.

Funds for compensation

7.2.14 The **Funding Statement [REP5-009]** sets out how the Proposed Development will be funded and in accordance with the Guidance, demonstrates that there is a reasonable prospect of the requisite funds being available both to pay any compensation arising from the exercise of the compulsory acquisition and temporary use powers and, indeed, to construct the Proposed Development. This document was updated during the Examination in order to provide additional clarity to the ExA and the Applicant considers it robust and in accordance with industry best practice. Further information regarding the funding position is given in Section 7.7 below.

Justification for interfering with the human rights of those with an interest in the land affected

7.2.15 In preparing the DCO, including the seeking of powers to acquire land compulsorily and to use land temporarily, the Applicant has had regard to the relevant provisions of the European Convention on Human Rights. For further details see Section 7.6 below.

7.2.16 Overall, the Applicant considers that the section 122(2) test and associated Guidance is met.

7.3 Compelling case in the public interest – section 122(3) of the Planning Act 2008

7.3.1 The Applicant considers that the condition in section 122(3) of the Act is met and that there is a compelling case in the public interest for compulsory acquisition. The need for and the benefits of the Proposed Development are set out in section 4 of the **Statement of Reasons [AS-071]** and in the other application documents, including the **Need Case [AS-125]**.

Time limit for exercise of compulsory powers (10 years)

7.3.2 The 10-year period set out in article 26 of the **draft DCO [REP10-003]** is proportionate and reasonable in light of the complex nature, large scale, and prolonged construction programme necessary for the Proposed Development. During the Examination, the Applicant considered time periods on other DCOs **Applicant's Response to Written Questions – Draft DCO [REP4-057]** (see Appendix A). A justification for this time period is further set out in the **Explanatory Memorandum [REP10-005]** and the **Statement of Reasons [AS-071]**.

7.4 Crown land

7.4.1 Crown land has been identified in the **Book of Reference [REP9-007]** and on the plans.

7.4.2 Initially there were 16 separate parcels of land identified as possibly being Crown land. Following further work undertaken by the Applicant, there now only remains one crown interest within the Book of Reference. Two parcels in the name of the Secretary of State for Defence were identified as Crown land due to historic covenants from in a conveyance dated February 1955. After further enquiry the Applicant was advised that the Secretary of State for Defence no longer has any interest in land in the area and is not aware of who is the current beneficiary of the rights.

7.4.3 Other crown interests were included owing to them being “bona vacantia” interests, where a company benefitting from land rights had been liquidated. The Applicant successfully obtained disclaimers from the Crown for interests of both affected companies. It is a well-established principle that disclaimed bona vacantia interests (i.e. escheat interests) are no longer Crown land. The letters received from the Government Property Lawyers (including evidence of disclaimer) were submitted to the ExA at Deadline 6 at Appendix B of the **Applicant's Post Hearing Submission - Compulsory Acquisition Hearing 2 (CAH2) [REP6-064]**.

7.4.4 One parcel in the name of Secretary of State for the Department for Levelling Up, Housing and Communities (DHULC) remains in the Book of Reference and the Applicant awaits confirmation that the interests can be within the scope of powers. However, to avoid the impact on any crown interest, the Book of Reference excludes the interests held by the Crown in this plot (2-46). The Applicant is expecting a consent letter from DHULC and as of 8 February 2024 this was being prepared for issue through the Crown Estate's managing agents.

7.5 Special Category Land and replacement land – section 122(2)(c) of the Planning Act 2008

7.5.1 The Application will be seeking rights over Special Category Land, more specifically land classed as ‘public open space’ at Wigmore Valley Park, which is shown on the **Special Category Land Plans [AS-021]**.

7.5.2 As set out in the **Statement of Reasons [AS-071]**, section 131 of the Act applies to the compulsory acquisition of land forming part of a common, open space or fuel or field garden allotment. Section 131 makes provision for Special Parliamentary Procedure (SPP) to apply where a DCO authorises the compulsory acquisition of such land or of rights over such land, unless the Secretary of State is satisfied that replacement land (being land not less in area than the relevant Special Category Land to be compulsorily acquired under the DCO and which is no less advantageous to the persons entitled to rights of common or other rights over it) will be given in exchange for the land to be compulsorily acquired.

7.5.3 Replacement land meeting these tests is being provided for the purposes of replacing Special Category Land.

Public Open Space land subject to acquisition

7.5.4 The land currently designated as public open space is at Wigmore Valley Park and comprised of plots 3-01, 5-06, 5-09, 5-15, and 5-22. Wigmore Valley Park is a designated District Park and area of public open space. The total existing area of open space within the Order limits subject to permanent acquisition covers an area of 35.9ha.

7.5.5 This land is essential to the Proposed Development and is subject to the works set out at Appendix A of the **Statement of Reasons [AS-071]**. Part of the land will be required for airport development, whereas a significant proportion of land will be subject to enhancement works. The Applicant has made clear throughout the Examination that the park will increase in size as a result of the scheme (see for example in response to Written Question CA.1.11 of **[REP4-056]**).

Replacement Open Space

7.5.6 Land further to the east of Wigmore Valley Park and to the south of Darley Road is currently in agricultural use and would be used for the replacement open space for Wigmore Valley Park. This land is currently in the possession of the Applicant.

7.5.7 In accordance with the provisions of article 35, the Applicant cannot acquire the open space land (belonging to the local authority, LBC) without first vesting the replacement land in LBC. This precedent mechanism safeguards the replacement land for LBC should a voluntary agreement not be reached. The Applicant set out in detail why this article was necessary in response to Written Question DCO1.6 of **[REP4-057]**.

- 7.5.8 The Applicant remains in discussions with LBC on entering into a lease arrangement for the existing open space land. This lease would set aside the need to use compulsory powers (other than to the extent that third party rights subsist, or the asset of community value designation impacts a voluntary agreement). The Applicant expects an agreement to be reached on a lease, but this is not expected to formally materialise until later in the year. The Applicant has agreed with LBC via the section 106 agreement to establish a community trust to manage the park following its completion.
- 7.5.9 The Applicant has provided further clarification on the replacement land to the ExA. The Applicant set out details on the current use of the replacement land **[REP8-038]** and responded to written questions from the ExA on the quality of the replacement land (see response to Written Question CA.2.1 of **[REP7-051]**).
- 7.5.10 The Applicant has provided detailed responses to claims that the replacement land is already subject to public recreation. The Applicant considers these claims speculative and without reasonable basis based upon the evidence currently before the Examination and the Applicant's own understanding of the use of the land. The overall position on the use of the land is summarised in:
- a. **Applicant's Response to Deadline 7 Submissions** – see section 2.4 on responses to Friends of Wigmore Park **[REP8-038]**.
 - b. **Applicant's Post Hearing Submission – Compulsory Acquisition Hearing 2 (CAH2) [REP6-064]**.
- 7.5.11 As set out in the **Code of Construction Practice [REP8-013]** (see section 12.1.1 (f)) the Applicant is committed to maintaining access to Wigmore Valley Park and not commencing construction works in the park until the replacement open space is accessible to the public. Works to the replacement open space are subject to a landscaping scheme approved by LBC. The works to the replacement open space must also be carried out and thereafter maintained in accordance with the relevant landscape and biodiversity management plan, as approved by LBC.
- 7.5.12 The existing area of open space subject to acquisition is 35.9ha. The replacement open space provided as part of the Proposed Development will be at least 36.3ha in size. Following completion of the enhancement works to the existing open space, and the creation of new replacement open space, Wigmore Valley Park will be 47.6ha. The Applicant made further submissions on the advantageousness of the replacement land in the **Applicant's Response to Written Questions Arising [REP7-051]**, the **Applicant's Response to the Examining Authority's Commentary on the Draft DCO [REP8-036]** (see e.g. in response to article 35) and in the **Applicant's Response to Deadline 7 Submissions [REP-038]**.
- 7.5.13 The Applicant therefore considers that the test in section 131 of the Act is met and the replacement land provided is no less advantageous.

7.6 Statutory Undertakers – section 127 and 138

7.6.1 The DCO, if made, will authorise the compulsory acquisition of land and rights in statutory undertakers' land and / or the removal of relevant rights and apparatus of statutory undertakers and operators. This land is held by various statutory undertakers and operators for the purposes of carrying out their statutory undertakings and operations.

Section 127

7.6.2 The test at section 127(3) of the Act provides that a DCO may only authorise the compulsory acquisition of a statutory undertaker's land where a representation has been made by the statutory undertaker objecting to the acquisition if the Secretary of State is satisfied that: (a) the land can be purchased and not replaced without serious detriment to the carrying on of the undertaking, or (b) if purchased, the land can be replaced by other land belonging to, or available for acquisition by, the undertaker without serious detriment to the carrying on of the undertaking.

7.6.3 Section 127(6) of the Act provides that a DCO may only authorise the compulsory acquisition of rights over statutory undertaker land where a representation has been made by the statutory undertaker objecting to the acquisition if the Secretary of State is satisfied that: (a) the rights can be acquired without any serious detriment to the carrying on of the undertaking, or (b) any consequential detriment to the carrying on of the undertaking can be made good by the undertaker by using of other land belonging to or available for acquisition by the undertaker.

7.6.4 The Applicant has, during preparation of the application for development consent, been in discussions with all affected statutory undertakers.

7.6.5 Adequate protection for statutory undertakers' assets is included within the protective provisions in Schedule 8 to the **draft DCO [REP10-003]**. These well precedented safeguards protect electricity, gas, water and sewage undertakers (Part 1 of Schedule 8) by, amongst other things, preserving Part 3 of the New Roads and Street Works Act 1991 (Ref 7.3), protecting rights of access, and restricting the Applicant's ability to acquire any apparatus without consent. Where necessary, agreements have also been entered into between the Applicant and statutory undertakers in order to protect apparatus. A summary of the position for each affected undertaker is set out further below.

7.6.6 As a result of the use of protective provisions and side agreements, the Applicant considers that none of the statutory undertakers or operators will suffer serious detriment to the carrying on of their undertaking or operation as a result of the compulsory acquisition of their land or as a result of the acquisition of rights over land. The Applicant therefore considers that the tests set out in sections 127(3) and 127(6) of the Act are met as indicated in the **Applicant's Position Paper on Sections 127 and 138 of the Planning Act 2008 [REP10-043]**.

Section 138

- 7.6.7 Section 138 of the Act applies if a DCO authorises the acquisition of land (compulsorily or by agreement) and there subsists over the land a 'relevant right', or there is 'relevant apparatus' on, under or over the land owned by a statutory undertaker or operator, who retain rights under the Electronic Communications Code as set out in Schedule 3A of the Communications Act 2003.
- 7.6.8 For the purposes of section 138, 'relevant right' means: (a) a right of way, or a right of laying down, erecting, continuing or maintaining apparatus on, under or over the land which is vested in or belongs to statutory undertakers for the purpose of carrying on their undertaking, or (b) is conferred by or in accordance with the electronic communications code on the operator of an electronic communications code network.
- 7.6.9 'Relevant apparatus' means: (a) apparatus vested in or belonging to statutory undertakers for the purpose of the carrying on of their undertaking, or (b) electronic communications apparatus kept installed for the purposes of an electronic communications code network.
- 7.6.10 In accordance with section 138(4) of the Act, a DCO may only include provision for the extinguishment of the relevant right, or the removal of the relevant apparatus, if the Secretary of State is satisfied that the extinguishment or removal is necessary for the purpose of carrying out the development to which the DCO relates. The **draft DCO [REP10-003]** includes provision to authorise the extinguishment of a relevant right, or the removal of relevant apparatus belonging to statutory undertakers (or operators of electronic communications code networks), in connection with the delivery of the Proposed Development.
- 7.6.11 The exercise of such powers will be carried out in accordance with the protective provisions contained in Schedule 8 of the **draft DCO [REP10-003]**, which apply to electricity, gas, water and sewage undertakers as well as operators of electronic communications code networks. These protective provisions contain constraints on the exercise of the powers in the **draft DCO [REP10-003]**, with a view to safeguarding statutory undertaker and operator interests, whilst enabling the Proposed Development, as authorised by the **draft DCO [REP10-003]**, to proceed. The Applicant therefore considers that the test set out in section 138 of the Act is met as indicated in the **Applicant's Position Paper on Sections 127 and 138 of the Planning Act 2008 [REP9-053]**.
- 7.6.12 The Applicant has summarised the position with key statutory undertakers and other parties below.

Affinity Water Limited

- 7.6.13 Protective provisions for the benefit of water and sewage undertakers are included at Part 1 of Schedule 8 to the **draft DCO [REP10-003]**. These provisions restrict powers of compulsory acquisition and protect apparatus. The Applicant has engaged with this party in respect of a Statement of Common Ground (SoCG) **[REP6-019]** and on the terms of a side agreement and protective provisions. Affinity Water informed the Examining Authority (ExA) at

Deadline 10 **[REP10-061]** that agreement had been reached with the Applicant in respect of all substantive matters in the protective provisions and that it anticipated reaching agreement on a side agreement in the next few days. The Applicant considers that substantive agreement has now been reached and that the agreement can be concluded before (or, failing that, shortly after the close of) the Examination. A signed SoCG is submitted at Deadline 11 **[TR020001/APP/8.08]**. The Applicant notes that Affinity Water maintains its objection to Schedule 2, para. 36(3) of the draft Order as set out in its representations at Deadline 10.

Bedfordshire Police

- 7.6.14 The Applicant has engaged with Bedfordshire Police in respect of the impact on the Proposed Development. A signed SoCG was submitted at Deadline 2, with all matters agreed **[REP2-008]**.

Cadent Gas Limited

- 7.6.15 Protective provisions for the benefit of gas undertakers are included at Part 1 of Schedule 8 to the **draft DCO [REP10-003]**. A form of side agreement and protective provisions are now agreed with bespoke protective provisions (in agreed form) added to the **draft DCO** submitted at Deadline 4 **[REP4-003]**. Cadent withdrew their representation at Deadline 9 **[REP9-076]** and a signed SoCG was submitted at Deadline 10, with all matters agreed **[REP10-031]**.

London Luton Airport Operations Limited (LLAOL)

- 7.6.16 The Applicant and LLAOL have held significant discussions on the Proposed Development. Protective provisions are included in the **draft DCO [REP10-003]** restricting compulsory acquisition of LLAOL interests.

National Highways Limited

- 7.6.17 The Applicant is engaged in ongoing discussions with National Highways on the impacts of the Proposed Development. The Applicant continues to discuss with National Highways matters including the residual concerns of National Highways on the south facing slips, road safety audits, and Rule 9 update and assessment. The Applicant is engaged with this party on a SoCG **[REP6-024]** and protective provisions.

Network Rail Infrastructure Limited

- 7.6.18 Protective provisions for the benefit of Network Rail Infrastructure Limited are included at Part 7 of Schedule 8 to the **draft DCO [REP10-003]**. These protective provisions are yet to be agreed with Network Rail Infrastructure Limited. The Applicant has been in discussions with Network Rail Infrastructure Limited on the impacts of the Proposed Development. Negotiations on terms of appropriate protective provisions and acquisition by agreement are ongoing but the Applicant's final position for the purposes of the Examination is set out in the **Consents and Agreements Position Statement [TR020001/APP/2.01]** which summarises the position with Network Rail at Deadline 11.

Prax Downstream UK Limited

- 7.6.19 The Applicant has had significant discussions with Prax. Protective provisions for the benefit of gas undertakers are included at Part 1 of Schedule 8 to the **draft DCO [REP10-003]**. These provisions restrict compulsory acquisition powers and protect apparatus. While this Interest Holder is not on the Ofgem list of gas licensees, the interest is listed in this schedule on a precautionary basis.

Thames Water Utilities Limited

- 7.6.20 Protective provisions for the benefit of water and sewage undertakers are included at Part 1 of Schedule 8 to the **draft DCO [REP10-003]**. These provisions restrict compulsory acquisition powers and protect apparatus. The Applicant and Thames Water have concluded a side agreement and Thames Water has withdrawn its representation. A SoCG has been signed by the parties and is submitted at Deadline 11 **[TR020001/APP/8.06]**.

UK Power Networks (and Eastern Power Networks)

- 7.6.21 The Applicant has had significant discussions with UK Power Networks (UKPN). Protective provisions for the benefit of electricity undertakers are included at Part 1 of Schedule 8 to the **draft DCO [REP10-003]**. These provisions restrict compulsory acquisition powers and protect apparatus. The Applicant and UKPN have concluded a side agreement and UKPN has informed the Applicant that it has written to the ExA (prior to Deadline 11) withdrawing its representation. No SoCG was produced for UKPN at its request.

World Fuel Services

- 7.6.22 The Applicant has held discussions with World Fuel Services (WFS) on the impact of the Proposed Development on its interests. The SoCG was signed by WFS and the Applicant at Deadline 6, with all matters agreed **[REP6-011]**.

7.7 Funding Statement

- 7.7.1 The Funding Statement confirms that, based on the cost and revenue projections, the Proposed Development is capable of being funded from the net income derived from operating the airport. In particular it:
- a. confirms that there is a 'reasonable prospect' of the requisite funds for acquisition becoming available (Guidance on Compulsory Acquisition paragraph 9 (Ref 7.1)) to enable the compulsory acquisition within the applicable statutory period following the Order being made, and that the resource implications of a possible acquisition resulting from a blight notice have been taken account of; and
 - b. gives as much information as is possible about the resource implications of implementing the project (Guidance on Compulsory Acquisition paragraph 17 (Ref 7.1)).

Further, the intention is that the project will be wholly financed by the private sector, without any contributions from LBC (see the **Applicant's Response to Written Questions Arising from Hearings CAH2-WQ6 of [REP7-048]**).

7.7.2 During Examination the following issues were raised:

- a. the ExA sought more information breaking down the costs and the timing of compulsory acquisition payments and the other construction costs, and questioned how land compensation would be paid for;
- b. the ExA asked for a detailed breakdown of capital costs between phases and queried the impacts of higher than assumed inflation rates on the Proposed Development's viability;
- c. questions were asked about where the £108 million (2022/23 prices) to pay land compensation would come from; and
- d. the most likely financing route for Phase 2.

7.7.3 In response the Applicant:

- a. Prepared in November 2023 an updated **Funding Statement [REP5-009]** which as well as answering the ExA's requests:
 - i. provided details of the £22 billion of surplus cash flow the Proposed Development is projected to make over 50 years to meet the financing costs of the expansion and pay the Applicant concession fees;
 - ii. evidenced that there is a live and active investor market for airport expansion projects;
 - iii. explained the intended concession extension (labelled Approach 1 in paragraph 4.3.1) delivery route for Phase 1 of the Proposed Development; and
 - iv. included a letter of support from the current airport operator (the world's largest airport management company).
- b. Provided in response to Written Questions arising from hearings CAH2-WQ2 **[REP7-048]** a detailed breakdown of all the capital costs in the two Phases, with the land compensation breakdown already provided in the revised **Funding Statement [REP5-009]**. The **Applicant's Response to Written Questions Arising from Hearings CAH2-WQ5 [REP7-048]** explained that sensitivities of higher inflation rates have been tested in the financial model and they would not adversely affect the viability of the Proposed Development.
- c. Confirmed that the £10 million of anticipated costs of land compensation for Phase 1 has already been provided for in the current 2023/24 financial year (paragraph 7.3.1 of **[REP6-064]**) and that Phase 2 land compensation costs will be easily paid from Luton Rising's anticipated future concession receipts, projected to be in excess of £100 million per year by 2033 (responses to ID 2.1 and ID 15.7 in **[REP7-063]**).
- d. Commercially confidential negotiations with the current operator are proceeding well, and the Applicant's response to ID.8.5 **[REP7-066]**

explains the planned Phase 2 progressive partnership (labelled Option b Joint Venture in section 4.4.1.b of the updated **Funding Statement [REP5-009]**).

7.7.4 The Applicant has also, following the ExA's request, inserted article 53 into the **draft DCO [REP10-003]**. This provision ensures that compulsory acquisition powers are not to be exercised for a phase of the Proposed Development until such time as a guarantee in respect of the compensation payable for that phase is approved by the Secretary of State.

7.7.5 In summary, having regard to both the updated Funding Statement and the additional responses referred to above, the ExA can be satisfied that there are no impediments to delivery arising from funding matters.

7.8 Human Rights Act 1998 and Equality Act 2010

Human Rights Act 1998

7.8.1 The Applicant has considered the Human Rights Act 1998 (Ref 7.4) and this consideration is set out in detail in the **Statement of Reasons [AS-071]**. No residential properties are subject to acquisition, and any landowner subject to compulsory powers is entitled to make a claim for compensation. No material human rights issues have been raised during the Examination. The Applicant maintains that its interference with human rights is proportionate and necessary.

Equality Act 2010

7.8.2 The Applicant has carried out an **Equality Impact Assessment (EqIA) [AS-129]** to assist the Secretary of State in discharging their public sector equality duty under section 149 of the Equality Act 2010 (Ref 7.5). Table 10.1 of the EqIA summarises the key findings.

7.8.3 In response to questions raised during the Examination, the Applicant clarified that whilst the study area for its assessment was smaller than the category 3 boundary, where impacts were identified as part of ES topic assessments outside the study area, they were taken into account (see the **Applicant's Response to Written Questions Arising from Hearings** from CAH2 – WQ7 and WQ8 **[REP7-048]**).

7.8.4 The Applicant considers that no adverse equalities effects are likely to arise as a consequence of the Proposed Development.

7.9 Topic conclusion

7.9.1 This section sets out why compulsory acquisition and temporary powers have been sought in the application for development consent and explained why the Applicant considers such powers to be necessary, proportionate, and justified.

7.9.2 As already set out in the **Statement of Reasons [AS-071]** and summarised above, the Applicant submits that the tests set out in section 122 and section 123 of the Act are met.

- 7.9.3 The Applicant owns or controls the majority of land required for the Proposed Development. The acquisition of land and rights (including restrictive covenants) and the temporary use of land, together with the overriding of interests, rights and restrictive covenants and the suspension or extinguishment of private rights, is no more than is reasonably required to facilitate or is incidental to the Proposed Development. Furthermore, the land identified to be subject to compulsory acquisition is no more than is reasonably necessary for that purpose and is proportionate.
- 7.9.4 The Applicant has consulted all persons affected by the compulsory acquisition and temporary possession powers and persons who may have a claim for compensation arising from the Proposed Development. The Applicant is seeking to acquire any interests in the land by agreement wherever practicable.
- 7.9.5 Given the national and local need for the Proposed Development (and the support for it found in policy, as well as the suitability of the Order limits (for the reasons outlined above), compulsory acquisition of the land and rights and the temporary use of land, together with the overriding of interests, rights and restrictive covenants and the suspension or extinguishment of matters affecting the Order limits identified by the Applicant for the Proposed Development is justified.
- 7.9.6 The Applicant has made significant progress on Crown land and at the time of writing, only one Crown land plot remains (2-46) within the Order limits. The Applicant is close to obtaining Crown consent for this final plot and will update the Secretary of State directly if such consent is obtained after the close of examination.
- 7.9.7 The Applicant considers the acquisition of open space justifiable and the relevant tests to be met.
- 7.9.8 The proposed interference with the human rights of those with an interest in the Order limits is for a legitimate purpose, namely the Proposed Development, and is necessary and proportionate to that purpose. The Applicant considers that the very substantial public and economic benefits to be derived from the proposed compulsory acquisition of the Order land would decisively outweigh the private loss that would be suffered by those whose land is to be acquired.
- 7.9.9 To conclude, without the grant of compulsory acquisition and temporary possession powers, the Applicant considers that it will not be possible to construct the Proposed Development or realise the public and economic benefits arising from it.

8 SURFACE ACCESS MATTERS

8.1 Introduction

- 8.1.1 The Applicant's fundamental position on surface access matters remains unchanged from that set out in the documents submitted with the application for development consent.
- 8.1.2 The strategy focussed on the delivery of the principles set out in the **Surface Access Strategy (SAS) [APP-228]**. The **SAS [APP-228]** recognises the need for changes in travel behaviour and investment in sustainable transport solutions. Future Travel Plans, prepared under the **Framework Travel Plan (FTP) [TR020001/APP/7.13]** will establish Targets that will strive to achieve higher levels of sustainable transport mode share than the surface access Limits set out by the **Green Controlled Growth Framework [TR020001/APP/7.08]**. A **Sustainable Transport Fund (STF) [REP10-039]** will be secured by the Development Consent Order (DCO) to fund interventions that will seek to achieve these Targets and mitigate any unforeseen residual impacts on the highway network.
- 8.1.3 The transport impacts of the Proposed Development are presented in the **Transport Assessment (TA) [APP-200 to APP-203, AS-123, APP-205 and APP-206]** for both the construction and the operational phases. The TA report structure is presented in section 1.3 of the document.
- 8.1.4 Two transport models have been used to appraise the transport impacts as a result of the Proposed Development – the Central Bedfordshire and Luton Transport Model – Luton Airport version (CBLTM-LTN) and the operational Vissim model. The CBLTM-LTN model has been used to assess the strategic impacts of the Proposed Development and where strategic impacts have been identified, the CBLTM-LTN model is supplemented by local junction modelling as appropriate.
- 8.1.5 The Vissim model has been used to provide a detailed assessment of the road network operation and impact of the Proposed Development in the area local to the airport, including assessing highway interventions to mitigate impacts.
- 8.1.6 Transport Analysis Guidance (TAG) issued by the Department for Transport (DfT) (Ref 8.1) forms the basis for the approach to traffic modelling.
- 8.1.7 For the purposes of the **TA [APP-200 to APP-203, AS-123, APP-205 and APP-206]**, three Assessment Phases were considered, with each Phase delivered to meet the forecast passenger demand at that stage:
- a. Assessment Phase 1 – a core case of 21.5 million passengers per annum (mppa) by 2027 is assumed to deliver works to facilitate the expansion of capacity in Terminal 1 in line with the demand forecasts contained in the application for development consent.
 - b. Assessment Phase 2a – a core case of 27 mppa by 2039 when Terminal 2 opens is assumed to deliver works to build and operate Terminal 2, and any associated infrastructure.

- c. Assessment Phase 2b – a core case of 32 mppa by 2043 when Terminal 2 is fully built out.

- 8.1.8 Vehicular trip generation has been developed from an analysis of existing travel patterns, future year passenger and staff forecasts and flight schedules.
- 8.1.9 The passenger trip generation has been based on forecast passenger growth associated with each Assessment Phase, together with indicative flight schedules for each assessment year.
- 8.1.10 The **TA [APP-200 to APP-203, AS-123, APP-205 and APP-206]** sets out the highway mitigation strategy to support the Proposed Development. It has been shown that the mitigation strategy addresses the impacts of the Proposed Development, which have been based on both the forecast changes to background transport use and the expected growth of the airport.
- 8.1.11 The Applicant has developed the Transport Related Impacts Monitoring and Mitigation Approach (TRIMMA) as the approach to monitoring and mitigating impacts on the highway network as a result of the Proposed Development. It is proposed as an agile mechanism for responsibly addressing traffic-related uncertainty, enabling the Applicant and relevant highway authorities to proactively detect and introduce mitigation on the highway network at the appropriate time.

8.2 The Applicant's Surface Access Strategy

Overview

- 8.2.1 The **SAS [APP-228]** sets the 20-year framework by which increased travel demand to and from the airport will be carefully managed in order to reduce the impact on surrounding communities and the environment. The **SAS [APP-228]** recognises the need for changes in travel behaviour and investment in sustainable transport solutions. The Applicant is committed to the strategic vision, objectives and priorities of the **SAS [APP-228]**.
- 8.2.2 The policy requirements of relevance to the **SAS [APP-228]** are set out in section 2 of the document. The document was prepared with consideration of relevant DfT policies, both relating to surface access and aviation more broadly. Local and regional policies and transport strategies have also been considered where relevant, with further details provided in section 3 of the **TA [APP-203]**.
- 8.2.3 The **SAS [APP-228]** sets out an approach of both Limits and Targets, with Limits set out in the **Green Controlled Growth (GCG) Framework [TR020001/APP/7.08]** (please refer to Chapter 12 of this document for details on GCG) and Targets to be set out in the five-yearly Travel Plans. Section 5 of the **SAS [APP-228]** explains the distinction between surface access Limits and Targets. Table 5.2 of the **SAS [APP-228]** sets out the surface access mode share Limits that will be secured via the **GCG Framework [TR020001/APP/7.08]** through the DCO.
- 8.2.4 The **SAS [APP-228]** identifies priority areas for supporting interventions to influence how passengers and staff travel to and from the airport.

8.2.5 The interventions and measures are grouped by six priority areas, which comprise:

- a. Luton Direct Air-Rail Transit (DART) and Rail;
- b. Vehicle Access, Parking, Private Hire Vehicles and Taxis;
- c. Bus and Coach;
- d. Walking and Cycling;
- e. Highway Interventions; and
- f. Technology and Communication.

8.2.6 The **SAS [APP-228]** details how each of the priority areas have been considered and how they link to the **FTP [TR020001/APP/7.13]**, the approach to the monitoring of highway impacts and how mitigation will be provided.

Framework Travel Plan

8.2.7 The vision and objectives of the **SAS [APP-228]** will be realised through the preparation of Travel Plans, produced every five years, which will set out the specific interventions and Targets for surface access during that shorter time period. The **FTP [TR020001/APP/7.13]** sets out the structure and approach for future Travel Plans. The obligation to produce and implement Travel Plans will be adopted by the airport operator.

8.2.8 The **FTP [TR020001/APP/7.13]** establishes that Targets set in future Travel Plans should strive to achieve higher levels of sustainable transport mode share than the surface access Limits set out by the **GCG Framework [TR020001/APP/7.08]**, to reflect the additional level of ambition of the Applicant and the airport operator as the airport grows.

8.2.9 Each Travel Plan must include two headline Targets for non-sustainable mode share: one for passenger and one for staff. In addition, the Travel Plan must include monitoring targets as detailed in Section 4 of the **FTP [TR020001/APP/7.13]**. Targets will be reviewed every five years by the Travel Plan Co-ordinator appointed by the airport operator and progress against Targets will be monitored and reported in consultation with relevant stakeholders.

8.2.10 The **FTP [TR020001/APP/7.13]** sets out a long list of interventions and measures that the airport operator can draw upon when developing the Travel Plans. These are set out in Section 5 of the FTP. It is not an exhaustive list and other interventions can be considered.

Sustainable Transport Fund

8.2.11 The STF has been proposed to fund interventions aimed at improving sustainable travel options for accessing the airport. Details of the STF are provided in the **STF** document **[REP10-039]**. It will support the implementation of interventions proposed in the Travel Plans. The STF will be generated through levies on on-site airport passenger parking transactions and is secured by requirement 32 of the **draft DCO [REP10-003]**. Fund size projections are

provided in Section 2.3 of the **STF** document **[REP10-039]** and these reflect the level of ambition that the Applicant has to deliver high quality sustainable transport interventions as the airport expands.

- 8.2.12 In addition, the STF will fund interventions associated with Mitigation Type 2 (MT2) as defined in the **Outline Transport Related Impacts Monitoring and Mitigation Approach (OTRIMMA) [REP10-036]**. MT2 are unforeseen and residual traffic impacts.
- 8.2.13 The airport operator will make funds available from the STF according to the recommendations of the Airport Transport Forum (ATF) Steering Group. The ATF Steering Group will consider a proposed intervention against agreed criteria (to be defined by the ATF Steering Group upon its establishment).
- 8.2.14 If at the end of any calendar year, there is a surplus of available funds (i.e. any uncommitted funds remaining) this shall be rolled over and added into the next year's fund. Up to 25% of this surplus may be redistributed (upon the recommendation of the ATF Steering Group) to Community First or the Community Fund.

Consideration of the Surface Access Strategy during the Examination

- 8.2.15 During Examination the following key issues were raised by the Examining Authority (ExA) and relevant highway authorities:
- a. The relationship between Travel Plan mode share Targets and the **GCG Framework [TR020001/APP/7.08]**.
 - b. How mitigation measures required to address a breach of a GCG Limit would be funded outside of the STF.
 - c. How the STF would end when the airport reaches 32 mppa and whether consideration could be given to the STF remaining in place.
 - d. Consideration of the need for the STF to be of a sufficient size in the early years to enable investment opportunities in new bus routes.
 - e. Confidence that the STF was of sufficient size to fund measures set out in the **FTP [TR020001/APP/7.13]**.
 - f. How bus and coach services will be funded and remain commercially viable throughout the delivery of the Proposed Development and beyond.
 - g. Accounting for Covid-19 in patronage and forecast service levels in terms of rail capacity.
- 8.2.16 In response the Applicant has confirmed the following:
- a. The **GCG Framework [TR020001/APP/7.08]** contains specified surface access Limits associated with mode share, set based on a comprehensive forecasting process and aligned with quantitative forecasts in the **Environmental Statement (ES) [TR020001/APP/5.01]**. The Travel Plan Targets are necessarily aspirational and, therefore, are not set with reference to environmental effects identified by the **ES [TR020001/APP/5.01]**. The process by which they are set in the Travel

Plan and agreed with Luton Borough Council following consultation with the other Host Authorities, Buckinghamshire Council and National Highways, is set out by requirement 31 of the **draft DCO [REP10-003]**.

- b. The obligation on the undertaker to implement the measures within a Mitigation Plan approved by the Environmental Scrutiny Group (ESG) to address a breach of a GCG Limit is an absolute one, irrespective of funding, and failure to do so would be a breach of the terms of the DCO, which would be enforceable under Section 161 of the Planning Act 2008 ('the Act') (Ref 8.2). Within the **STF [REP10-039]**, the Applicant set out at paragraph 3.4.2(d):

“where a Level 2 Threshold or Limit has been breached and additional measures are required as part of a Mitigation Plan or Level 2 Plan, these should not be funded by the STF. It is however acknowledged that measures already approved for funding from the STF or implemented by the ATF Steering Group may contribute towards the avoidance or prevention of exceedances of a Limit.”

- c. The STF will now remain in place beyond completion of the Proposed Development (i.e. the originally proposed fund cap has been removed).
- d. No later than the first meeting of the ATF Steering Group, the Applicant will make available up to £1,000,000 to 'pump-prime' the STF.
- e. During the Examination the proposed parking levy has been adjusted to generate an increase in the value of the STF, to increase stakeholder confidence in the ability of the fund to achieve the ambitious targets to be set out in future Travel Plans. This has doubled the illustrative forecast cumulative fund value from £18.5m to £37m during the delivery of the Proposed Development.
- f. The performance of bus and coach routes will be monitored through regular meetings with bus operators and ongoing review of usage data. Regular engagement with bus operators will take place through the preparation of the five-yearly 'Bus and Coach Market Studies', as described in Section 6.1.8 of the **Bus and Coach Study [REP10-041]** and the attendance of operators at ATFs.
- g. The Applicant submitted a **Rail Impact Summary [REP8-030]** which specifically addressed the change in demand as a result of Covid-19. It concluded that there has been a reduction in demand as a result of Covid-19 and subsequent changes to commuting patterns, but that this demand is recovering. There is also significant time for services to return to previously forecast numbers during the delivery of the Proposed Development.

8.2.17 For this topic, all matters are agreed with the relevant stakeholders at the end of Examination.

Topic conclusion

8.2.18 The Applicant concludes that its approach to sustainable transport is robust in the context of policy requirements and best practice. The introduction of the

STF provides a significant fund that can be accessed by all the relevant highway authorities via the ATF Steering Group to provide enhancements to sustainable transport and to strive to meet Travel Plan targets. It is the Applicant's position that no Interested Party has mounted a credible challenge to that conclusion during the Examination and as noted at paragraph 8.2.17, all matters relating to the Applicant's SAS are agreed with the relevant stakeholders.

8.3 The Applicant's approach to traffic modelling

Overview

- 8.3.1 The Proposed Development will lead to an increase in the number of surface access trips as a result of additional passengers and employees. To understand the impact of, and to mitigate these additional trips, transport modelling has been undertaken to consider how the transport network would operate in the future in the absence of the Proposed Development (future baseline) and with the Proposed Development.
- 8.3.2 The assessment methodology has been developed through ongoing discussions with the relevant highway authorities. Two transport models have been used to appraise transport impacts of the Proposed Development – the CBLTM-LTN and operational Vissim model. The development, use and interaction of the two models is detailed in Figure 9.1 of the **TA [APP-205]**.
- 8.3.3 The CBLTM-LTN model has been used to assess the strategic impacts of the Proposed Development and where strategic impacts have been identified, the CBLTM-LTN model is supplemented by local junction modelling as appropriate. The Vissim model has been used to provide a detailed assessment of the road network operation and impact of the Proposed Development in the area local to the airport, including assessing highway interventions to mitigate impacts. Transport modelling has been undertaken against three Assessment Phases which represent both development of the Airport infrastructure as well as growth in passenger and employee numbers.
- 8.3.4 Whilst mitigation measures have been developed to address growth at each of the Assessment Phases, the Applicant has committed to an ongoing monitoring and mitigation approach (please refer to the **OTRIMMA [TR020001/APP/8.97]**) which will ensure that the mitigation that is delivered addresses the impacts of the Proposed Development, given that some of these impacts may not arise until much later in the expansion of the airport.
- 8.3.5 The Applicant has worked with relevant highway authorities on an ongoing basis to develop the transport modelling. This has included development of the baseline models, forecast models and mitigation measures.
- 8.3.6 There is clear support in policy terms for the approach taken to the transport modelling. Transport models have been developed in accordance with the DfT's TAG (Ref 8.1) and forms the basis for the Applicant's approach to transport modelling which ensures that the impacts of the scheme are addressed in accordance with the National Planning Policy Framework (NPPF) (Ref 8.3)

paragraph 104 and the Airports National Policy Statement (ANPS) (Ref 8.4) paragraph 5.10.

Strategic modelling

Background

- 8.3.7 The strategic modelling has been undertaken using the CBLTM-LTN. The model, comprising a demand model, highway assignment model and public transport assignment model, was developed in 2018 with a 2016 base year. The development included initial scoping and specification, followed by data collection, model development, and concluded with calibration and validation, with the overall approach following the DfT's TAG (Ref 8.1). The highway and public transport models were successfully calibrated and validated to the parameters set out by TAG. The stages of model development have been documented in **TA Appendices – Part 1 of 3 [APP-201]** (please refer to Appendix B: Strategic Modelling - Model Specification Report, Appendix C: Strategic Modelling Data Collection Report, Appendix E1: Highway LMVR and Appendix E2: Public Transport LMVR).
- 8.3.8 The strategic model has 2027, 2039 and 2043 future years with both Do Minimum, without airport expansion, and Do Something, with airport expansion scenarios. The future year forecasting assumptions included an uncertainty log of future land use and transport infrastructure, and the DfT's traffic growth projections from the National Trip End Model (NTEM) version 7.2 and Road Traffic Forecasts (RTF) 2018 (Ref 8.5). The future year modelling and forecasts are documented in **TA Appendices – Part 2 of 3 [APP-201]** (please refer to Appendix F Strategic Modelling Forecasting Report). The strategic model and forecasts have been used to assess the geographical impacts by mode (highways and public transport) of the Proposed Development, and as an input to the ES (air quality, greenhouse gases, traffic and transportation and noise modelling and assessments), the local Vissim micro-simulation traffic modelling, individual junction traffic modelling, and therefore ultimately to define the need, design and assessment of measures to mitigate the impact.
- 8.3.9 Engagement with key stakeholders, including National Highways and the Host Authorities, commenced in 2018 and was undertaken throughout the development of the model and during the model forecasting stages. Details of the engagement have been set out in the meeting summary, as responding to Issue Specific Hearing 7 Action Point 4, which was reported in the **Applicant's Response to November Hearing Actions (Compulsory Acquisition Hearing 2 and Issue Specific Hearings 7 - 10) [REP7-072]**. The Strategic Model Forecasting Report (**TA Appendices – Part 2 of 3 [APP-201]**, Appendix F) was shared with the stakeholders prior to the Examination.
- 8.3.10 The key residual issues prior to the Examination were the assumed M1 all lane running (ALR) for the year 2043 and the timing of the dualling of Vauxhall Way. While the TA had conducted a sensitivity test for no ALR on the M1, it had not conducted a test for the Vauxhall Way dualling being implemented in 2028, which was one year later than that assumed in the TA, where the scheme was included in the model runs for 2027.

Rule 9 Letter

- 8.3.11 On 16 May 2023 the ExA requested that the Applicant review its transport modelling [PD-005] in light of new DfT interim advice, dated April 2023, regarding the treatment of the Covid-19 pandemic in transport modelling. The Applicant's response of 31 May 2023 [AS-051] described how it proposed to address the interim advice and provided an indicative timescale.
- 8.3.12 On 31 May 2023, the DfT also issued its full advice regarding the treatment of the Covid-19 pandemic in transport modelling as set out in the updated TAG Unit M4: Forecasting and Uncertainty (Ref 8.6).
- 8.3.13 In the letter of 13 June [PD-006], the ExA stated it:
- “has made a Procedural Decision to request that the Applicant reviews its transport modelling considering the recently published guidance. The ExA also requests that the Applicant engages with stakeholders, including National Highways and the Local Highway Authorities, at the earliest possible opportunity with a view to gaining agreement as to the appropriate methodology if the model is not re-based.”* The ExA has further requested that detail be added to the timetable provided in the Applicant's letter of 31 May 2023 to *“describe each stage of the process in sufficient depth to allow the ExA to understand how the requirements of the guidance will be addressed, including how any significant changes would be accommodated in the work programme and when the appropriate stakeholders will be engaged. This should be provided by 27 June 2023.”*
- 8.3.14 The Applicant responded setting out a proposed approach and timescale, and proposals for engagement as set out in [AS-064]. The Applicant proceeded on the basis as set out, provided updates to the ExA at Issue Specific Hearings 4 and 7 and issued its final response via the **Applicant's Response to Issue Specific Hearing 7 Action 2 – Accounting for Covid-19 in Transport Modelling Final Report [AS-159]**, on 15 December 2023.
- 8.3.15 The Applicant's response [AS-159] described the approach as:
- a. *“The methodology set out was considered to be consistent with TAG Unit M4 and provided a considered proportionate, practical and can be undertaken within a reasonable timescale which enabled the risks to be mitigated.”* (paragraph 7.1.3)
 - b. *“In the case of the Luton Airport DCO, the key risks relate to the measures that have been proposed to mitigate the impact of the increase in airport surface access travel demands - capacity improvements to off-site highway junctions.”* (paragraph 7.1.7)
- 8.3.16 The work included collation and review of traffic data over the pre-, during and post-pandemic period, updated modelling (with an update to the uncertainty log, and incorporation of the latest NTEM version 8 and National Road Traffic Projections 2022 (NRTP22) (Ref 8.7), which replaced RTF18) with no ALR on the M1 in 2043 and Vauxhall Way dualling in 2028 (and therefore not included in the 2027 model runs). The key findings were:

- a. Results from the Rule 9 modelling updates indicate that the overall forecast traffic volumes are slightly lower than the original flows that informed the application for development consent.
- b. Comparison between 2023 modelled and observed flows shows relatively good comparison on the strategic road network (SRN) but considerably higher modelled than observed flows for the local road network (LRN).
- c. The trends analysis also indicated a potential for a slight downward adjustment to the forecasts, although noting the limitations on the available observed data to support this. The impacts from Covid-19 are expected to be short-term and would likely dissipate as overall travel demands return to the pre-pandemic level (as has been seen on the SRN).
- d. Traffic volumes on the SRN have largely ‘recovered’ to pre-pandemic levels and, although volumes on the LRN have been increasing, they are still behind the pre-pandemic levels. Considering the length of time to reach the assessment years of 2027, 2039 and 2043 traffic, it is anticipated to return to the expected level within the assessment years.
- e. As discussed with National Highways and the relevant local highway authorities no adjustments were made to the base and future year models (apart from the updated changes for NTEM8, NRTP22 and the update to the uncertainty log referred to in paragraph 8.3.16 above) in order to continue to make a ‘robust’ assessment of overall future year traffic volumes and given the likelihood that traffic levels would eventually recover (as per the SRN).
- f. Following completion of the Rule 9 strategic modelling updates, the overall forecast risk assessment is considered to be ‘very low’ due to the slightly reduced traffic flows and the potential of further downward adjustments resulting from the trends analysis.

8.3.17 The Applicant’s report **[AS-159]** concluded that the:

“proposed highway mitigation measures for the airport expansion can be considered ‘robust’ and continue to be effective even with the updated modelling assumptions. The modelling demonstrates that the impacts of the Proposed Development, along with the included mitigations in Assessment Phases 1, 2a, and 2b (full development), would not significantly adversely affect the operation of the highway network in the local or wider area.”

8.3.18 Comments were received from the relevant highway authorities in response to the Applicant’s report **[AS-159]**. These were addressed by the Applicant in the **Applicant's Response to Comments from the Highway Authorities on the 'Accounting for COVID-19 in Transport Modelling Final Report' [REP8-039]**, and can be summarised as follows:

- a. Luton Borough Council (LBC) – LBC had *“no outstanding concerns with regard to the modelling”* and *“considered that the Applicant’s model is robust and the mitigation proposed in association with the development remains appropriate.”*

- b. Central Bedfordshire Council (CBC) – CBC stated that it “*would largely agree with the applicant’s conclusions with regards to the modelled network as assumed within the note, i.e. that generally flows are lower than in the previous assessment and with the London Road South junction, for example, reported as operating more efficiently in each forecast scenario as a result of these reduced flows.*” CBC went on to request further clarifications regarding the traffic forecasting, impacts, monitoring and mitigation at six locations for which the Applicant provided responses.
- c. Dacorum Borough Council, Hertfordshire County Council and North Hertfordshire Council (Hertfordshire Host Authorities) – The Hertfordshire Host Authorities stated they “*are not requesting any additional transport modelling work to be undertaken as it is not proportionate at this stage, but does request that this level of uncertainty and likely consequential effects are fully taken into account in any considerations and need for monitoring and controls should the DCO be consented and implemented to ensure the actual effects of the development are monitored, managed and controlled to ensure required outcomes within the assessed envelope.*” The Hertfordshire Host Authorities nonetheless requested that the Applicant provide some further information and clarifications, to which the Applicant duly responded.
- d. National Highways – National Highways had several comments requesting that further information be provided as well as points of clarification. These included the request for further information on queues and delays at M1 junctions, forecast flows and volume to capacity (V/C) ratios approaching M1 Junction 10 from the A1081, the need to adjust future year forecasts as a result of Covid-19, the capacity of M1 Junction 9 roundabouts and model convergence.

8.3.19 The Applicant provided the additional information and points of clarification requested by CBC, the Hertfordshire Host Authorities and National Highways in the **Applicant's Response to Comments from the Highway Authorities on the 'Accounting for COVID-19 in Transport Modelling Final Report' [AS-159] [REP8-039]**.

Local modelling

- 8.3.20 Local traffic modelling has been undertaken to provide a detailed assessment of the road network operation and impact of the Proposed Development and to develop highway interventions to mitigate identified impacts.
- 8.3.21 A Vissim micro-simulation model was developed covering the strategic and local road network in the vicinity of the airport including Junction 10 of the M1; the M1 corridor either side of Junction 10, the A1081 linking the airport to the M1, local roads and junctions within the study area, and circulation routes and car parking associated with the airport.
- 8.3.22 The Vissim model enabled a detailed understanding of the impacts of the Proposed Development on the highway network, as well as providing a means to iteratively develop and test highway interventions to mitigate these impacts.

- 8.3.23 The Vissim model was developed in consultation with the relevant highway authorities and in accordance with best practice and guidance as set out in the DfT's TAG (Ref 8.1) and Transport for London Vissim modelling guidance (Ref 8.8). A Local Model Validation Report (LMVR) prepared in accordance with this guidance, and which shows that the model represents observed conditions on the network was produced and agreed with the relevant highway authorities (please refer to Appendix D of the **TA Appendices [APP-200]**). Future assessment year Vissim modelling reports were also produced and shared with the relevant highway authorities and these are included in Appendix G of the **TA Appendices [APP-202]**.
- 8.3.24 In addition to the Vissim modelling, additional standalone local junction models (using 'Junctions' and LinSig software) were developed to assess the impacts of the Proposed Development beyond the extents of the Vissim model study area. Locations were identified through a combination of iterative modelling undertaken in the strategic CBLTM-LTN model and discussions with local highway authorities. Where impacts were identified, consideration was given to proportionate mitigation measures.

Construction impacts

- 8.3.25 The Applicant notes that construction of the Proposed Development has the potential to have impacts on users of the existing transport network. Chapter 13 of the **TA [APP-206]** has considered in detail the expected construction traffic impacts associated with the three Assessment Phases.
- 8.3.26 The assessment noted that the main impacts are expected to be along the primary access route to the site via Junction 10 of the M1 and along the A1081 (New Airport Way). At the peak of construction traffic activity during Assessment Phase 2a, it is estimated that there would be just over 230 vehicles (or approximately 460 two-way movements) per day arriving at and departing from the airport with a maximum hourly flow in the order of 70 vehicle movements. Given the strategic nature of the primary access routes to the airport, these impacts are not considered to be material in nature. These impacts have been discussed and agreed with the relevant highway authorities.
- 8.3.27 Whilst the construction impacts are not expected to be material in nature, the Applicant has proposed a number of control measures to ensure that construction activities are appropriately managed including:
- a. A Code of Construction Practice (CoCP) **[REP8-013]**;
 - b. A Construction Traffic Management Plan (CTMP) (an Outline of which can be found at **[REP10-021]**); and
 - c. A Construction Workers Travel Plan (CWTP) (an Outline of which can be found at **[REP8-018]**).
- 8.3.28 The Applicant, and any appointed contractor will continue to engage with relevant local authorities through the delivery of the various phases of construction to ensure that the impacts of construction are appropriately managed in accordance with the above.

Consideration of traffic modelling during the Examination

- 8.3.29 During the Examination, the Applicant engaged with the relevant highway authorities in regard to the Rule 9 modelling and provided regular updates to the ExA through **Covid-19 Additional Modelling Technical Note 1 [REP4-086]**, **Covid-19 Additional Modelling Technical Note 2 [REP4-106]** and a final report, **Accounting for Covid-19 in Transport Modelling Final Report [AS-159]**. The **Accounting for Covid-19 in Transport Modelling Final Report [AS-159]** showed that, even taking account of the DfT guidance as requested by the ExA, the assessment and mitigation strategy as set out in the original TA **[APP-200 to APP-203, AS-123, APP-205 and APP-206]** remains valid.
- 8.3.30 The Applicant has continued to work with relevant highway authorities to share, explain and interrogate the transport model and forecasts to ensure, as far as reasonably possible, that all aspects of the modelling were agreed. Notwithstanding this, a number of issues were raised by the ExA, relevant highway authorities and Interested Parties during the Examination, including:
- a. **Trip distribution plans**

The ExA requested trip distribution plans to summarise the distribution and routing of daily road traffic comprising airport passengers and staff travelling to/from the airport for the existing situation and for 2027, 2039 and 2043 forecast years, both without and with airport expansion.
 - b. **M1 to A6 link road**

The ExA requested further information on the forecast use of airport passengers and staff of the proposed new road link.
 - c. **Capacity of M1 - inclusion of capacity upgrades on the M1 motorway in the form of ALR**

Inclusion of capacity upgrades on the M1 motorway in the form of ALR. Issues were raised by a number of parties that the modelling included with the TA **[APP-200 to APP-203, AS-123, APP-205 and APP-206]** included an assumption that National Highways would implement capacity upgrades on the M1 mainline to address existing and future growth irrespective of the Proposed Development. This assumption was considered no longer appropriate given that no scheme for a capacity upgrade existed within National Highways forward plans.
 - d. **Integration of strategic and local models**

The CBLTM-LTN strategic model and Vissim microsimulation model forecasts were developed independently, and this has raised concern for some of the highway authorities over inconsistencies in the forecasting approach and the impact this may have on mitigation.
 - e. **Forecasting assumptions**

Assumptions on future development and infrastructure proposals were discussed, with some Interested Parties questioning the inclusion, or otherwise of various proposals including the East West Rail and the East Luton Study improvements.

f. **M1 Junctions**

National Highways raised concerns over residual impacts on the south facing slips of the M1 at Junction 10 and requested further information be provided on the forecast use and operational assessment of the M1 and key junctions in terms of flows, V/C ratios, queues and delays. The information provided in **Applicant's Response to Comments from the Highway Authorities on the 'Accounting for Covid-19 in Transport Modelling Final Report' [AS-159] [REP8-039]** has demonstrated that the M1 and key junctions are forecast to operate within capacity with the Proposed Development.

g. **CBC concerns**

CBC raised concerns over traffic impacts in Caddington and on the B653 Lower Harpenden Road / West Hyde Road junction and the Caddington/Slip End area in general.

h. **Hertfordshire Host Authorities concerns**

The Hertfordshire Host Authorities requested further information be provided on the forecast airport impacts within Hitchin and raised concerns that the proposed mitigations in Hitchin do not fully mitigate the impacts of the Proposed Development, as well as concerns over local policy compliance.

i. **Ivinghoe junction**

Buckinghamshire Council raised several concerns about the strategic model and impact of airport traffic at the junction of the B488 and B489 in Ivinghoe. The modelling concerns largely related to the level of validation within Buckinghamshire and also to the existing and forecast increase in airport traffic using the Ivinghoe junction.

8.3.31 In response the Applicant has undertaken the following:

a. **Trip distribution plans**

Trip distribution plans were produced for Deadline 1 **[REP1-019]**, and were updated at Deadlines 5 **[REP4-048]** and 8 **[REP5-037]**, with each submission improving the presentation and background mapping according to the ExA's comments.

b. **M1 to A6 link road**

The requests were responded to in the **Applicant's Response to Issue Specific Hearing 4 Action 4: M1 A6 Routing Analysis [REP4-105]** which analysed the forecast traffic volumes and origin-destination pattern of vehicles using the link, and it was found that airport traffic is not forecast to use the link and will instead continue to use the A1081 and J10 to access the M1.

c. **Capacity of M1**

The inclusion of a capacity upgrade on the M1 motorway was discussed with the relevant highway authorities as part of the model development process. Whilst it was noted that no scheme or associated funding

existed at this time, given the long-term horizon to which the modelling was being undertaken, it was acknowledged that a scheme was likely to come forward with some form of 'Smart Motorway' and ALR the likely candidate. In January 2022, the Government announced a pause in the rollout of new ALR 'Smart Motorway' schemes until five years of safety data is available. Given that this was a pause, it was considered that retaining the assumption in the core modelling was sound but, to address the pause and the concerns, Chapter 14 of the **TA [APP-206]** included a sensitivity test which considered the impacts of the Proposed Development in the absence of any capacity upgrade on the M1 mainline. This showed that the proposed mitigation strategy remained effective in mitigating the impacts of the Proposed Development. Notwithstanding this, and noting the ongoing concerns expressed by the relevant highway authorities, the Applicant removed this assumption from the further work undertaken during the Examination and as reported in the **Accounting for COVID-19 in Transport Modelling Final Report [AS-159]**, which continued to show the effectiveness of the proposed mitigation measures.

d. Integration of Strategic and Local Models

With regard to model forecasts in the CBLTM-LTN strategic model and Vissim microsimulation model, the two models utilise different base model years due to the time at which the original models were developed. This is not uncommon with traffic models, and not considered a material issue as both models have been validated in accordance with TAG (Ref 8.1). The forecasting methodology was presented to the relevant highway authorities as part of the model development process the differences between the two model forecasts explained noting that the mitigation strategy was shown to be effective in both models irrespective of the forecast. To address the concerns, Chapter 14 of the **TA [APP-206]** included a sensitivity test in which the growth from the CBLTM-LTN strategic model was incorporated into the Vissim microsimulation model. The sensitivity test showed that that even with the strategic model growth applied to the baseline Vissim model flows, the Proposed Development and associated junction mitigations are not considered to have a significant adverse impact on the operation of the highway network. Notwithstanding this, and noting the ongoing concerns expressed by the relevant highway authorities, the Applicant, as part of the further work undertaken during the Examination and reported in the **Accounting for COVID-19 in Transport Modelling Final Report [AS-159]** undertook all of the modelling with the Vissim modelling forecasts informed by the growth in demand in the CBLTM-LTN strategic model. This continued to show the effectiveness of the proposed mitigation measures.

e. Forecasting Assumptions

With regard to the specific interventions, LBC have confirmed a commitment to the delivery of the East Luton Study be completed for 2027 and therefore should not be included within Assessment Phase 1.

The Applicant confirmed the assumptions made on the East West Rail link within the strategic model.

The Applicant notes that as part of the modelling undertaken and reported in the **Accounting for COVID-19 in Transport Modelling Final Report [AS-159]** the uncertainty logs were updated in consultation with the relevant authorities and all of the matters raised by the relevant highway authorities were addressed.

f. **M1 Junctions**

The junctions were considered in detail in the submission of the **Accounting for COVID-19 in Transport Modelling Final Report [AS-159]**. The report showed that the impacts on the M1 junctions were not predicted to be material.

g. **CBC concerns**

The concerns were also addressed in the submission of the **Accounting for COVID-19 in Transport Modelling Final Report [AS-159]**. The Applicant has continued to discuss the impacts with CBC and the approach to addressing the impacts is discussed in the off-site highway interventions section further below.

h. **Hertfordshire Host Authorities concerns**

The Hertfordshire Host Authorities requested further information to be provided on the forecast airport impacts within Hitchin and this request was responded to in the **Applicant's Response to Comments From the Highway Authorities on the 'Accounting for Covid-19 in Transport Modelling Final Report' [AS-159] [REP8-039]**. The Hertfordshire Host Authorities maintain that they are not fully satisfied with the outcomes of the modelling or the responses to the queries raised.

i. **Ivinghoe junction**

The Applicant addressed the concerns raised by Buckinghamshire Council through the **Applicant's Response to Issue Specific Hearing 4 Action 6: Traffic on B489 Link [REP4-087]** and the **Applicant's Response to Applicant's Response to Issue Specific Hearing 7 Action 3 – Ivinghoe Junction Modelling Review [REP6-070]**. The Applicant has engaged with Buckinghamshire Council with regard to the issues raised in relation to the model validation within the Buckinghamshire area and shown that the model appropriately represents traffic conditions in the area of concern. Buckinghamshire Council agreed that the modelling is appropriate to assess the impact and with the findings of the reports, and as a result have withdrawn their concerns about the modelling (please refer to matter 3.2.1d of the SoCG between the Applicant and Buckinghamshire Council. **[TR020001/APP/8.18]**).

8.3.32 For this topic, all matters are agreed at the end of Examination with the exception of the following: Hertfordshire Host Authorities who maintain some objections to the Covid-19 modelling methodology and outcomes. The Applicant

believes that it has addressed all queries relating to the Rule 9 modelling satisfactorily. National Highways have recorded in the SoCG **[TR020001/APP/8.11]** at item 3.2.2 that they have concerns regarding the robustness of the Vissim modelling. The Applicant considers that National Highways have not provided any information on an evidential basis to support this statement. No technical justification of why they consider that the Vissim model is not robust has been provided to the Applicant. The Applicant's position is that the Vissim model was developed in consultation with the relevant highway authorities and in accordance with best practice and guidance.

Topic conclusion

8.3.33 The Applicant has undertaken extensive traffic and transport modelling which has been in accordance with all relevant policy and best practice, and informed by ongoing engagement with relevant stakeholders. During the course of the Examination, the Applicant provided further modelling to address concerns raised by Interested Parties in respect of the modelling undertaken for the **TA [APP-200 to APP-203, AS-123, APP-205 and APP-206]** and in response to the DfT issued guidance regarding the treatment of the Covid-19 pandemic in transport modelling, as reported in the **Accounting for COVID-19 in Transport Modelling Final Report [AS-159]**. This extensive modelling has continued to support the mitigation strategy set out in the **TA [APP-200 to APP-203, AS-123, APP-205 and APP-206]**, which has shown how the Proposed Development has been robustly tested and is compliant with the NPPF paragraph 104 (Ref 8.3) and ANPS (Ref 8.4) paragraph 5.10. Whilst there have been differences of opinion on the traffic modelling, including amongst the Interested Parties, the Applicant believes that the traffic modelling presented is robust and that no credible challenge has been mounted in terms of its general content and detail.

8.4 Impacts on the transport network and approach to mitigation

Overview

- 8.4.1 The approach to mitigation is set out in Section 8 of the **TA [AS-123]** which notes that the main priorities are to achieve greater use of public transport by both passengers and staff, and also to make the best use of existing highways infrastructure. Two main priorities for supporting the Proposed Development were:
- a. Extension of the Luton DART from Terminal 1 to the new terminal, Terminal 2, to provide a seamless link between Luton Airport Parkway station and Terminal 2.
 - b. Delivery of the Airport Access Road (AAR) which would provide access to Terminal 2 to the north east of the existing airport.
- 8.4.2 To address traffic impacts, improvements would be required to the highway infrastructure on roads and junctions on the approaches to the airport and in the wider area.

Off-site highway interventions

- 8.4.3 A package of off-site highway interventions was developed to support each Assessment Phase of the Proposed Development. The works built incrementally upon earlier Phases to ensure that mitigation was delivered in an efficient and effective manner. The package of mitigation works and the associated Assessment Phase in which they were assumed to be delivered is set out in Table 8.1 of the **TA [AS-123]** and shown in Appendix A of the **TA Appendices - Part 1 of 3 [APP-200]**.
- 8.4.4 The works were developed iteratively using the traffic modelling and through ongoing discussions with the relevant highway authorities.

Transport Related Impacts Monitoring and Mitigation Approach (TRIMMA)

- 8.4.5 An initial Outline TRIMMA (OTRIMMA) was provided in Appendix I of the **TA [APP-202]** and set out the indicative proposals to be followed and considered when developing the full TRIMMA. The full TRIMMA must be substantially in accordance with the OTRIMMA under requirement 30 of the **draft DCO [REP10-003]**.
- 8.4.6 During the Examination the **OTRIMMA** has been updated and extracted into a standalone document **[REP10-036]**, capable of being secured. It sets the proposed strategy for:
- a. monitoring the impact of traffic growth related to the Proposed Development on parts of public highway;
 - b. agreeing the need for and form of mitigation required because of traffic growth related to the Proposed Development (as identified in Schedule 1 of the **draft DCO [REP10-003]**); and
 - c. agreeing mitigation for residual traffic-related impacts to be funded by the **STF [REP10-039]**.
- 8.4.7 Two types of mitigation may be delivered through the TRIMMA:
- a. Mitigation Type 1 includes the proposed off-site highway works as identified in Schedule 1 of the **draft DCO [REP10-003]**.
 - b. Mitigation Type 2 includes works to address residual and unforeseen impacts that may arise from the Proposed Development. These include junction capacity enhancements, traffic calming and parking controls.
- 8.4.8 The governance for Mitigation Type 1 is shown in Figure 2.1 of the **OTRIMMA [REP10-036]**. The monitoring and decision-making process for Mitigation Type 1 is explained in Section 3 along with the thresholds for implementation to be agreed with the highway authorities.
- 8.4.9 Mitigation Type 2 is funded by the **STF [REP10-039]** and governance is by the ATF Steering Group. The ATF Steering Group will comprise a single representative from each of the relevant highway authorities.

Consideration of transport impacts and mitigation during the Examination

8.4.10 During Examination the following issues were raised:

- a. the need to complete Stage 1 Road Safety Audits (RSA1);
- b. appropriate consideration of cycling and walking improvements;
- c. works to M1 J10 including the need for additional mitigation on the south facing slips;
- d. justification of the extent of works in and around Luton and in particular on the Wigmore Lane, Eaton Green Road and Crawley Green Road corridors;
- e. justification for the Eaton Green Road Link;
- f. junction improvements in Hitchin and policy compliance;
- g. the need for further mitigation at junctions in Central Bedfordshire, most notably in Caddington;
- h. the potential need for mitigation in Buckinghamshire and in particular the Ivinghoe junction;
- i. the process for agreeing thresholds and the Applicant's position that this will come in the final TRIMMA and not in the **OTRIMMA [REP10-036]**;
- j. the Applicant was requested to amend the **OTRIMMA [REP10-036]** so that expenses incurred in evidencing schemes to be funded by the **STF [REP10-039]** would be reimbursed if found to meet the requirements of the TRIMMA Mitigation Type 2;
- k. the value of the Applicant's original proposal for a Residual Impact Fund (now consolidated into the STF) was questioned by the relevant highway authorities; and
- l. the issue of fly-parking was discussed and queries were raised about how this would be managed by the airport.

8.4.11 In response the Applicant has implemented the following:

- a. RSA1 have been undertaken for all of the highway measures shown in Appendix A of the **TA Appendices - Part 1 of 3 [APP-200]**. The Applicant has engaged with relevant highway authorities in regard to the findings of the RSA1 process and completed RSA1s have been submitted to the Examination **[REP8-028]**. The Applicant notes that the RSA1 have been fully agreed with the responsible highway authorities for most of the locations. The Applicant notes that the only outstanding RSA1 relates to responses received from Hertfordshire County Council. The Applicant has worked extensively to address the issues raised. The Applicant considers that the matters raised by the RSA1 have been addressed and discussions relate to further matters of details beyond the scope of the RSA1, which the Applicant is confident can be addressed within the Order limits.
- b. During the Examination, the ExA has sought further information on how walking and cycling has been considered and in particular, the application of Cycle Infrastructure Design Local Transport Note 1/20 (Ref 8.9). The

Applicant set out the approach to the development of mitigation measures in response in the **Applicant's Response to Written Questions - Traffic and Transportation including Surface Access [REP4-069]**. The Applicant notes that off-site highway mitigation works have been principally designed to accommodate increased volumes of traffic given that the Proposed Development will only generate limited numbers of additional walking and cycling trips by the very nature of an airport trip. Notwithstanding this, many off-site junction improvements in the immediate vicinity of the airport would be signalised, which would benefit walking and cycling through controlled crossings and potentially advanced stop lines (ASLs). These works were considered complementary to the principles set out by LBC in their Local Cycling and Walking Infrastructure Plan (LCWIP) (Ref 8.10). The **Applicant's Response to Deadline 4 Hearing Actions [REP4-070]** provided further information on how the existing shared use facilities on Wigmore Lane would be improved.

- c. The **Applicant's Response to Written Questions - Traffic and Transportation including Surface Access [REP4-069]** noted that the junctions located within Hitchin did not specifically include improved cycle facilities, as the North Hertfordshire LCWIP document (Ref 8.11) did not highlight these routes as priority routes requiring improvement. The Applicant notes that the principal impacts within Hitchin are related to additional traffic movements given these would be the main impacts of the Proposed Development in this area, and that the works did not preclude other measures coming forward. The Applicant therefore considers that the needs of all users have been considered and addressed.
- d. The Applicant worked closely with National Highways in developing the mitigation strategy for the SRN which formed the basis of the works consulted upon during the 2022 statutory consultation and then taken through to the application for development consent. As part of the ongoing engagement with National Highways, matters of detail have been discussed with regard to the works proposed to the M1 Junction 10 including the need for a maintenance bay and two gantries. Through this engagement, National Highways have acknowledged that the impacts and associated mitigation strategy for the junction are now 'agreed' and this is recorded in the Statement of Common Ground **[TR020001/APP/8.11]**.
- e. In their Relevant Representations **[RR-1076]**, National Highways raised concerns with regard to the impact of the Proposed Development on the south facing slips of the M1 at Junction 10. In the Applicant's response **[REP1-027]**, the Applicant noted that these were baseline issues and that the proposed mitigation strategy for the junction as a whole provided substantial benefits and the assessment of the Proposed Development should be considered in its overall contribution to improving the operation of the network. Notwithstanding this, the Applicant undertook to continue to work with National Highways to understand their concerns and agree a way forward.
- f. At Deadline 5, National Highways made a further submission to the Examination **[REP5-093]** setting out the additional measures required to the south facing slips to mitigate the residual impacts and that these should

be secured via Grampian conditions. In response at Deadline 6 **[REP6-058]**, the Applicant noted that regarding the southbound on-slip, not only were the issues associated with the future baseline (i.e., without the development) but that the **TA [APP-206]** had demonstrated that the impacts of the Proposed Development on the southbound on-slip had in fact been mitigated (paragraph 14.3.28). The Applicant's response further noted that the emerging model to respond to the ExA's Rule 9 request for consideration of the DfT guidance on Covid-19 effects was showing that both the future baseline and the impacts of the Proposed Development were reduced when compared to the impacts set out in the **TA [APP-200 to APP-203, AS-123, APP-205 and APP-206]**. The Applicant's response also stated that the Applicant disagreed that the increase in the 2043 figure for the northbound off-slip is significant. The Applicant further noted that the conclusions drawn by National Highways were premature given the ongoing Rule 9 work and strongly disagreed that any Grampian conditions should be applied.

- g. The Applicant's submission of the **Accounting for Covid-19 in Transport Modelling Final Report [AS-159]** considered in detail the impacts of Proposed Development on the operation of the south facing slips. The report considered vehicle throughput, queues and delays as well as journeys for vehicles on the M1 itself and for vehicles joining or leaving the M1 at Junction 10 and showed that the Proposed Development would not have any material adverse impact on the operation of the SRN in this location.
- h. At Deadline 7, National Highways provided a further update **[REP7-093]** in response to the Applicant's submission of the **Accounting for COVID-19 in Transport Modelling Final Report [AS-159]**. The supporting technical note provided by National Highways shows that National Highways' concerns exist in both the future baseline (referred to in the note as 'do-minimum') and with development ('do something') scenarios. National Highways covering letter in the **Response to the ExA's Further Written Questions (ExQ2) [REP7-093]** states that National Highways remain concerned about residual congestion on the southbound merge and in relation to the operation of the northbound mainline, with a particular problem where the five lanes reduce to four, north of Junction 9.
- i. In summary, National Highways and the Applicant are agreed on the impacts of the Proposed Development at Junction 10 and that the proposed mitigation strategy addresses the impacts of the Proposed Development on the junction. National Highways and the Applicant continue to have a different view on whether the Proposed Development has a residual impact on the south facing slips and the M1 mainline between Junction 9 and Junction 10 northbound. The impacts are also agreed for Junction 9, Junctions 11 and Junction 11a recorded in the National Highways SoCG item 3.2.13 **[TR020001/APP/8.11]**. The Applicant is confident that the **Accounting for COVID-19 in Transport Modelling Final Report [AS-159]** has demonstrated that the Proposed Development has in fact mitigated its impacts on the SRN and as such, no further mitigation is necessary, and no Grampian conditions should

therefore be applied to the Proposed Development. The Applicant does acknowledge that the forecasts are of a long-term nature (given the time over which the Proposed Development would take place) and therefore inherently subject to a degree of uncertainty. The Applicant set out in paragraph 4.2.3 of the **OTRIMMA** submitted at Deadline 10 **[REP10-036]** how funds can be accessed in the event that National Highways considers that the operation of the M1 Junction 10 southbound on-slip or M1 mainline between Junction 9 and Junction 10 requires works to alleviate congestion, and in the event that National Highways develop and implement proposals for such works. A final response to National Highways concerns has been set out in Applicant's response to Deadline 10 submissions **[TR020001/APP/8.192]**.

- j. During the Examination, the ExA sought further justification for the need and scale of highways works on the Wigmore Lane, Eaton Green Road and Crawley Green Road corridors. The **Applicant's Post Hearing Submission - Issue Specific Hearing 7 (ISH7) [REP6-065]** set out the significant level of airport-related traffic expected to use the Wigmore Lane corridor. The **Applicant's Response to Written Questions - Traffic and Transport [REP7-061]** provided further information which showed background and airport-related traffic volumes for all three corridors. It noted that the airport was expected to add significant additional movement to these corridors and that the proposed highway measures were needed to ensure that the network operated without interfering with traffic flow at adjacent junctions. In the **ExA's commentary on, or schedule of changes to the draft DCO [PD-018]** the ExA noted that due to the significant number of relevant representations expressing concerns regarding the extent of the proposed works to Eaton Green Road, Wigmore Lane and Crawley Green Road and the lack of sufficient justification for these works, the ExA considers they are unnecessary and therefore should be deleted from the DCO. The Applicant disagrees with this position. The Applicant notes that significant detail has been provided in the **TA [APP-200 to APP-203, AS-123, APP-205 and APP-206]**, the **Accounting for Covid-19 in Transport Modelling Final Report [AS-159]** and documents listed above which supported the case for mitigation. The removal of mitigation measures cannot be considered justified in the absence of a full understanding of the consequences or alternative measures. The Applicant submitted further information at Deadline 9 in the response to ExA's commentary **[REP9-051]** in the form of additional micro-simulation modelling which demonstrates that removal of these measures would have significant adverse impacts across the road network in Luton and beyond. The Applicant also notes the significant concerns raised by a number of the highway authorities in relation to the removal of these measures.
- k. During the Examination, representations were made that the Airport Access Road, and in particular, the Eaton Green Road Link were in breach of the Luton Local Plan 2011-2031 (Ref 8.12), and as such, the Eaton Green Road Link should be removed. The Applicant noted in **[REP4-069]** that the Eaton Green Link Road was already consented as part of the New

Century Park (now referred to as Green Horizons Park) planning permission which was submitted in December 2017 and had considered the relevant Local Plan policy in detail. The Applicant noted that the benefits outlined within the planning permission for Green Horizons Park would continue to be realised through the inclusion of the Eaton Green Road Link within the Proposed Development.

- l. The **TA [APP-202]** included measures to mitigate the impacts of the Proposed Development on three junctions in Hitchin. The Hertfordshire Host Authorities raised concerns that the proposed mitigations in Hitchin do not fully mitigate the impacts of the Proposed Development, as well as concerns over local policy compliance. The principle impacts of the Proposed Development within Hitchin are related to additional vehicular traffic. The traffic modelling included within the **TA [APP-202]** and the updated modelling as part of the **Accounting for COVID-19 in Transport Modelling Final Report [AS-159]**, showed that the proposed mitigation measures improve the performance of junctions to a level that is commensurate with the future baseline or better. The Applicant therefore considers that the modelling has shown that the impacts of the Proposed Development have been mitigated. The Hertfordshire Host Authorities have continued to object to the proposals on the grounds that they do not consider the proposals to be compliant with either Local Transport Plan policy (Ref 8.13) or the North Central Hertfordshire Growth and Transport Plan (Ref 8.14). The concerns raised by the Hertfordshire Host Authorities related to their view that there had been a lack of consideration within the proposals for sustainable transport. The Applicant has noted that the proposals are considered to be policy compliant in that not only do the proposals mitigate the impacts of the Proposed Development, but generally reduce delays on the main corridors that would be used by buses and in particular for any movements to/from the airport. The Applicant further noted that the North Hertfordshire LCWIP (Ref 8.11) had not identified the mitigated junctions as particular priorities for walking and cycling. The Applicant confirmed that the mitigation proposals do not preclude other measures from being implemented and, through the TRIMMA process, the measures could be modified in discussions with the Hertfordshire Host Authorities. The Applicant has produced and shared with the Hertfordshire Host Authorities plans which show how these could be amended at the detailed design stage, within the Order limits, to improve provision for other users (including signalisation of the A505/Pirton Road junction and part-signalisation of the Hitchin Hill junction). These alternative proposals have been discussed and an offer was made to fund the alternatives schemes but no agreement was reached with the Hertfordshire Host Authorities by the end of the Examination.
- m. The Applicant and CBC have continued to engage on the issue of the impacts in Caddington. The **TA [APP-202]** set out the impact of the Proposed Development on junctions in and around Caddington given that CBC had identified Caddington, amongst other locations, as an area of concern during the ongoing engagement prior to the submission of the

application for development consent. The analysis showed that the Proposed Development would have a relatively modest impact in terms of the additional number of trips that may use routes through Caddington. These trips were also likely to be diverted traffic and not airport-related trips. CBC were also keen to avoid encouraging additional traffic into Caddington given the character and nature of the village. The application did not identify any measures to address the impacts on Caddington given that the Applicant, like CBC, would not want to encourage additional traffic through Caddington, which implementing improvements could induce. The Applicant therefore considered that a monitoring approach through the TRIMMA would be the most effective way to manage any impacts within Caddington.

- n. Notwithstanding this and given that the junctions would potentially be over-capacity in the future baseline, the Applicant has worked with CBC during the Examination to develop the principles of measures including traffic calming/management to discourage traffic from using Caddington and junction modifications which could be implemented, if monitoring was to show that measures were required. The proposals include traffic calming on the Luton Road through Caddington, upgrading the Luton Road/Chaul End Road junction to a mini-roundabout and signalisation of the Newlands Road/Luton Road junction. The Applicant has secured these measures in a side agreement with CBC.
- o. The B653 Lower Harpenden Road/West Hyde Road junction has also been identified by CBC during engagement. Whilst the **Accounting for COVID-19 in Transport Modelling Final Report [AS-159]** shows a modest increase in traffic at the junction, the Applicant has agreed that if monitoring of this location determines a need for mitigation, a highway scheme shall be implemented. The scheme will provide additional capacity and/or improve safety at the junction. The Applicant has secured these measures in a side agreement with CBC.
- p. The Applicant has set out how the final TRIMMA must be approved by LBC in advance of the 'notice to grow' being served under article 44(1) of the **draft DCO [REP10-003]**. This TRIMMA will include details as to how the Thresholds will be agreed and a process for arbitration if they cannot be agreed.
- q. The Applicant amended the wording of the **OTRIMMA [REP10-036]** to allow costs associated with activities which ATF Steering Group members have undertaken to support the evidencing of MT2 proposals to be reimbursed from the STF if the ATF Steering Group agrees to fund the delivery of the mitigation proposal.
- r. The Applicant has identified impacts as set out in the **TA [APP-200 to APP-203, AS-123, APP-205 and APP-206]** and is committed to mitigating these impacts. The Applicant also acknowledges that, due to the scale and long build-out period of the Proposed Development, unforeseen impacts may occur. The Applicant has therefore proposed funding for residual traffic-related issues via the STF as described in the **OTRIMMA [REP10-036]**.

- s. The Applicant has set out how it will work with local authorities to alleviate fly-parking where this is identified as being a particular problem associated with airport users; authorities can address fly-parking via use of the **STF [REP10-039]**, as described in the **OTRIMMA [REP10-036]**.

8.4.12 For this topic, the following areas are not agreed at the end of Examination:

- a. As shown in the **CBC SoCG [TR020001/APP/8.14]** matter CBC39, CBC do not agree with the Applicant's position that it would not be necessary to monitor trips into off-site car parks. The Applicant agrees that the market for off-site parking will likely increase (and has therefore allowed for such an increase in the design of off-site highway works). The Applicant's position is that it cannot control off-site car parking facilities and thus cannot influence their expansion.
- b. Following discussions with National Highways a position has not been agreed with regard to the residual impacts on the M1 southbound on-slip and the M1 mainline between Junction 9 and Junction 10. A final response to National Highways concerns has been set out in **Applicant's response to Deadline 10 submissions [TR020001/APP/8.192]**.
- c. A side agreement has been agreed with CBC regarding the approach to mitigation in Caddington at the following junctions: Luton Road/Newlands Road, Luton Road/Chaul End Road and B4540/Front Street.
- d. A side agreement has been agreed with CBC regarding the approach to mitigation at the B653 Lower Harpenden Road/West Hyde Road junction.
- e. The form of the mitigation for the Hitchin junctions. The Applicant remains confident that the proposals within Hitchin mitigate the impacts of the Proposed Development. However, alternative proposals have been discussed and an offer was made to fund the alternatives schemes. No Agreement could be reached with the Hertfordshire Host Authorities by the end of the Examination and any alternative scheme would now need to come forward as Mitigation Type 2 in accordance with the **OTRIMMA [REP10-036]**.
- f. Monitoring of villages to the east of the airport in Hertfordshire. The Applicant has set out a process in the **OTRIMMA [REP10-036]** for how these locations can be mitigated as MT2 if it is determined that the Proposed Development does have an unforeseen impact.
- g. Monitoring and mitigation of impacts relating to off-site parking.
- h. The level of significance of the impacts of early morning traffic on the road network in Buckinghamshire.

Topic conclusion

8.4.13 The Applicant concludes that its approach is robust and compliant with all policy requirements and that no Interested Party has mounted a credible challenge to this conclusion during the Examination. The Applicant considers that the Proposed Development meets the requirements of the National Planning Policy Framework and Department for Transport Circular (01/2022). The processes set out in the **OTRIMMA [REP10-036]** and funding that can be accessed via the

STF [REP10-039] allow all relevant highway authorities, as members of the ATF Steering Group, to access funding should residual and unforeseen traffic-related impacts be determined in the future. It is the Applicant's position that all traffic-related impacts established in the **TA [APP 200-206 and AS-123]** have been identified and mitigated.

9 ENVIRONMENTAL AND SOCIAL MATTERS

9.1 Introduction

9.1.1 The chapters of the **Environmental Statement (ES) [APP-029]** to **[APP-046]** and **[AS-032]** (as amended and recorded in the Examination Library) set out the anticipated environmental and social impacts due to the Proposed Development.

9.1.2 Proposed mitigation is identified within these documents and secured via the documents detailed in those chapters and summarised in the **Mitigation Route Map [REP10-023]** with appropriate cross reference provided. The assessment reported in each chapter is supported by technical appendices **[APP-047]** to **[APP-142]** (as amended and recorded in the Examination Library) and figures **[APP-143]** to **[APP-164]** (as amended and recorded in the Examination Library).

9.1.3 **Chapter 1** of the **ES [APP-029]** sets out the overarching legal and policy context for the ES including how the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the IP EIA Regulations) (Ref 9.1) and the Planning Act 2008 ('the Act') (Ref 9.2), and other relevant policy and legislation, have been considered within the assessment. Section 2 of each ES technical assessment chapter reports how each assessment has considered discipline specific legislation, policy and guidance. Further detail on how the Proposed Development complies with national policy is presented in the **Planning Statement [TR020001/APP/7.01]** and the **Policy Compliance tables [REP5-018]**.

This Chapter of the Closing Submission provides a narrative for each environmental and social topic, summarising the key matters raised during the Examination and the responses of the Applicant, and confirms the Applicant's case at the end of the Examination having regard to compliance with legislation and policy. The structure follows the same order of topics as the ES, followed by commentary on the **In-combination and Cumulative effects [AS-032]**, **Equality Impact Assessment [AS-129]**, and the **Green Belt Assessment [APP-196]**.

9.2 Air Quality and Odour

Air Quality and Odour assessment

9.2.1 The Air Quality and Odour assessment is reported in **Chapter 7** of the **ES [AS-076]**. Compliance with relevant legislation and policy is outlined in section 7.2 of **Chapter 7** of the **ES [AS-076]** and in section 8.5 of the **Planning Statement [TR020001/APP/7.01]**.

Construction

9.2.2 The effects from demolition and construction of the Proposed Development have been assessed using the qualitative approach described in the latest guidance by the Institute of Air Quality Management (Ref 9.3) at the time of the ES submission. Mitigation measures for high risk sites have been set out in the

Code of Construction Practice (CoCP) [REP8-013] and have been recommended for all three assessment phases. These mitigation measures are considered good practice and following the implementation of this appropriate mitigation, the effects of construction on dust soiling and human health would be negligible and impacts would therefore be not significant, in line with IAQM guidance (Ref 9.4).

- 9.2.3 There will be off-site vehicle movements associated with the Proposed Development. Impacts from changes have been predicted using Atmospheric Dispersion Modelling Software - Airport edition (ADMS-Airport). The construction traffic has been assessed in combination with operational traffic, because the phases assessed will have both construction and operational traffic occurring.
- 9.2.4 Odour related to construction works disturbing the historical landfill beneath Wigmore Valley Park has been considered in the assessment. Potential construction odours will be mitigated by the measures described in the **CoCP [REP8-013]**.

Operation

- 9.2.5 A review of sources and emissions associated with the existing airport and the Proposed Development during operation has been carried out. Data was gathered for the relevant pollution sources and emissions assessed using dispersion modelling. The ADMS-Airport dispersion model has been used for assessment of operational emissions. The significance of effects has been calculated using the approach described in the Institute of Air Quality Management (IAQM) / Environmental Protection UK (EPUK) guidance (Ref 9.4).
- 9.2.6 The modelled concentrations at human receptors showed that the changes as a result of the Proposed Development is predicted to be not significant for all three assessment phases. The modelled concentrations at ecological receptors showed that there are changes predicted at some ecological receptors which could not be screened out as insignificant which have been passed to project ecologists to determine significance and evaluated in Section 8.9 of **Chapter 8** of the **ES [AS-027]**.
- 9.2.7 A compliance risk assessment has been undertaken using the modelling results from the local air quality assessment in accordance with the Design Manual for Roads and Bridges (DMRB) LA 105 Air quality guidance Ref (9.5). The results show that the Proposed Development is not predicted to impact compliance with the air quality standards.
- 9.2.8 In accordance with IAQM guidance (Ref 9.6), an assessment of odour under operational scenarios has been undertaken using a Source Pathway Receptor assessment, sniff testing, a review of complaint data and consultation responses received on the Preliminary Environmental Information Report (PEIR) published during statutory consultation in 2022. Overall, the effect of odour is considered to be not significant. Best practice measures to mitigate odours from the airport are provided in the **Outline Operational Air Quality Plan [REP9-013]**.

Air Quality and Odour mitigation

9.2.9 Mitigation measures proposed in relation to Air Quality and Odour are described in section 7.8 and section 7.10 of **Chapter 7** of the **ES [AS-076]** and in the **Mitigation Route Map [REP10-023]**.

Construction

9.2.10 Mitigation has been identified as required with respect to construction dust effects. The measures are considered good practice and therefore no additional mitigation is required as no residual significant impacts are predicted.

9.2.11 However, further measures beyond those good practices required have been considered including options to reduce on-site emissions from equipment and diesel generators as they are becoming more readily available and affordable in the market. With planning it is possible to achieve substantial reductions in onsite emissions during the construction phase. Given the size of the works and duration it is recommended that targets for the reduction of emissions on-site are written into environmental procurement requirements and a monitoring regime established to assess the effectiveness and application of emission saving measures. This has been secured in the **CoCP [REP8-013]**.

9.2.12 As contaminated materials may be excavated during construction of the Proposed Development, excavated materials could contain odorous materials. Measures have been provided for the lead contractors to implement to minimise the risk of odour generation. These are provided in the **CoCP [REP8-013]**.

Operation

9.2.13 No significant impacts are predicted as a result of the Proposed Development, however, continued air quality monitoring around the airport will be conducted and an air quality emissions inventory will be maintained to help track implementation of the **Outline Operational Air Quality Plan [REP9-013]** measures and report on the above on an annual basis. This monitoring is described in the **Outline Operational Air Quality Plan [REP9-013]** which will be secured by requirement 33 of the **Draft Development Consent Order [REP10-003]** (as amended and recorded in the Examination Library). The Outline Operational Air Quality Plan is supplemented by measures set out in the **Green Controlled Growth Framework [TR020001/APP/7.08]** submitted with the application for the development consent which provides a mechanism for future review and implementation of future actions if required.

Consideration of air quality and odour matters during Examination

9.2.14 During Examination the following issues were raised:

- a. Hitchin Air Quality Management Area (AQMA) results: North Hertfordshire District Council (NHDC) requested details on the modelled impacts of additional traffic generated by the Proposed Development on AQMAs in Hitchin as part of the Statement of Common Ground (SoCG) with NHDC **[TR020001/APP/8.16]**. The submission of a note detailing the Hitchin AQMA

results was identified as Action point 21 of Issue Specific Hearing (ISH) 8 **[EV15-013]**. Further request for information was raised in AQ.2.1 of the Examining Authority's (ExA) Further Written Questions (ExQ2) **[PD-015]**.

b. Odour

- i. Kerosene fuel odour: The ExA queried the jettisoning of aviation fuel in Action point 14 in ISH5 **[EV10-006]**. This was further raised in Action points 22 and 25 in ISH8 **[EV15-013]**. Luton Borough Council (LBC) have provided further comments in relation to Action point 25 from ISH8 **[REP-089]**.
 - ii. Odour complaints handling: LBC requested additional information on how odour complaints will be reported as part of the SoCG with LBC **[TR020001/APP/8.13]**. This was further raised as Action points 22 and 25 in ISH8 **[EV15-013]**. LBC have provided further comments in relation to Action point 25 from ISH8 **[REP-089]**.
 - iii. Odour from water treatment plant: A question regarding the potential for odour and flies from the proposed water treatment plant was raised in AQ.1.9 of the ExA's first Written Questions (ExQ1) **[PD-010]**. This was further raised by the ExA as part of Action 23 in ISH5 **[EV10-006]**.
- c. Predictions of air pollution in the human and ecological environment: Central Bedfordshire Council (CBC) raised concerns that predictions of air pollution in the human and ecological environment to be "*widely scant*", particularly at dwellings in Central Bedfordshire, as well as Luton Hoo and Someries Castle as detailed in section 5.1.13 of the CBC Local Impact Report (LIR) **[REP1A-002]** and during the SoCG with CBC **[TR020001/APP/8.14]**.
- d. Assessment methodology in relation to ammonia emissions and nitrogen deposition: The local authorities of CBC, Dacorum Borough Council (DBC), Hertfordshire County Council (HCC) and NHDC sought clarification that the assessment methodology and tools have been agreed with Natural England particularly in relation to ammonia emissions and nitrogen deposition detailed in section 7.4.10 and 7.4.12 of the DBC, HCC and NHDC LIR **[REP1A-003]**], item 14 of the Principal Areas of Disagreement Summary Statement (PADSS) from CBC **[AS-054]**, as well as the SoCGs with CBC **[TR020001/APP/8.14]**, DBC **[TR020001/APP/8.17]**, HCC **[TR020001/APP/8.15]** and NHDC **[TR020001/APP/8.16]**.
- e. Acid erosion impacts at cultural heritage receptors: CBC raised that there is no mention of acid erosion impacts at cultural heritage receptors as detailed in item 15 of the PADSS from CBC **[AS-054]** and the SoCG with CBC **[TR020001/APP/8.14]**.
- f. Short term effects and PM_{2.5} monitoring: DBC, HCC and NHDC raised that with increase in evidence linking finer fractions of particulate matter to health conditions, there is a need to have short-term thresholds to protect human health. There were also general questions raised in relation to air quality monitoring. These are detailed in section 7.4.10 and 7.4.11 of the DBC, HCC and NHDC LIR **[REP1A-003]**, section 2.2.15.1.1 to 2.2.15.1.3 of the DBC, HCC and NHDC Written Representation (WR) **[REP1-069]**, DBC Relevant Representation (RR) **[RR-0297]**, HCC RR **[RR-0558]**, NHDC RR **[RR-1119]**

and the SoCGs with DBC [TR020001/APP/8.17], HCC [TR020001/APP/8.15] and NHDC [TR020001/APP/8.16].

- g. Air quality analysis for nationally designated ecological sites: Natural England requested further air quality analysis information for the nationally designated sites through the PADSS from Natural England [AS-061], Natural England RR [RR-1079] and discussed during the SoCG with Natural England [REP6-049].
- h. Traffic data accounting for Covid-19: The ExA made a procedural decision via the **Rule 9 Letter [PD-005]** to take account of the potential impacts of Covid-19 on the traffic modelling undertaken to inform the Transport Assessment and Environmental Impact Assessment which includes the air quality assessment. Further request for information was raised by the ExA through the **Rule 17 letter [PD-005]**.

9.2.15 In response the Applicant states:

- a. Hitchin AQMA results: A technical note summarising the results of the dispersion modelling of road traffic emissions at AQMAs in Hitchin was submitted at Deadline 6 as the response to ISH8 Action point 21 [REP6-074]. A response to AQ.2.1. of ExQ2 [REP7-050] was provided at Deadline 7.
- b. Odour:
 - i. Kerosene fuel odour: A response to Action point 14 from ISH5 was provided as part of the Applicant's Post Hearing Submission for ISH5 at Deadline 3 [REP3-052]. Responses to Action points 22 and 25 at ISH8 were provided at Deadline 6 in the Applicant's Post Hearing Submission for ISH8 [REP6-066] and a note providing the proposed odour reporting process [REP6-073]. Following LBC's comments, the proposed odour reporting process was updated and provided at Deadline 8 [REP8-034].
 - ii. Odour complaints handling: Responses to Action points 22 and 25 at ISH8 were provided at Deadline 6 in the Applicant's Post Hearing Submission for ISH8 [REP6-066] and a note providing the proposed odour reporting process [REP6-073]. The note detailing the proposed odour reporting process was a concession following engagement with LBC through the SoCG. Following LBC's comments, the proposed odour reporting process was updated and provided at Deadline 8 [REP8-034]. The related item in the SoCG with LBC has since been updated to 'Agreed' [TR020001/APP/8.13].
 - iii. Odour from water treatment plant: A response to AQ.1.9 of ExQ1 was provided at Deadline 4 [REP4-053]. A response to Action point 23 in ISH5 was provided as part of the Applicant's Post Hearing Submission for ISH5 at Deadline 3 [REP3-052].
- c. Predictions of air pollution in the human and ecological environment: A response to section 5.1.13 off CBC's LIR was provided at Deadline 2A [REP2A-005]. The Applicant's position on the item is detailed in the SoCG with CBC [TR020001/APP/8.14].

- d. Assessment methodology in relation to ammonia emissions and nitrogen deposition: The SoCG with Natural England submitted at Deadline 2 **[REP2-041]** confirmed its agreement to the approach to assessment methodology.
- e. Acid erosion impacts at cultural heritage receptors: A previous response regarding Someries Castle is found within the Cultural Heritage section of the SoCG with CBC (ID ref CBC148) submitted at Deadline 2 **[REP2-021]**. In the same document within the Air Quality section, ID ref CBC73 stated that *“the Applicant considers that an assessment of acid deposition can be scoped out as SO₂ will not be a significant pollutant of concern and is not likely to cause exceedances of the relevant standards. The pollutants to be assessed were agreed with PINS and the local authorities, including CBC, at the scoping stage”*. As a concession, air quality monitoring at Someries Castle will be undertaken as part of the **Green Controlled Growth (GCG) Framework [TR020001/APP/7.08]**. This is included in the SoCG with CBC **[TR020001/APP/8.14]** and the **Cultural Heritage Management Plan** submitted at Deadline 4 **[REP4-020]**.
- f. Short term effects and PM_{2.5} monitoring: A technical note addressing short term effects and air quality monitoring was provided at Deadline 6 **[REP6-076]**. The responses to the RRs, WRs and LIRs in relation to this item was all referred to the RR response provided at Deadline 1 **[REP1-021]**. As a concession following engagement with DBC, HCC and NHDC, short term analysis will be provided as part of the annual monitoring report as detailed in the latest **Appendix D - Air Quality Monitoring Plan [REP9-028]** but will not be subject to the GCG process detailed in the **Green Controlled Growth (GCG) Framework [REP7-028]**. In addition, for PM_{2.5} monitoring, the Applicant commits to implementing colocation with a Defra reference method equivalent equipment at a GCG location in **GCG Framework Appendix D – Air Quality Monitoring Plan [REP9-028]**. The latest positions are provided in the SoCGs with DBC **[TR020001/APP/8.17]**, HCC **[TR020001/APP/8.15]** and NHDC **[TR020001/APP/8.16]**.
- g. Air quality analysis for nationally designated ecological sites: Air quality results for nitrogen oxides (NO_x), nitrogen deposition and ammonia (NH₃) results were directly provided to Natural England. No further questions or concerns were raised by Natural England.
- h. Traffic data accounting for Covid-19: A response in relation to the potential implications of the traffic data accounting for Covid-19 on air quality detailing the assessment methodology was provided as an additional submission **[AS-064]**. The findings of the environmental review in relation to air quality is provided in section 1.3 of the Accounting for Covid-19 in Transport Modelling – Environmental Appraisal submitted at Deadline 7 **[REP7-079]**. A response to the ExA’s request for information through the Rule 17 letter in relation to air quality is provided in item 13b submitted at Deadline 8 **[REP8-040]**.

9.2.16 For this topic, the only areas that are not agreed at the end of Examination are as follows:

- a. Acid erosion impacts at cultural heritage receptors, as discussed in the SoCG with Central Bedfordshire Council (CBC) **[TR020001/APP/8.14]**.

- b. CBC have raised concerns about predictions of air pollution in the human and ecological environment to be “*widely scant*”, as discussed in the SoCG with CBC [TR020001/APP/8.14].

Topic conclusion

- 9.2.17 The air quality assessment in **Chapter 7** of the **ES [AS076]** has been used to determine compliance with relevant planning policy. This is reported in section 8.5 of the **Planning Statement [TR020001/APP/7.01]** and in **Planning Statement Appendix E - Policy Compliance Tables [REP5-018]**.
- 9.2.18 **Chapter 7** of the **ES [AS-076]** has concluded that no likely significant effects on air quality and odour are predicted at receptors and the Proposed Development is not predicted to impact compliance with the air quality standards set out in legislation.
- 9.2.19 It is the Applicant’s position that nothing has materially changed during the Examination which fundamentally alters that assessment of policy accordance or the assessment conclusions (no significant effects to receptors or compliance) in **Chapter 7** of the **ES [AS-076]**.
- 9.2.20 Paragraphs 5.42 and 5.43 of the ANPS set out the considerations for decision making with regard to air quality. “5.42 *The Secretary of State will consider air quality impacts over the wider area likely to be affected, as well as in the vicinity of the scheme. In order to grant development consent, the Secretary of State will need to be satisfied that, with mitigation, the scheme would be compliant with legal obligations that provide for the protection of human health and the environment.*”
- 9.2.21 An Air Quality Monitoring Plan has been submitted as part of the proposed **GCG Framework [TR020001/APP/7.08]** and sets out how air quality will be monitored around the Application Site to ensure NO₂, PM₁₀ and PM_{2.5} levels remain below the GCG Thresholds.
- 9.2.22 As stated in section 8.5 of the **Planning Statement [TR020001/APP/7.01]**, the Proposed Development will sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, considering the presence of the nearby Air Quality Management Areas (e.g., Hitchin). **Chapter 7** of the **ES [AS-076]** concluded that, considering the **CoCP [REP8-013]** and good practice measures, there are not expected to be any significant adverse impacts to air quality, regarding the impacts of the Proposed Development on odour, emissions and dust.
- 9.2.23 Matters raised during Examination in relation to air quality and odour and the Applicant’s response to these are outlined above. It is the Applicant’s position that nothing has materially changed during the Examination which fundamentally alters that assessment of policy accordance.
- 9.2.24 Having regard to the air quality and odour matters in relation to this application for Development Consent, the Proposed Development would accord with all relevant planning policy.

9.3 Agricultural Land and Farm Holdings

Agricultural Land and Farm Holdings assessment

9.3.1 The Agricultural Land and Farm Holdings assessment is reported in **Chapter 6** of the **ES [AS-033]**. Compliance with relevant legislation and policy is outlined in section 1.7 of **Chapter 1 [APP-029]** and in section 6 of the **Planning Statement [TR020001/APP/7.01]**.

Construction

9.3.2 The assessment methodology for the construction effects comprises the following key stages:

- a. establishing the current quality of agricultural land quality, soil resources and agricultural holdings;
- b. considering the sensitivity of these receptors;
- c. considering the magnitude of impact on these receptors; and
- d. determining the likely significance of effects based on the magnitude of the impact and sensitivity of the receptor.

9.3.3 The likely significant effects on agricultural land quality and agricultural holdings will occur during construction, i.e. when agricultural land will be taken out of agricultural production and soil resources (topsoil and subsoil) would be stripped, stored and possibly replaced as part of a landscaping scheme. Where soil resources are to be left in situ, they may need to be cordoned off to prevent being tracked by machinery/plant or be protected by geotextile materials and/or other provision, e.g. stone layer, to protect the soil beneath a haul road.

9.3.4 Significant effects of the Proposed Development on an agricultural holding(s) occurs on commencement of construction, when agricultural land is taken out of production and movement through the construction site is prohibited for non-construction activities.

9.3.5 Establishing the baseline conditions has involved a desktop study of relevant published information, Agricultural Land Classification (ALC) surveys and Soil Resource Surveys (SRS). More information on this is provided in Section 6.5 of **Chapter 6** the **ES [APP-033]**.

Operation

9.3.6 Where the potential exists for significant effects from the Proposed Development on an agricultural holding(s) during the operational stage, an assessment has been undertaken utilising the same methodology described for construction., and no significant effects were identified.

Agricultural Land and Farm Holdings mitigation

9.3.7 Mitigation measures proposed in relation to **Agricultural Land and Farm Holdings** are described in section 6.8 of **Chapter 6** of the **ES [APP-033]** and in the **Mitigation Route Map [REP10-023]**.

Construction

- 9.3.8 Some of the agricultural land required for the Proposed Development would be managed under a new agricultural tenancy which would retain some areas in agricultural use during assessment Phase 1. The land taken out of arable production in assessment Phase 2a is to provide new areas of habitat creation. However, the neutral grassland provided as biodiversity mitigation is potentially reversible, i.e. the grassland could be returned to its former agricultural use by future generations, if required.
- 9.3.9 During construction, the quality and quantity of soil disturbed by the Proposed Development would be maintained by implementing appropriate techniques for stripping, storing and re-use. This approach would be adopted by construction contractors as described in the **Outline Soil Management Plan**, included as Appendix 6.6 of the **ES [AS-066]**.

Operation

- 9.3.10 All significant effects on agricultural land quality and farm holdings occur exclusively during construction, hence no mitigation during operation is required.

Consideration of Agricultural Land and Farm Holdings matters during Examination

- 9.3.11 During Examination the following issues were raised:
- a. Clarification was sought by Natural England on the magnitude and the quantum of areas of best, most versatile land that was required by the Applicant permanently.
 - b. The ExA requested information on whether Best and Most Versatile (BMV) land was a factor when optioneering the land requirements, and how retention of Wigmore Valley Park would have resulted in a greater loss of BMV land.
- 9.3.12 In response the Applicant:
- a. Provided a breakdown of soils and BMV impacted at each assessment phase of the Proposed Development, as part of discussions with Natural England. This information was not submitted into examination but agreed with Natural England by email.
 - b. The Applicant confirmed that BMV was considered in the strategic option appraisal stages as described in the **Sift Reports [APP-209] to [APP-212]** Appended to the **Design and Access Statement [AS-049]**. These Sift Reports also included options that would have resulted in greater loss of BMV which were considered.
- 9.3.13 For this topic, all matters are agreed at the end of Examination.

Topic conclusion

- 9.3.14 The **Agricultural Land and Farm Holdings** assessment in **Chapter 6** of the **ES [APP-033]** has been used to determine compliance with relevant planning policy. This is reported in section 8.11 of the **Planning Statement [TR020001/APP/7.01]** and in **Planning Statement Appendix E - Policy Compliance Tables [REP5-019]**.
- 9.3.15 Paragraphs 5.108, 5.115 and 5.126 of the ANPS (Ref 9.7) set out policy regarding development on the Best and Most Versatile agricultural land (BMV). Paragraph 5.108 sets out that BMV is land which is most flexible, productive, and efficient in response to inputs, and which can best deliver future crops for food and non-food uses. Paragraph 5.115 states: *“The applicant should take into account the economic and other benefits of best and most versatile agricultural land. Where significant development of agricultural land is demonstrated to be necessary, the applicant should seek to use areas of poorer quality land in preference to that of a higher quality.”*
- 9.3.16 Paragraphs 5.109, 5.118, 5.122 and 5.126 of the ANPS (Ref 9.7) sets out policy on soil resources. Paragraph 5.109 sets out that the development of land will *“affect soil resources, including physical loss of and damage to soil resources, through land contamination and structural damage. Indirect impacts may also arise from changes in the local water regime, organic matter content, soil biodiversity and soil process.”*
- 9.3.17 As described in section 8.11 of the **Planning Statement [TR020001/APP/7.01]**, in total, the Proposed Development would result in the loss of 57.6ha of Subgrade 3a (Best and Most Versatile (BMV)) agricultural land and 62.4ha of Subgrade 3b (non-BMV) agricultural land within the Main Development Site.
- 9.3.18 Approximately 54.2ha of agricultural land is proposed to be converted from intensive arable production to less-intensive neutral grassland/neutral meadow grassland, of which approximately 28.5ha is in Subgrade 3a. The soil profiles to be converted from arable production to neutral grassland/neutral meadow grassland will remain intact and their physical properties will be unchanged i.e., the grassland could be returned to its former intensive agricultural productivity by future generations, if required.
- 9.3.19 The ANPS (Ref 9.7) does not quantify what constitutes *“significant development of agricultural land”* but all of the 120ha of agricultural land (approximately 25% of the Main Application Site) is to be lost as it is required to facilitate the Proposed Development.
- 9.3.20 As demonstrated previously, the economic benefits of the Proposed Development are significant and therefore are in line with paragraph 5.115 of the ANPS (Ref 9.7) which states *“the applicant should take into account the economic and other benefits of best and most versatile agricultural land.”* As a result, the careful design of the Proposed Development and mitigation measures seeks to reduce any agricultural land impacts and align with planning policy, where possible.

- 9.3.21 Matters raised during Examination in relation to agricultural land and farm holdings are outlined above. All matters were agreed at the end of Examination.
- 9.3.22 As a result, it is the Applicant's position that nothing has materially changed during the Examination which fundamentally alters the assessment of policy accordance.
- 9.3.23 Having regard to the agricultural land matters in relation to this application for development consent, the Proposed Development accords with all relevant planning policy.

9.4 Biodiversity

Biodiversity assessment

- 9.4.1 The biodiversity assessment is reported in **Chapter 8** of the **ES [AS-027]**, which provides an assessment of the impacts on designated nature conservation sites, habitats and sensitive flora and fauna as a result of the construction and operation of the Proposed Development.
- 9.4.2 It considers impacts including habitat loss and fragmentation, and potential species mortality, as well as disturbance through lighting, noise and vibration, and habitat degradation as a result of changes in air quality and hydrological conditions within the Zone of Influence (Zoi). Compliance with relevant legislation and policy is outlined in section 8.2 of **Chapter 8** of the **ES** and in section 8.8 of the **Planning Statement [REP-016]**.
- 9.4.3 The biodiversity baseline data gathering exercise focussed upon assembling information on international, national and local designated nature conservation sites and protected and notable habitats and species which fall within appropriate study and survey areas, as defined in Section 8.3.5 and accessing appropriate sources listed in Section 8.5.2 of **Chapter 8 [AS-027]**. Ecological data gathering occurred at the site of the Proposed Development for several years; this included specific surveys for protected and notable habitats and species as summarised in Table 8.8 of **Chapter 8 [AS-027]**, following appropriate guidance for each receptor/survey type. All survey types, methods and extents were agreed with stakeholders via a thematic working group for the project.
- 9.4.4 The assessment methodology followed used both the importance (or value) of the ecological feature and the magnitude of the impact to determine the significance of the effect. This method of determining ecological value and significant effects is in line with the principles of the Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal (Ref 9.8) and follows the approach adopted across Chapters within this ES, refer to **Approach to the Assessment, Chapter 5** of the **ES [AS-075]**. The biodiversity methodology is detailed within section 8.5 of **Chapter 8** of the **ES [AS-027]**. Where impacts are considered likely, the assessment has identified measures to avoid or reduce potentially significant adverse effects. These measures have been designed iteratively during an integrated design process working with Project engineers to arrive at a design which incorporates embedded, good practice, and additional mitigation.

- 9.4.5 Further assessment of the Proposed Development with regards to European Sites is detailed within the **Habitats Regulations Assessment No Significant Effects Report [APP-171]**.

Construction

- 9.4.6 The Proposed Development is not anticipated to have any significant effect on biodiversity receptors within the study area. A number of effects have been identified as having initial significant adverse effects, prior to additional mitigation, but not in the long-term following adequate time for replacement habitats to have become established.
- 9.4.7 The Proposed Development would result in direct physical effects on biodiversity due to construction on currently undeveloped land and indirect effects due to disturbance during construction. For example, the construction of the Proposed Development would result in the direct loss of 15.2ha of habitat, (almost 100%) within Wigmore Park County Wildlife Site (CWS), and the loss of approximately 1.3ha (20%) of the Dairyborn Scarp District Wildlife Site (DWS) and 0.21ha (37%) of Luton Parkway Verges DWS.
- 9.4.8 Wigmore Park CWS is almost completely lost by assessment Phase 2a, however with embedded mitigation as part of the provision of open space, the initial moderate adverse effect in the medium term, becomes a minor adverse effect once the habitats have developed. Furthermore, with the inclusion of additional mitigation such as the Habitat Creation Area, this is anticipated to become a negligible effect in the long term. From initial creation of the replacement habitats, often of higher biodiversity value than those lost, and throughout their establishment, these habitats will be managed in line with the 50-year management period as described in the **Outline Landscape and Biodiversity Management Plan (LBMP)** (Appendix 8.2 of the **ES [AS-029]**), to ensure their success.
- 9.4.9 A similar narrative applies to Winch Hill Wood CWS/ Local Wildlife Site (LWS)/Ancient Woodland, Luton Parkway Verges DWS, Dairyborn Scarp DWS, habitats such as broadleaved woodland and for the species which utilise them such as bats, and badger, all of which are predicted to experience a long term negligible residual effect. Other habitat types, such as neutral semi-improved grassland receive an overall minor beneficial residual effect due to the large areas of additional grassland created as part of the Proposed Development, providing wide areas of habitat of increased biodiversity value for species/groups such as bats, terrestrial invertebrates and breeding birds.
- 9.4.10 Winch Hill Wood CWS, LWS and ancient woodland will be retained and managed to improve its condition, apart from minor tree removal on the perimeter of the site for arboriculture reasons only. It would be subject to indirect effects as a result of construction disturbance. The Proposed Development has been designed such that no groundwater control (e.g. dewatering) is proposed during construction, meaning that no changes to groundwater level and flow to groundwater dependent receptors are expected. With the embedded design measures, long term management and enhancement as set out in the **Outline LBMP**, Appendix 8.2 **[AS-029]**, together

with the control measures set out within the **Code of Construction Practice (CoCP), Appendix 4.2 [REP8-013]**, and **Drainage Design Statement, Appendix 20.4 [REP5-096]** the potential impacts were considered to be negligible in the long term.

- 9.4.11 With substantial habitat replacement provided by the Proposed Development, resulting in over 10% biodiversity net gain (BNG) (with a prediction of 12.05% for habitats and 31.51% for hedgerows following assessment Phase 1, and 10.85% for habitats and 18.5% for hedgerows following assessment Phases 2a and 2b, as shown within the **BNG report, Appendix 8.5 of the ES [APP-067]**), and mitigation in place, as described above, negative effects on habitats are not predicted to be significant and the effect reduces to negligible in some cases after habitats provided have matured.
- 9.4.12 Furthermore, the provision of habitats as part of the landscaping proposals during construction is considered to provide long-term minor beneficial effects (not significant) in some cases due to the net increase for habitats such as broad-leaved semi-natural woodland, broad-leaved plantation woodland, scrub, neutral semi-natural grassland, calcareous grassland, poor semi-improved grassland, and species rich hedgerows.
- 9.4.13 Temporary minor adverse residual effects are predicted for several species on site during the construction phases, as a result of habitat loss, killing/injury and temporary disturbance through noise and lighting. However, with mitigation in place, including through design, as described below, and control measures set out within the **Code of Construction Practice (CoCP) [REP8-013]**, the **Ecological Mitigation Strategies (Appendices 8.6 – 8.10 of the ES [AS-027])** and the **Outline LBMP (Appendix 8.2 [AS-029])**, these effects are not predicted to be significant.
- 9.4.14 A positive effect is anticipated for some species that will benefit from the use of the habitat provisions stated above, improved through the long term management and enhancement secured as part of the **Outline LBMP, Appendix 8.2 [AS-029]**.
- 9.4.15 In addition to the biodiversity net gain, areas of off-site hedgerow restoration are provided in the wider area to the north and east, which will further improve the habitat quality and the connectivity for a range of species.

Operation

- 9.4.16 As habitat loss is incorporated into the construction phase effects, the operational effects are limited to those relating to air quality, and other indirect effects.
- 9.4.17 Disturbance from the operation of the Proposed Development may displace species such as bats, badger and birds from using habitats adjacent to the airport, through noise and lighting disturbance. In addition, effects may occur due to changes to the quantity and direction of surface water runoff. However, with mitigation in place, including through design, as described below, these effects are not predicted to be significant. Recreational pressure on badger and orchids within the replacement open space is mitigated through design of the

pathways and appropriate signage to steer users away from more sensitive receptors, and no recreational pressure would occur within the habitat creation area as it would not be subject to public access.

Air quality effects

- 9.4.18 The air quality assessment relating to ecology is detailed in table 8.17 of section 8.14 of **Chapter 8 [AS-027]**, and in the **Habitat Regulations Assessment (HRA) Appendix 8.3 [APP-171]**. The assessment was undertaken in accordance with published guidance including that from Natural England and National Highways Design Manual for Roads and Bridges (Volume LA105: Air Quality) (Ref 9.5).
- 9.4.19 The first stage of assessment involved consideration of whether designated sites lay within the zones of influence of the project relating to air quality: 5km of the application site (for SSSIs), 2km (for non-statutory sites) or within 200m of the Affected Road Network (ARN). No European Sites lie within the zone of influence for air quality. Natural England therefore agreed in the Statement of Common Ground that no likely significant effects would arise on any European sites. No National Trust sites lie within the zone of influence for air quality. Five SSSIs and 56 non-statutory wildlife sites do lie within 5km (or 2km) of the application, or within 200m of the ARN.
- 9.4.20 The assessment then determined whether any of those five SSSIs and 56 non-statutory wildlife sites were to be subject to an increase in nitrogen deposition (accounting for both NO_x and ammonia) that exceeded a '1% of the critical load/level' initial screening threshold, or the Design Manual for Roads and Bridges (Ref 9.5) threshold for effects on botanical species richness (0.4 kgN/ha/yr).
- 9.4.21 The air quality assessment of ecological sites found temporary minor adverse (not significant) effects on some sites, including Winch Hill Wood CWS, where they lie within 2km of the Main Application Site and/or within 200m of the roads which experience certain changes in traffic due to the Proposed Development, as a result of nitrogen deposition and the resulting effect on species richness. Management of Winch Hill Wood CWS/ancient woodland and Dairyborn Scarp DWS for 50 years, as set out within the **Outline LBMP** (Appendix 8.2 [**AS-029**]), aims to improve their condition in the long term.
- 9.4.22 In summary:
- a. No significant air quality effects were identified on any of the five SSSIs because the '1% of the critical load' and/or 0.4 kgN/ha/yr thresholds are not forecast to be exceeded. Natural England have agreed with this conclusion in the Statement of Common Ground [**REP9-040**].
 - b. Thirty-nine non-statutory sites and five veteran trees within 2km of the Main Application Site and/or 200m of the ARN exceed 1% of the CL in at least one of the future year scenarios but fall below 0.4 kgN in all assessment years. Therefore, a negligible impact and a conclusion of no significant effect was reached.

- c. Seventeen non-statutory designated sites within 2km of the Main Application Site and/or 200m of the ARN exceed 1% and 0.4 kgN/ha/yr in at least one future assessment year. These were subject to further ecological analysis.
- d. For all seventeen sites it was concluded that the area affected is often small and subject to edge effects from roads and surrounding agriculture, which has reduced the botanical interest of the affected area, and the further forecast increase in nitrogen deposition will also be small as a proportion of baseline levels meaning the scheme presents little potential for further botanical change. Moreover, there is a counteracting positive role played by introducing habitat management (for Winch Hill Wood) and removing land from agricultural production (generally). Hence a conclusion of minor adverse impact leading to an effect that is not significant was drawn.

Biodiversity mitigation

- 9.4.23 Mitigation measures proposed in relation to Biodiversity are described in sections 8.8 and 8.10 of **Chapter 8** of the **ES [AS-027]** and in the **Mitigation Route Map [REP10-023]**. Monitoring is summarised in section 8.13 of **Chapter 8** of the **ES [AS-027]**.
- 9.4.24 Further details of the mitigation measures and monitoring can be found in the following documents;
- a. **Biodiversity Net Gain (BNG) Report** (Appendix 8.5 of the ES [**APP-067**]) and (**draft DCO** Schedule 2, (requirement 10) [**REP10-003**]).
 - b. **Outline Landscape and Biodiversity Management Plan (LBMP)** (Appendix 8.2 of the ES [**AS-029**]) and (**draft DCO** Schedule 2, (requirement 10)) [**REP10-003**]: describes the requirements for the establishment, management and monitoring of proposed landscape and biodiversity areas that form part of the Proposed Development.
 - c. **Ecological Mitigation Strategies** (Appendices 8.6 – 8.10 of the ES [**AS-027**]) and (**draft DCO** Schedule 2, (requirement 11)) [**REP10-003**], which describe the avoidance, mitigation and enhancement measures to be implemented to safeguard protected species during construction and operation of the Proposed Development for the following:
 - i. Amphibian and Reptile - Appendix 8.6 of the ES [**APP-068**];
 - ii. Badger - Appendix 8.7 (Confidential) of the ES [**APP-069**];
 - iii. Bat - Appendix 8.8 of the ES [**APP-070**];
 - iv. Bird - Appendix 8.9 (Confidential) of the ES [**APP-071**]; and
 - v. Orchid and Invertebrate - Appendix 8.10 (Confidential) of the ES [**AS-035**].
 - d. The Proposed Development has been designed, as far as possible, to avoid effects on biodiversity through option identification, appraisal, selection and refinement. For example, avoiding loss of ancient woodland within Winch Hill Wood (Woodland 6) (shown in Appendix B1 of the **Ecology Baseline Report**, Appendix 8.1 of the ES [**AS-033**] and [**AS-034**]).

- e. Mitigation measures have been integrated (embedded) into the Proposed Development for the purpose of minimising effects related to ecological receptors. These measures focus on implementing the mitigation hierarchy where possible to minimise the effects.

9.4.25 A summary of measures that have been embedded into the design of the Proposed Development through design iterations are set out below.

- a. The landscape design includes large areas of habitat creation to partially mitigate the loss of habitats from construction, and designed and managed to ensure their target condition exceeds that of the habitats lost and thereby contributes to achieving at least a 10% net gain in biodiversity (refer to the **BNG Report**, Appendix 8.5 of the ES [**APP-067**]). Much of this is included within a large area of provision of open space within the north east of the Main Application Site (as shown on Figure 14.11 of the ES [**REP4-037**]), and will connect to the retained areas of Wigmore Park, providing connectivity to the wider landscape, and include habitat creation measures to mitigate for those lost within Wigmore Park CWS.
- b. The replacement habitat, once established, will mitigate for the loss of these foraging, dispersal and shelter habitats which are used by a range of species including badger, bats, birds, reptiles, amphibians and invertebrate species. Whilst the provision of open space will be open to the public, other areas of habitat provision will not be. In addition, the provision of open space is designed with footpaths to direct the public away from habitats in the rest of the area.
- c. Habitat creation in the Terminal Approach (as shown in Figure 14.12 of the ES [**REP4-037**]), within and around Dairyborn Scarp DWS in assessment Phase 2a, replacing habitats lost with scrub, neutral meadow grassland, and exposed chalk on lower lying shallow slopes, along with management of existing woodland. Landscape restoration will comprise species rich hedgerows with trees adjacent to Winch Hill Road in assessment Phase 1. Further landscape restoration within assessment Phase 2b will include regrading and providing mitigation on top and to the east of the platform embankment east of the runway, by creating amenity grassland, broadleaved woodland, neutral meadow grassland and calcareous grassland, along with additional species rich hedgerows with trees.
- d. The measures to establish, manage and monitor areas of habitat creation within the Proposed Development are detailed within the **Outline LBMP** (Appendix 8.2 of the ES [**AS-029**]), developed in consultation with local stakeholders. It provides detailed management and monitoring requirements for the first five years, and subsequent requirements continuing for 50 years. Initial reviews will be conducted every five years, to ensure that the management is appropriate, and habitats created/enhanced are in line with those proposed. In addition, it includes appropriate measures to control recreational pressures on the habitats within the open space such as litter, trampling and disturbance.
- e. Grassland habitats between where Roman snail are present and the Proposed Development will continue to be managed as they are, from now

and through to operation (as part of the **Outline LBMP** (Appendix 8.2 of the ES **[AS-029]**)), at a short sward height to avoid the establishment of rough grassland and scrub. This would continue to discourage Roman snail from moving into the site.

- f. Incorporation of a minimum 15m wide buffer of semi-natural habitats, around areas of ancient woodland within or adjacent to the Proposed Development (**Arboricultural Impact Assessment (AIA)**, Appendix 14.3 **[AS-085]** and **CoCP**, Appendix 4.2 of the ES **[REP8-013]**). No ground works will be permitted within this buffer to ensure trees within ancient woodland are protected from root damage and soil compaction. This is in accordance with Natural England guidance.
- g. The Proposed Development has been designed to retain veteran/ancient trees where possible (AIA, Appendix 14.3 **[AS-085]**, **Outline LBMP**, Appendix 8.2 of the ES **[AS-029]**, and **CoCP**, Appendix 4.2 of this ES **[REP8-013]**), with a buffer zone established to protect the roots. This will be at least 15 times larger than the diameter of the tree, and at least 5m from the edge of the tree's canopy (if that area is larger than 15 times diameter). Only one veteran tree (Tree 343 - a re-grown ancient and veteran coppice) would be unavoidably lost as part of the Proposed Development and will therefore be re-coppiced and translocated in order to retain the tree (**Chapter 14**, of the ES **[AS-079]**). Veteran trees offer important habitats for a range of species including rare saproxylic invertebrates and fungi. Felled dead wood from potential veteran/ancient trees that could be lost will be kept in as large sections as possible and incorporated into the landscape design of the new areas of habitat creation within the open space, reinstalled vertically in the ground within the habitat creation areas to create 'monoliths' where possible, to encourage the deadwood to decay.
- h. An area of new habitat, within the provision of open space, and newly created habitat in the north east of the Main Application Site, as shown in the Landscape Mitigation Plans Figures 14.11 to 14.13 of this ES **[REP4-037]**, will be incorporated to mitigate the loss of grassland supporting orchids. This will be designed with consideration to soil conditions, geology and local topography, and managed for the requirements of the orchid species present (**Outline LBMP**, Appendix 8.2 of the ES **[AS-029]**).
- i. The adjacent arable margins to retained woodland and hedgerow belts within the Proposed Development, will be retained and managed to encourage retention and proliferation of the notable arable plant species and invertebrates identified within the survey area, as part of the **Outline LBMP** (Appendix 8.2 of the ES **[AS-029]**).
- j. The Proposed Development will incorporate artificial bat roosting provision on buildings and retained trees to mitigate the roosting opportunities lost to the Proposed Development as part of the **Outline LBMP** (Appendix 8.2 of the ES **[AS-029]**) and the **Bat Mitigation Strategy** (Appendix 8.8 of the ES **[APP-070]**).
- k. Newly created habitats will be managed appropriately for their proximity to the airport's airspace to ensure the risk of bird strike does not significantly

increase (a **Bird Strike Risk Assessment** is provided as Appendix 8.4 of the ES [APP-066]).

- I. As far as possible, the Off-site Car Parks at Luton Parkway will be designed to minimise loss of adjacent Luton Parkway Verges DWS (**Outline LBMP** (Appendix 8.2 of the ES [AS-029]) and habitats that could support protected species and important habitats.

9.4.26 Best practice measures (mitigation which will be in place as a result of standard good practice and due to legislative requirements) are set out in the **CoCP** (Appendix 4.2 of this ES [REP8-013]).

Design

9.4.27 In addition to the habitat creation measures within the provision of open space and landscape restoration areas, a large Habitat Creation Area (over 43ha) will be created to the east, as indicated on Landscape Mitigation Plans at Figures 14.11 to 14.13 of the ES [REP4-037]. This will include areas of low intensity grazed calcareous and neutral grassland as well as neutral meadow grassland and will not be available to the public for recreational use. These grasslands would be managed, through measures such as a reduction in fertilizer and herbicide inputs, to encourage the establishment of the notable plant species lost to construction of the Proposed Development (**Outline LBMP** (Appendix 8.2 of the ES [AS-029])). Inclusion of maintaining elements of bare ground on bunds and selected field margins through lower cuts and up to annual turnover of the ground in discrete areas, will reduce the effect of the loss of arable field margins, and their associated notable arable plants.

9.4.28 Off-site hedgerow restoration will be implemented to strengthen and improve the existing hedgerow network to the north east and east of the Main Application Site, along with small areas to the south, planting up gaps in existing hedgerows and planting new hedgerows where appropriate (over 6.5km) (for details please refer to the **Outline LBMP** (Appendix 8.2 of the ES [AS-029]), Landscape Mitigation Plans at Figures 14.11 to 14.13 of the ES [REP4-037] and **Strategic Landscape Masterplan Report [APP-172]**). These will improve not only the condition of the habitats themselves, but also the function they provide as wildlife corridors for a range of species including bats, badger and invertebrates.

9.4.29 Areas of habitat creation fields would be managed appropriately to provide replacement resource for local over-wintering farmland bird populations through variation of habitats (please refer to the **Outline LBMP** (Appendix 8.2 of the ES [AS-029])), including strips of rough grassland to provide suitable cover and foraging for these species. The management will be aimed at small passerine bird species such as finches and buntings such as the yellowhammer and will focus on the outer areas of the habitat creation fields at greatest distance from the runway and flight lines to minimise the risk of increasing bird strike.

Construction

9.4.30 Tree clearance works will be under a watching brief and/or monitored by an Ecological Clerk of Works or bat licence appointed person where appropriate.

Trees to be removed and identified as having low to high bat roost potential (but not confirmed roosts) within the Proposed Development will be soft felled. Confirmed bat roosts will also be soft felled under a bat mitigation licence once secured, as described in the Bat Mitigation Strategy, Appendix 8.8 of the ES [AS-068]. A draft bat licence was shared with Natural England, and a letter of no impediment was received, and a copy sent to the ExA.

- 9.4.31 In addition to the habitat creation measures within the provision of open space, measures will be adopted to mitigate the loss of invertebrate habitats for details please refer to the **Outline LBMP** (Appendix 8.2 of the ES [AS-029]) and the **Orchid and Invertebrate Mitigation Strategy**, Appendix 8.10 of the ES [AS-035].

Operation

- 9.4.32 Having followed the mitigation hierarchy through the design process, the Proposed Development would still lead to the unavoidable loss of 0.21ha (37%) of Luton Parkway Verges District Wildlife Site (DWS). Remaining areas of Luton Parkway Verges DWS that fall within the LLAL ownership will be subject to management measures to promote the diverse botany for which the site is designated, and improve on its current scrub condition. This will include measures such as mowing and removal of arisings, and scrub management to prevent encroachment and shading. To reduce pressures, such as trampling by pedestrians and littering, post and rail fencing will be established to deter 'cut throughs' from the new car park, interpretation boards will be erected to explain the value of the DWS, monitoring and management for litter removal will be enacted. These measures are included within the **Outline LBMP** (Appendix 8.2 of the ES [AS-029]).
- 9.4.33 The value of veteran trees is as a result of their age and the weather/disease/management processes that have occurred over the life of the tree. As such, the value of veteran trees cannot be replicated. Opportunities will be sought to implement sensitive management of retained veteran trees within the wider landscape, this may include measures such as thinning of young trees around veteran trees to reduce stresses upon the tree (**Outline LBMP**, Appendix 8.2 of the ES [AS-029]). Opportunities will also be explored to undertake 'veteranisation' of mature trees within the Applicant's ownership. This would involve wounding the tree to encourage rot features to form and replicate the beneficial features of naturally occurring veteran trees.
- 9.4.34 Detailed design will include directional lighting methods such as smart LED lighting with integrated baffles, cowls or hoods, to avoid light spill onto retained and adjacent habitats and the species they support (as described in the **Design Principles** document [REP9-030]). Habitat creation and landscape restoration at the margins of the airport development and associated infrastructure will act as a screen between the Proposed Development and adjacent habitats.

Consideration of Biodiversity matters during Examination

- 9.4.35 During Examination the following issues were raised:

- a. Wigmore Park CWS (Issue Specific Hearing 6, Action Point 4 **[EV11-009]**) - the ExA requested clarification on the mitigation proposed for the loss of Wigmore Park CWS.
- b. Orchids (Written Questions BIO.1.1 **[PD-010]**) - The ExA queried whether existing orchid populations exist outside Wigmore Park CWS and whether natural colonisation of orchids would occur to newly created habitats.
- c. Veteran trees (Issue Specific Hearing 6, Action Point 8 **[EV11-009]**) – The ExA queried whether ancient and veteran trees can be successfully translocated.
- d. Invertebrates (Written Questions BIO.1.5 **[PD-010]**) - The ExA requested clarification on the mitigation for invertebrates and how the existing range and population extent of invertebrate populations would be maintained throughout construction.
- e. Biodiversity Net Gain (BNG) – Stakeholders such as Luton Borough Council have asked for an aspiration of 20% BNG as set out in the Shared regional principles for protection, restoring and enhancing the environment in the Oxford-Cambridge Arc.
- f. Changes of hydrology for habitats and species of principal importance, including Winch Hill Wood (Issue Specific Hearing 6, Action Point 5 **[EV11-009]**) – The ExA requested clarification on any hydrological changes that may occur as a result of the Proposed Development, specifically by Winch Hill Wood.
- g. Nitrogen deposition (Written Questions BIO.1.3 **[PD-010]**) - The ExA requested clarification on how the removal of agricultural land and future uptake of electric vehicles had fed into the atmospheric modelling of nitrogen.
- h. Air Quality impacts on the updated transport modelling (post Covid) (via the **Rule 9 Letter [PD-006]**) – The ExA requested an update to the transport modelling and following assessment as the traffic data originally used was taken during a period of lockdown due Covid.
- i. Distance of car parks from Winch Hill Wood in relation to air quality modelling (Action points 26 in ISH8 **[EV15-013]**). – The ExA requested clarification on the distance of the nearest car park to this receptor and to confirm the outcome of the assessment based on this distance.
- j. Buffer zone of at least 15m for woodland (Action points 26 in ISH8 **[EV15-013]**) – The ExA requested further justification for the buffer zone used for woodlands and protected trees.

9.4.36 In response the Applicant:

- a. Wigmore Park CWS – Within the Applicant's Response to the ExA's Deadline 4 Hearing Actions **[REP4-070]**, the Applicant provided tables detailing the current composition of Wigmore Park CWS, along the habitats that will be created by individual work packages as part of the Proposed Development. These show that approximately three times the area of key habitat will be created as that lost within the Wigmore Park CWS.

- b. Orchids – Within the Applicant’s response to Written Questions (BIO.1.1) – Biodiversity [REP5-040], the Applicant provided an addition plan “Applicants response to ExA Written Question BIO.1.1: Orchid Location Plan”, to clarify the location of orchids which had been recorded on this site. An example of natural colonisation of orchids within the local vicinity was provided, where various orchid species including those found within the Wigmore Park CWS have colonised a former active chalk quarry (Hexton Chalk Pit, around 5km north of Luton Airport). The Applicant also reiterated that they will have control over land in the new open-space and the ability to specifically manage newly created, enhanced and retained habitats for orchids and other species.
- c. Veteran trees – Within the **Applicant’s Response to the Examining Authority’s Deadline 4 Hearing Actions [REP4-070]**, the Applicant clarified that only one tree Ancient and/or Veteran Tree is directly impacted by the Proposed Development, that is T343 which is an ash tree described as a ‘re-grown ancient and veteran coppice’, as discussed and shown in the **Arboricultural Impact Assessment [AS-085]**. The evidence compiled, including speaking to specialist contractors, demonstrates that it is feasible to successfully translocate a veteran tree subject to preparation as set within this detailed response. The Woodland Trust (Ash Dieback (*Hymenoscyphus fraxineus*) - Woodland Trust) estimates that 80% of all Ash Trees in the UK will be killed by the Ash Dieback disease. While the Applicant’s intention is that this tree will be translocated, as described in section 4 of the **Outline LBMP [AS-029]** tree specialists would need to assess T343 for signs of Ash Dieback disease before any final agreed translocation is planned.
- d. Invertebrates – Within the Applicant’s response to Written Questions – Biodiversity (BIO.1.5) [REP5-040], the Applicant clarifies that it is expected that the retained habitats through appropriate management, and the large areas of created habitats will be established/improved sufficiently to mitigate the loss of the areas by the first five years enough to reduce the level of effect to minor adverse, which will also include areas of disturbed and bare ground during establishment. These habitats will continue to progress/mature through the appropriate adaptive management and monitoring as detailed within the **Outline LBMP**. Furthermore, the habitat creation area will provide an additional 43 ha of habitats. Establishment of this Area will involve the conversion and management of largely arable land into a mosaic of neutral grassland maintained by low intensity grazing, neutral meadows, planted woodland blocks, and a cluster of small wildlife ponds. The Habitat Creation Area would integrate existing habitats of higher biodiversity value within this landscape, such as woodland, with newly created habitats, increasing connectivity using hedgerow restoration to establish a coherent ecological network.
- e. Biodiversity net gain – The Applicant has agreed within the Statement of Common Ground with Luton Borough Council [TR020001/APP/8.13] that the Applicant’s voluntary target of 10% BNG is proportionate given it is a NSIP, but where possible greater gain should be delivered in line with LBC’s Luton 2040 Vision.

- f. Changes of Hydrology for habitats and species of principal importance, including Winch Hill Wood – Within the Applicant’s Response to the ExA’s Deadline 4 Hearing Actions **[REP4-070]**, the Applicant stated that during construction, the primary sources of potential hydrological or hydrogeological impacts to habitats and species of principal importance are through pollution incidents (such as spills or sediment mobilisation) or the temporary altering of catchments (such as altering flowpaths or runoff volumes). The Proposed Development has been designed such that no groundwater control (e.g. dewatering) is proposed during construction, meaning that no changes to groundwater level and flow to groundwater dependent receptors are expected. With the embedded design measures, together with the control measures set out within the **Code of Construction Practice [REP6-003]**, and **Drainage Design Statement [REP5-096]**, the potential impacts on habitats of principal importance outside the Order Limits was considered to be negligible. As a result, no significant effects from hydrological or hydrogeological changes on the identified ecological receptors, habitats and species of principal importance are reported within the biodiversity Chapter (**Chapter 8** of the **ES [AS-027]**).
- g. Nitrogen Deposition - Within the Applicant’s response to Written Questions – Biodiversity (BIO.1.3) **[REP5-040]**, the Applicant stated that removing land from agricultural production within 2km (and in some cases within 1km or less) of these biodiversity sites will undoubtedly reduce nitrogen from this source, but the Applicant does not believe the tools or emission factors exist to quantify it, and therefore it has not been accounted for in the modelling. Similarly the uptake of electric vehicles (EVs) is not relied upon when determining the significance of the likely ecological effect of the modelled air quality impact, as carried out in **Chapter 8** of the **ES [AS-027]**.
- h. Air Quality impacts on the updated transport modelling (post Covid) – Within the **Applicant’s Accounting for Covid-19 in Transport Modelling – Environmental Appraisal [REP7-079]**, it was concluded that the critical level for NOx is still not forecast to be exceeded on any transect when using the Covid-19 scenario traffic data; this is no change from the original modelling. There are several changes in nitrogen deposition at non-statutory wildlife sites, However, none materially alter the conclusions reported in sections 8.9, 8.11 and 8.14 of **Chapter 8** of the **ES [AS-027]**.
- i. Distance of car parks from Winch Hill Wood in relation to air quality modelling – Within the Applicant’s Post Hearing Submission - ISH8 **[REP6-066]**, the Applicant stated that the nearest car park is a temporary car park approximately 35m from Winch Hill Wood. Due to the conservative nature of the air quality assessment and the small contribution that car parks make to the total concentrations at the woodland, this car park is not expected to have any significant implications on the air quality effects at Winch Hill Wood and therefore not expected to materially change the conclusions of the air quality assessment.
- j. Buffer zone of at least 15m for woodland – Within the Applicant’s Post Hearing Submission - ISH8 **[REP6-066]**, the Applicant stated that it has committed to a minimum buffer zone of at least 15m following standing

advice from Natural England and the Forestry Commission. An assessment of ancient woodland has been undertaken and concluded no significant effects, therefore the Applicant considers that this buffer distance does not need to be extended as it adequately mitigates effects. For protected trees this buffer zone is always exceeded.

9.4.37 For this topic, all matters are agreed at the end of Examination.

Topic conclusion

9.4.38 The Biodiversity assessment in **Chapter 8** of the **ES [AS-027]** has been used to determine compliance with relevant planning policy. This is reported in section 8.8 of the **Planning Statement [TR020001/APP/7.01]** and in **Planning Statement Appendix E - Policy Compliance Tables [REP5-018]**.

9.4.39 Paragraphs 5.89 to 5.91 of the ANPS (Ref 9.7) set out the considerations for an assessment of biodiversity and ecological conservation, with a general aim of achieving no net loss to biodiversity: *“The Government’s biodiversity strategy is set out in Biodiversity 2020: A Strategy for England’s wildlife and ecosystem services. Its aim is to halt overall biodiversity loss, support healthy, well functioning ecosystems, and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people.”*

9.4.40 The Proposed Development has been designed, as far as possible, to avoid effects on biodiversity through option identification, appraisal, selection, and refinement, for example, by avoiding loss of ancient woodland.

9.4.41 Mitigation measures have been embedded into the Proposed Development for the purpose of minimising effects related to ecological receptors. These measures focus on implementing the mitigation hierarchy where possible to minimise the effects.

9.4.42 Overall, the Proposed Development would deliver a minimum of 10% biodiversity net gain (with a prediction of 12.05% for habitats and 31.51% for hedgerows following assessment Phase 1, and 10.85% for habitats and 18.5% for hedgerows following assessment Phases 2a and 2b, as shown within the **BNG report**, Appendix 8.5 of the **ES [APP-067]**) through the extensive landscaping and habitat creation proposals and the management of retained and proposed habitat areas in accordance with national and local planning policy.

9.4.43 Matters raised during Examination in relation to biodiversity and ecological conservation are outlined above. For this topic, all matters were agreed at the end of Examination.

9.4.44 During Examination, text was added to Section 8.8 of the **Planning Statement [TR020001/APP/7.01]** referring to proposals to translocate a veteran tree as well as setting out the policy compliance of these proposals against paragraph 5.103 of the ANPS. This was submitted at Deadline 5.

9.4.45 It is the Applicant’s position that nothing has materially changed during the Examination which fundamentally alters the assessment of policy accordance.

- 9.4.46 Having regard to the biodiversity and ecological conservation matters in relation to this application for development consent, Proposed Development accords with all relevant planning policy.

9.5 Climate Change Resilience

Climate Change Resilience assessment

- 9.5.1 The Climate Change Resilience assessment is reported in **Chapter 9** of the **ES [APP-035]**. Compliance with relevant legislation and policy is outlined in section 9.2 of **Chapter 9 [APP-035]**.

- 9.5.2 The assessment of Climate Change Resilience during construction and operation presented in **Chapter 9 [APP-035]** has been undertaken in line with the latest policy and guidance, including the Institute of Environmental Management and Assessment (IEMA)'s Environmental Impact Assessment Guide to: Climate Change Resilience and Adaptation (Ref 9.9). Full details on the approach and methodology are presented in section 9.5 **Chapter 9** of the **ES [APP-035]**.

Construction

- 9.5.3 The assessment outlined in **Chapter 9** of the **ES [APP-035]** shows that, with the incorporation of embedded and best practice mitigation measures, no significant effects on the Proposed Development as a result of climate change during construction have been identified.

Operation

- 9.5.4 The assessment outlined in **Chapter 9** of the **ES [APP-035]** shows that, with the incorporation of embedded and best practice mitigation measures, no significant effects on the Proposed Development as a result of climate change during operation have been identified.

Climate Change Resilience Mitigation

- 9.5.5 Mitigation measures proposed in relation to Climate Change Resilience are described in section 9.8 of **Chapter 9** of the **ES [APP-035]** and in the **Mitigation Route Map [REP10-023]**.

Construction

- 9.5.6 All construction mitigation measures outlined are included in the **CoCP [REP8-013]**. The adoption and implementation of the CoCP by appointed contractors is secured as a requirement of the DCO.

- 9.5.7 A high-level risk assessment of severe weather impacts on the construction process will be produced by the lead contractor to inform any required mitigation. Any receptors and/or construction-related operations and activities potentially sensitive to severe weather events will be considered in the assessment. Climate change projections will also be considered in the risk assessments.

9.5.8 A full list of mitigation measures can be found in section 9.8 of **Chapter 9** of the **ES [APP-035]**.

9.5.9 As outlined in section 9.12 of **Chapter 9** of the **ES [APP-035]** and in the **CoCP [REP8-013]**, the lead contractors' EMS would consider all measures deemed necessary and appropriate to manage severe weather events and should, as a minimum, cover training of personnel and prevention and monitoring arrangements.

Operation

9.5.10 Climate Change Resilience has been taken into account in the sift/options stages of the Proposed Development that informed the 'future airport layout' and also the design to date. Multiple workshops and meetings were conducted with the design teams to discuss climate projections, potential impacts of climate change and to understand and influence the level of embedded mitigation incorporated into the design to increase the resilience of the Proposed Development to climate change effects.

9.5.11 Assets will be maintained regularly to detect deterioration and damage caused by extreme weather events such as storms through maintenance and monitoring in contracts.

9.5.12 Embedded and good practice mitigation for climate change resilience during operation, which have been incorporated into the Proposed Development design or would be secured as a requirement of the DCO. Certain mitigation measures can only be fully defined at an appropriate point in the future, for example, during detailed design. Where this is the case, such measures have been included in the **Design Principles** document **[REP7-034]**.

9.5.13 A full list of mitigation measures can be found in section 9.8 of **Chapter 9** of the **ES [APP-035]**.

9.5.14 As outlined in section 9.12 of **Chapter 9** of the **ES [APP-035]**, the following monitoring measures should be undertaken during operation:

- a. Dedicated personnel within the airport operator's organisation would be responsible for reporting and monitoring of the operational measures and risks. The operator would also need to consider the Proposed Development assets within the next adaptation reporting cycle under the Adaptation Reporting Power.
- b. All assets would be maintained regularly to detect deterioration and damage caused by extreme weather events such as storms through maintenance and monitoring in contracts.
- c. Landscape planting would take into consideration climate change in the selection of appropriate woodland tree and shrub species and provide adequate monitoring post-planting and, if necessary, replacement.
- d. A list of extreme weather-related incidents (for example, road surface deformations from extreme heat, storms, snow and ice etc.) would be maintained to assist in identifying thresholds which, when exceeded, require maintenance.

Consideration of Climate Resilience matters during Examination

9.5.15 No matters were raised during the Examination.

Topic Conclusion

9.5.16 The Climate Change Resilience assessment has been used to determine compliance with relevant planning policy.

9.5.17 It is the Applicant's position that nothing has changed with no matters raised during the course of the Examination.

9.6 Cultural Heritage

Cultural Heritage assessment

9.6.1 The cultural heritage assessment is reported in **Chapter 10** of the **ES [AS-077]**, which provides an assessment of the effects on cultural heritage assets as a result of the construction and operation of the Proposed Development. Compliance with relevant legislation and policy is outlined in section 10.2 of **Chapter 10 [AS-077]** and in section D2 of the **Planning Statement Appendix D [APP-198]**.

9.6.2 The methodology for assessing effects on the historic environment uses both the value (or significance) of the heritage asset and the magnitude of the impact to determine the significance of the effect. This method of determining heritage value is in line with guidance presented in the National Planning Policy Framework (NPPF) (Ref 9.10) and Historic England. The assessment of impacts has taken into consideration physical changes to a heritage asset as well as changes to its setting from both visual and aural intrusion.

9.6.3 The assessment also provides a statement of harm caused to individual assets as a result of the Proposed Development, identifying where on the spectrum the harm lies, either less than substantial or substantial. No substantial harm has been identified.

Construction

9.6.4 For the majority of heritage assets, the effects presented in the ES have been assessed as being not significant (negligible to minor adverse effects).

9.6.5 A significant effect has been identified on Wandon End House [1307874] and Wandon End Farmhouse [1102448]. A moderate adverse effect has been identified as a result of impacts to the setting of these assets during construction activities associated with earthworks and remediation and considered to be temporary for the duration of the construction phase only.

9.6.6 In addition, significant effects have been identified on archaeological remains including Iron Age and Roman settlement site [HER 108080], cropmarks of possible late prehistoric and Roman activity [HER 17218 and HER 17219], and potential archaeological features that may be identified from the additional trial

trenching. Moderate adverse effects have been identified on these assets as a result of permanent physical impacts occurring during construction activities.

Operation

9.6.7 For the majority of heritage assets, the effects presented in the ES have been assessed as being not significant (negligible to minor adverse effects).

9.6.8 A significant effect has been identified on Luton Hoo Grade II* Registered Park and Garden [1000568]. A moderate adverse effect has been identified as a result of noise during the operation of the Proposed Development and is considered to be a permanent change.

Cultural Heritage mitigation

9.6.9 Mitigation measures proposed in relation to cultural heritage are described in section 10.10 of **Chapter 10** of the **ES [AS-077]** and in the **Cultural Heritage Management Plan (CHMP) [REP8-015]**. The focus of the project has been to avoid or minimise the impact on cultural heritage, with embedded mitigation through design. Where specific additional mitigation is required, this has been included in the **CHMP [REP8-015]** and will be secured through Site Specific Written Schemes of Investigation. The **CHMP [REP8-015]** has been agreed with the Archaeological Advisors to the Local Planning Authorities.

Construction

9.6.10 Mitigation measures have been identified relating to impacts on archaeological remains and include detailed archaeological excavation, targeted archaeological monitoring during construction and operation, and protocols to be adopted for dealing with unexpected archaeological discoveries. In addition, additional trial trenching is proposed for those parts of the Proposed Development that could not be investigated for the ES. The results of the trial trenching may result in the requirement for additional mitigation responses.

9.6.11 No mitigation measures have been identified for Wandon End House and Wandon End Farmhouse due to the temporary nature of the impact.

Operation

9.6.12 It is assessed that Luton Hoo RPG would experience a moderate adverse effect as a result of the operation of the Proposed Development, arising from an increase in noise levels within the park. There is no appropriate response that would mitigate increased noise levels within a parkland setting, therefore no additional mitigation is proposed for the operational phase of the Proposed Development.

9.6.13 Whilst no significant effects were predicted for Someries Castle, the Applicant has made a commitment to review changes to air pollutant concentrations in the **GCG Framework [TR020001/APP/7.08]** which entails monitoring during the operational phase of the Proposed Development. In advance of the air quality monitoring, a condition survey of Someries Castle will be undertaken to record its current condition.

Consideration of Cultural Heritage matters during Examination

9.6.14 During Examination the following issues were raised:

- a. The ExA [ISH8 Action Points – WQ18] noted that the updated CHMP included further details on monitoring of brick erosion at Someries Castle and requested an explanation for what mitigation measures would be put in place if monitoring subsequently finds brick erosion is occurring.
- b. The ExA [ISH8 Action Points – WQ16] notes that the Applicant has considered Historic England’s request for a financial contribution towards the conservation of Luton Hoo Estate, but does not consider there to be sufficient justification to do so and has asked the applicant to expand on the reasons for this.
- c. The ExA [ISH8 Action Points – WQ14] has asked the Applicant to explain why the assessment for Luton Hoo has considered how the increased frequency of aviation noise would impact the aesthetic appreciated of the asset (in addition to changes in noise contours) but this has not been considered for other designated assets located under the flight paths.
- d. The ExA [ISH8 Action Points – WQ11] has asked the Applicant to explain why there are several assets identified in the **Cultural Heritage Gazetteer [REP4-017]** as experiencing less than substantial harm but Appendix D of the **Planning Statement [APP-198]** only provides a detailed assessment of two of the assets.
- e. Central Bedfordshire Council (CBC) have raised concerns (in Local Impact Report **[REP1A-002]**) that the Proposed Development could result in direct impacts resulting from vibration and pollution which may result in the deterioration of the fabric of Someries Castle. They have also raised concerns with regards to the Fire Training Ground (FTG) with respect to the visual and environmental impact on Someries Castle.
- f. CBC have raised concerns in LIR **[REP1A-002]** that the Proposed Development has the potential to impact negatively on the significance of Luton Hoo Estate and the setting of the mansion house by virtue of the additional built development that would be visible from the grounds. The Conservation Officer for CBC seeks confirmation that a suitable colour palette will be used for built components of the Proposed Development and would be sympathetic to and not in conflict with the surrounding landscape.
- g. CBC have raised concerns (in its LIR **[REP1A-002]**) about the lack of information to understand the visual and environmental impact of the FTG on Someries Castle and Luton Hoo RPG, in terms of built form and usage.
- h. Historic England accepts that it is not possible to mitigate negative impact of increased noise levels on Luton Hoo RPG and therefore suggests that the harm might instead be off-set in the form of financial contributions towards the conservation management of the asset by way of a Section 106 Agreement.

9.6.15 In response the Applicant:

- a. The Applicant advised in the Applicant's Response to Action Points from ISH8 **[REP6-076]** that the CHMP sets out the methodology for air quality monitoring at Someries Castle. Following each review process of the monitoring data, consultation will be undertaken with the Conservation Officer for the relevant LPA to discuss the potential impact of any identified changes on Someries Castle and appropriate mitigation measures will be identified and agreed based on the level of impacts. Any measures proposed would be dependent on the findings of the monitoring, whether the deterioration could be attributed to the Proposed Development, and subject to further discussion with the relevant LPA to ensure that the measures do not cause further damage or loss of historic fabric. Therefore, the CHMP only discusses the monitoring and further engagement as agreed with the relevant LPA.
- b. The Applicant considers that there is no feasible solution which can mitigate noise impacts within a park setting and it is not recommended to screen new development within a designed landscape with additional planting, which is acknowledged within the ES (paragraph 10.10.9) **[AS-077]** and has been discussed and agreed with the Conservation Officer for CBC and Historic England. The Applicant considers that financial contribution towards the conservation management of Luton Hoo would not mitigate the identified impact of the Proposed Development on Luton Hoo and that the identified harm would remain.
- c. The Applicant's methodology for assessing impacts through changes to the setting as a result of noise, is in line with current guidance and best practice and was agreed with statutory consultees including Historic England. This is documented in Table 10.6 in **Chapter 10** of the **ES [AS-077]**. The Applicant has considered impacts from all aspects of potential noise, as set out in **Chapter 16** of the **ES [REP9-011]**. This includes the increased frequency of aviation noise which forms part of the operational phase. This has been applied to all heritage assets but only where a potential impact as a result of noise has been identified, is this identified in the ES.
- d. For the majority of assets, the effects presented in **Chapter 10** of the **ES [AS-077]** have been assessed as being not significant (negligible to minor adverse effects). As such, it is concluded that the harm caused to these assets falls within the less than substantial category and at the lower level of the spectrum, and in accordance with planning guidance and Historic England advice, a proportionate approach has been taken and these assets are not discussed further in the Heritage Statement. The purpose of the Heritage Assessment, Appendix D of the **Planning Statement [TR020001/APP/7.01]** is to provide greater clarity on where, on the harm spectrum, those assets which will experience significant effects sit, in accordance with the requirements of the Planning Practice Guidance (PPG) and to enable the weighing of the planning balance. The Heritage Statement only discusses harm in relation to designated assets as the distinction between substantial harm and less than substantial harm does not apply to non-designated assets. No non-designated assets have been identified as being of 'schedulable quality' or of potentially national importance and as such are not included in the Heritage Assessment.

- e. As stated in Section 10.9 of **Chapter 10** of the **ES [AS-077]**, the air quality model predicts a negligible change in the concentrations of NO₂ and particulate matter (PM₁₀ and PM_{2.5}) at the site of Someries Castle. As such, it is assessed there would be no impact to the brick fabric of the castle as a result of the Proposed Development. Potential impacts to Someries Castle's fabric from vibration impacts are also assessed in Section 10.9 of **Chapter 10** of the **ES [AS-077]** which concludes that ground vibration would not be perceptible from Someries Castle, resulting in no impact to the asset. The impacts from the FTG have been assessed as detailed in **Chapter 7** of the **ES [AS-076]**. Effects from uses of the FTG along with cumulative effects from all airport operations were assessed including at Someries Castle and Luton Hoo Registered Park and Garden and results are presented in Table 3.1 in **Appendix 7.1** of the **ES [AS-028]**. All impacts from airborne pollutants are predicted to be not significant. The impacts from the physical presence of the FTG on the setting of Someries Castle is detailed in **Chapter 10** of the **ES [AS-077]**. The visualisations provided in Appendix 14.7 of the **ES [REP3-011]** demonstrate that the FTG would be partially visible in the middle-distance and would be viewed alongside existing modern structures, including farm buildings and an earthen bund, and would further emphasise the proximity of the airport. The presence of the FTG would not affect Someries Castle's heritage value and would represent minimal change to the asset's setting. All impacts to the setting of this asset are assessed to be not significant.
- f. The Applicant acknowledges a significant effect has been identified on Luton Hoo RPG through the introduction of new structures into the visual setting of the RPG. It has been discussed and agreed with the Conservation Officer for CBC and Historic England that it is not recommended to screen new development within a designed landscape with additional planting. The Applicant has confirmed that the detailed design and appearance of the proposed buildings would be subject to Planning Approval / Condition Discharge Approval. The **Design Principles** document **[REP9-030]** has been refined and submitted at Deadline 9 to address these concerns.
- g. The Applicant considers that the wirelines submitted provide an accurate visual representation of the Proposed Development. The AVRs have been modelled to provide the maximum parameters of the size and location of the FTG. As reported in the **Chapter 10** of the **ES [AS-077]**, **Chapter 7 [AS-076]** predicts a negligible change in pollutant concentrations of NO₂ and particulate matter (PM₁₀ and PM_{2.5}) at Someries Castle as a result of the operational development, which includes the use of the FTG. The Applicant considers that **Chapter 14** of the **ES [AS-079]** has a sufficient number of representative viewpoints (5no.) to fully consider and assess the effects on Luton Hoo as a receptor. **Chapter 10** of the **ES [AS-077]** also provides a full and robust assessment of effects on Luton Hoo and Someries Castle. The LVIA Working Group was set up for a wide variety of matters that included the number and locations of viewpoints to inform the LVIA. Further viewpoints are not considered proportionate and would

not contribute any further to, or change, the assessment of effects reported in the ES.

- h. No mitigation specific to Luton Hoo RPG has been identified as it is not considered that it would be effective in reducing the effect. The Applicant has considered the request for a form of financial contribution towards the conservation management of Luton Hoo RPG but does not consider there to be sufficient justification to do so.

9.6.16 For this topic, the only areas that are not agreed at the end of Examination are as follows:

- a. CBC are not satisfied with the level of information provided to understand the visual and environmental impact of the FTG on Someries Castle and Luton Hoo RPG. CBC are concerned about the permanent installation of the FTG and its impact on the setting of Someries Castle. The Applicant considers that **Chapter 10** of the **ES [AS-077]** provides a full and robust assessment and utilises evidence and information provided as part of the Landscape and Visual Chapter (**Chapter 14** of the **ES [AS-079]**) and **Chapter 7** of the **ES [AS-076]**). No impact has been identified in relation to impacts to the fabric of Someries Castle and all impacts to the setting of the asset are assessed to be not significant.
- b. CBC have stated that it remains unclear how airborne pollutants from the FTG would affect the fabric of Someries Castle and what can be done to mitigate it. As stated in Section 10.9 of **Chapter 10** of the **ES [AS-077]**, the air quality model predicts a negligible change in the concentrations of NO₂ and particulate matter at the site of Someries Castle and as such, it is assessed there would be no impact to the fabric of the castle as a result of the Proposed Development. Whilst acknowledging no impact has been identified, the Applicant has committed to air quality monitoring during the operational phase of the Proposed Development. Any mitigation measures proposed would be dependent on the findings of the monitoring, whether the deterioration could be attributed to the Proposed Development, and subject to further discussion with the relevant LPA to ensure that the measures do not cause further damage or loss of historic fabric. Therefore, the CHMP only discusses the monitoring and further engagement as agreed with the relevant LPA.
- c. The Applicant has considered the request by Historic England for a form of financial contribution towards the conservation management of Luton Hoo RPG but does not consider there to be sufficient justification to do so.

Topic conclusion

9.6.17 The cultural heritage assessment in **Chapter 10** of the **ES [AS-077]** has been used to determine compliance with relevant planning policy. This is reported in section D2 of the **Planning Statement [TR020001/APP/7.01]** and in **Planning Statement Appendix E - Policy Compliance Tables [REP5-018]**.

- 9.6.18 Paragraphs 5.193 to 5.195 of the ANPS (Ref 9.7) state: “As part of the environmental statement, the applicant should provide a description of the significance of the heritage assets affected by the proposed development, and the contribution of their setting to that significance. The level of detail should be proportionate to the asset’s importance, and no more than is sufficient to understand the potential impact of the proposal on the significance of the asset”.
- 9.6.19 The NPPF (Ref 9.9) provides detail regarding the assessment of harm to heritage assets and is supported by Planning Practice Guidance (PPG). The NPPF sets out the importance of being able to assess the significance of heritage assets that may be affected by a development. Paragraphs 205 to 209 of the NPPF introduce the concept that heritage assets can be harmed or lost through alteration, destruction or development within their setting. This harm ranges from less than substantial through to substantial. In instances where development would cause substantial harm to or total loss of significance of a designated asset consent should be refused unless it can be demonstrated that it is necessary to achieve substantial public benefits that outweigh that harm or loss (paragraph 206). In instances where development would cause less than substantial harm to the significance of a designated asset the harm should be weighed against the public benefits of the proposal to provide a balanced judgement (paragraph 207).
- 9.6.20 The Proposed Development design seeks to enhance the historic landscape by including provision for the planting of hedgerows and hedgerow trees that are in-keeping with the historic landscape character of the area.
- 9.6.21 Matters raised during Examination in relation to cultural heritage are outlined above along with the Applicant’s response. For this topic, the only areas that are not agreed at the end of Examination are explained in paragraph 9.6.16.
- 9.6.22 As a result, it is the Applicant’s position that nothing has materially changed during the Examination which fundamentally alters the assessment of policy accordance.
- 9.6.23 Paragraphs 5.205 of the ANPS (Ref 9.7) sets out that where the proposed development will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal. These public benefits do not need to be heritage specific to accord with the ANPS. Section 9 of the **Planning Statement [TR020001/APP/7.01]** considers the benefits of the Proposed Development in detail and concludes that these clearly and demonstrably outweigh the less-than-substantial-harm to heritage assets that would arise with the proposed suite of mitigation measures in place.

9.7 Economics and Employment

Economics and Employment assessment

- 9.7.1 The Economics and Employment assessment is reported in **Chapter 11** of the **ES [APP-037]**. Compliance with relevant legislation and policy is outlined in

section 11.2 of **Chapter 11** and in section 8.3 of the **Planning Statement [TR020001/APP/7.01]**.

Construction

9.7.2 The assessment methodology for the assessment of construction economic and employment effects is set out in Section 11.5 of **Chapter 11** of the **ES [APP-037]**. The assessment considers the following matters:

- a. Direct effects – existing businesses lost/displaced or isolated due to construction/future operational requirements of the airport.
- b. Direct employment – created by construction of the expanded airport and its ongoing operations; effects of construction employment generation on local housing markets.
- c. Indirect impacts - employment generated in the chain of suppliers of goods and services related to the construction of the airport.
- d. Induced impacts - employment and income generated by the spending of construction incomes earned.
- e. Gross value added (GVA) impacts generated through construction employment.

9.7.3 The methodology for assessing construction employment generation and GVA effects is based on HM Treasury Guidance (Ref 9.11) and the HCA Additionality Guide (Ref 9.12), see Section 11.5 of **Chapter 11** of the **ES [APP-037]** for details.

Operation

9.7.4 The assessment methodology for the assessment of economic and employment effects during construction is set out in Section 11.5 of **Chapter 11** of the **ES [APP-037]**. The assessment considered the following matters:

- a. Direct employment – created by operation of the expanded airport.
- b. Indirect impacts - employment generated in the chain of suppliers of goods and services related to the operation of the airport.
- c. Induced impacts - employment and income generated by the spending of operational incomes earned.
- d. GVA impacts - through operational employment.
- e. Wider economic impacts - strategic economic indicators/wider GVA impacts; transport economic efficiency effects; effects of employment generation on local housing markets.

9.7.5 This assessment has been undertaken using the most up to date information available from the airport and its on-site employers. Direct impacts have been derived directly from this, with data on average wages and salaries and profits drawn from company accounts and ONS surveys used to estimate direct GDP effects.

- 9.7.6 Changes in the effects and combined environmental effects on businesses through noise, vibration, traffic etc are determined by the findings of other technical chapters in the ES.
- 9.7.7 The indirect and induced impacts associated with the operation of the airport were estimated using data collected on supply chain purchases combined with Oxford Economics' economic models, based on inter-regional input-output tables.

Economics and Employment mitigation

- 9.7.8 Mitigation measures proposed in relation to economics and employment are described in Section 11.2 of **Chapter 11** of the **ES [APP-037]**.

Construction

- 9.7.9 A range of measures are proposed to enhance the benefits of the Proposed Development during construction. These include:
- a. the **CoCP [REP8-013]** seeks to minimise disruption to ongoing airport operations and therefore minimise effects on airport or other employment;
 - b. the design of the Proposed Development has been configured to minimise disruption to existing local businesses;
 - c. the design for the Proposed Development has sought to minimise adverse effects on the Green Horizons Park development (formerly New Century Park) (application reference 17/02300/EIA LBC);
 - d. an **Employment and Training Strategy (ETS) [REP8-020]** has been prepared in liaison with key stakeholders and submitted as part of the application for development consent. The **ETS [REP8-020]** proposes actions and initiatives with a vision to create quality careers and make the airport an inclusive and aspirational place to work. The **ETS [REP8-020]** specifically focuses on maximising employment opportunities at the local level (Luton) and in the Three Counties of Hertfordshire, Bedfordshire and Buckinghamshire, the principal area of airport employee residence, in particular. These proposals include establishing a Luton Employment and Skills Programme at the airport in line with the initiatives set out within the ETS. The Programme will involve engagement with local government partners, education institutions and training providers, promote employment and training opportunities across the airport with local employment support and training institutions, encouraging hiring of apprentices and trainees through procurement and working together with airport employers and enhancing outreach with local community groups and schools;
 - e. work will be undertaken with existing education bodies and employers in advance of construction to determine future skills requirements and gaps; and
 - f. as part of their selection criteria, contractors' ability to deliver social value will be considered (i.e. whether the contracts could deliver wider social, economic and environmental benefits).

Operation

- 9.7.10 For operation a similar approach to construction will be undertaken with the **ETS [REP8-020]** proposing actions and initiatives wherever relevant. A number of existing operators have bespoke training programmes – such as easyJet Academy.
- 9.7.11 It is anticipated that a Workplace Charter for employers will be developed to work towards a set of agreed objectives that would include a focus on local employment and training initiatives.
- 9.7.12 By developing local training and skills and focusing on target groups such as those out of work, the **ETS [REP8-020]** will also act as a mitigation to the effects on housing need. It will increase the ability of existing economically active and inactive populations in Luton and the Three Counties to engage with airport-related construction and operational employment thus reducing, particularly in relation to operation, the increase in housing need or in commuting that may result.

Consideration of Economics and Employment matters during Examination

- 9.7.13 During Examination the following matters were raised:
- a. potential demand on hotel accommodation from ‘non-home based’ construction workers;
 - b. the monitoring of existing employment and training support, the proposed **ETS [REP8-020]**, and how it is delivered;
 - c. availability of construction workers and their origins;
 - d. supply chain opportunities during construction and operation and how benefits from this will be secured;
 - e. displacement of jobs from current businesses by employees choosing to work for the airport either during construction/ operation;
 - f. influence of changing employment practices post-COVID on job creation;
 - g. monitoring requirements;
 - h. air fare savings; and
 - i. role of international connections in support business productivity and the businesses involved.
- 9.7.14 In response the Applicant made the following points:
- a. No assessment of potential demand on hotel accommodation arising from ‘non-home based’ construction workers was undertaken on the basis that demand for accommodation is best represented by the private rented homes sector given that the long duration of the construction period necessitates accommodation which can be readily used for longer periods of time. **Chapter 11** of the **ES [APP-037]** also states that if further demand from housing does arise from ‘non-home based’ construction

workers for shorter stays, a supply of bed and breakfast accommodation would be able to meet this portion of the overall demand.

- b. Annual reporting of the effectiveness of the existing Employment Skills and Recruitment Plan is undertaken by LLAOL through its Annual Monitoring Report, with a range of outcomes achieved in the 2022 reporting year. The intention of the ETS is to replace this with a scheme greater in ambition and befitting the scale of the development. The ETS will be secured through a section 106 agreement rather than by the **draft DCO [REP10-003]** requirement to enable greater flexibility for the terms of the ETS to be amended at a later date. The process for amending an obligation secured by section 106 is quicker than the process for amending a DCO requirement, and the Applicant is keen to retain this flexibility. In respect of Green Horizons Park, the Applicant recognises that there may be overlap across both schemes and will ensure that there is alignment and collaboration across both but the ETS will not replace it on the basis of the differences between the two developments.
- c. When assessing availability of construction workers who would not need to live in/ move to Luton, a 60-minute drive time was applied in the assessment of availability of home-based construction workers. This is justified on the basis of available research and professional experience which supported the consideration that there is a generally high density of labour across the area encompassed by this and that some construction workers will likely travel from a further distance from the Site based on evidence from other schemes. The need for construction workers arising from the Proposed Development is considered sufficiently limited (2% within 60-minutes that the requirements of other major infrastructure projects could also be met without impact on labour market availability and as such no cumulative effects would arise.
- d. The ETS is an overarching strategy which provides a framework to ensure that as many of the jobs and economic opportunities generated by the Proposed Development as possible go to the residents of Luton and surrounding areas. It is not a detailed study that sets out the route to market or provides analysis on the existing market conditions. It is a strategy to provide a framework to allow benefits to be realised.
- e. No assessment of displacement of jobs from current businesses by employees choosing to work for the airport either during construction/ operation has been undertaken. The large size of the accessible construction workforce means that displacement of workers is unlikely to undermine the capacity of the construction sector to meet demand for workers at other projects. Also, the application of displacement would have a significant limitation given there would be no certainty that it would remain accurate over a long construction period to 2043. Similarly, displacement has not been taken into account for the operational phase as this is not considered relevant in the context of higher levels of unemployment in Luton.
- f. Some businesses would be displaced by the Proposed Development for which employment has been estimated using guidance in the form of the

Homes and Communities Agency (now Homes England) Employment Densities Guide 3rd Edition (2015) (Ref 9.13). This includes premises which are currently vacant and support no actual jobs. If actual job numbers were known for the occupied premises displaced, the magnitude of impact is not expected to change and hence the assessment conclusion would remain the same. Whilst the industry is known for each of the occupied premises which are displaced, assumptions would need to be made regarding the likely users of vacant floorspace which would limit the extent of a more refined formula and as such the choice of employment density is considered to be wholly robust and proportionate.

- g. Whilst, no specific assessment has been carried out on changes in working practices post-Covid, the airport operator has recently updated the assessment of employment which shows that total employment is only 100 jobs lower than 2019, despite traffic not having fully recovered. This strongly suggests that the long-term impact of Covid-19 and staff furloughs has not impacted directly on airport related employment and the anticipated productivity trends going forward.
- h. Typically, socio-economics monitoring during construction and operation of is not covered within an environmental statement. Monitoring of employment and training outcomes and initiatives does form part of the ETS which sets out the approach to both monitoring and evaluation. The Applicant together with the airport operator will regularly monitor and review progress against its own objectives, to ensure their efficiency.
- i. It is not realistic or appropriate to exclude air fare benefits to foreign residents from the cost benefit analysis as explained in detail in Section 1.2 in the **Applicant's Response to Deadline 3 Submissions Appendix A New Economics Foundation [REP3-131]**.
- j. A range of companies who benefit from international connectivity and their location relative to the airport are highlighted in Figure 4.5 of the **Need Case [AS-125]**.

9.7.15 For this topic in relation to environmental impact assessment all matters are agreed at the end of Examination. Further discussion on the economic and employment benefits of the Proposed Development are described in Chapter 4 of this document on the need for and benefit of the Proposed Development.

Topic conclusion

- 9.7.16 The economics and employment assessment in **Chapter 11** of the **ES [APP-037]** has been used to determine compliance with relevant planning policy. This is reported in section 8.3 of the **Planning Statement [TR020001/APP/7.01]** and in **Planning Statement Appendix E - Policy Compliance Tables [REP5-018]**.
- 9.7.17 The Aviation Policy Framework (APF) (Ref 9.14) puts economic growth and the environment at the heart of the Government's vision for aviation. The overall policy position is summarised in paragraph 5:

"The Government's primary objective is to achieve long-term economic growth. The aviation sector is a major contributor to the economy and we support its

growth within a framework which maintains a balance between the benefits of aviation and its costs, particularly its contribution to climate change and noise. It is equally important that the aviation industry has confidence that the framework is sufficiently stable to underpin long-term planning and investment in aircraft and infrastructure.”

- 9.7.18 Flightpath to the Future (FttF) (Ref 9.15), the strategic framework for the aviation sector by the Department for Transport, refers to as part of one of its four core themes ‘realising benefits for the UK’ and identifies how the aviation sector can unlock national and local benefits and supporting levelling up through trade, air freight, aerospace, investment, and tourism as well as improved connections.
- 9.7.19 It is the Applicant’s position that nothing has materially changed during the course of the Examination which fundamentally alters that assessment of policy accordance. Having regard to the economics and employment matters raised during Examination, the Proposed Development would accord with all relevant planning policy relating to economics and employment.

9.8 Greenhouse Gases

Greenhouse Gases assessment

- 9.8.1 The assessment of the impact of the Proposed Development on the climate (greenhouse gas (GHG) assessment) is reported in **Chapter 12** of the **ES [REP3-007]**. Compliance with relevant legislation and policy is outlined in section 12.2 of **Chapter 12** and in section 8.7 of the **Planning Statement [TR020001/APP/7.01]**.

Construction

- 9.8.2 The assessment of GHG emissions arising from the construction phase of the Proposed Development and presented in **Chapter 12** of the **ES [REP3-007]** considers emissions from construction materials (including transport to site), construction energy consumption, waste materials (including transport off site), water consumption and waste water treatment, construction worker transport, and land use change.
- 9.8.3 Standard emissions factors were applied to each of these emissions sources, and a full description of methodology and assumptions applied are presented in **Appendix 12.2** of the **ES [APP-082]**.

Operation

- 9.8.4 The assessment of GHG emissions presented in **Chapter 12 [REP3-007]** has been undertaken in line with the reporting requirements set out in the Airports National Policy Statement (ANPS) (Ref 9.7), and with consideration to current policy on greenhouse gases and aviation. Full details on the approach and methodology to calculating GHG emissions are presented in **Chapter 12** of the **ES [REP3-007]**.
- 9.8.5 Although the ANPS does not have direct effect in relation to the Proposed Development, it sets out principles for the assessment of project greenhouse

gas emissions both from construction and operation, such that they can be assessed against the Government's carbon obligations, including but not limited to carbon budgets. Key GHG emissions sources have been assessed in line with the ANPS and include aviation, airport operations, surface access journeys and construction.

- 9.8.6 In line with the requirements of the ANPS, two scenarios have been modelled to understand the GHG impact of the Proposed Development. These scenarios are categorised as 'Do-Minimum' (DM), where the Proposed Development does not proceed, and the airport continues to operate assuming a 'business as usual' approach and 'Do-Something' (DS) where the Proposed Development proceeds. For the purpose of the GHG assessment the DM Scenario provides a Future Baseline against which the DS Scenario, or Core Planning Case (as defined in **Chapter 5** of the **ES [AS-075]**), is compared. The variation between the two scenarios represents the GHG impact of the Proposed Development.
- 9.8.7 Two Government policies that influence GHG emissions arising from the aviation and transportation sectors in the UK help frame the approach to assessing and reporting GHG emissions in **Chapter 12** of the **ES [REP03-007]**. The first is the Jet Zero Strategy (Ref 9.16) published in 2022 which sets out Government commitments to decarbonise airport operations by 2040, and aviation by 2050. The second is the Transport Decarbonisation Plan (Ref 9.17) which sets out Government Policy on decarbonising transportation in the UK in line with the UK's net zero by 2050 target. These policies, how they relate to other policies and mechanisms to reduce carbon emissions such as the UK Emissions Trading Scheme (UK ETS) and the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) are considered throughout the greenhouse gases assessment.

Aviation

- 9.8.8 GHG emissions from aircraft movements are calculated separately for the landing take-off (LTO) and cruise, climb and descent (CCD) phases of flight where LTO includes aircraft movements below an altitude of 3000 feet i.e., during the approach, taxiing, take-off and climb and CCD includes above 3000ft to the destination airport. In line with best practice all LTO emissions were included in the assessment while only CCD emissions from departing flights were included. This approach avoids double counting of emissions with other report airports and is in line with the carbon reporting approach applied in relation to the United Nations Framework Convention on Climate Change (UNFCCC).
- 9.8.9 Aviation results in non-CO₂ impacts from emissions including nitrogen oxides and water vapour that can, for example, result in contrails leading to the formation of cirrus clouds. However, as recognised by the Climate Change Committee there remains significant scientific uncertainty around the overall warming effect of non-CO₂ impacts. Furthermore, non-CO₂ impacts are not included within the Nationally Determined Contributions declared pursuant to the 2015 Paris Agreement or the carbon budgets set pursuant to the UK Climate Change Act and are not included in the Aviation emissions trajectory for the Jet Zero Strategy High Ambition scenario that the assessment uses as a

comparator for Aviation emissions. For all these reasons, the GHG assessment did not seek to quantify non-CO₂ impacts, consistent with current Government and Committee on Climate Change advice (Ref 9.18).

- 9.8.10 Baseline GHG emissions for aviation are based on forecasts detailing aircraft movements by final destination, distance travelled and aircraft type from 2019 through to 2043 assuming airport capacity remains at 18 mppa. Baseline emissions were further modelled through to 2050 assuming passenger numbers remain constant at 18 mppa and the fleet mix remains the same as projected for 2043.
- 9.8.11 Aircraft movement forecasts are limited to a breakdown of data at a regional level, namely Central and Eastern Europe; Domestic (UK); Middle East; North America; Turkey, Near East and North Africa; and Western Europe. Given the uncertainty around forecasting future flight destinations in detail, the forecast data provides an average distance travelled per journey to each region, rather than distances to specific destination airports.
- 9.8.12 The fleet mix used for the aircraft movement data is based primarily on types of aircraft that exist now and will replace the existing fleet over time. The fleet mix modelled reflects a shift from current aircraft models to newer aircraft such as the Airbus A320 and A321neo (new engine option) models, as well as the introduction of a number of Zero Emission Aircraft (ZEA) models from 2040 onwards in line with Jet Zero Strategy High Ambition scenario assumptions.
- 9.8.13 In addition to ZEA, the Jet Zero Strategy includes a number of specific targets that have been considered in the GHG assessment, including for domestic flights to be net zero by 2040, and for airport operations in England to be zero emission by the same date. For this reason, neither the Future Baseline nor the Core Planning Case includes these 2040 targets as assumptions.
- 9.8.14 For the Core Planning Case estimates for future GHG emissions from air traffic movements are based on air traffic forecasts included within the **Need Case [AS-125]**. Aircraft movement and passenger forecasts within the Need Case assume an aircraft fleet mix based on known aircraft types as described in the Core Planning Case.
- 9.8.15 Measures to mitigate GHG emissions from aviation assumed within the Jet Zero Strategy High Ambition scenario have been included in both the Future Baseline and the Core Planning Case as these are assumed to happen whether or not the Proposed Development goes ahead. These include uptake of Sustainable Aviation Fuels, improvements in aircraft and airspace efficiency, and the future rollout of zero emission aircraft from the late 2030s onwards and are also included in 'GHG assessment Core Planning Case'. Aviation emissions as a result of the Proposed Development were considered in the context of the emissions trajectory provided for the Jet Zero Strategy High Ambition Scenario as this represents the most relevant pathway to net zero for UK aviation.
- 9.8.16 The assessment of significance also considered the extent to which the Aviation element of the Proposed Development will be aligned with existing policy and best practice, including policy as described within the Jet Zero Strategy and alignment with the High Ambition scenario in particular. The Jet Zero Strategy

High Ambition scenario provides an aviation-specific comparator data series that covers the entire design life of the Proposed Development.

- 9.8.17 The role of market-based mechanisms including the UK ETS and CORSIA as control measures for aviation emissions is also considered in both the baseline scenario and Core Planning Case and have been taken into account in preparing the demand forecasts.
- 9.8.18 The assessment of GHG emissions shows that Aviation emissions from the Proposed Development are aligned with existing and emerging best practice, as described in the UK Government's Jet Zero Strategy; controlled via a combination of the UK ETS and CORSIA, meaning that they cannot exceed the limits set by these market-based mechanisms; account for only a very small proportion of emissions within the Jet Zero Strategy High Ambition scenario; and fall at the same rate as the Jet Zero Strategy High Ambition scenario emissions trajectory between the baseline year of 2019 and 2050.

Airport Operations

- 9.8.19 Baseline GHG emissions for the operation of airport buildings and infrastructure, as well as airside and landside vehicles and equipment, have largely been calculated based on activity data provided by the Applicant and airport operator, and included in the **Energy Statement**, Appendix 4.3 to the ES **[APP-050]** that accompanies this application for development consent.
- 9.8.20 Exceptions to this include fire training, which is assumed to remain constant throughout the design life, and aircraft engine testing, which have been extrapolated from 2019 baseline data proportional to overall aircraft movement numbers. Business travel is also extrapolated from 2019 data but is proportional to staff numbers.
- 9.8.21 Estimated emissions from Airport Operations for the Core Planning Case are derived in part from the 2019 carbon footprint, with emissions for aircraft engine tests, water consumption, waste disposal and airport employee business travel being extrapolated on the basis of projected aircraft movements, passenger and staff numbers as appropriate. Energy demand figures for power, heating and transport are taken directly from the **Energy Statement**, Appendix 4.3 of the ES **[APP-050]**.

Surface Access

- 9.8.22 Baseline GHG emissions for surface access journeys have been calculated from 2019 through to 2050 based on surface access journey data for passengers, staff and freight included in the **Transport Assessment [TR020001/APP/7.02]**. Passenger surface access journey data set out in the Transport Assessment was derived from demand forecasts. These considered the 2016 Passenger Survey (Ref 9.19) conducted by the Civil Aviation Authority (CAA) and provided information on the origin and destination of passengers within the United Kingdom and their mode of travel.
- 9.8.23 Estimates for future GHG emissions from passenger Surface Access journeys, journeys to and from the airport by public and private transport, are based on

data provided in the Transport Assessment. Demand forecast data, as presented in the **Need Case [AS-125]** were input into the strategic traffic model to provide traffic data. Predictions of the distribution of future year trips on the transport networks are provided by an updated version of the Central Bedfordshire and Luton Traffic Model (CBLTM) which has been amended to provide more detail on the networks around the airport and to extend the area over which the performance of the highway network can be assessed. The modified version of that model is referred to as the CBLTM-LTN.

- 9.8.24 Emissions factors used to estimate GHG emissions from surface access journeys are taken from the UK Government's standard database of conversion factors for company reporting and apply assumptions around future decarbonisation derived from UK Government policies as set out in the Transport Decarbonisation Plan.

Summary

- 9.8.25 The significance of effect of GHG impacts resulting from the Proposed Development has been evaluated via a combination of quantitative comparison with relevant trajectories to net zero, and a qualitative assessment against known policy and best practice. This approach is consistent with the updated guidance published by IEMA. Furthermore, key emissions sources are controlled by either external or internal mechanisms that will prevent them from exceeding strict specified limits; Aviation emissions are controlled via the UK ETS and CORSIA, while emissions from Airport Operations and Surface Access are subject to the limits set via the **GCG Framework [TR020001/APP/7.08]** developed for the Proposed Development.
- 9.8.26 The significance of each of the four emissions sources was evaluated to be Minor Adverse and Not Significant, with the same significance being applied to the Proposed Development as a whole. When this overall evaluation of significance is seen in the light of paragraph 5.82 of the ANPS, it is clear that the additional emissions resulting from the Proposed Development are not so significant that they have a material impact the Government's ability to meet its carbon reduction targets, including carbon budgets.

Greenhouse Gases mitigation

- 9.8.27 Mitigation measures proposed in relation to greenhouse gases are described in section 12.8 of **Chapter 12 [REP3-007]** and in the **Mitigation Route Map [REP10-023]**. Mitigation for greenhouse gases is also included in **Appendix 12.1 Outline Greenhouse Gas Action Plan [APP-081]**.

Construction

- 9.8.28 Measures to mitigate greenhouse gases during construction are identified in **Chapter 12** of the **ES [REP3-007]** and **Appendix 12.1** of the **ES [APP-081]** and include a commitment to achieve a minimum 25% recycled or secondary content in key construction materials such as concrete and steel, the setting of waste recovery targets and the requirement for the contractor to develop a Carbon Efficiency Plan setting out how they will manage and reduce carbon emissions during construction through the use of monitoring, employee training,

the use of renewable and low carbon fuels and a Construction Workforce Travel Plan.

- 9.8.29 All mitigation measures in the construction phase are set out in Section 10 of the **CoCP [REP8-013]**.

Operation

- 9.8.30 Embedded and additional measures to mitigate Operational GHG emissions have been identified in line with the three categories outlined in paragraphs 9.8.8 to 9.8.24 above. All measures are presented in **Chapter 12** of the **ES [REP3-007]** and **Appendix 12.1** of the **ES [APP-081]**.

Aviation

- 9.8.31 While emissions from aviation are largely outside the control of the Applicant a number of embedded mitigation to facilitate the reduction aviation emissions will be introduced including measures to reduce emissions during the LTO phase such as single engine taxiing, electric towing and a reduction in the use of auxiliary power units.
- 9.8.32 The airport operator will also introduce operating policy to encourage the uptake of more efficient aircraft and the use of sustainable aviation fuels.

Airport Operation

- 9.8.33 A range of measures to mitigate emissions during the operation of the Proposed Development will be implemented. These will include measures to reduce the use of energy and other resources through energy efficient and sustainable building design, for example the inclusion of heat pumps, increased air tightness, and building orientation to maximise daylight. Measures will also focus on the reduction of emissions from ground fleet vehicles (whether operated by the airport or by third parties), and the development of infrastructure to facilitate the use of zero emission airside equipment.

Surface Access

- 9.8.34 Emissions from surface access journeys made by passengers, staff and freight are largely outside the control of the Applicant, however a number of measures to facilitate low carbon transportation will be implemented including a surface access strategy to shift passenger and staff away from private cars and on to public transport, incentivisation of the use of low carbon vehicles to travel to the airport, and the provision of EV charging points.
- 9.8.35 GHG emissions from airport operations and from surface access will be governed via the Green Controlled Growth (GCG) system that has been proposed to ensure that environmental limits are observed as the airport grows. The GHG Monitoring Plan appended to the **Green Controlled Growth Framework [TR020001/APP/7.08]** provides more detail on the scope of emissions included within GCG and the reporting process for emissions. The Monitoring Plan sets out a procedure for monitoring and reporting of GHG emissions for activities that are under the direct control or influence of the airport.

9.8.36 GCG is described in more detail in the **Green Controlled Growth Framework** document [TR020001/APP/7.08] and in the **Green Controlled Growth Explanatory Note** [TR020001/APP/7.07].

Consideration of Greenhouse Gases matters during Examination

9.8.37 During Examination the following key issues were raised:

- a. Reliance on the Jet zero Strategy: The reliance on the Jet Zero Strategy as a policy to reduce aviation emissions.
- b. Non-CO₂ emissions: The exclusion of non-CO₂ emissions from the assessment of GHG emissions.
- c. Departing flights only: The exclusion of GHG emissions from arrival flights at the airport.
- d. Sensitivity testing: The exclusion of sensitivity testing to account for the delay in uptake of GHG mitigation measures outline in the Jet zero High Ambition Scenario.

9.8.38 In response the Applicant made the following points:

9.8.39 **Reliance on the Jet Zero Strategy:** The GHG assessment carried out in relation to Aviation emissions and presented in **Chapter 12** of the **ES [REP3-007]** makes a series of assumptions around the implementation of specific mitigation measures to reduce the overall emissions from aviation. These measures include the introduction of sustainable aviation fuels (SAFs), improvements to aircraft and airspace efficiency, and the future of use zero emission aircraft (ZEA).

9.8.40 These measures are described in the UK Government's Jet Zero Strategy under Scenario 2: High Ambition. The Applicant recognises that these measures, which must by necessity be applied at a national and international level, are not within the control of the Applicant and are subject to a degree of uncertainty.

9.8.41 But the UK Government has stated that Scenario 2: High Ambition within the Jet Zero Strategy effectively represents current government policy around aviation decarbonisation, and therefore the Applicant takes the view that it is reasonable to assume that these measures will be implemented in full, in support of the UK Government's legally-binding emissions reductions targets.

9.8.42 Delivery of these measures is not within the control of the Applicant, but their overall effectiveness in reducing aviation emissions is underpinned through the use of market-based mechanisms including the UK ETS and CORSIA. If delivery of Jet Zero aviation mitigation measures does not take place according to the timetable set out, these market-based mechanisms will work as intended to send a price signal to aircraft operators that will, in the short term, moderate demand and therefore emissions.

9.8.43 The use of market-based mechanisms in this way may constrain demand, but this is likely to be consistent with the Slower Growth scenario presented within

the **Need Case [AS-125]**. Within this scenario, which has been assessed qualitatively, passenger numbers grow more slowly relative to the Core Planning Case but converge with this scenario at the proposed cap of 32 mppa.

- 9.8.44 The Applicant's position, therefore, is that it is reasonable to assume that mitigation measures as described within the Jet Zero Strategy will be implemented, but that in the case of slower delivery, the growth in passenger numbers and associated aviation emissions will be constrained accordingly.
- 9.8.45 **Non-CO₂ emissions:** The Applicant recognises the issue of non-CO₂ effects and discusses this in section 12.12 of **Chapter 12 [REP3-007]**. Further explanation on the inclusion of non-CO₂ emissions is included in the Applicant's Response to **Issue Specific Hearing 8 Action 41 – Commentary Regarding Non-Carbon Dioxide Emissions [REP7-076]**. The Applicant acknowledges that it is possible to calculate non-CO₂ effects but does not consider it appropriate to do so for several reasons, namely:
- a. considerable uncertainty in method and approach;
 - b. exclusion of non-CO₂ effects from the Jet Zero modelled trajectory; and
 - c. a legal precedent on excluding non-CO₂ emissions from aviation planning applications.
- 9.8.46 There remains considerable uncertainty, as recognised by the Climate Change Committee and Government, as to the magnitude of additional warming impact from non-CO₂ effects. The Climate Change Committee in its Sixth Carbon Budget Pathway Report (Ref 9.20), page 374, states: *"It remains extremely challenging to accurately aggregate the effects of these non-CO₂ impacts into a CO₂-equivalence 'multiplier' for use within climate policy mechanisms. These effects still have significant uncertainties associated with them and their size can depend on the conditions under which the activity occurs, unlike for well-mixed greenhouse gases which affect the climate similarly independently of where they occur."*
- 9.8.47 The Government's own documents refer to uplift factors for non-CO₂ effects ranging between a multiplier of 1.7 stated on page 17 of the 2023 Government greenhouse gas conversion factors for company reporting: Methodology paper (Ref 9.21) and around 3 times, page. 55, Jet Zero Strategy (Department for Transport). In the Jet Zero Strategy, page 56, it is noted that addressing non-CO₂ effects is a core Government policy measure. Jet Zero: One Year On (Ref 9.22) (Department for Transport), page 5, states: *"We have developed a programme of research to advance our understanding of aviation's non-CO₂ impact and identify mitigation options and established a Non-CO₂ Task and Finish group as part of the Jet Zero Council."*
- 9.8.48 Given the generally acknowledged uncertainty around the magnitude of additional warming resulting from non-CO₂ effects, there is clearly no consensus around which uplift factor is most appropriate to apply to aviation. To evaluate the significance of a project's GHG impact on the climate, IEMA guidance (Ref 9.23) recommends contextualising the emissions from a project against a relevant trajectory to net zero. For the GHG assessment emissions from the Proposed Development, were compared against the aviation

emissions trajectory presented in the Jet Zero Strategy for the High Ambition scenario, as this closely represents UK Government policy on aviation decarbonisation. Were an uplift factor to be applied to the Aviation emissions from the Proposed Development, then clearly the same factor would need to be applied to the aviation emissions trajectory within the Jet Zero Strategy. The overall contribution of the Proposed Development to UK aviation emissions would remain unchanged.

- 9.8.49 Partly due to the uncertainty around the impact of non-CO₂ effects as discussed above, these effects are excluded from the aviation emissions trajectories in the Jet Zero Strategy. They are also excluded from the UK's national carbon budgets and from the Climate Change Committee's Sectoral budget for aviation. The current position on the exclusion of non-CO₂ effects from aviation for the purpose of EIA reporting has been made clear by the courts. The Decision letter published by the Secretary of State (Ref 9.24) relating to the granting of the P19 application at London Luton Airport makes direct reference to the issue of non-CO₂ impacts, and states in paragraph 8.29 on pages 22-23 that:

“LADACAN concedes that there is no Government target or requirement to assess non-CO₂ effects as a matter of national policy. The Government's considered approach is to continue to investigate and research non-CO₂ impacts. As accepted by LADACAN's climate witness under cross examination, some measures directed at addressing CO₂ emissions will also cover non-CO₂ effects. Regarding SAF for example, the Bristol decision held that, given the extent of scientific uncertainty and the intention of the Climate Change Action Plan to consider the effects further, it would be unreasonable to weigh in the balance of that proposal. The same approach is true in this case. The Applicant's climate witness identifies that there is no reason why the CRS could not consider the effects further as understanding of non-CO₂ effects develops. There is not reasonable reason for refusing permissions on the basis of non-CO₂ effects.”

- 9.8.50 **Departing flights:** This advice on the inclusion of departing flights only has been adopted by the DfT and has informed its policy on aviation and climate change. It is also used as the basis for the approach taken in the ANPS for assessing GHG emissions from aviation. The advice of the Committee on Climate Change with regard to aviation and the UK carbon budgets is to consider emissions from departing flights only. Additionally, the United Nations Framework Convention on Climate Change recommends that for carbon reporting purposes, nations submitting annual emissions totals only consider departing flights to avoid double counting with other countries.

- 9.8.51 **Sensitivity Testing:** The Applicant's position (as described in [REP6-053]) is that Inset 12.4 of **Chapter 12** of the **ES [REP3-007]** is not a quantitative sensitivity analysis, but that it does however effectively represent a proxy for a sensitivity test, in that it illustrates the relative contribution of different mitigation measures to the aviation emissions in the Core Planning Case. A full, quantified sensitivity study to assess the impact of different rates of delivery of each measure to be carried out would by necessity involve a large number of variables, given that differential delivery rates for three different mitigation

measures, and combinations thereof, would need to be modelled. This complex and time-consuming process would be of limited value in demonstrating the overall impact on overall emissions rates.

- 9.8.52 As previously noted, should the mitigation measures described in the Jet Zero Strategy be delivered more slowly than anticipated, the emissions from aviation will continue to be controlled via market-based mechanisms including the UK ETS and CORSIA. Increased costs resulting from the controls exerted by these mechanisms will have an impact on demand (represented by the Slower Growth Case) but will also act to stimulate and incentivise innovation and speed the development of emissions mitigation measures. Variations in the delivery of SAFs, improvements in efficiencies, and the introduction of zero emissions aircraft, therefore, will have an impact on emissions that is moderated by the effect of market based mechanisms. The Faster and Slower Growth Cases described in the **Need Case [AS-125]** have taken these effects into account.
- 9.8.53 For this topic all matters are agreed at the end of Examination.

Topic conclusion

- 9.8.54 The Greenhouse Gases assessment in **Chapter 12 of the ES [REP3-007]** has been used to determine compliance with relevant planning policy. This is reported in section 8.7 of the **Planning Statement [TR020001/APP/7.01]** and in **Planning Statement Appendix E - Policy Compliance Tables [REP5-018]**.
- 9.8.55 The Jet Zero Strategy sets out strategic objectives for airport development in the UK. These are “*maximising and making efficient use of our existing airspace, aircraft and airports, all airport operations in England to be zero emission by 2040, delivery of the Airspace Modernisation Strategy up to 2040 and to grow the UK share of the global aerospace manufacturing market as more efficient technology emerges.*” It includes a "High ambition" scenario to reduce in-sector aviation emissions.
- 9.8.56 Notably, paragraph 5.82 of the ANPS (Ref 9.7) states that “*any increase in carbon emissions alone is not a reason to refuse development consent, unless the increase in carbon emissions resulting from the project is so significant that it would have a material impact on the ability of Government to meet its carbon reduction targets, including carbon budgets*”.
- 9.8.57 **Chapter 12 of the ES [REP3-007]** found that the Proposed Development will result in increased carbon emissions, relative to the Future Baseline, due to the increase in passenger and aircraft movement numbers.
- 9.8.58 Paragraph 8.7.27 of the **Planning Statement [TR020001/APP/7.01]** states that the Proposed Development accords with the relevant carbon and greenhouse gas planning policies taken as a whole. There is acknowledgement that during construction there is a minor adverse effect, as well as on airport operations, however as described, the **GCG Framework [TR020001/APP/7.08]** seeks to mitigate GHG where reasonably practicable and any increase in carbon emissions alone is not a reason to refuse development consent.
- 9.8.59 Matters raised during Examination in relation to greenhouse gas matters are outlined above. All matters were agreed at the end of Examination.

- 9.8.60 As a result, it is the Applicant's position that nothing has materially changed during the Examination which fundamentally alters that assessment of policy accordance.
- 9.8.61 Having regard to the greenhouse gases matters in relation to this application for development consent, the Proposed Development accords with all relevant planning policy.

9.9 Health and Community

Health assessment

- 9.9.1 The health assessment is reported in **Chapter 13** of the **ES [REP10-009]**. Compliance with relevant legislation and policy is outlined in section 13.2 of **Chapter 13** of the **ES** and in Section 8.12 of the **Planning Statement [TR020001/APP/7.01]**.

Construction

- 9.9.2 The health assessment methodology is described in **Appendix 13.4** of the **ES [APP-086]**. Health effects are assessed at population rather than individual level. The approach to the assessment is informed by the Institute of Environmental Management and Assessment (IEMA)'s Guide to Determining Significance for Human Health in Environmental Impact Assessment (IEMA, 2022).
- 9.9.3 The health baseline provides a demographic, socio-economic and health profile of the receptor population in the study area based on publicly available data. Sources of data are described in Section 5.1 of **Appendix 13.4** of the **ES [APP-086]**.
- 9.9.4 Qualitative judgements of the significance of health effects have considered the magnitude of changes to health determinants (environmental, social or economic factors that affect health outcomes) and the sensitivity of the population(s) exposed to these changes. Health determinants scoped into the assessment are listed in paragraph 13.3.17 of **Chapter 13** of the **ES [REP10-009]**.
- 9.9.5 The study area is divided into 'local' and 'wider' study areas, to reflect the distribution of impacts on different types of health determinant. The local study area comprises the areas surrounding the airport, as shown in Figure 13.1 **[AS-101]**. The wider study area includes the local authority areas of Luton, Hertfordshire, Central Bedfordshire and Buckinghamshire. The health determinants scoped in for the local and wider study areas are described in Table 13.6 of **Chapter 13** of the **ES [REP10-009]**.
- 9.9.6 Criteria for assessing the magnitude of impacts on health determinants and sensitivity of receptor populations were defined at the start of the assessment period and are set out in Tables 6.1 and 6.2 of Appendix 13.4. Subsequently, in 2022, IEMA published its Guide to Determining Significance for Human Health in Environmental Impact Assessment, which includes high-level criteria to guide the assessment of magnitude and sensitivity. The bespoke criteria are

compatible with the IEMA guidance, so these criteria were retained, and due regard was also paid to the IEMA criteria.

- 9.9.7 The nature of the likely effect(s) on population health are predicted based on the scientific evidence linking health determinants to health outcomes. A review of evidence is presented in Appendix 13.5 of the ES **[APP-087]**.

Operation

- 9.9.8 The qualitative health assessment methodology for operational health effects follows the same methodology as the construction assessment.
- 9.9.9 Quantitative assessments of the health outcomes arising from operational noise and air emissions have been undertaken as described in Sections 7.2 and 7.3 of **Appendix 13.4** of the **ES [APP-086]**.
- 9.9.10 The assessment of noise-related health effects has been undertaken for the whole population affected by air noise levels of 45 dBL_{Aeq,16h} and 45 dBL_{Aeq,8h} for all assessment phases. The assessment uses exposure-response relationships for specific health outcomes, published by the Department for the Environment, Food, and Rural Affairs (Defra). These relationships cover the effects of aircraft noise on acute myocardial infarction (AMI) (heart attacks), amenity (annoyance), hypertension (stroke, dementia) and self-reported sleep disturbance. Health outcomes are quantified in terms of either Disability-Adjusted Life Years (DALYs) or Quality Adjusted Life Years (QALYs). An assessment of significance has been made based on magnitude and sensitivity criteria defined in Tables 6.1 and 6.2 of Appendix 13.4.
- 9.9.11 The assessment of air quality-related health effects has been undertaken for the whole population affected by changes in air pollutant concentrations for NO_x, PM₁₀ and PM_{2.5} resulting from traffic-related, on-airport and aircraft emissions. The assessment uses exposure-response relationships for specific health outcomes, published by Defra. These relationships cover the effects of air pollution (PM₁₀ and NO_x) on mortality and the effects of PM₁₀ on respiratory and cardiovascular hospital admissions. The results are expressed as a % change in health outcome resulting from the Proposed Development compared to the baseline. An assessment of significance has been made based on magnitude and sensitivity criteria defined in Tables 6.1 and 6.2 of **Appendix 13.4** of the **ES [APP-086]**.

Community assessment

- 9.9.12 The community assessment is reported in **Chapter 13** of the ES **[REP10-009]**. Compliance with relevant legislation and policy is outlined in Section 13.2 of **Chapter 13** and in the **Planning Statement [TR020001/APP/7.01]**.

Construction

- 9.9.13 The assessment methodology is set out in Section 13.5 of **Chapter 13** of the **ES [REP10-009]**. The assessment methodology is applicable to both the construction and operational phases of the Proposed Development. The assessment is largely qualitative in nature and considers the following matters:

- a. loss or gain: a loss or gain of a resource or receptor;
- b. displacement: the re-location of receptors and resources from one location to another;
- c. in-combination effects: changes to the amenity of a resource due to combined environmental impacts (noise, air quality, traffic, visual effects), affecting enjoyment of a resource by a receptor; and
- d. isolation effects: isolation of communities from services and facilities, measured by significant delay/disruption to routes from local communities to access services and facilities.

- 9.9.14 The assessment includes an assessment of in-combination effects on community resources which draws from the findings of other assessment topics, taking into account professional judgement about the sensitivity of the individual receptor to the predicted effect. An in-combination community effect occurs where two or more residual significant effects from air quality, traffic and transport, noise, and vibration, or visual or light impact occur on specific community resources.
- 9.9.15 The following community resources and receptors (people) that use them have been considered as part of the community assessment:
- a. residential properties;
 - b. schools;
 - c. community facilities;
 - d. open spaces and Public Rights of Way (PRoW); and
 - e. leisure and recreation facilities.
- 9.9.16 In identifying the community baseline, a series of surveys of open spaces and recreational routes were undertaken to verify the baseline of community resources, and to ascertain quality and usage. These were undertaken throughout 2019 (from April to November) prior to any changes in usage resulting from the Covid-19 lockdowns. Results of the open space surveys were used to determine significance and in particular receptor sensitivity by providing further details on use of the space. Further details of the methodology for undertaking open space surveys and the results can be found in **Appendices 13.1 [APP-083] and 13.2 [APP-083] of the ES.**
- 9.9.17 The community assessment outcomes are set out in **Section 13.9 of Chapter 13 of the ES [REP10-009]**. This concludes that the impact of the closure and re-provision of part of Wigmore Valley Park represents a low magnitude beneficial impact on a receptor of medium sensitivity which will result in a minor beneficial permanent effect for users of the park, which is not significant.
- 9.9.18 The Proposed Development will result in the loss of Prospect House Day Nursery and the assessment concludes that based on current supply and demand for nursery places, the loss of the nursery, prior to any mitigation, would represent an impact of high magnitude on a community resource with high sensitivity due to the lack of nearby comparable alternative facilities.

Without mitigation, this would result in a major adverse community effect which is significant.

Operation

- 9.9.19 The assessment methodology for community effects during operation is the same as for construction as detailed above.
- 9.9.20 The community assessment outcomes are set out in **Section 13.9 of Chapter 13** of the **ES [REP10-009]**. This concludes that there are no significant effects on community resources during operation. The assessment explored whether there were any in-combination effects during operation however as no community resources experienced two or more residual significant effects, there were no significant effects on community resources during operation.

Health mitigation

- 9.9.21 Mitigation measures proposed in relation to Health are described in section 10 of **Chapter 13** of the **ES [REP10-009]** and in the **Mitigation Route Map [REP10-023]**.

Construction

- 9.9.22 No further health mitigation was proposed beyond that proposed as embedded mitigation.

Operation

- 9.9.23 No further health mitigation was proposed beyond that proposed as embedded mitigation.

Community mitigation

- 9.9.24 Mitigation measures proposed in relation to community are described in Section 13.10 of **Chapter 13** of the **ES [REP10-009]** and in the **Mitigation Route Map [REP10-023]**.

Construction

- 9.9.25 In order to mitigate the effect on Prospect House Day Nursery, the Applicant has engaged with the owner and operator of the nursery to identify reasonably practicable measures to help mitigate the likely effects.
- 9.9.26 Within the Applicant's response to the ExA's Written Questions **[REP7-048]**, the Applicant in the EqlA concludes neutral effects on the basis that the nursery will be provided in a suitable location. The response further acknowledges the commercial nature of the reprovision of nursery places and considers that at the time of reprovision there may be alternative providers in the area and that the facility in questions may not be operating at the time of reprovision. In relation to the mechanism to mitigate the effect on Prospect House Day Nursery, Luton Borough Council has accepted the proposed mitigation which is captured in the section 106 agreement.

9.9.27 Prospect House Day Nursery is not anticipated to be demolished until assessment Phase 2a, therefore after 2032. A potential alternative property has been identified and the Applicant has committed to ensure that alternative facilities are provided, and agreements are in place, with adequate prior notice, to accommodate these services prior to the existing building being required for the Proposed Development. In relation to the mechanism to mitigate the effect on Prospect House Day Nursery, Luton Borough Council has accepted the proposed mitigation which is captured in the section 106 agreement as described in Section 5.8 of the **Planning Statement** submitted as part of the application for development consent **[TR020001/APP/7.01]**.

9.9.28 The current operator of the nursery has not raised objection to this timeline and does not require formal agreement at this early stage, given the time available within the existing lease and new premises being required.

Operation

9.9.29 No significant effects on community resources during operation were reported therefore no mitigation and monitoring is proposed.

Consideration of Health matters during Examination

9.9.30 During Examination the following issues were raised:

- a. **Health baseline data.** The ExA asked that the Applicant and the Joint Host Authorities meet to agree any specific datasets relating to local health inequalities within the Joint Strategic Needs Assessment (JSNA) document(s) relevant to the Proposed Development that are necessary to ensure that the assessment, receptor selection and any consequent mitigation is representative of the likely significant effects (see HAC.1.3 of the ExA's Written Questions **[PD-010]**).
- b. **Operational mitigation with regard to community engagement.** The Hertfordshire Host Authorities and Buckinghamshire Council raised concerns in their submissions and at ISH8 about mitigation of operational health effects. The Hertfordshire Host Authorities requested that further detailed commitments on operational community engagement procedures be included in the DCO. Buckinghamshire Council requested assurance that job opportunities would be available to communities in Buckinghamshire.
- c. **Monitoring of health outcomes in relation to air noise.** The UKHSA / OHID recommended that health monitoring should be undertaken in relation to air noise impacts and the noise insulation scheme. The ExA's ISH8 Action 20 requested that the Applicant and UKHSA / OHID meet to discuss possible health monitoring and agree a position statement or way forward.
- d. **Assessment methodology.** Buckinghamshire Council raised points at ISH8 and in their post-hearing submission **[REP6-087]** about the approach to the health assessment including the application of IEMA guidance, the thresholds of identification of in-combination environmental

(‘neighbourhood quality’) effects on health and consideration of impacts on tranquillity in open spaces.

9.9.31 In response the Applicant:

- a. Met with the Host Authorities to discuss the datasets used for the local and wider study areas and provided further information requested including an explanation of the rationale for the local study area boundary and cross-checking of datasets used in the assessment with JSNA datasets.
- b. Provided confirmation further information in the Hertfordshire Host Authority SoCGs [TR020001/APP/8.15-8.17] on the airport operator’s approach to community engagement. Provided confirmation in its Response to Deadline 6 submissions [REP7-063] that health effects associated with employment, income and training across the local and wider study area (which includes Buckinghamshire) are assessed in paragraphs 13.9.8 to 13.9.15, 13.8.35 to 13.9.40, 13.11.3, 13.11.9 and Table 13.20 (pages 98 and 109) of ES **Chapter 13 [REP10-009]**. Note that the Applicant had also previously confirmed in its Comments on Responses to WQs [REP5-052] that Buckinghamshire is included in the study area for the **Employment and Training Strategy (ETS) [REP8-020]** and as such measures to maximise employment benefits set out in the ETS are applicable to Buckinghamshire.
- c. Prepared a Position Statement on Health Monitoring [REP7-075] setting out the limitations of health monitoring at London Luton Airport explaining why the Applicant does not propose to undertake such monitoring.
- d. Provided a full response to the scope and methodology points raised by Buckinghamshire Council in their Response to Deadline 6 Submissions [REP7-063].

9.9.32 For this topic the areas that are not agreed at the end of Examination are as follows:

- a. UK Health Security Agency (UKHSA) and Office for Health Improvement and Disparities (OHID) SoCG items 3.6.2 and 3.6.3, Monitoring. The UKHSA / OHID recommended that health monitoring should be undertaken. The Applicant’s position is set out in full in the **Applicant’s Response to Issue Specific Hearing 8 Action 20 - Position Statement on Health Monitoring [REP7-075]**.
- b. Buckinghamshire Council SoCG items 3.11.1 and 3.11.2, traffic related community impacts and analysis of health implications. The council agreed that the traffic modelling and assessment of significant health effects are robust but requested that a specific analysis of potential effects of early morning traffic movements in the villages of Pitstone, Marsworth and Ivinghoe be undertaken and that an explanation be included in the ES stating that some individuals may be affected by noise at levels not assessed as significant in the noise or health assessment. The ES scope is based on the potentially significant effects of the Proposed Development and health effects are assessed at population

level. The Applicant noted that sensitivities and attitudes to noise vary widely and small changes may be perceived as adverse by some individuals; it does not follow that all perceptible changes will lead to significant population health effects. The Applicant does not propose to undertake an assessment of issues that have been scoped out according to the agreed methodology.

- c. Hertfordshire County Council SoCG ID ref HCC103 [TR020001/APP/8.15], Dacorum Borough Council SoCG ID ref DBC97 [TR020001/APP/8.17], North Hertfordshire District Council SoCG ID ref NHDC104 [TR020001/APP/8.16] and Central Bedfordshire Council SoCG ID CBC82 [TR020001/APP/8.14]. The councils requested that more details on community engagement during the operation of the Airport be included in the DCO, including a commitment for the airport operator to appoint a community liaison officer. The Applicant does not propose to provide details of specific operational community engagement procedures and staffing, such as the appointment of a community liaison officer at the airport, as part of the DCO. The Applicant has provided details of the current airport operator's community engagement processes in the SoCG. The Airport operator employs a Community and Corporate Social Responsibility manager.
- d. Central Bedfordshire Council SoCG ID ref CBC83 [TR020001/APP/8.14]. The council notes that health assessment is based on the residual effects of other topics such as noise. As a result of this approach, the council considers that the health assessment is reactive and does not demonstrate a direct impact on the design of the proposal. The Applicant notes that the environmental and social considerations of options and alternatives are reported in **Chapter 3** of the **ES [AS-026]** and two Preliminary Environmental Information Reports were consulted on as the project developed. This shows that the environmental and social issues that affect health were considered throughout design development. Embedded mitigation is taken into account in the final assessment of health effects reported in the ES.
- e. Central Bedfordshire Council SoCG ID ref CBC84 & CBC85 [TR020001/APP/8.14]. The council considers that JSNA data and local (lower super output area level) deprivation data should be presented in the assessment. The Applicant's response is set out in the SoCG and in its response to Written Question HAC1.3 [REP5-052]. The Applicant considers that the baseline data presented for the wider health study area is proportionate and notes that this matter has been raised by other authorities and resolved through the SoCG process.

Consideration of Community matters during Examination

9.9.33 During Examination the following issues were raised:

- a. Prospect House Day Nursery - The ExA questioned the implications of not re-providing Prospect House Day Nursery.
- b. Ace Sandwich Bar – The ExA questioned the implications of not re-providing Ace Sandwich Bar.

- c. Community study area – The ExA questioned the justification for scoping out the population within the lowest adverse effect level (LOAEL) contour and population affected by issues such as economic growth and employment.
- d. Quality assessments – The ExA questioned how the quality assessments included in **Appendix 13.1** of the **ES [APP-083]** had been taken into account in the assessment.
- e. Long term residential receptors – The ExA questioned how the assessment had taken into account impacts on long term residential receptors such as Sue Ryder Neurological Care Centre.
- f. Raynham Way Recreation Ground – The ExA questioned the effect on Raynham Way Recreation Ground set out in **Appendix 13.2** of the **ES [APP-084]**.
- g. Wigmore Valley Park – Stakeholders such as Stop Luton Airport Expansion questioned the assessment of the impact on Wigmore Valley Park.

9.9.34 In response the Applicant stated:

- a. Prospect House Day Nursery – Within the Applicant's response to the ExA's Written Questions **[REP4-068]**, the Applicant confirmed that if the facility is not re-provided, this would result in a major adverse significant community effect.
- b. Ace Sandwich Bar - Within the Applicant's response to the ExA's Written Questions **[REP-068]**, the Applicant confirmed that if the facility is not re-provided, this would not result in a significant community impact. The loss of the sandwich bar is a minor adverse effect which is not significant. As it is not significant, there is no requirement to mitigate.
- c. Community study area – Within the Applicant's response to the ExA's Written Questions **[REP4-068]**, the Applicant confirmed that the study areas which have been scoped out relate to specific effects reported in other topics. The study area identified in the methodology covers the full extent where in-combination community effects are likely to occur.
- d. Quality assessments - Within the Applicant's response to the ExA's Written Questions **[REP4-068]**, the Applicant confirmed that the quality assessment locations were identified at an early stage of the assessment process to establish the baseline. As the design of the Proposed Development progressed and mitigation was identified, no in-combination effects on these resources were identified.
- e. Long term residential receptors – Within the Applicant's response to the ExA's Written Questions **[REP4-068]**, the Applicant confirmed that all community facilities including long term residential receptors and care facilities were assessed for potential in-combination community effects. No in-combination community effects on the Sue Ryder Neurological Care Centre or any other long term residential receptors or care facilities were identified.

- f. Raynham Way Recreation Ground – Within the Applicant’s response to the ExA’s Written Questions **[REP4-068]**, the Applicant confirmed that there is no significant in-combination effect on Raynham Way Recreation Ground. Table 2.3 in **Appendix 13.2** Open Space Survey Results of the **ES [APP-084]** was included in error and should have been removed from the Appendix. This has been noted in the **Deadline 5 Submission – 8.26 Errata Report [REP5-036]**.
- g. Wigmore Valley Park – The Applicant has provided responses to the various points raised by Stop Luton Airport Expansion in **Deadline 4 Submission [REP4-100]**.

Topic conclusion

- 9.9.35 The Health and Community assessment in **Chapter 13** of the **ES [REP10-009]** has been used to determine compliance with relevant planning policy. This is reported in the **Planning Statement [TR020001/APP/7.01]** and in **Planning Statement Appendix E - Policy Compliance Tables [REP5-018]**.
- 9.9.36 APF (Ref 9.11) paragraph 3.3 suggests proposals should aim to achieve a *“fair balance between the negative impacts of noise (on health, amenity (quality of life) and productivity) and the positive economic impacts of flights”*.
- 9.9.37 On open space, paragraph 5.106 of the ANPS (Ref 9.7) states *“Access to high quality open spaces and the countryside and opportunities for sport and recreation can be a means of providing necessary mitigation and/or compensation requirements...”*. Paragraph 5.112 adds *“Existing open space, sports and recreational buildings and land should not be developed unless the land is no longer needed or the loss would be replaced by equivalent or better provision...Any exchange land should be at least as good in terms of size, usefulness, attractiveness, quality, and accessibility...”*
- 9.9.38 Similarly, Chapter 8 of the NPPF (Ref 9.9) states that planning policies and decisions should aim to achieve healthy, inclusive, and safe places (paragraph 92). Paragraph 98 emphasises that *“...access to a network of high-quality open spaces...is important for the health and well-being of communities...”* Paragraph 99 indicates that existing open space should not be built on unless *“...the loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location.”*
- 9.9.39 The health and community assessment identifies effects on the health of the ‘population’ and on the lives of people within the local community, arising from direct and indirect impacts on community resources and the environmental, social, and economic impacts of the Proposed Development.
- 9.9.40 With regards to health, it has been demonstrated in **Chapter 13** of the **ES [REP10-009]** that, with the relevant mitigation and compensation measures in place, the Proposed Development would not result in unacceptable levels of harm to health. This included the benefits of increased employment opportunities against the negative impacts of increased noise.

- 9.9.41 With regards to communities, it has been demonstrated in **Chapter 13** of the **ES [REP10-009]** that, the Proposed Development will result in the loss of Prospect House Day Nursery with the assessment concluding that based on current supply and demand for nursery places, the loss of the nursery, prior to any mitigation, would represent an impact of high magnitude on a community resource with high sensitivity due to the lack of nearby comparable alternative facilities.
- 9.9.42 In order to mitigate the effect on Prospect House Day Nursery, the Applicant has engaged with the owner and operator of the nursery to identify reasonably practicable measures to help mitigate the likely effects. Prospect House Day Nursery is not anticipated to be demolished until assessment Phase 2a, therefore after 2032. A potential alternative property has been identified and the Applicant has committed to ensure that alternative facilities are provided, and agreements are in place, with adequate prior notice, to accommodate these services prior to the existing building being required for the Proposed Development. A further assessment to confirm replacement capacity requirements will be conducted closer to the time of closure. This commitment will be secured via a s106 agreement as described in Section 5.8 of the **Planning Statement [TR020001/APP/7.01]** submitted as part of the application for development consent.
- 9.9.43 The current operator of the nursery has not raised objection to this timeline and does not require formal agreement at this early stage, given the time available within the existing lease and new premises being required.
- 9.9.44 Matters raised during Examination in relation to health and the community are outlined above with the areas that are not agreed explained.
- 9.9.45 It is the Applicant's position that nothing has materially changed during the course of the Examination which fundamentally alters the assessment of policy accordance.
- 9.9.46 Having regard to the health and community matters in relation to this application for development consent, the Proposed Development accords with all relevant planning policy.

9.10 Landscape and Visual Impacts

Landscape and Visual Impacts assessment

- 9.10.1 The Landscape and Visual Impact assessment (LVIA) is reported in **Chapter 14** of the **ES [AS-079]**. Compliance with relevant legislation and policy is outlined in section 14.2 of **Chapter 14** and in section 8.9 of the **Planning Statement [TR020001/APP/7.01]**.

Construction

- 9.10.2 The assessment methodology in relation to landscape and visual effects during construction stage is set out in Section 14.5 of **Chapter 14** of the **ES [AS-079]** and in **Appendix 14.1** of the **ES [AS-036]**.

- 9.10.3 The LVIA considers effects during each of the three assessment phases to design capacity, to understand the effectiveness of proposed mitigation measures and changes to land management objectives during this period.
- 9.10.4 The LVIA combines construction effects and aircraft movement increases associated with each assessment phase and makes judgements based on the likely reasonable worst case scenario in each of these assessment periods.
- 9.10.5 The assessment periods considered in the LVIA are:
- a. Construction assessment Phase 1 and interim aircraft movement effects (c.2025 - 2032).
 - b. Construction assessment Phase 2a and interim aircraft movement effects (c. 2033 - 2036).
 - c. Construction assessment Phase 2b and interim aircraft movement effects (c. 2037 - 2042).
- 9.10.6 The assessment periods at assessment Phases 1 and 2b differ to those set out in **Chapter 4** of the **ES [AS-074]** and **Chapter 5** of the **ES [APP-032]**, in order to understand the effectiveness of proposed landscape-based mitigation measures and changes to land management objectives on landscape receptors and in screening impacts from development on visual receptors. These assessment periods include additionally the interim periods between construction in assessment Phase 1 ending in 2027 and construction in assessment Phase 2a commencing in 2033; and between construction activities ceasing in 2041 and the maximum passenger capacity being reached in 2043.

Operation

- 9.10.7 The assessment methodology in relation to landscape and visual effects during operation is set out in Section 14.5 of **Chapter 14** of the **ES [AS-079]** and in **Appendix 14.1** of the **ES [AS-036]**. The Assessment considers effects at the year of maximum passenger capacity – c.2043); and at the design year for the purposes of landscape-based mitigation, 15 years beyond the end of construction. The design year of 2056 represents a period 15 years after the assessment Phase 2b construction activities are scheduled to end in 2041 and has been selected to allow for the establishment of mitigation planting implemented during this period.

Landscape and Visual Impacts mitigation

- 9.10.8 Embedded mitigation measures proposed in relation to landscape and visual impacts are described in Section 14.8 of **Chapter 14** of the **ES [AS-079]** and in the **Mitigation Route Map [REP10-023]**. Additional landscape and visual mitigation measures are set out in section 14.10 of **Chapter 14** of the **ES [AS-079]**. A summary of the mitigation measures is provided below.

Construction

- 9.10.9 The Replacement Open Space (Work No. 5b(02)) is an integral part of the Proposed Development, which, in line with policy, is needed to replace existing public open space that would be lost to development in the western part of

Wigmore Valley Park. The Replacement Open Space (Work No. 5b(02)) would be provided as part of assessment Phase 1.

- 9.10.10 An area at least as large as may be affected by the proposed works would be made available for use by the public ahead of any site clearance activities that would impact existing public open space and construction operation.
- 9.10.11 Other mitigation and monitoring measures proposed during construction include:
- a. good practice measures to protect the landscape and visual amenity as set out and explained in the **CoCP** (refer to Appendix 4.2 of the **ES [REP8-013]**);
 - b. works to trees to be carried out in accordance with the **Arboricultural Impact Assessment** (AIA) contained in Appendix 14.3 of the **ES [REP9-015]**;
 - c. the functionality of the Public Rights of Way network would be protected throughout construction, to enable users to continue to exercise their rights whilst also protecting them from construction traffic.

Operation

- 9.10.12 The design of the Proposed Development has evolved to avoid impacting on ancient woodland at Winch Hill Wood, to retain mature woodland/hedgerow vegetation and coniferous plantation woodland long the ridgeline of Winch Hill, to retain an area of mature woodland to the north of Dairyborn Escarpment, and to retain (in part) hedgerow vegetation on the retained northern part of Wigmore Valley Park.
- 9.10.13 The design has evolved to avoid excavation on the ridgeline of Winch Hill or in land occupied by a potential Roman building, located within the field immediately to the south east of Wigmore Valley Park.
- 9.10.14 The replacement open space has been designed to avoid, minimise, replicate and/or replace landscape and visual effects by restoring boundary treatments, providing new screening planting and creating areas of meadow and mown grassland.
- 9.10.15 An earth bund would be formed on the south west boundary of the retained part of Wigmore Valley Park using fill material considered unsuitable for constructing the airfield platform.
- 9.10.16 Extensive planting of new trees, shrubs and seeding of meadow grassland are proposed to mitigate for the loss of existing vegetation and to provide new habitats and green corridors for wildlife.
- 9.10.17 The visual impact of new buildings and, where feasible, airfield equipment would be reduced through muted surface finishes.
- 9.10.18 An **Outline Landscape and Biodiversity Management Plan** has been prepared (Appendix 8.2 of the **ES [AS-029]**) that sets out measures for the management of existing and proposed vegetation.

- 9.10.19 Improvements to Public Rights of Way within the surrounding landscape are proposed, including upgrades of sections and improved signage.

Consideration of Landscape and Visual Impacts matters during Examination

- 9.10.20 During Examination the following issues were raised:

- a. A request from Natural England to assess the effects of the Proposed Development on the Special Qualities of the Chilterns Area of Outstanding Natural Beauty (AONB);
- b. Effects of the Proposed Development on the landscape of the AONB;
- c. The weight to be attributed to the potential extension of the AONB and the suitability of the AONB sensitivity test;
- d. The value of views within the potential AONB extension area;
- e. The implications of Section 245 of the Levelling-up and Regeneration Act 2023 (LURA);
- f. The visual effects of buildings and structures on the eastern edge of the Proposed Development;
- g. The effects of the Fire Training Ground (FTG) (work no. 2d), including lighting associated with the FTG, on views from Someries Castle, from Luton Hoo and from footpaths to the south of the airport.
- h. Hertfordshire Host Authorities Response at Deadline 5 **[REP5-067]** in response to written question PED.1.5, stated that it would expect that a design strategy which included a comprehensive approach towards the appropriate integration of this large-scale development into the host landscape would be included in relevant application documents. Hertfordshire Host Authorities consider that the measures set out in Table 3.4 of **Chapter 3** of the **ES [AS-026]** are limited.

- 9.10.21 In response the Applicant:

- a. Agreed to prepare an assessment of the effects of the Proposed Development on the Special Qualities (SQs) of the AONB **[REP7-046]**. The assessment concluded that the Proposed Development would have no significant effects on the SQs of the AONB.
- b. Acknowledges that the Proposed Development would result in significant adverse effects on the perceptual and aesthetic qualities of the AONB during Phase 2b and operation. However, these effects would occur solely as a result of increased aircraft movements over the AONB. Effects on the AONB arising from the physical works associated with the Proposed Development would be insignificant.
- c. Considers that at this stage no weight should be attributed to the potential extension to the AONB. The boundary change plan is at early stage akin to the early stages of a Local Plan review.
- d. Considers that the introduction of a designation to an existing view (in this case extension of AONB status) does not mean that the value of that view

is necessarily increased. It is acknowledged that a change in designation is possible but the enjoyment of the view experienced does not change as a result of the designation.

- e. Considers that the LURA amendment has no material effect on the existing assessments contained in its Environmental Statement and Planning Statement, nor on the Applicant's substantive case for development consent.
- f. Confirms that the visual effects of buildings and structures on the eastern edge of the Proposed Development have been assessed in Section 14.9 of the ES. Section 14.10 of the ES describes additional landscape and visual mitigation measures proposed in addition to embedded and good practice measures described in Section 14.8 of the ES. Section 14.11 of the ES concludes that the additional mitigation measures described in Section 14.10 of the ES are assessed to result, in the majority of instances, in Insignificant effects on visual receptors to the east of the Airport. The FTG floodlights are generally aimed towards the runway and not towards Luton Hoo, therefore the peak intensity of the FTG light sources is not visible in the direction of Luton Hoo
- g. Confirms that the visual effects of the Fire Training Ground have been considered as part of the assessment of visual effects in Sections 14.9 and 14.11 of the ES [**AS-079**] and the Detailed Visual Impact Assessment in Appendix 14.5 of the ES . Section 14.10 of the ES describes additional landscape and visual mitigation measures proposed in addition to embedded and good practice measures described in Section 14.8 of the ES. Section 14.11 of the ES concludes that the additional mitigation measures described in Section 14.10 of the ES are assessed to result, in most instances, in Insignificant effects on views from Someries Castle, from Luton Hoo and from footpaths to the south of the Airport.
- h. Explained in its **Response to Hertfordshire Host Authorities Comments [REP6-061]** that **Chapter 3** of the **ES [AS-026]** provides a summary of environmental design measures embedded within the Proposed Development to avoid or reduce environmental effects. The Applicant also explained other constraints and factors which led to the selection of the preferred option for the Proposed Development and noted that environmental design measures were provided to ensure compliance with the EIA Regulations. Full details of the landscape and visual embedded measures included in the design of the Proposed Development are provided in Section 14.8 of **Chapter 14** of the **ES [AS-079]**.

9.10.22 The only areas that are not agreed are at the end of Examination are:

- a. The effects on the Special Qualities of the AONB as discussed in item number 3.4.8 of the Statement of Common Ground between the Applicant and Natural England and item number HCC73 of the Statement of Common Ground between the Applicant and Hertfordshire County Council;
- b. The effects on the landscape of the AONB as discussed in item numbers HCC72 of the Statement of Common Ground between the Applicant and Hertfordshire County Council

- c. The effects of ash dieback, as discussed in item number CBC65 of the Statement of Common Ground between the Applicant and Central Bedfordshire Council;
- d. The need for a night time assessment, as discussed in item number CBC65 of the Statement of Common Ground between the Applicant and Central Bedfordshire Council;
- e. The operational effects of the Fire Training Ground as discussed in item numbers CBC65 and CBC67 of the Statement of Common Ground between the Applicant and Central Bedfordshire Council.

Topic conclusion

- 9.10.23 The landscape and visual assessment in **Chapter 14** of the **ES [AS-079]** has been used to determine compliance with relevant planning policy. This is reported in section 8.9 of the **Planning Statement [TR020001/APP/7.01]** and in **Planning Statement Appendix E - Policy Compliance Tables [REP5-018]**.
- 9.10.24 Paragraph 5.214 of the ANPS states the requirement for landscape and visual impacts to be assessed as part of the EIA. **Chapter 14** of the **ES [AS-079]** considered likely effects of the Proposed Development on the elements that make up the landscape, the specific aesthetic or perceptual qualities of the landscape, character of the landscape and changes in views or visual amenity.
- 9.10.25 It is reported that the Proposed Development is expected to have a range of both adverse and beneficial landscape and visual impacts. However, the Proposed Development has been designed carefully, aiming to avoid or minimise harm to the landscape and providing reasonable mitigation where possible and appropriate.
- 9.10.26 Section 8.9 of the **Planning Statement [TR020001/APP/7.01]** states that there will be an adverse impact on the surrounding landscape (including the Chilterns AONB) and visual impact caused by the Proposed Development. In most instances these impacts can be adequately mitigated but, in some instances, there will be residual adverse impacts resulting in harm which needs to be weighed in the planning balance (such as the parkland of Wigmore Valley Park). This harm is tempered by other instances where current landscape and visual impacts are improved (such as the network of PRow east of Luton) and the Proposed Development therefore accords with relevant landscape and visual impact planning policies taken as a whole.
- 9.10.27 With regard to the AONB, the Applicant considers that the Proposed Development has been designed sensitively and with regard to various factors, including the distance between the Proposed Development and the AONB, the topography, the scale of development proposed and the nature of existing intervening and surrounding built form. The Proposed Development would not compromise the purposes of the designation of the AONB as set out in the **Applicant's Response to Issue Specific Hearing 8 Action 42 - Chilterns Area of Outstanding Natural Beauty Special Qualities Assessment [TR020001/APP/8.144]**. Therefore, although the Proposed Development does not strictly protect or enhance the AONB, nor is there any strong conflict with either national or local AONB policies having regard to the nature and scale of

the assessed impacts on the AONB, and the purposes for its designation. Notwithstanding that great weight is to be given to conserving and enhancing landscape and scenic beauty of the AONB, the Applicant considers that this issue does not weigh heavily in the planning balance for the Proposed Development for these reasons.

- 9.10.28 Matters raised during Examination in relation to landscape and visual impacts are outlined above including a response and explanation of the matters not agreed.
- 9.10.29 It is the Applicant's position that nothing has materially changed during the Examination which fundamentally alters that assessment of policy accordance.
- 9.10.30 Having regard to the landscape and visual impact matters in relation to this application for development consent, the Proposed Development accords with all relevant planning policy.

9.11 Major Accidents and Disasters

Major Accidents and Disasters assessment

- 9.11.1 The Major Accidents and Disasters (MA&D) assessment is reported in **Chapter 15** of the **ES [APP-041]**. Compliance with relevant legislation and policy is outlined in section 15.2 of **Chapter 15** of the ES and in section 8.21 of the **Planning Statement [TR020001/APP/7.01]**.
- 9.11.2 It is noted that by definition all MA&D hazards have the potential to result in serious damage that would result in a significant effect, however in most cases the likelihood of a MA&D occurring is low or very low. The MA&D assessment outlines the reasonably foreseeable worst-case consequence of a MA&D event (i.e. the significant effect) and then determines the likelihood of the significant effect occurring in the event of a MA&D. Risks that are considered to be unacceptable are assessed as 'significant' and risks that are considered as tolerable or tolerable if As Low As Reasonably Practicable (ALARP)⁴ (TifALARP) are assessed as 'not significant'.
- 9.11.3 In summary, the assessment considers the risk of serious damage occurring as a result of the following:
- a. vulnerability of the Proposed Development to a natural disaster or to a major accident from an existing hazard source; and
 - b. the Proposed Development creating a new source of a major accident.

Construction

- 9.11.4 The assessment identified 30 potential MA&D hazards relevant to the Proposed Development during construction such as extreme weather events, fire,

⁴ As low as reasonably practicable (ALARP) is a term used to describe an expected level of residual risk involved with a system or set of operations, in case it is not possible to eliminate the risk. What this means, is that the Applicant, overseen by the regulatory authorities, is responsible for exercising good practice and judgement to ensure that necessary measures have been taken in order to reduce the levels of risk, such that the residual risk levels are 'as low as reasonably practicable'.

explosion and major leaks and spillages. The potential for construction activities to disturb the normal operation of the existing airport was considered.

- 9.11.5 Mitigation outlined below is considered to mitigate all MA&D risks to be as low as reasonably practicable. Therefore, the residual risks of MA&D are not likely to be significant.

Operation

- 9.11.6 The assessment identified 31 hazards during operation, such as extreme weather events, fire, explosion, major leaks and spillages and aircraft accidents. During operation, the Proposed Development would introduce additional aircraft movements, and therefore, the potential for an increased risk of aircraft accidents was considered.
- 9.11.7 Mitigation outlined below is considered to mitigate all MA&D risks to be as low as reasonably practicable. Therefore, the residual risks of MA&D are not likely to be significant.

Major Accidents and Disasters mitigation

- 9.11.8 Mitigation measures proposed in relation to MA&D are described in section 15.10 of **Chapter 15** of the **ES [APP-041]** and in the **Mitigation Route Map [REP10-023]**.

Construction

- 9.11.9 Measures to mitigate MA&D risks to and from the construction of the Proposed Development include but are not limited to:
- a. a detailed construction phasing plan is to be developed by the lead contractor which would consider the interaction of the works with airport operations and existing safety, environmental, emergency systems (refer to the **CoCP [REP8-013]**);
 - b. the lead contractor would be required to set up and implement accredited safety and EMS, including safe systems of work. These would identify all relevant legislation that must be complied with. Regular audits would be undertaken to monitor compliance against these management systems (refer to the **CoCP [REP8-013]**); and
 - c. the CoCP sets out requirements to minimise the risk of environmental pollution, including requirements for emergency preparedness and pollution incident response.

Operation

- 9.11.10 Measures to mitigate MA&D risks to and from the operation of the Proposed Development include but are not limited to:
- a. the drainage strategy of the Proposed Development has been developed to accommodate 1 in 100 year rainfall events, including an allowance of 40% for increase in rainfall with climate change and incorporates pollution

prevention measures (see Section 20.2 and Appendix 20.4 **Drainage Design Statement** of the ES [REP5-096]);

- b. slopes within the earthworks design have been specified at a gradient which would mitigate the risk of slope failure that could result in a landslide;
- c. to mitigate the risks associated with construction over the historic landfill site, piled foundations and ground gas protection would be embedded into the design of new structures;
- d. the highway design of the Proposed Development has been developed to the standards set within the Design Manual for Roads and Bridges (Ref 9.5). Road Safety Audits would be carried out to inform further design development;
- e. the layout of the Proposed Development has been developed in consultation with the airport's fire safety and emergency resilience officers. A fire hydrant system will be provided during assessment Phase 2a to connect to all new aircraft stands, and the existing number of emergency water tanks around the runway will be retained. A three minute response time across the airport for the onsite rescue and firefighting service has been maintained in the Proposed Development's design;
- f. the design of the proposed fuel storage facility incorporates measures to mitigate the risk of fire and explosion;
- g. the Proposed Development includes a direct connection between the fuel storage facility and the existing fuel pipeline to the east of the Main Application Site. This will provide the opportunity for fuel to be delivered to site via pipeline, reducing the need for fuel to be transported to the airport via road, and therefore, removing hazardous loads from the public road network;
- h. uninterruptible power sources have been incorporated within the design, which would provide emergency power for critical infrastructure, if mains power fails;
- i. the design of the Proposed Development has been developed not to attract birds in order to minimise the risk of bird strike;
- j. the Proposed Development will provide facilities for the on-site police service and rendezvous points for emergency services. An isolation bay has been incorporated within the airfield design, where aircraft can be directed, if required, in case of a threat or for disease control;
- k. the design of extended Luton DART includes emergency means of egress from trains and station platforms;
- l. the Proposed Development has been designed in compliance with relevant health and safety legislation, standards and guidance, including with regards to fire safety. In line with legal requirements, a fire risk

assessment will be undertaken, and a fire plan and evacuation strategy will be implemented on site;

- m. the Proposed Development would operate under the Civil Aviation Authority Aerodrome Certificate and in compliance with UK aviation law and relevant guidance;
- n. the on-site rescue and firefighting service would remain the first-responders for any incident within the airport boundary and the on-site Luton Airport Policing Unit would continue to police the airport;
- o. the proposed fuel farm would be operated under a Control of Major Accidents Hazards and Hazardous Substances Consent in compliance with relevant legislative requirements; and
- p. the Public Safety Zone, where planning restrictions apply, would be maintained to minimise the number of people and properties at risk in case of an accident occurring during aircraft landing or take-off.

Consideration of Major Accidents and Disasters matters during Examination

9.11.11 During Examination the following issues were raised:

- a. Public Safety Zone (PSZ) in relation to the need to revise the PSZ if the airport increased its passenger numbers during Written Questions.

9.11.12 In response the Applicant:

- a. Confirmed that the PSZ does not need to be revised due to the increased passenger numbers proposed as part the Proposed Development. The requirements for the PSZ are defined in the Department for Transport (DfT) Policy paper - Control of development in airport public safety zones - Updated 8 October 2021 (Ref 9.25). For aerodromes with greater than 45,000 commercial air transport movements (ATMs) per year, which is already the case at London Luton Airport, the public safety controlled zone (PSCZ) is 1,500m from the runway threshold and this does not change unless there is a change to the runway length or the position of the landing thresholds which is not the case with the Proposed Development.

9.11.13 The only area not agreed is as follows:

- a. The East of England Ambulance Service NHS Trust (EEAST) requested additional information forecasting the construction phase number and type of accidents in order to determine the likely/ potential impact on EEAST's services and resource capacity, and to inform the mitigation EEAST is seeking in terms of patient I.D, triage and handover procedures, as set out fully in EEAST's relevant representations **[RR-0401]**. The Applicant discussed this topic with EEAST during meetings held to progress the SoCG and the Applicant's full response is provided within the SoCG **[TR020001/APP/8.19]**.

Topic conclusion

- 9.11.14 The MA&D assessment in **Chapter 15** of the ES [APP-041] has been used to determine compliance with relevant planning policy. This is reported in section 8.21 of the **Planning Statement [TR020001/APP/7.01]** and in **Planning Statement Appendix E - Policy Compliance Tables [REP5-018]**.
- 9.11.15 Section 4, paragraph 4.35 of the ANPS states *“The Examining Authority and SoS will take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security standards which the design has to satisfy.”*
- 9.11.16 The Control of Development in Airport Public Safety Zones (Department for Transport (DfT)) (Ref 9.26) policy paper defines Public Safety Zones (PSZs), sets out the criteria for their establishment and states development within PSZs is restricted so as to control the number of people on the ground at risk of death or injury should an aircraft accident occur during landing or take-off.
- 9.11.17 **Chapter 15** of the **ES [APP-041]** includes consideration of the management of security risks, and protective security measures are proposed. The chapter assesses several plausible threats and natural hazards and proposes appropriate steps that will be taken to reduce vulnerability, increase resilience and ensure public safety and security. The Proposed Development therefore accords with the relevant planning policies and provisions concerning major accidents, disasters and public safety.
- 9.11.18 The only matter raised during Examination in relation to major accidents and disasters is outlined above alongside the Applicant’s response to this matter and explanation on the outstanding matter.
- 9.11.19 It is the Applicant’s position that nothing has materially changed during the Examination which fundamentally alters the assessment of policy accordancy.
- 9.11.20 Having regard to major accidents and disasters in relation to this application for development consent, the Proposed Development accords with all relevant planning policy.

9.12 Noise and Vibration

Noise and Vibration assessment

- 9.12.1 The noise and vibration assessment is reported in **Chapter 16** of the **ES [REP9-011]**. In summary, the scope of the assessment in **Chapter 16** covers the following sources of noise and vibration:
- noise and vibration from earthworks and construction of the Proposed Development infrastructure;
 - noise and vibration from construction traffic;
 - operational air noise⁵;
 - operational ground noise⁶;
 - surface access noise, including from the new road infrastructure resulting from the proposed development;
 - fixed plant noise; and
 - operational vibration.
- 9.12.2 Supporting information is provided in the following ES Appendices:
- Appendix 16.1 Noise and Vibration Information [REP9-017]** provides supporting detailed information for the noise and vibration assessment including details of acoustic terminology.
 - Appendix 16.2 Operational Noise Management (Explanatory Note) [REP10-019]** provides further detail on the mitigation and compensation described in the Noise and Vibration Chapter, with references to the certified documents that secure the mitigation.
 - Appendix 16.3 Fixed Plant Noise Management Plan [REP4-025]** describes the process to reduce and control adverse effects of fixed plant noise arising from operation of the Proposed Development.
- 9.12.3 Compliance with relevant legislation and policy is outlined in Section 16.2 of **Chapter 16** of the **ES [REP9-011]** and in Section 8.6 of the **Planning Statement [TR020001/APP/7.01]**. Compliance with the Overarching Aviation Noise Policy Statement (Ref 9.27), which was published after DCO submission, is outlined in **Commentary on the Overarching Aviation Noise Policy Statement [REP1-012]**.
- Overview**
- 9.12.4 For the assessment of noise and vibration effects, the concepts of Lowest Observed Adverse Effect Level (LOAEL), Significant Observed Adverse Effect Level (SOAEL) and Unacceptable Adverse Effect Level (UAEL), as defined in

⁵ Air noise is defined as noise emissions from all aircraft movements in the landing and take-off cycle associated with the airport

⁶ Ground noise is defined as noise emissions from aircraft taxiing between stand and runway, engine testing, Auxiliary Power Units (APU) and fire training ground activities

the Noise Policy Statement for England (Ref 9.28) and Planning Practice Guidance Noise (Ref 9.33), are used.

- a. LOAEL is defined as ‘the level above which adverse effects on health and quality of life can be detected’;
- b. SOAEL is defined as ‘the level above which significant adverse effects on health and quality of life occur’; and
- c. UAEL is defined as the level above which unacceptable adverse effects on health and quality of life occur which should be prevented.

9.12.5 Noise and vibration effects are identified as a result of the magnitude of change and the resulting exposure, with reference to the LOAEL and SOAEL thresholds.

9.12.6 Significant adverse effects on health and quality of life in noise policy terms are determined by noise or vibration exposure above the SOAEL.

9.12.7 Unacceptable adverse effects on health and quality of life in noise policy terms are determined by noise or vibration exposure above the UAEL. No receptors are forecast to exceed any noise or vibration UAEL as a result of the Proposed Development.

9.12.8 The LOAELs, SOAELs and UAELs for each source of noise and vibration are agreed with the Host Authorities in their SoCGs **[TR020001/APP/8.13-8.17]**. The exception to this is the surface access daytime UAEL, though it is accepted by the Host Authorities that the setting of the daytime UAEL does not affect the assessment outcomes, see Table 9-2 for further information.

9.12.9 Likely significant effects in EIA terms are determined by noise change when comparing a situation with the Proposed Development and without the Proposed Development in a given assessment year where the baseline or forecast noise levels exceed the LOAEL.

Construction noise and vibration assessment

9.12.10 The method for assessing construction noise and vibration is summarised in Section 16.5 of **Chapter 16** of the **ES [REP9-011]**. As noted in the Host Authority SoCGs **[TR020001/APP/8.13-8.17]**, the Host Authorities agree with the approach, modelling and methodologies for the construction noise and vibration assessment.

9.12.11 The assessment outcomes of the construction noise and vibration assessment are presented in Section 16.9 of **Chapter 16** of the **ES [REP9-011]**, taking into account the embedded mitigation secured by the CoCP, and no significant adverse effects were identified. An additional quantitative assessment of night-time construction noise and vibration was undertaken and reported in **Assessment of night-time construction noise [REP4-080]** in response to the ExA’s Action 1 from Issue Specific Hearing 3 **[EV8-008]**, confirming the outcomes of the qualitative assessment in **Chapter 16 [REP9-011]** that no significant adverse effects were identified.

Operational noise and vibration assessment

Air noise assessment

- 9.12.12 The methodology for assessing air noise is summarised in Section 16.5 of **Chapter 16** of the **ES [REP9-011]**. As noted in the Host Authority SoCGs **[TR020001/APP/8.13-8.17]**, the Host Authorities agree with the approach, modelling and methodologies for the air noise assessment.
- 9.12.13 No new significant effects on health and quality of life have been identified in any assessment phase as a result of air noise from the Proposed Development taking into account the embedded mitigation secured by the **Green Controlled Growth Framework [REP9-022]**, the **Air Noise Management Plan [REP9-047]**, and the **Compensation Policies, Measures and Community First [TR020001/APP/7.10]**. Communities that experience continuing exposure above the SOAEL will be eligible for a full package of noise insulation that will avoid continuing significant effects on health and quality of life.
- 9.12.14 Adverse likely significant noise effects above SOAEL during the daytime and night-time have been identified due to change in noise as a result of the Proposed Development in assessment Phase 1, 2a and 2b. These effects would be avoided by the noise insulation scheme.
- 9.12.15 For assessment Phase 1, the difference in noise would be between 0 and 2 dB higher with the Proposed Development. Most of this change will be experienced by the population at lower noise exposure levels between the LOAEL and SOAEL, and the magnitude of change would not lead to adverse likely significant effects. Whilst the noise insulation scheme will be rolled out as quickly as is reasonably practicable, it may not be possible to offer and install noise insulation (where the offer is accepted) to all impacted communities before the relevant noise change occurs, due to the capacity of the market to meet immediate demand. In such cases there may be temporary adverse likely significant effects in assessment Phase 1 for 3,800 people until such time as noise insulation can be provided and the adverse likely significant effects avoided. The Applicant has made multiple updates to **Compensation Policies, Measures and Community First [TR020001/APP/7.10]** to provide further information on the proactive and accelerated delivery program for the noise insulation scheme. See **Section 13.6** of this closing submission for further information.
- 9.12.16 For assessment Phase 2a the difference in noise would be between 1 and 2 dB higher with the Proposed Development. Most of this change will be experienced by the population at lower noise exposure levels between the LOAEL and SOAEL, and the magnitude of change would not lead to adverse likely significant effects. The extensive noise insulation scheme that forms part of the application for development consent would avoid the adverse likely significant effects that would otherwise occur in assessment Phase 2a for 200 people during the day and 2,600 people during the night. By assessment Phase 2a, noise insulation will have been rolled out to all the communities that would otherwise experience adverse likely significant effects.

- 9.12.17 For assessment Phase 2b the difference in noise would be between 1 and 3 dB higher with the Proposed Development. Most of this change will be experienced by the population at lower noise exposure levels between the LOAEL and SOAEL, and the magnitude of change would not lead to adverse likely significant effects. The extensive noise insulation scheme that forms part of the application for development consent would avoid the adverse likely significant effects that would otherwise occur in assessment Phase 2b for 500 people during the day and 3,250 people during the night. By assessment Phase 2b, noise insulation will have been rolled out to all the communities that would otherwise experience adverse likely significant effects.
- 9.12.18 For the (non-significant) adverse effects between LOAEL and SOAEL the embedded mitigation described above mitigates and minimises noise as far as reasonably practicable in line with Government noise policy.

Ground noise assessment

- 9.12.19 The methodology for assessing ground noise is summarised in Section 16.5 of **Chapter 16** of the **ES [REP9-011]**. As noted in the Host Authority SoCGs **[TR020001/APP/8.13-8.18]**, the Host Authorities agree with the approach, modelling and methodologies for the ground noise assessment.
- 9.12.20 The assessment outcomes of the ground noise assessment are presented in Section 16.9 of **Chapter 16** of the **ES [REP9-011]**. With respect to ground noise, households adjacent to the airport are expected to experience changes in noise levels across the assessment phases (increases of up to 3dB and decreases of up to 2dB). However, the vast majority of these noise changes will be experienced by the population at lower noise exposure levels between the LOAEL and SOAEL, and the magnitude of change would not lead to adverse likely significant effects.
- 9.12.21 A small number of households (six in assessment Phase 1, reducing to four in assessment Phase 2a and 2b) close to the airport will experience adverse likely significant effects due to noise change above SOAEL that will be avoided by the provision of noise insulation.
- 9.12.22 No adverse likely significant effects are predicted for noise sensitive non-residential receptors in any assessment phase.

Surface access noise assessment

- 9.12.23 The methodology for assessing surface noise is summarised in Section 16.5 of **Chapter 16** of the **ES [REP9-011]**. As noted in the Host Authority SoCGs **[TR020001/APP/8.13-8.18]**, the Host Authorities agree with the approach, modelling and methodologies for the ground noise assessment.
- 9.12.24 The exception to this which is also recorded in the SoCGs is the setting of the daytime surface access UAEL of 74dBL_{Aeq,16h}. Whilst the Applicant has provided full justification for this UAEL in **Chapter 16 of the ES [REP9-011]** and in **Surface Access Noise Modelling Additional Information [REP3-045]**, the Host Authorities consider the daytime surface access UAEL should be 71dBL_{Aeq,16h}. However, the Host Authorities have noted that irrespective of the

UAEL value (within the range 71-74 dB), it is accepted that the assessment outcomes remain unchanged (with no receptors forecast to be exposed above the UAEL) and acceptable.

- 9.12.25 The assessment outcomes of the surface access noise assessment are presented in Section 16.9 of **Chapter 16** of the **ES [REP9-011]**.
- 9.12.26 Minor increases in road traffic are expected on most major routes but typically not to the extent that they would result in significant adverse effects in terms of road traffic noise exposure. However, for some houses along Crawley Green Road, minor increases in road traffic noise in assessment Phase 2a and Phase 2b could lead to indirect adverse likely significant effects because of the existing high road traffic noise levels in the area (above the SOAEL). As these effects are far into the future and depend on forecast traffic data, the effects will be reassessed using more up to date traffic data nearer the time, and noise insulation will be provided to avoid the significant effects should the reassessment confirm that they are likely to occur. This is secured in the **Compensation Policies, Measures and Community First [TR020001/APP/7.10]**.
- 9.12.27 Potential indirect adverse likely significant effects in assessment Phase 2b are also predicted for some residents in Tea Green as a result of increased traffic on Stony Lane, although absolute road traffic noise levels are not expected to be high (i.e. they remain below the SOAEL). Further information on these indirect adverse likely significant effects is provided in Section 3.2 of the **Applicant's ISH8 post hearing submission [REP6-066]** that the effects are limited to an average noise increase during the day is due to an intensification (increase in the frequency) of traffic from about 1 car passby per minute to about 2 car passbys per minute, rather than closer or louder cars. No practicable noise mitigation is possible and as the policy requirement for exposure between LOAEL and SOAEL is to mitigate and minimise (not avoid) adverse effects in the context of sustainable development, this remains fully compliant with noise policy.
- 9.12.28 There are also some localised beneficial effects on road traffic noise associated with the Proposed Development. For example, once the airport access road is open, road traffic, and therefore road traffic noise, on Eaton Green Road is expected to reduce. However, these beneficial effects are not likely to be significant.
- 9.12.29 No adverse likely significant effects are predicted for noise sensitive non-residential receptors in any assessment phase.

Fixed plant noise assessment

- 9.12.30 The methodology for assessing fixed plant noise is summarised in Section 16.5 of **Chapter 16** of the **ES [REP9-011]**. The level of design detail at the time of the DCO submission and examination for fixed plant is limited, as is normal for any project of this nature. The methodology for assessment of significant effects of fixed plant is therefore to avoid significant adverse effects and reduce adverse effects as far as is reasonably practicable, through a requirement to design fixed plant following a noise management process derived from

guidance in British Standard 4142 (Ref 9.29). This approach is described in further detail in the Appendix 16.3 **Fixed Plant Noise Management Plan [REP4-025]** which is secured by a requirement to the DCO. As fixed plant will be designed following this approach; the permanent effect of operational building services noise in all assessment phases would be not significant.

Operational vibration

- 9.12.31 A qualitative assessment of operational vibration has been undertaken by identifying potential sources of vibration and their distance to the nearest sensitive receptors with comparison to recommended study area distances from relevant guidance including the Design Manual for Roads and Bridges (Ref 9.5), the Federal Transit Administration's Transit Impact Assessment guidance (Ref 9.30) and ISO 14837 Mechanical vibration — Ground-borne noise and vibration arising from rail systems (Ref 9.31).
- 9.12.32 As the minimum distance between the Luton DART and any area on which aircraft would operate on the ground is over 400m, which is substantially greater than the 60-100m distances recommended for vibration assessment in the references described above, it is considered that operational ground-borne vibration as a result of the Proposed Development will be not significant.
- 9.12.33 Given that the condition of road surfaces on the majority of the highway network is outside the scope of the Proposed Development, with only localised junction improvements proposed, an assessment of road traffic vibration was scoped out.

Noise and Vibration mitigation

Overview

- 9.12.34 Mitigation measures proposed in relation to noise and vibration are described in section 16.8 and 16.10 of **Chapter 16** of the ES **[REP9-011]** and in the **Mitigation Route Map [REP10-023]**.
- 9.12.35 To mitigate the effects of the Proposed Development, a range of measures are proposed as described in the following sub-sections. In line with aviation policy (Ref 9.27), the Noise Policy Statement for England (NPSE, Ref 9.32), Planning Practice Guidance Noise (PPGN, Ref 9.33) and Government's policy on sustainable development, the Proposed Development includes noise mitigation measures to:
- a. limit and, where possible, reduce the number of people significantly affected by adverse impacts from aircraft noise;
 - b. prevent unacceptable adverse effects on health and quality of life from noise and vibration;
 - c. avoid significant adverse effects on health and quality of life from noise and vibration;
 - d. mitigate and minimise adverse effects on health and quality of life from noise and vibration;

- e. where possible contribute to improvements of health and quality of life from noise; and
- f. share the benefits of future technological improvements between the airport and its local communities to achieve a balance between growth and aircraft noise reduction.

Construction noise and vibration mitigation

- 9.12.36 The **CoCP** (Appendix 4.2 of the ES **[REP8-013]**) sets out measures to minimise noise and vibration from construction activities, including the requirement for contractors to use quieter machinery and equipment and construction methods which are not inherently noisy. The measures include, but are not limited to, the following:
- a. best practicable means⁷ measures to minimise noise and vibration (e.g. control of working hours, selection of quiet construction methods and plant and provision of screening);
 - b. noise and vibration monitoring;
 - c. seeking prior consent for the above from the local authority before noisy or perceptible vibration inducing works are commenced;
 - d. details of works notifications to nearby houses; and
 - e. details of a complaints procedure.
- 9.12.37 Following discussions at Issue Specific Hearing 3, changes were made to the CoCP to:
- a. introduce a hierarchy of time period for out of core hours working to protect the most sensitive periods of the day and night;
 - b. restrict the area in which earthworks can take place to ensure that earthworks are only undertaken in less noise-sensitive areas outside of core hours;
 - c. add restrictions relating to impact piling; and
 - d. align the vibration thresholds in the CoCP to the vibration assessment criteria in **Chapter 16** of the **ES [REP9-011]**.
- 9.12.38 The construction noise and vibration mitigation will avoid significant adverse effects on health and quality of life and mitigate and minimise adverse effects on health and quality of life, from construction noise and vibration. As a result, no significant effects have been identified for construction noise and vibration.

⁷ 'Best Practicable Means' (BPM), as defined by as defined in Section 72 of the Control of Pollution Act, are means employed to minimise noise, taking into account things such as local conditions, technology, cost and safety.

Operational mitigation

Air noise mitigation

- 9.12.39 The Noise Envelope is a legally binding framework to monitor, manage and control aircraft noise, including a defined mechanism to share the noise reduction benefits of future technological improvements in aircraft between the airport and local communities. The Noise Envelope will be secured as part of the DCO through the **Green Controlled Growth Framework [TR020001/APP/7.07]** providing a framework of Limits and controls to manage aircraft noise. The **Green Controlled Growth Explanatory Note [TR020001/APP/7.08]** includes details on how the Noise Envelope will be enforced through GCG, including independent oversight and scrutiny.
- 9.12.40 The Noise Envelope has been integrated into the **GCG Framework [TR020001/APP/7.08]** so that the enforcement, control and reporting processes set out within GCG will automatically apply to the Noise Envelope, avoiding the need for duplication of processes and enforcement bodies and providing consistency across the four topics covered by the **GCG Framework [TR020001/APP/7.08]** (noise, air quality, carbon and surface access).
- 9.12.41 In essence, the Noise Envelope defines the noise environmental outcomes to be achieved, or bettered, rather than pre-defining the specific mitigation mechanisms employed to achieve the outcomes which may or may not prove to be successful. Given that the airport expansion is planned over an extended period of time, this approach provides certainty of the outcomes that will result even in the reasonable worst-case scenario, whilst also providing appropriate flexibility for the airport operator to identify and implement the optimum mitigation at the time it may become required and draw on future technology improvement.
- 9.12.42 The Noise Envelope provides several enhancements to the current consented noise controls, such as independent scrutiny and oversight, increased transparency, adaptive mitigation and management plans and Noise Limit Reviews. The Noise Envelope also requires a more proactive approach to forward planning the management of noise through the introduction of Thresholds below each Limit and the use of Quota Count (QC) budgets when planning growth. See **Comparison of consented and proposed operational noise controls [REP5-014]** for further details. During examination, improvements were made to the Noise Envelope (see **Section 12.2** of this closing submission for a full list of improvements), and a worked example was provided that can be used to reasonably conclude that the Noise Envelope would have avoided the historic breaches that occurred in 2017-2019, see **Noise Envelope – improvements and worked example [REP2-032]**.
- 9.12.43 The Noise Envelope Limits and Thresholds are defined using the L_{Aeq} metric to ensure the effects on health and quality of life during the day and night are limited and where possible reduced. The L_{Aeq} metric was chosen as recent research updates from the Civil Aviation Authority (CAA) have shown that this metric is best correlated with daytime (annoyance) and night-time (sleep disturbance) health effects (Ref 34, 35 and 36). The use of the L_{Aeq} metric as

the principal noise control also aligns the Noise Envelope with the methodology for identifying significant effects used in the noise assessment in **Chapter 16** of the ES **[REP9-011]**, ensuring that the Noise Envelope has the ability to limit the noise effects to those presented in the ES and ensure that they are not exceeded.

- 9.12.44 The Noise Envelope Limits and Thresholds are aligned with the Faster Growth Scenario to ensure that the noise effects will not exceed the assessed 'reasonable worst case' in the ES. At Deadline 9, an update was made to the assessment of the Faster Growth scenario (referred to as the Updated Faster Growth scenario) which assumes a faster fleet transition to new-generation aircraft, reducing noise effects and reducing the Noise Envelope Limits and Thresholds in turn, see **Applicant's position on contour and movement limits [REP9-055]**.
- 9.12.45 The Noise Envelope also requires that QC budgets are derived from the contour area Limits and Thresholds and are used:
- a. to inform forward planning of airport operations (both annual and five-year forward plans);
 - b. to incentivise airlines to operate the quietest aircraft available in response to the opportunity of growth;
 - c. as part of the bi-annual process of slot management and capacity declaration; and
 - d. where, in the forward plan, the Level 2 Threshold Equivalent QC or Limit Equivalent QC is exceeded, to include within the annual Monitoring Report proposals for slot management measures, additional interventions or mitigation to ensure that the Limits will not be exceeded.
- 9.12.46 Further detail on this mechanism is provided in **Applicant's Response to Issue Specific Hearing 9 Actions 8, 19 and 20 - Quota Count Noise Controls [REP7-077]** which provides a worked example and demonstrates how this mechanism provides a link between the 92-day summer Noise Envelope contour area noise controls and the full calendar year.
- 9.12.47 As part of the Aviation 2050 consultation, the CAA in CAP1731 (Ref 9. 37) undertook a review of aircraft noise limits and their pros and cons, informed by a benchmarking exercise of noise controls at major airports, and provided recommendations for noise limit schemes. The conclusion of this exercise was the recommendation of:
- "A locally set absolute Quota Count or noise contour area limit at a particular noise level for both day and night for each airport"*
- 9.12.48 The Applicant's Noise Envelope, with its contour area Limit and QC budget requirements is fully in line with this recommendation.
- 9.12.49 As set out in Section 3.2 of **Appendix 16.2** of the **ES [REP10-019]**, the Noise Envelope is fully compliant with aviation noise policy, including the Aviation Policy Framework (Ref 9.11), the Airports National Policy Statement (Ref 9.7),

Flightpath to the Future (Ref 9.12) and the Overarching Aviation Noise Policy Statement (Ref 9.25).

- 9.12.50 Following discussion at the Issue Specific Hearings in September 2023, further discussions with the Host Authorities and the decision to approve the P19 application (21/00031/VARCON), the Applicant submitted an **Air Noise Management Plan [TR020001/APP/8.125]** to secure the continuation of the following additional noise controls that are compatible with the growth sought by the DCO:
- a. a movement limit of 9,650 during the Night Quota Period (23:30 – 06:00)⁸;
 - b. a QC limit of 3,500 during the Night Quota Period (23:30 – 06:00);
 - c. a ban on QC2 aircraft or above during the full night period (23:00 – 07:00);
 - d. track violation penalties; and
 - e. departure Noise Violation Limits.
- 9.12.51 Whilst, as discussed in Issue Specific Hearing 3, it was anticipated that these controls would have been maintained through the airport operator's Noise Action Plan, the **Air Noise Management Plan [REP9-047]**, which is secured by a Requirement to the DCO, provides certainty that these controls will be maintained.
- 9.12.52 The Host Authorities have agreed with the inclusion of these additional noise controls in the SoCGs **[TR020001/APP/8.13-8.17]**.
- 9.12.53 In summary, the Applicant considers that the proposed combination of contour area Limits, Night Quota Period QC limits and Night Quota Period movement limits are fully robust, are in line with best practice in airport noise controls and are in line with Civil Aviation Authority recommendations for noise control.
- 9.12.54 The Applicant therefore does not consider it necessary or reasonable to provide additional movement limits. Further justification for this position is provided in **Applicant's position on noise contour and movement limits [REP9-055]**.
- 9.12.55 As part of the Proposed Development, the current air noise insulation scheme administered by the airport operator will be updated if development consent is granted. The updated noise insulation scheme improves on the current scheme and goes beyond the government proposals set out in Aviation 2050 (Ref 38).
- 9.12.56 The proposed noise insulation scheme offers a substantial improvement on the current scheme by offering a fully funded package of insulation for habitable rooms for properties within the daytime SOAEL noise contour and a fully funded package of insulation for bedrooms for properties within the night-time SOAEL. Additionally, properties outside the SOAEL contours and within the 54dB_L^{Aeq,16h} noise contour will receive a contribution towards the cost of agreed noise insulation works.

⁸ This restriction has been part of the proposed noise controls since DCO submission.

9.12.57 The air noise mitigation will avoid significant adverse effects on health and quality of life, and mitigate and minimise adverse effects on health and quality of life, from air noise. As a result, no significant effects on health and quality of life (due to high noise exposure) or adverse likely significant effects (due to noise change) have been identified for air noise.

Ground noise mitigation

9.12.58 The Proposed Development has been designed to reduce aircraft ground noise by providing additional taxiways and improving the use of airfield layout to reduce aircraft taxi time and queueing. An engine run-up bay for engine testing has been located within a specially designed facility with noise screening and noise barriers have been provided to reduce the impact of aircraft ground noise.

9.12.59 Following discussion at the Issue Specific Hearings in September 2023, the Applicant submitted an **Outline Ground Noise Management Plan [TR020001/APP/8.46]** to secure the continuation of the ground noise controls relating to:

- a. ground running of aircraft propulsion engines;
- b. preferential use of stands and taxiways;
- c. use of Auxiliary Power Units and Ground Power Units; and
- d. ground run tests at night and locations for ground run test during the day.

9.12.60 Whilst, as discussed in Issue Specific Hearing 3, it was anticipated that these controls would have been maintained through the airport operator's Noise Action Plan, the adoption of a Ground Noise Management Plan which must be substantially in accordance with the **Outline Ground Noise Management Plan [TR020001/APP/8.46]**, secured by a requirement to the DCO, provides certainty that these controls will be maintained.

9.12.61 A further addition made during examination was to include daytime and night-time ground noise eligibility criterion for the noise insulation schemes in **Compensation Policies, Measures and Community First [TR020001/APP/7.10]**, to secure the continuation of the existing ground noise insulation scheme.

9.12.62 The ground noise mitigation will avoid significant adverse effects on health and quality of life, and mitigate and minimise adverse effects on health and quality of life, from ground noise. As a result, no significant effects on health and quality of life (due to high noise exposure) or adverse likely significant effects (due to noise change) have been identified for ground noise.

Surface access noise mitigation

9.12.63 The Proposed Development is committed to improving accessibility to the airport, particularly by public transport which will reduce the impacts from road traffic noise. This is secured in the **Framework Travel Plan [TR020001/APP/7.13]**. In addition, the Airport Access Road will be constructed using a surfacing material, secured in the **Design Principles [REP9-030]**, designed to reduce noise.

- 9.12.64 The assessment of noise from the Proposed Development presented in **Chapter 16** of the **ES [REP9-011]** has identified the potential for indirect significant adverse effects, in 2039 and 2043, for specific properties on Crawley Green Road due to intensification of road traffic using existing public highways, where road traffic noise levels are expected to be above the SOAEL with the Proposed Development in place.
- 9.12.65 Monitoring of airport trips will be undertaken on an annual basis with wider traffic surveys undertaken every 5 years to provide the information required to undertake forecast surface access noise modelling up to 5 years into the future at properties where an indirect significant adverse effect above SOAEL has been identified in **Chapter 16** of the **ES [REP9-011]**. To account for any potential atypical night-time flows, the monitoring will collect sufficient data for Transport Research Laboratory Method 1 (Ref 39) to be employed for the stretch of Crawley Green Rd from Vauxhall Way to Hedley Rise. This monitoring and remodelling will be used to identify eligibility for noise insulation if required.
- 9.12.66 For properties in which a significant effect is confirmed through the updated modelling described above, a package of noise insulation to habitable rooms, including bedrooms, living rooms, and dining rooms would be offered with respect to the façade or facades that triggered the significant effect. See **Compensation Policies, Measures and Community First [TR020001/APP/7.10]** for more information. Provision of noise insulation will avoid the significant effects on health and quality of life that would otherwise occur.
- 9.12.67 The surface access noise mitigation will avoid significant adverse effects on health and quality of life, and mitigate and minimise adverse effects on health and quality of life, from surface access noise. As a result, no significant effects on health and quality of life have been identified for surface access noise. Potential indirect adverse likely significant effects have been identified for some residential properties on Stony Lane where no practicable noise mitigation has been identified (see Section 3.2 of the **Applicant's ISH8 post hearing submission [REP6-066]** for further information).

Fixed plant noise mitigation

- 9.12.68 Fixed plant noise will be designed, constructed, operated and maintained in order to meet the noise management process specified in the **Fixed Plant Noise Management Plan [REP4-025]** secured by a requirements to the DCO. As a result, no significant effects on health and quality of life (due to high noise exposure) or adverse likely significant effects (due to noise change) have been identified for fixed plant noise.
- 9.12.69 Following Issue Specific Hearing 3 and discussion with the Host Authorities, the Applicant updated the **Fixed Plant Noise Management Plan [REP4-025]** to reduce the initial noise rating level target of 10dB below background instead of 5dB below background. The Applicant also updated the management plan to require that the surveys used to define the background sound levels will be carried out no later than 12 months following serving notice under article 44(3)

of the DCO. These updates to the management plan will avoid any issues of ‘baseline creep’ resulting in relaxed assessment criteria as baseline sound levels change as the airport expands.

Consideration of noise and vibration matters during Examination

9.12.70 During the examination several key noise and vibration issues were raised, discussed and addressed as summarised in **Table 9-1**.

Table 9-1: Summary of key noise and vibration issues raised throughout the Examination

Issues raised	Applicant response
Construction noise and vibration	
<p>The issue of impact piling was discussed at ISH3 and the ExA issued Action 10 [EV8-008] for the Applicant to consider whether a restriction on piling would be needed and if so how and where would this be secured. The issue was further discussed at ISH8 and the ExA issued Action 1 [EV15-013] to review to review the effect of impact piling if it were to occur and whether it needs to be assessed in the ES.</p>	<p>Following discussion with LBC, the Applicant agreed with LBC to add restrictions relating to impact piling to the CoCP [REP8-013] at paragraph 14.2.7. This addition was agreed as appropriate by all Host Authorities in the SoCGs [TR020001/APP/8.13-8.17].</p> <p>With regards to an assessment of impact piling, the Applicant responded in the ISH8 post hearing submission [REP6-066], noting that it is not proposed that impact piling would take place as part of construction of the Proposed Development. It is therefore considered that an appropriate assessment of the likely significant effects of construction has already been undertaken and therefore impact piling does not need to be assessed in the ES.</p>
<p>The issue of night-time construction was discussed at ISH3 and the ExA issued Action 1 [EV8-008] to undertake a quantitative assessment of night-time construction noise impacts based on the proposed night-time works.</p>	<p>This additional assessment was undertaken and reported in Assessment of night-time construction noise [REP4-080]. The assessment confirmed the outcomes of the qualitative assessment in Chapter 16 [REP9-011] that no significant adverse effects were identified.</p> <p>To secure that the works are undertaken in line with the reasonable assumptions that were made in undertaking this assessment, changes were made to the CoCP [REP8-013] to introduce a hierarchy of time period for out of core hours working to protect the most sensitive periods of the day and night and to restrict the area in which earthworks can take</p>

Issues raised	Applicant response
	place to ensure that earthworks are only undertaken in less noise-sensitive areas outside of core hours.
At ISH3 the ExA queried the temporary vibration thresholds in the Code of Construction Practice and whether the Host Authorities agree with the thresholds	The CoCP [REP8-013] was updated following ISH3 and discussions with the Host Authorities to remove the temporary vibration thresholds and maintain consistent thresholds with Chapter 16 of the ES [REP9-011] . This change was agreed with the Host Authorities as recorded in the SoCGs [TR020001/APP/8.13-8.17] .
Air noise	
Validation of the Aviation Environmental Design Tool (AEDT) air noise model was discussed at ISH3 and ISH8 and was the subject of many written submissions and ExA Written Questions	<p>The Applicant provided a summary of the AEDT noise model validation process in Applicant’s ISH3 post hearing submission [REP3-050], noting that full detail of the validation process is provided in Appendix 16.1 of the ES [REP9-017].</p> <p>The ExA issued several Written Questions relating to the AEDT noise model assumptions and validation (NO.1.11, NO.1.12, NO.1.13, NO.1.14, NO.1.15, NO.1.16) which were fully responded to by the Applicant [REP4-060].</p> <p>At several deadlines LADACAN and other interested parties submitted written comments on the noise model validation which were fully responded to by the Applicant.</p> <p>Following discussions at ISH3, the Applicant updated the Aircraft Noise Monitoring Plan [REP7-026] to require that the air noise model used for forward planning and to determine compliance with the Noise Envelope Limits should be checked and validated annually rather than every five years.</p> <p>The AEDT noise model validation has been the subject of technical scrutiny by the Host Authorities’ noise consultant and the Civil Aviation Authority (CAA). As a result, the AEDT noise model validation is agreed as appropriate in the SoCGs for each Host Authority [TR020001/APP/8.13-8.17] and the CAA [TR020001/APP/8.10].</p> <p>The Applicant, LADACAN and the Suono (on behalf of the Host Authorities) met on 8 February to discuss LADACAN’s concerns about input data for the noise model validation process as raised in various LADACAN submissions. The Applicant and LADACAN agreed that the purpose of the “cut-off” of noise monitoring terminal measurement data (as raised</p>

Issues raised	Applicant response
	<p>by LADACAN in [REP9-081]) is intended to avoid issues with measured noise levels being compromised by ambient sound and non-aircraft noise sources. The Applicant and LADACAN also agreed that there is newer data available from temporary noise monitoring terminals which may help to explain the differences in measured and modelled data at certain locations, such as the LTN_SLTN monitoring location. However, the Applicant set out how this data would only be likely to resolve the observed disparities at the individual locations and would not result in changes to the noise model validation. The noise model validation uses global adjustments to the aircraft noise performance itself, so further adjustments cannot be made to the validation without compromising the validation at all the other locations where there is good agreement between measured and modelled data.</p> <p>In this meeting, LADACAN also raised their concerns about the risk that the model is currently overpredicting, and that future validation of the model could result in lower noise levels and therefore allow more aircraft to be flown within the noise contour area Limits. The Applicant explained that the model does not overpredict and the validation is robust (as agreed in the SoCGs with the Host Authorities and CAA), but that there are opportunities for the noise contour area Limits to be revised in future – see the Noise Limits review process in the Green Controlled Growth Framework [TR020001/APP/7.08]. This review would be scrutinised by the Environmental Scrutiny Group and Noise Technical Panel and the setting of new Noise Envelope Limits would take into account any updates made to the modelling through the annual validation process that had taken place up to that point.</p>
<p>The extent to which the proposed development ‘shares the benefits’ of aircraft technology improvements was discussed at ISH9 and was the subject of several written submissions.</p>	<p>The Applicant is committed to sharing the benefits of future technological improvements (in terms of aircraft noise reduction) between communities and industry. The benefit of the transition to ‘new generation’ aircraft (e.g. the Airbus 320Neo and 321Neo and the Boeing 737Max) will be shared with the community, through the setting of the Noise Envelope Limits and the Noise Limit Review process. The extent to which the Proposed Development ‘shares the benefits’ is quantified in Section 3 of Appendix 16.2 of the ES [REP10-019].</p> <p>As set out in the GCG Explanatory Note [TR020001/APP/7.08], the Noise Envelope secures the</p>

Issues raised	Applicant response
	<p>incentivisation and transition into the fleet of quieter new generation aircraft, this is secured by the stepping down of noise contour Limits in 2029 and again in 2034. This incentivises and secures improvement in aircraft noise levels that can be quantified at this time based on known performance of new generation aircraft, sharing the benefit with the community.</p> <p>For the later years of expansion (assessment Phase 2a and onwards), The Noise Envelope includes a defined mechanism to share the noise reduction benefits of future technological improvements in aircraft between the airport and local communities. This would be controlled through a requirement to review the Limits and Thresholds in 5-year cycles and reduce these, if reasonably practicable, as and when future technology becomes available, and its noise performance known. The Noise Limit Review requires the airport operator to reduce the limits to below the 2019 Consented baseline (based on the 2017 permission consent not the higher P19 consent) as quickly as is reasonably practicable. The Noise Limit Review will be independently overseen by the Noise Technical Panel and subject to approval by the Environmental Scrutiny Group (see Chapter 12 of this closing submissions).</p> <p>The requirement for five year forward noise forecasts and QC budgets as set out in paragraph 3.1.7 in the GCG Framework [TR020001/APP/7.08] as part of the slot allocation and capacity declaration process will drive the airlines to re-fleet to secure growth while meeting the noise Limits in the GCG.</p>
<p>The current noise performance of the A321neo was discussed at ISH3 and was the subject of many written submissions</p>	<p>The position regarding the current noise performance of some variants of the A321neo is acknowledged. Through discussions with the airport operator and airline operators, it has become apparent that the poor performance is restricted to a particular engine variant of the A321neo and other engine variants perform as would be expected from noise certification testing. Measured noise data was used to predict A321neo noise in the 2027 scenario (assessment Phase 1); however, it is assumed that, by 2039, any issues with the A321neo performance would be resolved through fleet transition to equivalent aircraft that are no worse than the expected performance from noise certification testing. Consequently, A321neo predictions for the 2039 and 2043 scenarios were modelled based on the modelling methodology referenced from the Air Noise and Performance (ANP) database (Ref 9.40). See The Noise Envelope Limits</p>

Issues raised	Applicant response
	<p>are set based on this assumption and therefore secure the outcomes will be no worse than as generated by this assumption. See Appendix 16.1 of the ES [REP9-017] for further information.</p>
<p>The subject of dispensations was raised in several written submissions and Written Questions (GCG.1.3 and NO.2.3)</p>	<p>For the Noise Envelope Limits, updates were made as noted in Noise Envelope - Improvements and worked example [REP2-032] to include early and late running (off-schedule) movements in the compliance process.</p> <p>Updates were also made to the Aircraft Noise Monitoring Plan [REP7-026] and the GCG Explanatory Note [REP9-020] to align the process of dispensations (where the exceedance of a Threshold or Limit occurs as a result of circumstances beyond the control of the airport operator) with relevant guidance from the DfT (Ref 9.41).</p> <p>Similarly, the Air Noise Management Plan [REP9-047] was updated to align the list of dispensations with, and to make reference to, the same guidance from the DfT.</p> <p>This guidance is considered an appropriate mechanism for determining when it is appropriate to dispense aircraft that are not within the airport operator’s control.</p>
<p>The subject of night noise controls, including a ban on night flights, was discussed at ISH3 and the subject of many written submissions</p>	<p>The Applicant has fully assessed the impact of night flights on health and wellbeing and, as set out in Chapter 16 of the ES [REP9-011], the conclusion of the assessment is that there are no residual significant effects from night-time aircraft noise due to the combination of mitigation measures and compensation measures which include:</p> <ul style="list-style-type: none"> • the Noise Envelope and its legally binding framework of night-time noise Limits and Thresholds and QC budgets, and a mechanism to reduce these in the future where possible (secured through the Green Controlled Growth Framework [TR020001/APP/7.07]); • the 9,650 movement limit in the Night Quota Period (23:30 – 06:00) secured in the Air Noise Management Plan [REP9-047]; • the 3,500 QC limit in the Night Quota Period (23:30 – 06:00) secured in the Air Noise Management Plan [REP9-047];

Issues raised	Applicant response
	<ul style="list-style-type: none"> • the ban on QC and above aircraft during the full night period (23:00 – 07:00) secured in the Air Noise Management Plan [REP9-047]; • the reducing night-time departure Noise Violation Limits that operate during the full night period (23:00 – 07:00) secured in the Air Noise Management Plan [REP9-047]; and • the extended noise insulation scheme which include full cost of insulation for bedrooms exposed above the night-time SOAEL (set out in Compensation Policies Measures and Community First [TR020001/APP/7.10] and secured via a Section 106 agreement. <p>The Applicant’s position on the topic of a night flight ban is set out in the Section 7.1 of the Applicant’s ISH3 post hearing submission [REP3-050]. In summary, the Applicant noted:</p> <ul style="list-style-type: none"> • there is no Government policy which requires, or sets expectation, for a ban on scheduled night flights, other than in the specific context of Heathrow expansion; • the Government’s Overarching Aviation Noise Policy Statement (OANPS) (Ref 9.35) requires a balance between economic and consumer benefits and the noise and health impacts of night flights, and notes that adverse effects may be offset by an increase in economic and consumer benefits; • night flights at London Luton Airport are fundamental to the economics of the airlines and a ban on night operations would result in lower utilisation of expensive aircraft that would make operating from the airport uneconomic or result in substantial increases in air fares, reducing the economic and consumer benefits of the Proposed Development.
<p>Fleet mix assumptions that fed into the noise modelling were discussed at ISH3 and ISH8 and were the subject of many written submissions and Written</p>	<p>The Applicant’s fleet mix assumptions are fully robust, see Chapter 4 of this document for further information.</p>

Issues raised	Applicant response
<p>Questions (NO.1.22, NO.2.2)</p>	
<p>Noise controls and limits were discussed at ISH3, ISH8 and ISH9 and were the subject of several written submissions and Written Questions.</p> <p>The Host Authorities have noted in their SoCGs that they are seeking additional noise controls and limits [TR020001/APP/8.13-8.17]</p>	<p>This issue is not agreed with the Host Authorities at the end of examination and is addressed in Table 9-2.</p>
<p>The use of the 2019 Actuals and Consented Baseline was discussed at ISH3, ISH8 and ISH9 and was the subject of several written submissions and Written Questions.</p>	<p>This issue is not agreed with the Host Authorities at the end of examination and is addressed in Table 9-2.</p>
<p><i>Green Controlled Growth and the Noise Envelope</i></p>	
<p>The extent to which the Noise Envelope Design Group recommendations and community consultation has informed the Noise Envelope was raised by LADACAN in several written submissions and was discussed at ISH9.</p> <p>The ExA’s Written Question GCG.2.6 queried whether the Noise Envelope Design Group should comment</p>	<p>The Applicant’s position on community engagement and consultation for the Noise Envelope is set out in Section 4.2 of the Applicant’s ISH9 post hearing submission [REP6-067].</p> <p>The Applicant noted that it has set out in Section 3 of Appendix 16.2 of the ES [REP10-019] the extent to which community engagement, and hence tailoring to local priorities, has informed the development of the noise envelope. Annex A of [REP10-019] contains the Noise Envelope Design Group (NEDG) Interim and Final Reports, and the Applicant’s response to these reports, and how they have informed the Noise Envelope, is presented in Annex B of [REP10-019]. Following updates made during examination to secure the current consented noise controls in the Air Noise Management Plan [REP9-047], Table 1.2 in Appendix 16.2 of the ES [REP10-019] demonstrates that the</p>

Issues raised	Applicant response
<p>on the final Noise Envelope design</p>	<p>vast majority of the NEDG recommendations have been adopted as noise controls in the DCO.</p> <p>Section 4.2 of the Applicant’s ISH9 post hearing submission [REP6-067] sets out that the Noise Envelope design was the subject of extensive public consultation through the 2022 statutory consultation. The Applicant noted that through consultation it was made clear that the noise contour area limits and thresholds presented were indicative. The final noise envelope would be based on the forecasts and reasonable worst-case noise contours within the ES. The Applicant highlighted that the indicative limits were actually wider than what is in the final Noise Envelope design. Therefore, the only substantive change was to tighten the contour area control. Overall, the principles and process were all consulted on as part of the 2022 statutory consultation.</p> <p>The Applicant discussed the ExA’s Written Question GGC.2.6 on whether the NEDG should comment on the final Noise Envelope design with the NEDG’s Independent Chair. The Independent Chair noted that as the noise envelope is now closely aligned with the original recommendations, and that NEDG members are actively engaged with the DCO process and are making their voices heard, that consequently they see little to be gained from reconstituting and reconvening the NEDG at this stage. The Applicant agreed with this position. See Applicant’s response to Written Questions - Green Controlled Growth [REP7-054] for further information.</p>
<p>The effectiveness of the Noise Envelope, and particularly whether it would have been able to avoid the historic contour Limit breaches, was discussed at ISH3 and was the subject of many written submissions.</p>	<p>The Noise Envelope has been designed to improve upon the existing noise control regime and to effectively prevent breaches from occurring. Appendix 16.2 of the ES [REP10-019] sets out how the proposed Noise Envelope contains mechanisms that would have avoided the noise Limit breaches that occurred at the airport from 2017-2019. This is further elaborated on in the Comparison of consented and proposed operational noise controls document [REP5-014] which provides a direct comparison between the current and proposed operational noise controls, noting that the Noise Envelope provides several enhancements to the current consented noise controls that are designed to prevent breaches before they occur, such as independent scrutiny and oversight, increased transparency, adaptive mitigation and management plans and noise Limit reviews.</p> <p>During examination, improvements were made to the Noise Envelope, and a worked example was provided that can be used to reasonably conclude that the Noise Envelope would</p>

Issues raised	Applicant response
	<p>have avoided the historic breaches that occurred in 2017-2019, see Noise Envelope – improvements and worked example [REP2-032].</p> <p>A further worked example was provided in the Applicant’s Response to Issue Specific Hearing 9 Actions 8, 19 and 20 – Quota Count Noise Controls [REP7-077], demonstrating how the Noise Envelope requirement to use Quota Count budgets will be an effective means of tying the Noise Limits to slot management and capacity declaration over the full calendar year.</p> <p>Following the updates to the Noise Envelope made during examination and further technical discussions, the Host Authorities have agreed in their SoCG that the Noise Envelope has been demonstrated to be an effective noise control strategy [TR020001/APP/8.13-8.17].</p>
<p>The setting of the Noise Envelope Limits based on the Faster Growth scenario was discussed at ISH3 and ISH9 and was the subject of many written submissions</p>	<p>This issue is not agreed with the Host Authorities at the end of examination and is addressed in Table 9-2.</p>
<p>Surface access noise</p>	
<p>The topic of surface access noise model validation was raised by Host Authorities and discussed at ISH3</p>	<p>Additional information on the surface access noise model and its validation was provided in Surface access noise modelling additional information [REP2-040] in response to comments from the Host Authorities. Further technical discussions were held between the Applicant and the HAs to discuss in detail the four monitoring locations where discrepancies between the measured and predicted surface access noise values were over 3dB. Following these discussions it was agreed that the discrepancies are due to location specific factors and that the surface access noise model validation is robust. At the request of the ExA [EV8-008], Surface access noise modelling additional information was updated at Deadline 3 [REP3-045] to provide this additional information.</p> <p>Following these technical discussions, the surface access noise model validation was agreed as appropriate in the Host Authorities SoCGs [TR020001/APP/8.13-8.17].</p>

Issues raised	Applicant response
<p>Buckinghamshire Council raised the issue of noise from early morning traffic movements in written submissions, for example in [REP6-087].</p>	<p>The Applicant provided a response to this issue in response to Written Question NO.2.12 [REP7-056], noting that the assessment methodology for surface access noise in Section 16.5 of Chapter 16 of the ES [REP9-011], takes into account traffic throughout the day and night, including the influence of peak hours which are a common feature of existing road traffic noise across the UK and across road schemes.</p>
<p>Ground noise</p>	
<p>At ISH3 the ExA noted that ground noise controls would be retained as part of the ongoing noise management process, but would not be secured under the DCO. The ExA queried what the mechanism would be to ensure these are continued to be implemented.</p>	<p>Whilst, as discussed in ISH3, it was anticipated that these controls would have been maintained through the airport operator's Noise Action Plan, the adoption of a Ground Noise Management Plan which must be substantially in accordance with the Outline Ground Noise Management Plan [TR020001/APP/8.46], secured by a requirement to the DCO, provides certainty that these controls will be maintained.</p>
<p>Several written submissions (for example [AS-156]) queried why there was no ground noise insulation scheme in the DCO submission.</p>	<p>Although the assessment of ground noise in Chapter 16 of the ES [REP9-011] did not identify the need for a separate ground noise insulation scheme to avoid significant adverse effects on health and quality of life from noise, Compensation Policies, Measures and Community First [TR020001/APP/7.10] was updated during examination was to secure the continuation of the existing ground noise insulation scheme.</p>
<p>At ISH3, the ExA queried to what extent the ground noise modelling depends on the build out sequence and the specific building dimensions on the airfield, in particular the two large hangars on the northern boundary of the Airport and requested the Applicant</p>	<p>As requested by the ExA, the Applicant provided Additional ground noise modelling information [REP5-045] for a scenario where four existing buildings, located along President Way between Airport Approach Road and Prince Way, were not demolished replaced by Hangars A and B in assessment Phase 2b.</p> <p>[REP5-045] also provides information on updates that were made to the requirements within the Draft Development Consent Order [REP10-003] that provide security that implementation of, or changes to, the detailed design of the Proposed Development must not give rise to any materially new or materially different environmental effects in</p>

Issues raised	Applicant response
to model ground noise without the hangars [EV8-008]	comparison with those reported in the ES. This therefore provides security that implementation of, or changes to, the detailed design of the Proposed Development (for example if design changed such that Hangars A and B were not built) must not give rise to any materially new or materially different noise effects in comparison with those reported in Chapter 16 of the ES [REP9-011] .
Fixed Plant noise	
At ISH3, the ExA queried the fixed plant noise criterion of 5dB below background and whether it should be 10dB below background as suggested by the Host Authorities	Following Issue Specific Hearing 3 and discussion with the Host Authorities, the Applicant updated the Fixed Plant Noise Management Plan [REP4-025] to reduce the initial noise rating level target of 10dB below background instead of 5dB below background. This is recorded as agreed with the Host Authorities in the SoCGs [TR020001/APP/8.13-8.17] .
At ISH3, the ExA queried whether the criteria in the Fixed Plant Noise Management Plan could allow for the baseline noise levels to increase, which they referred to as 'baseline creep'.	As noted in the Applicant's ISH3 post hearing submission [REP3-050] , the criterion in the Fixed Plant Noise Management Plan [REP4-025] provides sufficient protection from fixed plant noise adding to other noise sources and increasing the overall ambient baseline sound levels ('baseline creep'). However, to provide further certainty on this, the Applicant updated the management plan to require that the surveys used to define the background sound levels will be carried out no later than 12 months following serving notice under article 44(3) of the DCO. The Host Authorities confirmed that these changes will ensure 'baseline creep' is minimised in their comments on Deadline 4 submissions ([REP5-076] and [REP5-068]).
Noise insulation	
The subject of the rollout of the noise insulation scheme was discussed at ISH3 and ISH9 and was the subject of many written submissions and Written Questions (NO.1.24 –	The Applicant has made multiple updates to Compensation Policies, Measures and Community First [TR020001/APP/7.10] to provide further information on the proactive and accelerated delivery programme for the noise insulation scheme. See Section 13.6.6 of this Closing Submissions for further information.

Issues raised	Applicant response
NO.1.30 and NO.2.14 – NO.2.19)	
The subject of the rollout of the noise insulation scheme and its ability to meet government noise policy was discussed at ISH3 and ISH9	<p>The Applicant has set out how the noise insulation scheme rollout complies with Government noise policy and aviation policy in Section 7.3 of the Applicant's ISH3 post hearing submission [REP3-050] and Section 4.13 of the Applicant's ISH9 post hearing submission [REP6-067].</p> <p>These submissions set out how the policy aim in the Airports National Policy Statement (Ref 9.7) and Noise Policy Statement for England (Ref 9.25) to avoid significant adverse impacts on health and quality of life from noise is explicitly in the context of sustainable development. The noise insulation rollout therefore meets the policy aim by prioritising and providing the full cost of insulation for exposure above the Significant Observed Adverse Effect Level (SOAEL), and by rolling out the scheme as fast as reasonably practicable.</p>
Noise insulation for park homes, such as those at McFarland Park and Woodside Park, was the subject of several written representations from LADACAN and Written Questions from the ExA (NO.1.29, NO.2.17) and was discussed at ISH8	<p>As noted in the Applicant's ISH8 post hearing submission [REP6-066], the Applicant confirmed that there are no park homes within SOAEL, as confirmed in its response to Written Question NO.1.29 [REP4-060]. There are some between LOAEL and SOAEL – and so there is a requirement to mitigate and minimise noise as far as reasonably practicable. The compensation policy requires surveys to be undertaken to determine what is practicable and possible at these homes. The majority of the park homes are understood to be substantial and capable of being insulated. If the surveys determine that it is not possible to provide further noise insulation due to their construction - then that still complies with the policy requirement to mitigate and minimise within the context of sustainable development (i.e. as far as reasonably practicable).</p>

Noise and vibration matters agreed at the end of the examination

9.12.71 For noise and vibration, the following matters are agreed with the Host Authorities as recorded in the SoCGs **[TR020001/APP/8.13-8.17]**:

- a. the Applicant has used appropriate policy, legislation and guidance to inform the noise and vibration assessment;
- b. the approach, modelling and methodology for the construction noise and vibration assessment are appropriate;
- c. the CoCP contains appropriate vibration thresholds;

- d. the CoCP contains appropriate impact piling restrictions;
- e. the approach, modelling and methodology for the air noise assessment are appropriate;
- f. the approach, modelling and methodology for the ground noise assessment are appropriate;
- g. the approach, modelling and methodology for the surface access noise assessment are appropriate (with the exception of the setting of the daytime UAEL);
- h. the validation of the AEDT aircraft noise model is appropriate;
- i. the validation of the surface access noise model is appropriate;
- j. an appropriate future baseline has been used for the assessment;
- k. the ambient noise monitoring data is appropriate for the assessment of noise effects;
- l. the noise insulation scheme is appropriate;
- m. the **Fixed Plant Noise Management Plan [REP4-025]** contains appropriate criterion for fixed plant noise;
- n. the noise controls included in the **Air Noise Management Plan [REP9-047]** are appropriate (though further controls are sought by the Host Authorities);
- o. the contour values used for the Noise Envelope Limits (54dB_{L_{Aeq,16h}} and 48dB_{L_{Aeq,8h}}) are appropriate;
- p. the five-yearly review period of the Noise Envelope is appropriate; and
- q. the Noise Envelope has been demonstrated to be an effective noise control strategy.

9.12.72 For noise and vibration, the following matters are agreed with Buckinghamshire Council as recorded in the SoCG **[TR020001/APP/8.18]**:

- a. the air noise assessment in **Chapter 16** of the **ES [REP9-011]**, including supplementary noise metrics, is appropriate with respect to effects reported in Buckinghamshire;
- b. the assessment of noise and tranquillity on the Chilterns AONB is appropriate;
- c. overflight of the Chilterns AONB and airspace change are appropriately addressed in the Noise Envelope;
- d. the Noise Envelope review timescales are appropriate;
- e. the Noise Envelope Design Group does not need to continue to operate as an independent entity from the Environmental Scrutiny Group; and
- f. the Applicant has appropriately taken into account the World Health Organization guidelines (Ref 9.42) in the sensitivity test in **Chapter 13** of the **ES [REP10-009]**; and
- g. the Construction Traffic Noise Management Plan is appropriate.

9.12.73 For noise and vibration, the following matters are agreed with the UK Health Security Agency as recorded in the SoCG **[TR020001/APP/8.12]**:

- a. the Applicant has appropriately engaged with various stakeholders on the assessment methodology and noise envelope;
- b. the Applicant has appropriately presented air noise exposure in terms of noise thresholds and noise changes;
- c. the Applicant has appropriately acknowledged the strong link between transport noise and adverse health outcomes;
- d. the Applicant has appropriately quantified health effects due to aviation noise using Disability Adjusted Life Years (DALYs) and awakenings;
- e. the Applicant's sensitivity analysis using awakenings and recent evidence from the World Health Organization is appropriate;
- f. the Applicant has provided appropriate justification for its setting of LOAELs, SOAELs and UAELS;
- g. the Applicant's approach to the assessment of noise by comparison to a future baseline (the Do-Minimum) as well as a historic baseline is appropriate;
- h. the Applicant's approach to next-generation aircraft and the Noise Limit Review is appropriate;
- i. the Noise Envelope has been developed in consultation with local stakeholders and local communities;
- j. the choice of noise contour for the Noise Envelope Limits was defined by the Noise Envelope Design Group;
- k. the mechanism for assessing surface access noise insulation eligibility is appropriately secured; and
- l. the noise insulation scheme has an appropriate proactive rollout program including mechanisms to encourage take-up for tenants.

9.12.74 For noise and vibration, the following matters are agreed with the Civil Aviation Authority as recorded in the SoCG **[TR020001/APP/8.10]**:

- a. the AEDT noise model validation is appropriate;
- b. the Applicant has provided sufficient clarification on the proposals for Noise Envelope Limits, including movements that would be excluded from monitoring compliance with the Limits;
- c. the Applicant has undertaken a sensitivity test which demonstrates that airspace change is likely to be accommodated with the proposed contour area Limits and, as such, the proposed Noise Envelope is not considered likely to fetter the wider Airspace Change Process;
- d. the Applicant has provided sufficient clarification on noise insulation scheme eligibility; and

- e. the Civil Aviation Authority will consider its position on membership of the Green Controlled Growth Environmental Scrutiny Group Noise Technical Panel at the appropriate time when the Panel is established.

Noise and vibration matters not agreed at the end of the examination

9.12.75 For noise and vibration, the matters that are not agreed at the end of Examination are summarised in Table 9-2.

Table 9-2: Summary of noise and vibration matters that are not agreed.

Matters not agreed	Applicant response
Host Authorities [TR020001/APP/8.13-8.17]	
<p>The Host Authorities do not agree that the Proposed Development complies with aviation noise policy in terms of the policy requirements of <i>“limiting, and where possible reducing, the total adverse impacts on health and quality of life from aviation noise”</i> (Overarching Aviation Noise Policy Statement) and <i>“the benefits of future technological improvements should be shared between the applicant and its local communities, hence helping to achieve a balance between growth and noise reduction”</i> (Aviation Policy Framework)</p>	<p>The Proposed Development has been demonstrated to be fully compliant with aviation noise policy.</p> <p>Chapter 16 of the ES [REP9-011] and the Planning Statement [TR020001/APP/7.01] sets out how the Proposed Development complies with aviation noise policy.</p> <p>The Proposed Development’s compliance with the new Overarching Aviation Noise Policy Statement (Ref 27) has been set out in Commentary on the Overarching Aviation Noise Policy Statement [REP1-012].</p> <p>Paragraph 3.3 of the Aviation Policy Framework (Ref 9.11) states <i>“We want to strike a fair balance between the negative impacts of noise (on health, amenity (quality of life) and productivity) and the positive economic impacts of flights. As a general principle, the Government therefore expects that future growth in aviation should ensure that benefits are shared between the aviation industry and local communities.”</i></p> <p>At paragraph 3.12, the APF notes (emphasis added): <i>“The Government’s overall policy on aviation noise is to limit and, where possible, reduce the number of people in the UK significantly affected by aircraft noise, <u>as part of a policy of sharing benefits of noise reduction with industry.</u>”</i></p> <p>Therefore, the Applicant considers that the sharing of benefits is not just concerned with new technology and noise reduction but a broader concept which also involves consideration of the extent to which broader economic and consumer benefits outweigh any harms.</p>

Matters not agreed	Applicant response
	<p>This position is reiterated in the Overarching Noise Policy Statement which makes clear that <i>“We consider that “limit, and where possible reduce” remains appropriate wording. An overall reduction in total adverse effects is desirable, but in the context of sustainable growth an increase in total adverse effects may be offset by an increase in economic and consumer benefits. In circumstances where there is an increase in total adverse effects, “limit” would mean to mitigate and minimise adverse effects, in line with the Noise Policy Statement for England.”</i></p> <p>This means that there may be circumstances where noise might increase if there were strong economic and consumer benefits but this would place the emphasis on mitigation and minimising the impacts rather than them necessarily reducing over time. This would still be consistent with the concept of sharing the benefits.</p>
<p>The Host Authorities consider that the daytime UAEL for surface access noise should be 71 dB LAeq,16hr consistent with the Heathrow Airport PEIR.</p>	<p>The Heathrow Airport Preliminary Environmental Information Report (PEIR) does not represent Government policy and there is no decision or examination relating to the appropriateness of the 71dB_{LAeq,16h} UAEL as the application has not proceeded to DCO submission.</p> <p>The Applicant has applied an appropriate UAEL for the surface access noise assessment: 74dB_{LAeq,16h}.</p> <p>The UAEL has been set with reference to the relevant guidance and has been accepted as appropriate in the DCO decision for the A14 Cambridge to Huntingdon Improvement Scheme.</p> <p>Further justification has been provided in Surface Access Noise Modelling – Additional Information [REP3-045].</p> <p>The Host Authorities agree that the assessment outcomes remain unchanged and are acceptable regardless of whether the daytime surface access UAEL is set at 71 or 74dB_{LAeq,16h}.</p>
<p>The Host Authorities do not accept that the 2019 Actuals baseline has been used in the core assessment and believe that the 2019</p>	<p>The Applicant’s position on the use of the 2019 baseline is set out in Section 6.2 of the Applicant’s ISH3 post hearing submission [REP3-050].</p> <p>In summary, the use of either the 2019 Actuals or Consented baseline does not affect the identification of</p>

Matters not agreed	Applicant response
<p>Consented baseline should have been used instead.</p>	<p>adverse likely significant effects in Environmental Impact Assessment (EIA) terms, nor does it affect the conclusions of residual significant adverse effects on health and quality of life in noise policy terms.</p> <p>An assessment using both the 2019 Actuals and 2019 Consented baseline has been undertaken. The conclusions of residual significant effects remain the same for both assessments, as significant effects would be avoided through the provision of the full cost of noise insulation.</p>
<p>The Host Authorities take the position that the following additional noise controls should be included:</p> <ul style="list-style-type: none"> • a future QC limit below that of the extant, included QC limit of 3,500 acting in the core night period (2330-0600) • an ATM movement cap (or QC limit) applying to the early morning shoulder period (0600-0700) • an annual 24-hour ATM movement cap (this additional control is sought by all Host Authorities except for Luton Borough Council) 	<p>As set out in the Comparison of consented and proposed operational noise controls [REP5-014], the vast majority of the noise controls in the current consent will be either be secured or improved upon in the DCO. the Applicant considers that the proposed combination of contour area Limits, Night Quota Period QC limits and Night Quota Period movement limits are fully robust, are in line with best practice in airport noise controls and are in line with Civil Aviation Authority recommendations for noise control.</p> <p>In terms of the additional controls sought by the Host Authorities, the Applicant’s position is that a future QC limit would overlap, duplicate and conflict with the quota count controls for the full night period (see Response to Suono's note on Noise Controls [REP6-052] for further information).</p> <p>The Applicant’s position is that movement limits (total annual and shoulder period) are not necessary or reasonable (see Applicant’s Position on Noise Contour and Movement Limits [REP9-055] for full justification of this position).</p>
<p>The Host Authorities consider that noise Limits should be set by reference to the Core Planning Case</p>	<p>The Noise Envelope Limits and Thresholds are aligned with the Faster Growth Scenario to ensure that the noise effects will not exceed the assessed ‘reasonable worst case’ in the ES. An Updated Faster Growth scenario was introduced in Applicant’s Position on Noise Contour and Movement Limits [REP9-055] which assumes a faster fleet transition to new-generation aircraft, reducing noise effects and reducing the Noise Envelope Limits and Thresholds in turn. An assessment</p>

Matters not agreed	Applicant response
	<p>of the total adverse effects on health and quality of life of the Updated Faster Growth scenario is provided in Appendix A of [REP9-055]. The assessment notes that, as was the case for the ES Faster Growth scenario, the additional significant effects that arise in assessment Phase 1 compared to the Core Planning Case would be avoided through the provision of the full cost of insulation, so the noise effects in the Updated Faster Growth scenario are both limited and reduced.</p>
<p>UK Health Security Agency [TR020001/APP/8.12]</p>	
<p>The UKHSA welcomes noise insulation as a last resort mitigation measure, however it notes the many limitations of such a mitigation measure, and the significant uncertainties whether noise insulation will mitigate the adverse effects identified. The UKHSA notes there is very little good quality evidence to confirm whether sound insulation schemes are effective to protect health, and the extent of unintended consequences. For example, sound insulation may reduce indoor noise levels at the expense of poorer indoor air quality and increased risk of overheating. Partially funded schemes, such as the ones proposed by the Applicant (Vol. 5 16.10.5) may widen health inequalities (see also Human Health and Wellbeing section). Noise insulation will also do nothing to mitigate outdoor exposure, including at private and public amenity space and places of relative tranquillity.</p> <p>It is important to emphasise that UKHSA and OHID's</p>	<p>The Applicant confirms that noise insulation is the last resort in the mitigation hierarchy, as set out in Section 2 of Appendix 16.2 of the ES [REP10-019]. The hierarchy therefore starts with mitigation at source and mitigation by intervention (which benefit both indoor and outdoor exposure) before mitigation by compensation (noise insulation) is provided.</p> <p>The noise insulation scheme (see Compensation Policies, Measures and Community First [TR020001/APP/7.10]) will provide a full package noise insulation where air noise exposure from the development exceeds the relevant SOAEL values. No likely significant effects have been identified below the air noise SOAEL. Therefore, the assessment only relies on noise insulation avoiding significant effects where a full package of noise insulation is provided.</p> <p>Whilst it is noted that there is little research on the effects of noise insulation schemes on health, this approach to avoiding significant effects on health and quality of life from noise using noise insulation (as a last resort) has been accepted in the decision making for several large infrastructure projects (e.g., HS2, Thames Tideway and the ending of the Heathrow Cranford Agreement).</p> <p>The noise insulation packages will include suitable ventilation if required.</p> <p>The issue of health monitoring is addressed in Section 9.9 of this Closing Submissions.</p>

Matters not agreed	Applicant response
<p>disagreement on this point is not to discourage the provision of a noise insulation scheme, but rather to demonstrate the importance of monitoring).</p>	

Noise and vibration conclusion

- 9.12.76 The noise and vibration assessment in **Chapter 16** of the **ES [REP9-011]** has been used to determine compliance with relevant planning policy. This is reported in Section 8.6 of the **Planning Statement [TR020001/APP/7.01]**, in **Planning Statement Appendix E - Policy Compliance Tables [REP5-018]** and in **Commentary on the Overarching Aviation Noise Policy Statement [REP1-012]**.
- 9.12.77 In compliance with the Aviation Policy Framework (Ref 11), the Overarching Aviation Noise Policy Statement (Ref 9.24), the Noise Policy Statement for England (NPSE, Ref 9.25), Planning Practice Guidance Noise (PPGN, Ref 9.30), the National Planning Policy Framework (Ref 9.9) and Government’s policy on sustainable development, the Proposed Development includes noise mitigation measures to:
- a. limit and, where possible, reduce the number of people significantly affected by adverse impacts from aircraft noise (in compliance with paragraph 3.12 of the Aviation Policy Framework and the Overarching Aviation Noise Policy Statement);
 - b. prevent unacceptable adverse effects on health and quality of life from noise and vibration (in compliance with Planning Practice Guidance Noise and paragraph 180e of the National Planning Policy Framework);
 - c. avoid significant adverse effects on health and quality of life from noise and vibration (in compliance with the Noise Policy Statement for England aims and paragraph 5.68 of the Airports National Policy Statement);
 - d. mitigate and minimise adverse effects on health and quality of life from noise and vibration (in compliance with the Noise Policy Statement for England aims and paragraph 5.68 of the Airports National Policy Statement);
 - e. where possible contribute to improvements of health and quality of life from noise (in compliance with the Noise Policy Statement for England aims and paragraph 5.68 of the Airports National Policy Statement); and
 - f. share the benefits of future technological improvements between the airport and its local communities to achieve a balance between growth and aircraft noise reduction (in compliance with paragraph 3.3 of the Aviation Policy Framework).

- 9.12.78 The socio-economic and consumer benefits of the development are relevant to noise:
- a. overall air noise experienced by communities will increase as a result of the development;
 - b. noise at night-time will always be higher than the noise limits set by the extant planning permission (as modified by the P19 permission);
 - c. the Noise Policy Statement for England expressly defines that meeting its three noise aims “is in the context of government sustainable development policy”; and
 - d. while the Noise Envelope will share the noise benefits of future technology, it is likely that the industry’s share will be greater than the community share and CAA guidance for Noise Envelopes identifies that socio-economic benefits are relevant to determining how noise benefits are shared.
- 9.12.79 Compliance with the Overarching Aviation Noise Policy Statement is outlined in **Commentary on the Overarching Aviation Noise Policy Statement [REP1-012]**. In summary, the Proposed Development and its embedded mitigation, combined with the noise insulation scheme secured by the compensation commitments, meet the overall policy on aviation noise in the OANPS by providing an appropriate balance between the economic and consumer benefits of the Proposed Development against its social and health implications in line with the ICAO Balanced Approach.
- 9.12.80 Matters raised during Examination in relation to noise and vibration as well as the Applicant’s response to these matters are set out in Table 9-1. For this topic, matters which were not agreed at the end of Examination are outlined, alongside the Applicant’s response in Table 9-2.
- 9.12.81 It is the Applicant’s position that nothing has materially changed during the course of the Examination which fundamentally alters that assessment of policy accordance.
- 9.12.82 As a result, the position remains that the Proposed Development accords with the relevant planning policies and provisions governing noise, although it is acknowledged, allowing for a reasonable worst case, that there will be an increase in aircraft noise and road traffic noise. The mitigation and compensation measures outlined in this section, including sharing the benefits, will mitigate negative effects as far as reasonably practicable.

9.13 Soils and Geology

Soils and Geology assessment

- 9.13.1 The Soils and Geology assessment is reported in **Chapter 17** of the **ES [REP7-011]**. Compliance with relevant legislation and policy is outlined in Section 17.2 of **Chapter 17** and in Section 8.17 of the **Planning Statement [TR020001/APP/7.01]** and in **Planning Statement Appendix E - Policy Compliance Tables [REP5-018]**.
- 9.13.2 The Applicant followed the methodology as described in Design Manual for Roads and Bridges (DMRB) Volume 11, Section 3, Part 11 Geology and Soils and DMRB Volume 11 Section 2, Part 4 Environmental Assessment and Monitoring. Both of these documents have since been superseded but the adoption of this methodology was previously agreed with the Environment Agency and Host Authorities at a technical working group meeting on 26 July 2021. The collation and assessment of baseline data was completed in line with current guidance from the Environment Agency: "Land Contamination: Risk Management" (Ref. 9.43) which advocates a tiered, risk-based approach.
- 9.13.3 The Applicant has assessed the effects from land contamination on human health, buildings and infrastructure and that of unidentified unexploded ordnance from the construction and operation of the Proposed Development. The assessment of effects on groundwater and surface water was undertaken as part of **Chapter 20** of the **ES** (see section 9.16 of this closing submission). The ES and supporting Appendices provide a robust assessment of land contamination risk. A summary of the outcomes for construction and operation is provided below.

Construction and operation

- 9.13.4 No significant adverse or beneficial residual effects were identified associated with the construction of the Proposed Development. It was concluded that overall construction of the Proposed Development would provide an overall minor beneficial effect in terms of land contamination, by removing, processing and treating contaminated soils, installing gas control measures along the landfill perimeter and to the buildings, and placement of an engineered cover system over the landfill thus reducing risks to human health, and the environment.
- 9.13.5 The former Eaton Green Landfill located in the Main Application Site was identified as the main area of concern with regard to potential contamination and requiring a remediation strategy, refer to the **Outline Remediation Strategy (ORS)** (Appendix 17.5 of the ES [REP6-005]).
- 9.13.6 Requirement 17 of the **draft DCO [REP10-003]** requires the contractor to produce a Remediation Strategy and a Foundation Works Risk Assessment (FWRA) for works on the former Eaton Green Landfill. The Remediation Strategy and FWRA will be submitted to the local planning authority for approval subject to consultation with the Environment Agency and relevant water undertaker on matters related to their functions. All works on the landfill will be undertaken in accordance with current legislation, guidance and best practice.

9.13.7 The works on the former landfill will be completed under environmental permits (listed in the **Consents and Agreements Position Statement [TR020001/APP/2.03]**, including a “Deposit for Recovery” (DfR) permit for recovery of waste materials.

9.13.8 The reuse of materials (Made Ground and natural soils) in areas off the landfill will be regulated under CL:AIRE Definition of Waste Code of Practice (DoW:CoP) (Ref. 9.44). A Framework Materials Management Plan will be developed by the lead contractor with Material Management Plans (MMP) for each package.

Soils and Geology mitigation

9.13.9 Mitigation measures proposed in relation to soils and geology are described in section 17.8 of **Chapter 17** of the **ES [REP7-011]** and in the **Mitigation Route Map [REP10-023]**.

Construction

9.13.10 Risks to human health from contaminants in soils, dust, vapours and gasses are to be mitigated by implementation of design and environmental management system control measures set out in the **Outline Remediation Strategy (ORS) [REP6-005]** and **CoCP [REP8-013]**. The ORS and CoCP are secured by requirement 17 and requirement 8 of the **draft DCO [REP10-003]** respectively.

9.13.11 For works on the former landfill, management plans will be produced for the DfR permit. The permit will be regulated by the Environment Agency and will require strict monitoring and controls to be agreed prior to works. The DfR permit will also require works to be undertaken by appropriately qualified and experienced persons. This will provide a robust mechanism for control and management of land contamination risks.

9.13.12 A programme of monitoring of groundwater, ground gas and leachate will be agreed with the Environment Agency as part of the permit application. Monitoring will start preconstruction and continue during and post construction.

9.13.13 Additional ground investigation will be required for areas off the landfill. The potential requirement for remediation works off the landfill is addressed by requirement 12 of the **draft DCO [REP10-003]**.

Operation

9.13.14 Implementation of design measures for the Proposed Development on the landfill include an engineered cover system with placement of services in the cover system, gas protection measures to buildings, external areas and the perimeter of the landfill. All measures are outlined in the **ORS [REP6-005]** these will be further developed during detailed design as secured by requirement 17. It is expected the gas control measures and the engineered cover system will be maintained over the lifetime of the Proposed Development.

9.13.15 The perimeter gas control measures will continue to protect off site receptors during the operational phase. On-going monitoring and maintenance of perimeter gas mitigation is secured by the **Mitigation Route Map [REP10-023]**.

Consideration of Soils and Geology matters during Examination

- 9.13.16 During Examination the following issues were raised during ongoing stakeholder engagement and submissions, Issue Specific Hearings (ISH6 and ISH8) and in Written Questions (WQ).
- 9.13.17 During Examination the following issues were raised:
- a. The submission of the Waste Recovery Plan (WRP) was raised by the Environment Agency in their response to **ES Chapter 17** and in the SoCG **[REP9-035]**. This was also raised by the ExA at ISH6 and ISH8.
 - b. Boundary landfill gas protection was raised by LBC in the SoCG **[TR020001/APP/8.13]** and also in a Written Question by the ExA, AQ.2.3 **[REP7-050]**.
 - c. Details of current monitoring results, and access to future monitoring data were requested by Affinity Water and the Environment Agency
 - d. Concerns around the protection of groundwater during the works on the landfill and the content of the Foundation Works Risk Assessment (FWRA) were raised by the Environment Agency and Affinity Water
 - e. Waste located off the landfill was raised by the Environment Agency in the SoCG **[REP9-040]**.
 - f. Earthworks on the landfill and proximity to residential homes was a relevant representation raised by Friends of Wigmore Park **[RR-0472]** and **[REP1-023]**.
 - g. Written Question PED1.6 **[REP5-052]** from the EA on the volumes of earthwork fill materials and percentage of waste materials suitable for recovery and reuse, WQ2 query BCG.2.15 **[REP7-049]** on the source of imported granular fill.
 - h. Comments from the Environment Agency on the ORS, FWRA, **ES Chapter 17** submitted with the DCO application.
- 9.13.18 In response the Applicant:
- a. WRP: the Applicant responded to questions about the WRP in both the September (ISH6) **[EV11-004 and EV-11-005]** and November (ISH8) **[EV15-007 and EV-15-008]** 2023 examination hearings. The WRP report was uploaded to the Environment Agency portal in December 2023 and a decision from the Environment Agency, is awaited.
 - b. A Technical Note was prepared entitled “Gas Mitigation measures” and issued into examination in December 2023 **[TR020001/APP/8.164]**. The aim of the technical note was to demonstrate the effectiveness of the proposed passive ventilation system. It referenced relevant case studies where this technique has previously been used and provided details of the further gas monitoring (including continuous gas monitoring) that will be

most appropriate for measuring changes in landfill gas conditions during construction.

- c. Monitoring the proposed monitoring regime is described in **Appendix 17.7** of the **ES [REP7-011]**. Monitoring of groundwater, ground gas and leachate is required as part of the Deposit for Recovery permit. Monitoring is to be carried out preconstruction and continue during the construction and post construction phases of the Proposed Development. The programme of monitoring to be agreed with the Environment Agency as part of the DfR permit application. Two rounds of monitoring have been completed during the examination period. Details of the 2023 monitoring have been shared with the Environment Agency, Affinity Water and LBC.
- d. An updated **Foundation Works Risk Assessment (FWRA)** was prepared by the Applicant **[REP6-007]**. A detailed FWRA will be prepared post DCO, as secured by requirement 17 of the **dDCO [REP10-003]**. This also secures consultation with the Environment Agency and Affinity Water on the detailed FWRA.
- e. The Applicant has provided evidence on the source of wastes and non waste located outside the landfill. Appendix A and Figure 2 of the WRP provide a record of both the waste and non-waste materials present at this site.
- f. The Applicant responded to the relevant representation, outlining how the risks from the landfill have been assessed under the current guidelines and the works will be controlled through an environmental permit regulated by the Environment Agency.
- g. The Applicant provided a response in **[REP7-049]** at Deadline 7. This referred to the detail presented in the **ES Chapter 19 Waste and Resources [AS-081]** and includes consideration of several source options, which need to be considered at the time of construction, to adequately meet the volume and quality requirement at each assessment phase. The quantities of materials that can be recovered from the landfill was presented in Appendix 17.2 **[APP121-122]**.
- h. Updated documents: **Outline Remediation Strategy [REP6-005]** and **Foundation Works Risk Assessment [REP6-007]** were submitted by the Applicant at Deadline 6. An updated **ES Chapter 17 [REP7-011]** was submitted by the Applicant at Deadline 7.

9.13.19 For this topic, all matters are agreed at the end of Examination.

Topic conclusion

- 9.13.20 The soils and geology assessment in **Chapter 17** of the **ES [REP7-011]** has been used to determine compliance with relevant planning policy. This is reported in section 8.17 of the **Planning Statement [TR020001/APP/7.01]** and in **Planning Statement Appendix E - Policy Compliance Tables [REP5-018]**.
- 9.13.21 Paragraphs 5.226–5.229 of the ANPS (Ref 9.7) stipulate that where necessary, land stability should be considered in respect of new development, as set out in the NPPF (Ref 9.9) and supporting planning guidance. The applicant should

ensure that any necessary investigations are undertaken to confirm that their sites are and will remain stable or can be made so as part of the development.

- 9.13.22 Paragraphs 5.109–5.127 of the ANPS (Ref 9.7) set out that for developments where land may be affected by contamination, or existing mitigation is in place in respect of historical contamination, the applicant should have regard to the statutory regime contained in Part IIA of the Environmental Protection Act 1990 and relevant Government guidance relating to or dealing with contaminated land. Where the development is subject to an EIA, the applicant should undertake an assessment of any likely significant land quality effects and describe them in the ES.
- 9.13.23 Construction activities which could expose construction workers, adjacent residential areas to the north and users of the airport to contaminants in dust, vapours, and gases are identified and the implementation of design and environmental management mitigation measures to negate this are set out in the **Outline Remediation Strategy [REP6-005]** and **Code of Construction Practice [REP4-011]**. It has been established that the Proposed Development is not expected to cause soil pollution or face unacceptable risks, as a result of the measures in place for remediating and mitigating against contaminated land.
- 9.13.24 Matters raised during Examination in relation to land contamination and instability and the Applicant's responses are set out above. For this topic, all matters have been agreed at the end of examination.
- 9.13.25 During the examination, the proposed methods for handling materials, gas mitigation and protection of water resources were explored and additional information and documents were provided to the statutory authorities, by the Applicant. All matters raised in the consultation meetings and statements of common ground have now been agreed with the Environment Agency and Host Authorities.
- 9.13.26 As a result, it is the Applicant's position that nothing has materially changed during the Examination which fundamentally alters the assessment of policy accordance.
- 9.13.27 Having regard to the land contamination and instability matters in relation to this application for development consent, the Proposed Development accords with all relevant planning policy.

9.14 Traffic and Transportation

Traffic and Transportation assessment

- 9.14.1 The traffic and transportation assessment is reported in **Chapter 18** of the **ES [REP8-009]**. Compliance with relevant legislation and policy is outlined in section 18.2 of **Chapter 18** and in section 8.4 of the **Planning Statement [TR020001/APP/7.01]**.

Construction

- 9.14.2 The scale and extent of the assessment has been defined in accordance with the 'Guidelines for the Environmental Assessment of Road Traffic' originally produced by the Institute of Environmental Assessment, now the Institute of Environmental Management (IEMA) and referred to as the 'IEMA Guidelines' (Ref. 9.?). These guidelines recommend that the following environmental effects listed below may be considered important when considering traffic from an individual development. These include:
- a. Severance.
 - b. driver delay.
 - c. pedestrian delay.
 - d. pedestrian amenity.
 - e. accidents and safety.
 - f. hazardous loads.
- 9.14.3 This list was compared with the effects identified in the Design Manual for Roads and Bridges and the following additional topics identified for inclusion in this assessment:
- a. Driver stress.
 - b. pedestrian fear and intimidation (to reflect pedestrian amenity).
- 9.14.4 There is limited guidance on standard ways to measure these environmental effects therefore a detailed description of the application of the methodology was set out in Appendix 18.1 'Traffic and Transportation Methodology' [**APP-128**] was produced. A key element of the guidance in the IEMA Guidelines is the two broad rules-of-thumb that can be used to screen out those road links where there is unlikely to be an environmental effect since the change in the volume of traffic is small, that is $\pm 30\%$, or $\pm 10\%$ where there is a sensitive receptor.
- 9.14.5 The baseline flows, the Do Minimum scenario, that were used to assess the impact of the increased volume associated with the construction traffic were obtained from the strategic traffic modelling which is described in Chapter 9 of the **Transport Assessment [APP-205]**. The construction traffic flows that were then added to the Do Minimum flows to produce the Do Something scenario were based on the estimates of construction traffic that were calculated for the preparation of ES Appendix 4.1 **Construction Method Statement and Programme Report [REP8-011]**.
- 9.14.6 The application of these guidelines to the difference between these two scenarios for each of the assessment phases identified that there were no links where the increase in traffic volume warranted further analysis.

Operation

- 9.14.7 The methodology described above was also applied to the 'Do Minimum' and 'Do Something' flows that were produced for the three assessment phases in

order to determine the degree of any environmental effect that would be linked to the Proposed Development.

- 9.14.8 The assessment did not identify any adverse environmental effects associated with the change in traffic volumes that are predicted to occur as a result of the Proposed Development. A significant beneficial effect for road safety has been identified for Assessment Phases 2a and 2b. These are a result of the conversion of the existing roundabout at the junction of Eaton Green Road and Frank Percival Way, the conversion of the Frank Percival Way to northbound traffic only (presently two-way) and the general reduction in traffic flow through the junction resulting from the construction of the Airport Access Road.
- 9.14.9 There is no standard methodology for the assessment of changes in passenger loadings on public transport, therefore it was necessary to produce a methodology for this assessment. The adopted approach for public transport is described in Section 2 of **Appendix 18.1 of the ES [APP-128]** starting at paragraph 2.2.41. In developing the methodology for rail travel it was necessary to take account of the absence of any appropriate pre-COVID base data, and the change that will have occurred to both the pattern and scale of passenger loadings following the introduction in May 2021 of the East Midlands electric service between St Pancras International and Corby that provides a greater frequency of service by that operator and a greatly enhanced capacity.
- 9.14.10 The result of the assessment of the environmental effects on public transport found that there would be no significant environmental effects.

Traffic and Transportation mitigation

- 9.14.11 Mitigation measures proposed in relation to Traffic and Transportation are described in section 4.10 of **Chapter 4** of the **ES [REP5-012]** and in the Mitigation Route Map **[REP10-023]**.

Construction

- 9.14.12 Whilst no significant effects have been identified during construction, in line with best practice, the following documents have been prepared to limit the impact on the highway network of the construction stage:
- a. **Outline Construction Traffic Management Plan [REP6-009]**; and
 - b. **Outline Construction Workers Travel Plan [REP8-018]**.

Operation

- 9.14.13 As part of the application, a document titled **Surface Access Strategy [APP-228]** was submitted. As part of the strategy there is a Surface Access Vision whereby the Applicant will “*make use of the existing runway to provide maximum benefit to the local and subregional economy whilst actively managing surface access impacts in line with our commitment to responsible and sustainable development*”. To that end there are five objectives of which the first two are to “increase air passenger public transport mode share” and to “increase employee sustainable travel mode share”.

- 9.14.14 In order to assist with the achievement of these objectives there is a commitment to introduce a number of mitigation measures that include:
- a. Luton DART extension to serve new terminal.
 - b. New bus and coach terminal and creation of additional spaces in existing facility.
 - c. Off-site highway interventions, as shown in **Appendix A** to the **Transport Assessment [APP-200]**.
 - d. **Framework Travel Plan [TR020001/APP/7.13]**.

Consideration of Traffic and Transportation matters during Examination

- 9.14.15 During Examination the following issue was raised:
- a. The ExA made a procedural decision via a Rule 9 Letter to the Applicant on 16 May 2023 **[PD-005]** to take account of the potential impacts of Covid-19 on the traffic modelling undertaken to inform the Transport Assessment and Environmental Impact Assessment undertaken in support of the application.
- 9.14.16 The ExA requested an explanation of the implications of the replacement IEMA Guidelines, published in July 2023, for the assessment presented in **Chapter 18** of the **ES [REP8-009]**.
- 9.14.17 There were no substantive issues raised by third parties regarding the contents of **Chapter 18** of the **ES [REP8-009]**.
- 9.14.18 In response to the two queries summarised above, the Applicant provided the following information:
- a. Based on the revised traffic flow prediction reported to the ExA in the **Applicant's Response to Issue Specific Hearing 7 Action 2 - Accounting for Covid-19 in Transport Modelling Final Report [AS-159]** a review of the analysis reported in the ES was undertaken and reported in the submission '**Accounting for Covid-19 in Transport Modelling – Environmental Appraisal**' **[REP7-079]**. All analysis reported in **Chapter 18** of the **ES [REP8-009]** relating to road traffic was re-run with the revised traffic flows and the conclusion of that review was that there were no new or different significant effects.
 - b. The implications of the revised IEMA Guidelines was provided in the document **Response to Examining Authority's Written Questions (Traffic and Transport) [REP7-061]**. The main change in the revised document is the addition of a requirement to assess abnormal loads as well as hazardous loads and the undertaking of road safety audits. In the response it is noted that since the Site was connected to the motorway network by a dual carriageway road it was not considered that abnormal loads would cause a significant detrimental environmental effect. Regarding the requirement for Road Safety Audits, there is no suggestion that there should be any analysis reported in an ES chapter and since

audits have been undertaken and shared with the relevant highway authorities this new criterion is satisfied.

- 9.14.19 For this topic the only matters of significance were raised by the ExA and full responses have been provided.

Topic conclusion

- 9.14.20 The Traffic and Transportation assessment in **Chapter 18** of the **ES [REP8-009]** has been used to determine compliance with relevant planning policy. This is reported in section 8.4 of the **Planning Statement [TR020001/APP/7.01]** and in **Planning Statement Appendix E - Policy Compliance Tables [REP5-018]**.
- 9.14.21 The APF (Ref 9.11) paragraph 5.11 sets out that all proposals for airport development must be accompanied by clear surface access proposals which demonstrate how the airport will ensure easy and reliable access for passengers, increase the use of public transport by passengers to access the airport, and minimise congestion and other local impacts.
- 9.14.22 The Proposed Development accords with the relevant surface access planning policies taken as a whole, although it is acknowledged that there will be an increase in traffic. The measures included in the Proposed Development will mitigate negative impacts as far as reasonably practicable.
- 9.14.23 Matters raised during Examination in relation to surface access and the Applicant's response to these is summarised above from paragraphs 9.14.14-9.14.19. For this topic, the only matters of significance were raised by the ExA and full responses have been provided during the Examination.
- 9.14.24 As a result, it is the Applicant's position that nothing has materially changed during the Examination which fundamentally alters the assessment of policy accordance.
- 9.14.25 Having regard to the surface access matters in relation to this application for development consent, the Proposed Development accords with all relevant planning policy.

9.15 Waste and Resources

Waste and Resources assessment

- 9.15.1 The Waste and Resources assessment is reported in **Chapter 19** of the **ES [AS-081]**. Compliance with relevant legislation and policy is outlined in section 19.2 of **Chapter 19 [AS-081]** and in section 8.14 of the **Planning Statement [TR020001/APP/7.01]**. The methodology for the Waste and Resources assessment follows the guidance set out within the Institute of Environmental Management and Assessment (IEMA) guide to: Materials and Waste in Environment Impact Assessment, Guidance for a Proportionate Approach. The assessment methodology assesses the likely significant effects of the on:
- a. the availability of resources, specifically key construction materials during construction and operation; and
 - b. landfill void capacity during construction and operation.

Construction

- 9.15.2 The Applicant's assessment, as presented in **Chapter 19** of the **ES [AS-081]** concluded, for EIA purposes there is only one significant adverse effect in the construction phase. This relates to a decrease in hazardous landfill void capacity in assessment Phase 2a, which when considered conservatively in the surrounding counties (Bedfordshire, Buckinghamshire and Hertfordshire) expansive study area. When considered at a national level (as suggested in the IEMA assessment guidance) the decrease in hazardous landfill capacity void is not significant.

Operation

- 9.15.3 The Applicants' assessment, as presented in **Chapter 19** of the **ES [AS-081]** concluded, for EIA purposes, there are no significant adverse effects in the operation phase.

Waste and Resources mitigation

- 9.15.4 Mitigation measures proposed in relation to Waste and Resources are described in section 19.8 of **Chapter 19** of the **ES [AS-081]** and in the **Mitigation Route Map [REP10-023]**.

Construction

- 9.15.5 Mitigation measures have been integrated (embedded) into the Proposed Development for the purpose of minimising effects related to waste and resources during construction. These measures focus on designing out waste, importing alternative (recycled and secondary) aggregate and other materials, implementing the waste hierarchy through the reuse and recycling of site-won materials on-site where possible to minimise the need to import construction materials to site, and to reduce the quantity of waste to be exported off-site. The following requirements are set out in the Appendix 4.2 of the ES, **CoCP [REP8-013]**:

- a. Produce a Materials Management Plan (MMP).
- b. Produce a Site Waste Management Plan (SWMP) (based on the **Outline SWMP (OSWMP)** included as Appendix 19.1 of the ES **[AS-097]**).
- c. Setting of recycled content targets. The target is set in the **CoCP [REP8-013]** and **OSWMP** (Appendix 19.1 of the ES **[AS-097]**).
- d. Setting of waste recovery and recycling targets as per the Airport National Policy Statement (ANPS). The targets are set in the **CoCP [REP8-013]** and **OSWMP** (Appendix 19.1 of the ES **[AS-097]**).

Operation

- 9.15.6 Mitigation measures have been integrated (embedded) into the Proposed Development for the purpose of minimising effects related to waste and resources during operation. These general measures comprise the following, which focus on implementing the waste hierarchy through reuse and recycling:

- a. Produce an Operational Waste Management Plan (OWMP) in accordance with the **Outline OWMP (OOWMP)**, provided as Appendix 19.2 of the ES **[APP-134]**.
- b. Setting of waste recycling target as per the ANPS. The target is set in the OOWMP (Appendix 19.2 of the ES **[APP-134]**).

Consideration of Waste and Resources matters during Examination

9.15.7 For this topic, no issues were raised during examination and all matters are agreed at the end of Examination.

Topic conclusion

- 9.15.8 The Waste and Resources assessment in **Chapter 19** of the **ES [AS-081]** has been used to determine compliance with relevant planning policy. This is reported in section 8.14 of the **Planning Statement [TR020001/APP/7.01]** and in **Planning Statement Appendix E - Policy Compliance Tables [REP5-018]**.
- 9.15.9 Paragraph 5.137 of the ANPS (Ref 9.7) states that the targets for preparation for reuse and recycling of municipal waste (50%), and for construction and demolition waste (70%) set out by the Waste Framework Directive should be considered “*minimum acceptable practice*” for the construction and operation of any new airport infrastructure.
- 9.15.10 The design of the Proposed Development and the planned approach to its construction have been developed with an overarching principle of achieving efficiencies in waste and resources where possible, for example by designing out waste generation where possible and diverting waste from landfill through on-site and off-site recycling and recovery.
- 9.15.11 The construction target is for the Proposed Development to achieve at least 90% (by weight) material recovery of non-hazardous construction and demolition waste, going well beyond the 70% target set out in the ANPS.
- 9.15.12 In accordance with LLP policy LLP37 (Ref 9.45) which encourages “*an overall reduction in the amount of waste generated, treated and disposed of to reduce the need for land for waste management. Proposals that are likely to generate significant volumes of waste through development or operational phases will be required to include a waste audit as part of the application*”, an audit of the design has been undertaken to estimate resources required and waste to be generated from construction.
- 9.15.13 For this topic, no issues were raised during the Examination.
- 9.15.14 As a result, it is the Applicant’s position that nothing has materially changed which fundamentally alters the assessment of policy accordance and that the Proposed Development accords with all relevant planning policy.

9.16 Water Resources and Flood Risk

Water Resources and Flood Risk assessment

- 9.16.1 The Water Resources and Flood Risk assessment is reported in **Chapter 20** of the **ES [REP4-009]**. Compliance with relevant legislation and policy is outlined in section 20.2 of **Chapter 20** and in sections 8.15 and 8.16 of the **Planning Statement [TR020001/APP/7.01]**.
- 9.16.2 The Applicant has assessed as part of the ES:
- a. Changes to existing water level, volume and flow characteristics that could increase flood risk or reduce water available for existing water dependent receptors in the natural environment;
 - b. Surface water and groundwater quality;
 - c. Water supply and sewerage infrastructure; and
 - d. Water Framework Directive (WFD) bodies and potential changes to their status.
- 9.16.3 The assessment of the risk of contamination from the historic landfill to the underlying groundwater resources is provided in the **Detailed Quantitative Risk Assessment (DWRA) – Controlled Water** in Appendix 17.4 of the ES **[APP-124]**.
- 9.16.4 A summary of the assessment outcomes for construction and operation is provided below.
- Construction**
- 9.16.5 The Applicant aligned the assessment methodology with the methodology described in Design Manual for Roads and Bridges (DMRB) LA113: Road Drainage and the Water Environment.
- 9.16.6 Construction impacts on receptors during construction were supported by assessments within the following appendices:
- a. **Flood Risk Assessment**, Appendix 20.1 of the ES **[REP4-038]**;
 - b. **Water Framework Directive Compliance Assessment**, Appendix 20.2 of the ES **[REP4-027]**; and
 - c. **Hydrogeological Characterisation Report**, Appendix 20.3 of the ES **[REP4-029]**.
- 9.16.7 The Applicant's assessment, as summarised in **Chapter 20** of the **ES [REP4-009]** concluded, for EIA purposes, there are no significant effects taking into consideration embedded and tertiary mitigation measures.
- Operation**
- 9.16.8 The Applicant aligned the assessment methodology with the methodology described in Design Manual for Roads and Bridges (DMRB) LA113: Road Drainage and the Water Environment.

- 9.16.9 Impacts on receptors during operation were supported by assessments within the following appendices:
- a. **Flood Risk Assessment**, Appendix 20.1 of the ES [REP4-038];
 - b. **Water Framework Directive Compliance Assessment**, Appendix 20.2 of the ES [REP4-027];
 - c. **Hydrogeological Characterisation Report**, Appendix 20.3 of the ES [REP4-029].
 - d. **Drainage Design Statement**, Appendix 20.4 of the ES [REP5-096]
 - e. **Water Cycle Strategy**, Appendix 20.5 of the ES [REP4-033]; and
 - f. **Hydrogeological Risk Assessment: Drainage**, Appendix 20.6 of the ES [REP4-035].
- 9.16.10 The Applicant's assessment, as summarised in **Chapter 20** of the **ES [REP4-009]** concluded, for EIA purposes, there are no significant effects taking into consideration mitigation measures.

Water Resources and Flood Risk mitigation

- 9.16.11 Mitigation measures proposed in relation to Water Resources and Flood Risk are described in Section 20.8 of **Chapter 20** of the **ES [REP4-009]**.

Construction

- 9.16.12 Risks to the water environment during construction will primarily be mitigated by implementation of control measures as outlined in the **CoCP [REP8-013]**. The CoCP is secured by requirement 8 of Schedule 2 of the **draft DCO [REP9-003]**.

Operation

- 9.16.13 Risks to the water environment during operation will be mitigated by measures embedded within the drainage design, ongoing monitoring and permitting/consenting from relevant stakeholders (such as the Environment Agency, Thames Water and Affinity Water). The mitigation measures are outlined in the **Design Principles [REP9-030]**. The Design Principles are secured by requirement 13 of Schedule 2 of the **draft DCO [REP10-003]**.
- 9.16.14 Requirement 13 of Schedule 2 also requires '*No part of the authorised development may commence until for that part written details of a surface and foul water drainage plan, including means of pollution control and monitoring, have been submitted and approved in writing by the relevant planning authority following consultation with the Environment Agency, the lead local flood authority and the relevant water and sewerage undertakers, on matters related to their functions.*'

Consideration of Water Resources and Flood Risk matters during Examination

- 9.16.15 During Examination a number of issues were raised during ongoing stakeholder engagement and submissions, Issue Specific Hearings (ISH6 and ISH8) and in written questions:

- a. Engagement with the Environment Agency on the discharge of treated effluent to ground;
- b. Engagement with Thames Water on discharges to their network;
- c. Engagement with Affinity Water on potable water supply;
- d. Impacts to the WFD compliance assessment following updates to the WFD classifications;
- e. The impacts of the changes to topography and proposed drainage designs on local groundwater dependent features (such as flood risk and impacts on ecological sites/woodlands);
- f. Management of water quality risks from works in and around landfill materials;
- g. Alteration of surface water catchments (potential for 9 hectares of the Lea catchment diverted to the Mimram catchment); and
- h. Implementation of drainage upgrades required as part of existing planning conditions (Project Curium drainage upgrades).

9.16.16 In response:

- a. The Applicant engaged regularly with the Environment Agency throughout the examination. The drainage strategy was updated for Deadline 4 to include both a preferred discharge option (discharge to Thames Water foul network) and a reserve discharge option (treatment and discharge to ground), in line with the change request [**AS-151 and AS-152**]. All Water Resources and Flood Risk documents were updated at Deadline 4 and 5, with additional information provided to the Environment Agency. The Applicant worked with the Environment Agency to agree design principles which would be secured by the draft DCO to reduce the risks to the water environment as the detailed drainage design was developed post-DCO.
- b. The Applicant engaged regularly with Thames Water on proposals to discharge both foul water and contaminated surface water to their network. This included further modelling works of the networks capacity and engagement on East Hydes capacity.
- c. The Applicant engaged regularly with Affinity Water to agree protective provisions and Design Principles.
- d. The Applicant reviewed the WFD classification updates and agreed with the Environment Agency that there would be no impact on the compliance assessment.
- e. The Applicant provided further information in regard to the hydrogeological characterisation and impacts to groundwater dependent receptors at the Issue Specific Hearings and in response to Written Questions [**REP4-066 and REP7-057**].
- f. The Applicant outlined control measures (secured by DCO requirements) that manage water quality risks from works in and around landfill materials (including the **CoCP [REP8-013]**, **Design Principles [REP9-030]**, **Outline Remediation Strategy [REP6-005]** and **Outline Foundation**

Works Risk Assessment [REP6-007]). Responses to written questions in relation to water quality risks from works in the area of the landfill were submitted at Deadline 4 and 7 **[REP4-066 and REP7-057]**.

- g. The Applicant confirmed **[REP6-066]** that the airport operator is undertaking drainage upgrades in 2024/2025 which negate the requirement to divert 9 hectares of the Lea catchment into the Mimram catchment.
- h. The Applicant updated the **draft DCO [REP10-003]** so that Article 44 would not extinguish the existing drainage upgrades required as part of Project Curium, without written consent from Luton Borough Council.

9.16.17 For this topic the only area that is not agreed at the end of Examination is as follows:

- a. Due to the potential risk of flooding downstream of the drainage works, Luton Borough Council proposed that the respective Lead Local Flood Authorities (Central Bedfordshire LLFA and Hertfordshire County Council LLFA) are explicitly listed as requiring separate consultation in requirement 13 of the **draft DCO [REP10-003]**. The Applicant considers that the relevant local authority can decide (under requirements 36 and 37 of the **draft DCO [REP10-003]**) to consult other listed local authorities if they consider it relevant, and as such the other LLFAs do not need to be explicitly listed in requirement 13. This matter is not agreed with Luton Borough Council.

9.16.18 All water related matters have been agreed with the Environment Agency, Thames Water, Affinity Water, Central Bedfordshire Council LLFA and Hertfordshire County Council LLFA in their respective Statements of Common Ground.

Topic conclusion

9.16.19 The Water Resources and Flood Risk assessment in **Chapter 20** of the **ES [REP4-009]** has been used to determine compliance with relevant planning policy.

9.16.20 Section 14 of the NPPF (Ref 9.10) outlines the requirements to ensure that flood risk is considered at all stages of the planning process to direct development away from areas at highest risk.

9.16.21 The approach to drainage and flood risk has been discussed with the LLFA and EA through the working group process.

9.16.22 As a result, the drainage design for the Proposed Development has applied a hierarchical approach that promotes sustainable development and includes the use of infiltration tanks and rainwater recycling. The design of the surface water drainage has been developed to accommodate the volume and rate of water generated by a 1 in 100-year return period storm event, including a 40% uplift to allow for potential increases in rainfall due to climate change. The new drainage system will include real-time monitoring of contaminant levels and volumes to determine if surface water runoff from across the remainder of the Main

Application Site is contaminated. When contaminants are detected, water will be diverted into storage tanks.

- 9.16.23 Paragraph 5.175 of the ANPS (9.7) states that “*Where the proposed development is subject to an Environmental Impact Assessment and the development is likely to have significant adverse effects on the water environment, the applicant should ascertain the existing status of, and carry out an assessment of, the impacts of the proposed project on water quality, water resources and physical characteristics as part of the environmental statement.*”
- 9.16.24 NPPF (Ref 9.9) paragraph 180 (e) states “... *Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.*”
- 9.16.25 An appropriate assessment of the impacts of the Proposed Development on water quality and water resources (including source protection zones and abstractions), for groundwater and surface water quality and quantity, has been undertaken in **Chapter 20** of the **ES [REP4-009]**. To satisfy paragraphs 5.176 and 5.177 of the ANPS (Ref 9.7), a Water Framework Directive Compliance Assessment has been completed.
- 9.16.26 Matters raised during the Examination in relation to water resources are outlined in paragraph 9.16.15. The Applicant’s response to these matters is set out in paragraph 9.16.16. For this topic, the only area that is not agreed at the end of the Examination is a matter not agreed with Luton Borough Council, explained in paragraph 9.16.17.
- 9.16.27 The Environment Agency initially raised a Principle Area of Disagreement [**AS-056**] with the proposed discharge of treated effluent to the aquifer. However, following further engagement and updates to **Chapter 20** and its associated appendices, the Environment Agency removed their Principle Area of Disagreement at Deadline 6 [**REP6-111**]. The Environment Agency has now agreed all matters in the Statement of Common Ground, with further works secured by the draft DCO.
- 9.16.28 It is the Applicant’s position that nothing has materially changed during the Examination which fundamentally alters the assessment of policy accordance.
- 9.16.29 Having regard to the Water Resources and Flood Risk matters raised during Examination, the Proposed Development would accord with all relevant planning policy relating to Water Resources and Flood Risk.

9.17 In-combination and Cumulative Effects

In-combination and Cumulative Effects assessment

- 9.17.1 The In-combination and cumulative effect assessment is reported in **Chapter 21** of the **ES [REP10-011]**.
- 9.17.2 In-combination effects are those which may be a result of the combined action of different environmental impacts from the Proposed Development upon the same receptor(s). The method employed for the in-combination effects

assessment is described in section 21.2 of the chapter and was developed as bespoke assessment methodology using several guidance documents to assess the potential effect of other effects identified in Chapters 6 to 20 of the ES in-combination with each other.

- 9.17.3 The potential interaction of air quality, noise and visual effects were considered as in some cases the same receptors would experience a combination of these effects. Residential properties under the flight path or in close proximity to the Proposed Development, such as, those in South Wigmore, Tea Green, Stony Lane, Winch Hill, residents of Winch Hill Cottages, Darleyhall were identified as potentially experiencing minor in-combination effects, which are not significant.
- 9.17.4 Cumulative effects are those which may occur due to the ‘cumulation’ or combined action of a number of different projects and developments (referred to as ‘other developments’), cumulatively with the Proposed Development, on the same receptor(s). The cumulative effect assessment was undertaken in accordance with The Planning Inspectorate (2019) Advice Note Seventeen: Cumulative Effects Assessment.
- 9.17.5 The long list of other development considered in the cumulative effects assessment was discussed and agreed with relevant local authorities during engagement. This list was subject to screening criteria, as defined in the Planning Inspectorate’s Advice Note Seventeen and described section 21.3 of **Chapter 21** of the **ES [REP10-011]**, to give the short list of other development considered in the assessment.
- 9.17.6 The results of the assessment are reported by each environmental aspect in turn in Table 21.10 of Chapter 21 of the ES. No significant cumulative effects were identified.

In-combination and Cumulative Effects mitigation

- 9.17.7 No additional mitigation measures were identified in relation to in-combination or cumulative effects.

Consideration of In-combination and Cumulative Effects matters during Examination

- 9.17.8 During Examination the following issues were raised:
- a. At Written Questions 1 BCG.1.4 **[PD-010]** the ExA asked each Host Authority to *“provide an update on any submitted planning applications or consents granted since the application was submitted that could either affect the Proposed Development or be affected by the Proposed Development and whether these would affect the conclusions reached in the Environmental Statement (ES).”*
 - b. The only developments of note, not already fully accounted for in the cumulative assessment, was application. 21/00356/FPM from the Hertfordshire Host Authorities.
 - c. At Written Questions 2 BCG.2.4 **[PD-015]** the ExA asked each Host Authority to *“Provide an update on any applications for planning*

permission or prior approval that have been submitted/ determined since the ExA's first written questions (ExQ1) [PD-010] that could either affect the Proposed Development or be affected by the Proposed Development and confirm whether these could change the conclusions reached in the Environmental Statement (ES). Could you also provide an update on the following applications: 1. Wandon End Solar Farm; and 2. Bloor Homes application."

- d. CBC **[REP7-084]** and LBC **[REP7-090]** identified an application was submitted by the airport operator to LBC to determine whether the creation of a solar farm to the south of the runway was permitted development. LBC and CBC confirmed that the proposal constituted permitted development on 13 December (ref: 23/01314/GPDOPD).
- e. The Hertfordshire Host Authorities **[REP7-087]** again identified 21/00356/FPM provided updates on:
 - i. Wandon End Solar Farm – (Ref 22/03231/FP) – where the LPA is currently undertaking public re-consultation on the application and expects a recommendation will be submitted to the Planning Control Committee in March 2024.
 - ii. East of Luton Planning Application by Bloor Homes (Ref: 17/00830/1; 22/02905/FP; 22/02904/FP) The applications have agreed extensions in time to the end of March 2024, and are likely to require further extension following progression with a Masterplan as required by Policy SP9: Design and Sustainability in the adopted North Hertfordshire Local Plan 2011-2031. f and requested that these proposals should be fully taken into account in the assessment by the Applicant in terms of the DCO and the EIA.
- f. In the Rule 17 letter of 17 January 2024 [PD-019] the ExA requested that CBC and LBC provide plans and commentary on the implications of the solar farm to the south of the runway on the current application, and that *"As the solar farm development is now in the consented baseline, the Applicant is requested to submit further information setting out any implications on the Proposed Development and the findings of the Environmental Statement (ES). This should include any potential changes to the Landscape and Visual Impact Assessment, and Cultural Heritage, with reference to Luton Hoo and Someries Castle. This element of the response can be submitted at D9."*
- g. In the Rule 17 letter of 25 January 2024 **[PD-021]** the ExA requested that the Applicant *"provide comment on the implications of the developments identified by the relevant planning authorities for the conclusions of the ES Chapter 21 In-combination and cumulative effects assessment **[AS-032]**, if any."*

9.17.9 In response the Applicant:

- a. The Applicant responded that 21/00356/FPM is on the western edge of Stevenage, approximately 7km from the Proposed Development. Therefore, it didn't meet the selection criteria for inclusion in the cumulative assessment (which included residential development +200 homes considered 'Large Scale Major' only up to 5km from Proposed

Development Site) as discussed with the Host Authorities during engagement and described in section 21.3 of **Chapter 21** of the ES.

- b. The Applicant responded to the Rule 17 letter of 17 January 2024 at Deadline 9 [**REP9-052**] confirming that the inclusion of the proposed solar farm on operational land to the south of the runway does not change the conclusions of the assessments reported in the ES.
- c. The Applicant responded to the Rule 17 letter of 25 January 2024 at Deadline 9 [**REP9-057**] acknowledging that the additional development Wandon End Solar (Ref 22/03231/FP) was not fully considered in the ES as the Applicant was only made aware of the proposal shortly before submission; this was also acknowledged in the ES. The Applicant has updated **Chapter 21** on In-combination and Cumulative Effects to fully consider this development and resubmitted at Deadline 10. No new to different cumulative effect were identified.

9.17.10 For this topic all matters are agreed at the end of Examination.

Topic conclusion

9.17.11 The **In-combination and Cumulative Effects** assessment in **Chapter 21** of the ES [**REP10-011**] has been used to determine compliance with relevant Environmental Impact Assessment Regulations.

9.17.12 It is the Applicant's position that nothing has materially changed during the course of the Examination which fundamentally alters that assessment.

9.18 Equalities

Equality Impact Assessment

9.18.1 The assessment is presented in the **Equality Impact Assessment (EqIA) [AS-129]**. Compliance with relevant legislation and policy is outlined in section 7.4 of the **Planning Statement [TR020001/APP/7.01]**.

Construction

9.18.2 Following an initial screening exercise, the potential disproportionate and differential effects of the Proposed Development on groups with protected characteristics as defined in the Equality Act 2010 during construction have been assessed. The outcomes of the assessment have been informed by documents submitted as part of the development consent including the ES [**TR020001/APP/5.01**].

9.18.3 The EqIA concluded that during construction the following groups will experience adverse effects; children, young people, older people, those with disabilities, pregnancy and maternity (for accessibility to Public Rights of Way).

9.18.4 The Proposed Development will result in the loss of Prospect House Day Nursery and the assessment concludes that based on current supply and demand for nursery places, the loss of the nursery, prior to any mitigation, would represent a disproportionate effect on children aged 3 months to 5 years

and parents with young children. With appropriate mitigation measures the effect would be neutral on both groups.

- 9.18.5 Effects identified as neutral in protected characteristic groups include air quality, access to public open space and impacts arising from severance for access to community and religious facilities.
- 9.18.6 Beneficial effects during construction have been identified for young people, those with disabilities, BME groups and women due to benefits from employment opportunities generated by the construction of the Proposed Development.

Operation

- 9.18.7 The methodology used to understand the implications of the operation of the Proposed Development follows that of construction and is outlined in section 9.18.2 of this report.
- 9.18.8 The EqIA concluded that during operation the following groups will experience adverse effects; children, young people, older people, those with disabilities, pregnancy and maternity, BME groups in some locations due to increases in noise levels, based on outcomes from the noise assessment within the ES **[TR020001/APP/5.01]**.
- 9.18.9 Further potential adverse effects have been identified for those with particular religions and beliefs who require access to appropriate facilities, proposed mitigation through the **Design Principles** document **[REP9-030]** acknowledges that the consideration of needs of religious groups and includes measure to mitigate any potential adverse effects.
- 9.18.10 Additionally, further potential adverse effects have been identified for women who are more likely to feel concerned about security, particularly at night in public spaces with poor lighting. As the design of the Proposed Development progresses it will ensure sufficient lighting and
- 9.18.11 Effects identified as neutral in protected characteristic groups include air quality, provision of information and wayfinding at the airport for those who may not speak English, access to religious facilities and impacts arising from severance for access to community and religious facilities.
- 9.18.12 Beneficial effects during operation have been identified for young people, those with disabilities, BME groups and women due to benefits from access to public space and public rights of way, access to employment opportunities, access to gender neutral toilets, lighting measures.
- 9.18.13 Mitigation measures proposed in relation to equalities impacts are described in section 3.6 of the **Equality Impact Assessment [AS-129]** and in the **Mitigation Route Map [REP10-023]**.

Construction and operation mitigation

- 9.18.14 The following proposed mitigation measures are relevant to the EqIA, the measures are summarised below and the relevant topic from the ES where the mitigation is identified is referenced below:

- a. Acoustic barriers are proposed to screen receptors from noise emissions generated by ground activities at new airport infrastructure. The barrier is incorporated into each of the assessment phases (as defined in **Chapter 4** of the ES [TR020001/APP/5.01]). The barrier would be approximately 4m in height but may vary to suit specific locations. (**Chapter 16** Noise and Vibration of the ES [TR020001/APP/5.01])
- b. Measures included within the **CoCP** (provided as Appendix 4.2 of the **ES [REP8-013]**) outline the Best Practicable Means implemented during construction works to manage noise and vibration
- c. The Noise Envelope provides details on how aircraft noise will be controlled and how benefits of noise reduction from next generation technology will be shared in line with UK noise policy.
- d. Proposed highway mitigation works described in **Chapter 4** of the **ES [TR020001/APP/5.01]** are included in the Proposed Development to reduce the adverse impact of the additional traffic on other road users (**Chapter 18** Traffic and Transportation of the ES [TR020001/APP/5.01]).
- e. The appointed contractor will make provision to limit adverse health and wellbeing effects relating to the construction of the Proposed Development through implementation of a community engagement strategy to reduce stress and uncertainty associated with the Proposed Development (**Chapter 13** Health and Communities of the ES [REP10-009]), and the **Code of Construction Practice** provided as Appendix 4.1 of the ES [TR020001/APP/5.02]).
- f. Mitigation measures in line with the International Civil Aviation Organization (ICAO) Balanced Approach to Aircraft Noise Management will be adopted to reduce aircraft noise as far as reasonably practicable (**Chapter 16** Noise and Vibration of the ES [TR020001/APP/5.01]).
- g. New building infrastructure introduced that screens receptors to the north of the Proposed Development from ground-based operational noise sources (**Chapter 16** Noise and Vibration of the ES [TR020001/APP/5.01])
- h. Low noise road surfacing on the proposed Airport Access Road (**Chapter 16** Noise and Vibration of the ES [TR020001/APP/5.01]) has been proposed to reduce the impact of noise from road traffic.

9.18.15 Additionally, there will be a number of PRow affected by the Proposed Development, these footpaths and the proposed mitigation are detailed within Section 3.6.2 of the **EqIA [AS-129]**.

9.18.16 In addition to the mitigation measures set out above, the following measures would be adopted by the Proposed Development and are of particular relevance to the EqIA:

- a. appropriate measures to reduce emissions to air (**Chapter 7** of the ES [TR020001/APP/5.01])

- b. Develop and implement a stakeholder communications plan that includes community engagement before work commences on site, as described in the **CoCP** (Appendix 4.2 of the ES **[REP8-013]**).
- c. Best practice construction noise and vibration management measures described in the **CoCP** (Appendix 4.2 of the ES **[REP8-013]**).
- d. **ETS [TR020001/APP/7.05]** – Outlines how the future construction skills requirements will be met.
- e. Off-site construction traffic movements would be managed in compliance with the **Construction Traffic Management Plan (CTMP)**, Appendix 18.3 of the ES **[TR020001/APP/5.02]**.

Consideration of Equalities matters during Examination

9.18.17 During Examination the following issues were raised:

- a. Regards to the Equalities Act in relation to Compulsory Acquisition (CA) and Temporary Possession (TP) and whether any Affected Persons have been identified as having protected characteristics and if so what regard has been had to them.
- b. Consideration of whether the **Statement of Reasons [AS-071]** or the ES **[AS-129]** been reviewed since the application was submitted and in particular in light of RRs to ensure that everything has been done to ensure anyone with protected characteristics has been captured and assessed to ensure compliance with the Equality Act 2010 (Ref 9.46).
- c. The re-provision of Prospect Day Nursery.

9.18.18 In response the Applicant:

- a. The Applicant's response to the ExA's Written Questions **[REP7-048]** outlines that an EqIA for the Proposed Development has been carried out and prepared in accordance with DCO industry best practice and the methodology is outlined in Section 3 of the EqIA including any assumptions and limitations. The response further outlines that the EqIA adopts a study area of 1km around the main application site in accordance with industry best practice. This therefore includes any party within the scope of CA/TP powers (i.e. those within the Order limits) and an assessment on any groups affected has been identified as appropriate within the EqIA.
- b. The Applicant's response to the ExA's Written Questions **[REP7-048]** highlights that the Applicant remains compliant with the Equalities Act 2010 and where points have been raised on the EqIA, the applicant has responded to relevant representations where appropriate. To date, RRs and other submissions made by Interested Parties have not flagged any material points which would need to be revisited within the EqIA.
- c. Prospect House Day Nursery – Within the Applicant's response to the ExA's Written Questions **[REP7-048]**, the Applicant in the EqIA concludes neutral effects on the basis that the nursery will be provided in a suitable location. The response further acknowledges the commercial nature of the re-provision of nursery places and considers that at the time of

reprovision there may be alternative providers in the area and that the facility in questions may no be operating at the time of reprovision. In relation to the mechanism to mitigate the effect on Prospect House Day Nursery, Luton Borough Council has accepted the proposed mitigation which is captured in the section 106 agreement.

9.18.19 For this topic, there are no outstanding areas that are not agreed at the end of Examination.

Topic conclusion

9.18.20 This is reported in the **Planning Statement [TR020001/APP/7.01]** and in **Planning Statement Appendix E - Policy Compliance Tables [REP5-018]**.

9.18.21 It is the Applicant's position that nothing has materially changed during the Examination which fundamentally alters that assessment of policy accordance.

9.18.22 Having regard to the Equalities matters raised during Examination, the Proposed Development would accord with all relevant planning policy relating to Equalities.

9.19 Effects on the Green Belt

Overview

9.19.1 The **Green Belt Assessment [APP-196]** considered each element of the Proposed Development located within the Green Belt and whether they constitute inappropriate development.

9.19.2 This assessment concluded that there are two elements constituting inappropriate development, the proposed Surface Movement Radar (SMR) to the south of the airport and the Above Ground Installation to the east of the airport.

9.19.3 In both cases, it has been demonstrated that the identified harm to the Green Belt that would result from these elements is clearly outweighed by the benefits they would deliver and that very special circumstances exist, in accordance with the National Planning Policy Framework (Ref 9.9) and the relevant Green Belt policies within the respective development plan documents.

9.19.4 All other elements of the Proposed Development in the Green Belt are not inappropriate and therefore comply with the relevant Green Belt policies within the respective development plan documents.

Consideration of Green Belt matters during the Examination

9.19.5 During Examination the following issues were raised:

- a. The impact of the physical works proposed as part of the replacement open space on Green Belt.
- b. The location of the SMR.
- c. The location of the Fuel Pipeline and the Above Ground Installation, including questions at the Issue Specific Hearing.

- 9.19.6 In response, the Applicant provided the Applicant's response to Written Questions - Green Belt at Deadline 4 [REP4-064]. This response:
- a. Confirmed that the physical works proposed as part of the replacement open space would remain inherently open, both in close and long-distance views and would continue to clearly link to the wider Green Belt both visually and spatially, maintaining the sense of separation between settlements. As a result, and when tested against the five purposes of Green Belt as set out in the NPPF (Ref 9.9), it is considered that the proposed change of use and associated physical works would preserve openness and would not conflict with these purposes. It should be considered to be "not inappropriate" development in accordance with the NPPF. Green Belt matters, all agreed, were included in the Statements of Common Ground with the Host Authorities.
 - b. Detailed that for the SMR Movement Radar, very special circumstances apply for the Green Belt location. This was qualified further through a written response which outlined the principles and detail in which the SMR was designed, in particular, to not only function effectively notably through its height, but also not encourage urban sprawl, nor impact the use of the land in any other way. The open nature of the SMR works would still afford views through, and they would not appear as solid massing. They would visually be assimilated into the adjacent airport infrastructure and would be perceived as part of the overall airport including existing functions.
 - c. Discussed the Fuel Pipeline and Above Ground Installation, where very special circumstances apply for the Green Belt location. The siting of the works would achieve a reduction in environmental impacts, relating to greenhouse gas emissions, air quality, noise, and traffic congestion associated with reducing road vehicle movement. The access road is considered to be "not inappropriate" in the Green Belt as it would preserve its openness and does not conflict with the purposes of including land within it. The location of these works sought to ensure functionality and efficiency as well as the reduction of environmental impacts, alongside the design of the alignment being selected to minimise impact on openness.
- 9.19.7 For this topic, all matters are agreed at the end of the Examination.
- 9.19.8 With LBC, matters were agreed at Deadline 3, and as stated in their Local Impact Report, LBC is satisfied that the need for a Green Belt location for the Surface Movement Radar and associated infrastructure has been appropriately demonstrated.
- 9.19.9 Central Bedfordshire Council confirmed in December 2023 that they had reviewed the **Planning Statement [TR020001/APP/7.01]**, **Design and Access Statement [AS-049]** and **Green Belt Assessment [APP-196]** and is satisfied with the case put forward by the Applicant in regard to work in the Green Belt in Central Bedfordshire.
- 9.19.10 The Hertfordshire Host Authorities confirmed in December 2023 that they had reviewed the **Planning Statement [TR020001/APP/7.01]** and **Green Belt Assessment [APP-196]** and on the assumption that the development is judged

against Green Belt policy as a agrees with the case put forward by the Applicant to the ExA to consider the impact.

Topic conclusion

- 9.19.11 It is the Applicant's position that the conclusions of the Green Belt Assessment remain unchanged. For those elements of the Proposed Development which constitute inappropriate development, the benefits they would deliver are a consideration which clearly and demonstrably outweigh the limited harm they would have, and therefore very special circumstances exist in accordance with relevant national and local Green Belt policy.

10 THE DRAFT DEVELOPMENT CONSENT ORDER

10.1 The Applicant's approach

- 10.1.1 At submission, the Applicant provided a draft Development Consent Order (DCO) and an Explanatory Memorandum (EM) setting out an explanation of and justification for the different provisions contained within the draft DCO, together with details of the precedents that various provisions were based upon and evidence that appropriate guidance had been followed.
- 10.1.2 The Applicant has, in preparing and amending the DCO, been mindful of relevant Government policy. In that context, the Applicant would request that regard is had to Getting Great Britain building again: Speeding up infrastructure delivery (Ref 10.1). That document sets out that *“the delivery of big infrastructure projects in our country could be much better. It is too slow. Too bureaucratic. Too uncertain.”* It goes on to state *“the system responds with more process, but longer processes are not leading to better outcomes. All these factors detract from the focus we need on delivery. We need to speed up every part of the process, ... and hardwire a focus on delivery into every part of the system.”* That is the approach adopted by the Applicant, and it is requested that measures or provisions which disproportionately add time, cost or needless process are not inserted into the DCO.
- 10.1.3 The Applicant has also been mindful of the planning tests relating to planning conditions which are relevant to DCO requirements (see paragraph 4.9 of the Airports National Policy Statement (Ref 10.2)). In particular, requirements should only be imposed where they are necessary, relevant to planning, relevant to the development to be consented, enforceable, precise, and reasonable in all other respects. In a number of instances, amendments proposed do not meet these tests, and introduce ambiguity about the relevant securing mechanism. The Applicant has therefore resisted a number of proposed Requirements for that reason. The Applicant respectfully requests where a relevant matter is secured under a ‘control document’ that that matter is not duplicated on the ‘face of the DCO’. Doing so introduces ambiguity about the enforcement of the relevant commitment and also runs a serious risk of the parameters and processes included in the relevant control documents (which have been the subject of detailed engagement during the course of the Examination) being inadvertently omitted.
- 10.1.4 During the Examination, both the draft DCO and the EM have evolved significantly as the Applicant sought to be proactive and reasonable in responding to and, where possible, ‘closing out’ comments and drafting requests from Interested Parties and the Examining Authority (ExA). The ExA is directed to the **Summary of Changes to the Draft DCO [REP10-035]** which evidences that approach in full. For the purposes of this summary, the Applicant highlights the following (more significant) changes that have been made throughout the Examination:
- a. Article 2 (Interpretation): new sub-paragraphs (12) and (13) have been inserted in order to provide comfort to discharging bodies. The provision provides that where a deemed consent provision applies anywhere within

the Order, it is only effective if the undertaker has included a statement notifying the discharging body of its effect as part of the application for consent. This provides any such bodies with sufficient notice that if they do not respond within the allocated timeframe, consent will be deemed to have been given. This aligns the draft DCO with other recent DCO precedents which include 'deemed consent' provisions.

- b. Article 22 (Felling, lopping and removal of trees, shrubs and hedgerows): these powers have now been limited and are not to be exercised in relation to any tree, shrub or hedgerow which is situated within a conservation area, or which is subject to a tree preservation order unless the tree, shrub or hedgerow has been identified in a scheme or plan submitted under paragraphs 9 or 10 of Schedule 2 (Requirements). The amendments have been made as a result of the **Examining Authority's commentary on, or schedule of changes to the draft DCO [PD-018]**.
- c. Article 33 (Temporary use of land for carrying out the authorised development): the notice period for entering and taking temporary possession of land has been increased from 14 to 28 days, having regard to the ExA's first Written Questions **[PD-015]**.
- d. Article 35 (Special category land): this has been amended to make clear that the scheme for the provision of replacement land that the undertaker is to provide is to be a "satisfactory" scheme. This amendment was made in response to **Examining Authority's commentary on, or schedule of changes to the draft DCO [PD-018]** and the **Host Authorities' Response at Deadline 8 to DCO Matters [REP8-052]**, paragraph 8.7.
- e. Article 43: at the request of the Environment Agency and the Host Authorities, the Applicant has removed the disapplication of drainage consents for which they are the consenting body.
- f. Article 44 (Interaction with LLAOL planning permission): in response to requests from the Host Authorities and the ExA, this article has been significantly amended. This article now:
 - i. Contains a requirement for the undertaker to inform Central Bedfordshire Council (CBC), Dacorum Borough Council (DBC), Hertfordshire County Council (HCC) and North Hertfordshire District Council (NHDC) once notice has been served to Luton Borough Council (LBC) under paragraph (1).
 - ii. Clarifies that in the instance the LLAOL planning permission ceases to have effect, the associated section 106 agreement is abrogated.
 - iii. Confirms which relevant planning conditions from the LLAOL planning permission are to be 'preserved'. These are conditions under the LLAOL planning permission which either require built development not completed at the point article 44(1) notice is served, or involve an ongoing monitoring/management regime for built development which should continue beyond service of that notice. The specific conditions that paragraph (4) applies to are listed in new paragraph (7), and take account of whichever airport

planning permission (i.e. 18 mppa vs 19 mppa) constitutes “the LLAOL planning permission” at the relevant time. Paragraph (4) provides that the condition will be “preserved” until it has been discharged, or LBC certifies that an equivalent DCO obligation (e.g. in relation to surface water management) has superseded it. Paragraph (5) adjusts the pre-existing enforcement provision of article 44 to take account of new paragraph (4). This change has been made in response to comments from LBC, and in discussion with London Luton Airport Operations Limited (LLAOL), which has confirmed the relevant planning conditions which should be ‘carried over’. These conditions do not conflict with the operating regime for the airport under the DCO. The Applicant understands that LBC is now content with article 44.

- g. Article 45 (Application of the 1990 Act): in response to comments and specific suggestions from the Host Authorities and the ExA at Issue Specific Hearing 10 and in post-hearing submissions, this has been amended to confirm that conditions will not be rendered unenforceable before an inconsistency between planning permissions actually arises. It also ensures that the relevant local planning authority will be notified where an inconsistency is considered to have arisen, which will allow the local authority to engage with the matter as it sees fit. Further changes have been made to require notice of inconsistencies, as well as defining “inconsistency” in line with the request from Host Authorities. The Applicant also notes that it has limited the operation of article 45(1) to assure the Host Authorities and other Interested Parties that permitted development rights will not inadvertently apply to Wigmore Valley Park. See Section 10.2 of this document for signposting to the Applicant’s detailed justification for the necessity of this provision.
- h. Article 53 (Funding): a new article has been inserted as a result of the **Examining Authority’s commentary on, or schedule of changes to the draft DCO [PD-018]** published on 16 January 2024. Given the long-term phased delivery programme for the Proposed Development, which is reflected by the 10-year period for exercising compulsory acquisition powers, the Applicant has made some minor revisions to the drafting proposed by the ExA to confirm that the form of guarantee or security can also be phased. In other words, the guarantee or security in any phase would relate to the exercise of any specified compulsory acquisition powers for that phase, and not the compulsory acquisition powers necessary for delivery of later phases. The guarantee or security for the later phases would then come forward at the relevant time.
- i. Schedule 2, requirement 1 (Interpretation): in response to the **Examining Authority’s commentary on, or schedule of changes to the draft DCO [PD-018]**, the Applicant added the concept of “specified authorities” to support a number of changes across Schedule 2 to provide greater precision, and wider consultation obligations, in relation to the discharge of requirements.
- j. Schedule 2, requirement 2 (Amendments to approved details): amendments made as a result of the **Examining Authority’s**

commentary on, or schedule of changes to the draft DCO [PD-018].

The Applicant has made a number of amendments to requirement 2 to better clarify and spell out its purposes, effect and process, including providing greater clarity in relation to which local authority is responsible for granting approval. Sub-paragraphs (1) and (2) now confirm clearly that amendments to plans which are ‘finalised’ at the point of DCO grant, and any amendments in the future to any parameters, must be consulted upon with the “specified authorities” (i.e. all of the Host Authorities) before a decision is made by LBC on the application. Amended sub-paragraph (3) then deals with amendments to plans etc. for which an approval is required (based upon an outline) under another requirement in Schedule 2. This employs “relevant planning authority” or the “relevant highway authority” as the approving body, as the identity of that body will vary under Schedule 2 depending on where the works are taking place, and what kind of works they are.

- k. Schedule 2, requirement 5 (Phasing of authorised development): this was an amendment made in view of comments made in Issue Specific Hearing 1 and Issue Specific Hearing 6, in written submissions by Interested Parties, in response to the ExA’s first written questions **[PD-015]** and in the **Examining Authority’s commentary on, or schedule of changes to the draft DCO [PD-018]**. The Applicant incorporated a phasing requirement in the Deadline 8 version of the Draft DCO **[REP8-003]**, as requested by the ExA, but made some adaptations to ensure that the Applicant has reasonable and proportionate flexibility to deliver the authorised development in “parts” which may be increments of a phase shown in the **Scheme Layout Plans [AS-072]**.
- l. Schedule 2, requirement 6 (Detailed design): this was amended during the course of the Examination, in response to comments from the ExA and Interested Parties, to be more prescriptive about the information required to be included in an application for detailed approval. Furthermore, in response to Action Point 53 from **Action Points arising from Issue Specific Hearing 8 (ISH8) on environmental matters, health and communities, held on Wednesday 29 November 2023 [EV15-013]** and following discussions with LBC, the requirement now also introduces a design review process for Terminal 2 (Work Nos. 3b(01) and 3b(02)), the new coach station (Work No. 3d), Terminal 2 plaza (Work No. 3f), the new Luton DART station (Work No. 3g) and the hotel (Work No. 4a). The process for this design review is set out in the **Design Principles** document **[REP9-030]**. In response to comments by the Host Authorities at Deadline 9, the approval mechanism was adjusted to ensure that the relevant planning authority approves all works, notwithstanding that the relevant highway authority has an approval function over highway works under Schedule 8.
- m. Schedule 2, requirement 8 (Code of Construction Practice): as a result of discussions at Issue Specific Hearing 1, this has been amended to clarify that the authorised development must be “carried out in accordance with” the Code of Construction Practice and the management plans approved under it, rather than simply be “carried out substantially in accordance

with” it. This Requirement was also updated at Deadlines 8 and 9 in response to **Examining Authority’s commentary on, or schedule of changes to the draft DCO [PD-018]** to provide more precision in terms of the relationship between the CoCP and the management plans that sit under it, and to include a commitment to a construction lighting plan.

- n. Schedule 2, requirement 9 (Landscaping Design): as a result of discussions at Issue Specific Hearing 1, this has been amended so that the landscaping scheme must now “be in accordance with” the principles in the **Strategic Landscape Masterplan [APP-172]** and the **Design Principles [REP9-030]**, rather than simply reflecting the principles of the first document. An amendment has been made to sub-paragraph (3) in response to the Environment Agency’s comments to confirm that any landscaping works would be carried out in line with the requirements of any environmental permit applicable to the works. Paragraph (4) has been amended in response to the **Examining Authority’s commentary on, or schedule of changes to the draft DCO [PD-018]** to clarify that the authorised development must not only be constructed in accordance with the landscaping scheme but also thereafter maintained in accordance with the relevant landscape and management plans approved under requirement 10.
- o. Schedule 2, requirement 10 (Landscape and biodiversity management plan), sub-paragraph (3) has similarly been amended in response to a comment from the **Host Authorities’ Response at Deadline 8 to DCO Matters [REP8-052]**, paragraph 23 to clarify that the authorised development must not only be carried out in accordance with the landscaping and biodiversity management plan, but also thereafter maintained in accordance with it. A further amendment has been made to commit the undertaker to replacing any tree or shrub planted as part of the landscaping scheme that within the specified period is removed, uprooted, destroyed, died or becomes damaged or diseased. A definition for “specified period” has also been included.
- p. Schedule 2, requirement 11 (Protected species) has been amended to now require consultation with Natural England on a scheme of mitigation measures. This is in response to the **Examining Authority’s commentary on, or schedule of changes to the draft DCO [PD-018]**.
- q. Schedule 2, requirement 12 (Previously unidentified land contamination and contaminated groundwater): in response to the **Examining Authority’s commentary on, or schedule of changes to the draft DCO [PD-018]** this has been amended to commit the undertaker to additionally informing or consulting a number of bodies in different scenarios:
 - i. the relevant water undertaker must now be informed in the event that any previously unidentified contaminated land is found during construction;
 - ii. the undertaker must now consult the relevant water undertaker when completing a risk assessment for the previously unidentified contaminated land;

- iii. a verification plan for remediation must be approved by the relevant planning authority, but now in consultation with the relevant water undertaker;
 - iv. a verification report must be approved by the relevant planning authority, but now in consultation with the Environment Agency and the relevant water undertaker.
- r. Schedule 2, requirement 13 (Surface and foul water drainage) has been amended to require consultation with the lead local flood authority and the relevant water and sewerage undertakers on a surface and foul water drainage plan – this amendment was made in response to the **Examining Authority’s supplementary agenda additional question ISH1.S2.14 [EV6-002]**. The requirement has additionally been amended in response to discussions at Issue Specific Hearing 1 to ensure that the surface and foul water drainage plan must be “in accordance with the drainage principles” set out in the **Design Principles [REP9-030]**, rather than simply reflecting them. The requirement now also contains further details of what must be in such a plan.
- s. Schedule 2, requirement 14 (Construction traffic management) and requirement 15 (Construction workers) have both been amended to change the identity of consultees. Rather than the relevant plans being approved by the relevant planning authority, following consultation with the relevant highway authority, consultation must now be with the “specified authorities”, Buckinghamshire Council and National Highways under requirement 14, and must now be with the “specified authorities” and Buckinghamshire Council under requirement 15. These changes have been made in response to: **Examining Authority’s commentary on, or schedule of changes to the draft DCO [PD-018]**.
- t. Schedule 2, requirement 17 (Remediation of Former Eaton Green Landfill) has been expanded to confirm that no part of the authorised development comprising Work No. 1b is to commence until both a remediation strategy and a foundation works risk assessment (rather than just the former) has been submitted to and approved in writing by the relevant planning authority, following consultation with the Environment Agency and the relevant water undertaker (rather than just the former). This first change has been made in response to a request from the Environment Agency and was first incorporated into the draft DCO at Deadline 5 **[REP5-003]**.
- u. Schedule 2, requirement 18 (Interpretation) has been amended to reflect changes to **Appendix A of the Green Controlled Growth Framework [TR020001/APP/7.08]**, in response to comments made by the Host Authorities at Deadline 4 seeking additional time for the review and approval of Level 2 Plans and Mitigation Plans: consultation period lengthened from 21 to 28 days.
- v. Schedule 2, requirement 20 (Environmental Scrutiny Group) has been amended in response to the Applicant’s Response to Issue Specific Hearing 1 Actions 20, 21, 24 and 26 and Issue Specific Hearing 3 Action 28: Green Controlled Growth – Transition Period and Slot Allocation

Process **[REP4-072]** to commit the undertaker to establishing the Environmental Scrutiny Group (ESG) “*as soon as reasonably practicable following service of the notice under article 44(1)*”, rather than simply no later than 56 days prior to the due date for submission of the first Monitoring Report. An amendment has also been made in response to the ExA’s commentary on, or schedule of changes to the draft DCO **[PD-018]** to change the requirement for personnel on the ESG – rather than a representative from an airline industry body, the individual must be a “slot allocation expert”, a term which is defined in requirement 20(13).

- w. Schedule 2, requirement 21 (Monitoring of permitted operations has been amended in response to the **ExA’s commentary on, or schedule of changes to the draft DCO [PD-018]** and now clarifies that the undertaker must monitor:
 - i. noise from the date the notice is served under article 44(1); and
 - ii. air quality, greenhouse gas emissions and surface access from 1st January following the end of the calendar year in which that notice is served.

Further amendments have also been made to clarify the dates by which Monitoring Reports are due.

- x. Schedule 2, requirement 23 (Exceedance of a Level 2 Threshold) and requirement 24 (Exceedance of a Limit) have both been amended to clarify the process in relation to an exceedance of a Level 2 Threshold and an exceedance of a Limit, respectively.
- y. Schedule 2, requirement 27 (Air noise management plan): has been inserted to secure a raft of existing noise-related conditions under the terms of the **Air Noise Management Plan [REP9-047]**. This plan includes the night quota period scheduled movement cap previously committed to on the face of the DCO under previous requirement 27.
- z. Schedule 2, requirement 28 (Fixed plant noise management plan) has been amended to clarify that from the date that notice is served in accordance with article 44(1), the airport must be operated in accordance with the **Fixed Plant Noise Management Plan [REP4-025]**.
- aa. Schedule 2, Requirements 29 to 34 (Requirements relating to: Ground noise management plan, Off-site highway works, Travel Plans, Operational air quality plan, Greenhouse gas action plan, Operational waste management plan). The Applicant has recognised that the obligation to produce operational plans should be tied to accessing the throughput authorised by the DCO, and not to the operation of part of the authorised development. The requirements now also clarify that from the date notice is served in accordance with article 44(1), the airport must be operated in accordance with the relevant plan, and that notice cannot be served until the plan is approved. Amendments were also made to requirement 30 (Off-site highway works) at Deadline 9 to simplify the provision and to provide greater clarity that the undertaker must “*implement and comply with the TRIMMA*”, rather than “*implement mitigation under the TRIMMA*”. This reflects the evolution of the **Outline**

Transport Related Impacts Monitoring and Mitigation Approach (TRIMMA) [REP10-036] over the course of the Examination, and the range of mitigation scenarios it provides for.

- bb. Schedule 2, requirement 35 (Interpretation) has been amended to provide for an extended approval period in respect of applications made under requirement 6 which involve the design review process – an extension from 8 to 13 weeks. This requirement also provides a definition of “Part 5 consultee” which is relevant to requirement 36 that follows.
- cc. Schedule 2, requirement 36 (Applications made under requirements) has been enhanced during the course of the Examination, in response to submissions from Interested Parties, to provide a mechanism to trigger consultation with “Part 5 consultees” where the discharging authority considers it necessary and appropriate given the nature and extent of the application under Schedule 2. Requirement 6 was further updated in response to the **Examining Authority’s commentary on, or schedule of changes to the draft DCO [PD-018]** to clarify the process in relation to any application made under the requirements, in particular in relation to the process of consultation with “Part 5 consultees” and time periods. The obligation to consult, where the relevant conditions are met, is now mandatory rather than discretionary.
- dd. Schedule 2, requirement 37 (Further information) has been similarly updated in response to the **ExA’s commentary on, or schedule of changes to the draft DCO [PD-018]** to clarify the process in relation to requesting further information under requirement 36. In particular, this sets out timeframes for the length of consultation periods.
- ee. Schedule 2, requirement 38 (Register of requirements) has been added in response to comments from the ExA. This commits the undertaker to establishing and maintaining an electronic register of requirements comprising details of whether any application has been made under a requirement and, if so, whether or not any consent, agreement or approval has been given. An electronic link to any such application must also be provided.
- ff. Schedule 2, requirement 41 (Application of Part 8 of the Planning Act 2008) to recognise that local authorities may also submit a request to Luton Borough Council to pursue enforcement action where relevant plans have not been consulted on or submitted within the specified time limits. A new sub-paragraph has been inserted as a result of submissions made by the Host Authorities.
- gg. Schedule 8: the application version of the draft DCO contained protective provisions for the benefit of electricity, gas, water and sewerage undertakers (Part 1), operators of electronic communications code network operators (Part 2) and London Luton Airport Operations Limited (Part 3). During the course of the Examination, the Applicant has added further protective provisions for the benefit of:
 - i. Cadent Gas Limited (Part 4) – these are fully agreed;

- ii. National Highways (Part 5) – whilst much of the content of these is agreed, there is fundamental disagreement over a number of critical matters. The Applicant objects to the amendments being proposed by National Highways in the strongest possible terms. The ExA is directed to the **Applicant's Response to Deadline 10 Submissions [TR020001/APP/8.192]** and the **Applicant's Position Paper on Sections 127 and 138 of the Planning Act 2008 [REP10-043]** for the Applicant's detailed comments in this respect. The Deadline 10 version of the draft DCO contains the Applicant's preferred version of these protective provisions, save in relation to some minor drafting changes that the Applicant has indicated it would be willing to accept in its Deadline 11 submissions.
 - iii. Local Highway Authorities (Part 6) – these are now substantially agreed between the parties, save a very small number of points explained in the **Applicant's Response to Deadline 10 Submissions [TR020001/APP/8.192]**. Again, the draft DCO at Deadline 10 contains the Applicant's preferred version of these protective provisions, save in relation to some minor drafting changes that the Applicant has indicated it would be willing to accept in its Deadline 11 submissions;
 - iv. Network Rail (Part 7) – whilst the Applicant considers the suggested impact on operational rail assets is greatly overstated, at Network Rail's request, in recognition of their statutory functions, and with the aim of reaching a compromise, the Applicant has included protective provisions for the benefit of Network Rail. The provisions contain some relatively limited modifications to Network Rail's 'standard' provisions, so that they proportionately reflect the nature of the interface between the Proposed Development and the railway. The form of the provisions in Part 7 has not been agreed, and the Applicant has explained its reasons from departing from the 'standard' Network Rail provisions in the **Applicant's Response to Deadline 10 Submissions [TR020001/APP/8.192]**.
- hh. Schedule 9 was restructured in response to a request made by the ExA and now sets out each individual's document that is to be certified, together with its document reference and version number.

10.2 Outstanding matters at the end of the Examination

- 10.2.1 As noted in section 10.1, the Applicant has meaningfully engaged with Interested Parties and the ExA with the objective of positively responding to drafting suggestions, and with the aim of settling as many drafting points as has been reasonably possible. As a result of this strategy, the Applicant's submission at the close of the Examination is that the number of drafting points still in dispute is small, for an application of this scale. Those points in dispute relate largely to issues of principle associated with the Proposed Development, rather than the form of drafting in the DCO. The Applicant considers that the

draft DCO is in a form suitable for being ‘made’, and respectfully invites the ExA to recommend this accordingly to the Secretary of State.

10.2.2 The table below provides the Applicant’s position on some of the key points it understands to be ‘not agreed’ at the close of the Examination. The Applicant emphasises that this is a summary only, represents the Applicant’s understanding, and is of course not a proxy for the detailed submissions made by the parties on the draft DCO at the various Examination deadlines.

Table 10-1 Summary of matters raised regarding the draft DCO and the Applicant's response

Provision	Raised by	Matter raised and Applicant’s response
Existing provisions		
<p>Article 35 (Special category land)</p>	<p>Host Authorities ExA</p>	<p>The ExA has recommended that wording is included to ensure replacement land is “no less advantageous”. The Applicant’s position is that article 35 does not need to include the wording “no less advantageous” for the following reasons:</p> <ol style="list-style-type: none"> 1. In tandem with other provisions of the draft DCO, there are adequate measures to secure the provision of “no less advantageous” replacement land, as detailed in the Applicant’s Response to the Examining Authority’s Commentary on the Draft DCO [REP8-036]. The “scheme” referred to in article 35 will also require approval from the relevant planning authority under paragraphs 6, 9 and 10 of Schedule 2 to the draft DCO. Furthermore, the Code of Construction Practice [REP8-013], secured by paragraph 8 of Schedule 2, provides a commitment at paragraph 12.1.1(f) to maintain access to, and not commencing construction works on, the existing Wigmore Valley Park until the replacement open space is accessible to the public. These measures provide the framework to ensure that a replacement land scheme will be delivered which is no less advantageous compared to the special category land it is replacing. 2. The “no less advantageous test” is engaged, as a matter of law under section 131 of the Planning Act 2008 (Ref 10.3), at the point the Secretary of State takes a decision on the application for development consent. This mirrors the long-established position

Provision	Raised by	Matter raised and Applicant’s response
		<p>under section 19 of the Acquisition of Land Act 1981 (Ref 10.4).</p> <p>3. The Applicant is aware of no DCO precedent to support the need for this drafting, and there are no features of the Proposed Development which give rise to the need for this specific drafting.</p> <p>4. The Applicant has also amended article 35(1) so that it refers to certification of a “satisfactory” scheme, which it understands the Host Authorities are content with.</p>
<p>Article 45 (Application Of The 1990 Act) – paragraphs (2)-(6)</p>	<p>Host Authorities ExA</p>	<p>The Applicant notes that whilst the ExA recommended removal of this provision, the Host Authorities support it in principle. In line with the Host Authorities, the Applicant considers that a removal of article 45(2) to (6), as suggested by the ExA, would be detrimental to all parties, and lead to uncertainty and ambiguity about the relevant enforcement regime. The Applicant has set out its position on article 45 in the Applicant’s Response to the Examining Authority’s Commentary on the Draft DCO [REP8-036]. The Applicant has noted that similar provisions are precedented.</p> <p>It is recognised that the Host Authorities have raised concerns about the scope and effect of article 45. In response to these comments, the Applicant has made a number of drafting changes.</p> <p>The Applicant has removed reference to “any power or right exercised under this Order” in article 45. The Applicant is unpersuaded by the Host Authorities’ suggestion that this amendment was necessary because an “inconsistency” could not arise by virtue of the provisions cited (e.g., compulsory acquisition powers). Nonetheless, the Applicant has made the change to assure the Host Authorities that the scope of the provision is intended to deal with conflicts between the development authorised under the DCO and any other planning permissions.</p> <p>The Applicant has inserted a definition of “inconsistency” in line with the comments from the Host Authorities. This specifically defines</p>

Provision	Raised by	Matter raised and Applicant’s response
		<p>inconsistency with the specific parameters considered by the Supreme Court in Hillside.</p> <p>The Host Authorities also seek “Confirmation in relation to paragraphs (2) to (4) that the relevant consent (be it an existing planning permission, another relevant planning permission, or the development consent order) relied upon remains enforceable in relation to all other aspects beyond the Hillside inconsistency”.</p> <p>The Applicant considers that the Host Authorities’ concern that a lacuna exists resulting in a scenario that would allow the development to continue without compliance or the need for mitigation is unfounded. If development was permitted under a relevant planning permission, and the DCO did not provide authorisation for that development, the condition in the planning permission must be complied with. It is only where there is an authorised work under the DCO that the conditions which may otherwise apply would be disapplied. The Applicant has provided a full response in the Applicant’s Response to Deadline 9 submissions [REP10-045].</p> <p>The Host Authorities’ new suggestion that an approval mechanism would assuage this remaining “residual” concern is disproportionate given the narrow terms on which the provision applies, and the requirement to provide notification of the conflicts (inserted at the request of the Host Authorities) and no precedents cited.</p> <p>Without prejudice to this position, if the ExA and/or Secretary of State are minded to remove the provisions in the absence of the suggestion put forward by the Host Authorities, the Applicant sees the unnecessary and unprecedented suggestion as being preferable to the removal of the provisions given the serious and fundamental issues which the Applicant has explained. This could be achieved by simply substituting “notify” with “agree with” in sub-paragraph (5).</p>
<p>Article 52 (Arbitration)</p>	<p>ExA</p>	<p>The ExA recommended the need for a schedule setting out details on how arbitration would work including providing a framework and appropriate</p>

Provision	Raised by	Matter raised and Applicant’s response
		<p>timeframe to enable a fair, impartial, final and binding resolution where a substantive difference between the parties arises.</p> <p>The Applicant does not consider the inclusion of an arbitration schedule necessary or proportionate as:</p> <ol style="list-style-type: none"> 1. The statutory arbitration process, under article 52, already engages the Arbitration Act 1996 (Ref 10.5) (see the effect of section 96 of the 1996 Act). Prescribed and excessively stringent timing and procedural requirements (even where they could be directed otherwise) as the default position is not considered appropriate given matters in dispute could be either complex or relatively simple. The Applicant’s precedented position acknowledges there should be no “default position” of having disputes resolved in a period of up to 4 months. This level of flexibility is required due to the varied nature of the of the potential disputes, including a fixed timetable would not be in the public interest. 2.The approach adopted by the Applicant is precedented under numerous transport DCOs from which there has been no known issue to arise. There is no specific project need that requires this schedule. 3. As a matter of consistent practice, the DfT does not favour fixed arbitration rules. <p>The Applicant therefore considers it preferable that each of the arbitrators should be able to confirm the details of each arbitration process reflecting proportionately given the particular nature of the issue under dispute.</p>
<p>Requirement 2 (Amendments to Approved Details)</p>	<p>ExA</p>	<p>The ExA has suggested that the plans listed in requirement 2(1) are plans or details which require approval by the relevant planning authority in accordance with any paragraph in Parts 2 or Part 4 of the Schedule 2 and so would be captured under requirement 2(3). To improve precision of drafting the ExA considers that 2(1) could be deleted.</p> <p>The Applicant highlights that the plans listed in requirement 2(1) are ‘final plans’ and so do not require secondary approval, but given the long</p>

Provision	Raised by	Matter raised and Applicant’s response
		<p>delivery period of the scheme they should have the capacity to be amended.</p> <p>Noting the ExA’s commentary, the Applicant has made a number of amendments to requirement 2 to better clarify and spell out its purpose, effect and process. This includes greater clarity in relation to which a local authority is responsible for granting approval.</p>
<p>Requirement 5 (Phasing of authorised development)</p>	<p>Host Authorities</p>	<p>The Host Authorities have requested that requirement 5 should be triggered once the authorised development “begins” rather than when it is “commenced”.</p> <p>This requirement is explicitly drafted to allow the undertaker to carry out the specified pre-commencement activities, which are minor in effect. This approach is consistent with the discharging of other requirements, and has no material effect on the production of a phasing plan, nor the timing of subsequent reviews.</p>
<p>Requirement 6 (Detailed design)</p>	<p>Host Authorities ExA</p>	<p>The Host Authorities have raised the lack of a ‘link’ between the parts of the authorised development approved under this requirement, and the pre-commencement requirements that correspond to that approved detailed design. The Applicant considers that the approach it has taken to drafting Schedule 2 is conventional and well-precedented, and does not consider that further drafting is required to address this comment because:</p> <ol style="list-style-type: none"> 1. The Applicant has committed to a register of requirements (requirement 39) which has been drafted in the format request by the Host Authorities to cover both live applications and approved applications/decisions – meaning information about requirements will be readily accessible; and 2. Requirement 38 allows a discharging authority to request additional information in response to an application to discharge a requirement – and so, if there was a need for clarity around the relationship between requirements, this could validly

Provision	Raised by	Matter raised and Applicant’s response
		<p>form the basis of an information request to the undertaker, specific to the matter in question at the relevant time.</p> <p>Separately, the ExA has recommended that that the design review process should be secured on the face of the DCO. The Applicant disagrees as a process is already secured through the Design Principles [REP8-022] which allows for the approach to be refined in the future under requirement 2. The Applicant remains of the opinion that the required clarity is best served by incorporating, into a single document, both the overarching design principles and the design review process. This means that the Applicant and the relevant planning authority has a single reference source in preparing and considering the subsequent application for detailed design.</p>
<p>Requirement 8 (Code Of Construction Practice)</p>	<p>ExA</p>	<p>The ExA has recommended that Luton Borough Council (LBC) should be the approving authority for the specific construction management plans.</p> <p>The Applicant disagrees with this as: (i) this does not align with the flexibility Schedule 2 allows elsewhere to deliver the project in “parts”; and (ii) it does not recognise that some of those “parts” (in particular some highway works, drainage works, fuel pipeline works and replacement park works) take place in areas where the “relevant planning authority” is not LBC.</p> <p>The construction management plans only relate to a discrete “part” of the scheme being delivered, and it is appropriate for the relevant planning authority (which may not be LBC) to approve those plans.</p> <p>The Applicant also disagrees with the ExA’s proposal for management plans to be consulted upon with all of the “specified authorities”. Such a blanket obligation to consult all Host Authorities on every draft management plan would frequently result in disproportionate consultation obligations for management plans which have no impact beyond the immediate locality. For example, for highway works taking place in Hitchin, it would be disproportionate for Hertfordshire County Council to</p>

Provision	Raised by	Matter raised and Applicant’s response
		<p>have to consult distant local authorities on a dust management plan for those highway works.</p> <p>By reason that discrete parts of the development, delivered incrementally, will vary considerably in size, the Applicant does not consider it proportionate to list specific consultees for management plans. Instead, the relevant planning authority will be best placed to determine appropriate consultation requirements when exercising their role as “discharging authority” on an application.</p> <p>Furthermore, the Applicant notes that, following Deadline 8 amendments recommended by the ExA, detailed in the draft DCO submitted at Deadline 8 [REP8-004], the “discharging authority” under Part 5 is now under a duty to consult the relevant bodies listed under Part 5 of Schedule 2 where the relevant conditions which engage them are met.</p>
<p>Requirement 10 (Landscape and biodiversity management plan)</p>	<p>ExA</p>	<p>The Applicant’s position is that there should be no legal requirement to secure on the face of the draft DCO a commitment to 10% biodiversity net gain. Such a legal commitment does not yet apply to Nationally Significant Infrastructure Projects (NSIPs) and is not expected to apply until 2025. As a result, this amendment is not supported by existing law or policy in relation to NSIPs, and so is not appropriate on that basis.</p>
<p>Requirement 13 (Surface and foul water drainage)</p>	<p>ExA</p>	<p>The Applicant does not agree with the ExA’s position that the Drainage Design Statement (DDS) should be secured via a requirement. The Design Principles [REP9-030] were amended at Deadline 5 [REP5-034] to include all drainage design principles, and therefore the inclusion of a further requirement introduces duplication and ambiguity over the relevant provision which achieves the same desired outcome.</p>
<p>Requirement 14 (Construction Traffic Management)</p>	<p>ExA</p>	<p>The ExA recommended that LBC should be the discharging authority responsible for approving the construction traffic management plan and construction workers travel plan to streamline the process.</p> <p>The Applicant does not agree with this position as it does not align with the flexibility afforded by</p>

Provision	Raised by	Matter raised and Applicant's response
Requirement 15 (Construction Workers)		Schedule 2 to deliver “parts” of the authorised development that may fall outside of LBC’s administrative boundaries.
Requirement 19 (Exceedance Of Air Quality Level 2 Threshold Or Limit)	ExA	The Applicant does not agree with the ExA’s position that this requirement should be deleted as it duplicates other controls in Part 3 of Schedule 2 of the draft DCO. Specifically, the Applicant notes that the contribution of the airport to air quality issues is the key factor to be addressed within the Green Controlled Growth provisions, specifically the application of a two-stage approach to monitor air quality. The removal of this requirement will in effect remove this two-stage process. The Applicant provided a full response to this in the Applicant’s Response to the Examining Authority’s Commentary on the Draft DCO [REP8-036]
Requirement 20 (Environmental Scrutiny Group) Inclusion of Dacorum Brough Council	ExA Host Authorities Buckinghamshire Council National Highways	<p>The ExA has recommended that Dacorum Borough Council should be included in the Environmental Scrutiny Group (ESG). Buckinghamshire Council have argued that given the remit of the ESG, particularly in relation to any approved increase in the night quota cap and when considering the current uncertainty regarding the submitted traffic data, that they should also be included in the ESG and its associated Technical Panels moving forward, in order to allow it to represent its communities’ best interests effectively.</p> <p>The Applicant respectfully does not agree with these proposals. The Applicant’s position is that local authorities that are subject to the relevant environmental impacts as a result of the scheme should be included. In Dacorum’s case, being a host authority (based on a very small part of the Order Limits) does not automatically put an authority within this category. The Applicant has set out its position on this matter in Applicant’s Response to the Examining Authority’s Commentary on the Draft DCO [REP8-036] and Applicant's Post Hearing Submission - Issue Specific Hearing 9 (ISH9) [REP6-067].</p> <p>Buckinghamshire Council have also requested to have representation on each of the four Technical Panels. For similar reasons, the Applicant does not</p>

Provision	Raised by	Matter raised and Applicant's response
		<p>agree with this position and again notes no significant adverse effects for each of the environmental topics within GCG have been identified within the boundary of Buckinghamshire Council. It is therefore the Applicant's position that it is not relevant or appropriate for Buckinghamshire Council to have a role on the Environmental Scrutiny Group or any of the Technical Panels.</p> <p>National Highways requested additional text in subparagraph (4) to prevent members of the ESG from making decisions in relation to matters over the strategic road network. The Applicant does not accept this position as detailed in the Applicant's response to Deadline 6 Submissions, Appendix B [REP7-065] and the Applicant's response to comments on the Draft DCO at Deadline [REP7-062].</p> <p>The Applicant does not accept the ExA's proposed replacement of requirement 20(3)(b) and amendments to 20(7) as to accept this would result in the local authorities having unfettered discretion and result in a situation where representatives are not able to fulfil the requirements of the ESG. Specifically, due to the technical nature of these requirements, specific knowledge outside the scope of the local authorities' remit is required. Additionally, the removal of this requirement would threaten the objectivity of the ESG.</p> <p>The Applicant does not agree with the ExA's proposal to include a requirement that at least 50% of local authority representatives should be present for the purposes of decision-making under this requirement. The Applicant notes that under the Terms of Reference [REP9-024] there is a reasonable endeavours requirement to have 100% attendance and that a requirement to have 50% of local authority representative attendance could frustrate the process through deliberate or other non-attendance and threaten the DCO timeline. However, the Applicant has amended the Terms of Reference [TR020001/APP/7.08] to require attendance of at least two local authority representatives and where quorum cannot be met a</p>

Provision	Raised by	Matter raised and Applicant’s response
		<p>second meeting will be head with a reduced quorate requirement.</p> <p>The Host Authorities requested the ESG be set up in advance of the article 44(1) notice.</p> <p>The Applicant updated requirement 20 to ensure the ESG is established ‘as soon as reasonably practicable’. The provision has a ‘long-stop date’ which ensures it must be established 56 days before its first meeting (i.e., the first time it would be required to fulfil some function under the DCO). It is therefore not considered necessary to make any further amendments.</p> <p>The Applicant would note that the establishment of the ESG is not within control of the Applicant as there are parts of the process that require involvement of the Secretary of State. Furthermore, the first meeting of the ESG would be after the submission of the first monitoring report therefore at least one calendar year after submission of the article 44(1) notice. In those circumstances where it is guaranteed the ESG will be established when it is necessary to the operation of GCG, the Applicant does not consider it justifiable to introduce unnecessarily onerous and stringent timescales which may be breached through no fault of its own.</p>
<p>Requirement 21 (Monitoring of permitted operations)</p>	<p>ExA</p>	<p>The ExA requested changes to sub-paragraph (1) to address concerns of a lag between monitoring reporting resulting in an increase of flights post service of the article 44(1) notice and an inaccurate baseline position. The Applicant has concerns that these changes could delay implementation and has explained that the process of GCG within this DCO is novel and will require the operator to implement and undertake actions that are not yet established. The Applicant does not agree a change is required and has provided a detailed response to this in the Applicant’s Response to Issue Specific Hearing 1 Actions 20, 32, 24 and 26 and Issue Specific Hearing 3 Action 20: Green controlled Growth – Transition Period and Slot Allocation Process [REP4-067] and the Applicant’s Response to the Examining Authority’s Commentary on the Draft DCO [REP8-036].</p>

Provision	Raised by	Matter raised and Applicant’s response
<p>Requirement 23 (Exceedance of a Level 2 Threshold)</p>	<p>ExA</p>	<p>The Applicant disagrees with the deletion of sub-paragraph (6) as the deletion would result in unfettered considerations playing a role in decision-making. The Applicant notes that a decision is capable of appeal but considers sole reliance on an appeals process is disproportionate. The Applicant’s Response to the Examining Authority’s Commentary on the Draft DCO [REP8-036] provides an example of the consequences of the deletion of this paragraph.</p> <p>The ExA also proposed deletion of the deemed approval mechanism within this requirement. The Applicant does not accept this on the basis that the timescales are set in accordance with the process for declaration of slot availability (as detailed in section 3.5 of the Applicant’s Post-Hearing Submission for Issue Specific Hearing 9 [REP6-067]). Without this mechanism, the process can be frustrated, the implementation of a Level 2 or Mitigation Plan can be delayed in addition to preventing airport growth. The Applicant also notes that deemed consent provisions are well precedented and given the clear parameters for Level 2 Plans and Mitigation Plans, the aforementioned requirements in the Terms of Reference and their connection to the established programme for airport capacity declarations and slot availability, it is considered the use of this mechanism in this context is specifically justified and necessary.</p>
<p>Requirement 24 (Exceedance of a Limit)</p>	<p>ExA</p>	<p>The Applicant respectfully disagrees with the ExA’s position that a monitoring report should be submitted one year from adoption of the Mitigation Plan as paragraph (a) is to provide a ‘backstop’, and that the intention and effect of requirement 24(10)(a)-(b) is to require a Mitigation Plan to be effective as soon as practicable or a maximum of two years before a revised Mitigation Plan is required. Given the requirement for a Mitigation Plan is to require measures to remove an exceedance as soon as reasonably practicable, and such a plan must be approved by the ESG, it is not considered appropriate nor necessary to require a revised Mitigation Plan to be submitted in 12 months (even if</p>

Provision	Raised by	Matter raised and Applicant’s response
		<p>the period accounted for a period in which the Monitoring Report was not available).</p> <p>Whilst the Applicant maintains this position, the Applicant has requested that, if the ExA or Secretary of State were to recommend a change in drafting, the ExA includes the wording “<i>unless the ESG agrees to a longer period</i>” after “1 year” so that the ESG’s discretion is not fettered to approve a plan which – whilst containing all reasonably practicable measures – anticipated a longer period.</p> <p>The Applicant does not agree with the imposition of financial penalties within this requirement, as proposed by the ExA, and refers back to the reasons noted in the Applicant’s Response to the Examining Authority’s Commentary on the Draft DCO [REP8-036] and the Applicant’s Position on Financial Penalties [REP9-058]. At Deadline 11, the Applicant provided a further response to the Host Authorities’ Deadline 10 submission on this matter.</p>
<p>Requirement 25 (Review of implementation of this Part)</p>	<p>ExA</p>	<p>The Applicant has not made the ExA’s proposed changes, i.e. that the review includes an analysis of extant policies in relation to the control of greenhouse gas emissions and an outline of appropriate actions to ensure that the development is compliant with these.</p> <p>If the intention was to secure ‘actions’ pursuant to future policy changes, a requirement to do so is already included within Section 4.5 of the Outline Greenhouse Gas Action Plan [APP-081] and would be carried forward into any Greenhouse Gas Action Plans produced under requirement 34 of the DCO.</p> <p>If the intention is to secure amendments to GCG Thresholds or Limits that reflect future changes, the Applicant is concerned that the proposed drafting could be interpreted as an absolute requirement – please refer to the Applicant’s response at section 5.3 of the Applicant’s Post-Hearing Submission for Issue Specific Hearing 9 [REP6-067].</p>
<p>Requirement 26 (Air noise)</p>	<p>ExA</p>	<p>The ExA considers that for the purposes of precision, enforceability and clarity, a number of</p>

Provision	Raised by	Matter raised and Applicant’s response
<p>management plan)</p>		<p>commitments secured in the Air Noise Management Plan should also appear on the “face” of the draft DCO: scheduled night quota period movements cap; track violation penalties; noise violation limits.</p> <p>The Applicant disagrees with this position, on the basis that the secured Air Noise Management Plan [REP9-047] is the appropriate vehicle and contains important content on the process. The Applicant has provided a full explanation for this in the Applicant's Response to the Examining Authority's Commentary on the Draft DCO submitted at Deadline 8 [REP8-036].</p>
<p>Requirement 30 (Offsite highways works)</p>	<p>Central Bedfordshire Council National Highways</p>	<p>Central Bedfordshire Council has requested that requirement 30 include timeframes regarding the implementation of mitigation schemes under the TRIMMA. This is unnecessary as the delivery commitments are contained in the OTRIMMA [REP10-036], upon which the TRIMMA must be substantially based. The OTRIMMA clearly sets out the principles and timings that must be adhered to (including the delivery of any mitigation works). The Applicant has amended requirement 30 to establish a clear obligation to comply with the TRIMMA.</p> <p>National Highways requests the inclusion of “Grampian” requirements in Schedule 2 to provide for the delivery of works to M1 Junction 10, including a prior phasing approval mechanism, and the inclusion of a modelling and monitoring Requirement. On the latter point, National Highways consider that the Covid-19 modelling and monitoring commitments in the OTRIMMA are not sufficient to account for impacts to the Strategic Road Network (SRN).</p> <p>The Applicant strongly opposes this in the strongest possible terms, and considers such measures unnecessary, unjustified and disproportionate. Schedule 1 to the draft DCO includes works to mitigate the highways impacts of the Proposed Development, and the TRIMMA process will ensure that this mitigation is delivered at the appropriate time in accordance with locationally-specific thresholds to be agreed in each case with the relevant highway authority. Any remaining issues at Junction 10 of the M1 are because of background</p>

Provision	Raised by	Matter raised and Applicant’s response
		<p>traffic growth and are not for the Applicant to mitigate, but the Applicant has nevertheless committed to a funding contribution to such works in the OTRIMMA [REP10-036], submitted at Deadline 10. The Applicant has also included substantial protective provisions for the benefit of National Highways in relation to works on the SRN.</p> <p>Accordingly, there is no need or justification for Grampian conditions in favour of National Highways, nor for approval of a phasing requirement in relation to SRN works.</p>
<p>Requirement 36 (Interpretation – Part 5)</p>	<p>Host Authorities</p>	<p>While the Host Authorities welcome the Applicant’s extension of time for the determination of the applications relating to approval under requirement 5 for the key “gateway” aspects of the Proposed Development, they retain concerns about supposed “brevity” of the determination periods for other requirements.</p> <p>As set in the Applicant’s Response to Deadline 9 submissions [REP9-051], the Applicant’s view that 8 weeks is a reasonable determination period for requirements (other than the ‘gateway’ works under requirement 5). The Applicant highlights the Southampton to London Pipeline DCO (6 weeks) and the A585 Windy Harbour to Skipool Highway DCO, Sizewell C DCO, Silvertown Tunnel DCO and Port of Tilbury (Expansion) DCO (all 8 weeks) as relevant benchmarks.</p> <p>A period of 8 weeks in this case appropriately balances the interests of the discharging authority and the Applicant, noting that the proposals will have been through a rigorous examination process. The statutory time limit for applications for planning permission are set out in article 34 of the Town and Country Planning (Development Management Procedure (England) Order 2015 (as amended) and 8 weeks is in line with the time limit set for all other types of development.</p> <p>Moreover, the Applicant highlights that most planning applications are decided within 8 weeks, unless they are unusually large or complex, in which case the time limit is extended to 13 weeks (which</p>

Provision	Raised by	Matter raised and Applicant’s response
		<p>aligns with the Applicant’s extended period for ‘gateway’ works).</p> <p>The Applicant emphasises that the ‘clock’ resets for the determination period if further information is requested, a further accommodation made in favour of the discharging authority.</p>
<p>Requirement 37 (Applications made under requirements)</p>	<p>Buckinghamshire Council Host Authorities ExA Affinity Water</p>	<p>Buckinghamshire Council requests that a minimum consultation period is included for the discharge of requirements. The Applicant considers that, given the nature and scale of discharging applications will vary considerably, a minimum period would be overly prescriptive and the discharging authority is best placed to determine how much time should be allowed for consultation within the 8 (or 13) week period for a decision.</p> <p>The Applicant has not included the wording “deemed valid” within requirements 37(1)(b)(i) at the recommendation of the ExA as the Applicant disagrees that there is a need for an application to be “deemed valid”. This is unnecessary as if the discharging authority requires further information for an application to be considered properly, it can request this under requirement 38 (further information) of Schedule 2 of the draft DCO and the ‘clock’ re-starts again for the approval period once that information has been satisfactorily received.</p> <p>The Applicant also disagrees with the inclusion of approval being subject to additional conditions as the provision would have already been through a rigorous examination process where parties would have had the opportunity to suggest the inclusion of additional conditions if necessary, to allow discharging authorities to add further conditions post-examination would in effect extend the review of this requirement and frustrate delivery of the scheme.</p> <p>The Host Authorities and Affinity Water have asked for the removal of the deemed consent provision in requirement 37, and the ExA recommended the same in its Examining Authority’s commentary on, or schedule of changes to the draft DCO [PD-018]. The Applicant does not agree with the proposed removal of the deemed approval provision</p>

Provision	Raised by	Matter raised and Applicant’s response
		<p>within this requirement or elsewhere in the draft DCO. Such provisions are well-precedented and justified in the delivery of nationally significant infrastructure projects, specifically as there is a public benefit in the efficient delivery of that infrastructure. The deemed approval mechanism prevents approving bodies from frustrating the delivery of a project by simply failing to issue any decision. It is reasonable to include a mechanism that encourages active decision-making – the provision does not prevent an approving body from refusing an application, but at least in those circumstances the Applicant would be in receipt of reasons with which to act upon. Deemed consent provisions are well-precedented for these reasons. The Applicant introduced new sub-paragraphs (12) and (13) in article 2 of the draft DCO [REP10-003] in order to provide comfort to discharging bodies. These sub-paragraphs provide that where a deemed consent provision applies anywhere within the Order, it is only effective if the undertaker has included a statement notifying the discharging body of its effect as part of the application for consent.</p> <p>The Applicant notes that a number of Orders have included this wording to address concerns regarding deemed consent, such as Longfield Solar Farm Order 2023, the A47 Wansford to Sutton Development Consent Order 2023, the A12 Chelmsford to A120 Widening Development Consent Order 2024 and the Drax Power Station Bioenergy with Carbon Capture and Storage Extension Order 2024 and so this wording (and the necessity and justification for deemed consent) should be given due weight.</p>
<p>Requirement 38 (Further Information)</p>	<p>ExA Host Authorities</p>	<p>The ExA requested an increase of the period for consultees to respond under requirement 38. The Applicant does not agree and contends the timescales are fair, reasonable and appropriate in the context that the proposal would already have obtained DCO approval and given the reasonable desire of the Applicant to balance the interests of others with its reasonable desire to proportionately set some limits over the time taken to discharge requirements. This provision is not prescribing a consultation period, it is merely allowing a period of</p>

Provision	Raised by	Matter raised and Applicant’s response
		<p>time within which a consultee is to notify the discharging authority whether they require further information. In this context, the timescales are reasonable. During the course of the Examination, the Applicant has amended requirement 38 to include a period of five or ten business days (depending on the length of the specified period) for the Part 5 consultee to notify the discharging authority of whether it requires any further information. The Applicant considers that this amounts to an appropriate amount of time for Part 5 consultees to submit a notification.</p> <p>The Host Authorities remain concerned that the wording of sub-paragraph (4), specifically that the discharging authority “<i>is deemed to have sufficient information</i>”, could have adverse cost implications if the Host authority is deemed to have information that they do not hold and that this wording should be deleted.</p> <p>In the Applicant’s Response to Deadline 8 Submissions [REP9-051], the Applicant highlights that a request for further information re-sets the ‘clock’ for deciding discharge applications. Additionally, the discharging authority and consultees are not limited in the number of times they can request for further information. To avoid a scenario where there is an indefinite period for determination of an application, the Applicant has included the wording “<i>sufficient information</i>” which is a reasonable ‘check’ to avoid unnecessary delays to implementation.</p> <p>In relation to the potential costs arising out of an appeal to a discharging authority’s decision, the Applicant considers the Host Authorities’ argument to be unfounded given the generality of the costs provisions and because normal practice dictates that costs are met by each party provided both act reasonably. The Applicant also has the option to consider a late information request, which it would need to balance against the potential length of an appeal process.</p>

Provision	Raised by	Matter raised and Applicant's response
Schedule 8, Part 5 Protective Provisions	National Highways	There is fundamental disagreement between the Applicant and National Highways over a number of critical matters regarding the form of National Highways' Protective Provisions. The Applicant objects to the amendments to the protective provisions being proposed by National Highways in the strongest possible terms. The ExA is directed to the Applicant's Response to Deadline 10 Submission [TR020001/APP/8.192] for the Applicant's detailed comments in this respect.
Schedule 8, Part 6, Protective Provisions	Local Highway Authorities	These are now substantially agreed between the parties, save a very small number of points explained in the Applicant's Response to Deadline 10 Submission [TR020001/APP/8.192] .
Schedule 8, Part 7, Protective Provisions	Network Rail	<p>The form of the provisions in Part 7 has not been agreed, and the Applicant has explained its reasons from departing from the 'standard' Network Rail provisions in the Applicant's Response to Deadline 10 Submission [TR020001/APP/8.192].</p> <p>The Applicant has communicated to Network Rail that the Proposed Development does not impact the operational land, nor the railway, with compulsory acquisition only required over an area of land that the Applicant is already negotiating with Network Rail to purchase by agreement.</p>
Other Proposed Requirements		
Noise Contour Limits and Quota Count Point Limit	ExA Host Authorities	The ExA and Host Authorities have requested the inclusion of this new requirement so that the noise contour limits are secured on the face of the DCO. The Applicant maintains its position that this is not necessary as the Limits in the GCG process ensures that noise outcomes are no worse than those noted in the Environmental Statement (ES). Please see Chapter 12 of this document and the Applicant's comments on Noise Contours and Movement Limits [REP9-055] .
Annual air traffic (ATM) cap for	ExA	The ExA and Host Authorities have suggested this requirement is included to provide certainty regarding the maximum number of flights that can

Provision	Raised by	Matter raised and Applicant's response
the authorised development	Host Authorities	cooperate. The Applicant maintains its position as detailed in the Applicant's Response to the Examining Authority's Commentary on the Draft DCO [REP8-036] . See also the Applicant's comments on Noise Contours and Movement Limits [REP9-055]
Noise Insulation Policy and Programme	ExA	The Applicant has recommended two requirements in the DCO to secure the noise insulation policy, and a plan for its 'roll-out'. The Applicant has updated the Compensation Policies, Measures and Community [REP10-029] at successive deadlines, and has made further changes to it at Deadline 11 [TR020001/APP/7.10] , to address these matters. The document is secured by the section 106 agreement, and so there is no need or justification to secure it in the DCO. The Applicant considers the approach of including a further requirement would introduce ambiguity about the securing mechanism for these commitments, and runs the risk of the detailed processes and parameters (which have been the subject of consultation and refinement throughout the Examination) secured in the Compensation Policies, Measures and Community [TR020001/APP/7.10] being inadvertently omitted.
Air Quality Monitoring Plan	ExA Host Authorities	The ExA recommended this new requirement to ensure appropriate air quality standards are achieved through consultation with the relevant local authorities and considers the GCG Framework [TR020001/APP/7.08] does not have the required mechanisms for approval. The Applicant does not agree and provided a detailed response to this in the Applicant's Response to Deadline 7 Submissions [REP8-038] and Responses to Written Questions [REP7-054] and [REP7-090] .
Commitment on water consumption	Affinity Water ExA	The ExA proposed a requirement to manage water consumption for the Proposed Development in the absence of protective provisions and/or a side agreement for Affinity Water. In the Applicant's Response to the Examining Authority's Commentary on the Draft DCO [REP8-036] , the Applicant articulated the reasons why such a requirement is not necessary or appropriate. At

Provision	Raised by	Matter raised and Applicant’s response
		<p>Deadline 10 [REP10-061] Affinity Water confirmed it had substantively agreed the terms of bespoke protective provisions with the Applicant and that it anticipated reaching substantive agreement on the terms of a side agreement “in the next few days”. The Applicant considers that agreement has now been reached on both substantive issues and terms of both side agreement and protective provisions, and it is only the formal execution and completion of that agreement which is now required. The Applicant understands that Affinity Water will make representations to that effect at Deadline 11.</p>

11 SECTION 106 AGREEMENT

11.1 Summary of position at the end of Examination

11.1.1 This Section provides a summary of the final positions of the section 106 agreement that the Applicant has proposed as part of its application for development consent.

11.1.2 The section 106 agreement is in agreed form and has been issued for signature. The Applicant refers the Examining Authority (ExA) to the final unsigned section 106 agreement between the Applicant and the following parties, submitted at Deadline 11 **[TR020001/APP/8.167]**:

- a. London Luton Airport Operations Limited (LLAOL);
- b. Central Bedfordshire Council (CBC);
- c. Dacorum Borough Council (DBC);
- d. Hertfordshire County Council (HCC);
- e. Luton Borough Council (LBC);
- f. North Hertfordshire District Council (NHDC); and
- g. Royal Bank of Scotland Plc.

11.1.3 The Applicant has submitted a Joint Position Statement with the Host Authorities at Deadline 11 **[TR020001/APP/8.196]** which confirms that the section 106 agreement is in agreed form and is in the process of being signed / sealed and completed in counterpart. The intention is that it will be completed on 9 February 2024 and be submitted to the ExA on the same date.

11.2 Content of the section 106 agreement

11.2.1 The section 106 agreement **[TR020001/APP/8.167]** provides the following obligations:

- a. Schedule 2 – Re-provision of sports pitches: A Sports Pitch and Changing Room Re-Provision Contribution of £1,196,737 is payable to LBC for the re-provision of certain sports facilities. This payment is index-linked from 25 June 2021 which is the date of the Green Horizons Park (GHP) section 106 agreement (linked to permission 17/02300/EIA) (the GHP section 106). This is because this payment obligation is lifted from the GHP section 106. Should the contribution be triggered under the GHP section 106 then any amount paid will be set off against the amount due under the section 106.
- b. Schedule 3 – Future Management of Wigmore Valley Park: The Applicant commits to establishing a community trust for the management and maintenance of Wigmore Valley Park. This is to be set up when the open space replacement land has been laid out. A management plan must be submitted by the Applicant to LBC and approved by them before the replacement land is laid out. The Applicant commits to pay a sum of

£250,000 per annum starting from when the replacement land is laid out and ready for use by the public and payable in perpetuity.

- c. Schedule 4 – Employment and Training Strategy: To operate the development in accordance with the **Employment and Training Strategy [REP8-020]** following service of the notice referred to in article 44(1) of the Development Consent Order (DCO) which is the point when the passenger cap referred to in the existing planning permission for the airport is exceeded.
- d. Schedule 5 – Green Controlled Growth – Funding Elements: Officer contributions of £2,500 for members of the Environmental Scrutiny Group (ESG) and £5,500 for members of the Technical Panels under the ESG are payable by the Applicant on an annual basis, the first payment being due on the establishment of the ESG under requirement 20 of the DCO. These payments are index linked. The payments will stop should the ESG be established through a corporate entity which takes over this responsibility.
- e. Schedule 6 – Prospect House Day Nursery: The Applicant commits to the carrying out of an assessment to establish whether or not the re-provision of places for Prospect House Day Nursery is necessary. Any assessment will be carried out at least 18 months before the land is acquired.
- f. Schedule 7 – Compensation Policies: The **Compensation Policies, Measures and Community First** document [TR020001/APP/7.10] is secured by the section 106.
- g. Schedule 8 – Community Fund: LLAOL covenants to retain the existing community fund which shall have a minimum of £100,000 per annum paid into it in perpetuity. Any monies received from the Track Violation Penalty System and Departure Noise Violation Scheme payable under the **Air Noise Management Plan [REP9-047]** will be paid into this fund.
- h. Schedule 9 – Design Review: LBC covenants to establish and appoint a Design Review Panel in accordance with the **Design Principles [REP9-030]**. The Applicant will pay for the costs of the Design Review Panel and also for the participation of LBC.

12 GREEN CONTROLLED GROWTH

12.1 Overarching principles of the Green Controlled Growth approach

Key documents

- 12.1.1 The following are the key documents relating to the overarching principles of the Green Controlled Growth (GCG) approach:
- a. **GCG Explanatory Note [REP9-020];**
 - b. **GCG Framework [TR020001/APP/7.08];**
 - c. **GCG Framework Appendix A – ESG Terms of Reference [REP10-027];**
 - d. **GCG Framework Appendix B – Technical Panels Terms of Reference [TR020001/APP/7.08];**
 - e. **GCG Framework Appendix C – Aircraft Noise Monitoring Plan [TR020001/APP/7.08];**
 - f. **GCG Framework Appendix D – Air Quality Monitoring Plan [REP9-028];**
 - g. **GCG Framework Appendix E – Greenhouse Gases Monitoring Plan [TR020001/APP/7.08];**
 - h. **GCG Framework Appendix F – Surface Access Monitoring Plan [TR020001/APP/7.08];**
 - i. **Applicant’s Post Hearing Submission – Issue Specific Hearing 9 (ISH 9) [REP6-067];**
 - j. **Applicant’s Response to Written Questions – GCG [REP5-090];**
 - k. **Applicant’s Response to Written Questions – GCG [REP7-054];** and
 - l. **Applicant’s Position Paper on Financial Penalties [REP9-058].**

Overview of GCG

- 12.1.2 GCG is an innovative new framework that has been developed by the Applicant since the 2019 statutory consultation took place to address the feedback received on environmental concerns, and the strong desire indicated by stakeholders for the airport to be more ambitious in its approach to reducing and mitigating the environmental effects of expansion. It is considered to be one of the most far-reaching commitments to managing environmental effects ever voluntarily put forward by a UK airport.
- 12.1.3 In order to place the Applicant’s commitment to environmental sustainability at the very centre of the expansion proposals, it is proposed that growth authorised by the Development Consent Order (DCO) will be managed through the GCG Framework, within environmental Limits defined based on the outputs of the Environmental Impact Assessment (EIA) that forms the basis of the application for development consent.

- 12.1.4 This means that that the environmental effects of the expansion of the airport will not be solely dependent on how well mitigation and other controls identified and secured at the planning stage work in practice but will mean that the ongoing growth of the airport will only take place where it can do so within the reasonable worst case envelope of environmental effects that formed the basis for granting development consent. The Applicant believes that such an approach is unique for a major infrastructure project in the UK.
- 12.1.5 The GCG approach is secured through the **GCG Framework [TR020001/APP/7.08]** and requirements contained within Part 3 of Schedule 2 of the **draft DCO [REP10-003]**.
- 12.1.6 The GCG approach is built around some key elements, which are explored in greater detail within the **GCG Explanatory Note [REP9-020]**. These principles can be summarised as follows:
- Limits on environmental effects in four key areas***
- 12.1.7 GCG focuses on four key environmental topics which are directly linked to the throughput of the airport and where, therefore, environmental effects on communities have the greatest potential to change as the numbers of flights and passengers using the airport increase over time. These are:
- a. aircraft noise, via a Noise Envelope;
 - b. air quality;
 - c. greenhouse gas emissions (for airport operations and surface access); and
 - d. surface access.
- 12.1.8 The way in which GCG will apply to each of these topics is considered in more detail in Sections 12.2 to 12.5 below.
- 12.1.9 In each of these areas, the **GCG Framework [TR020001/APP/7.08]** secures binding Limits. Airport growth is dependent on these Limits not being exceeded. This commitment means that any exceedance of the Limits will have significant implications for the airport. On this basis, it is vital that Limits are not set arbitrarily but are aligned with the comprehensive forecasting process undertaken through the EIA.
- 12.1.10 Limits are also aligned with the assessment phases used in the Environmental Statement (ES) meaning that they will change over time, as passenger throughput increases. By phasing Limits in this way, it can also be ensured that the benefits of new technology assumed in the forecasting for the EIA (for example, a new generation of quieter aircraft or the move to electric vehicles), which will be delivered over a longer time period, are captured and shared between the airport and local community having regard to the economic benefits arising from growth.
- 12.1.11 Importantly, GCG does not replace or supersede other environmental management plans or mitigation secured through the **draft DCO [REP10-003]**, some of which replicate controls in place under the existing planning consents.

Rather, the **GCG Framework [TR020001/APP/7.08]** provides an additional and supplemental level of environmental protection. This includes a bespoke 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 other environmental management plans most relevant to the four environmental topics within GCG secured through the draft DCO are as follows, with further detail on each of these plans provided in Chapter 8 and Chapter 13 of this document:

- a. the **Outline Operational Air Quality Management Plan [REP9-013]**, secured by requirement 33 of the **draft DCO [REP10-003]**;
- b. the **Outline Greenhouse Gas Action Plan [APP-081]**, secured by requirement 34 of the **draft DCO [REP10-003]**;
- c. the **Air Noise Management Plan [REP9-047]**, secured by requirement 27 of the **draft DCO [REP10-003]**;
- d. the **Framework Travel Plan [TR020001/APP/7.13]**, secured by requirement 31 of the **draft DCO [REP10-003]**; and
- e. the **Outline Transport Related Impacts Monitoring and Mitigation Approach [REP10-036]**, secured by requirement 30 of the **draft DCO [REP10-003]**.

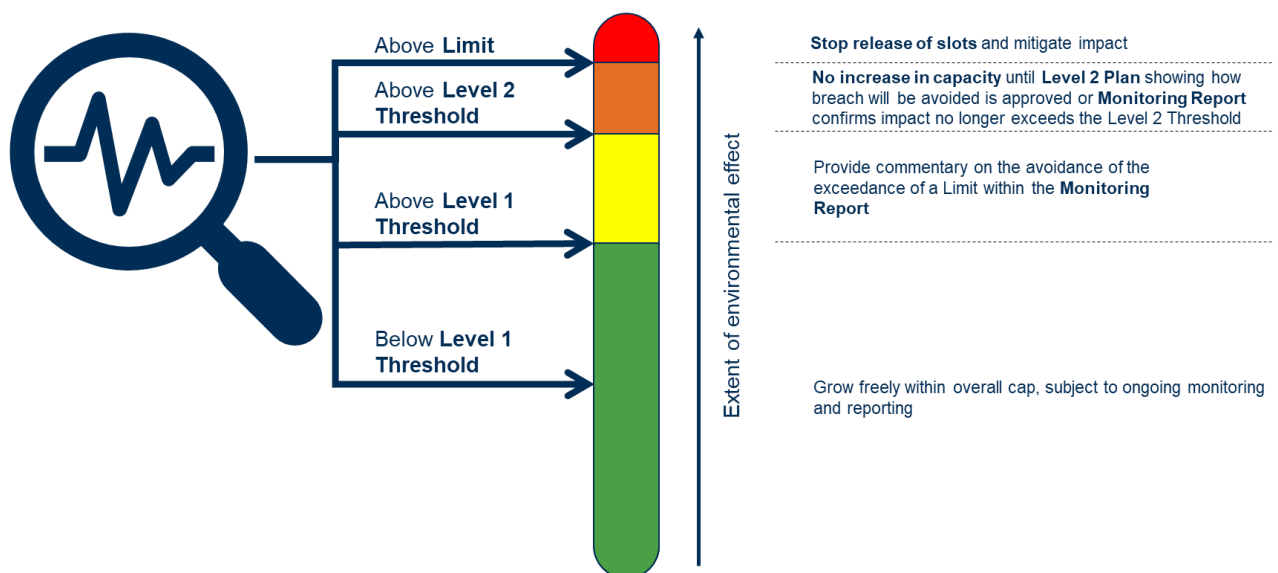
A proactive approach to managing environmental effects

- 12.1.12 Where controls are placed on environmental effects associated with development proposals or infrastructure projects today, these are often expressed in binary terms using planning conditions or section 106 planning obligations; *“Impact X shall not exceed Y...”*. This means that action only needs to be taken once a limit or control has already been exceeded.
- 12.1.13 To address this concern, the **GCG Framework [TR020001/APP/7.08]** includes Level 1 and Level 2 Thresholds sitting below each Limit, with an escalating sequence of checks and actions to be undertaken as each Threshold is reached. This will require growth to be planned, and steps taken before a Limit is reached, with the ultimate intention that this early action avoids the Limit being exceeded. By taking this proactive approach, it will ensure that plans for growth are adjusted in response to the prevailing circumstances at the time, rather than waiting for a problem to occur and then reacting.
- 12.1.14 GCG is also set up to provide transparency around the steps that the airport is taking to manage its growth with respect to environmental impacts. Above a Level 1 Threshold each annual Monitoring Report will be required to include commentary on the actions that the airport is taking to avoid potential future breaches of Limits. That commentary could include, for example, if the airport operator considers any interventions or measures are needed or are already planned to be brought forward in the forthcoming year that will mitigate the effects of future growth against the Limits.
- 12.1.15 Where a Level 2 Threshold is exceeded, the airport operator is required to submit a Level 2 Plan to the Environmental Scrutiny Group (ESG) (described

further in paragraph 12.1.22 below) for approval. The Level 2 Plan will consider whether continued operations at the declared level of airport capacity are expected to result in the effect(s) increasing above the Limit and if this is the case, include proposals for additional interventions or mitigation. Unless the Level 2 Plan can demonstrate that an increase in airport capacity can be accommodated without breaching a Limit, at this point no further increases in capacity will be permitted. In this way, GCG will provide for independent oversight and approval of plans for growth prior to a Limit being exceeded in a way that is unique to UK airports, but that is also consistent with internationally agreed guidelines and domestic legislation controlling how growth occurs at airports.

12.1.16 Where an annual Monitoring Report shows breach of a Limit, submission of a Mitigation Plan to the ESG by the airport operator will be required, unless it is certified by the ESG that a breach is due to circumstances beyond the control of the airport operator.⁹ The Mitigation Plan will need to set out the airport operator’s plan for bringing the environmental effect(s) back below the Limit, within as short a timeframe as is considered reasonably practicable. The Mitigation Plan must include analysis to demonstrate that this will be achieved and include a programme for the implementation of the mitigation. The mitigation will subsequently need to be delivered according to these timescales. Following the breach of a Limit, unless otherwise agreed by the ESG, the airport operator will not increase declared hourly runway capacity above the existing capacity declaration and nor should any additional slots be allocated (above the existing number of allocated slots) until monitoring confirms the relevant environmental effect has fallen below the relevant Limit.

Figure 12.1: The escalating sequence of actions secured by GCG as environmental effects increase



⁹ Paragraphs 2.2.37 to 2.2.43 of the **GCG Explanatory Note [TR020001/APP/7.07]** outlines the process required to certify that an exceedance was due to circumstances beyond the control of the airport operator and lists potential examples of these circumstances.

12.1.17 As set out in the Applicant's **Noise Envelope – Improvements and Worked Example [REP2-032]** it is reasonable to conclude that this approach, alongside the proactive use of QC budgets as required by paragraph 3.17 of the **GCG Framework [TR020001/APP/7.08]**, would have avoided the historic breaches of noise conditions that occurred at the airport between 2017 and 2019. The worked example shows how the potential for Limit breaches would have been identified through the 2015 Monitoring Report with interventions implemented from 2016, rather than the airport taking action in 2018 in response to a 2017 breach.

Ongoing monitoring of the actual environmental effects of expansion

12.1.18 As set out in paragraph 12.1.4, GCG has been designed to provide an explicit link between the ongoing growth of the airport and the actual, measured environmental effects of expansion. In this way, it is different to traditional environmental management plans or strategies that are typically secured through planning permissions or on major infrastructure projects which rely on an applicant committing to implement particular pieces of infrastructure or undertake operations in particular ways, with no link back to the actual effect of that mitigation once it has been implemented. GCG therefore controls the outputs of the process – the environmental effect experienced by communities around the airport – rather than the inputs into the process.

12.1.19 The **GCG Framework [TR020001/APP/7.08]** requires the airport operator to carry out annual monitoring of the airport's environmental effects to enable oversight of the airport's performance against the GCG Limits. Detailed Monitoring Plans for each of the environmental topics in scope for GCG, which will be secured as certified documents and will control how monitoring of each environmental topic will be carried out in future, are included at **Appendices C to F of the GCG Framework [TR020001/APP/7.08]** and these have been subject to scrutiny and updated as necessary throughout the Examination period. More detail on how these have been amended in response to feedback is set out in Sections 12.2 to 12.5.

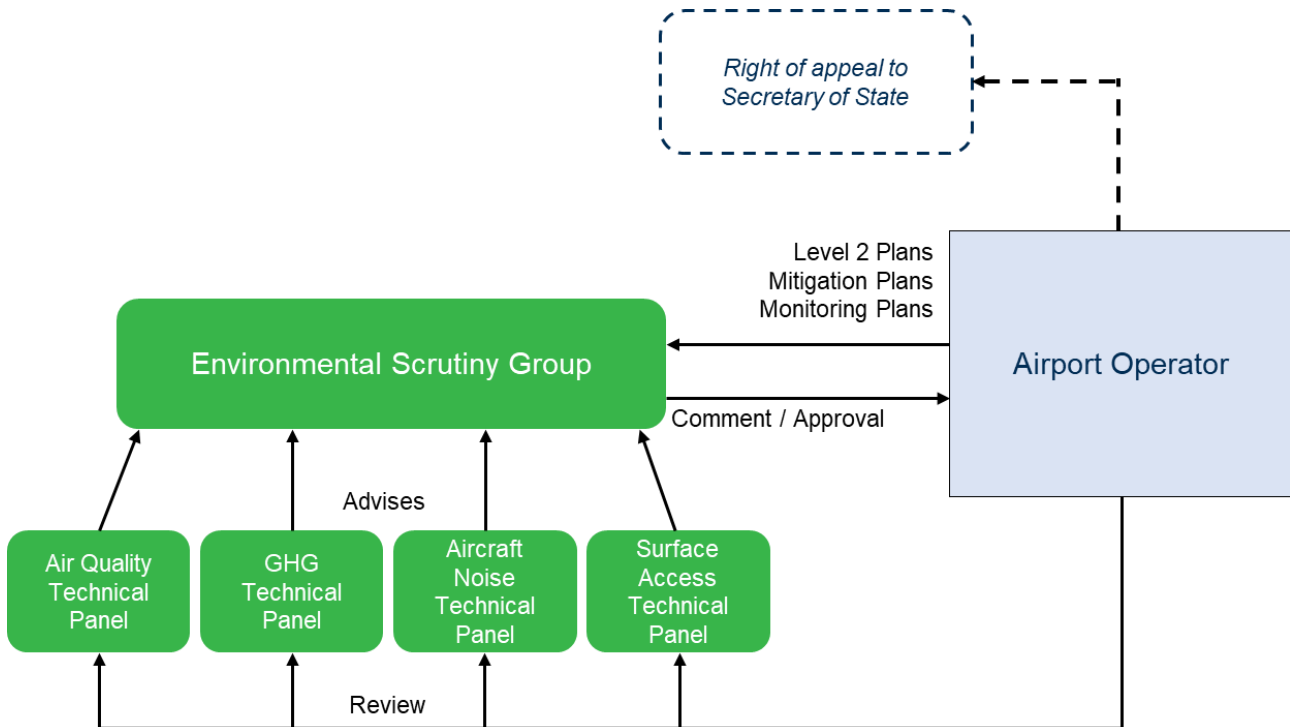
12.1.20 Monitoring results will be compiled into an annual Monitoring Report, which will not only be submitted to the ESG (described further below) who will provide independent oversight, but will also be available to the public to ensure that monitoring is transparently reported in a way that can be readily interpreted to support effective decision-making and maintain trust.

12.1.21 As with the controls on growth associated with any exceedances of a Level 2 Threshold or Limit, the timings associated with monitoring and reporting of environmental impacts have been designed to align with the annual calendar for the airport to declare its capacity and for slots to be allocated, ensuring that GCG is aligned with internationally agreed guidelines and domestic legislation whilst, where necessary, allowing action to be taken through the airport's capacity declaration in a timely manner.

Independent oversight

- 12.1.22 Effective scrutiny and review of the environmental effects of the expanding airport, combined with robust governance, is fundamental in making the **GCG Framework [TR020001/APP/7.08]** effective. On this basis, GCG will be overseen by a governance structure centred on a newly established independent body, the ESG. The approach will also establish an independent Technical Panel for each environmental topic area to support the ESG. The ESG and Technical Panels will supplement rather than replace existing groups and committees, including the airport Consultative Committee and its subgroups, and the Airport Transport Forum.
- 12.1.23 Terms of Reference for the ESG and Technical Panels are also included at **Appendices A and B** of the **GCG Framework [TR020001/APP/7.08]** and as with the other parts of GCG, have been amended and updated throughout the Examination in response to comments and suggestions from Interested Parties and the Examining Authority (ExA).
- 12.1.24 As the ESG is intended to provide independent oversight, the Applicant has made the deliberate decision that neither it, the airport operator nor airlines operating at the airport will have any involvement in its ongoing operation. Instead, it is proposed that the ESG will have representation from those local authorities that are impacted across the whole range of environmental topics within the scope of GCG, as well as an independent chair and independent technical experts. Following representations made by Interested Parties throughout the Examination process, the ESG and Technical Panels will be fully funded by the Applicant and airport operator.
- 12.1.25 Among the functions of the ESG set out in its Terms of Reference [**REP10-027**] is the ability for it to approve or refuse Level 2 Plans and Mitigation Plans submitted to it by the airport operator where a Level 2 Threshold or Limit has been exceeded. In particular, the ESG will have the ability to refuse a Mitigation Plan where it is not satisfied that the Plan will reduce an environmental impact below the relevant Limit as soon as reasonably practicable. The Applicant believes that providing this level of scrutiny and control over how an airport mitigates its environmental impacts is unprecedented and is not allowed for under existing planning enforcement regimes.
- 12.1.26 The four GCG Technical Panels will be established to provide advice and recommendations to the ESG. Membership of the various Technical Panels has been offered to public bodies that have a responsibility for managing the relevant environmental impact and are forecast to experience the relevant environmental effect as a result of the Proposed Development. In this way, all relevant bodies that are considered to be potentially impacted by the proposed expansion of the airport will be offered a voice in the GCG process.
- 12.1.27 As with the ESG, each Technical Panel will have an appointed independent expert who will also act as the Panel's chair. In this way, even where (for example) local authorities do not have relevant in-house technical expertise, the Technical Panel will still be able to carry out an independent and objective technical assessment and make recommendations to the ESG as appropriate.

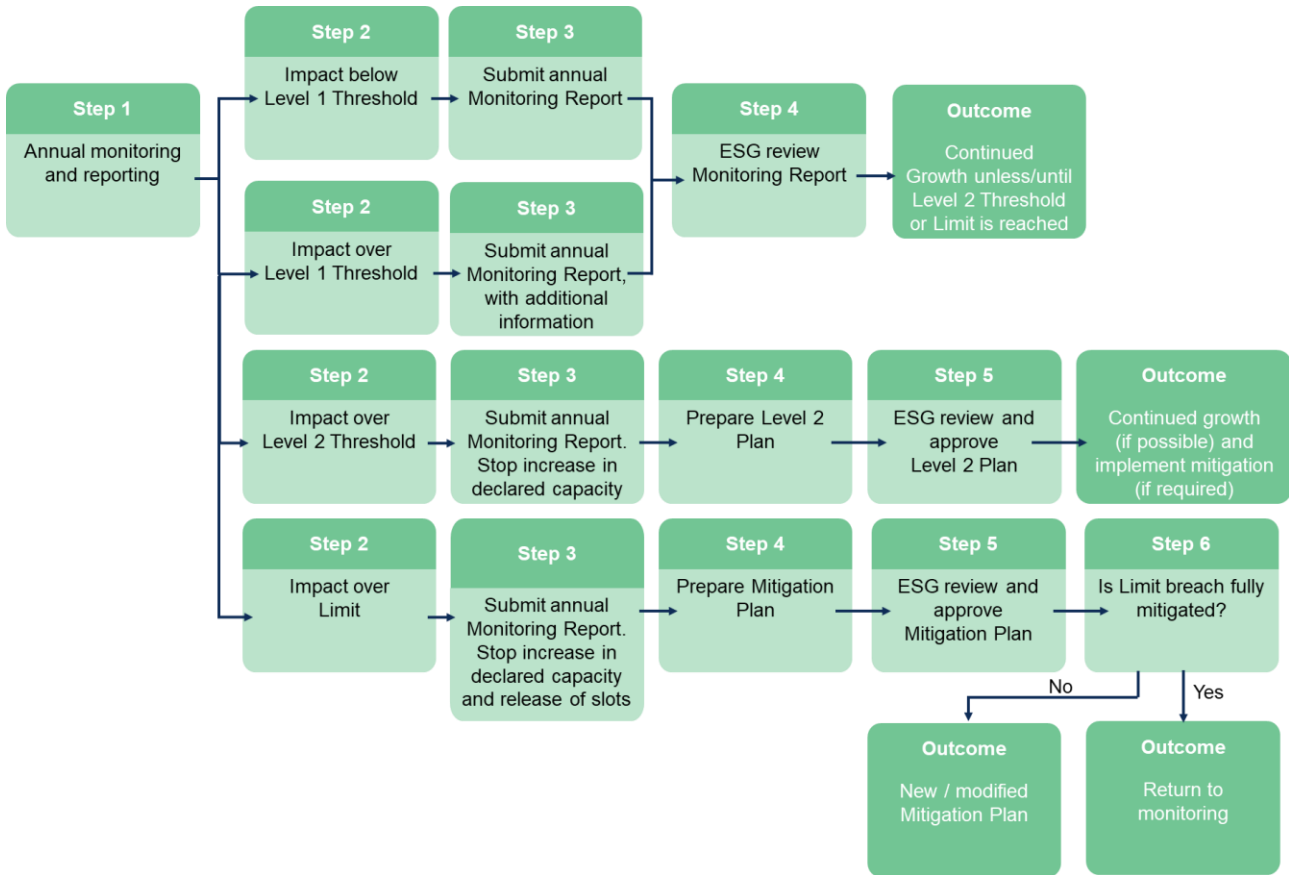
Figure 12.2: Proposed governance arrangements within the GCG Framework



An explicit commitment to link environmental performance to growth

- 12.1.28 Fundamental to the GCG approach is an explicit link between Limits and the ongoing growth of the airport. Put simply, if the airport cannot grow within the Limits established through GCG then the airport cannot grow. Whilst any such restrictions on growth would have significant commercial implications for the airport and go well beyond any penalty associated with existing planning controls, the Applicant believes this demonstrates the seriousness with which it takes its responsibility to the communities around the airport.
- 12.1.29 These controls on growth are secured by requirements in the **draft DCO [REP10-003]** and the wording of these requirements has been agreed with the airport operator and airport slot co-ordinator to ensure that the controls will be workable and compliant with relevant legislation. The controls on growth would continue to apply until the airport operator submits a Monitoring Plan that shows that the relevant environmental effect has reduced below the Limit.
- 12.1.30 The full GCG process is set out in **Figure 12.3** below.

Figure 12.3: Proposed GCG approach



12.1.31 The GCG documents submitted with the application, which are proposed to be certified under the DCO, are detailed in the table below.

Table 12-1 Certified GCG documents submitted with the application

Document Name	Document purpose	PINS Reference
GCG Explanatory Note	Provides a narrative to explain the GCG approach.	Updated at Deadline 11 and Examination Library reference therefore not yet assigned. The Applicant's reference is [TR020001/APP/7.07] .
GCG Framework	Sets out the necessary processes required for the functioning of the GCG approach and the values of the Limits and Thresholds	Updated at Deadline 11 and Examination Library reference therefore not yet assigned. The Applicant's reference is [TR020001/APP/7.08] .
GCG Framework Appendix A – ESG Terms of Reference	Sets out the Terms of Reference for the ESG. The ESG must operate, meet and make decisions in accordance with these	[TR020001/APP/7.08]

Document Name	Document purpose	PINS Reference
	Terms of Reference, unless otherwise agreed by the ESG and airport operator in accordance with the process set out in these Terms of Reference.	
GCG Framework Appendix B – Technical Panels Terms of Reference	As above but sets out the Terms of Reference for the Technical Panels rather than ESG.	[TR020001/APP/7.08]
GCG Framework Appendix C – Aircraft Noise Monitoring Plan	Establishes the specific monitoring and reporting requirements for the relevant environmental effect within the GCG Framework	Updated at Deadline 11 and Examination Library reference therefore not yet assigned. The Applicant's reference is [TR020001/APP/7.08] .
GCG Framework Appendix D – Air Quality Monitoring Plan		[REP9-028]
GCG Framework Appendix E – Greenhouse Gases Monitoring Plan		Updated at Deadline 11 and Examination Library reference therefore not yet assigned. The Applicant's reference is [TR020001/APP/7.08] .
GCG Framework Appendix F – Surface Access Monitoring Plan		Updated at Deadline 11 and Examination Library reference therefore not yet assigned. The Applicant's reference is [TR020001/APP/7.08] .

Consideration of the GCG approach during the Examination

- 12.1.32 During the course of the Examination a number of changes were made to the GCG process by the Applicant in response to engagement with Interested Parties and the ExA. Changes are highlighted in the tracked change versions of the GCG documents in the Examination Library and these versions of the documents are referenced in the table below.
- 12.1.33 This section explores how the Applicant has responded to some of the key issues raised and the changes these have led to. Changes relating specifically to each of the environmental effects covered within GCG are set out below in the section corresponding to the relevant effect. This section contains changes relating to general GCG processes, governance and reporting.

Table 12-2: Examples of general changes made to the GCG approach during the Examination

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
<p>GCG Framework Appendix A – ESG Terms of Reference [TR020001/APP/7.08]</p>	<p>This change introduced a slot allocation expert, in place of ‘a representative airline industry body to be confirmed’, as a member of the ESG. This change and associated changes to the ESG Terms of Reference were made at Section A2.1.</p>	<p>This change was made in response to representations from Interested Parties that the proposed wording did not secure the required level of independence for membership of ESG. The changes to wording make it clear that this role on ESG is intended for a body such as the International Air Transport Association (IATA) as joint publishers of the Worldwide Airport Slot Guidelines and who will be able to provide advice on guidance on how growth at the airport can be managed via the slot allocation process.</p>	<p>Deadline 3</p>
<p>GCG Framework Appendix A – ESG Terms of Reference [TR020001/APP/7.08], GCG Framework Appendix B – Technical Panels Terms of Reference [TR020001/APP/7.08]</p>	<p>Changes were made to the quorum for ESG and the Technical Panels – increasing the quorum from only the independent members of the bodies to also require at least one Local Authority representative. These changes were made at Section A2.2 of the ESG Terms of Reference and at Section B2.2 of the Technical Panels Terms of Reference.</p>	<p>This change and the reasons for the change are outlined in Table 1.1 of Applicant’s Post Hearing Submission – Issue Specific Hearing 9 (ISH 9) [REP6-067] at Action Point 2. The addition of at least one Local Authority representative into the quorum was in response to Written Questions GCG.1.12 and GCG.1.13 [PD-010], as well as engagement with the Host Authorities through the Statement of Common Ground (SoCG) process.</p>	<p>Deadline 5</p>

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
<p>GCG Explanatory Note [REP5-021], draft DCO [REP5-004]</p>	<p>These changes to monitoring requirements and timings removed the previously proposed transition Period for aircraft noise (i.e. GCG would be enforced for aircraft noise from serving of notice under article 44(1) of the DCO). The transition period for other environmental topics (greenhouse gases, air quality and surface access) was reduced to its minimum possible length, acknowledging that for these environmental topics new monitoring processes will need to be put in place, and that monitoring and reporting is on the basis of annual impacts and therefore needs to start on 1st January in any given year.</p> <p>Changes were made to paragraphs 2.2.44 to 2.2.48 of the GCG Explanatory Note, including changes to Figure</p>	<p>These changes were outlined at Section 4 of the Applicant’s response to Issue Specific Hearing 1 Actions 20, 21, 24 and 26 and Issue Specific Hearing 3 Action 28: GCG - Transition Period and Slot Allocation Process (“the Slots Paper”) [REP4-072]. The reasons for these changes are also included at this section of the document. The overall reason for the changes was to strengthen the GCG approach in the early stages of expansion, in response to Interested Parties and the ExA raising concerns around the ability to control environmental impacts during the transition period.</p>	<p>Deadline 5</p>

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
	<p>2.9. Requirement 17(4), which secured the transition period, was removed from the Deadline 5 draft DCO. Changes were also made to requirement 20 of the Deadline 5 draft DCO (Monitoring of permitted operations).</p>		
<p>Draft DCO [REP5-004]</p>	<p>This change introduced a requirement to establish the ESG as soon as reasonably practicable following the serving of the notice under article 44(1) of the DCO and in any event no later than 56 days prior to the due date for submission of the first Monitoring Report.</p> <p>This change was introduced at requirement 19(1) of the draft DCO and superseded a requirement to establish the ESG no later than 56 days prior to the due date for submission of the</p>	<p>These changes were proposed at paragraph 3.3.10 of the Slots Paper [REP4-072], in response to Issue Specific Hearing 1 Action Points 24 and Point 5 under 'Paper on slot allocation process' from the ExA's Rule 17 Letter [PD-009]. This change provides assurances that the ESG will be in place prior to the requirement for it to discharge any of its duties within the GCG process.</p>	<p>Deadline 5</p>

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
	first Monitoring Report.		
<p>GCG Framework Appendix B – Technical Panels Terms of Reference [TR020001/APP/7.08]</p>	<p>This change introduced a requirement to set out necessary amendments to members of the Noise Technical Panel where changes to the forecast shape of the 54dB_{L_{Aeq,16h}} and 48dB_{L_{Aeq,8h}} noise contours have occurred, such that noise impacts are experienced by different local authorities from those originally identified and included as part of the Noise Technical Panel.</p> <p>Changes were made to paragraphs B2.1.6 and B4.10.3 of the Technical Panels Terms of Reference.</p>	<p>These changes were made in response to concerns raised at matter 3.9.5 within the Statement of Common Ground between London Luton Airport Limited and Buckinghamshire Council [REP6-038]. The provision allows for future members to be added to the Technical Panel if the aircraft noise monitoring review process identifies that changes in the shape of the noise contours result in noise impacts within a local authority that is not already represented on the Noise Technical Panel.</p>	<p>Deadline 5</p>
<p>GCG Framework Appendix A – ESG Terms of Reference [TR020001/APP/7.08], GCG Framework Appendix B – Technical Panels Terms of Reference [TR020001/APP/7.08]</p>	<p>Full funding of any reasonable costs of involvement for local authority representatives ESG and Technical Panel members by the Applicant was introduced through this change. This replaced funding of travel, secretarial,</p>	<p>These changes were made in response to concerns raised within the SoCGs between the Applicant and the following parties (the Host Authorities):</p> <ul style="list-style-type: none"> • Luton Borough Council [REP6-028]; • Central Bedfordshire Council [REP6-030]; 	<p>Deadline 5</p>

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
	<p>administrative and accounting costs.</p> <p>Changes were made to Section A2.6 of the ESG Terms of Reference and to Section B2.7 of the Technical Panels Terms of Reference.</p>	<ul style="list-style-type: none"> • Hertfordshire County Council [REP6-032]; • North Hertfordshire District Council [REP6-034]; and • Dacorum Borough Council [REP6-036]. <p>The concerns were raised within the matter ‘ESG – Funding’.</p>	
<p>Draft DCO [REP5-004], GCG Framework Appendix A – ESG Terms of Reference [TR020001/APP/7.08]</p>	<p>This change increased the time available to ESG to review Level 2 Plans and Mitigation Plans through a reduction in the time the Applicant has to produce these plans.</p> <p>Changes were made to requirement 23(10) and requirement 23(12) of the Deadline 5 draft DCO. Changes were also made to the ESG Terms of Reference at Sections A4.3 and A4.5.</p>	<p>The increase in the time available for ESG to review Level 2 and Mitigation Plans was in response to Written Question DCO1.16 [PD-010], as well as representations made by the Host Authorities [REP4-126] in response to Written Question DCO.1.16.</p>	<p>Deadline 5</p>
<p>GCG Framework [TR020001/APP/7.08], GCG Explanatory Note [REP7-019]</p>	<p>This change introduced a mechanism to review the quantum of funding provided to local authority ESG and Technical Panel representatives.</p>	<p>These changes were made in response to concerns raised within the SoCGs between the Applicant and the following parties (the Host Authorities):</p> <ul style="list-style-type: none"> • Luton Borough Council [REP6-028]; 	<p>Deadline 7</p>

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
	<p>Changes were made to paragraph 2.3.2 of the GCG Framework and paragraph 2.2.51 of the GCG Explanatory Note.</p>	<ul style="list-style-type: none"> • Central Bedfordshire Council [REP6-030]; • Hertfordshire County Council [REP6-032]; • North Hertfordshire District Council [REP6-034]; and • Dacorum Borough Council [REP6-036]. <p>The concerns were raised within the matter ‘ESG – Funding’.</p> <p>The change was made to ensure that the funding provided by the Applicant to local authority representatives of ESG and the Technical Panels is sufficient to cover the costs of their involvement.</p>	
<p>GCG Framework Appendix A – ESG Terms of Reference [TR020001/APP/7.08], GCG Framework Appendix B – Technical Panels Terms of Reference [TR020001/APP/7.08]</p>	<p>Changes were made to clarify the acceptability of virtual or hybrid ESG and Technical Panel meetings. Changes were made to paragraph A2.6.7 of the ESG Terms of Reference and to paragraph B2.7.5 of the Technical Panels Terms of Reference.</p>	<p>These changes were made in response to Issue Specific Hearing 9 Action 3 and are outlined in Table 1.1 of the Applicant’s Post Hearing Submission – Issue Specific Hearing 9 (ISH 9) [REP6-067] at Action Point 2.</p>	<p>Deadline 7</p>
<p>GCG Framework Appendix A – ESG Terms of Reference [TR020001/APP/7.08]</p>	<p>This change relaxed the selection criteria for Local Authority representatives to ESG by removing the requirement for the nominee to</p>	<p>These changes were made in response to concerns raised within the SoCGs between the Applicant and the following parties (the Host Authorities):</p> <ul style="list-style-type: none"> • Luton Borough Council [REP6-028]; 	<p>Deadline 7</p>

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
	<p>work within the department dealing with planning functions.</p> <p>Changes were made to paragraphs A2.1.13 and A2.1.14 of the ESG Terms of Reference.</p>	<ul style="list-style-type: none"> • Central Bedfordshire Council [REP6-030]; • Hertfordshire County Council [REP6-032]; • North Hertfordshire District Council [REP6-034]; and • Dacorum Borough Council [REP6-036]. 	
<p>GCG Framework Appendix A – ESG Terms of Reference [TR020001/APP/7.08]</p>	<p>This change reflected the ExA’s proposed changes to the draft DCO and replaced the previous requirement for local authorities put forward a ‘suitably qualified senior planning professional’ with a requirement that they nominate a ‘competent officer’ to represent them on ESG.</p>	<p>These changes were made in response to concerns raised within the SoCGs between the Applicant and the following parties (the Host Authorities):</p> <ul style="list-style-type: none"> • Luton Borough Council [TR020001/APP/8.13]; • Central Bedfordshire Council [TR020001/APP/8.14]; • Hertfordshire County Council [TR020001/APP/8.15]; • North Hertfordshire District Council [TR020001/APP/8.16]; and • Dacorum Borough Council [TR020001/APP/8.17]. 	<p>Deadline 9</p>
<p>GCG Framework Appendix A – ESG Terms of Reference [TR020001/APP/7.08], GCG Framework Appendix B – Technical Panels Terms of Reference [TR020001/APP/7.08]</p>	<p>Changes were made to the quorum for ESG and the Technical Panels, reflecting the ExA’s proposed changes to the draft DCO – increasing the quorum from the independent members of the</p>	<p>These changes were made in response to concerns raised within the SoCGs between the Applicant and the following parties (the Host Authorities):</p> <ul style="list-style-type: none"> • Luton Borough Council [TR020001/APP/8.13]; • Central Bedfordshire Council [TR020001/APP/8.14]; 	<p>Deadline 9</p>

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
	<p>bodies and one local authority representative to requiring at least two local authority representatives. In order to protect the GCG process, and the requirement for it to conclude in time to inform the slot allocation process, the Applicant has added an additional requirement to hold a further meeting within seven days with a reduced quorate requirement if a quorum cannot be achieved at the first meeting. These changes were made at Section A2.2 of the ESG Terms of Reference and at Section B2.2 of the Technical Panels Terms of Reference.</p>	<ul style="list-style-type: none"> • Hertfordshire County Council [TR020001/APP/8.15]; • North Hertfordshire District Council [TR020001/APP/8.16]; and • Dacorum Borough Council [TR020001/APP/8.17]. <p>The concerns were raised under the matter ‘ESG – Quorum’</p> <p>This change was also made in response to a proposed amendment to requirement 19 of the draft DCO published within the ExA’s commentary on, or schedule of changes to, the draft DCO [PD-018].</p>	
<p>GCG Framework Appendix A – ESG Terms of Reference [TR020001/APP/7.08], GCG Framework Appendix B – Technical Panels Terms of Reference [TR020001/APP/7.08]</p>	<p>Changes were made to the various procedures for the ESG and Technical Panels responding to reviews undertaken by the airport operator within both sets of Terms of Reference. These changes</p>	<p>These changes were made in response to comments made by Buckinghamshire Council as part of their Deadline 6 Submission – Comments on any further information / submissions received by Deadline 5 [REP6-086].</p>	<p>Deadline 9</p>

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
	addressed inconsistencies between different review processes and provided additional clarity on how the ESG sought advice from Technical Panels.		
<p>GCG Framework [TR020001/APP/7.08], GCG Explanatory Note [TR020001/APP/7.07]</p>	<p>Introduction of explicit requirement to consider new and emerging best practice as part of review of monitoring plans</p>	<p>These changes were made in response to concerns raised within the SoCGs between the Applicant and the following parties (the Host Authorities):</p> <ul style="list-style-type: none"> • Luton Borough Council [TR020001/APP/8.13]; • Central Bedfordshire Council [TR020001/APP/8.14]; • Hertfordshire County Council [TR020001/APP/8.15]; • North Hertfordshire District Council [TR020001/APP/8.16]; and • Dacorum Borough Council [TR020001/APP/8.17]. 	<p>Deadline 9</p>

12.1.34 For this topic the only areas that are not agreed at the end of Examination are as follows:

- a. **The role of Dacorum Borough Council on the ESG** [TR020001/APP/8.13, TR020001/APP/8.14, TR020001/APP/8.15, TR020001/APP/8.16, TR020001/APP/8.17]. The Host Authorities have requested that Dacorum Borough Council is offered a role on the ESG on the basis that they are impacted by airport operations. The Applicant disagrees that Dacorum are impacted across the range of GCG topics as set out at point 19(2) of the **Applicant's Response to the Examining Authority's Commentary on the Draft DCO [REP8-036]**.
- b. **Local Authority Representation on the ESG** [TR020001/APP/8.13, TR020001/APP/8.14, TR020001/APP/8.15, TR020001/APP/8.16, TR020001/APP/8.17]. The Applicant has made several changes to the **GCG Framework Appendix A – ESG Terms of Reference [TR020001/APP/7.08]** throughout the course of the Examination to respond to points raised by the Host Authorities and ExA. The majority of these matters are now agreed, with the exception of the provision at paragraph A2.1.15 of the ESG Terms of Reference that the final decision as to whether an officer nominated by a local authority to take up their role on the ESG meets the criteria set out in paragraph A2.1.14 of the Terms of Reference rests with the chair of the ESG. The Applicant's position is that this provision is entirely appropriate in the context of ensuring the proper functioning of the ESG, and that an independent chair will be capable of making an objective determination of whether an individual meets this requirement.
- c. **Formation of the ESG as a corporate entity** [TR020001/APP/8.14, TR020001/APP/8.15, TR020001/APP/8.16, TR020001/APP/8.17]. The Applicant continues to believe that this approach to the formation of the ESG is appropriate. One of the very important drivers in the Applicant's approach has been to ensure that the ESG is truly independent. GCG is intended to be a clear and explicit communication to the local communities and Host Authorities that the structures in place are at arm's length from the airport operator, the owner and, indeed, in order to address a perceived conflict, LBC itself.

Furthermore, by creating a separate legal entity which is distinctly the decision-maker, it will reduce the risk to those local authority representatives, for example, a decision to refuse (or approve) being amenable to judicial review, and local authorities and/or representatives being liable.

The implications for local authorities are therefore that the corporate entity (a company limited by guarantee) will secure independence, reduce potential legal liability enabling the ESG to undertake their functions, and also ensure that the legal powers open to companies are given to the ESG (e.g., in terms of appointments and entering into contracts). It is acknowledged that this approach is not yet agreed with

the Host Authorities who continue to have reservations about its appropriateness. Notwithstanding this, both the Applicant and the Host Authorities acknowledge that there will be time for further discussions on this point following the grant of any consent.

- d. **GCG Thresholds and Limits [TR020001/APP/8.13, TR020001/APP/8.14, TR020001/APP/8.15, TR020001/APP/8.16, TR020001/APP/8.17]**. This issue is also raised specifically for aircraft noise at paragraph 12.2.13. The Applicant considers that the principle of aligning Limits and Thresholds within the **GCG Framework [TR020001/APP/7.08]** with the Faster Growth sensitivity test is appropriate and will ensure that the environmental impacts of expansion are no worse than the reasonable worst case. The Host Authorities do not support this position. Notwithstanding this, it should be noted that Limits and Thresholds for air quality are aligned with national air quality objectives (and that this approach is agreed with the Host Authorities), and that surface access Limits and Thresholds are based on mode share assumptions that are consistent across both the Core Planning Case and Faster Growth sensitivity test. In addition, as set out in the Applicant's response to Issue Specific Hearing 9 Action Point 28, included at Appendix A to the **Applicant's Post Hearing Submission - Issue Specific Hearing 9 (ISH9) [REP6-067]**, the Greenhouse Gases Limits and Thresholds for Airport Operations have been derived from the Core Planning Case.
- e. **Sanctions for continued breaches [TR020001/APP/8.13, TR020001/APP/8.14, TR020001/APP/8.15, TR020001/APP/8.16, TR020001/APP/8.17]**. It is noted that at Deadline 7 the Host Authorities requested that a regime of financial sanctions was incorporated into GCG. As set out in more detail in the **Applicant's Position Statement on Financial Penalties [REP9-058]**, the Applicant considers that financial penalties in the context of GCG:
- i. are unnecessary and wholly unjustified in light of the robust and comprehensive GCG Framework the Applicant has put forward;
 - ii. are inappropriate given the existing enforcement mechanism endorsed by Parliament in the context of breaches of the DCO;
 - iii. do not meet the planning policy tests;
 - iv. do not meet the specific tests which are relevant to the imposition of conditions;
 - v. are being proposed without a clear legal basis;
 - vi. are unprecedented;
 - vii. are being sought to be justified by reference to precedents which are wholly irrelevant;
 - viii. assume a function for the Department for Transport which it has hitherto not accepted or been consulted upon; and

- ix. are not appropriate in the context of a single decision on a DCO application.

12.2 GCG – Aircraft Noise

Key documents

- 12.2.1 The following are the key documents relating to the GCG approach to Aircraft Noise:
- a. **GCG Explanatory Note [TR020001/APP/7.07];**
 - b. **GCG Framework [TR020001/APP/7.08];**
 - c. **GCG Framework Appendix C – Aircraft Noise Monitoring Plan [TR020001/APP/7.08];**
 - d. **Noise Envelope – Improvements and Worked Example [REP2-032];**
 - e. **Applicant’s Post Hearing Submission – Issue Specific Hearing 3 (ISH 3) [REP3-050];**
 - f. **Applicant’s response to Issue Specific Hearing 1 Actions 20, 21, 24 and 26 and Issue Specific Hearing 3 Action 28: GCG - Transition Period and Slot Allocation Process [REP4-072];**
 - g. **Comparison of Consented and Proposed Operational Noise Controls [REP5-014];**
 - h. **Applicant’s Response to Written Questions - GCG [REP5-090];**
 - i. **Applicant’s Post Hearing Submission – Issue Specific Hearing 9 (ISH 9) [REP6-067];**
 - j. **Applicant’s Response to Written Questions – GCG [REP7-054];**
 - k. **Applicant's Response to Issue Specific Hearing 9 Actions 8, 19 and 20 - Quota Count Noise Controls [REP7-077]; and**
 - l. **Applicant’s Position on Noise Contour and Movement Limits [REP9-055].**

Overview of the GCG approach to aircraft noise (the Noise Envelope)

- 12.2.2 The approach to aircraft noise within the GCG is outlined at Section 3.2 of the **GCG Explanatory Note [TR020001/APP/7.07]**, with further details including (but not limited to) monitoring and reporting requirements outlined in the **GCG Framework Appendix C – Aircraft Noise Monitoring Plan [TR020001/APP/7.08]**. The values of the Limits and Thresholds are presented in Table 12-3 below, as well as Table 3.1 of the **GCG Explanatory Note [TR020001/APP/7.07]** and Table 3.1 of the **GCG Framework [TR020001/APP/7.08]**. The values of the Limits and Thresholds were updated at Deadline 9; please refer to the **Applicant’s Position on Noise Contour and Movement Limits [REP9-055]**. This change was made in response to the ExA’s recommendation that the noise Limits be lowered to represent that of the Core Case, “to avoid additional effects above [Significant Observed Adverse

Effect Level] SOAEL for the local community that are otherwise predicted to arise” [PD-018]. In the **Applicant’s position on contour and movement limits [REP9-055]**, it has been demonstrated that the lowered noise Limits results in a reduction in exposure above the SOAEL compared to the previous Limits and that there would be no difference in residual significant effects between the Core Planning Case and the Updated Faster Growth case.

Table 12-3: GCG Limits and Thresholds for aircraft noise

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

* Assumes that ‘next-generation’ (low carbon) aircraft will be no quieter than the ‘new generation’ aircraft (e.g. B737Max and A321Neo)

12.2.3 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 a single control process for aircraft noise, and this is integrated with the wider control processes which form GCG. A summary of the key principles of the approach is as follows:

- a. GCG will place Limits and warning Thresholds on the total size of the 92-day summer average L_{Aeq} noise contours for day (07:00–23:00) and night (23:00-07:00), based on a standard modal split (as recommended by the Noise Envelope Design Group).
- b. Limits are fixed for five-year periods (to align with the Noise Action Plan cycles), with the initial Limit applying up to the end of 2028. Subsequently, defined Limits decrease for the five-year periods 2029-2033 and 2034-2038 to secure the community benefit of the transition to quieter ‘new generation’ aircraft. The defined limits then increase from 2039 to allow for

growth and current uncertainty in the noise performance of 'next generation' (low-carbon) aircraft.

- c. Noise Limits Reviews will be triggered by an approved airspace change proposal or publication of a new ICAO noise chapter.
- d. Noise Limits Reviews should consider whether it is reasonably practicable to reduce Limits from the values established through the DCO, whilst permitting the growth granted by the DCO. This is with the intent of reducing Limits below the 2019 Cap¹⁰ as quickly as is reasonably practicable.
- e. Limits could be changed for the next five-year period onwards in response to an approved airspace change proposal, and from 2039 onwards in response to a new ICAO noise chapter.
- f. A Noise Limits Review will be subject to approval by the ESG, as informed by the Noise Technical Panel.
- g. Following the initial Noise Limits Review, the process will be repeated on a five-yearly cycle.
- h. Compliance with the Limits and performance relative to the Thresholds will be monitored and reported every year via a binding Aircraft Noise Monitoring Plan with Level 2 Plans and Mitigation Plans triggered if necessary to improve noise performance overseen by the ESG.
- i. The **Aircraft Noise Monitoring Plan [TR020001/APP/7.08]** requires publication of a wide range of other noise and airport operational indicators to inform communities and aircraft noise management. The Monitoring Plan also requires continuing validation and improvement of the airport operator's noise modelling and monitoring systems in line with Civil Aviation Authority (CAA) guidance.

12.2.4 The Applicant's proposals for the Noise Envelope are cognisant of the Government policy statement titled 'Overarching Aviation Noise Policy' (OANPS) published in March 2023 (Ref 12.1). The Applicant provided commentary on the implications of this policy statement for GCG within the **Commentary on the Overarching Aviation Noise Policy Statement [REP1-012]**.

12.2.5 The OANPS precludes the publication of the Government's policy paper on aviation noise policy, as stated in Flightpath to the Future (Ref 12.2), by reference to Aviation 2050 the Future of UK Aviation (Ref 12.3). This process has also been aligned with expectations set out within the Airports National Policy Statement (Ref 12.4) (ANPS) that builds on the Aviation Policy Framework (Ref 12.5) (APF) and the CAA's guidance (CAP 1129) (Ref 6), in particular ANPS paragraph 5.60 which states that a Noise Envelope should:

- a. include clear noise performance targets;

¹⁰ 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'.

- b. facilitate the achievement of a balance between growth and noise reduction;
- c. share the benefits of future technological improvements between the Applicant and local communities.
- d. include suitable review periods, set in consultation with local stakeholders; and
- e. be defined in consultation with local communities and stakeholders with tailoring of the approach to local priorities.

12.2.6 The Limits and Thresholds provide clear performance targets for noise based on the outputs of the EIA and inclusion of the Noise Envelope within GCG explicitly links growth at the airport to performance against these targets.

12.2.7 The Applicant is committed to “*sharing the benefits of future technological improvements*” (in terms of aircraft noise reduction) between communities and the aviation industry. Limits have been set commensurately to the noise reduction benefits of the transition to ‘new generation’ aircraft in the early years of expansion, securing both the sharing of these benefits with the community and, due to the controls on airport growth through the Limits, a “*balance between growth and noise reduction*”.

12.2.8 A review mechanism is also proposed for the Limit to be reduced in future years (beyond the 2030s) if and when quieter ‘next generation’ aircraft become available that would enable lower noise levels to be achieved than that forecast in the reasonable worst case assessment reported in the ES. In addition to reviews relating to the Limits and Thresholds, further periodic reviews are proposed. This includes the following:

- a. A review of the AEDT noise model, which was used to prepare the noise forecasts presented in the ES and will be maintained for use as the basis for planning for growth and noise control at the airport.
- b. A review of the noise forecasts and, if necessary, updating of the forecasts every five years. This review period aligns with the ongoing need under the Environmental Noise (England) Regulations 2006 (Ref 12.7) to publish strategic noise maps and a Noise Action Plan (NAP) every five years starting in 2008.

12.2.9 In line with paragraph 5.60 of the ANPS (Ref 12.4), the Noise Envelope Design Group (NEDG) was formed to ensure that the design of the envelope is “*defined in consultation with local communities and relevant stakeholders*”. The Applicant has set out in Section 3 of **Appendix 16.2** of the **ES [REP10-019]** the extent to which community engagement, and hence tailoring to local priorities, has informed the development of the Noise Envelope. Annex A of **[REP10-019]** contains the NEDG Interim and Final Reports, and the Applicant’s response to these reports, and how they have informed the Noise Envelope, is presented in Annex B. Following updates made during the Examination to secure the current consented noise controls in the **Air Noise Management Plan [REP9-047]**, Table 1.2 in **Appendix 16.2** of the **ES [REP10-019]** demonstrates that the vast majority of the NEDG recommendations have been adopted as noise controls in the DCO.

- 12.2.10 The proposed Noise Envelope provides several enhancements to the current consented noise controls (consented under planning reference 21/00031/VARCON) such as independent scrutiny and oversight, increased transparency, pro-active use of Quota Count budgets for day and night, adaptive mitigation and management plans and noise limit reviews. A full description of these enhancements was provided within the **Comparison of Consented and Proposed Operational Noise Controls [REP5-014]**. Further to this submission, the Applicant also provided the **Noise Envelope – Improvements and Worked Example [REP2-032]**, a paper containing a worked example which can be used to reasonably conclude that the proposed noise controls would have avoided the historic noise limit breaches that occurred in 2017-2019.
- 12.2.11 As set out in Section 9.12 of this document, the Noise Envelope, in combination with the other embedded noise mitigation in the Proposed Development and the Compensation Policies, Measures and Community First (noise insulation scheme) **[TR020001/APP/7.10]**:
- a. limits and, where possible, reduces the number of people significantly affected by adverse impacts from aircraft noise;
 - b. prevents unacceptable adverse effects on health and quality of life from noise;
 - c. avoids significant adverse effects on health and quality of life from noise;
 - d. mitigates and minimises adverse effects on health and quality of life from noise;
 - e. where possible contributes to improvements of health and quality of life from noise; and
 - f. shares the benefits of future technological improvements between the airport and its local communities to achieve a balance between growth and noise reduction.

Consideration of the GCG approach to aircraft noise during the Examination

- 12.2.12 The table below outlines changes made to submitted documents during the Examination in response to engagement with Interested Parties and the ExA, which relate specifically to the approach to noise within GCG.

Table 12-4: Examples of changes made to the GCG approach to aircraft noise during the Examination

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
GCG Framework [REP3-017],	The introduction of a specific requirement to convert current and future Level 2 Threshold and	This change was identified whilst the Applicant was compiling the Noise Envelope Improvements	Deadline 3

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
<p>GCG Explanatory Note [REP3-015]</p>	<p>Limit noise contour areas into equivalent total 16-hour daytime and total 8-hour night-time QC budgets following the breach of a Level 1 Threshold. These changes were made at paragraph 3.1.7 of the GCG Framework and paragraph 3.2.15 of the GCG Explanatory Note.</p> <p>The Noise Envelope also requires that QC budgets are derived from the contour area Limits and Thresholds and are used:</p> <ul style="list-style-type: none"> a. to inform forward planning of airport operations (both annual and five-year forward plans); b. to incentivise airlines to operate the quietest aircraft available in response to the opportunity of growth; c. as part of the bi-annual process of slot management and capacity declaration; and d. where, in the forward plan, the Level 2 Threshold Equivalent QC or Limit Equivalent QC is exceeded, to include within the annual Monitoring Report proposals for slot management measures, additional 	<p>and Worked Example [REP2-032] document, which contains further information regarding the change and the reasons behind it. The change builds on the lessons learnt from the noise control breaches between 2017 and 2019 and provides mechanisms for preventing a similar breach occurring. Further detail on this mechanism is provided in Applicant’s Response to Issue Specific Hearing 9 Actions 8, 19 and 20 - Quota Count Noise Controls [REP7-077] which provides a worked example and demonstrates how this mechanism provides a link between the 92-day summer Noise Envelope contour area noise controls and the full calendar year.</p>	

Document(s)	Summary of Changes Made	Reason for Changes Made	Submitted At
	<p>interventions or mitigation to ensure that the Limits will not be exceeded.</p>		
<p>GCG Framework [REP7-018], GCG Explanatory Note [REP7-020]</p>	<p>The introduction of a specific requirement to convert current and future Level 2 Threshold and Limit noise contour areas into equivalent total 16-hour daytime and total 8-hour night-time quota counts (QCs) at all times. These changes were made at paragraph 3.1.7 of the GCG Framework and paragraph 3.2.15 of the GCG Explanatory Note.</p>	<p>This change was outlined at Section 4.4 of the Applicant’s Post Hearing Submission – Issue Specific Hearing 9 (ISH 9) [REP6-067]. The change builds on the changes made at Deadline 3 by introducing the requirement to use QC budgets irrespective of a Level 1 breach.</p>	<p>Deadline 7</p>
<p>GCG Explanatory Note [REP3-016], GCG Framework [REP3-018]</p>	<p>Changes were made to the values of the Level 1 Threshold and Level 2 Threshold for noise so that these were set relative to the Limit values, rather than relative to the difference between the Limit and the equivalent do-minimum noise contour area. Changes were made to Table 3.1 in the GCG Explanatory Note and the GCG Framework.</p>	<p>This change was identified whilst the Applicant was compiling the Noise Envelope Improvements and Worked Example [REP2-032] document, which contains further information regarding the change and the reasons behind it. Section 4.3 details the review of the proposed noise Thresholds in the context of previous noise limit breaches that occurred in 2017, 2018 and 2019. Changes to the Thresholds were made in response to this review, so that the proposed Thresholds would have prevented the earlier breaches from occurring. The revised Thresholds align with the recommendations of the NEDG.</p>	<p>Deadline 3</p>

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
<p>GCG Framework Appendix C – Aircraft Noise Monitoring Plan [REP3-024]</p>	<p>The introduction of off-schedule flights into the Noise Envelope, through alterations to paragraph C4.1.3.</p>	<p>This change was identified whilst the Applicant was compiling the Noise Envelope Improvements and Worked Example [REP2-032] document; further information regarding the change and the reasons behind it is included at Section 5.2 of that document.</p>	<p>Deadline 3</p>
<p>GCG Explanatory Note [REP5-021], draft DCO [REP5-004]</p>	<p>This change removed the transition period for aircraft noise (i.e. GCG would be enforced for aircraft noise from serving of notice under article 44(1) of the DCO).</p> <p>Changes were made to paragraphs 2.2.44 to 2.2.48 of the GCG Explanatory Note, including changes to Figure 2.9. Requirement 17(4), which secured the transition period, was removed from the Deadline 5 draft DCO. Changes were also made to requirement 20 of the Deadline 5 draft DCO (Monitoring of permitted operations).</p>	<p>These changes were outlined at section 4 of the Applicant's response to Issue Specific Hearing 1 Actions 20, 21, 24 and 26 and Issue Specific Hearing 3 Action 28: GCG - Transition Period and Slot Allocation Process ('the Slots Paper') [REP4-072]. The reasons for these changes are also included at this section of the document. The overall reason for the changes was to strengthen the GCG approach in the early stages of expansion, in response to Interested Parties and the ExA raising concerns around the ability to control environmental impacts during the transition period.</p>	<p>Deadline 5</p>
<p>GCG Framework Appendix B – Technical Panels Terms of Reference [REP5-027]</p>	<p>This change introduced a requirement to set out necessary amendments to members of the Noise Technical Panel where changes to the forecast shape of the 54dBL_{Aeq,16h} and 48dBL_{Aeq,8h} noise contours have occurred, such that noise impacts are experienced by</p>	<p>These changes were made in response to concerns raised at matter 3.9.5 within the SoCG between London Luton Airport Limited and Buckinghamshire Council [REP6-038]. The provision allows for future members to be added to the Technical Panel if the</p>	<p>Deadline 5</p>

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
	<p>different local authorities from those originally identified and included as part of the Noise Technical Panel.</p> <p>Changes were made to paragraphs B2.1.6 and B4.10.3 of the Technical Panels Terms of Reference.</p>	<p>aircraft noise monitoring review process identifies that changes in the shape of the noise contours result in noise impacts within a local authority that is not already represented on the Noise Technical Panel.</p>	
<p>Applicant’s position on contour and movement limits [REP9-055]</p>	<p>At Deadline 9, an update was made to the assessment of the Faster Growth scenario (referred to as the Updated Faster Growth Scenario) which assumes a faster fleet transition to new-generation aircraft, reducing noise effects and reducing the Noise Envelope Limits and Thresholds in turn.</p>	<p>These changes were made in response to updated fleet mix information (see [REP6-066] and response to Written Question NO.2.2 [REP7-056]) and in response to the ExA’s recommendation that the noise Limits be lowered to represent that of the Core Case, “to avoid additional effects above SOAEL for the local community that are otherwise predicted to arise” [PD-018]. In the Applicant’s position on Contour and Movement Limits [REP9-055], it has been demonstrated that the lowered noise Limits result in a reduction in exposure above the SOAEL compared to the previous Limits and that there would be no difference in residual significant effects between the Core Planning Case and the Updated Faster Growth case.</p>	<p>Deadline 9</p>

12.2.13 For GCG aircraft noise the only area that is not agreed at the end of Examination with the Host Authorities **[TR020001/APP/8.13-8.17]** is the use of the Updated Faster Growth case as the basis for determining the Limits and

Thresholds. This issue, along with wider noise issues that are not agreed at the end of Examination, is fully addressed in Table 9-2 of this closing submission.

12.3 GCG – Air Quality

Key Documents

12.3.1 The following are the key documents relating to the GCG approach to air quality:

- a. **GCG Explanatory Note [TR020001/APP/7.07];**
- b. **GCG Framework [TR020001/APP/7.08];**
- c. **GCG Framework Appendix D: Air Quality Monitoring Plan [REP9-028];**
- d. **Environmental Improvement Plan Interim Target for PM2.5 Commentary [REP1-017];**
- e. **Applicant’s Post Hearing Submission – Issue Specific Hearing 5 (ISH 5) [REP3-052];**
- f. **Applicant’s Response to Issue Specific Hearing 5 Action 16: GCG Scope Monitoring [REP4-089];**
- g. **Applicant’s Response to Written Questions - GCG [REP5-090];**
- h. **Applicant’s Post Hearing Submission – Issue Specific Hearing 9 (ISH 9) [REP6-067];**
- i. **Applicant’s Response to Issue Specific Hearing 9 Action 26: Air Quality Monitoring [REP6-076]; and**
- j. **Applicant’s Response to Written Questions – GCG [REP7-054].**

Overview of the GCG approach to air quality

12.3.2 The approach to air quality within the GCG is outlined at Section 3.3 of the **GCG Explanatory Note [TR020001/APP/7.07]**, with requirements around monitoring and reporting of air quality concentrations outlined in the **GCG Framework Appendix D – Air Quality Monitoring Plan [REP9-028]**.

12.3.3 The GCG approach to air quality has been designed to align with the existing legislation on the monitoring and management of air quality in the UK. The local authorities surrounding the airport have a statutory duty under the Environment Act 2021 (Part IV Air Quality) (Ref 12.8) to monitor air quality within their administrative boundaries, report performance against the UK Air Quality Objectives set by the Government, and subsequently take action to improve air quality if required through the declaration of an Air Quality Management Area and the production of an Air Quality Action Plan. The relative contribution of the airport to any air quality issues is therefore a key factor to be addressed within GCG, as many existing issues with air quality are unrelated to the airport, are outside of the airport’s control, and can only be resolved by Luton Borough Council and other neighbouring authorities.

- 12.3.4 The main pollutants relevant to human health that are associated with operations at the airport, as identified by **Chapter 7** of the **ES [AS-076]**, are different sizes of Particulate Matter (PM₁₀, PM_{2.5}) and Nitrogen Oxides (NO_x) – in particular Nitrogen Dioxide (NO₂). It is these three pollutants that the GCG Limits for air quality are proposed to relate to, as these are the pollutants assessed and with impacts forecast as part of the application for development consent.
- 12.3.5 The detailed assessments carried out for the ES assess the effects of expansion on the total emissions of pollutants, and how they are dispersed across the local area over time (the measurable concentration of pollutants at given locations). Locations which are sensitive to changes in air quality (known as sensitive receptors) are those at which human health and ecosystems could be impacted. Within the ES, the Applicant has assessed the modelled change in air quality concentrations at 601 representative human receptors close to the airport and/or the affected road network. This assessment concluded that no significant air quality impacts are forecast at any of these locations.
- 12.3.6 A sifting methodology, as summarised in Figure 12.4, was therefore applied to reduce the number of modelled locations down to a proportionate number of locations to be monitored and to subsequently divide these locations into ‘in scope’ (i.e., Limits and Thresholds would apply at ‘in scope’ locations) and ‘monitoring only’. The sifting process identified a shortlist of 43 sensitive receptors where the air quality forecasting suggested the airport expansion would have the greatest proportionate effect on air quality. Some of these 43 receptors are in close proximity to each other, and therefore given the requirement for location-based monitoring, this list has been simplified to 15 key locations, with a representative receptor identified for each one. The 15 key locations are shown in Figure 12.5.

Figure 12.4: Process for shortlisting GCG air quality locations

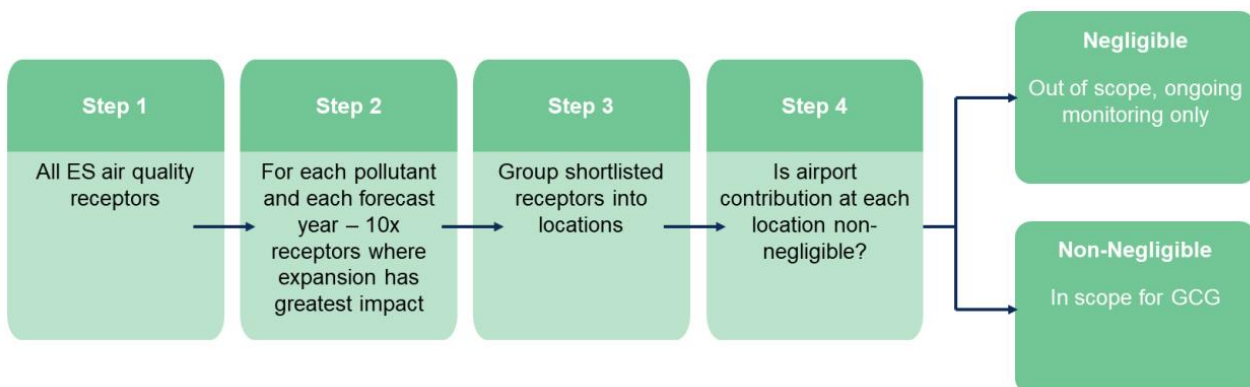
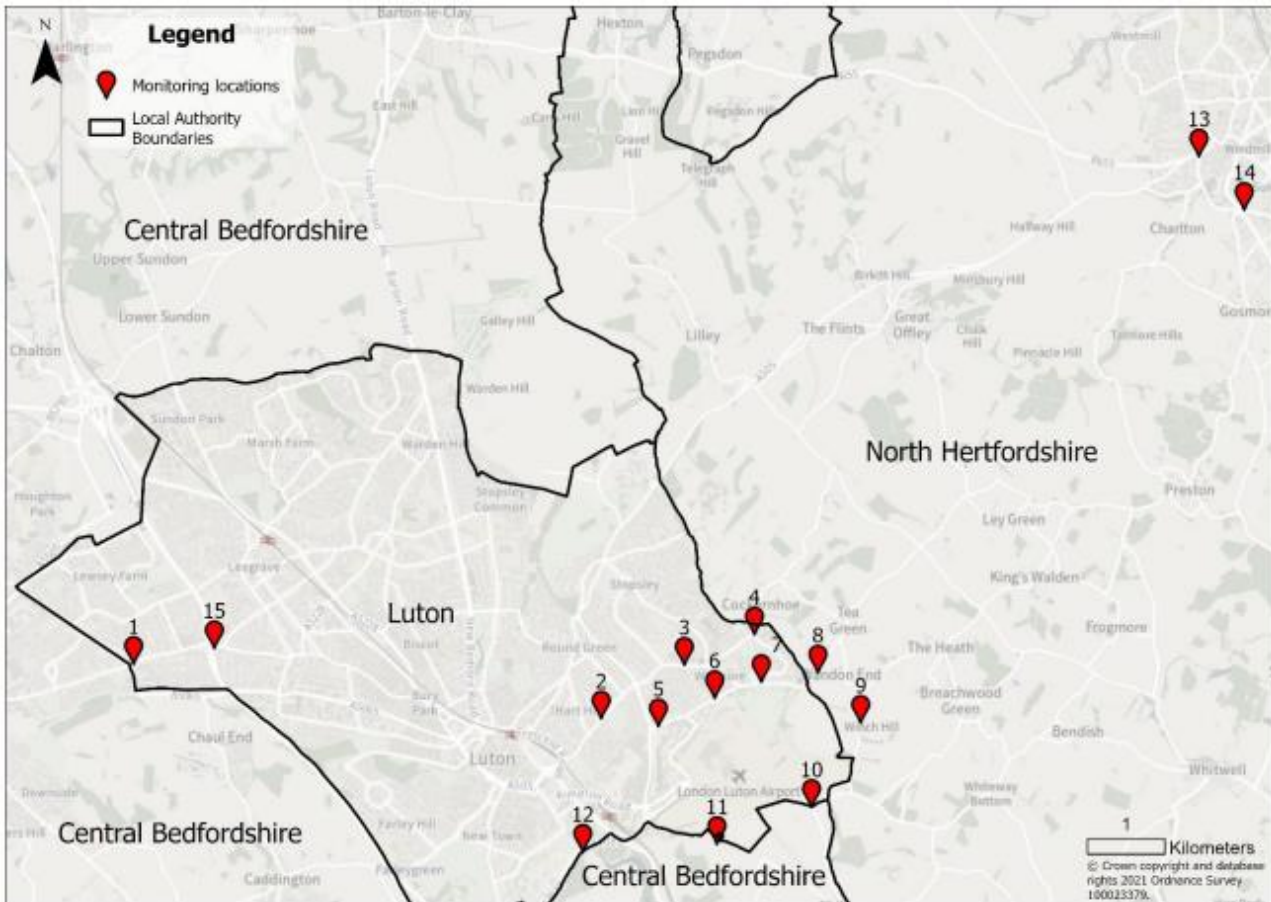


Figure 12.5: Locations for ongoing monitoring of air quality concentrations



- 12.3.7 The extent of impacts, and decision on whether each location is in or out of scope based on total airport impact for GCG is included in Appendix A of the **GCG Explanatory Note [TR020001/APP/7.07]** and summarised in Table 3.4 of the same document. 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). 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.
- 12.3.8 The values of the Limits and Thresholds are presented below in Table 12-5, as well as in Table 3.5 of the **GCG Explanatory Note [TR020001/APP/7.07]** and Table 4.3 of the **GCG Framework [TR020001/APP/7.08]**.

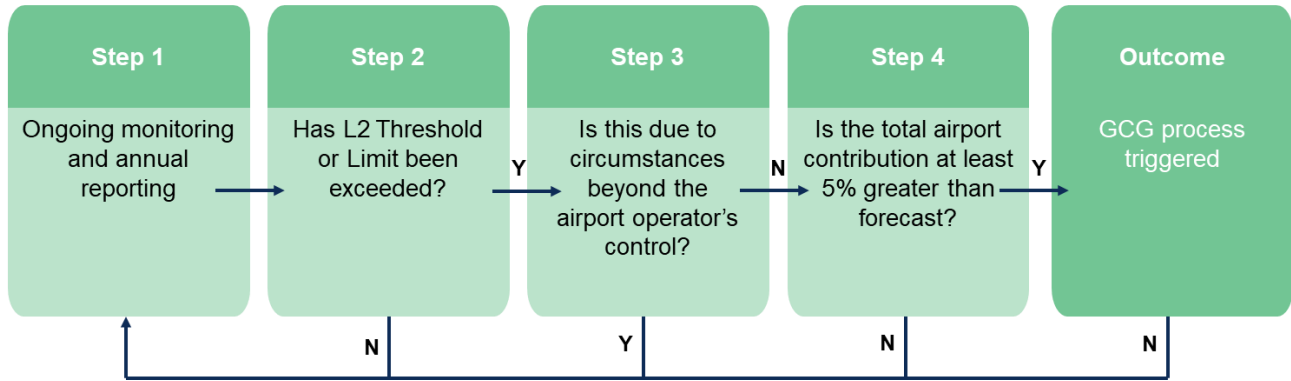
Table 12-5: GCG Limits and Thresholds for air quality

Limit	Up to 2026 (all Phases)	2027 to 2039 (all Phases)	2040 onwards (all Phases)
Annual average PM _{2.5} concentration	Limit		
	20 µg/m ³	12 µg/m ³	10 µg/m ³
	Level 2 Threshold		
	19 µg/m ³	11.4 µg/m ³	9.5 µg/m ³
	Level 1 Threshold		
	15 µg/m ³	9 µg/m ³	7.5 µg/m ³
Annual average PM ₁₀ concentration	Limit		
	40 µg/m ³	40 µg/m ³	40 µg/m ³
	Level 2 Threshold		
	38 µg/m ³	38 µg/m ³	38 µg/m ³
	Level 1 Threshold		
	30 µg/m ³	30 µg/m ³	30 µg/m ³
Annual average NO ₂ concentration	Limit		
	40 µg/m ³	40 µg/m ³	40 µg/m ³
	Level 2 Threshold		
	38 µg/m ³	38 µg/m ³	38 µg/m ³
	Level 1 Threshold		
	30 µg/m ³	30 µg/m ³	30 µg/m ³

- 12.3.9 However, the GCG approach has also been developed to recognise some of the practical constraints around monitoring the air quality impact of the Proposed Development, which, in contrast to other GCG topic areas, cannot be directly measured. As a result, unlike the other environmental topics in scope for GCG, an exceedance of an air quality Limit (determined by monitoring) that is linked to the ‘with expansion’ forecast could be wholly unrelated to the expansion of the airport, for example, due to growth in non-airport related traffic.
- 12.3.10 The **GCG Framework [TR020001/APP/7.08]** therefore sets out a two-step process, whereby any exceedance of a Level 2 Threshold or Limit will trigger a requirement for the airport operator to determine the cause of the exceedance. Indicatively, this could include analysis of an emissions inventory and background/regional air quality data, in addition to commissioning of additional traffic surveys in order to understand changes in airport-related traffic flows.
- 12.3.11 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 **[REP9-024]**,

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. If the breach is due to factors related to the airport, then the GCG process will apply in full. This approach is summarised in Figure 12.6.

Figure 12.6: Process for monitoring air quality at locations in scope for GCG, and determining airport contribution



12.3.12 The GCG process also includes proposals to review both air quality Limits and Thresholds in response to changes to national air quality objectives for the three pollutants in scope for GCG, periodically (every five years) to determine whether locations should remain in or out of scope, and specifically during Phase 2a. Where an air quality Level 2 Threshold (or Limit) at an out of scope location has been exceeded, then a review of the airport’s contribution to any increase in the pollutant concentration at that location will be carried out by the airport operator. The review processes for the GCG approach to air quality are set out at paragraphs 3.3.29 to 3.3.38 of the **GCG Explanatory Note [TR020001/APP/7.07]**.

Consideration of the GCG approach to air quality during the Examination

Table 12-6: Examples of changes made to the GCG approach to air quality during the Examination

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
GCG Explanatory Note [REP3-016], GCG Framework [REP3-018]	This change transposes the interim target of 12µg/m3 from the Environmental Improvement Plan (Ref 12.9) into the GCG Limits. Changes were made to Table 4.3 in the GCG Explanatory Note and GCG Framework.	This change was made in response to a request for further information made at Section 13 of Annex F of the Rule 6 Letter [PD-007] issued by the Planning Inspectorate. This requested commentary on the implications of the Environmental Improvement Plan Interim	Deadline 3

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
		Target for PM2.5. The Applicant submitted the Environmental Improvement Plan Interim Target for PM2.5 Commentary [REP1-017] document in response, which outlines the changes to the air quality Limits and Thresholds, as well as the reasons for these changes, at Section 4.	
<p>GCG Explanatory Note [REP5-021], GCG Framework [REP5-023], GCG Framework Appendix D – Air Quality Monitoring Plan [REP5-031]</p>	<p>This change introduced a new review process for Phase 2a to determine if new air quality monitoring locations should be brought into scope for GCG.</p> <p>Changes were made to paragraphs 4.4.9 to 4.4.11 of the GCG Framework, including the addition of Figure 4.2. Changes were made to paragraphs 3.3.36 to 3.3.38 of the GCG Explanatory Note, including the addition of Figure 3.10. Changes were also made to paragraphs D2.3.8 to D2.3.10 and paragraph D2.3.13 of the Air Quality Monitoring Plan, including the addition of Figure 2.2.</p>	<p>These changes are outlined in section 2 of Applicant’s Response to Issue Specific Hearing 5 Action 16: GCG Scope Monitoring [REP4-089]. Further commentary on the amendments is provided at section 3 of the same document. The changes were made in response to Issue Specific Hearing 5 Action 16, to provide strengthened controls on air quality within GCG from Phase 2a onwards.</p>	Deadline 5
<p>GCG Framework Appendix D – Air Quality Monitoring Plan [REP9-028]</p>	<p>Changes were made to paragraphs D2.1.6 to D2.1.7 to clarify the quality assurance and quality control (QA/QC) procedure for the monitoring equipment and to capture the commitment to provide</p>	<p>These changes were made in response to requests made by Luton Borough Council in Deadline 7 Submission - Response to the ExA’s Further Written Questions (ExQ2) (if required) [REP7-090] in relation to</p>	Deadline 9

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
	<p>one Defra reference-equivalent monitor.</p> <p>Changes were also made to paragraph D3.1.2 to include short-term monitoring results for information only.</p>	<p>monitoring and QA/QC procedure and Defra reference-equivalent monitor used for collocation. Changes were also made in response to requests made by the Hertfordshire Host Authorities in Deadline 7 Submission - Comments on any further information/submissions received by Deadline 6 [REP7-085] in relation to short-term monitoring.</p>	

12.3.13 For this topic, the only area that is not agreed at the end of Examination is as follows:

- a. The Applicant does not consider it appropriate to include short-term Limits and Thresholds in the GCG Framework. However, there was agreement on a commitment to report short-term monitoring results for information and not for GCG purposes. This item and the relevant positions are captured in the SoCGs with Hertfordshire Host Authorities [TR020001/APP/8.15, TR020001/APP/8.16 and TR020001/APP/8.17].

12.4 GCG – Greenhouse Gases

Key Documents

12.4.1 The following are the key documents relating to the GCG approach to greenhouse gases (GHGs):

- a. **GCG Explanatory Note [TR020001/APP/7.07];**
- b. **GCG Framework [TR020001/APP/7.08];**
- c. **Applicant’s Post Hearing Submission – Issue Specific Hearing 9 (ISH 9) [REP6-067];**
- d. **GCG Framework Appendix E: Greenhouse Gases Monitoring Plan [TR020001/APP/7.08];** and
- e. **Applicant’s Response to Issue Specific Hearing 9 Action 27 – Note on GHG Limits [REP7-078].**

Overview of the GCG approach to greenhouse gas emissions

- 12.4.2 The approach to GHGs within GCG is outlined at Section 3.4 of the **GCG Explanatory Note [TR020001/APP/7.07]**, with requirements around monitoring and reporting of GHG emissions outlined in the **GCG Framework Appendix E – Greenhouse Gases Monitoring Plan [TR020001/APP/7.08]**.
- 12.4.3 For GHGs, it is proposed that GCG builds upon the progress that the airport has made through the Airport Carbon Accreditation (ACA) scheme, reaching Level 4 ('Transformation') in September 2023, demonstrating that it is "*transforming its operations to achieve carbon reductions in line with global climate goals*". GCG will work alongside the **Outline Greenhouse Gas Action Plan [APP-081]**, which will secure the mitigation actions and commitments that will allow the Proposed Development to be delivered and the airport operated in accordance with emissions reduction targets and contribute to the UK achieving its target of net zero emissions by 2050.
- 12.4.4 GCG sets gross Limits for Scope 1 and Scope 2 GHG emissions associated with airport operations. This means that compliance with the GCG Limit will be based on monitored and reported emissions, with no ability to use carbon offsetting. GCG also includes a mechanism that requires a review of both the definition of 'airport operations' and the associated Limit within three months of Government clarifying the scope and pathway to achieving the policy ambition of zero emissions airport operations by 2040 as part of its Jet Zero Strategy (Ref 12.10) to ensure that the **GCG Framework [TR020001/APP/7.08]** is future-proofed against this ambition. Placing absolute Limits that cannot be exceeded on GHG emissions in this way is considered to be unique for major infrastructure projects.
- 12.4.5 Scope 3 emissions associated with airport operations and surface access are by definition not within the airport operator's direct control, although they are able to indirectly influence these. These Scope 3 emissions are therefore incorporated into the GCG Framework as a net Limit, inclusive of any offsetting that the airport operator may choose to implement. The **GCG Framework [TR020001/APP/7.08]** includes controls on what offsets can be used for the purposes of GCG, and how these must be reported. As with Scope 1 and 2 emissions, Scope 3 emissions associated with airport operations will be reviewed to ensure consistency with the Jet Zero Strategy, and to demonstrate its commitment to managing the impacts of greenhouse gases, the Applicant has also incorporated its commitment to achieve carbon neutral surface access by 2040 into the GCG Limits.
- 12.4.6 To align with UK Government policy on aviation emissions, which states that these are to be managed at a national level, it is not proposed to include GHG emissions from aviation within the **GCG Framework [TR020001/APP/7.08]**. These emissions will be managed at a sector-wide level through the UK Emissions Trading Scheme (ETS) and Carbon Offsetting and Reduction Scheme for International Aviation (CORSA), compliance with which is a legal requirement for airlines.

12.4.7 The values of the Limits and Thresholds are presented in Table 12-7 below, as well as Table 3.1 of the **GCG Explanatory Note [TR020001/APP/7.087]** and Table 3.1 of the **GCG Framework [TR020001/APP/7.08]**.

Table 12-7: GCG Limits and Thresholds for GHG emissions

Limit	Limit Values (tCO ₂ e/yr)			
	Phase 1	Phase 2a	Phase 2b	Full Operating Capacity
Airport Operations CO ₂ e emissions (Scope 1 and Scope 2, no offsetting permitted)	Limit			
	<i>Note that these Limits (and Thresholds) will be reviewed to align with the Jet Zero Strategy ambition of zero-emissions airport operations by 2040</i>			
	7,644	4,969	280	280
	Level 2 Threshold			
	7,262	4,721	266	266
	Level 1 Threshold			
	6,880	4,472	252	252
Airport Operations CO ₂ e emissions (Scope 3, offsetting allowable)	Limit			
	<i>Note that these Limits (and Thresholds) will be reviewed to align with the Jet Zero Strategy ambition of zero-emissions airport operations by 2040</i>			
	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 ₂ e emissions (Scope 3, offsetting allowable)	Limit			
	<i>Note that from 2040 onwards, the Limit (and Thresholds) will be zero, irrespective of which Phase the airport is in</i>			
	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

Consideration of the GCG approach to greenhouse gas emissions during the Examination

Table 12-8: Examples of changes made to the GCG approach to GHGs during the Examination

Document(s)	Summary of Changes Made	Reason for Changes	Submitted At
<p>GCG Explanatory Note [TR020001/APP/7.07], GCG Framework [TR020001/APP/7.08]</p>	<p>Changes to the GHG review process to include an explicit requirement to include new and emerging best practice.</p>	<p>These changes were made in response to concerns raised within the SoCGs between the Applicant and the following parties (the Host Authorities):</p> <ul style="list-style-type: none"> • Luton Borough Council [TR020001/APP/8.13]; • Central Bedfordshire Council [TR020001/APP/8.14]; • Hertfordshire County Council [TR020001/APP/8.15]; • North Hertfordshire District Council [TR020001/APP/8.16]; and • Dacorum Borough Council [TR020001/APP/8.17]. <p>This change was also in response to the ExA’s commentary on, or schedule of changes to, the draft DCO [PD-018].</p>	<p>Deadline 9</p>

12.4.8 For this topic, all matters are agreed at the end of Examination.

12.5 GCG – Surface Access

Key Documents

12.5.1 The following are the key documents relating to the GCG approach to surface access:

- a. **GCG Explanatory Note [TR020001/APP/7.07];**
- b. **GCG Framework [TR020001/APP/7.08];**

- c. **GCG Framework Appendix F: Surface Access Monitoring Plan [TR020001/APP/7.08];**
- d. **Applicant's Post Hearing Submission – Issue Specific Hearing 9 (ISH 9) [REP6-067];** and
- e. **Surface Access Controls – Relationship Map [EV16-002].**

Overview of the GCG approach to surface access

- 12.5.2 The approach to surface access within GCG is outlined at Section 3.5 of the **GCG Explanatory Note [REP9-020]**, with requirements around monitoring and reporting of surface access mode share outlined in the **GCG Framework Appendix F – Surface Access Monitoring Plan [TR020001/APP/7.08]**.
- 12.5.3 Within GCG, the focus of the surface access Limits is on the trips made by passengers and staff travelling to and from the airport. Surface access, and road traffic in particular, also plays a central role in the environmental impact of the Proposed Development; most notably, with regard to air quality and GHG emissions. Compliance with the air quality and surface access GHG Limits set out previously is also therefore closely linked to how successful the uptake of sustainable modes of transport is.
- 12.5.4 GCG is however only one part of the overall approach to assessing, monitoring, managing and mitigating surface access impacts as a result of the expansion of the airport. The relationship between the different surface access control and mitigation strategies is shown in the **Surface Access Controls – Relationship Map [EV16-002]**, and was described further in the **Applicant's Post Hearing Submission – Issue Specific Hearing 9 (ISH 9) [REP6-067]**.
- 12.5.5 The **GCG Framework [TR020001/APP/7.08]** 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. These Limits therefore function to promote the uptake of 'sustainable' travel, including public transport and active travel and are consistent with the mode shares for passengers and staff utilised within the surface access modelling, which in turn inform both air quality and GHG forecasts included in the ES.
- 12.5.6 The values of the Limits and Thresholds are presented below in, as well as in Table 3.8 of the **GCG Explanatory Note [TR020001/APP/7.07]** and Table 6.1 of the **GCG Framework [TR020001/APP/7.08]**.

Table 12-9: 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			
Airport staff non-sustainable travel mode share	Limit			
	70%	68%	64%	60%
	Level 2 Threshold			
	69%	66%	62%	58%
	Level 1 Threshold			
Note: all Limit and Threshold values have been rounded to zero decimal places				

Consideration of the GCG approach to surface access during the Examination

- 12.5.7 During the Examination the key issue raised was the relationship between the **GCG Framework [TR020001/APP/7.08]** and other surface access controls and sources of funding, including the **Framework Travel Plan [TR020001/APP/7.13]**, the **Outline Transport Related Impacts Monitoring and Mitigation Approach [REP10-036]** and the Sustainable Transport Fund, further detail on which is provided in the **Sustainable Transport Fund document [REP10-039]**.
- 12.5.8 For this topic, it is acknowledged that some of the Host Authorities retain residual concerns around the relationship between the mode share Limits secured through the GCG Framework and the mode share Targets that will be included in future Travel Plans. The Applicant’s position is that these provide two distinct functions, with GCG seeking to ensure that the ‘reasonable worst case’ mode share assumptions that underpin the **Transport Assessment [APP-203, AS-123, APP-205 and APP-206]** and **ES [TR020001/APP/5.01]** are not exceeded, with significant consequences of airport growth being stopped if this is the case. The Travel Plan allows more ambitious mode share Targets to be set, with a five-yearly review process allowing these to respond to prevailing conditions. It is understood that the residual concerns of the Host Authorities relate specifically to the lack of mode share Targets in the **Framework Travel**

Plan [TR020001/APP/7.13] rather than specific concerns around the operation of GCG.

12.6 Topic conclusion

- 12.6.1 The Applicant takes its responsibility to manage the impacts of the airport on communities around the airport seriously. Feedback from the 2019 statutory consultation and ongoing engagement with stakeholders indicated a strong desire for the airport to be more ambitious with its approach to reducing and mitigating the environmental effects of expansion. One of the ways in which this has been done is through the development of the GCG Framework.
- 12.6.2 The GCG Framework sets out a series of clearly specified ‘Limits’ for the individual environmental effects of the expanding, expanded, and lifetime operation of airport. The Limits are proposed for four environmental topics:
- a. aircraft noise;
 - b. air quality;
 - c. GHGs; and
 - d. surface access.
- 12.6.3 The key elements of the legally binding GCG Framework are:
- a. limits on environmental effects in the four topic areas;
 - b. a proactive approach to managing environmental effects;
 - c. ongoing monitoring of the actual environmental effects of expansion;
 - d. independent oversight; and
 - e. an explicit commitment to link environmental performance to growth.
- 12.6.4 Independent oversight has been secured through the establishment of a new body called the ESG, who will oversee the monitoring and reporting regime, informed by four new Technical Panels, one for each environmental topic within the scope of GCG.
- 12.6.5 The GCG Framework is enshrined as part of the DCO, to ensure the airport operator takes account of the actual environmental effects of the airport’s expansion as they manifest over time, rather than predicating all permitted growth up to 32 mppa on the basis of the effects predicted through the EIA process.
- 12.6.6 The Applicant believes this approach to managing environmental impacts to be unique amongst both airports and major infrastructure projects in the UK and shows its ambition to be an industry leader in sustainability. The controls secured through the GCG approach are robust, ambitious and wide-ranging. The controls were developed in response to feedback from the 2019 statutory consultation and have been informed by stakeholder engagement both prior to the submission of the application for development consent and throughout the course of the Examination.

13 CONTROL DOCUMENTS

13.1 Introduction

13.1.1 The environmental mitigation measures, which have been identified and are relied on in the Environmental Statement (ES), have been set out in the Applicant's **Mitigation Route Map (MRM) [REP10-023]**. The MRM outlines the proposed mitigation measures, the relevant control document each measure sits within, and the mechanism by which the mitigation commitment is secured. These measures are very largely secured by requirements in Schedule 2 of the **draft Development Consent Order (DCO) [REP10-003]**, or otherwise by **Section 106 agreement [TR020001/APP/8.167]**.

13.1.2 In this Chapter, following an explanation of the Applicant's position on environmental permitting, the control documents within which the mitigation measures sit within are defined under the headings Design, Construction and Operation. Under each of these, the Applicant has identified the most prevalent matters raised during the Examination and explains how and where these have been addressed. The chapter then considers the matters raised in relation to **Compensation Policies, Measures and Community First [REP9-032]**.

13.2 Environmental permitting

13.2.1 While the DCO will be the principal consenting mechanism for the Proposed Development, at the appropriate stage this will be supplemented by permit applications required for specific activities to deliver the Proposed Development under the Environmental Permitting (England and Wales) Regulations 2016 (the EPR) (Ref 13.1).

13.2.2 The **Consents and Agreements Position Statement [TR020001/APP/2.03]** outlines the Applicant's strategy for securing environmental permits and the types of permits needed to implement and operate the Proposed Development and has been updated throughout the Examination. A final version of this statement has been submitted at Deadline 11.

13.2.3 All environmental permits required for the Proposed Development will be applied for at the appropriate future stage of project delivery, in accordance with the EPR. The **draft DCO [REP10-003]** does not seek to disapply any provisions of the EPR.

13.2.4 The relevant environmental permits are issued by the Environment Agency (EA). The Applicant has an agreed Statement of Common Ground (SoCG) **[REP9-035]** with the EA, which sets out how all environmental permitting matters will be addressed in liaison with the EA as the regulator.

13.3 Controls relating to design

Overview

13.3.1 The application for development consent presents a preliminary design for the Proposed Development, together with measures to ensure high-quality design outcomes are achieved at the detailed design stage, and that mitigation and

compensation measures are delivered such that there are no materially new or materially different effects compared to those reported in the **Environmental Statement (ES) (TR020001/APP/5.01-5.03)**. The preliminary design is captured across the following key documents:

- a. **Draft DCO [REP10-003]** – confirms in article 6 (Limits of works) the limit of each numbered work as shown on the Works Plans (see below), describes the numbered works for which consent is sought in Schedule 1, and defines maximum parameters for these in requirement 7 (Parameters of authorised development) in Schedule 2.
- b. **Works Plans [AS-012 - AS-017]** – define the spatial limits within which each numbered work must be delivered.
- c. **General Arrangement Drawings [AS-018, AS-019 and REP5-010]** provide an illustration of what certain parts of the Proposed Development could look like.
- d. **Scheme Layout Plans [AS-072]** – show the indicative layout of the airport at each assessment phase.

13.3.2 Chapter 6 of this document sets out the Applicant’s commitment and approach to achieving a high-quality design for the proposals, including the overarching principle of embedded ‘good design’.

13.3.3 Control documents in relation to design are as follows:

- a. **Design Principles [REP9-030]** - defines the principles that the detailed design of the Proposed Development must be in accordance with. Also sets out a process of Independent Design Review for specified elements of the Proposed Development (refer to Chapter 6 of this document for further information). Secured by requirement 6 (Detailed design) in Schedule 2 of the **draft DCO [REP10-003]**.
- b. **Strategic Landscape Masterplan [APP-172]** - provides an illustrative overall masterplan for the site and a brief overview of the proposals in each landscape mitigation area proposed. Secured by requirement (Landscaping design) 9 in Schedule 2 of the **draft DCO [REP10-003]**.
- c. **Drainage Design Statement (DDS) [REP5-096]** - sets out the strategy for surface and foul water drainage, with the specific design principles the detailed drainage design must accord with set out in the **Design Principles [REP9-030]**. These principles are secured by requirement 13 (Surface and foul water drainage) in Schedule 2 of the **draft DCO [REP10-003]**.

Matters raised during the Examination

Design Principles

13.3.4 Section 6.3 of Chapter 6 details the matters raised during the Examination in relation to the **Design Principles [REP9-030]** and how the Applicant has responded.

Strategic Landscape Masterplan

13.3.5 No significant matters concerning the Strategic Landscape Masterplan were raised during the Examination. For matters raised in relation to landscape and visual impacts more broadly, please refer to section 9.10.20.

Drainage Design Statement

13.3.6 Section 5.3 of **Chapter 5** includes an explanation of the amendments made to the **DDS [REP5-096]**, following engagement with the EA and Thames Water in relation to treated foul effluent and surface water runoff. This is also considered within Section 9.16 of this document.

13.4 Controls relating to construction

Overview of the Code of Construction Practice

13.4.1 The principal control document for construction impacts, the **Code of Construction Practice (CoCP) [REP8-013]**, outlines the overarching environmental management and mitigation requirements to be implemented throughout the construction period. Secured via requirement 8 (Code of construction practice) in Schedule 2 of the **draft DCO [REP10-003]**, it identifies plans which must be approved under the CoCP to control numerous aspects of construction-related impacts.

Changes made to the Code of Construction Practice during the Examination

13.4.2 Table 13-1 below sets out the amendments made to the CoCP throughout the Examination in response to comments from Interested Parties and the Examining Authority (ExA). Changes to the CoCP in relation to noise and vibration are summarised in Section 9.12 of this document.

Table 13-1: Key changes made to the CoCP

CoCP Topic	Change	In response to
2.1. Environmental Management Systems (paragraph 2.1.6)	Updated CoCP submitted at Deadline 6 [REP6-003] - included reference to construction site lighting arrangements to be approved by the relevant planning authority.	ExA Written Question PED.1.29 [PD-010]
3.6.3 Training and competence	Updated CoCP submitted at Deadline 4 [REP4-011] - reference to community wellbeing included to seek to address concerns regarding the lead contractor’s community engagement team being appropriately qualified/trained to have due consideration for the community’s mental	Please refer to the SoCG between the Applicant and the UK Health Security Agency [REP10-033]

CoCP Topic	Change	In response to
	health and wellbeing while they undertake their works.	
5.5 Site Lighting	<p>Updated CoCP submitted at Deadline 8 [REP8-013] - to include a requirement that site lighting and signage will obtain approval prior to the commencement of construction by the relevant planning authority in consultation with relevant authorities.</p> <p>Additionally, an update relating to the requirement for the lead contractor to produce the site lighting arrangements prior to the commencement of construction and that these need to be approved by the relevant planning authority. The updates include a methodology for measuring light obtrusion effects near sensitive habitats and measures for mitigation if necessary.</p>	ExA Written Question PED.1.29 [PD-010]
6.5 Unexploded ordnance (UXO)	Updated CoCP submitted at Deadline 8 [REP8-013] - to specify that the detailed UXO assessment will also need to be prepared prior to any surveying and investigative works permitted under article 21 (Authority to survey and investigate the land) of the draft DCO, including non-intrusive surveys.	ExA Written Question DCO.2.4 [PD-015]
12.1.1. Health and Community – General Provisions	<p>Updated CoCP submitted at Deadline 4 [REP4-011] - editing wording to maintain access and not commence construction works in the existing Wigmore Valley Park until replacement open space is accessible to the public.</p> <p>Updated CoCP submitted at Deadline 6 [REP6-003] - to include requirement for engagement with Luton Borough Council (LBC) prior to the commencement of works associated with Terminal 2, to review the potential construction workforce numbers</p>	Please refer to the SoCG between the Applicant and Luton Borough Council [TR020001/APP/8.13]

CoCP Topic	Change	In response to
	and local rental accommodation requirements.	
15.1.1 Soil and Geology – General Provisions	Updated CoCP submitted at Deadline 4 [REP4-011] - edits to more clearly distinguish between the different regulatory requirements associated with excavated material generally and that originating from the landfill site.	Please refer to the SoCG between the Applicant and the Environment Agency [REP9-035] .
16.4 General measures to reduce construction traffic impacts	Updated CoCP submitted at Deadline 6 [REP6-003] - edit to clarify that all temporary traffic management schemes for the Proposed Development will be subject to the traffic regulation process established by the DCO.	Central Bedfordshire Council (CBC) comments on Deadline 4 submissions [REP5-066] - paragraph 14.
Various sections	Updated CoCP submitted at Deadline 8 [REP8-013] - to clarify the role of the statutory water undertaker (Affinity Water) and the matters on which they should be consulted by the relevant planning authority and the lead contractor, as appropriate.	Please refer to the SoCG between the Applicant and Affinity Water [TR020001/APP/8.08]

13.4.3 Whilst not a change to the CoCP itself, requirement 8 (Code of Construction Practice) of Schedule 2 of the **draft DCO [REP10-003]** was amended at Deadline 9 following issue of the **ExA's commentary on or schedule of changes to the draft DCO [PD-018]** to secure a detailed construction site lighting plan at the construction stage, which must be substantially in accordance with the lighting measures contained in the **CoCP [REP8-013]**.

Additional construction controls

13.4.4 Various construction-related control documents sit alongside the CoCP:

- a. **Outline Soil Management Plan [APP-060]** – sets out the procedures for intensive soil handling operations and treatments for the subsoil. Secured by requirement 8 (Code of construction practice) in Schedule 2 of the **draft DCO [REP10-003]**.
- b. **Outline Construction Traffic Management Plan [REP10-021]** – measures to be adopted to manage the delivery of goods and materials during construction. Secured by requirement 14 (Construction traffic management) in Schedule 2 of the **draft DCO [REP10-003]**.
- c. **Outline Site Waste Management Plan [AS-097]** – sustainable methods for managing construction, demolition and excavation waste. Secured by requirement 8 in Schedule 2 of the **draft DCO [REP10-003]**.

- d. **Outline Remediation Strategy (for former Eaton Green Landfill) [REP6-005]** - the remediation strategy for the main area of concern with regard to potential contamination. Secured by requirement 17 (Remediation of Former Eaton Green Landfill) in Schedule 2 of the **draft DCO [REP10-003]**.
- e. **Outline Foundation Works Risk Assessment [REP6-007]** – describes the pollution risks that need to be considered in developing the design and methodology for foundations of structures to be constructed over the landfill. Secured by requirement 17 (Remediation of Former Eaton Green Landfill) in Schedule 2 of the **draft DCO [REP10-003]**.
- f. **Outline Construction Workers Travel Plan [REP8-018]** - to minimise the impact of increased traffic from construction workers on the local road network. Secured by requirement 15 (Construction workers) in Schedule 2 of the **draft DCO [REP10-003]**.
 - a. **Cultural Heritage Management Plan [REP8-015]** - the scope, guiding principles and methodology for the planning and implementation of archaeological mitigation. Secured by requirement 16 (Archaeological remains) in Schedule 2 of the **draft DCO [REP10-003]**.
 - b. **Outline Landscape and Biodiversity Management Plan [AS-029]** – describes the establishment, management and monitoring of proposed landscape and biodiversity areas. Secured by requirement 10 (Landscape and biodiversity management plan) in Schedule 2 of the **draft DCO [REP10-003]**.
 - c. **Ecological Mitigation Strategies for Amphibian and Reptile [APP-068], Badger [APP-069], Bat [APP-070], Bird [APP-071] and Orchid and Invertebrate [AS-035]** - describe the avoidance, mitigation and enhancement measures to be implemented to safeguard protected species during construction and operation of the Proposed Development. Secured by requirement 11 (Protected species) in Schedule 2 of the **draft DCO [REP10-003]**.

Consideration of the additional construction controls during the Examination

Outline Soil Management Plan

- 13.4.5 Natural England raised some points regarding the **Outline Soils Management Plan [REP1-112]**, in relation to the clarity of its aim to return land to its original quality, and target specification. This informed ongoing engagement with Natural England on soil- related matters throughout the Examination. The matters were included in the agreed SoCG **[REP9-040]** at section 3.6.7 and it was agreed that Natural England's concerns would be addressed in the detailed Soil Management Plan as secured by requirement 8 (Code of construction practice) of the **draft DCO [REP10-003]**.

Outline Construction Traffic Management Plan

- 13.4.6 At Issue Specific Hearing 7, the ExA requested via Action Point 33 that certain roads considered unsuitable for construction vehicles were added to the **Outline Construction Traffic Management Plan (OCTMP) [REP10-021]**. In response, the Applicant included a new section, “7 - Pre-Construction Condition Surveys for a Traffic Management Plan”, within the OCTMP which provided a list of potential surveys that can be carried out prior to starting works on site. Further detail in relation to this matter can be found in the **Applicant’s Post Hearing Submission – Issue Specific Hearing 7 (ISH 7) [REP6-065]**.

Outline Site Waste Management Plan

- 13.4.7 There were no issues raised regarding the **Outline Site Waste Management Plan [AS-097]** during the Examination.

Outline Remediation Strategy (for former Eaton Green Landfill)

- 13.4.8 The issues raised during the Examination regarding the **Outline Remediation Strategy [REP6-005]** were predominantly from the EA. They supplied detailed comments and from those the most prevalent issues were:
- a. Issues related to the environmental permit (‘Deposit for Recovery Permit’) required for the works on the former landfill:
 - i. clarification on the application of waste legislation and the land contamination regulatory framework for works on the former landfill;
 - ii. terminology used in the document regarding ‘recovery’ of waste and ‘re-use’ of materials;
 - iii. waste materials outside the landfill;
 - iv. the production of the waste recovery plan (WRP) for the agreement in principle relating to the environmental permit;
 - v. requirement for a groundwater authorisation for drilling through the landfill;
 - vi. requirement for a detailed quantitative hydrogeological risk assessment for works on the former landfill;
 - vii. reference to new guidance on drilling through landfills (which was only recently published);
 - viii. works on the landfill to be in accordance with a construction quality assurance plan; and
 - ix. segregation of the area of the site where works are regulated under CL:AIRE Definition of Waste Code of Practice (Ref 13.2), from the permitted area on the former landfill.
 - b. Potential for the utilisation of landfill gas rather than venting to atmosphere.

- 13.4.9 The main issues for LBC were:

- a. The proposed gas protection measures to be installed to the perimeter of the landfill to prevent off-site migration and evidence of the efficacy of the proposed passive ventilation system was requested.

- b. Whether the gas monitoring frequency was sufficient when the character of the landfill changed once construction commenced.
- c. A request for a geological watching brief relating to the excavation of chalk to the east of the airport, a request for independent oversight of the works on the landfill but this was not accepted by the Applicant and LBC agreed **[TR020001/APP/8.13]**.

13.4.10 In response to issues raised by the EA and LBC, the Applicant responded as follows:

- a. The **Outline Remediation Strategy [REP6-005]** was updated to address key concerns from the EA and LBC and re-submitted at Deadline 6. The EA and LBC subsequently confirmed that they are content with the ORS - refer to matters 3.2.5 to 3.2.8 of the EA SoCG **[REP9-035]** and matter LBC122 of the LBC SoCG **[TR020001/APP/8.13]**.
- b. The Foundation Work Risk Assessment (FWRA) was updated to an Outline FWRA **[REP6-007]** at Deadline 6, capable of being secured by requirement in the draft DCO. Requirement 17 (Remediation of Former Eaton Green Landfill) of the draft DCO was also amended to secure the requirement for a detailed FWRA for the former Eaton Green Landfill to be approved by the relevant planning authority following consultation with the EA and relevant water undertaker at the construction stage.
- c. The WRP was submitted to the EA National Permitting team in December 2023 for the agreement in principle. The EA have requested some clarifications which the Applicant is in the process of responding to and liaison with the EA on the WRP will be ongoing following the Examination.
- d. The Applicant agreed to consider utilisation of landfill gas at a future stage of design.
- e. A **Gas Mitigation Measures Technical Note [REP7-071]** was prepared and submitted at Deadline 7. The Technical Note included measures to be used if the magnitude of migrating gas increased, together with case studies where the virtual curtain technology has been used, to provide reassurance. The Technical Note also included information about how the monitoring regime would change if it was found to be insufficient. The **Outline Remediation Strategy [REP6-005]** includes measures to ensure the risks associated with the migration of gas are adequately mitigated and managed. The final suite of measures will be confirmed in the final remediation strategy to be submitted for the approval of the relevant planning authority under requirement 17 (Remediation of Former Eaton Green Landfill) of the **draft DCO [REP10-003]**, following the decision by the Secretary of State.
- f. The request by LBC for a geological watching brief relating to the excavation of chalk to the east of the airport was agreed by the

Applicant and is detailed in **Chapter 7** of the **ES [REP7-011]** and the **CoCP [REP8-013]**.

Outline Construction Workers Travel Plan

- 13.4.11 The main issue in relation to the **Outline Construction Workers Travel Plan (OCWTP) [REP8-018]** was raised by the ExA via Written Question 5 of Issue Specific Hearing 7 **[EV14-008]**, regarding the nature of potential additional measures to ensure the OCWTP meets its overall objectives. In response, the Applicant indicated what measures could be implemented in Section 7.1.4 of the **OCWTP [REP8-018]**. Further detail in relation to this matter can be found in the **Applicant's Post Hearing Submission – Issue Specific Hearing 7 (ISH 7) [REP6-065]**.

Cultural Heritage Management Plan

- 13.4.12 Minor amendments to the Cultural Heritage Management Plan were requested by archaeological advisors from the relevant Host Authorities via meetings with the Applicant during the Examination. In response, the following updates were made:
- a. General updates throughout the document to clarify the role of the relevant planning authority archaeological advisor and the approval process for Written Schemes of Investigation (WSI) and completion of areas.
 - b. Addition of Section 7 (Proposed Development Impacts) in response to the Hertfordshire County Council Archaeological Advisor requesting clarity on which areas of the site would/would not be physically impacted by the Proposed Development.
 - c. Additional text added to Section 10 (Scope of Works – Archaeological Monitoring) to include a condition survey of Someries Castle in response to a request from Central Bedfordshire Council's Conservation Officer.
- 13.4.13 The Applicant provided the updated Cultural Heritage Management Plan with these changes included at Deadline 4 **[REP4-020]**.
- 13.4.14 Further amendments to the Cultural Heritage Management Plan were made and submitted at Deadline 8 **[REP8-015]**, following the receipt of the ExA's Rule 17 letter on 17 January 2024 **[PD-019]**. The changes comprised:
- a. Update to Section 8 to include the requirement for an updated WSI to be agreed with the relevant planning authority archaeological advisor.
 - b. Update to paragraph 11.1.5 in relation to procedures regarding the discovery of human remains being in accordance with article 23 (Removal of human remains) of the **draft DCO [REP10-003]**.
 - c. In addition, updates were made to Section 2.3 to clarify the relevant planning authority archaeological advisor's role as there was an error with the submission at Deadline 4 **[REP4-020]** which omitted those previously requested changes.

Outline Landscape and Biodiversity Management Plan

- 13.4.15 Section 9.4 of this document details the matters raised during the Examination in relation to this Plan and how the Applicant responded to those matters.

Ecological Mitigation Strategies for Amphibian and Reptile, Badger, Bat, Bird and Orchid and Invertebrate

- 13.4.16 Section 9.4 of this document details the matters raised during the Examination in relation to the above Ecological Mitigation Strategies and how the Applicant responded to those matters.

13.5 Controls relating to operational matters

Overview

- 13.5.1 The primary operational control on the four key categories of environmental effects directly related to passenger number growth because of the Proposed Development (air quality, greenhouse gas emissions, aircraft noise and surface access) is the **Green Controlled Growth (GCG) Framework [TR020001/APP/7.08]** proposed by the Applicant. Further detail on this is provided in Chapter 12 of this document.
- 13.5.2 The Applicant has proposed several operational management plans in addition to the GCG Framework, which are discussed in this section. These include:
- a. **Outline Operational Air Quality Plan [REP9-013]** - measures proposed to reduce and control impacts on air quality. Secured by requirement 33 (Greenhouse gas action plan) in Schedule 2 of the **draft DCO [REP10-003]**.
 - b. **Air Noise Management Plan [REP9-047]** – secures the continuation of existing noise controls including Night Quota Period (23:30–06:00) movement limits and Quota Count limits, departure Noise Violation Limits and track violation penalties. Secured by requirement 27 (Air noise management plan) in Schedule 2 of the **draft DCO [REP10-003]**.
 - c. **Fixed Plant Noise Management Plan [REP4-025]** - describes the process to reduce and control adverse effects of fixed plant noise. Secured by requirement 28 (Fixed plant noise management plan) in Schedule 2 of the **draft DCO [REP10-003]**.
 - d. **Ground Noise Management Plan [REP4-049]** - secures the continuation of ongoing processes to control ground noise. Secured by requirement 29 (Ground noise management plan) in Schedule 2 of the **draft DCO [REP10-003]**.
 - e. **Outline Greenhouse Gas Action Plan [APP-081]** – mitigatory actions and commitments to ensure the Proposed Development is operated in accordance with emission reductions targets. Secured by requirement 34 (Greenhouse gas action plan) in Schedule 2 of the **draft DCO [REP10-003]**.

- f. **Outline Operational Waste Management Plan [APP-134]** – sets out how operational waste arising from the Proposed Development will be managed. Secured by requirement 35 (Operational waste management plan) in Schedule 2 of the **draft DCO [REP10-003]**.
- g. **Framework Travel Plan (FTP) [TR020001/APP/7.13]** – outlines the structure and approach for the Travel Plans that will be produced to deliver upon the vision and objectives for surface access as the airport expands. Secured by requirement 31 (Travel plans) in Schedule 2 of the **draft DCO [REP10-003]**.
- h. **Outline Transport Related Impacts Monitoring and Mitigation Approach [REP10-036]** – the proposed approach to addressing uncertainty regarding impacts on the highway network as a result of the long-term nature of the Proposed Development. Secured by requirement 30 (Off-site highway works) in Schedule 2 of the **draft DCO [REP10-003]**.

Consideration of the proposed operational controls (excluding GCG) during the Examination

Outline Operational Air Quality Plan

- 13.5.3 At Issue Specific Hearing 5 the Applicant was asked to provide an explanation of the proportion of the proposed measures that are committed to, rather than aspirational, and what levers are available to the Applicant to ensure that the proposed actions are implemented by the airport operator. In response, the **Applicant's Response to Deadline 4 Hearing Action [REP4-070]** explained that all the actions are committed to. Further detail on matters related to air quality can be found at Section 9.2 of this document.

Noise Management Plans

- 13.5.4 The three noise management plans (**Air Noise Management Plan [REP9-047]**, **Fixed Plant Noise Management Plan [REP4-025]** and **Ground Noise Management Plan [REP4-049]**) are considered under Section 9.12 this document, which details the matters raised during Examination and how the Applicant responded.

Outline Greenhouse Gas Action Plan

- 13.5.5 During Issue Specific Hearing 2, the ExA noted that the **Outline Greenhouse Gas Action Plan [APP-081]** should include a requirement for regular review. Refer to paragraph 5.4.6 of the **Applicant's Post Hearing Submission - Issue Specific Hearing 2 (ISH2) [REP3-048]**.
- 13.5.6 In response to the ExA, the Applicant explained that the **Outline Greenhouse Gas Action Plan [APP-081]** will be regularly reviewed as part of airport operations, but also as new carbon budgets are published. Refer to paragraph 5.4.6, of the **Applicant's Post Hearing Submission - Issue Specific Hearing 2 (ISH2) [REP3-048]**.

- 13.5.7 LBC raised a concern via the SoCG (LBC152) [TR020001/APP/8.13] and subsequent email that there were inconsistencies in the carbon reduction commitments and targets made between the Greenhouse Gas Action Plan submitted by the airport operator as part of their application for 19 mppa ('the P19 Application') and the Outline Greenhouse Gas Action Plan submitted as part of the application for development consent. A meeting was held between the Applicant and LBC on 23 January 2024 to discuss the concerns raised in the LBC SoCG (LBC152) [TR020001/APP/8.13]. These concerns were closed out during the meeting. This is acknowledged in the final SoCG with LBC [TR020001/APP/8.13].

Outline Operational Waste Management Plan

- 13.5.8 No significant matters concerning the **Outline Operational Waste Management Plan [APP-134]** were raised during the Examination.

Framework Travel Plan

- 13.5.9 Section 8.2 of Chapter 8 details the matters raised during Examination in relation to the **Framework Travel Plan [TR020001/APP/7.13]** and how the Applicant responded.

Sustainable Transport Fund

- 13.5.10 Section 8.2 of Chapter 8 details the matters raised during Examination in relation to the **Sustainable Transport Fund [REP10-039]** and how the Applicant responded.

Outline Transport Related Impacts Monitoring and Mitigation Approach

- 13.5.11 Section 8.4 of Chapter 8 details the matters raised during the Examination in relation to the **Outline Transport Related Impacts Monitoring and Mitigation Approach (TRIMMA) [REP10-036]** and how the Applicant has responded.

13.6 Compensation Policies and Measures

Overview

- 13.6.1 **Compensation Policies, Measures and Community First [TR020001/APP/7.10]** enshrines the Applicant's commitment to making sure that residents and businesses are fairly compensated. This will be achieved, where possible, by compensatory mitigation such as noise insulation to avoid the negative environmental effects. In many cases the proposal goes above and beyond the legal compensation requirements and this represents current best practice when compared to other policies on similar infrastructure projects in the UK.
- 13.6.2 The policy provides full costs of noise insulation on properties exposed to significant levels of noise and unprecedented levels of contribution to help with mitigation depending on the levels of noise at residential properties including community buildings.

- 13.6.3 The policy also includes property purchase schemes for those in the most effected locations and business support for occupiers of commercial premises that need to be acquired to deliver the Proposed Development.

Consideration of the proposed compensation policies and measures during the Examination

- 13.6.4 During Examination the following issues were raised:

- a. the quality and illegibility of the contour plans appended to the proposed new policy as submitted with the application for development consent [APP-226];
- b. the transition arrangements from existing to new policy;
- c. clarification and explanation for 'reasonable efforts to sell' a property before a purchase under the hardship policy;
- d. how levels of grant would be kept up-to-date and resistant to inflationary pressure;
- e. clarification of the definition of eligible rooms under the noise policy;
- f. fairness of approach to those who own Listed Buildings;
- g. rationale for the prior knowledge date of 16 October 2019;
- h. how the Applicant would deal with complaints and appeals;
- i. the inclusion of a policy for the effects of ground noise;
- j. the requirement for a testing policy for the insulation schemes;
- k. the need for a proactive and accelerated rollout plan;
- l. the means for securing the commitments made by the Applicant in the policy;
- m. the need for Terms of Reference for the Noise Insulation Sub-Committee of London Luton Airport Consultative Committee (LLACC);
- n. the requirement for monitoring progress and performance of the policy;
- o. clarification of approach for those who might qualify for more than one of the schemes; and
- p. the need to encourage acceptance by owners when offers have been made.

- 13.6.5 In response, the Applicant has carried out the following:

- a. Improved, higher definition plans were annexed to the policy.
- b. Clear transition arrangements were set out so that applications under the existing policy are completed and those who have had insulation under the existing policy are also eligible for insulation under the new policy subject to adjustment for completed works.
- c. Examples were added to explain how 'reasonable efforts to sell' might be demonstrated to meet the criteria under the hardship policy.

- d. A review mechanism was introduced so that every five years there is an update to the levels of contribution under the scheme which is to be approved by LBCI.
- e. Extra description was included for eligible rooms under the noise policy to remove uncertainty about outbuildings in residential use.
- f. Additional payments of up to £2,500 to cover costs associated with preparing and obtaining Listing Building consent were provided for, with a commitment to require contractors to carry a range of products suitable for Listed Buildings.
- g. It was made clear that those who may have secured planning permission prior to 16 October 2019, but may not have built or moved into the property before 16 October 2019, had to make a case for eligibility based on the facts.
- h. Ability for appeals on Schemes 1 and 3 (full insulation) to be made to the Noise Insulation Sub-Committee of LLACC was provided for. A requirement for the noise insulation contractors to operate a complaints procedure as part of the scope to be delivered was included.
- i. Addressed the omission of a ground noise policy by providing the same as already committed under the existing noise insulation policy.
- j. A commitment to operate a testing policy for the insulation schemes with a set of minimum standards to be applied was included.
- k. Provision was made for the rollout plan to be consulted on by the LLACC and approved by LBC prior to notice being served under article 44(1) of the DCO. To adopt a proactive approach with methodology to target completion within four years and a commitment to appoint multiple suppliers to help accelerate delivery.
- l. Arrangements were made to secure the policy through a section 106 agreement with the relevant planning authorities **[TR020001/APP/8.167]**.
- m. Terms of Reference for the Noise Insulation Sub-Committee of LLACC was annexed to the policy.
- n. Committed to deliver an annual report on the implementation and performance of the rollout of the noise insulation policy.
- o. Clarified that, where a homeowner is eligible for more than one scheme, that it will be explained they will then have the choice as to which scheme they would prefer to apply.
- p. Committed to write to tenants directly to offer the noise insulation subject only to them being able to obtain landlord consent. Support for households who do not have English as a main language, have low literacy or vulnerabilities due to age, disability or poor health. There will be safeguarding and clear communication protocols.

13.6.6 The noise insulation scheme is agreed as appropriate by the Host Authorities in the SoCGs held between them and the Applicant **[TR020001/APP/8.13 to TR020001/APP/8.17]**.

13.7 Topic conclusion

- 13.7.1 This Chapter has summarised the various controls proposed as part of the Proposed Development. The Applicant considers that these appropriately avoid, mitigate and compensate the anticipated adverse impacts of the Proposed Development across its design, construction and operation.
- 13.7.2 The most prevalent matters raised throughout the Examination in relation to these controls have either been set out in this document or the reader is directed to the relevant submission document where the position is set out.
- 13.7.3 The Applicant is confident that matters raised by the ExA and Interested Parties have been dealt with appropriately and have ultimately resulted in a strengthened framework of controls for the Proposed Development at the end of the Examination.

14 STAKEHOLDER ENGAGEMENT

14.1 Introduction

14.1.1 This Chapter provides a summary of the engagement undertaken by the Applicant during both the pre-application and Examination stages, outlining how this has successfully resolved or limited issues raised and objections from stakeholders.

14.1.2 It is the Applicant's view that the Proposed Development has been through a robust and rigorous level of scrutiny, both through an extensive pre-application period and through the Examination of what is a detailed and complex application.

14.2 Pre-application engagement and consultation

14.2.1 The Applicant undertook extensive engagement with stakeholders through the pre-application stage of the Proposed Development. Due to the varied nature of the stakeholders, the engagement allowed the Applicant to develop a detailed understanding of local issues and where possible, proactively address them through engagement with stakeholders.

14.2.2 A continuous programme of engagement was run alongside the non-statutory and statutory consultation phases of the pre-application stage. One round of non-statutory consultation took place in 2018. Two rounds of statutory consultation were held, one in 2019 and another in 2022. The 2019 statutory consultation included 35 events which attracted 3,894 attendees and led to 3,501 responses being received. The 2022 statutory consultation included 14 events and an online virtual engagement room (attracting 1,174 attendees and 3,881 users respectively) and led to 3,790 responses being received.

14.2.3 Engagement has been a consistent and vital part of the process, beginning in advance of the 2018 non-statutory consultation and increasing in range and scope before each statutory consultation. Due to the size and scale of the Proposed Development there are a significant number of stakeholders and engagement has been conducted regardless of view or opinion towards the Proposed Development. In fact, a significant amount of time has been spent engaging with stakeholders to resolve and agree matters wherever possible in advance of the submission of the application for development consent.

14.2.4 Since 2020, the Applicant has focused on regular one-to-one meetings and theme specific Technical Working Groups (TWGs), encompassing a range of relevant stakeholders. These regular meetings were later used to focus on agreeing the format and content of the Statements of Common Ground (SoCGs) and the process for progressing these as they started to be developed following the 2022 statutory consultation.

14.2.5 In line with the underlying principles of the Planning Act 2008 ('the Act') (Ref 14.1), the Applicant shared information with the Host Authorities in advance of the submission of the application for development consent to assist with the closing out of matters. Inevitably there were several matters which were not

agreed, and these are documented within the relevant SoCGs referred to below.

- 14.2.6 For further information on engagement and consultation that took place during the pre-application stage, please refer to the **Consultation Report [AS-048]**.

14.3 Acceptance for Examination

- 14.3.1 The Applicant considers that the approach to sharing information and resolving matters prior to submission of the application for development consent was reasonable and proportionate and that the process of engagement and consultation met the requirements set out in the Act in both word and intent of the Guidance (Ref 14.2), and as such the Applicant considers that the test of adequacy was met.
- 14.3.2 The Applicant welcomed confirmation of this requirement as identified in the Acceptance Letter from the Planning Inspectorate **[PD-001]**.
- 14.3.3 Acceptance by the Planning Inspectorate is demonstrable evidence that the pre-application consultation and engagement complied with the relevant legislation and Guidance.

14.4 Engagement during the Examination

Summary of the Applicant's approach

- 14.4.1 The Applicant held regular meetings with stakeholders during the Examination period. This was both with those that were in the process of agreeing SoCGs (refer to the next section for more information) and with wider stakeholders. The purpose of this engagement was to:
- a. provide updates on the Examination process and answer specific questions;
 - b. continue the engagement on the SoCGs to endeavour, where possible, to reach agreement on matters relating to each stakeholder; and
 - c. discuss issues related to key topics such as surface access.
- 14.4.2 The Applicant entered into discussions with stakeholders with a view to both supporting the delivery of the expanded airport and leaving a lasting positive legacy, and where possible, addressing any issues with the existing operation. Therefore, it was important that in discussions with stakeholders the Applicant focused on considering:
- a. whether a request mitigates an impact identified in the Environmental Statement (ES) and whether it is proportionate;
 - b. whether the request is relevant at application stage or, if it is more appropriate to be dealt with at a future detailed design stage; and
 - c. whether the Applicant could implement such requests, or whether responsibility for resolving the matter sits with another party.

- 14.4.3 Where agreement has not been reached or where the request or suggestion is not in alignment with the information in paragraph 14.4.2 then a justification has been given in the relevant SoCG.

Statements of Common Ground

- 14.4.4 Following the 2022 statutory consultation a total of 19 Interested Parties, including the five Host Authorities and other key stakeholders, engaged in the SoCG process with the Applicant. In Summer 2023, during Examination, the Examining Authority (ExA) requested that the Applicant seek to also develop SoCGs with Buckinghamshire Council, the East of England Ambulance Service Trust, and Bedfordshire Fire and Rescue Service **[PD-007]**, bringing the total to 22.
- 14.4.5 Updated SoCGs were submitted at Deadlines 2, 3, 4, 6, 9, 10 and 11, with an updated **Statement of Commonality [TR020001/APP/8.22]** submitted at Deadline 2, 3, 6 and 11. The ExA asked the Applicant to provide a **SoCGs Update Document** at Deadline 4 **[PD-009] [REP4-094]** which included an update on the progress of remaining 'ongoing' matters and a summary of the current status of each SoCG. This approach then continued for Deadlines 7 **[REP7-041]**, 8 **[REP8-027]**, 9 **[REP9-043]** and 10 **[REP10-038]**.
- 14.4.6 Regular meetings took place between technical leads and relevant Interested Parties to discuss any ongoing matters and to reach a final position. On several occasions, the five Host Authorities participated in joint, topic-specific meetings covering areas of mutual interest; these topics included Green Controlled Growth, Need Case, Noise, and Surface Access.
- 14.4.7 A summary of engagement undertaken with each relevant Interested Party during the Examination is recorded within Section 2 of their respective SoCGs, except for the Host Authorities where the summary can be found in Appendix 1 of their respective SoCGs.
- 14.4.8 By Examination Deadline 11, 22 SoCGs have all (1,236) matters agreed. In total, across all SoCGs:
- a. 84.5% (1,045) of all matters are agreed;
 - b. 15.5% (191) of all matters are not agreed; and
- 14.4.9 A final matrix containing a broad list of topics covered within the SoCGs and their commonality across the SoCGs is set out within Section 3 of the **Statement of Commonality for SoCGs [TR020001/APP/8.22]** submitted at Deadline 11.

14.5 Status of statutory undertakers' objections at the close of Examination

Statutory undertakers and electronic communication code operators

14.5.1 The following statutory undertakers or electronic communication code operators which hold land or rights pursuant to section 127 and/or section 138 of the Act did not make any objections to the application for development consent:

- a. Arqiva Limited;
- b. BT Limited/BT Group plc;
- c. GTC Pipelines Limited;
- d. Independent Pipelines Limited;
- e. Independent Power Networks Limited;
- f. London Luton Airport Operations Limited (LLAOL);
- g. Openreach Limited;
- h. Quadrant Pipelines Limited;
- i. The Electricity Network Company Limited;
- j. Virgin Media Limited; and
- k. Vodafone Limited.

14.5.2 The following statutory undertakers or electronic communication code operators which hold land or rights pursuant to section 127 and section 138 of the Act did submit an in-principle objection to the Planning Inspectorate, however have since notified the Applicant that there is no objection to the application for development consent:

- a. UK Power Networks (and Eastern Power Networks);
- b. Cadent Gas Limited; and
- c. Thames Water Utilities Limited.

14.5.3 The following statutory undertakers or electronic communication code operators which hold land or rights pursuant to section 127 and section 138 of the Act have outstanding objections to the application for development consent:

- a. Affinity Water Limited;
- b. Network Rail Infrastructure Limited; and
- c. National Highways Limited.

14.6 Responding to Interested Parties' submissions into the Examination

14.6.1 When responding to Interested Parties' submissions, the Applicant was mindful that, due to the volume and variety of the submissions, the Applicant's approach

in responding to these submissions needed to be proportionate and accessible for all Interested Parties, the ExA, and the Secretary of State.

- 14.6.2 Many of the detailed responses from Interested Parties included the same matters raised across multiple deadlines. Therefore, to avoid the unnecessary repetition of information, the Applicant did not include responses to matters that the Applicant considered had already been addressed in previous submissions and only sought to provide responses to new matters raised in the submissions or to clarify inaccuracies.
- 14.6.3 In instances where an Interested Party challenged the response provided by the Applicant on a particular matter, the Applicant signposted the Interested Party to the previous responses provided on that matter, rather than repeating the Applicant's earlier response. This minimised the additional paperwork submitted into the Examination, albeit the Applicant considers that its approach to Interested Party responses has been particularly thorough.
- 14.6.4 In instances where the Applicant did not provide a response, because no relevant matter had been raised or the point raised had been previously addressed, the Applicant made clear in each response to submissions document that, where no response was provided, it should not be read as the Applicant's agreement or acceptance of the matter raised.
- 14.6.5 Where a response was not provided directly into the Examination, the submissions either fed into the relevant SoCGs or direct engagement with the Interested Party.

14.7 Topic conclusion

- 14.7.1 The Applicant's proposals have been developed through a programme of comprehensive consultation and engagement over six years. This has included three separate rounds of consultation (2018, 2019 and 2022), 12 TWGs and direct one-to-one engagement with community, business and wider interest groups.
- 14.7.2 Feedback from the engagement and consultation has shaped the Proposed Development (such as design changes to Terminal 1) and has allowed the Applicant to undertake additional assessments (such as sensitivity testing and traffic modelling). A full list of changes made in response to feedback received can be found in Section 12 of the **Consultation Report [AS-048]**.
- 14.7.3 Although a small number of stakeholders have maintained in-principle objections to the Proposed Development (refer to paragraph 14.5.3), the engagement process has allowed for a constructive discussion that has allowed the Applicant to further develop its proposals during the Examination in agreement with Interested Parties.
- 14.7.4 The Applicant is committed to ongoing engagement with stakeholders in the post-Examination period in relation to matters such as the discharge of requirements, through the numerous advisory groups to be established under the DCO should it be made by the Secretary of State.

15 THE PLANNING BALANCE AND CONCLUSIONS

15.1 Principle of development

- 15.1.1 There is clear Government policy support for aviation growth and for airports making best use of their runways, as set out in various national aviation policy documents, including:
- a. Aviation Policy Framework 2013 (APF) (Ref 15.1);
 - b. Airports National Policy Statement 2018 (ANPS) (Ref 15.2);
 - c. Beyond the horizon: making best use of existing runways 2018 (MBU) (Ref 15.3);
 - d. Aviation 2050 – the future of UK aviation 2018 (Ref 15.4);
 - e. Flightpath to the Future 2022 (FttF) (Ref 15.5);
 - f. Jet Zero Strategy 2022 (JZS) (Ref 15.6);
 - g. Jet Zero Strategy: one year on 2023 (Ref 15.7); and
 - h. Overarching Aviation Noise Policy Statement 2023 (OANPS) (Ref 15.8).
- 15.1.2 All of the above policies are important and relevant to the determination of this application for development consent. In particular, APF paragraph 5 is supportive of aviation growth within a framework which maintains a balance between the benefits of aviation and its costs.
- 15.1.3 The policy regarding the tests for airports seeking to make best use of existing runway(s) is set out in full in MBU. MBU is clear that applications to make best use of an existing runway, as is the case with the Proposed Development, should be judged *“taking careful account of all relevant considerations, particularly economic and environmental impacts and proposed mitigations.”* Consistent with aviation policy from 2013, the Government is clear that there is a balance between environmental impacts and economic benefits that must be considered by the decision-maker.
- 15.1.4 The ANPS does not have effect for airport development other than the proposed northwest runway at Heathrow, but it is still an important and relevant consideration for this application for development consent. The ANPS is consistent with MBU in making clear that the Government is supportive of airports beyond Heathrow making best use of their existing runways, whilst recognising that the development of airports can have negative as well as positive local impacts and that any proposal should be considered on its merits.
- 15.1.5 The ANPS acknowledges that London and the south east are now facing longer term capacity problems which is having an adverse impact on the UK economy and affecting the country’s global competitiveness. The Proposed Development would clearly contribute to tackling this issue.
- 15.1.6 The ANPS sets out that the Government accepts that it may therefore be possible for existing airports to demonstrate sufficient need for their proposals

and that applications by airports wishing to make more intensive use of existing runways will be judged on their individual merits.

- 15.1.7 The principle of development is also established in local planning policy. The Luton Local Plan (Ref 15.9) makes provision for the airport to respond positively to future growth, helping to safeguard London Luton Airport's key sub-regional economic contribution to jobs and wealth creation. Simultaneously, it sets a clear environmental and transport framework within which to regulate future growth.

15.2 Need Case and Socio-Economic Benefits

- 15.2.1 Government policy on aviation is clear that increases in aviation capacity are necessary and that airports bring significant socio-economic benefits. The Government recognises that by not increasing airport capacity in the south east, capacity constraints would impose increasing costs on the rest of the economy over time, lowering economic output by making aviation more expensive and less convenient to use, with knock-on effects in lost trade, tourism, and foreign direct investment.
- 15.2.2 There are a large number of businesses with international connections in the area served by London Luton Airport and these businesses need enhanced aviation connectivity to remain globally competitive and deliver growth in productivity and output.
- 15.2.3 Notwithstanding the effects from Covid-19, there is expected to be strong growth in demand for air travel, with the market recovering to 2019 levels by 2024, as stated in the **Need Case [AS-125]**. This growth is expected to continue, and additional capacity will be required at London Luton Airport shortly thereafter if it is to continue to deliver the aviation connectivity that the area around it requires.
- 15.2.4 Detailed demand forecasts show that with the Proposed Development, the airport would reach 32 million passengers per annum (mppa) between 2042 and 2049, according to the Faster and Slower Growth Cases. This demonstrates that there is a need for the Proposed Development in accordance with Government aviation policy and forms the basis upon which the benefits and impacts have been assessed.
- 15.2.5 National, regional, and sub-regional economic strategy is strongly focussed on building economic growth around linkages with the global economy. The Government's Build Back Better (Ref 15.10) strategy provides explicit direction for the future and identifies as a core pillar the 'Global Britain' policy agenda, which requires enhanced international connectivity.
- 15.2.6 London Luton Airport's role is vital in the context of the 'levelling up' agenda. Stakeholders in the airport's surrounding areas have identified that, despite apparent high levels of prosperity, there remain substantial and persistent pockets of deprivation. Luton itself is identified as a highest priority area for the Levelling Up Fund and has been awarded £20m from the fund. The role of the Proposed Development will support in regenerating many of these areas.

- 15.2.7 Compared to 2019, there would be 4,400 more jobs created in Luton, generating £698m in additional economic activity (**Need Case [AS-125]**, Table 8.2) - or an additional 6,100 jobs and £906m of additional economic activity measured across the Three Counties area as a direct consequence of the airport growing to 32 mppa by 2043.
- 15.2.8 Furthermore, the proposed Community First fund will contribute £1 for each additional passenger as a result of the Proposed Development. At the maximum expanded capacity of 32 mppa, this would mean an additional £13 million a year is contributed to local community projects.
- 15.2.9 In this context, the positive impact on the following will maximise employment opportunities at the local level and collectively result in significant socio-economic benefits:
- a. direct and indirect forms of employment generated;
 - b. direct and indirect Gross Value Added;
 - c. increased business travel opportunities;
 - d. increased tourism Gross Domestic Product and jobs;
 - e. journey time savings and Air Passenger Duty revenue; and
 - f. measures in the **Employment and Training Strategy [REP8-020]**
- 15.2.10 The positive impact on the above would be consistent with the requirement in national planning policy to afford significant weight to the need to support economic growth and should be accorded substantial positive weight in the planning balance.

15.3 Environmental Impacts

- 15.3.1 Chapter 9 of this document provides an overview of the environmental impacts of the Proposed Development on a topic-by-topic basis, together with commentary on key issues arising during the Examination and a summary of policy compliance.
- 15.3.2 There are four key environmental topics which are directly linked to the throughput of the airport and where, therefore, environmental effects on communities have the greatest potential to change as the numbers of flights and passengers using the airport increase over time. These will be appropriately and effectively managed through the Green Controlled Growth (GCG) Framework, and comprise:
- a. aircraft noise;
 - b. air quality;
 - c. greenhouse gas emissions (for airport operations and surface access); and
 - d. surface access.
- 15.3.3 The **GCG Framework [TR020001/APP/7.08]** establishes an explicit and groundbreaking commitment to link environmental performance to growth at the

airport and, taken together with other proposed mitigation measures, ensures that impacts in these four key areas will be appropriately mitigated.

Noise

- 15.3.4 In relation to noise, as described at Section 9.12, a range of measures are proposed to mitigate the noise effects of the Proposed Development. Measures put in place to comply with the policy discussed throughout Chapter 9 are outlined in paragraph 9.12.77.
- 15.3.5 In summary, the Proposed Development and its embedded mitigation, combined with the noise insulation scheme secured by the compensation commitments, meet the overall policy on aviation noise in the OANPS. This is achieved by providing an appropriate balance between the economic and consumer benefits of the Proposed Development against its social and health implications in line with the International Civil Aviation Organization Balanced Approach (Ref 15.11).
- 15.3.6 The Applicant's position remains that the Proposed Development accords with the relevant planning policies and provisions governing noise, although it is acknowledged, allowing for a reasonable worst case, that there will be an increase in aircraft noise and road traffic noise. The mitigation and compensation measures, including sharing the benefits, will mitigate negative effects as far as reasonably practicable. Therefore, this issue should be accorded moderate negative weight in the planning balance.

Air quality

- 15.3.7 In relation to air quality, **Chapter 7** of the **ES [AS-076]** concluded that no likely significant effects on air quality and odour are predicted at receptors and that the Proposed Development is not predicted to impact compliance with air quality standards set out in legislation. Further detail of this has been outlined in Section 9.2.
- 15.3.8 The Air Quality Monitoring Plan, part of the proposed **GCG Framework [TR020001/APP/7.08]**, outlines strategies to monitor NO₂, PM₁₀, and PM_{2.5} levels around the Application Site, ensuring they remain below specified thresholds. The Proposed Development will contribute to compliance with limit values or national objectives for pollutants, considering nearby Air Quality Management Areas.
- 15.3.9 Despite concerns raised during the Examination, the Applicant maintains that there have been no material changes affecting the assessment of policy accordance regarding air quality and odour matters. Therefore, this issue should be accorded limited adverse weight in the planning balance.

Greenhouse Gases (GHG)

- 15.3.10 In relation to GHG, **Chapter 12** of the **ES [REP3-007]** acknowledges increased carbon emissions from the Proposed Development due to higher passenger and aircraft movements. It should be noted that GHG emissions from aircraft movements are controlled at a national level. Further detail on the Applicant's approach to GHG can be found at **Chapter 12** of the **ES [REP3-007]**. **Section**

8.7 of the Planning Statement [TR020001/APP/7.01] recognizes a minor adverse effect during construction and airport operations but identified compliance with national aviation carbon and greenhouse gas policies.

- 15.3.11 As described in Section 9.8, having regard to discussions on GHG matters throughout the Examination, the Applicant maintains that no significant changes occurred to the initially proposed approach, thereby maintaining alignment with policy. Therefore, this issue should be accorded limited adverse weight in the planning balance.

Surface Access

- 15.3.12 An overview of surface access issues is provided in Chapter 8 and the Applicant concludes that its approach to Sustainable Transport is robust in the context of policy requirements and best practice.
- 15.3.13 The introduction of the Sustainable Transport Fund (STF), which can be accessed by all the relevant highway authorities via the Airport Transport Forum (ATF) Steering Group, will provide enhancements to sustainable transport and meet Travel Plan targets. Additionally, the Applicant has undertaken extensive traffic and transport modelling in accordance with all relevant policy, best practice and through ongoing engagement with relevant stakeholders.
- 15.3.14 During the Examination, the Applicant has provided further modelling to address concerns raised by Interested Parties. This extensive modelling has continued to support the mitigation strategy set out in the **Transport Assessment [APP-200 to APP-203, AS-123, APP-205 to APP-206]** which has shown how the Proposed Development has been thoroughly tested and is compliant with the National Planning Policy Framework (NPPF) (Ref 15.12).
- 15.3.15 Whilst it is acknowledged that there will be an increase in traffic, it is the Applicant's position that all traffic-related impacts established in the **Transport Assessment [APP-200 to APP-203, AS-123, APP-205 and APP-206]** have been identified and mitigated. Therefore, the matters relating to surface access as a whole should be accorded moderate adverse weight in the planning balance.

Cultural Heritage

- 15.3.16 Regarding cultural heritage, the heritage asset Luton Hoo Grade II* Registered Park and Garden (which comprises Luton Hoo Conservation Area and Luton Hoo House among other designated assets and structures) will experience less-than-substantial-harm. Whilst great weight is given to the assets' conservation, the NPPF is clear that the 'less than substantial harm' to the asset is to be weighed against the public benefits of the Proposed Development. Further discussion of this is found in Section 9.6.
- 15.3.17 It is considered that the benefits of the Proposed Development clearly and demonstrably outweigh this less-than-substantial-harm to heritage assets that would arise with the proposed suite of mitigation measures in place. Overall, this issue should be accorded limited adverse weight in the planning balance.

Landscape and visual impacts

- 15.3.18 In relation to landscape and visual impacts, as reported in **Chapter 14** of the ES **[AS-079]** there will be an adverse impact on the surrounding landscape (including the Chilterns Area of Outstanding Natural Beauty (AONB)) and visual impact caused by the Proposed Development. In most instances this will not amount to unacceptable levels of harm and the impacts can be adequately mitigated but, in some instances, there will be residual adverse impacts resulting in harm which needs to be weighed in the planning balance (such as in respect of the parkland of Wigmore Valley Park). This harm is tempered by other instances where there is an improvement in landscape and visual quality over existing conditions (such as the network of Public Rights of Way east of Luton).
- 15.3.19 The Applicant has demonstrated that the Proposed Development would not compromise the purposes of the designation of the AONB as set out in the **Chilterns AONB Special Qualities Assessment [REP7-046]**. Therefore, although the Proposed Development does not strictly protect or enhance the AONB, nor is there any strong conflict with either national or local AONB policies having regard to the nature and scale of the assessed impacts on the AONB, and the purposes for its designation. Great weight is to be given to conserving and enhancing landscape and scenic beauty of the AONB, but the Applicant considers that, even by applying such policy, this issue has a limited impact on the overall planning balance for the Proposed Development.
- 15.3.20 Subject to the above and notwithstanding that the positive and negative landscape and visual effects cannot readily be aggregated, it is considered that, overall, limited adverse weight should be accorded landscape and visual impacts in the planning balance.

Open space

- 15.3.21 In terms of open space, the Proposed Development will deliver long-term overall improvements in Wigmore Valley Park provision. The section 106 agreement, outlined in Chapter 11, secures a contribution for sports pitch and changing room re-provision. The agreement also commits to establishing a community trust for the management and maintenance of Wigmore Valley Park, to be set up when the open space replacement land has been laid out.
- 15.3.22 During the Examination, the Applicant explained how the retention of the existing Wigmore Valley Park would have resulted in greater loss of best and most versatile (BMV) agricultural land and was a less preferable option (see paragraph 9.3.12). Overall, the Applicant considers the impact on open space can be accorded limited positive weight in the planning balance.

Biodiversity

- 15.3.23 In terms of biodiversity, the Proposed Development has been designed, as far as possible, to avoid effects through option identification, appraisal, selection, and refinement - for example, by avoiding loss of ancient woodland. Details of this are set out in out in **Chapter 8 [AS-027]** of the **ES**.

- 15.3.24 Mitigation measures have been embedded into the Proposed Development for the purpose of minimising effects related to ecological receptors. These measures focus on implementing the mitigation hierarchy where possible, first to avoid, but thereafter to minimise the effects.
- 15.3.25 Overall, the Proposed Development would deliver a range of biodiversity improvements including a biodiversity net gain (BNG) of over 10% (see the BNG report at **Appendix 8.5** of the **ES [APP-067]**) through the extensive landscaping and habitat creation proposals and the management of retained and proposed habitat areas. This can be accorded moderate positive weight in the planning balance.
- 15.3.26 It is noted that should the translocation of tree T343 not be successful, there would be conflict with ANPS 5.103 (Ref 15.2) but it is considered that the harm associated with this would be clearly outweighed by the demonstrable need for and benefits of the Proposed Development outlined above.

Green Belt

- 15.3.27 As stated in the **Green Belt Assessment [APP-196]** limited development is proposed within the Green Belt and where this is deemed to be “inappropriate development” (the Surface Movement Radar and the Above Ground Installation associated with the fuel pipeline connection), it has been demonstrated that Very Special Circumstances exist in accordance with relevant national and local Green Belt policy.

Agricultural land, health and community and amenity factors

- 15.3.28 The conclusions presented in Chapter 9 demonstrate that, in relation to agricultural land (Section 9.3), health and community (Section 9.9) and other amenity matters, impacts can be mitigated to the extent that these issues should be accorded limited adverse weight in the planning balance.
- 15.3.29 These conclusions also demonstrate that, in relation to waste (Section 9.15), flood risk (Section 9.16), water quality and resources (Section 9.16), land contamination (Section 9.13) and major accidents (Section 9.11), impacts can be mitigated to the extent that these issues should be considered neutral in the planning balance.

Summary

- 15.3.30 Overall, the anticipated impacts of the Proposed Development have been robustly assessed and the Applicant considers that the wide range of controls proposed, as summarised in Chapter 13, appropriately avoid, mitigate and compensate these anticipated impacts of the Proposed Development across its design, construction and operation.
- 15.3.31 The Applicant is confident that matters raised by the ExA and Interested Parties have been dealt with sufficiently and have ultimately resulted in a robust framework of controls for the Proposed Development.

15.4 Other Matters

15.4.1 In addition to the benefits and impacts summarised above, there are other issues which are considered to be important and relevant to the determination of the application for development consent, having regard to relevant legislation, national and local policy, guidance and best practice as set out below.

Consideration of reasonable alternatives

15.4.2 As set out in Chapter 6, the consideration of alternative designs, individual elements and design evolution of the Proposed Development has been informed by the potential for likely significant environmental effects arising from the Proposed Development and the need to mitigate these effects.

15.4.3 Full consideration has been given to feedback received from consultation events and engagement with stakeholders in considering the reasonable alternatives through a detailed and thorough Sift process, which describes how the final form of the Proposed Development was selected from different alternatives.

15.4.4 The Applicant concludes that its approach to the consideration of alternatives has demonstrated accordance with all relevant legal and policy requirements and that the strategic objectives are delivered by the Proposed Development.

Good design

15.4.5 Developing a good design, with good design processes and engagement, has been a key focus of the Applicant. The design of the Proposed Development has been informed by a comprehensive and integrated process of technical design advice from the Applicant's multi-disciplinary team. This has been supplemented through three rounds of public consultation and extensive engagement with the Host Authorities, statutory consultees and other stakeholders.

15.4.6 Feedback has been incorporated into the design of the Proposed Development as set out in the **Design and Access [AS-049 and AS-124]** and has enabled the ANPS criteria for good design and all relevant policies at the national and local levels to be met.

15.4.7 The **Design Principles** document [**REP9-030**] has been prepared to secure good design at the detailed design stage. The **Design Principles [REP9-030]** have been strengthened substantially during the Examination process through engagement with the Host Authorities and other Interested Parties. This has been done while retaining sufficient flexibility for the long build-out programme in the case of any changes to policy, regulatory and operational requirements, innovation and to allow the airport operator to meet the needs of passengers and airlines at the relevant time.

15.4.8 Furthermore, a process of Independent Design Review has been introduced and agreed with the Host Authorities in relation to the key public-facing buildings. This is a further and important safeguard to secure good design at the detailed design stage.

Engagement

- 15.4.9 Empowering local people to shape the form of growth at the airport, as well as influence how its future operations will be managed, has been a central theme to the Applicant's approach to developing the Proposed Development. A detailed report of how the Applicant has considered and made changes to the Proposed Development in response to feedback gathered from three rounds of public consultation can be found in the **Consultation Report [AS-048]**.
- 15.4.10 A summary of engagement during Examination is provided in Section 14.3. The approach to the Applicant's responses to Interested Parties' submissions into the Examination is presented in Section 14.5.
- 15.4.11 Furthermore, the Applicant is committed to ongoing engagement with stakeholders post-Examination, including through the following means which will further facilitate local influence upon the management of impacts from the Proposed Development:
- a. The **GCG Framework [TR020001/APP/7.08]** (including the Environmental Scrutiny Group (ESG) as the key monitoring body for GCG and the Technical Panels for each of the four environmental topics);
 - b. Airport Transport Forum (ATF);
 - c. ATF Steering Group;
 - d. Community First;
 - e. **Employment and Training Strategy (ETS) [REP8-020]**;
 - f. Wigmore Valley Park Community Trust; and
 - g. Noise Insulation Sub-Committee of London Luton Airport Consultative Committee.
- 15.4.12 These interventions combine to ensure that the Proposed Development, whilst of national significance, is also grounded in local sensitivities. The Applicant recognises that London Luton Airport is not detached from its locality, but is a key player in Luton's economy, culture and community. Committing to the ongoing involvement of local people in the airport's growth is testament to the Applicant's investment in Luton and the surrounding area.

15.5 Planning Balance and Conclusions

- 15.5.1 In summary, there is clear support for UK airport expansion as a driver for economic growth, which is ingrained in national policy. Thus the Proposed Development is supported in principle, subject to the benefits being appropriately balanced against the impacts.
- 15.5.2 The need for the Proposed Development and the significant socio-economic benefits which would be delivered have been clearly demonstrated and should be accorded substantial positive weight in the planning balance.

- 15.5.3 The Applicant has demonstrated that, where residual adverse effects would occur, extensive engagement and design iteration, including during the Examination, has sought to avoid, minimise and mitigate those impacts.
- 15.5.4 Where this has not been possible, compensatory measures have been proposed where appropriate by the Applicant so that any residual impacts and resultant policy conflict is limited.
- 15.5.5 The Applicant's case has been subjected to rigorous testing through the Examination. Having regard to changes proposed to the application and additional commitments made during the Examination, it remains the Applicant's position that the Proposed Development accords with national aviation policy, national planning policy and the relevant development plan documents when taken as a whole.
- 15.5.6 The substantial benefits of the Proposed Development clearly and demonstrably outweigh the harms that would arise with the proposed suite of mitigation measures in place, and the overall planning balance is overwhelmingly in favour of the grant of development consent.

REFERENCES

Chapter 2

- Ref 2.1 Department for Transport, Airports National Policy Statement, June 2018
- Ref 2.2 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. HM Government.
- Ref 2.3 Secretary of State for Transport (2013), Aviation Policy Framework
- Ref 2.4 Department for Transport, Making best use of existing runways, June 2018
- Ref 2.5 HM Government (2018) Aviation 2050 – the future of UK Aviation. A consultation.
- Ref 2.6 Department for Transport, Flightpath to the Future, May 2022
- Ref 2.7 Department for Transport, Jet Zero Strategy, July 2022
- Ref 2.8 Department for Transport, Jet Zero Strategy; one year on, July 2023
- Ref 2.9 Department for Transport, Overarching Aviation Noise Policy Statement, March 2023

Chapter 4

- Ref 4.1 Secretary of State for Transport (2013), Aviation Policy Framework
- Ref 4.2 Department for Transport, Airports National Policy Statement, June 2018
- Ref 4.3 Department for Transport, Making best use of existing runways, June 2018
- Ref 4.4 HM Government (2018) Aviation 2050 – the future of UK Aviation. A consultation.
- Ref 4.5 Department for Transport (2022) Flightpath to the Future: a strategic framework for the aviation sector, May 2022. Online.
- Ref 4.6 Department for Transport, Jet Zero Strategy, July 2022
- Ref 4.7 Department for Transport, Jet Zero Strategy; one year on, July 2023
- Ref 4.8 Department for Transport, Overarching Aviation Noise Policy Statement, March 2023
- Ref 4.9 Department for Transport, Flightpath to the Future, May 2022
- Ref 4.10 Department for Transport, Application for the Proposed Manston Airport Development Consent Order, Decision, 18th August 2022
- Ref 4.11 Luton Borough Council, Luton 2040 A place to thrive
- Ref 4.12 The Planning Inspectorate, Bristol Airport Appeal, Appeal Ref: APP/D0121/W/20/3259234, Decision, February 2022
- Ref 4.13 Department for Transport, UK Aviation Forecasts 2017
- Ref 4.14 Department for Transport, TAG Unit A5.2 Aviation Appraisal, November 2023
- Ref 4.15 Department for Levelling Up, Housing & Communities, TOWN AND COUNTRY PLANNING ACT 1990 – SECTION 77 APPLICATION MADE BY LONDON LUTON AIRPORT OPERATIONS LTD (LLAOL) LONDON LUTON AIRPORT, AIRPORT WAY, LUTON, LU2 9LY APPLICATION REF: 21/00031/VARCON, Decision Letter, October 2023

Chapter 5

- Ref 5.1 Airports National Policy Statement (June 2018). Department for Transport.
- Ref 5.2 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. HM Government.
- Ref 5.3 London Luton Airport Vision for Sustainable Growth 2020-2050 (December 2017). London Luton Airport Limited.
- Ref 5.4 Airports Commission: Appraisal Framework (April 2014). Airports Commission on behalf of HM Government.

Chapter 6

- Ref 6.1 Airports National Policy Statement (June 2018). Department for Transport.
- Ref 6.2 National Planning Policy Framework (December 2023). Department for Levelling Up, Housing and Communities.
- Ref 6.3 National Design Guide (January 2021). Department for Levelling Up, Housing and Communities; Ministry for Housing, Communities & Local Government.
- Ref 6.4 National Model Design Code (October 2021). Department for Levelling Up, Housing and Communities; Ministry for Housing, Communities & Local Government.
- Ref 6.5 Luton Local Plan (2011 – 2031) (adopted 2017). Luton Borough Council.
- Ref 6.6 Central Bedfordshire Local Plan (2015 – 2035) (adopted July 2021). Central Bedfordshire Council.
- Ref 6.7 North Hertfordshire Local Plan (2011 – 2031) (adopted November 2022). North Hertfordshire District Council.

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- Ref 6.8 Dacorum Local Plan Core Strategy (2006-2031) (adopted September 2013). Dacorum Borough Council.
- Ref 6.9 Beyond the Horizon: The future of UK aviation – Making best use of existing runways (June 2018). Department for Transport.
- Ref 6.10 Airports Commission: Appraisal Framework (April 2014). Airports Commission on behalf of HM Government.
- Ref 6.11 London Luton Airport Vision for Sustainable Growth 2020-2050 (December 2017). London Luton Airport Limited.
- Ref 6.12 Sustainability Strategy (January 2022). London Luton Airport Limited.

Chapter 7

- Ref 7.1 Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land (September 2013). Department for Communities and Local Government.
- Ref 7.2 Planning Act 2008, UK Public General Act, 2008, c.29.
- Ref 7.3 New Roads and Street Works Act 1991, UK Public General Acts, 1991 c.22.
- Ref 7.4 Human Rights Act 1998, UK Public General Acts, 1998 c.42.
- Ref 7.5 Equality Act 2010, UK Public General Acts, 2010 c.15.

Chapter 8

- Ref 8.1 Transport analysis guidance (October 2013, updated November 2023). Department for Transport.
- Ref 8.2 Planning Act 2008. HM Government.
- Ref 8.3 National Planning Policy Framework (December 2023). Department for Levelling Up, Housing and Communities.
- Ref 8.4 Airports National Policy Statement (June 2018). Department for Transport.
- Ref 8.5 Road traffic forecasts 2018 (September 2018). Department for Transport.
- Ref 8.6 TAG unit M4 forecasting and uncertainty (November 2023). Department for Transport.
- Ref 8.7 National Road Traffic Projections 2022, Department for Transport.
- Ref 8.8 Traffic Modelling Guidelines (September 2021). Transport for London.
- Ref 8.9 Cycle Infrastructure Design Local Transport Note 1/20 July 2020. Department for Transport.
- Ref 8.10 Luton Local Cycling and Walking Infrastructure Plan 2023-2033. Luton Borough Council.
- Ref 8.11 North Hertfordshire Local Cycling and Walking Infrastructure Plan Final Draft August 2023. North Hertfordshire District Council.
- Ref 8.12 Luton Local Plan (2011 – 2031) (adopted 2017). Luton Borough Council.
- Ref 8.13 Local Transport Plan 2018-2031. Hertfordshire County Council.
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