Hertfordshire County Council

LONDON LUTON AIRPORT EXPANSION

Relevant Representations

70107305
JUNE 2023

PUBLIC

Hertfordshire County Council

LONDON LUTON AIRPORT EXPANSION

Relevant Representations

TYPE OF DOCUMENT (VERSION) PUBLIC

PROJECT NO. TR020001

OUR REF. NO. 70107305

DATE: JUNE 2023

WSP

8 First Street
Manchester
M15 4RP

Phone: +44 161 200 5000

WSP.com

QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	First issue			
Date	June 2023			
Prepared by	Various			
Signature				
Checked by	Nicola Ashworth			
Signature				
Authorised by	Andy Saunders			
Signature				
Project number	70107305			
Report number				
File reference	\\uk.wspgroup.com\central data\Projects\70107xxx\70107305 - HCC TIPS LOT 1 - Luton Airport DCO Advice for HCC			

CONTENTS

FOREWORD

This report has been prepared by WSP UK Ltd (WSP) on behalf of Hertfordshire Country Council, Dacorum Borough Council, and North Hertfordshire Council (the Councils) in their capacity as host authorities for the London Luton Airport Expansion Project (the Proposed Development). Luton Rising (the Applicant) has submitted an application for development consent for the Expansion of London Luton Airport from its current permitted cap of 18 million passengers per annum (mppa) up to 32 mppa (the Proposed Development) and this was accepted by the Examining Authority for Examination on 27 March 2023..

This report has been prepared for the Councils for use in their Relevant Representation that they will submit to the Examining Authority. It sets out WSP's review of the Environmental Statement prepared by the Applicant and provides commentary on the adequacy of the assessment, the methodologies used and the suggested mitigation measures.

1

INTRODUCTION

INTRODUCTION

1.1 INTRODUCTION

1.1.1. This report has been prepared by WSP UK Ltd (WSP) on behalf of Hertfordshire Country Council, Dacorum Borough Council, and North Hertfordshire Council (the Councils) in their capacity as host authorities for the London Luton Airport Expansion Project (the Proposed Development). Luton Rising (the Applicant) has submitted an application for development consent for the Expansion of London Luton Airport from its current permitted cap of 18 million passengers per annum (mppa) up to 32 mppa (the Proposed Development) and this was accepted by the Examining Authority for Examination on 27 March 2023.

This report has been prepared for the Councils for use in their Relevant Representation that they will submit to the Examining Authority. It sets out WSP's review of the Environmental Statement prepared by the Applicant and provides commentary on the adequacy of the assessment, the methodologies used and the suggested mitigation measures.

1.2 SCHEME DETAIL

1.2.1. The Councils understand that the Proposed Development expands on the current operational airport with the construction of a new passenger terminal and additional aircraft stands. This would also include improvements to existing infrastructure and supporting facilities in line with incremental growth in the capacity of the airport.

1.3 CONSULTATION WITH THE APPLICANT

1.3.1. The Councils have liaised with the Applicant on a number of matters relating to the Proposed Development and have provided comment on matters relating to the environmental assessment, as well as with regard to how the Proposed Development could affect the Councils undertaking their statutory functions.

2 AIR QUALITY

2.1 DOCUMENTS REVIEWED

2.1.1. The following documents have been reviewed:

- TR020001-000662-5.01 Environmental Statement Chapter 7 Air Quality.pdf (issue 1, 27th February 2023)
- TR020001-000691-5.02 Environmental Statement Appendix 7.1 Air Quality Methodology.pdf (issue 1, 27th February 2023)
- TR020001-000692-5.02 Environmental Statement Appendix 7.2 Air Quality Baseline Data.pdf (issue 1, 27th February 2023)
- TR020001-000693-5.02 Environmental Statement Appendix 7.3 Air Quality Results.pdf (issue 1, 27th February 2023)
- TR020001-000694-5.02 Environmental Statement Appendix 7.4 Air Quality Sensitivity Tests.pdf (issue 1, 27th February 2023)
- TR020001-000695-5.02 Environmental Statement Appendix 7.5 Outline Operational Air Quality Plan.pdf (issue 1, 27th February 2023)
- TR020001-000782-5.03 Environmental Statement Chapter 7 Air Quality Figures 7.1 - 7.3a.pdf (issue 1, February 2023)
- TR020001-000783-5.03 Environmental Statement Chapter 7 Air Quality Figures 7.3b - 7.26.pdf (issue 1, February 2023)
- TR020001-000784-5.03 Environmental Statement Chapter 7 Air Quality Figures 7.27 - 7.43.pdf (issue 1, February 2023)
- TR020001-000840-7.08 Green Controlled Growth Framework.pdf (issue 1, February 2023)
- TR020001-000837-7.08 Green Controlled Growth Framework Appendix D - Air Quality Monitoring Plan.pdf (issue 1, February 2023)
- Preliminary Environmental Information Report Volume 2 Main Report Chapter 7 Air Quality (2022)
- Preliminary Environmental Information Report Volume 3 Appendix 7.1 Air Quality Methodology (2022)

2.1.2. All Environmental Statement (ES) documents reviewed were obtained from the Planning Inspectorate website at: Documents | London Luton Airport Expansion (planninginspectorate.gov.uk)

2.1.3. All Preliminary Environmental Information Report (PEIR) documents reviewed were obtained from the Luton Rising website: Air quality | London Luton Airport Expansion (arup.com).

2.1.4. Comments are provided only where an error, omission or ambiguity has been identified, clarification is required, or in the case of a noteable observation. Comments provided previously on the PEIR have been taken into consideration.

2.2 LEGISLATION, POLICY AND GUIDANCE

2.2.1. The following concern legislation and policy only:

Ref. (doc, para, etc)	Comments	Recommendations
Chapter 7, Table 7.1	The Environment Act 2021 appears in the table twice. The first appearance, as Ref. 7.8, is actually referring to the Environment Act 1995 (as included in the chapter end notes, under 'References') – not the Environment Act 2021, which is Ref. 7.9. There is an incorrect mention here to the 'Clean Air Strategy' – it should be to the National Air Quality Strategy (legislated in the Environment Act 1995), which pre-dates the Clean Air Strategy 2019 and is relevant to ongoing Local Air Quality Management.	Should be corrected although would not change the assessment findings.
Chapter 7, Table 7.1	Does not mention The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020 which amends the limit value for $PM_{2.5}$ as set under the Air Quality Standards Regulations 2010 from 25µg/m^3 to 20µg/m^3. [This was previously highlighted in the review of the PEIR.]	Should be included although would not change the assessment findings.
Chapter 7, Table 7.1	Does not mention The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 (made 30th January 2023) which sets legally-binding long-term targets for $PM_{2.5}$.	Chapter 7 post-dates this legislation although target set for 2040 is included in Chapter 7, Table 7.2.
Chapter 7, Table 7.2	Does not include the 20µg/m^3 $PM_{2.5}$ limit value. [This was previously highlighted in the WSP review of the PEIR.] Does not include the interim $PM_{2.5}$ target for end of January 2028 of 12µg/m^3. Unlike the long-term PM2.5 target of 10µg/m^3 for 2040 (The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023), the interim target is not statutory but a commitment made in the HM Government Environmental Improvement Plan 2023 (published 31st January 2023).	Should be included although would not change the assessment findings.
Appendix 7.2, paragraph 1.4.1	Incorrectly refers to the old $PM_{2.5}$ limit value of 25µg/m^3.	Should be corrected although would not change the assessment findings.
Chapter 7, Table 7.3	Does not mention the National Air Quality Strategy (relevant to Local Air Quality Management and Air Quality Management Areas).	Should be included although would not change the assessment findings.
Chapter 7, Table 7.3	Does not mention HM Government Environmental Improvement Plan 2023 (published 31st January 2023).	Chapter 7 post-dates this publication. Not considered to be a fundamental omission.
Chapter 7, Table 7.3	Does not mention the Government's policy paper 'Air quality strategy: framework for local authority delivery' (published 28 April 2023).	Chapter 7 predates this policy paper. Not considered to be a fundamental omission.

2.3 BASELINE INFORMATION

2.3.1. No comments.

2.4 ASSESSMENT OF SIGNIFICANT EFFECTS

2.4.1. The following comments concern consultation and methodology for the assessment of air quality impacts at designated ecological sites, and notable impacts at human receptors:

Ref. (doc, para, etc)	Comments	Recommendations
Chapter 7, Section 7.4	Referring back to the PEIR (Vol 3, App 7.1, paragraph 3.2.5) it was stated that *"Consultation with Natural England on the method for assessing ammonia emissions for the ecological sites will be carried out and any updates to the methodology will be included in the ES."* No reference is made to this consultation in ES Chapter 7.	The Application should clarify if consultation with Natural England took place and if the method to determine ammonia emissions and nitrogen deposition impacts was agreed.
Appendix 7.1, paragraphs 3.7.68, 4.2.5, 4.2.6, Table 7.1	The approach taken in modelling NH_3 and nitrogen deposition was to use the 'National Highways Ammonia N Deposition Tool version 2 – DRAFT' (2022).	The Applicant should confirm that the use of this draft tool was agreed with Natural England. The Applicant should provide a copy of this tool and report from National Highways (it is not readily available in the public domain).
Appendix 7.1, Table 3.4	Average nitrogen deposition background from APIS was used in predicting nitrogen deposition impacts at designated ecological sites.	Seek confirmation from the Applicant that this approach was agreed with Natural England, and the errors in APIS data as noted on the APIS website 18 January 2023 have been accounted for.

2.5 MITIGATION, ENHANCEMENT AND MONITORING

2.5.1. The comments concern the monitoring plan:

Ref. (doc, para, etc)	Comments	Recommendations
Green Controlled Growth Framework, Chapter 4, Table 4.2	The table refers to monitoring that is 'Out of Scope' and 'In Scope'. The meanings of these terms are not given.	The Applicant should amend the chapter text to explain to the reader what is meant by 'Out of Scope' and 'In Scope' including providing justification for anything that is 'Out of Scope'.
Green Controlled Growth	The limit for annual mean $PM_{2.5}$ concentration up to 2040 is not set to the Government target of 12µg/m3 for 2028, and the level 1 and 2 thresholds do not reflect this.	The Applicant should update this table to reflect the Government

Framework, Table 4.3		$PM_{2.5}$ target of 12µg/m^3 for annual mean concentrations.
Green Controlled Growth Framework, Chapter 4 and Appendix D - Air Quality Monitoring Plan	The GCG Limits and Thresholds for air quality that are given in Chapter 4, Table 4.2 only serves to address issues of compliance with Government standards for annual mean pollutant concentrations. This does not support a proactive approach to emissions management as it can only address the measured annual mean pollutant concentrations retrospectively. It also does not serve to help protect people from acute heath conditions such asthma that can be brought on by short-term air pollution episodes - and could be associated with emissions from airport related sources (LTO, airside, landside and roads carrying airport related traffic). As such, the proposed air quality monitoring plan is inadequate. Furthermore, the proposed use of "*AQMesh or equivalent*" (Appendix D, paragraph D2.1.1) is not sufficient to demonstrate compliance with Government standards as such indicative methods (even with MCERTS certification) do not meet Defra reference method equivalence criteria (refs: https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf and https://uk-air.defra.gov.uk/networks/monitoring-methods?view=mcerts-scheme). The Palas Fidas 200, which meets the Defra reference method equivalence criteria and enables simultaneous measurement of PM_{10} and $PM_{2.5}$, would be suitable for this purpose. With substantial evidence accumulating linking finer fractions of particulate matter (especially $PM_{2.5}$ and smaller) to chronic and acute heath conditions, there is a need to have short-term thresholds to protect human health. Although at present there are no Government standards to address short-term concentrations of $PM_{2.5}$ (or finer fractions), the World Health Organisation (WHO) gives interim targets and guideline levels (https://www.who.int/publications/i/item/9789240034228) for 24-hour mean $PM_{2.5}$ which could be adopted now. As the Government has recently legislated a 10µg/m^3 target (for 2040) for annual mean $PM_{2.5}$, which is the same threshold as the WHO interim target 4, with a Government interim target of 12µg/m^3 (for 2028), it would seem appropriate to set thresholds for 24-hour mean $PM_{2.5}$ concentrations based at least on the WHO interim target 3, which is 37.5µg/m^3 not to be exceeded more than 3-4 days per year (the corresponding WHO interim target 3 for annual mean $PM_{2.5}$ is 15µg/m^3 - so it is reasonably in-line with the Government's nterim annual mean target). A 24-hour mean threshold would enable a more proactive approach to emissions management than would be possible if only annual mean thresholds are used.	The Applicant should revisit the Air Quality Monitoring Plan as proposed under the current Green Controlled Growth Framework so as to include 24-hour mean $PM_{2.5}$ thresholds to better address the matter of acute human health impacts and enable a more proactive approach to emissions management. The Applicant should include continuous monitoring using a method that meets the Defra reference method equivalence criteria for PM_{10} and $PM_{2.5}$.

2.5.2.

2.6 CONCLUSIONS

2.6.1. No comments.

2.7 ADDITIONAL COMMENTS ON FIGURES AND APPENDICES

2.7.1. The following comments concern figures only:

Ref. (doc, para, etc)	Comments	Recommendations
Figure 7.3	Figure 7.3 is a series of figures showing human, ecological, cultural and health receptors: • Figure 7.3a 'Modelled Human Receptors' • Figure 7.3b 'Modelled Ecological Receptors' (comprising 11 figures in total – one overview and 10 zoomed in) • Figure 7.3c 'Modelled Cultural Receptors' • Figure 7.4d 'Modelled Receptors for Health Assessment' Chapter 7 Section 7.9 includes only one cross reference to Figure 7.3 in paragraph 7.9.9: *"The maximum change is seen at receptor H133 (located on the Dunstable Road (A505) at the Poynters Road Roundabout), the locations of which are shown in Figure 7.3 of this ES [TR020001/APP/5.03]*". However, Figure 7.3a, which shows 'Modelled Human Receptors', does not show the reader where H133 is actually located. It is not clear in Chapter 7 how Figures 7.3c or Figure 7.3d are relevant. When discussing the assessment findings in Chapter 7 for specific human and ecological receptors it would be helpful to cross-reference to the relevant figure.	The Applicant should ensure clear and comprehensive cross-referencing of figures showing receptor locations so as to aid the reader in interpreting the findings of the assessment. For each receptor that is specifically identified in Chapter 7, the reader should be able to easily navigate to the relevant figure and find its exact location within the figure.
Figures 7.41 – 7.43	These figures show assessment phase 1 annual mean pollutant contours for NO_2, PM_{10} and $PM_{2.5}$ but are not referenced in Chapter 7 or appendices.	The Applicant should clarify if these should be referred to or included. If so then shouldn't similar figures for the other phases also be included?

2.8 SUMMARY

2.8.1. The review has identified several issues associated with ES Chapter 7 concerning recent legislation and policy, the assessment of significant effects and figures that the Applicant should be asked to address; in particular:

- if consultation with Natural England took place and if the method to determine ammonia emissions and nitrogen deposition impacts was agreed, and
- the inadequacy of the Green Controlled Growth Framework monitoring plan.

3 BIODIVERSITY AND HABITATS REGULATIONS ASSESSMENT

BIODIVERSITY

3.1 DOCUMENTS REVIEWED

3.1.1. The following documents have been reviewed:

- Volume 5 Environmental Statement: 5.01 Chapter 8 Biodiversity;

3.2 LEGISLATION, POLICY AND GUIDANCE

3.2.1. Chapter 8 summarises within Table 8.1 the key legislation referred to. It is considered that the legislation referred to is appropriate and comprehensive.

3.2.2. In terms of policy, Chapter 8 within Table 8.1 lists core national references including the National Planning Policy Framework (NPPF), National Policy Statement for National Networks – December 2014 (NPSNN), Biodiversity 2020. Local policy listed includes Luton Local Plan 2011-2031, North Hertfordshire District Local Plan 2011-2031, Decorum Borough Council Local Planning Framework, Bedfordshire and Luton Local Biodiversity Action Plan (LBAP). Key provisions within the local policy documents are presented.

3.2.3. Reference is also given to the Airports National Policy Statement (ANPS) with appropriate principles highlighted despite relevance to London Heathrow directly.

3.2.4. The guidance referred to for Chapter 8 is set out in Table 8.4. The tables heading refers to ‘legislation’ presumably in error. Table 8.4 is limited to broad guidance on ecological impact assessment rather than more specific aspects. Whilst these are appropriate it would be useful for signposting to be given to specific guidance that informed judgments made in the chapter. No guidance is presented that will inform judgments at a local (i.e. county, borough, district) level.

3.3 BASELINE INFORMATION

3.3.1. Sources of baseline information as part of the desk study referred to in Chapter 8 include Bedfordshire and Luton Biodiversity Recording and Monitoring Centre (BLBRMC). The final request for data from BLBRMC was made in June 2022 and thus contemporary and appropriate to inform the chapter. Likewise, data was sought from Herts Environmental Records Centre (HERC) with the final request again made in June 2022.

3.3.2. It is unclear from the list provided (paragraph 8.5.2) whether publicly available data bases for key habitats at a local scale were consulted (i.e., for Habitats of Principal Importance, ancient woodland).

3.3.3. Table 8.8 in Chapter 8 presents the extent of baseline surveys undertaken. The receptors covered by these surveys are comprehensive for a site with limited aquatic habitat. It is noted that several surveys are up to 4 years old at the time of writing of the chapter. This could be considered to represent an out of date baseline (CIEEM, 2019). The Chapter notes agreement as to the use of the baseline data within the Technical Working Group (TWG) that includes relevant consultees. It would be expected that comprehensive pre-construction surveys are undertaken to determine contemporary baseline conditions and assess appropriateness of mitigation and enhancement measures.

3.3.4. Study areas (defined as Zones of Influence) are described in Table 8.6 while survey areas are presented in Table 8.8. The study areas are appropriate

3.3.5. Full details of baseline information that inform Chapter 8 are included in Appendix 8.1 Ecology Baseline Report. This was unavailable on the Planning Inspectorate library for the Proposed Development and is therefore not subject to review of within this representation.

3.3.6. 'Important' ecological features are valued 'in line with the principles' with CIEEM guidelines (2018) and follow a geographical frame of reference (Table 8.9). It is noted that International or European value sites refer to European Commission (EC) directives (i.e. Habitats and Birds Directives) as examples – these are not included in the legislation section earlier in the chapter in favour of European Union (Withdrawal Agreement) Act 2020 ('the Withdrawal Act').

3.3.7. County/ district value refers to an example, 'Medium value for less common or better quality examples within the County or district, and Low value for those more common and widespread examples/species.' It is unclear what guidance has been sought to make these judgments for the relevant districts for the Proposed Development. Furthermore, a further example is provided of 'Nationally scarce species (e.g. recorded in 16 – 100 10 km squares in the UK) or Annex 1 habitats of the Habitats Directive, where not a qualifying feature of a national site network site.' It is again unclear why Annex 1 habitat (from the EC Habitats Directive) is referred to on a county/district basis.

3.3.8. Tables 8.12 – 8.14 summarise the geographical importance and receptor value of sites, habitats and protected species respectively. Several features are judged based on their abundance or distribution within the 'district'. The basis or evidence used to make these judgements is unclear.

3.3.9. Assumptions and limitations are included in Section 8.6 although where they apply to baseline surveys they are detailed in Appendix 8.1. The general limitations provided in Section 8.6 are clear while noting the point made about baseline survey data validity. Paragraph 8.6.4 refer to the 'general' agreement that habitats have not changed and thus influencing the updated surveys undertaken.

3.4 ASSESSMENT OF SIGNIFICANT EFFECTS

3.4.1. Determination of significant effects follows a matrix approach which deviates from CIEEM methodology. This is not necessarily a limitation (and it provides consistency with other chapters in the ES) and an interpretation is provided in Table 8.11.

3.4.2. Embedded mitigation is outlined in section 8.8 and is accounted for within the assessment. These measures are appropriately framed as being as embedded rather than as 'additional' mitigation.

3.4.3. The Proposed Development will result in the total loss of Wigmore Park County Wildlife Site (CWS) over the different construction phases. While the CWS is mitigated for as part of the enhanced provision of open space included in the development (i.e., embedded mitigation), a judgment is made that the effects will be minor in the long term (10-15 years) on the CWS. It is considered here that the assessment does not recognise that the CWS will be lost regardless of the enhanced area. It is compensated for not mitigated. Therefore, it can be considered to be incorrectly framed in Chapter 8. Furthermore, the application of a 10-15 year criterion as being sufficient to make a judgement on long term effects does not account for hedgerows and tree lines as outlined in paragraph 8.9.5. These are compensated for in open space not the enhanced areas. Therefore, it is questionable that this measure will provide the same ecological function.

3.4.4. Further assessment is made on Dairyborn District Wildlife Site (DWS) in regard to embedded mitigation providing sufficient maturity in either 5-15 or 10-30 years. The latter time span involves broadleaved semi-natural woodland. It is considered that justification is required as to why this timeframe is appropriate to conclude that there is a not significant long term effect.

3.4.5. The assessment also determines 'temporary' effects when a feature (e.g., orchids) will be at least partially lost. Embedded mitigation quoted to reduce a moderately significant effect to minor relies upon long term management of the area that will remain and provision of enhanced areas that will be suitable for these species. Without considering mitigation at this stage certainty that the enhanced areas will support these species is not likely to be high. This assessment therefore requires further justification.

3.4.6. The assessment of operational impacts on Wigmore Park CWS notes that it will no longer exist as a functional CWS. What is not clear is how operational effects, notably air quality changes, will impact the proposed compensatory areas within the Proposed Development and therefore whether their proposed species richness will be impaired.

3.4.7. All other aspects of the assessments are agreed to be appropriate.

3.5 MITIGATION, ENHANCEMENT AND MONITORING

3.5.1. Additional mitigation is outlined in section 8.10 of Chapter 8. The design measures from 8.10.2 provide a confusing narrative in terms of the differences to the measures proposed in embedded mitigation.

3.5.2. Additionally, several measures are proposed on receptors that are not considered to have significant effects in the assessment e.g., birds. The process of identifying the required additional mitigation should be clarified.

3.5.3. Mitigation proposed in general terms is however appropriate to mitigate impacts.

3.5.4. A suite of monitoring strategies are referred to in section 8.13. While these documents have not been reviewed the scope of features proposed for monitoring is appropriate.

3.6 RESIDUAL EFFECTS AND CONCLUSIONS

3.6.1. As detailed above, the assessment loss of a feature (i.e. a CWS/DWS) focuses on the biodiversity the site supports not the feature itself. Compensation for the loss is framed as mitigation in this regard which is questionable. Therefore, clarifications sought in the assessment remain when considering residual effects.

3.6.2. Some features e.g., birds (Barn Owl and Red Kite) and reptiles are subject to an assessment of the residual effects and are not subject to an initial assessment (i.e. when considering embedded mitigation only). This provides a confusing narrative as to what is assessed fully.

3.7 ADDITIONAL COMMENTS ON FIGURES AND APPENDICES

3.7.1. No comments.

3.8 SUMMARY

3.8.1. Chapter 8 provides, in general, a thorough overview of the likely impacts on Biodiversity. Key concerns are highlighted however on:

- The consistency of assessment of receptors through the chapter sections of 8.9 Assessment; 8.10 Additional Mitigation and 8.11 Residual Effects. It does not appear that all impacts are characterised in Section 8.9.
- The framing of habitat compensation as embedded mitigation within the Proposed Scheme. This requires consideration of the mechanism being deployed and also the likelihood of long term certainty of the mitigation proposed.

HABITATS REGULATIONS ASSESSMENT (HRA)

3.9 DOCUMENTS REVIEWED

3.9.1. The following documents have been reviewed:

- Volume 5 Environmental Statement and related documents: 5.08 8.4 Habitats Regulations Assessment No Significant Effects Report

3.10 LEGISLATION, POLICY AND GUIDANCE

3.10.1. No legislation section is provided in the No Significant Effects Report (NSER). While some information is provided under Section 1.3 HRA Process it could be expected that detail on the legislation underpinning HRA and the implications of UK's exit from the European Union, would be included in the report.

3.10.2. No policy is outlined at either a national or local (including Hertfordshire) level.

3.10.3. Limited guidance documents are referred to which include appropriate references to key case law.

3.11 BASELINE INFORMATION

3.11.1. Study areas applied reference DMRB LA115 which are then subject to appropriate adaptation, partly in response to Natural England advice.

3.11.2. No further baseline information is required to inform the screening exercise within the NSER.

3.12 SCREENING ASSESSMENT

3.12.1. It is concluded that there is no impact pathway on the qualifying features of the European Sites. This conclusion is appropriate although the detailed assessment relates to air quality effects only. An explanation for the conclusions made on other impact pathways is not given.

3.13 ADDITIONAL COMMENTS ON FIGURES AND APPENDICES

3.13.1. No comments.

3.14 SUMMARY

3.14.1. The NSER provides a conclusion that is supported. The NSER is however light on detail in regard to legislative and policy requirements in addition to basic narrative on justifying the lack of impact pathways away from air quality effects.

4 CLIMATE CHANGE RESILIENCE

4.1 DOCUMENTS REVIEWED

4.1.1. The following documents have been reviewed:

- Chapter 9 Climate Change Resilience (APP-035)

4.2 LEGISLATION, POLICY AND GUIDANCE

4.2.1. The legislation, policy and guidance discussed in the chapter is considered to incorporate all relevant documents.

4.3 BASELINE INFORMATION

4.3.1. The baseline information presented in **Section 9.7** is considered appropriate for the Proposed Development.

4.4 ASSESSMENT OF SIGNIFICANT EFFECTS

4.4.1. The scope of the assessment is considered appropriate to the Proposed Development. The scoping opinion comments have been addressed in the ES and the receptors identified are considered appropriate to the Proposed Development.

4.4.2. Engagement with relevant stakeholders has taken place and suggestions incorporated in to the ES.

4.4.3. The assumptions and limitations in **Section 9.6** are considered appropriate for the assessment of climate risk.

4.4.4. The methodology outlined in **Section 9.5** clearly identifies the assessment measures (likelihood and severity / consequence) used, which are considered appropriate to the assessment.

4.4.5. The assessment is considered appropriate for the Proposed Development.

4.5 MITIGATION, ENHANCEMENT AND MONITORING

4.5.1. The embedded and good practice measures at construction stage are considered appropriate, and secured through the Code of Construction Practice. It is however noted that reference to Eurocodes and British Standards (BS EN1997-1 and BS6031) are made. These design standards were written 15 to 20 years ago, and may not fully consider the impacts of climate change. It is recommended that mitigation measures to ensure that geotechnical / earthwork design fully considers the potential impacts of climate change, particularly in relation to increased winter precipitation resulting in wetter ground conditions; and drier hotter summers resulting in drier ground conditions; and the impacts potentially caused by ground movement.

4.5.2. A number of embedded and good practice mitigation measure state *"Assets will either be designed for the climatic conditions projected or the end of their design life, using appropriate design guidance where available or adaptive capacity will be built into the designs."* Whilst is it understood that the design is not yet advanced enough to specify how the design will accommodate climate projections or adaptive capacity, the Host Authorities should be satisfied that such measures will be incorporated into the detailed design.

4.5.3. The monitoring measures identified are considered appropriate for the Proposed Development.

4.6 CONCLUSIONS

4.6.1. No comments.

4.7 ADDITIONAL COMMENTS ON FIGURES AND APPENDICES

4.7.1. No comments.

4.8 SUMMARY

4.8.1. The Climate Change Resilience Chapter is considered to be well written and provides a robust assessment of the impact of climate change on the Proposed Development Receptors.

4.8.2. Comments have been made in relation to embedded mitigation measures, to consider appropriate inclusion of climate adaptation which will be effected throughout the design life.

5 GREENHOUSE GASES

5.1 DOCUMENTS REVIEWED

5.1.1. The following documents have been reviewed:

- TR020001-000667-5.01 Environmental Statement Chapter 12 Greenhouse Gases
- TR020001-000716-5.02 Environmental Statement Appendix 12.1 Outline Greenhouse Gas Action Plan
- TR020001-000833-7.07 Green Controlled Growth Explanatory Note
- TR020001-000838-7.08 Green Controlled Growth Framework Appendix E - Greenhouse Gases Monitoring Plan
- TR020001-000840-7.08 Green Controlled Growth Framework

5.2 LEGISLATION, POLICY AND GUIDANCE

5.2.1. All anticipated legislation, policy and guidance have been included.

5.2.2. Two observations were made in the Environmental Statement Chapter 12;

- Dacorum Local Plan Core Strategy 2006-2031 - "(*e) Plan to limit **residential indoor** water consumption to 105 litres per person per day until national statutory guidance supersedes this advice*". This text is not relevant to the Proposed Development.
- Dacorum Local Plan Core Strategy 2006-2031 - "*Applicants will therefore need to explain how: (i) they have considered the whole life cycle of the building and how the materials could be recycled at the end of the building's life*" The table does not identify that this requirement has not been considered in the ES, reasoning should be provided why this has not been considered (i.e. scoped out at the Scoping Stage and agreed in the Scoping Opinion)

5.3 BASELINE INFORMATION

5.3.1. No observations have been made on the baseline as presented in the Environmental Statement Chapter 12.

5.4 ASSESSMENT OF SIGNIFICANT EFFECTS

5.4.1. The assessment has been conducted in line with industry best practice and guidance. No comment on the main assessment.

5.4.2. One observation in regards to the ICCI aspect, Table 12.30 seems to only consider some operation ICCI, however, the CCR Assessment makes references to other potential Climate Change Impacts (Chapter 9 - Table 9.29), have these been considered? E.g. Damage to materials and construction equipment etc.

5.4.3. Note that this review covers the documents as listed above. It has been assumed that data from other inputs are correct (such as Energy Modelling, Transport Modelling, Need Case, Framework Travel Plan etc)

5.5 MITIGATION, ENHANCEMENT AND MONITORING

5.5.1. Mitigation seems satisfactory, observations have been made in regards to the mitigation being listed under the incorrect heading and an error regarding the delivery mechanism of one mitigation measure. Please see the topic review sheet for further details.

5.6 CONCLUSIONS

5.7 No material comments regarding the assessment.

5.8 PRESENTATION

5.8.1. No comments on Figures.

5.8.2. Three observations were made in regards to Appendix 12.1. Please see the topic review sheet for further details.

5.9 SUMMARY

5.10 No material comments regarding the assessment, the majority of observations related to minor discrepancies.

6 CULTURAL HERITAGE

BUILT ENVIRONMENT

6.1 DOCUMENTS REVIEWED

6.1.1. The following documents have been reviewed:

- Environmental Statement Chapter 10 Cultural Heritage
- Environmental Statement Chapter 10 Cultural Heritage Figures 10.1-10.9
- Environmental Statement Appendix 10.1 Cultural Heritage Desk Based Assessment
- Environmental Statement Appendix 10.2 Cultural Heritage Gazetteer
- Environmental Statement Appendix 10.6 Cultural Heritage Management Plan
- Environmental Statement Appendix 14.7 Accurate Visual Representations

6.2 LEGISLATION, POLICY AND GUIDANCE

6.2.1. Note is made of the Ancient Monuments and Archaeological Areas Act 1979. However, the Proposed Development does not physically impact any scheduled monuments.

6.2.2. There is no mention of the Hedgerow Regulations 1997. Were historic hedgerows considered? As Historic England (HE) notes:

> *Hedgerows, like trees, can make an important contribution to the character of an area and may be historically (and occasionally archaeologically) important as indications of land use and previous ownership. They also contribute significantly to biodiversity.*
>
> *The removal of a hedgerow is unlikely to require planning permission, but if removal is proposed as part of a planning application then its impact on the heritage significance of the area and its impact on the setting of any heritage assets around may be taken into account in accordance with planning policies in the National Planning Policy Framework (NPPF) (ref. 1) and the local development plan.*

6.3 BASELINE INFORMATION

6.3.1. Lack of historic hedgerows assessment is noted above.

6.3.2. Appendix 10.2 Cultural Heritage Gazetteer states that there are no physical impacts to non-designated above ground assets, so these are then scoped out. It appears that settings impacts to non-designated assets have not been assessed. As per the National Planning Policy Framework (NPPF) para 203: 'The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application.' These assets have settings which should be considered.

6.3.3. Care should be taken to avoid the level of detail about the baseline of heritage assets already contained in Appendix 10.1. The ES should be a synthesis of the technical appendices. A separation of assets scoped in and scoped out would have made the document clearer to read. There is also no separation of above and below ground non-designated heritage assets.

6.3.4. The Applicant should confirm how temporary the construction impacts for each asset are.

6.3.5. At places in the reports, when talking about significance, the heritage interests of a building (as per the NPPF and HE's Statement of Heritage Significance) is sometimes interchanged with the values in Historic England's Conservation Principles (2008).

6.3.6. Although the NPPF is mentioned in the reports, at no point is there is an assessment in NPPF terms (e.g. no harm, less than substantial harm, substantial harm, etc) in Appendix 10.1.

6.3.7. In the ES various construction and operational impacts are assessed separately. What is needed is an overall assessment of the construction and operational effects on assets impacted.

6.3.8. Repeating the point about assessing the whole of a registered park and garden that falls partly within the study area seems unnecessary – it can be noted in the consultation section – but this approach would be expected. The report should also ensure that impacts to individual assets located within these parks and gardens are considered.

6.3.9. The report states that it recognises that 'quietness' does not contribute to setting – but if an asset is, as an example, in a quiet, isolated rural environment, then a lack of noise would be expected – and is part of its isolated setting – the introduction of noise, from a road, railway or airport, would have a bearing on any impacts to that asset's setting.

6.3.10. Appendix 14.7 includes wirelines for some views and block forms for others. See in particular ES Table 10.6 HE comments dated 14 December 2021 which specifically discusses block forms. There should be constant cross-referencing to the assets and the visualisations in Appendix 14.7 – for example, the views at various locations in Kings Walden (Herts) and the impacts on the Grade I listed Church of St Mary (see DBA Appendix 1, para 10.7.50). This cross-referencing is essential to understand the impact assessments.

6.3.11. Needs detailed cross-referencing to Chapter 16 Noise and Vibration.

6.4 ASSESSMENT OF SIGNIFICANT EFFECTS

6.4.1. No additional comments. But please see additional comments on figures and appendices.

6.4.2. Needs detailed cross-referencing to Chapter 16 Noise and Vibration.

6.5 MITIGATION, ENHANCEMENT AND MONITORING

6.5.1. No additional comments. But please see additional comments on figures and appendices.

6.6 CONCLUSION

6.6.1. As per the baseline, Appendix 10.2 Cultural Heritage Gazetteer states that there are no physical impacts to non-designated above ground assets, so these are then scoped out. As per the NPPF para 203: '*The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application.'* These assets have settings which should be considered.

6.7 ADDITIONAL COMMENTS ON FIGURES AND APPENDICES

6.7.1. Some photos are dated in Appendix 10.1 (on the plates) and others are not.

6.7.2. The Red Line Boundary continues outside the historic map at Figures 9 and 10 of Appendix 10.1.

6.7.3. Appendix 14.7 includes wirelines for some views and block forms for others. See in particular ES Table 10.6 HE comments dated 14.12.2021 which specifically discusses block forms. There should

be constant cross-referencing to the assets and the visualisations in Appendix 14.7 – for example, the views at various locations in Kings Walden (Herts) and the impacts on the Grade I listed Church of St Mary (see DBA Appendix 10.1, para 10.7.50). This cross-referencing is essential to understand the impact assessments.

6.8 SUMMARY

6.8.1. Issues noted at Legislation, Policy and Guidance with regards to the Ancient Monuments and Archaeological Areas Act 1979 and the Hedgerow Regulations 1997.

6.8.2. Issues with Baseline Information noted.

6.8.3. Issues noted at Conclusion with regards to Appendix 10.2 Cultural Heritage Gazetteer.

6.8.4. Issues noted with Additional Comments and Figures with regards to Appendix 10.1 and Appendix 14.7.

ARCHAEOLOGY

6.9 DOCUMENTS REVIEWED

6.9.1. The archaeology topic is included in ES Chapter 10: Cultural Heritage, alongside built environment (built heritage) and historic landscape.

6.9.2. An independent technical review of the following EIA submission documents was undertaken, in respect of archaeology, and specifically that part of the Proposed Development Site at the eastern end that falls within Hertfordshire. The following documents were reviewed:

- TR020001-000665-5.01 Environmental Statement Chapter 10 Cultural Heritage, and
- TR020001-000786-5.03 Environmental Statement Chapter 10 Cultural Heritage Figures 10.1-10.9.

6.9.3. The purpose of the review was to provide a technical assessment on the methodologies employed to assess the environmental effects of the Proposed Development, and to confirm whether proportionate mitigation has been proposed to reduce or offset any significant adverse effects identified. It has not entailed detailed scrutiny or validation of the baseline data. No comment has been made in respect of those parts of the Proposed Development Site outside the administration of Hertfordshire County Council and the Hertfordshire local planning authorities of North Herts and Dacorum.

6.9.4. The supporting technical appendices were consulted to inform the ES review, but were not themselves subject to review. It is assumed that the methodology, data and conclusions of these reports are sound. Reports of site based evaluation are assumed here to have been separately approved on completion of the fieldwork, by the Hertfordshire County Council (HCC) Archaeological Advisor, who provides development control advice to each of the Hertfordshire local planning authorities:

- TR020001-000708-5.02 Environmental Statement Appendix 10.1 Cultural Heritage Desk-based Assessment
- TR020001-000709-5.02 Environmental Statement Appendix 10.2 Cultural Heritage Gazetteer
- TR020001-000710-5.02 Environmental Statement Appendix 10.3 Geophysical Survey Report (SUMO 2018)

- TR020001-000711-5.02 Environmental Statement Appendix 10.4 Geophysical Survey Report (TigerGeo 2019)
- TR020001-000712-5.02 Environmental Statement Appendix 10.5 Archaeological Trial Trench Evaluation Report (Cotswold 2019)
- TR020001-000713-5.02 Environmental Statement Appendix 10.6 Cultural Heritage Management Plan
- TR020001-000714-5.02 Environmental Statement Appendix 10.7 Archaeological Trial Trench Evaluation Report (Cotswold 2022)

6.9.5. A review of the PEIR was carried out by the statutory consultees in 2019. The substantive comments on the PEIR appear to have been largely, but not entirely, addressed in the EIA submission.

6.10 LEGISLATION, POLICY AND GUIDANCE

6.10.1. ES Chapter 10 Section 10.2 includes reference to relevant legislation, policy and guidance. The only omission is reference to the *Hedgerow Regulations 1997*. Hedgerows considered historically important under the regulations are sometimes covered within archaeological assessments, but for the purposes of this review this is discussed in Section 6.2: Built Environment of this document, above.

6.11 BASELINE INFORMATION

6.11.1. ES Chapter 10 Section 10.1.4 lists the supporting technical appendices, including the evaluation fieldwork reports. This section – or elsewhere in the baseline – should clarify what evaluation work has been completed to support the EIA submission and what work is still outstanding, as this affects our understanding of the archaeological potential and likely impacts and resultant environmental effects as reported in the ES.

6.11.2. Technical appendix 'TR020001-000714-5.02 Environmental Statement Appendix 10.7 Archaeological Trial Trench Evaluation Report (Cotswold 2022)' details the trial trenching that has been undertaken within Hertfordshire, as part of a second phase of intrusive evaluation. The report states that four areas in Hertfordshire have been identified for evaluation (Areas 1, 4, 5, and 6), but that only the south-western part of Area 6 (part of an HCC-defined Area of Archaeological Significance) has been evaluated to date. This is a relatively small area. The report notes (para 7.5) that due to non-archaeological constraints (an aviation pipeline and its 50m buffer) trenches may have been located too far to the south-west to have identified a possible Roman building (HER ref. 7358), which could conceivably lie within the edge of the Proposed Development Site. The asset has been recorded on the HER as a quantity of Roman pottery was recovered nearby during the construction of the aviation pipeline. The evaluation otherwise found no significant archaeology in the area investigated. Whilst the safety implications of working close to an aviation pipeline are obvious, a 50m buffer might be considered excessive considering that there should be means of prospection that could locate the pipeline accurately.

6.11.3. ES Chapter 10 Table 10.6 alludes to this incomplete programme of evaluation and an agreement with the HCC Archaeological Advisor for the additional work to be carried out post-determination of the granting of planning consent (i.e. under the terms of a standard planning condition). This limitation and the uncertainty it presents should be made clear in ES Chapter 10 Section 10.6, along with the rationale for the agreement to carry out much of the intrusive evaluation work post-

determination. It is assumed here that the very few anomalies of archaeological nature identified by the geophysical survey, suggesting little potential for significant remains to be present, is the rationale.

6.11.4. ES Chapter 10, Para 10.7.61, refers to the identification of potential non-designated buried heritage assets not recorded on the respective Historic Environment Record (HER): *'…a further 26 assets have been identified during the preparation of the DBA [desk-based assessment] and a review of historical map evidence and LiDAR and largely comprise the sites of former woodland and pit-like features which may be indicative of quarrying'*. Such assets are not shown on Figure 10.3: Location of Non-Designated Cultural Heritage Assets, nor on Figure 3 in 'TR020001-000708-5.02 Environmental Statement Appendix 10.1 Cultural Heritage Desk-based Assessment'. Consequently they are not included as receptors in ES Chapter 10 Para 10.7.62. The gazetteer notes several assets that are the site of a building or such which is no longer extant, but that does not mean that associated buried remains do not survive.

6.11.5. Winch Hill Farm, a 17th century farmstead with medieval origins (HER 11016) is not assessed as the 'Asset comprises the location of an asset that is no longer extant'. Associated buried remains of structural footings, pits, ditches and such may however survive and have not been assessed in the ES.

6.11.6. The county boundary (likely ancient) between Hertfordshire and Bedfordshire, which is not defined above ground, but which may at one time have been delineated by a ditch or boundary markers, has not been included as an asset (it is not on the HER), although the geophysical survey and trenching found little evidence.

6.11.7. ES Chapter 10 Para 10.7.62 makes no mention of the possible presence of previously unrecorded archaeological remains, although this is covered in Sections 3.5 and 5.4 of 'TR020001-000708-5.02 Environmental Statement Appendix 10.1 Cultural Heritage Desk-based Assessment'. The summary archaeological background (ES Chapter 10 paras 10.7.10–10.7.25) sets out what is known, but professional judgement of archaeological potential, by chronological period, forms a key part of any baseline assessment and should be summarised in the ES Chapter.

6.11.8. In the areas yet to see intrusive evaluation, the potential for possible, previously unrecorded remains has been clarified. Within the Hertfordshire part of the Proposed Development, the evaluation work is however still outstanding.

6.12 ASSESSMENT OF SIGNIFICANT EFFECTS

6.12.1. Whilst the outline details of the Proposed Development are covered by a separate ES Chapter, ES Chapter 10 Section 10.9: Impact Assessment does not describe the impact from the Proposed Development where it is relevant to archaeology. The assumption should be that all areas within the red line boundary that are not currently developed would have topsoil stripped prior to construction, e.g. prior to any earthworks, landscaping, new build, services/utilities trenches, planting, ecology mitigation, temporary construction compounds and temporary access etc). As topsoil removal can have an impact on archaeological remains, the impact is therefore site wide.

6.12.2. ES Chapter 10 Section 10.9, lists only three archaeological assets as potential receptors, all of which are noted on the HER. Two of the three assets fall with Hertfordshire, comprising a possible Roman building, of medium value/significance (HER ref. 7358), and cropmarks of a possible Roman field system, of low value/significance (HER refs 17218 and 17219).

6.12.3. In respect of the possible Roman building, (HER 7358), ES Chapter 10 para 10.9.55 states that the Proposed Development would have no impact and consequently there would be no environmental effect. However, as stated in TR020001-000714-5.02 Environmental Statement Appendix 10.7 Archaeological Trial Trench Evaluation Report (Cotswold 2022)' Para 7.5, the evaluation was probably located too far to the south-west to confirm whether the asset is present in the Proposed Development Site or not. The presence of this asset, and the possible environmental effect, has not been sufficiently established.

6.12.4. There are other assets that may be affected by the Proposed Development, but their impact is not assessed. These are possible, previously unrecorded archaeological remains. The potential for such and likely significance is set out in 'TR020001-000708-5.02 Environmental Statement Appendix 10.1 Cultural Heritage Desk-based Assessment'. This comprises possible remains dating to:

- Early prehistoric (Palaeolithic and Mesolithic): medium potential
- Late prehistoric (Neolithic, Bronze Age and Iron Age): medium to high potential
- Roman: high potential, including those assets already identified on the HER (above).
- Medieval: medium to high potential for agricultural remains
- Post-medieval: high potential for farm buildings and agricultural remains. Although not stated, this could include buried remains associated with Winch Hill Farm, a 17th century farmstead with medieval origins (HER 11016)
- Modern: high potential for WWII material.

6.12.5. The ancient county boundary could be included as an additional heritage asset, but this is not flagged in the ES or TR020001-000708-5.02 Environmental Statement Appendix 10.1 Cultural Heritage Desk-based Assessment.

6.12.6. There is no assessment of the environmental effects resulting from the impact on possible, previously unrecorded archaeological remains outlined above. This can often present the largest impact of development proposals in areas not subject to intrusive evaluation (i.e. the section of the Site within Hertfordshire).

6.13 MITIGATION, ENHANCEMENT AND MONITORING

6.13.1. ES Chapter 10 Section 10.10: Additional Mitigation, includes a statement of design mitigation with respect to the possible Roman building, of medium value/significance (HER ref. 7358). ES Chapter 10 para 10.10.2 it states that '*A programme of additional archaeological evaluation has been completed in 2022 and the results, which are presented in Appendix 10.7 of this ES [TR020001/APP/5.02], confirm there are no significant archaeological remains in this location and therefore no potential impact to asset HER 7358. As such, additional mitigation by design measures are not required*.' However, as stated in the evaluation report, TR020001-000714-5.02 Environmental Statement Appendix 10.7 Archaeological Trial Trench Evaluation Report (Cotswold 2022)' Para 7.5, the evaluation was probably located too far away from the possible site of the asset to confirm whether it is present in the Proposed Development Site or not. If it is within the Proposed Development Site, the proposals would potentially result in a significant adverse environmental effect that has not been reported in the ES.

6.13.2. The mitigation strategy of further trial trenching in areas post-determination, followed by an agreed programme of mitigation is sufficient to reduce/offset any adverse environmental effects arising from impacts to possible previously unrecorded remains as set out in para 6.11.4 above.

6.14 CONCLUSIONS

6.14.1. No conclusion is provided.

6.15 PRESENTATION

6.15.1. ES Chapter 10 Figure 10.3: Location of Non-Designated Cultural Heritage Assets should include the 26 possible assets identified during the course of the desk-based assessment.

6.16 SUMMARY

- The ES Chapter has not sufficiently established whether the possible Roman building (HER ref. 7358) is present within the Proposed Development Site or not, and the potential adverse environmental effect is unreported.
- The ES Chapter has not reported the potential adverse environmental effect arising from construction phase impacts on possible buried remains associated with Winch Hill Farm, a 17th century farmstead with medieval origins (HER 11016).
- The ES Chapter has not reported on the environmental effects of the Proposed Development in respect of the potential for possible, previously unrecorded archaeological remains dating from the prehistoric period onwards. In the unevaluated areas of the Proposed Development Site these could be significant. The assessment of such potential is provided in TR020001-000708-5.02 Environmental Statement Appendix 10.1 Cultural Heritage Desk-based Assessment but needs to be summarised in the ES Chapter.
- The ES should clarify that part of the Proposed Development Site has not yet been evaluated and state this as a clear limitation.
- The ES should provide information on the nature of the development proposals that might have an archaeological impact.

7 TRAFFIC AND TRANSPORTATION

7.1 DOCUMENTS REVIEWED

7.1.1. The following documents have been reviewed:

- TR020001-000941-5.01-Environmental-Statement-Chapter-18-Traffic-and-Transportation-Revision-1.pdf
- TR020001-000798-5.03 Environmental Statement Chapter 18 Traffic and Transportation Figures 18.1 - 18.3.pdf
- TR020001-000763-5.02 Environmental Statement Appendix 18.1 Traffic and Transportation Methodology.pdf
- TR020001-000764-5.02 Environmental Statement Appendix 18.2 Selected Traffic Flow Modelling Results.pdf
- TR020001-000765-5.02 Environmental Statement Appendix 18.3 Outline Construction Traffic Management PLan.pdf
- TR020001-000765-5.02 Environmental Statement Appendix 18.4 Outline Construction Workers Travel Plan.pdf
- TR020001-000767-5.02 Environmental Statement Appendix 18.5 Sensitivity Tests.pdf
- TR020001-000816-7.02 Transport Assessment – Part 1 of 4 (Chapters 1-4).pdf
- TR020001-000817-7.02 Transport Assessment – Part 2 of 4 (Chapters 5-8).pdf
- TR020001-000818-7.02 Transport Assessment – Part 3 of 4 (Chapters 9-10).pdf
- TR020001-000818-7.02 Transport Assessment – Part 4 of 4 (Chapters 11-16).pdf
- TR020001-000820-7.02 Transport Assessment Appendices - Part 1 of 3 (Appendices A-E).pdf
- TR020001-000821-7.02 Transport Assessment Appendices - Part 2 of 3 (Appendix F).pdf
- TR020001-000822-7.02 Transport Assessment Appendices - Part 3 of 3 (Appendices G-M).pdf
- TR020001-000833-7.072 Green Controlled Growth Explanatory Note
- TR020001-00839-7.08 Green Controlled Growth Framework Appendix F- Surface Access Monitoring Plan
- TR020001-000840-7.08 Green Controlled Growth Framework
- TR020001-000844-7.12 Surface Access Strategy
- TR020001-000845-7.13 Framework Travel Plan

7.1.2. The focus of the review described in this section is transport matters in Hertfordshire. Other issues were also identified in other local authority areas.

7.2 LEGISLATION, POLICY AND GUIDANCE

7.2.1. The ES and Transport Assessment (TA) appear to refer to the majority of the policy, legislation and guidance that would be expected, including the Hertfordshire Local Transport Plan 4, but does not refer to the North Hertfordshire Local Plan (2011-2031).

7.2.2. The ES and TA also do not refer to the effect on the proposals of the recent Government announcements on Smart Motorways (April 2023) which may affect some of the mitigation assumptions in the main traffic modelling scenarios. It is noted that the TA and ES were finalised before this announcement, and it is therefore recommended that the applicant should produce an addendum report or similar to identify the potential impact of this change on their proposals. This is particularly important as the base scenario appears to rely on a previously proposed Smart

Motorway scheme, along with another scheme already in place, to provide capacity for the predicted traffic flows.

7.3 BASELINE INFORMATION

ES Chapter 18 - 18.7 Baseline Conditions:

7.3.1. Figure 18.2 – Strategic Road Network – shows roads included in the modelled network. Some unclassified roads could potentially carry rat-running traffic and should therefore be included e.g. the road across from Whitwell to the A505 (Lily's Btm).

7.3.2. 18.7.33-35 M1 9-10 hard shoulder running has been included in both Do Min and Do Som. Our understanding is that it is now not National Highways' policy to deliver any more Smart Motorways and the M1 improvements are not part of any National Highways Road Investment Strategy (RIS) programme. Therefore, the core transport modelling scenario should not include these improvements. It is recommended that the authorities seek an alternative scenario without these schemes, unless the applicant has evidence that National Highways has a scheme offering similar capacity benefits.

7.3.3. 18.7.37-40 refers to East West Rail but it is unclear whether any or all of this is included in the modelling. We are of the understanding that is it not a committed / consented scheme so it should not be included in the transport modelling core scenario.

7.3.4. Generally there is a lack of detail in both the ES and TA – only specific links are picked out for comparison which may not align with roads that Local Authorities have concerns about. Access to the models would enable us to examine specific links.

7.3.5. The VISSIM modelling covers only the airport and connections to the M1 and is therefore irrelevant to Hertfordshire. We also have concerns about the methodology.

7.4 ASSESSMENT OF SIGNIFICANT EFFECTS

ES Chapter 18 18.9 Assessment:

7.4.1. Section 18.9.58 states 'it has been assumed that the proportion of airport passengers using non-sustainable modes of transport will not rise above 55%'. WSP has several queries for which further information would be required:

- How has 55% been derived?
- What evidence has been used?
- How has public transport usage to the airport changed post Covid Pandemic 2022/23? How will this impact public transport use in the future?

Transport Assessment Chapter 9 and 10:

7.4.2. 9.1.6 Model base year is 2016. The 2016 Base Year Model is now 7 years old and travel patterns have changed since the Covid Pandemic. We have asked for evidence of how traffic flows and public transport usage have changed between 2016 and 2022/ 2023.

7.4.3. 9.5.19 and Table 9.5 – passenger mode split between bus/coach/rail etc – it is unclear where these mode share splits have come from.

7.4.4. 9.5.26 states '*The HGV and LGV trips generated by the Proposed Development are calculated by applying the percentage growth in passengers to the baseline HGV and LGV movements to/from the*

airport.' We have asked for evidence that the number of HGVs and LGVs to the airport is directly correlated to the number of passengers, rather than to the shops and commercial facilities provided at the airport.

7.4.5. The strategic model shows link flow increases of up to 133% but states that there are no significant capacity issues, which would see flows more than doubling on those links – for heavily trafficked links this could lead to delay. Where flows decrease there is no explanation.

7.4.6. Volume over capacity figures (V/Cs) are shown in figures only. We have asked for V/Cs to be included in the tables of link flows so we can understand the impact the increases in flow are having on the road capacity.

7.4.7. Section 10 – Highway Capacity Assessment – link flows and V/Cs are from the strategic model, junction assessments from VISSIM modelling. The two models are not consistent – flows on J10 slip roads are quoted and are different from each model. It is difficult to get an overall picture of where the issues are across the network.

7.4.8. M1 'widening' has been included in both Do Min and Do Something Core Scenario models. This is not a committed scheme and should not be included.

7.4.9. Although a sensitivity test has been run excluding the M1 scheme, there is not enough detail in Appendix 18.5 to properly assess the effects of the expansion on local roads.

Other TA Comments

7.4.10. The recent announcement stopping new Smart Motorway schemes means that the development proposals cannot rely on the additional capacity that the existing and proposed schemes on the M1 would have provided. A report summarising the sensitivity test scenario that excluded the Smart Motorway capacity in a similar level of detail to that in the main TA, should be provided including a better description of the impact on local roads that is referred to in the TA.

7.4.11. The ES does not appear to address matters such as severance in Hitchin and the surrounding villages, where the TA is indicating high traffic flows may need to be mitigated. It is recommended that the ES should give these areas due consideration.

7.4.12. Roles, responsibilities and funding mechanisms for the toolbox of interventions should be provided to provide a clear steer to the organisations on the level of commitment and funding that might be required to meet the targets

7.4.13. Green Controlled Growth (GCG) controls mode share by unsustainable modes for passengers and staff , but the relationship with real numbers is not considered. It would be helpful to understand this as the percentages could be masking serious increases in traffic on the surrounding networks.

7.4.14. The GCG sets out mechanisms for managing growth, but what happens if the limits are exceeded for an extended period of time? What is the limit on the time this can be allowed before a reduction in capacity would be required? The Applicant should provide further details of how the GCG mechanisms will be likely to operate in practice to provide confidence that the proposed measures will work appropriately.

7.4.15. There is likely to be a delay between formally increasing airport capacity and impacts showing in the monitoring – this lag in reporting could leave problems not being addressed promptly, which increase congestion. This includes:

- 1.8.9 - capacity declarations made 7 months in advance of the operations, which may not be enough time to address any problems. .
- 2.3.9 – performance against the Limits in one calendar year cannot inform the capacity declaration for the following year, rather the minimum lag is two summer seasons.

7.5 MITIGATION, ENHANCEMENT AND MONITORING

7.5.1. The applicant proposes in the TA the following highways mitigation is proposed within Hertfordshire:

- A505/ Pirton Road/ Wratten Road West, Hitchin
- A505/ A602 Park Way, Hitchin
- A602/ B656/ Gosmore Road, Hitchin

7.5.2. WSP has several concerns about the scheme drawings that have been provided with the TA as follows:

- Failure to apply HCC LTP4 principles within the design, resulting in traffic led schemes that do not consider improvements for active and sustainable modes of travel
- The schemes do not appear to consider buildability in the vertical dimension, and there are several areas where the drawings may need to be changed to accommodate this if visibility and gradient requirements are to be considered in the design.
- One of the schemes (A505/ Pirton Road) appears to make queuing and delay on Pirton Road significantly worse in the PM peak. Additionally, the modelling of this junction assumes a very low fixed flow from Wratten Road West. If this flow is higher than assumed it could have a negative impact on the model results and require the scheme to be redesigned. It is recommended that the applicant survey the flows on Wratten Road West to confirm that their modelling assumptions are robust.

7.5.3. Firstly, none of the three schemes offer improvements to active or public transport modes, which means that they are pure junction capacity improvements which contradicts the objectives of HCC LTP4, whereby it is expected that any junction improvement will include direct improvements for those modes. Indeed, the A602/ B656 scheme could even make conditions worse for cyclists. It is recommended that the Applicant should review the designs and ensure that the schemes can:

a) Be constructed in all three dimensions;

b) Provide improvements for active and sustainable modes in addition to improving traffic capacity; and

c) Address any problems introduced or not resolved by the schemes by ensuring that the mitigation is not significantly worsening conditions for any road user.

7.5.4. The following changes/ mitigation to Public Rights of Way (PROW) are proposed, including Footpaths, 41 and 43 and Bridleway 52. A new PROW is also proposed in North Hertfordshire. While the TA identifies an all weather surface to the PROW, it does not identify if landowner permissions are forthcoming for this to occur.

7.5.5. The plans in the TA show this mitigation being provided in a stepped manner, over a period of several years which could lead to frequent temporary path closures for construction work – it may be worthwhile completing the final construction in one stage.

7.5.6. The TA indicates that traffic calming will be provided as mitigation in the following villages in North Hertfordshire:

- Great Offley
- Tea Green
- Breachwood Green
- Whitwell

7.5.7. At present the TA does not provide any details about the traffic calming in these locations. It is recommended that further details of the type and extents of this traffic calming should be provided as part of the planning application.

7.5.8. No details of expected bus patronage from Hertfordshire is given, meaning that it will be difficult to plan future bus services. While the TA commits to discussions on future public transport improvements with local bus operators and local authorities, the report stops short of any specific commitments relating to local bus services to/from Hertfordshire. WSP would recommend that the Hertfordshire Local Authorities should seek commitments to at least a bus service connecting to the East Coast Mainline rail services linking Hitchin station to Luton Airport, improvements to the local village services to link to the airport and potentially a service similar to the 724 Harlow to Heathrow service, operating to Luton Airport instead.

7.5.9. The Construction Traffic Management Plan provides no information about the effects of the constructing the proposed development on local HGV stopping areas such as lay-bys, truck stops and service stations. For a development of the size of that proposed at Luton Airport, there is a risk that delivery vehicles to the airport (those waiting for time slots, having a break or at the end of their driver hours) may fill the available space, leaving no room for delivery vehicles serving other businesses in Luton and the surrounding towns. It is recommended that the applicant should demonstrate that this situation will not be a problem during construction.

7.5.10. While the applicant seeks to set worker, construction worker and visitor travel plans, there is only minimal commitment and detail given to targets and measures given at present.

7.5.11. The Traffic Monitoring report (TRIMMA) does not include for monitoring at the villages in North Hertfordshire where the applicant proposes traffic calming. This means that even with traffic calming, large unexpected movements may start causing congestion in those villages. The TRIMMA also does not include sufficient detail of how the monitoring will be undertaken and if there are opportunities to construct permanent, automated monitoring stations within the highway schemes.

7.5.12. A balanced approach to the gathering of non-sustainable travel trends should be developed to understand the full impacts of the airport expansion annually. Monitoring of traffic flows on key routes through Hertfordshire should be carried out and will be a key indicator on whether the assumed airport access routes are being used, or whether traffic is spilling onto local routes that may require additional mitigation as a result of the airport growth, particularly through the villages to the east of the airport.

7.5.13. Further detail is required in the ‘toolbox’ of interventions to ensure there is a ‘owner’ of the mitigation where the Applicant would not be the responsible party. This will help ensure implementation of the mitigations with the other parties.

7.5.14. The GCG Framework needs further information to demonstrate the levels of acceptable non-sustainable modes for passenger access that are being suggested in the limits and thresholds which are currently expressed only as a percentage. The applicant should demonstrate what the percentages mean in terms of broad numbers to provide additional context for the adjoining

authorities and the 'acceptable' traffic levels that may be experienced based on the current assumptions for the direction of access route for passengers to the airport.

7.5.15. The GCG also shows that there could be a significant delay between thresholds being exceeded and restrictions on growth coming into effect. For the Hertfordshire road network this could present an adverse impact which will need to be monitored annually through the TRIMMA and surface access Travel Plan. It is not clear what the relationship between the 3 monitoring mechanisms is and whether there will be sufficient incentive to implement the additional mitigation through the Travel Plan if the GCG is performing within acceptable limits.

7.6 PRESENTATION

7.6.1. Some of the strategic model results would be best viewed within the model so that specific concerns of the Hertfordshire authorities could be considered, rather than rely upon the Luton focussed information that is provided in the documentation.

7.7 CONCLUSIONS AND SUMMARY

7.7.1. Section 10.5.1 states that '*A comprehensive approach to modelling the impact of the Proposed Development has been carried out, including strategic modelling, Vissim modelling and local junction capacity assessments. This modelling approach includes consideration of growth including committed developments and planned transport schemes. The modelling demonstrates that the impacts from the Proposed Development and mitigations included in the scheme at Assessment Phase 1, 2a and 2b (full development) would not have a significant adverse impact on the operation of the highway network in the local or wider area.'*

7.7.2. In our opinion – the modelling that has been done does not fully support the above conclusion as we have concerns with both the inputs to the modelling and the consequent outputs. WSP also recommends a scenario where the existing and proposed Smart Motorways are removed from the M1 (in line with the current direction of Government policy since April 2023) and that the additional localised impacts should be assessed in greater detail.

7.7.3. Some of the proposed mitigation measures in Hertfordshire are set out to a minimal level of detail or have been designed without some consideration of improvements for active and sustainable travel modes. The drawings provided also do not appear to have considered the vertical dimension within the design, and there are locations where gradients or other factors such as forward visibility may mean that the scheme cannot operate safely or be constructed to meet design standards.

7.7.4. Almost no detail is provide on walking, cycling or public transport measures in Hertfordshire.

7.7.5. The CTMP outline appears inadequate as no consideration is given for where construction delivery vehicles will wait off-site for their appointment on site, or to take breaks or end their daily driving hours, or even park overnight for an early morning delivery. There is a risk that the number of construction deliveries to the airport could lead to the local laybys, truck stops and service areas being full of airport bound vehicles and that this may lead to it being more difficult for other businesses in Luton and the surrounding towns to have deliveries due to constraints on these rest areas.

8 LANDSCAPE AND VISUAL

8.1 DOCUMENTS REVIEWED

8.1.1. The following documents have been reviewed:

- 5.01 Chapter 14 – Landscape and Visual Assessment
- 5.01 Chapter 14 - LVIA Figures 4.1 – 4.17
- 5.02 Appendix 14.1 – LVIA Methodology
- 5.02 Appendix 14.3 – Arboricultural Impact Assessment Methodology
- 5.02 Appendix 14.4 - Detailed Landscape Assessment
- 5.02 Appendix 14.5 - Detailed Visual Assessment
- 5.02 Appendix 14.8 – Residential Visual Amenity Assessment
- 5.02 Appendix 14.9 – Chilterns AONB Sensitivity Test
- 5.02 Appendix 14.10 - Landscape Mitigation Establishment Schedule
- 5.02 Appendix 8.2 – Outline Landscape and Biodiversity Management Plan

8.2 LEGISLATION, POLICY AND GUIDANCE

5.01 CHAPTER 14 – LANDSCAPE & VISUAL ASSESSMENT

8.2.1. **Paragraph 14.2.** The inclusion of Tables 14.1 to Tables 14.4 is welcomed. Unfortunately the majority just refer the reader to the Appendices and Section 14.9. Those Appendices and Section 14.9 do not cross reference any policy or guidance therefore it is not possible to easily identify which elements of the assessment are complying with which policy. There is no discussion as to whether all, or any, of the policies listed are complied with. For example, para 174 of the NPPF (Table 14.2) states planning decisions should protect and enhance valued landscapes. The response given is that a description of the baseline is provided, noting valued landscapes, and these are then considered to inform judgements on value magnitude. A discussion on policy compliance would be beneficial.

8.2.2. There is no discussion as to why a 5km radius from the Site was chosen for the study area extents. The only consideration of study area refinement is to include sections of Area of Outstanding Natural Beauty (AONB) and full extent of character areas. The ‘full extent of character areas’ is not confirmed – the LCA plan at Figure 14.3 does not include the extent of the study area so its not clear which (if any) LCAs extend beyond the 5km boundary. It’s also not clear which LCAs cover the study area (as the extent of the study area is not shown on Figure 14.3). The character of the offsite works should also be included, as shown on Figure 14.1 but excluded from 14.3. Further clarification on LCAs within the study area is required, including off site areas, all LCAs within the 5km study area and cross reference to relevant study area plans relating to AONB aircraft flight paths.

8.2.3. **Paragraph 14.3 Table 14.5 scoping opinion ID 4.13.3.** The Planning Inspectorate requested ridgeline and trees to be clearly identified and annotated on a Figure, with any reliance on them adequately secured. A response is provided stating that the features are identified in Figure 14.5. No ridgeline is identified on Figure 14.5, nor trees in relation to this ridgeline separately identified. There is no indication of how such features are to be secured, or what reliance on them is made in the conclusions of the assessment. Planning Inspectorate comments have not been complied with. The ridgeline and trees need to be clearly identified and annotated on Figure 14.5. Confirmation of how such features are to be secured should be clearly stated.

8.2.4. **Paragraph 14.3.15**. The 4 bullets are the same as Matters scoped in. This is too generic to be helpful at this stage. More proportionate detail on the receptors considered needs to be provided. It would be much clearer and more helpful to identify the actual receptors scoped in or out, not the highly generic 4 items listed.

8.2.5. **Paragraph 14.4**. It is not clear to what degree the Chilterns Conservation Board (CCB) has been consulted – they did not form part of the LVIA working group and only appear to have been consulted pre 2019 statutory consultation. Clarification on what was discussed with CCB would be beneficial, particularly in relation to AONB setting (CCB are not listed as attending the meeting on Open Space on 24 March 2021 where AONB setting was discussed), representative viewpoints, dark night skies, and tranquillity.

8.3 BASELINE INFORMATION

8.3.1. **Paragraph 14.7.2**. There is limited discussion as to which conditions relate to which study area – there are three study areas shown on Figure 14.1 and there is reference at 14.3.5 to additional study areas including the Chilterns and full extent of character areas over and above the two study areas shown on Figure 14.1. A Figure clearly showing all of the study area/s being considered needs to be provided. Clearer identification throughout the whole of Section 14.7 as to which study areas are being considered in each paragraph would be helpful.

8.3.2. **Paragraph14.7.6**. Discussion is provided on Character Areas, notably National Character Area (NCA) 110 and two East of England Landscape Types. NCA 110 nor the two landscape character types are included in the assessment section and none of them have they been scoped out either. It is unclear why NCA 110 and the two East of England Landscape Types are included as baseline conditions and then not assessed, given that 14.7.3 states that this section identifies features that may be significantly affected.

8.3.3. Similarly, why are all of the local character areas excluded from the description of the local landscape in 14.7.6 but are then assessed? How does the reader logically understand the characteristics of the local character areas that may be impacted when they are not described?

8.3.4. Why is the character of the AONB (both that within the study area and the ‘additional’ study area extents) not defined? Why are landscape character areas only defined where they are within or immediately surrounding the Proposed Development site? Why are character areas across the study area not shown? Why is the Character of the AONB excluded? Discussion on the local landscape character is required for the study area as a whole, including the elements that may be impacted and why, so that the baseline clearly leads on to the assessment section.

8.3.5. **Paragraph 14.7.7 – 14.7.11**. A description of landform is provided. No discussion on the landform east of the airport is provided, or any discussion as to why landform east of the airport is considered worthy of assessment when all of the other elements described in the baseline landform section are not. Discussion on the landform to the east of the airport is required, including the elements that may be impacted and why, so that the baseline clearly leads on to the assessment section.

8.3.6. **Paragraphs 14.7.35 – 14.7.41**. Cultural patterns and historic features. Much of the narrative describes land use. There is no discussion of any cultural references or historic development to provide the context of the airport in terms of culture. The airport is nearly 100 years old and part of an important and historic town with a strong connection to industry. Discussion on the historic cultural associations should be included to provide context.

8.3.7. **Paragraphs 14.7.42 – 14.7.46.** Aesthetic and perceptual qualities. Discussion appears to focus on tranquillity with a brief discussion on visibility. In 14.7.42 there is no discussion of the aesthetic qualities of the study area. Heritage assets, conservation areas, good quality parks and public realm can all contribute to good aesthetic properties, but there is no discussion to indicate why only aesthetic and perceptual qualities relating to the AONB are considered in the assessment. Paragraph 14.7.46 notes that levels of tranquillity increase with distance from the airport. There is no discussion on the Special Qualities of the AONB or how they are experienced in the areas being considered for assessment (notably the baseline level of tranquillity, visibility and visitor experience in the AONB study area). Discussion on the aesthetic and perceptual qualities of the Study area as well as the AONB is required, including the elements that may be impacted and why, so that the baseline clearly leads on to the assessment section. More robust discussion on AONB special qualities, characteristics and baseline is required to provide a more robust defence of potential impacts on those qualities.

8.3.8. **Paragraph 14.7.47.** Existing visual conditions. There is no discussion of visibility in relation to the ZTV, and how it has been refined. There is no discussion on who the main visual receptors in the study area are. There is no indication of tranquillity influences on the 'pleasantness' of a view (i.e. the visual amenity, or 'pleasantness' of a view has to be influenced by sound and the senses, in terms of people experiencing a view). Discussion on visibility in relation to the ZTV and how it was refined should be provided. Identification of the key receptor groups experiencing the views should be identified. It is the change in visual amenity of those experiencing the views that are being assessed, not the viewpoint. Reference to visual amenity should include reference to tranquillity.

8.3.9. **Paragraph 14.7.53 - 14.7.54.** Identification of additional developments in the area that would change the baseline in future. There is no discussion about what changes to the site would occur – both built form and vegetation – and the influence this would have on other receptors such as the AONB. Further discussion on the Future baseline should be provided here to recognise on-site changes as a result of the 'Without Proposed Development' scenario.

8.4 ASSESSMENT OF SIGNIFICANT EFFECTS

8.4.1. **Paragraph 14.9.4**. This section lists the landscape receptors being assessed. The landscape receptors being assessed have not been previously identified or any justification provided as to their selection. This rationale is not provided in Appendix 14.4 Detailed Landscape Impact Assessment. Identification of the landscape receptors to be assessed should be clearly identified in the baseline, along with a summary of their key characteristics such that the reader is able to logically understand the reason for selection and the resulting assessment. The character and qualities of the AONB should be identified, including specifically the areas of the AONB considered in the assessment. Justification as to the exclusion of other areas of the AONB should be given, particularly given the statement at 14.3.5 where full extent of character areas are considered.

8.4.2. **Paragraph 14.9.18.** This paragraph provides a summary of effects for '*most'* of the receptors. A summary of **all** receptors noted should be provided, not just 'most', and where they differ, this should be discussed.

8.4.3. **Paragraph 14.9.20.** The paragraph identifies a magnitude of low adverse in relation to tranquillity and aesthetic/perceptual qualities in the AONB at Phase 2b. This magnitude is questioned, when Table 5.3 in Appendix 14.1 suggests that low adverse magnitude of change is when 'slight loss or damage' occurs. The text currently provided at 14.9.20 talks about 'noticeable' increases in aircraft

movements which would '*permanently deteriorate the sense of tranquillity'*. This wording is more consistent with the definition provided for Medium adverse where '*partial loss or noticeable damage*' occurs. The magnitude of impact for receptor (h) – AONB should be reconsidered.

8.4.4. **Paragraph 14.9.21 - 14.9.23**. Operational effects are briefly summarised in a short paragraph, stating that there would be no change in effect between the interim passenger capacity and maximum passenger capacity on the AONB. Based on the information presented, this conclusion needs further justification to support the outcome, given the importance of tranquillity (which can include 'busyness' through artificial movement such as planes) on the character of the AONB. Magnitude of impact on the AONB should be re-considered.

8.4.5. **Paragraph 14.9.25**. This section lists the visual receptors being assessed. The visual receptors being assessed have not been previously identified or any justification provided as to their selection. This rationale is not provided in Appendix 14.5 Detailed Visual Impact Assessment. Identification of the visual receptors to be assessed should be clearly identified in the baseline, along with a summary of their key amenity characteristics such that the reader is able to logically understand the reason for selection and the resulting assessment.

8.4.6. **Paragraph 14.9.24 – 14.9.46.** There does not appear to be any mention of aircraft movement (increase in number of flights/ aircraft noise) on any visual receptor. Particularly in recreational spaces, such as the AONB, these factors influence the quality/ pleasantness of the views they enjoy from that space and the experience of the visual receptor. Aircraft movement and noise should also be considered in relation to visual amenity (i.e. tranquillity and levels of business/movement in the view) and not just consideration of static built form or vegetation.

8.4.7. **Table 14.7 Item 2. Faster growth.** Qualitative sensitivity analysis, item 2 – Faster growth. Rise in passenger demand more quickly is deemed not to alter the assessment. Assuming faster growth results in peak passenger demand at any earlier stage when planting is less mature, and that peak demand is retained for longer, then further justification is needed to explain why this would not influence receptors for a longer period and potentially before all vegetation (particularly that planted in Phase 2b) is mature. Further justification of item (2) is required to support the conclusion that rise in passenger demand more quickly is not deemed to alter the assessment.

8.4.8. **Table 14.7 Item 6. Changes to airspace.** It is not clear how different flight paths would impact receptors. The existing assessment includes additional areas in the AONB relating to flight paths/ heights. How will changes to flight paths affect the AONB assessment? Discussion and further clarification of item (6) is needed.

8.4.9. **Paragraph 14.10.5.** The OLBMP is identified as 'additional mitigation'. It is suggested that this element is re-worded to clearly state that the OLBMP is **embedded** mitigation but that any additional mitigation implemented will **also** fall under the OLBMP. Re-wording to aid clarity required. Any mitigation activities relating solely to 'additional mitigation' features should be clearly identified in the OLBMP.

8.4.10. **Paragraph 14.11.** It is not clear how the upgrading of one single path (item [w] at 14.10.2) results in seemingly large assessment changes in relation to the Public Right Of Way (PROW) network at both construction and operation. Further clarification within this section text relating to PROW is needed.

8.4.11. It is not clear how the planting of hedgerows results in continued improvement in effects, when they will be maintained at a set height and predicted to reach that height relatively quickly. Some

receptors are shown in different phases with the same effect whilst others change, but there is limited or no discussion as to what is influencing these changes. It is therefore difficult to determine which adverse effects the additional mitigation measures are seeking to reduce. Some of the effects noted appear to be enhancements, given that they were not identified as significant effects previously and therefore not in need of 'mitigation'. Further clarification within this section is needed to understand 'enhancement' effects rather than 'mitigation' effects.

8.4.12. **Paragraph 14.13.3.** There is no indication of timeframes for monitoring by the Developer post Phase 2b completion. Indication of monitoring requirement timeframes by the Developer post Phase 2b completion should be provided to indicate timeframes for replacements of failed planting.

8.5 MITIGATION, ENHANCEMENT AND MONITORING

8.5.1. Mitigation proposed to enhance local characteristic features such as hedges is considered to be appropriate.

8.5.2. **Paragraph 14.8.6 - 14.8.7.** Creation of replacement open space. Has the change in character of the proposed replacement open space land (loss of agricultural land and change to public use) been assessed? It does nt appear to have been.

8.5.3. **Paragraph 14.8.8.** Use of excavated material considered unsuitable for use beneath the aviation platform. What guarantees are in place to ensure that such excavated material is suitable for planting purposes? Identification of methodology should be provided to ensure excavation fill used is suitable for the types of planting proposed.

8.5.4. **Paragraph 14.8.9 bullet point (c).** Consultation with the relevant LPA officers is needed to determine if the translocation of the TPO tree is genuinely feasible given it it's a veteran tree and only in fair condition. What is the methodology for its translocation and what is the strategy for its replacement if the translocation fails? How long will the success (or otherwise) of the translocated tree be monitored for? There is no mention of a translocated tree in Appendix 14.10 Landscape Mitigation Establishment, whilst in the Tree Schedule at Appendix 14.3 Arboricultural Impact Assessment, the tree is identified for felling. Further, there is no strategy or methodology identified for translocating trees within the OLBMP at Appendix 8.2. Methodology for tree translocation and strategy for its replacement in case the tree dies in the future and/ or its on-going maintenance for long-term health need to be provided and detailed in the OLBMP. Replacements for veteran trees should be agreed with the LPA with regards to the species and number. Without this assurance clearly identified in the OLBMP, purely the moving of the tree will result in this mitigation 'strategy' being achieved, irrespective of whether it thrives or dies.

8.6 CONCLUSIONS

8.6.1. No conclusion is provided, just a cross-reference to the Detailed Appendices which do not contain any conclusions. A conclusion should be provided to provide a rounded descriptive summary on the landscape and visual impacts of the Proposed Development.

8.7 ADDITIONAL COMMENTS ON FIGURES AND APPENDICES

8.7.1. **Figure 14.1.** The title of the Plan is The Site and Landscape Study Area. No Visual study area is shown. The Legend includes a note saying the 5km study area contains character areas and AONB land. This therefore includes the section of AONB to the north of the Site only. This is not consistent with Figures 4.14 – 4.17 which suggests the AONB area is wider and extends to the west as well as

the north. The Visual study area should be included on this plan. Clarification is needed on the study area. The 'additional' AONB study area should be clearly indicated on this plan.

8.7.2. **Figure 14.2.** Understanding of the Figure requires cross referencing with the Methodology document (Appendix 14.1) to understand how the basic ZTV has been generated making review very cumbersome. All key relevant information should be included on the Figure such as base mapping used, observer eye height, Site extent, height of development plotted etc. to prevent opening multiple documents to understand.

8.7.3. The three study areas are not shown on Figure 14.2 (overlying the ZTV) and the Figure is drawn at a different scale to every other Figure making it more difficult than necessary to understand. A consistent scale should be used (e.g. 1:50000) so it's clear how visibility relates to other Figures.

8.7.4. Figure 14.2 does not contain the order limits on the plan, it is only referenced in the key. Order limits should be shown on the plan.

8.7.5. Figure 14.2 does not cover the whole study area, only part of it. The whole study area should be shown on the plan.

8.7.6. **Figure 14.3.** Why are landscape character areas only shown for those in and around the immediate area of the Site? Why are character areas across the study area, including the AONB, not shown? All Character Areas should be included on the Figure.

8.7.7. **Missing.** A figure showing Visual Receptors is not provided. It is therefore difficult to determine where the Visual Receptors being assessed are located. A Figure showing all the key visual locations and receptors should be provided.

8.7.8. **Appendix 14.1 Section 5.5. LVIA Methodology** - Sensitivity of Receptor. There is no table on sensitivity ratings provided in 5.5 – only tables relating to Landscape Susceptibility and Value. Sensitivity ratings should be provided, given that your combined table at para 5.7.1 (Table 5.4) clearly shows ratings for sensitivity. Descriptors for each of the three ratings should therefore be given in 5.5.

8.7.9. **Appendix 14.1 Section 6.4. LVIA Methodology** - Sensitivity of Visual Receptor. There is no table or discussion of sensitivity provided in 6.4 – only discussion and tables relating to Susceptibility and Value. Sensitivity ratings should be provided, given that the combined table at para 6.6.1 (Table 6.9) clearly shows ratings for sensitivity. Descriptors for each of the three ratings should therefore be given at 6.4.

8.7.10. **Appendix 14.4 Section 2. Detailed Landscape Assessment**. Section 2 provides the detailed assessment of impacts on aesthetic and perceptual qualities of the AONB. It does not define those qualities, merely states that there are qualities that can be experienced in some areas of the AONB. There is no discussion as to what is experienced in the area of the AONB being specifically considered, including visitor experience. Further consideration needs to be given in relation to the special qualities of the AONB to make the assessment far more robust. By acknowledging that the development has a permanent significant adverse effect on the AONB, a more robust and reasoned defence should be provided.

8.7.11. **Appendix 14.4. Detailed Landscape Assessment.** Throughout this appendix, reference to aesthetic and perceptual qualities only appear to be considered in relation to the AONB. It is not made clear as to why these factors are ignored for other receptors. As per GLVIA3 para 3.15 landscape includes the way the landscape is experienced. For example:

a) The cottages and farmsteads east of the airports are identified as experiencing no change at any point, yet if they sit within a designated landscape (Appendix 14.9 AONB Sensitivity Test) then adverse effects on the perceptual and aesthetic qualities in this area would increase. There is no explanation provided as to why the AONB in terms of its tranquillity is influenced but the scattered cottages and farmsteads in the same location are not.

b) Narrow winding lanes. Will there be increased traffic using the narrow roads as cut throughs to the airport? How would that affect their character? There is no discussion as to the current experience and character of those lanes therefore only direct physical changes are being considered. This is not a complete assessment of landscape character.

8.7.11.1 Clarification is needed as to why features are considered in terms of their physical presence only and not in terms of 'character' – which includes the way they are experienced.

8.7.11.2 Clarification is needed as to why some unaffected elements such as 'The outlying cottages and scattered farmsteads east of the airport' have been singled out and included in the assessment as a separate feature at all, given that the development has never included the demolition of any of these physical features therefore could be reasonably assumed from the outset that there would be no effect from the outset?

8.7.12. **Appendix 8.2 OLBMP Appendix 14.10.** There is no mention of a translocated tree in Appendix 14.10 Landscape Mitigation Establishment, whilst in the Tree Schedule at Appendix 14.3 Arboricultural Impact Assessment, the tree is identified for felling. Further, there is no strategy or methodology identified for translocating trees within the OLBMP at Appendix 8.2. Methodology for tree translocation and strategy for its replacement and/ or on-going maintenance for long-term health need to be provided and detailed in the OLBMP. Without this assurance, purely the moving of the tree will result in this mitigation 'strategy' being achieved, irrespective of whether it thrives or dies.

8.7.13. **Appendix 8.2 OLBMP paragraph 7.2.6 point (d).** There is no indication of timeframes for monitoring by the Developer post Phase 2b completion. Indication of monitoring requirement timeframes by the Developer post Phase 2b completion should be provided to indicate timeframes for replacements of failed planting.

8.8 SUMMARY

8.8.1. The Chapter and its associated appendices are not well summarised, requiring continual cross checking of other documents. This makes understanding of the Chapter circuitous and time consuming and suggests the author is seeking to divert the reader from questioning the Chapter due to complexity of searching for the answers.

8.8.2. Whilst much of the assessment is agreed with, the Chapter lacks clarity, transparency and a robustness of reporting that diminishes confidence in the reader. The Chapter should be complete as a standalone document, incorporating all necessary key information to make understanding of the assessment possible. It should not require review of all associated appendices in order to understand the Chapter.

8.8.3. Numerous clarifications are still required and various inconsistencies are noted. In particular, there is a lack of consideration of aesthetic and perceptual qualities contributing to landscape character. it is felt that impacts on the AONB are not fully considered, particularly in terms of landscape effects.

9 NOISE AND VIBRATION

9.1 DOCUMENTS REVIEWED

9.1.1. The following documents have been reviewed:

- 5.01 Environmental Statement - Chapter 16 - Noise and Vibration (ES noise chapter);
- 5.02 Environmental Statement - Appendix 16.1 Noise and Vibration Information (provides supporting technical detail to the noise chapter, including details of model validation);
- 5.02 Environmental Statement - Appendix 16.2 Operational Noise Management (Explanatory Note) (provides further detail and explanation of the mitigation and compensation in the noise chapter - including the Noise Envelope and its development);
- 5.02 Environmental Statement - Appendix 16.3 Fixed Plant Noise Management Plan (a short appendix to secure the process for management of fixed plant noise via the DCO);
- 5.03 Environmental Statement - Chapter 16 Noise and Vibration Figures 16.1 - 16.20 (figures are split across six documents);
- 5.03 Environmental Statement - Chapter 16 Noise and Vibration Figures 16.21 - 16.40;
- 5.03 Environmental Statement - Chapter 16 Noise and Vibration Figures 16.41 - 16.60;
- 5.03 Environmental Statement - Chapter 16 Noise and Vibration Figures 16.61 - 16.80;
- 5.03 Environmental Statement - Chapter 16 Noise and Vibration Figures 16.81 - 16.97b;
- 5.03 Environmental Statement - Chapter 16 Noise and Vibration Figures 16.98a - 16.104;
- 7.07 Green Controlled Growth Explanatory Note (explanatory note for the Green Controlled Growth within which the Noise Envelope sits);
- 7.08 Green Controlled Growth Framework (the actual GCG framework document secured via the DCO);
- 7.08 Green Controlled Growth Framework Appendix A -Draft ESG - Terms of Reference;
- 7.08 Green Controlled Growth Framework Appendix B -ESG Technical Panels Draft Terms of Reference;
- 7.08 Green Controlled Growth Framework Appendix C - Aircraft Noise Monitoring Plan;
- 7.10 Draft Compensation Policies, Measures and Community First (provides details of the noise insulation scheme.

9.2 LEGISLATION, POLICY AND GUIDANCE

9.2.1. The submitted documentation contains reference to a near-complete list of legislation, policy and guidance documents. No reference is made to Building Bulletin 93 - Acoustic design of schools: performance standards (February 2015). No reference is made to Overarching Aviation Policy statement (issued in March 2023).

9.2.2. It is not clear how current and emerging noise policy is adhered to, by limiting and where possible reducing the number of people significantly affected by aircraft noise, and whether there is an appropriate balance between growth and noise reduction.

9.3 BASELINE INFORMATION

9.3.1. The baseline year used is 2019, with no account for the noise condition breaches in this year. This is not acceptable.

9.3.2. Baseline noise monitoring data is not sufficient to fully characterise the existing noise environment in impacted areas of Hertfordshire.

9.3.3. The future baseline takes account of the extant noise contour condition on Luton Airport, which is acceptable.

9.3.4. The baseline air noise and ground noise models are acceptable. Clarification is sought on the baseline surface access noise model, which contains material differences between measured and predicted noise levels with no explanation as to why.

9.4 ASSESSMENT OF SIGNIFICANT EFFECTS

9.4.1. The correct air noise assessment is limited to a sensitivity study, which is not acceptable. In future years, reliance is placed upon the incorrect test (Do Something vs. Baseline) rather than the correct test (Do Something vs. Do Minimum).

9.4.2. By the Applicant's own admission, by 2043 the Development core case would lead to 18,300 more people moving within the LOAEL and 500 more people within the SOAEL, for air noise in the daytime. The night-time equivalents are 27,150 people into LOAEL and 1,900 into SOAEL. While populations are only provided for the whole study area, it is reasonable to assume that a strong percentage of the LOAEL increase covers the Stevenage area and some percentage of the SOAEL increase covers the Breachwood Green area. Both are in Hertfordshire, under the preferred approach path.

9.5 MITIGATION, ENHANCEMENT AND MONITORING

9.5.1. In principle, the proposed Noise Insulation Scheme is acceptable. Some minor improvements to improve flexibility are suggested.

9.5.2. The Green Controlled Growth scheme has not been demonstrated to be effective at controlling breaches, such as those that have occurred historically. This was a requirement of the Host Authorities made within the Noise Envelope Design Group (NEDG).

9.5.3. The Green Controlled Growth scheme does not contain the full suite of noise controls set out by the Host Authorities within the NEDG report. These include extant noise-related conditions. The GCG scheme must be updated to include a wider range of controls compared to what is offered.

9.6 CONCLUSIONS

9.6.1. Summary noise conclusions are reached using the wrong assessment test. The noise chapter does not set out the assessment transparently.

9.7 ADDITIONAL COMMENTS ON FIGURES AND APPENDICES

9.7.1. Colour-coding within some tables are applied incorrectly and should be updated. A list of figures should be provided, for ease of reference.

9.8 SUMMARY

9.8.1. The noise documents do not, in our view, present a case that complies with UK aviation noise policy or emerging policy, which is equally important when looking at timeframes well into the future. Assessments for various sources of noise are not portrayed consistently or transparently. The air noise assessment, which is typically the most important environmental issue for local communities,

seeks to present a case of noise reduction over time through focusing on the wrong test and use of a baseline that was not in compliance with extant planning conditions. The incorrect methodology allows claims of noise reduction, rather than the clear noise increase brought about by the proposed development compared to the do minimum case in all future years. This key indicator of the likely scale of impact is only presented as a sensitivity case.

10 WATER RESOURCES AND FLOOD RISK

10.1 DOCUMENTS REVIEWED

10.1.1. The following documents have been reviewed:

- 5.01 Chapter 20: Water Resources and Flood Risk
- 5.03 Chapter 20 Water Resources and Flood Risk Figures 20.1 – 20.6
- 5.07 Appendix 20.1: Flood Risk Assessment
- 5.02 Appendix 20.3 Hydrogeological Characterisation Report
- 5.02 Appendix 20.4 Drainage Design Statement
- 5.02 Appendix 20.5 Water Cycle Strategy
- 5.02 Appendix 20.6 Hydrogeological Risk Assessment – Drainage

10.1.2. Appendix 20.2 Water Framework Directive assessment has been reviewed and the comments identified for this report are consistent with those provided for the Environmental Statement Chapter 20 Water Resources and Flood Risk.

10.2 LEGISLATION, POLICY AND GUIDANCE

Flood Risk Assessment (Appendix 20.1)

10.2.1. Confirmation is sought on why the Airport Access Road is identified as more vulnerable.

Hydrogeological Characterisation Report (Appendix 20.3)

10.2.2. Appendix 20.3 (Hydrogeological Characterisation Report) is in line with relevant legislation, policy, and guidance described in this document (Chapter 20).

Drainage Design Statement (Appendix 20.4)

10.2.3. Large capacity tanks are required for maintenance and access. There is no reference to provision or the number of tankers required to empty the tanks during periods of routine and emergency maintenance.

10.2.4. No drawing is provided showing proposals for Sustainable Drainage Systems (SuDS) features and it is not clear if sufficient space is included in the design for them. Clarification is required on whether the water quality requirements are based on Design Manual for Roads and Bridges (DMRB) or SuDS Manual.

10.2.5. This report references filter drains to be provided in areas with limited space. Without benefit of drawings it is hard to understand if there will be a maintenance/access issue or if this has been considered within the available land.

Water Cycle Strategy (Appendix 20.5)

10.2.6. The report provides no reference to the Environment Act 2021 that sets new polices and targets for improving the natural environment, including those relating to sewage, abstraction and water quality. In particular the Act may change the requirements and operation of the relevant sewerage and water supply utility companies, which may in turn affect Proposed Development operations. The Applicant should review the requirements of the Environment Act 2021 and understand the implications that this may have for the Proposed Development, and set out any proposed measures to ensure with compliance of the Act.

Hydrogeological Risk Assessment (Appendix 20.6)

10.2.7. Appendix 20.3 (Hydrogeological Characterisation Report) is in line with relevant legislation, policy, and guidance described in this document (Chapter 20).

10.3 BASELINE INFORMATION

Flood Risk Assessment (Appendix 20.1)

10.3.1. Discussions of existing surface water overland flow paths should be included and assessed and how the development may change or disrupt those flow paths should be included. Appropriate mitigation should be included where there is a change in existing flow paths.

Hydrogeological Characterisation Report (Appendix 20.3)

10.3.2. The report states that the “chalk matrix has a high average porosity of approximately 35%.” Typically, porosity is highly spatially variable. It is essential that the Applicant provides data where this is available from previous geotechnical or hydrogeological investigations, if this is not available then justification on not undertaking GI until detailed design needs to be provided. A citation should be provided for porosity.

10.3.3. The legend states “groundwater locations” which should be corrected to “groundwater monitoring location”. An additional figure which just shows the airport itself would help to identify the site location in the context of the groundwater monitoring locations.

Drainage Design Statement (Appendix 20.4)

10.3.4. The estimated volume of existing soakaways is based on assumptions.

10.3.5. Baseline potable water data which proposals are based on (19/20 data) may potentially be impacted by a global pandemic. It is probable that the baseline data will not represent the ‘average’ year.

10.3.6. There is no reference to what rainfall data was used.

10.3.7. There is no information or reference made with respect to the condition of the existing network or residual life of the existing network.

10.3.8. No reference has been made to what method was used in calculating greenfield run off rates.

10.3.9. The drainage design statement states it is ‘based on a conservative approach’ but no information or detail is provided on this conservative approach.

10.3.10. In reference to rainwater harvesting further information is required, specifically about how these systems are designed and managed and if the design in accordance with SuDs Manual.

10.3.11. Potential locations of rainwater harvesting tanks are provided. No information has been provided on how these potential locations were arrived at.

Water Cycle Strategy (Appendix 20.5)

10.3.12. The Applicant references Appendix 20.4 Drainage Design Statement (DDS), stating a calculated average demand of potable water of 7.5 l/s. Review of Appendix 20.4 indicates this value was calculated based on 2019/2020 potable water consumption data. The dates that data was collected are unknown. Given the significant nationwide lockdowns experienced in 2020 it is unclear if this dataset is representative of post-Covid-19 conditions.

Hydrogeological Risk Assessment (Appendix 20.6)

10.3.13. Site-specific water quality data or information is missing if the Applicant has taken any.

10.3.14. Reference of source concentration data is missing.

10.4 ASSESSMENT OF SIGNIFICANT EFFECTS

Water Resources and Flood Risk (Chapter 20) – Water Quality

10.4.1. The assessment of impact to water quality of surface and groundwater receptors relies on the treatment specified in the DDS (Appendix 20.4). Given that the review of the DDS has identified data gaps, it cannot be confirmed if the Lead Local Flood Authority (LLFA) agree with the conclusions regarding impact to surface water and groundwater quality.

10.4.2. Furthermore a review of Appendix 20.6 identifies that insufficient evidence is presented to justify that pollution to the chalk aquifer is insignificant.

Water Resources and Flood Risk (Chapter 20) – HEWRAT

10.4.3. More clarity is required on how the additional mitigation measures required as identified in the HEWRAT assessment would be secured through the DCO process. Paragraph 7.2.3 of the DDS (Appendix 20.4)

10.4.4. There is a discrepancy over whether HEWRAT assessment has been completed or if it is to be completed at detailed design stage.

10.4.5. If a HEWRAT assessment has been completed the details of this should be provided so it can be reviewed by consultees.

10.4.6. If the additional mitigation measures are being specified at detailed design stage, confirmation is required that there is sufficient space within the site boundary to deliver the additional mitigation measures required.

Flood Risk Assessment (Appendix 20.1)

10.4.7. Details on the off-site Highway Interventions and their potential impact on fluvial flooding should be expanded. It states that the proposed works are limited in scope and scale, however no details are provided on those works.

Hydrogeological Characterisation Report (Appendix 20.3)

10.4.8. The impacts (negative or positive) that are identified through a predictive scenario are not described in detail in the documents.

10.4.9. The predictive scenarios are evaluated under the high hydraulic conductivity of upper chalk (2.37E-5m/s). However, typically, the site-specific packer test results indicate significantly lower hydraulic conductivity, in the range of 1E-7 to 1E-8 m/s (Table 5.3). It generates high uncertainty.

10.4.10. The WTP (classified as potential for groundwater flooding of property situated below ground level) and southern infiltration tank (classified as potential for groundwater flooding to occur at surface) are located in areas susceptible to groundwater flooding, as per Figure 20.5.

Hydrogeological Risk Assessment (Appendix 20.6)

10.4.11. The predicted concentrations of all contaminants were derived based on a single simulation. However, source concentration magnitude might vary due to the high uncertainty.

10.4.12. The Infiltration worksheet predicts reducing the bromine discharge concentration to 3mg/l would result in the predicted concentration of bromine at the 50m compliance point being below the water quality criteria.

10.5 MITIGATION, ENHANCEMENT AND MONITORING

Flood Risk Assessment (Appendix 20.1)

10.5.1. Clarification on what improvements to the local surface water management provision could be made should be expanded upon and more certainty given as to their inclusion and technical feasibility.

Hydrogeological Characterisation Report (Appendix 20.3)

10.5.2. A worst-case scenario of groundwater flooding was evaluated based on the Environment Agency's Hertfordshire groundwater model. However, the Hertfordshire groundwater model is not well described anywhere in the documents, nor is it described that any alteration was made to the model to incorporate site-specific data or information to accurately predict scenarios. The groundwater flow calibration is missing.

10.5.3. The groundwater model needs to be reviewed by the consultees.

Drainage Design Statement (Appendix 20.4)

10.5.4. Clarification is required on how surface water runoff be diverted away from the water environment, (including the techniques for the management and monitoring) for when the fire training ground is both in and not in use. Also clarification is sought on how fire water will be managed during an emergency scenario.

Water Cycle Strategy (Appendix 20.5)

10.5.5. The assessment of post-development water demand for each Assessment Phase ranges from a baseline of 18 mppa to a future post-development number of 32 mppa. It is unclear if 32 mppa is the maximum permitted capacity and therefore provides some assurance that passenger numbers will not increase beyond this number without a requirement for further assessment. Inset 3 in Section 4.8 indicates significant growth in passenger numbers from c.10 mppa in 2015 to c.18 mppa in 2019.

10.5.6. The calculation of water demand in Assessment Phase 1 uses the calculation "0.9*9l/s – 7.5l/s = 0.6l/s". It is unclear where the figure of 9l/s comes from as this does not align with the predicted water demand figures in Table 5.1.

10.5.7. The report calculates that a storage tank of approximately 3,000m^3 would be sufficient to maintain a constant monthly supply of approximately 3,400m^3. Detailed calculations have not been provided for review. It is unclear how this assessment has taken into account seasonal fluctuations and, most importantly, reduced rainfall during summer months that may be exacerbated by the effects of climate change. It is also expected that the rainfall predicted during the summer months (including climate change effects) is compared against the peak demand that may be experienced during the summer months, rather than the annual average.

10.5.8. The report states a calculated water demand for Assessment Phase 2a of 10.1l/s. It is unclear how this figure has been calculated. Applying the same formula used in Para 6.2.7 suggests a water demand of 10.0l/s (0.9*11.1l/s) if applying 1 decimal place.

10.5.9. The calculations appear to only refer to the average water demand. Consideration does not seem to have been given to the peak water demand.

10.5.10. The report predicts a potential increase in non-terminal water of 1.7l/s in Phase 2a and 2.5l/s in Phase 2b, increasing the total demand to 5l/s in Phase 2a and 5.8l/s in Phase 2b. The report surmises that this water could be collected following use and treated to be re-supplied as a non-potable water supply. However, it is understood that there is uncertainty about how the non-terminal water is used and therefore we conclude that there would also be uncertainty about how easily this water could be collected for re-use, or how easily these uses could be supplied with a non-potable supply. The report also surmises that there would be a relatively consistent supply and demand balance, which we conclude is currently unknown based on the information provided in the report. The Applicant is required to clarify the assumptions made in the report, including information regarding non-terminal water uses and viability for collection and re-use along with clarifying assumptions made regarding variability of supply and demand throughout the year.

10.5.11. The report references Table 5.1 and states a water demand figure of 13.3l/s. This appears to be incorrect and should state 13.2l/s.

Hydrogeological Risk Assessment (Appendix 20.6)

10.5.12. All underground tanks (storage and infiltration) have been designed with the bottom of the tanks at least 1m above the maximum 1 in 100 year storm event groundwater table level (approximately 9 m above the seasonal maximum groundwater level).

10.5.13. The infiltration tanks have been designed to an infiltration rate of 0.085 m/hr. The risk of clogging is not considered, which would reduce the infiltration rate over time and should highlight maintenance and mitigation plans.

10.5.14. The assessment states “A constant discharge to ground in the Northern Infiltration Tank has been assumed for this assessment based on an estimated average discharge rate of 30 l/s”. The calculation is not provided.

10.5.15. The predicted concentrations of Iron, Ammonium and Bromine exceed the water quality criteria at the unsaturated zone and 50m compliance point. As per the statement, "it is recommended that during the detailed design it is considered whether lower concentrations in the discharged effluent could reasonably be achieved."

10.6 CONCLUSIONS

Water Resources and Flood Risk (Chapter 20) - Water Quality

10.6.1. The assessment of impact to water quality of surface and groundwater receptors relies on the treatment specified in the DDS (Appendix 20.4). Given that the review of the DDS has identified data gaps, it cannot be confirmed if the LLFA agree with the conclusions regarding impact to surface water and groundwater quality.

Flood Risk Assessment (Appendix 20.1)

10.6.2. Whilst flood risk is not a significant constraint for the scheme further details and expansion of key areas would provide increased confidence in the assessment.

10.6.3. Flood risk is not currently secured via an appropriately worded requirement in the dDCO; this needs to be addressed.

Hydrogeological Characterisation Report (Appendix 20.3)

10.6.4. The report is well described and highlighted all points regarding hydrogeological characterisation for quantity assessment aspects.

Hydrogeological Risk Assessment (Appendix 20.6)

10.6.5. The assessment states “the proposed discharge concentrations of cadmium, chromium, copper and chlorine are considered to be acceptable and are unlikely to result in significant pollution of groundwater. “The discharge concentration of the above-mentioned elements is not described, and impact assessment is also not provided. These contaminants, in high enough concentrations, could have a significant impact on the groundwater quality aspect of the chalk aquifer.

10.6.6. The mitigation plan is not described and is not presented well.

10.6.7. The impact of contaminants on groundwater has been identified; however, it has been recommended to evaluate it during the detailed design. It should be assessed at this stage.

10.7 ADDITIONAL COMMENTS ON FIGURES AND APPENDICES

Water Resources and Flood Risk (Chapter 20)

10.7.1. The Study Area and Zone of Influence is not shown on Figure 20.1 as stated in Table 20.5. The 1km buffer appears on the legend but not within the mapping.

Flood Risk Assessment (Appendix 20.1)

10.7.2. It would be much easier for the reader to have some maps and figures in the text to aid understanding and analysis.

Hydrogeological Characterisation Report (Appendix 20.3)

10.7.3. The report is presented in a systematic order, including appropriate figures and tables. However, a section should be added that describes the Environment Agency’s Hertfordshire groundwater model and what alteration is applied in order to utilise the site-specific study area.

Drainage Design Statement (Appendix 20.4)

10.7.4. Regarding drawings within this document, line types are not consistent with the key and several of the notes are cut off in view ports. The text is varying in colour and there are issues with the draw order.

10.7.5. No calculations have been provided in support of design and assumptions.

Hydrogeological Risk Assessment (Appendix 20.6)

10.7.6. The unit used is not consistent through the documents.

10.8 SUMMARY

10.8.1. There is a lack of detail provided regarding drainage design (including water treatment), water re-use and groundwater modelling. It is recommended that further detail is provided so that the design can be reviewed more thoroughly.

11 ECONOMICS AND EMPLOYMENT

11.1 DOCUMENTS REVIEWED

11.1.1. The following documents have been reviewed:

- Chapter 11: Economics and Employment
- ES Appendix 11.1 Oxford Economics

11.2 LEGISLATION, POLICY AND GUIDANCE

11.2.1. Table 11.1 of Section 2 of the ES Chapter includes relevant national and local policies, highlighting specific policies relevant to economics and employment, including:

- Hertfordshire Local Enterprise Partnerships (LEP's) The refreshed Strategic Economic Plan: 2017-2030, July 2017
- Local Industrial Strategies (LISs) (produced by LEP's), September 2019
- Hertfordshire LEP's Draft Hertfordshire Local Industrial Strategy, September 2019
- Dacorum Borough Council Core Strategy 2006-2031, September 2013

11.2.2. However, The North Hertfordshire Local Plan 2011-2031, which was adopted in November 2022 replaced The North Hertfordshire District Council Local Plan No.2 with Alterations (1996) and North Hertfordshire District Council Draft Local Plan 2011-2031 (2016). The latest version should be included in place of the previous Plans as it is now the most up to date at the time of writing.

11.2.3. The Hertfordshire County Council Corporate Plan 2019-2025, July 2019 has been superseded by The Hertfordshire County Council Corporate Plan 2022-2025 since the time of writing.

11.2.4. In Table 11.3, the guidance referred to is considered to incorporate all relevant documents and are the latest and most up to date. Table heading is 'Legislation' and should be 'Guidance'. For future reference, Homes and Communities Agency (HCA) is now known as Homes England.

11.3 BASELINE INFORMATION

11.3.1. The baseline information presented is considered appropriate for the Proposed Development.

11.3.2. In paragraph 11.7.1 it is outlined that public sources were used to identify business addresses but these are not listed.

11.3.3. Paragraph 11.7.13 reports future baseline in regard to, labour supply and employment but there is no reference to elements in the future baseline which would clarify the outlook taken later in the assessment for business travel jobs, tourism GDP, tourism jobs, journey time savings, APD revenue, and demand in local housing markets which form part of the Economics and Employment assessment.

11.3.4. The statement "*The 'Without Development' scenario is used, where appropriate, as a comparator for the assessed case, to show the effect of the Proposed Development against an appropriate reference point*" is unclear as the appropriate reference point is not defined.

11.3.5. OxEcon refers to a "Core Planning Case". It would be useful to know: (1) if this corresponds directly to the 'With Development' case in the E&E chapter, and (2) how it corresponds to core and other outlooks in local plans such as the LEP's LIS.

11.3.6. The future baseline is currently being reported in various sections, including Sections 11.7 and 11.9. It would be advantageous for the reader to understand the chapter by grouping all future baseline description in one section.

11.3.7. It is not clear why housing for construction workers only requires half the houses needed for operational workers (see corresponding section in construction). They should consistently represent the response from the housing market and any inflows of workers. The Applicant should provide reasoning / justification for the housing numbers identified as being required for the Proposed Development.

11.4 ASSESSMENT OF SIGNIFICANT EFFECTS

11.4.1. The Study Area is outlined and justified and is considered to have been identified appropriately. There is a clear description of both the immediate study area (Airport Employment Area) and the wider study area (comprising the local area of LBC and the Three Counties).

11.4.2. It is noted that consultation has been undertaken with the relevant statutory bodies and the Consultation Report is a separate document that was submitted as part of the DCO application. Attendees are listed as well as a summary of the main themes that were raised during consultation have been clearly reported in Section 11.4.3, as well as in Table 11.5

11.4.3. A composite multiplier value of 1.5 is not specifically refenced or otherwise justified. It may be from HCA additionality guide Table 4.14 (regional and medium is 1.5), but a more specific value of construction (2.19) is quoted in the safe reference and would seem more appropriate. Also other government sources indicate a multiplier of 2.19 for construction and 7.4 for the FTE/£m investment which could be used to check the unreferenced factor of 10 (person years to 1 FTE) commented on elsewhere,

11.4.4. Note that the selection of a lower value of 1.5 may seem to support the approach that ‘A worst case assessment has been adopted for the Economics and Employment assessment’ (Para 11.6.5) but this would be lead to over-optimistic representation of effects which are greater at higher multipliers (such as demand for construction workers in local employment markets). Multipliers and factors used should be clarified, including their regional/national/local scope.

11.4.5. The guidelines for estimates of significance (for effects during construction) are not referenced or otherwise justified and are surprising in not being related to a labour market of a particular size. Comparative estimates for Hinckley Point C are in % terms and consider an impact 'major' if over 2% and ‘moderate’ if from 1-2%. Additional justification should be provided for levels of significance.

11.4.6. No indication of the thresholds for housing receptor sensitivity is provided.

11.4.7. As with construction, the guidelines for estimates of significance (for effects during operation) are not referenced or otherwise justified and are not related to a labour market of a particular size. In addition, they are different from those used to assess construction impacts. Levels of significance require additional justification. An explanation should be provided to explain differences between those used for construction.

11.4.8. Section 11.6 clearly outlines assumptions and limitations associated with the Economics and Employment assessment.

11.4.9. Paragraph 11.6.2 details assumptions related to the construction employment methodology and is informed by Census 2011 data as the results of the 2021 Census had not been released at the time of writing. It would be appropriate to include the most up to date data, or state that this is a limitation.

11.4.10. The majority of significant effects described in Section 11.9 are beneficial and therefore mitigation measures are not considered necessary for the majority of the effects. Paragraphs 11.5.13 and 11.9.6 state that "ten construction job years is assumed to equate to one FTE job" which is based on the HM Treasury's standard approach. The HM Treasury guidance document 'The Green Book' does not contain this information. The assessment methods used follow relevant guidance, with potential effects considered both during construction and operation. The correct source of the approach used from the HM Treasury's guidance document 'The Green Book' should be provided.

11.4.11. Effects should be reported at a more local level as suggested by the Inspectorate (i.e. by each local authority rather than combined for Luton and the Three counties). It would be more appropriate to show how the employment opportunities will be spread, also taking into account constraints posed by peak hour traffic congestion. This should be considered within the assessment. The Applicant should report effects on a local level (each local authority) rather than combined Luton and the Three Counties.

11.5 MITIGATION, ENHANCEMENT AND MONITORING

11.5.1. There are no monitoring requirements identified in the chapter for the performance of mitigating measures in the construction or operational phases of the Proposed Development. It is considered that monitoring of the local businesses (specifically during the construction phase) should be included to ensure adverse effects are avoided where possible. The Applicant should identify what monitoring of local businesses should be carried out during the construction phase.

11.6 CONCLUSIONS

11.6.1. There is no concluding or summary text within the Chapter.

11.7 ADDITIONAL COMMENTS ON FIGURES AND APPENDICES

11.7.1. No comments.

11.8 SUMMARY

11.8.1. The overall Assessment is considered likely to be broadly correct in respect of the effects which are assessed. However, not all effects are quantified and some may have been overlooked.

11.8.2. The estimating methods used for the effects assessed quantitatively are fairly standard and so the accuracy of estimates (e.g. for local employment) depends on assumptions regarding inputs (e.g. the construction programme). The effects are often closely and directly linked to input levels through a simple factor.

11.8.3. The main uncertainties are related to inputs for:

- The forecast level of passenger demand – this is inherently uncertain according to both prospects for international aviation and potential competition with other UK and international airports.
- The impacts of outbound tourism – this has methodological challenges (as highlighted in the chapter), but the impacts on Luton and neighbouring area of significantly increased passenger volumes may be of greater concern than the chapter currently expresses. For example, economic

effects from the increased local hotel use or other services tourists might use are not specifically identified.

11.8.4. More generally, this version of the chapter does not seem to have fully addressed the Inspectorate's comments, often has a low level of referencing leading to appreciable unclarity, and seems to have been developed organically with (e.g.) baseline information appearing in a number of separate places.

12 HEALTH AND COMMUNITY

12.1 DOCUMENTS REVIEWED

12.1.1. The following documents have been reviewed:

- 5.01 Environmental Statement - Chapter 13 Health and Community
- 5.02 Environmental Statement - Appendix 13.1 - Open Space Survey Methodology
- 5.02 Environmental Statement - Appendix 13.2 - Open Space Survey Results
- 5.02 Environmental Statement - Appendix 13.3 - Open Space User Questionnaire
- 5.02 Environmental Statement - Appendix 13.4 - Methodology for Health and Community Assessment
- 5.02 Environmental Statement - Appendix 13.5 - Evidence Review for Health Assessment
- 5.03 Environmental Statement - Chapter 13 Health and Community Figures 13.1 – 13.2

12.2 LEGISLATION, POLICY AND GUIDANCE

12.2.1. The Environmental Statement (ES) Chapter 13 appears to refer to the majority of the policy and legislation that would be expected for such an assessment including the North Hertfordshire Local Plan 2011-2031 (Policy SP10), Hertfordshire County Council's Sustainable Hertfordshire Strategy 2022, and the Dacorum Local Plan 2020-2038 (Policy 22.1). However for guidance, while the Hertfordshire County Council Health Impact Assessment Position Statement 2019 is referenced in the ES Chapter 13, there is no mention of the county-wide Hertfordshire Joint Strategic Needs Assessment (JSNA), which looks at the specific health and social care needs of the local population. It is noted though that the Hertfordshire Mental Health and Wellbeing JSNA is referenced in Appendix 13.4 Methodology for Health and Community Assessment.

12.3 BASELINE INFORMATION

12.3.1. It is noted that the study area is comprised of both a 'local neighbourhood area', which is situated primarily within Luton Borough Council but also extends into North Hertfordshire, and a 'wider area' which includes Hertfordshire as well as other local authority jurisdictions. The JSNA for Luton has been included as a source for baseline information, however the JSNA for Hertfordshire has not been included. It would be expected that local health data from the Local Authorities included in the whole study area would be referenced and used to inform the baseline. Instead the baseline relies on Local Authority Health Profiles produced by the Office for Health Improvement and Disparities (OHID) to report on health indicators. The Health Profile referenced in the baseline is for Hertfordshire County as a whole, and does not include a breakdown of any localised indicators for individual authorities, such as North Hertfordshire District Council and Dacorum District Council. It is noted that a profile for the Hitchwood, Offa and Hoo ward (situated in North Hertfordshire) has been referenced, as part of it sits within the 'local neighbourhood area' portion of the study area. While OHID datasets are robust, data collected and reported by local Public Health teams provides useful, localised insights which should also have been reported on and used to develop the baseline.

12.3.2. The prevalence of vulnerable groups in the wider study area have been identified at a Hertfordshire County level. By doing this, there is a risk that vulnerable groups in the districts situated in close proximity to the airport, such as Dacorum and North Hertfordshire, are not being identified as their presence is averaged across the County as a whole. As highlighted in the Hertfordshire's Director

of Public Health Annual Report 2019/20, while the general standard of living in Hertfordshire is high there are pockets of deprivation across all of Hertfordshire's districts, and significant variations in health outcomes[1]. It is these vulnerable groups situated closest to the airport who are most likely to experience disproportionate impacts from the Proposed Development.

12.3.3. The Future Baseline provided in the ES Chapter 13 is limited in scope to population projections for Luton, and general health indicators at a national (England) scale. There is no information provided for Hertfordshire, or the Hertfordshire districts, who are part of the study area for the assessment.

12.4 ASSESSMENT OF SIGNIFICANT EFFECTS

12.4.1. The ES Chapter 13 has made use of relevant, and up to date, guidance for the assessment of effects as would be expected.

12.5 MITIGATION, ENHANCEMENT AND MONITORING

12.5.1. A moderate adverse (significant) impact has been identified for receptors in both the 'local neighbourhood area' (including a portion of North Hertfordshire) and the 'wider area' (including all of Hertfordshire County) relating to the impacts on 'perception and uncertainty' which can effect mental health and wellbeing by increasing stress and anxiety. Embedded mitigation for impacts on 'perception and uncertainty' has been identified as implementing actions for community engagement as set out in the Code of Construction Practice (CoCP). However, this impact has been identified for all assessment phases (design, construction and operation) and the CoCP focusses primarily on the construction phase of the development. There does not appear to be any mitigation proposed or secured for this impact once the Proposed Development is operational.

12.6 CONCLUSIONS

12.6.1. The conclusions of the assessment reflect the impacts discussed and mitigation measures proposed.

12.7 ADDITIONAL COMMENTS ON FIGURES AND APPENDICES

12.7.1. Figure 13.1 would benefit from having the community resources, as listed in paragraph 13.5.10 of the ES Chapter 13 identified on the figure, enabling the reader to understand the proximity of such resources (and receptors using them) to the Proposed Scheme.

12.7.2. It would be beneficial to have a figure demonstrating the 'wider area' portion of the study area, in addition to the 'local neighbourhood area' shown in Figure 13.1. This could be broken down by the three headings identified in Table 13.6, namely showing; Areas within which there are likely to be environmental impacts, Population within the lowest observed adverse effect level (LOAEL) noise contour for aircraft noise, and Population affected by issues such as economic growth, employment and changes to the housing market resulting from the Proposed Development.

[1] Hertfordshire's Director of Public Health Annual report 2019/20: A summary of the health of our population across the county. Accessed online: https://www.hertshealthevidence.org/documents/key-resources/dph-annual-report-2019-20.pdf

12.8 SUMMARY

12.8.1. In summary it is felt that the baseline has not given enough attention to the communities situated in close proximity to the airport, but whom fall outside of the 'local neighbourhood area' portion of the study area. By reporting on the 'wider area' at a county level, there is a risk that vulnerable groups within the districts situated in close proximity to the airport have not been identified, and potential impacts missed.

12.8.2. Additionally it is recommended that mitigation to address the significant effect on mental wellbeing that has been identified once the Proposed Scheme is operational is identified and secured to minimise harm on the affected populations.

8 First Street
Manchester
M15 4RP

wsp.com