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London Luton Airport Expansion

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**8.77 Applicant's response to Written Questions -
Landscape and Visual Impacts**

Infrastructure Planning (Examination Procedure) Rules 2010

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The Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

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

**8.77 APPLICANT'S RESPONSE TO WRITTEN QUESTIONS -
LANDSCAPE AND VISUAL IMPACTS**

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1 RESPONSE TO EXAMINING AUTHORITY WRITTEN QUESTIONS (LANDSCAPE AND VISUAL IMPACTS)

Table 1.1: Responses to the Examining Authority's Written Questions (Landscape and Visual Impacts)

PINS ID	Question / Response
PED.1.16	<p>[The Applicant notes that this question is directed not only to the Applicant but also to Joint Host Authorities.]</p> <p>Question: Methodology</p> <p>Chapter 14 of the ES [AS-079, paragraph 14.5.7] advises of the distinction between the terms 'impact' and 'effect' in the Guidelines for Landscape and Visual Impact Assessment third edition (2013) (GLVIA3) and that the term 'impact' should not be used to mean a combination of several effects. The paragraph then goes on to state that the Landscape and Visual Impact Assessment (LVIA) varies from this advice and refers to 'magnitude of impact,' even when describing a combination of several effects.</p> <p>Chapter 5 of the ES [AS-075, paragraph 5.4.40] states that to provide consistency across topics within the Environmental Assessment, the methodology as described in Chapter 5 will be adopted, although where topic-specific alternatives exist (following industry-wide guidance or best practice) these have been presented within the relevant aspect assessment chapters of this ES.</p> <p>Applicant: Given the guidance in GLVIA3, which contains a topic-specific alternative, explain further why the term 'magnitude of impact' has been used as opposed to 'magnitude of effect' when judging the significance of effects in the LVIA. Explain further why this variance does not compromise the assessment, as stated in paragraph 5.6.1 of Appendix 14.1 of the ES [AS-036].</p> <p>Joint Host Authorities: Do you have any comments on the approach adopted to the methodology and use of terminology in the LVIA?</p> <p>Response: Paragraph 5.6 of Appendix 14.1 LVIA Methodology of the ES [AS-036] confirms that 'magnitude of impact' has been adopted to provide consistency with other chapters of the ES.</p> <p>With regard to this variance, this conforms to the GLVIA3 (Ref 1) as follows: <i>"1.16...This guidance urges consistent use of the terms 'impact' and 'effect' in the ways that they are defined above but recognises that there may be circumstances where this is not appropriate, for example where other practitioners involved in an EIA are adopting a different convention. In this case the following principles should apply:</i></p> <ol style="list-style-type: none"> 1. <i>The terms should be clearly defined at the outset.</i> 2. <i>They should be used consistently with the same meaning throughout the assessment.</i> 3. <i>Impact should not be used to mean a combination of several effects."</i> <p>The magnitude of impact on a landscape receptor has been assessed in terms of its:</p> <ol style="list-style-type: none"> a. size or scale - extent to which the removal or addition of landscape features alters the existing landscape character; b. geographical extent - of the area over which the effect is evident; c. duration of the effect - (short 0-5yrs/ medium 5-10yrs / long term 10-25yrs); and d. reversibility – (i.e. temporary or permanent).
PED.1.17	<p>[The Applicant notes that this question is directed not only to the Applicant but also to Joint Host Authorities].</p> <p>Question: Methodology</p>

PINS ID	Question / Response
	<p>Applicant: Appendix 14.1 of the ES [AS-036, Tables 5.3 and 6.8] sets out the judgements of the magnitude for both landscape and visual impacts being recorded as high, medium, low, very low or no change for both adverse and beneficial. Recognising the comments in ES Volume 5, Appendix 1.4 [APP-047, page 77/ electronic page 80], please explain further:</p> <ol style="list-style-type: none"> 1. why a category of 'very high' has not been included but a 'very low' category has; and 2. the extent to which the inclusion of a 'very high' category, or removal of the 'very low' category, would change the assessment of effects. <p>Joint Host Authorities: Noting the comments on this point in the report by Vincent and Gorbing - Response to Scoping Report (on behalf of the host authorities) [APP-168], Electronic Page 184 (report page 46) in paragraphs 4.148 and 4.149, please provide further comments on this matter and a response to point 2 above.</p> <p>Response: The range of criteria used to define both value/sensitivity of receptors, and magnitude of impacts, are described in Chapter 5 Approach to the Assessment of the Environment Statement (ES) [AS-075] as High, Medium, Low, Very low as general guidance. This is a common approach with descriptors provided for each criteria which is recognised good practice.</p> <p>GLVIA3 recommends the use of:</p> <p><i>'Word scales, with ideally three or four but a maximum of five categories, are preferred as the means of summarising judgements for each of the contributing criteria... The final overall judgement of the likely significance of the predicted landscape and visual effects is, however, often summarised in a series of categories of significance reflecting combinations of sensitivity and magnitude. These tend to vary from project to project but they should be appropriate to the nature, size and location of the proposed development and should as far as possible be consistent across the different topic areas in the EIA.'</i></p> <p>Changing the names (e.g. Very High instead of High) would still give four criteria used and applied using the same descriptors and therefore not alter the conclusion on effects or significance. Where practical, the terms have been used across the environmental aspect assessments reported in Chapter 6 to 21 of the ES to provide consistency for the reader particularly when reading multiple assessment and/or summaries of impacts and effects. Where these terms are specifically not used alternatives are provided. The LVIA has taken these terms and applied them to the assessment.</p>
PED.1.18	<p>Question: Significance of Effect Methodology Chapter 14 of the ES [AS-079, Table 14.1] provides a matrix for determining the significance of effect. In respect of sensitivity of receptor, the table identifies low, medium and high. Taking the findings in paragraph 14.9.27 of ES Chapter 14 [AS-079] as an example, it states visitors to Wigmore Valley Park are considered to be of medium to high sensitivity, which is assumed to have been arrived at by combining visual susceptibility and visual value.</p> <ol style="list-style-type: none"> 1. Explain clearly how Table 14.7 is used to determine significance of effect. 2. Should sensitivity of receptors in Table 14.7 be expanded to include matrices for medium-high or low-medium so that it is clear how the significance of effect has been determined? <p>Response:</p> <ol style="list-style-type: none"> 1. The Applicant assumes that the ExA are referring to Table 14.7 rather than Table 14.1 of the ES. Paragraph 14.5.19 of Chapter 14 of the ES [AS-079] states that the significance of a landscape or visual effect is summarised through professional judgement, combining the sensitivity of the receptor with the magnitude of impact. As noted by the ExA, visitors to Wigmore Valley Park are considered to be of medium to high sensitivity which is derived from a combination of visual susceptibility (assessed to be 'high' in this instance) and visual value (assessed to be 'medium' in this instance). The magnitude of impact on this receptor is assessed to be medium adverse during the construction stage. Applying the criteria in Table 14.7 results in a moderate adverse significance of effect on this receptor during the construction stage. Applying the same criteria in Table 14.7 could result in a moderate/major adverse significance of effect on this receptor. In determining the significance of effect on this (and all other landscape and visual receptors), professional judgement has been used, based on several factors which contribute to sensitivity and magnitude as described in the detailed landscape and visual assessments set out in ES Appendices 14.4 [AS-139] and 14.5 [AS-086]. 2. The LVIA and LVIA methodology is intended to be accessible notwithstanding the number of tables and receptors. With the example cited above the effect is Moderate adverse which is Significant. The conclusions reached reflects the LVIA methodology and various tables within the document. It is not considered necessary to include additional categories that may add further confusion.

PINS ID	Question / Response
PED.1.19	<p>[The Applicant notes that this question is directed not only to the Applicant but also to Joint Host Authorities].</p> <p>Question: Assessment of Significant Effects Applicant: There appear to be some discrepancies in the assessment of significance effects in Appendix 14.5 of the ES [AS-139]. For example, in the table in Section 2 'Construction Phase 2a – Visitors to Wigmore Valley Park' (page 41) the assessed effect is to remain a moderate adverse effect which is stated to be 'not significant' but Phase 2b, which is considered to also have a 'moderate adverse' effect, is stated to be 'significant'. Explain why a different conclusion on significance is reached for the same judged effect?</p> <p>If this is a typographical error, please review all findings to ensure that the correct assessment of effects is reported.</p> <p>Joint Host Authorities: Are you in agreement with the assessment findings on significant effects on the receptors assessed in Appendices 14.4 [AS-086] and 14.5 [AS-139]? If not, advise where disagreement on the findings exist and how this may affect conclusions.</p> <p>Response:</p> <p>This is a typographical error and should state 'moderate adverse' effect, is stated to be 'significant'. The Applicant will review all of Appendix 14.5 to ensure no further errors are included. Any errors identified will be included in the Errata Document to be submitted at Deadline 5.</p>
PED.1.20	<p>Question: Zone of Theoretical Visibility (ZTV) Figure 14.1 in [AS-102] identifies a study area of 5 kilometres (km) yet the ZTVs in Figures 14.2 and 14.8 do not cover the full 5km Study Area as identified in Figure 14.1.</p> <p>Please submit revised Figures ZTVs showing theoretical visibility in the whole study area.</p> <p>Response:</p> <p>Figures 14.2 and 14.8 have been updated to show the 5km study area and resubmitted at Deadline 4 (5.03 Environmental Statement Chapter 14 Landscape and Visual Figures 14.1-14.17 Revision 2).</p>
PED.1.21	<p>Question: ES Assumptions Chapter 14 of the ES [AS-079, paragraph 14.6.1(a)] notes that the assessment assumes all existing vegetation unaffected by the Proposed Development would remain in situ. It goes on to state '<i>...unless otherwise identified for removal or impacted as a consequence of proposed woodland enhancements....</i>'.</p> <p>Confirm the size and location of these areas and how the assessment has taken the potential for removal into account.</p> <p>Response:</p> <p>The management of existing habitats is described in Section 4 of Appendix 8.2 Outline Landscape and Biodiversity Management [AS-029] of the ES, with the woodland in question specifically described in paragraph 4.2.2 of Appendix 8.2 Outline Landscape and Biodiversity Management [AS-029]. References to figures showing their size and location are provided in the text. The proposed measures to enhance these woodlands include activities such as fencing, thinning, and coppicing to open canopy, and opportunities to open woodland glades, and targeted planting to be determined at detailed design stage. These measures are designed to enhance the woodland not to remove it or reduce the value it offers as potential visual screening. Therefore, the visual assessment has not considered its potential removal as it will not be removed as part of the Proposed Development.</p> <p>Vegetation identified for removal is described in the Site Clearance Drawings provided in Appendix D of Appendix 4.1 Construction Method Statement and Programme Report of the ES [AS-082].</p>
PED.1.22	<p>[The Applicant notes that this question is directed to Natural England, however the Applicant considers that a response from the Applicant will help provide further clarification]</p> <p>Question:</p>

PINS ID	Question / Response
	<p>Chilterns Area of Outstanding Natural Beauty (AONB)</p> <p>Please provide an update on the review of the Applicant's methodology for the assessment of the effects on the special qualities of the Chilterns AONB.</p> <p>Response: The methodology for the assessment of the effects on the special qualities of the Chilterns AONB was updated after receiving initial comments from Natural England in August 2023. The first draft of the assessment was circulated on 23 October 2023 to consultees that requested inclusion, including Natural England, the Chilterns Conservation Board, Luton Borough Council, the Hertfordshire Councils representatives and Central Bedfordshire Council. Buckinghamshire Council declined engagement when asked by the ExA at Issue Specific Hearing 6. A meeting to discuss the draft report was arranged for 30 October 2023, and comments requested by Friday 3 November.</p>
PED.1.23	<p>[The Applicant notes that this question is directed not only to the Applicant but also to All Local Authorities, Natural England, The Chiltern Society and Chilterns Conservation Board, however the Applicant considers that a response from the Applicant will help provide further clarification]</p> <p>Question: Chilterns AONB Sensitivity Test [APP-107]</p> <p>Applicant: Paragraph 2.4.2 states that extension to the boundary of the Chilterns AONB would neither change the judgements of magnitude of impact resulting from the Proposed Development nor those on the sensitivity of a visual receptor. This is because judgements on sensitivity are a product of the activity one is performing when experiencing a view, which would not be altered by the future designation of this land.</p> <p>Please explain further the rationale for this statement, given that introducing a statutory landscape designation would likely increase the value of the receptor and its susceptibility to change.</p> <p>All Local Authorities, Natural England, The Chiltern Society and Chilterns Conservation Board: Are parties in agreement with the findings in the Sensitivity Assessment? If not, why not?</p> <p>Response: The text cited above relates to the Visual Assessment only. The preceding section 2.3 of the Chilterns AONB Sensitivity Test [APP-107] discusses Landscape Assessment and concludes that these changes would further increase the judgement on magnitude of impact in Assessment Phase 2a for the aesthetic and perceptual characteristics of the landscape within the Chilterns AONB landscape receptor from very low to low, which would in turn increase the significance of effect on this landscape receptor assessed and recorded in Section 14.9 in Chapter 14 of the ES [AS-079] in this period from minor adverse to moderate adverse, which is significant.</p>
PED.1.24	<p>Question: Countryside and Rights of Way Act 2000</p> <p>The Chiltern Society [RR-0226] states that the Applicant, as a statutory undertaker, has a duty to have regard to the purpose of conserving and enhancing the natural beauty of the AONB under Section 85 of the Countryside and Rights of Way Act 2000.</p> <p>Can you confirm the accuracy of this statement and what implications it would have for the assessment.</p> <p>Response: The Applicant is not a 'statutory undertaker' as defined under the Airports Act 1986 (as amended by the Civil Aviation Act 2006/2012) or section 85 of the Countryside and Rights of Way Act 2000 (CROW). There may be some confusion on the part of the Chilterns AONB over Luton Borough Council being the sole shareholder for the Applicant. Luton Borough Council, as a council, are deemed a 'public body' for the purposes of CROW and therefore must comply with the duty to consider AONBs when exercising functions but these functions are not being exercised by the Council in this circumstance.</p> <p>Regardless of the argument above, the Applicant has had regard to the Chilterns AONB when assessing the environmental effects of the Proposed Development, as reported in Chapter 14 of the Environmental Statement [AS-079]. This reports the results of the Landscape and Visual impact assessment, and associated Appendices [APP-107], [AS-086] and [AS-139].</p>

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	<p>In addition, an assessment of the potential effects on the special qualities of the AONB is being prepared and a draft has been issued to Natural England, the Chilterns Conservation Board and the Host Authorities for discussion and comment. Please refer to the response to PED.1.2.2.</p>
<p>PED.1.25</p>	<p>Question: Landscape Proposals</p> <p>The Design and Access Statement [AS-049, Paragraph 3.3.7] states that the landscape proposals support the sustainability aspirations of the airport by promoting solutions that:</p> <ul style="list-style-type: none"> a. nurture wildlife; b. conserve water and energy; c. reduce soil and water pollution; d. reduce construction waste; and e. decrease surface water run-off. <p>Explain further how the landscape proposals support the aspirations listed.</p> <p>Response:</p> <p>The strategic design considerations are developed to specify the key design aims, objectives and requirements needed to achieve the Vision and the Strategic Objectives as set out in Section 3 of the Design Access Statement Volume I [AS-049]. These are listed under five headings, but are closely interlinked to create a comprehensive approach.</p> <p>The proposed landscape mitigation areas illustrated in the Strategic Landscape Masterplan [APP-172] will fulfil the landscape strategic considerations, and Requirement 9 of the dDCO [REP3-003] secures the landscape design to be developed in accordance with the principles set out in the Design Principles [TR020001/APP/7.09]. For instance, the proposals create increased biodiversity value for both new and existing habitats by incorporating meadow grasslands, created and enhanced woodlands, new and restored hedgerows, a cluster of small wildlife ponds and a range of bat and bird boxes to nurture the wildlife. The landscape proposals also introduce location appropriate species within the planting strategy, including native species. reducing maintenance requirements. contributing to the conservation of water and energy. Similarly, the landscape proposals conserve water by incorporating a balanced hard and soft landscape to enable natural water infiltration to support the overall water management objectives. Further information is provided in Biodiversity Net Gain Report [APP-067].</p> <p>The landscape strategic considerations are safeguarded within the overall Proposed Development through the Design Principles [TR020001/APP/7.09] and Environmental Statement Chapter 3 [AS-026], embedding these considerations into design principles and mitigation measures. For example, the Proposed Development has been designed, as far as possible, to avoid effects related to waste and resources through option identification, appraisal, selection and refinement as detailed in ES Chapter 19 Waste and Resources [AS-081]. Furthermore, the Biosecurity strategy described in the Landscape and Biodiversity Management Plan [AS-029] explains what measures are taken to reduce the risk of soil and water pollution.</p> <p>The sustainability design principles listed in the Design Principles [TR020001/APP/7.09] also establish a number of sustainability principles which the future detailed design would comply with, to ensure the established landscape strategic design considerations are achieved.</p>
<p>PED.1.26</p>	<p>Question: Photomontages</p> <p>Chapter 14 of the ES [AS-079, Table 14.5, Section 4.13.21] states that photomontages from three viewpoint locations that show the effectiveness of proposed landscape mitigation ahead of assessment Phase 2a and at the year of maximum passenger capacity have been included in Appendix 14.7 of the ES [AS-141 to AS-144 and AS-149].</p> <p>Identify these viewpoints and where this information is shown.</p> <p>Response: ES Appendix 14.7 Accurate Visual Representations and Representative Viewpoints show the proposed mitigation, refer to the following representative viewpoints: 10B, 13 [REP3-010], 28, 31 [REP3-012], 56 [REP3-014] (additional views were provided following the EXAs request Summer 2023). ES Figure 14.8 Assessment Viewpoint Locations [AS-102] for the location of the viewpoints.</p>
	<p>Question:</p>

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PED.1.27	<p>Solar Energy Generation</p> <p>The Proposed Development includes the installation of solar photovoltaic (PV) panels and canopies to support PV panels attached to the roof of proposed buildings (New Terminal 2 building and car parks P1, P5, P9 and P12) and constructed within surface car parks (P2, P10 and P11).</p> <p>In the absence of any reference, clarify if the findings in Appendices 14.4 [AS-086] and 14.5 [AS-139] of the ES has included consideration of the effects of solar energy generation for both landscape and visual impacts?</p> <p>Response: The assessment of the landscape and visual effects of the Proposed Development, as set out in Appendices 14.4 [AS-086] and 14.5 [AS-139] of the ES, has considered the installation of solar photovoltaic (PV) panels and canopies to support PV panels attached to the roof of proposed buildings, and constructed within surface car parks. Whilst these structures are not explicitly referenced in the assessments, they have been taken into account in the descriptions and judgements made in relation to magnitude of impact, and factored into the 3D development parameters model used to produce the photomontages included in ES Appendix 14.7 [REP3-009 to REP3-014].</p>
PED.1.28	<p>Question: Natural England's 15 Green Infrastructure Principles</p> <p>Natural England's RR [RR-1079] states that the Proposed Development should be designed to meet the 15 Green Infrastructure Principles. The Applicant's response to these comments [REP1-027] states that the Strategic Landscape Masterplan [APP-172] provides high level principles for green infrastructure which have taken into account the Green Infrastructure (GI) Principles set out in Natural England's GI Framework.</p> <ol style="list-style-type: none"> 1. Explain in more detail how the design approach to the Strategic Landscape Masterplan has taken into account the principles for green infrastructure. 2. Explain whether any regard has been had to the Green Infrastructure Planning and Design Guide in preparing the Strategic Landscape Masterplan and if so, what measures have been incorporated. 3. Further to the comments on page 32 of [REP1-027] in response to Natural England's comments, in the absence of any reference to the Green Infrastructure Principles in the Strategic Landscape Masterplan, explain how the draft DCO [REP3-003] includes a requirement to develop further detailed plans reflecting the GI principles set out in the Strategic Landscape Masterplan. <p>Response: Question 1 The proposed enhancements to existing Wigmore Valley Park Work No. 5b(01) and provision of Replacement Open Space (Work No. 5b(02)) are key elements of Green Infrastructure (GI) provided as part of the Proposed Development. The design approach to the Strategic Landscape Master Plan (SLMP) [APP-172] takes into account many of Natural England's GI principles including: providing nature rich, beautiful, active and healthy places; providing multifunctional, varied, connected and accessible GI; responding to and understanding an area's character; working in partnership and vision. This is explained further below.</p> <p>The character of the proposed Open Space would transition from the more formal park character within Wigmore Valley Park towards a more rural character within the replacement open space. The enhancements to the existing park would improve the connectivity, screening and biodiversity value of the retained parkland area, through the creation of additional surfaced paths linking to the replacement open space provision, and through the planting of additional scrub and woodland vegetation. The park would benefit from enhancements such as the improved skate park, play facilities and Wigmore Pavilion and would also provide opportunities for unstructured or natural play, picnicking and exercise. The Replacement Open Space would be accessible to the adjoining communities it serves and a range of users would be encouraged to make use of the space, through increased accessibility and enhancements.</p> <p>Soft landscaping within the proposed open space would include the management of existing woodland, proposed new broadleaved woodland, amenity grassland, neutral meadow grassland. Off-site hedgerow restoration is proposed to strengthen landscape character and structure.</p> <p>The proposed Replacement Open Space includes the creation or restoration of mixed species boundary hedgerows with hedgerow trees, creation of neutral meadow grassland and woodland planting. Grassland, woodland and pond habitats will be created and enhanced to provide suitable habitat for a range of species. This will be managed for 50 years to maximise the biodiversity value of both new and existing habitats, and ensure a successful establishment of vegetation and overall integration of works within the surrounding landscape, adopting a management approach that is appropriate to nature conservation, the users of the open space and its amenity.</p>

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	<p>In addition to planting new hedgerows, hedgerow restoration and enhancements of defunct hedgerows will be provided off site in order to improve the hedgerow network within the wider landscape, providing enhanced habitat and connectivity for a range of species. Woodland tree and shrub species to be planted would be similar to those that exist within the surrounding landscape, in line with the local landscape character and be resilient to climate change.</p> <p>The new hedgerows will be species rich and comprise a mixture of native shrubs and where possible, coppiced stools. The species selected to be planted have been designed to be characteristic of the surrounding area. Hedgerow trees would provide further height and structure within several of the proposed hedgerows. Orchids would be translocated as part of the works.</p> <p>Public access within the replacement open space would be encouraged through the resurfacing and in some instances upgrading of existing Public Rights of Way and through the creation of new surfaced paths. New access points would be provided to the replacement open space from the surrounding road network and Wigmore Valley Park.</p> <p>Question 2 The SLMP [APP-172] has had regard to the GI Principles set out within the GI Planning and Design Guide (as explained above). The SLMP has not expressly considered the detailed guidance set out in this document as the SLMP is an illustrative masterplan and provides an overview of the landscape proposals.</p> <p>Question 3 The Green Infrastructure Principles are reflected in the Strategic Landscape Masterplan [APP-172] as described above. The principles are included in the Design Principles which is secured by requirement 9 of the draft DCO [REP3-004]</p>
PED.1.29	<p>Question: Site Lighting</p> <p>Paragraph 7.1 in Appendix 5.2 [APP-052] lists embedded mitigation measures with regard to the lighting design strategy.</p> <ol style="list-style-type: none"> 1. Explain where this, and other mitigation measures referred to within the assessment, are secured in the draft DCO. 2. Paragraph 7.2.4 in Appendix 5.2 [APP-052] and Paragraph 5.5.8 in Appendix 4.2 [APP-049] states during the construction phase, particular attention would be paid to the likelihood of sky glow and light intrusion beyond each construction site and that, when lighting is used, it shall be visually checked from likely sensitive receptors (eg nearby residential properties) and any necessary adjustments made to ensure that visibility and intensity is reduced to a minimum. <ol style="list-style-type: none"> a. Explain further how lighting shall be visually checked, duration and periods when this would take place, and what adjustments could be made to reduce visibility and intensity to a minimum. b. What measures would be in place to investigate and resolve any complaints regarding light pollution? <p>Response:</p> <ol style="list-style-type: none"> 1. Overarching mitigation measures are identified in the Design Principles [TR020001/APP/7.09] updated at Deadline 4 with measures to avoid obtrusive light effects and adverse impacts on biodiversity. In summary, these include: <ol style="list-style-type: none"> a. Lighting design consider best practice guidance for limiting light obtrusion effects outlined in ILP GN01. b. Lighting design not to exceed design code recommendations for illuminance and glare. c. Use of horizontal cut-off luminaires with zero tilt to avoid direct upward light. d. Lighting designs to avoid spill light beyond the task area. e. Luminaire aiming (or main beam angle) not to exceed 70° from nadir. f. High-mast systems limited to 25m tall. g. Avoid placing luminaires at the perimeter of decked car parks or other elevated structures. h. Use of warm white light sources (with limited blue spectrum wavelengths) is preferred. i. Use of automatic lighting controls to manage the use of lighting according to usage. 2. Measures to reduce construction phase light obtrusion effects may include: <ol style="list-style-type: none"> a. Avoid overlighting the task (e.g. in excess of recommendations in BS EN 12464)

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	<ul style="list-style-type: none"> b. Install shields, louvres or cowls to limit direct view of the light source. c. Re-aim luminaires away from the observer d. Re-locate luminaires e. Revise the on/off switching regimes to limit the duration of lighting outside of normal working hours. f. Use lower powered floodlights <p>3. Construction Phase lighting is considered in the Code of Construction Practice [APP-049]. The contractor is required to respond to complaints by residents and it is noted that this will be particularly relevant after new lighting is installed. The following methodology is proposed:</p> <ul style="list-style-type: none"> a. Where a complaint is received, the contractor promptly investigates. b. Contractor visits the site to make a visual inspection to identify if there is a direct view of any light sources. c. Illumination measurements will be recorded (e.g. at window locations). d. Contractor will make adjustments (see below) to the construction lighting where safe and practicable to do so. e. Illumination measurements and visual inspections repeated following the intervention. <p>Where temporary works lighting necessary near residential properties, the contractor will notify them of the duration of the lighting and seek to reduce or extinguish it outside of normal working hours, where safe and practicable.</p> <p>The design principles are secured by Requirement 5(2) of Schedule 2 to the dDCO [REP3-003].</p>
PED.1.30	<p>[The Applicant notes that this question is directed not only to the Applicant but also to Hertfordshire Authorities]</p> <p>Question: Light Obtrusion Assessment / Night-time assessment</p> <p>Applicant:</p> <ul style="list-style-type: none"> 1. Explain the extent of consultation that has been undertaken when identifying the key receptors that are most likely to be affected by light obtrusion. 2. Aside from sky glow, given concerns that have been raised in Relevant Representations (for example [RR-0636] and [RR-0903]) regarding the extent of lighting omitted from buildings within the airport, such as the existing multi storey car park, to what extent does the light obtrusion assessment assess the effects of lighting omitted from proposed buildings forming part of the Proposed Development to surrounding rural areas, such as Breachwood Green? <p>Hertfordshire Authorities: [REP1-069, page 63] requests submission of a night-time assessment based on the LVIA Methodology rather than simply relying on the light obtrusion assessment.</p> <ul style="list-style-type: none"> 1. Do you therefore disagree with the findings in Table 8.3 of the light obtrusion assessment that there would be no significant effects through light obtrusion? If so, please advise where those areas of disagreement are. 2. Do the councils have any planning guidance in respect of lighting that can inform the proposals? If so, please submit this. 3. Aside from the Chilterns AONB, are there any other sensitive receptors that the lighting obtrusion assessment should include, such as views from rural villages and areas to the east of the airport?
	<p>Response:</p> <p>The lighting assessment was aligned with the LVIA viewpoints agreed through consultation as described in section 14.4 of Chapter 14 of the ES [AS-079] and surround the Proposed Development.</p> <ul style="list-style-type: none"> 1. With reference to Appendix 5.2 Light Obtrusion Assessment Part A [APP-052], viewpoints 31, 32, 33 and 34 were considered in the assessment for light intrusion and source intensity effect using a 3D lighting modelling. These viewpoints are all located around Breachwood Green. Other rural locations are also assessed (see Table 8.1 in section 8, and Appendix C Figure 14.8 Assessment Viewpoint Locations, of Appendix 5.2 of the ES [APP-052]). All exterior area lighting has been included in the modelling and lighting within decked car parks. Internal lighting to Proposed Development buildings is not yet developed and façade lighting is not proposed, so both are therefore excluded from the modelling. The resultant effects due to lighting of the Proposed Development were found to satisfy the ILP guidance¹ for obtrusive light for a rural location in terms of light intrusion and source intensity.
PED.1.31	<p>Question: Unacceptable levels of harm</p>

PINS ID	Question / Response
	<p>Chapter 8 of the Planning Statement [AS-122, paragraph 8.9.31] states <i>‘it is evident that whilst that will be an adverse impact on the surrounding landscape (including the Chilterns AONB) and visual impact caused by the Proposed Development, in most instances this will not amount to unacceptable levels of harm’.</i></p> <p>Describe the instances where unacceptable levels of harm would arise.</p> <p>Response: The Applicant acknowledges that the wording in 8.9.31 is not as helpful or clear as it could be and the Planning Statement can be amended to read as follows: <i>“8.9.31 It is evident that whilst that will be an adverse impact on the surrounding landscape (including the Chilterns AONB) and visual impact caused by the Proposed Development. In most instances, these impacts can be adequately mitigated but, in some instances, there will be residual adverse impacts resulting in harm which needs to be weighed in the planning balance (such as the parkland of Wigmore Valley Park). This harm is tempered by other instances where current landscape and visual impacts are improved (such as the network of PRow east of Luton).</i></p> <p><i>8.9.32 The Proposed Development is therefore in accordance with the relevant landscape and visual impact planning policies taken as a whole, noting that there are some adverse and beneficial effects. With mitigation measures incorporated into the design where possible, this matter should be accorded only limited negative weight in the planning balance.”</i></p> <p>NB. Paragraph 8.9.32 is unchanged but is included above for context and to show that the amendment to the wording of 8.9.31 has no effect on the conclusion on this issue.</p>
PED.1.32	<p>[The Applicant notes that this question is directed to All Local Authorities, however the Applicant considers that a response from the Applicant will help provide further clarification]</p> <p>Question: Landscape and the planning balance</p> <p>Chapter 8 of the Planning Statement [AS-122, paragraph 8.9.32] concludes that, allowing for mitigation measures, landscape and visual impacts should be accorded only limited weight in the planning balance.</p> <p>Do you agree that landscape and visual impacts should only be accorded limited weight? If not, why not and what weight should they be given?</p> <p>Response: The Applicant notes that this question is directed to all Local Authorities and considers that a response from the Applicant is not required at this time.</p>
PED.1.33	<p>Question: Landscaping – Terminal Approach</p> <p>The Design and Access Statement [AS-124, Paragraphs 5.29.9 and 5.29.10] explains the approach to the landscape design for the proposed terminal approach, including the Airport Access Road (AAR); the areas of which are illustrated in Figure 5.36.</p> <ol style="list-style-type: none"> 1. Explain where this element of the proposed landscape works is secured in the works plans/ draft DCO. 2. Advise where in the Design Principles document [APP-225] further information relating to landscape treatments adjoining the AAR is contained. <p>Response:</p> <ol style="list-style-type: none"> 1. The landscaping works associated with the Terminal Approach illustrated in Figure 5.36 with the Design and Access Statement [AS-124] is split across a number of different Work Nos. as the landscaping element is not the main works within some areas. The list of Work Nos. that include the landscaping associated with the Terminal Approach is listed below. Within Schedule 1 of the Draft DCO [REP2- 003] the works description includes soft landscaping for these Work elements (or has been updated at DL4 to include soft landscaping). <ol style="list-style-type: none"> a. Work No. 3d - Coach Station b. Work No. 3i - Airport Operations and Maintenance c. Work No. 3f - T2 Plaza d. Work No. 3e (01, 02) - New Passenger drop off zone e. Work No. 3h - T2 support facilities and buildings f. Work No. 4k(01,02) - Car park P5 g. Work No. 4o(01, 02) - Car park P9 h. Work No. 4t(04,05) - Airport Access Road car parking replacement

PINS ID	Question / Response
	<ul style="list-style-type: none">i. Work No. 4r - Car park P12j. Work No. 4a - Hotelk. Work No 5a - Terminal Approachl. Work No 6a (01, 02, 03) - Airport Access Road and Link Road <p>2. The Strategic Landscape Masterplan (SLMP) provides an illustrative plan showing high level landscape proposals. Page 6 of this plan lists the Landscape Design principles where in particular principle no. 12 should be noted. Page 7 of the SLMP provides the illustrative plan with areas E and F the relevant locales. Requirement 9 of the dDCO [REP3-003] references the Design Principles [TR020001/APP/7.09] which secures these proposals. The Design Principles document [TR020001/APP/7.09] has been updated and is submitted at Deadline 4. It is secured by Requirement 5 in Schedule 2 of the dDCO [REP3-003].</p>

REFERENCES

Ref 1 Landscape Institute and Institute of Environment Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment 3rd Edition