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8.144 Applicant's Response to Issue Specific Hearing 8 Action 42 - Chilterns Area of Outstanding Natural Beauty Special Qualities Assessment

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**

**8.144 APPLICANT'S RESPONSE TO ISSUE SPECIFIC HEARING 8
ACTION 42 – CHILTERN AREA OF OUTSTANDING NATURAL
BEAUTY SPECIAL QUALITIES ASSESSMENT**

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1 INTRODUCTION

1.1 Purpose of Report

- 1.1.1 This document has been prepared in response to representations submitted by Natural England (NE) in relation to the proposed expansion of London Luton Airport (the airport) to 32 million passengers per annum (mppa), (hereby referred to as 'the Proposed Development') by Luton Rising (a trading name of London Luton Airport Limited ('the Applicant')).
- 1.1.2 The Proposed Development is a Nationally Significant Infrastructure Project (NSIP) under Part 3 of the Planning Act 2008 (as amended). An application for a Development Consent Order (DCO) under Section 14 of the Planning Act 2008 was submitted to the Planning Inspectorate in February 2023 and accepted by the Planning Inspectorate in March 2023.
- 1.1.3 Following the submission of the application, NE submitted Relevant Representations to the Planning Inspectorate on 21 June 2023 **[RR-1079]** and a Principal Areas of Disagreement Summary Statement (PADSS) on 10 July 2023 **[AS-061]**.
- 1.1.4 Paragraphs 2.6 and 2.7 of NE's Relevant Representation state the following:
"The Landscape and Visual Impact Assessment (LVIA) should be supported by an assessment of how the scheme, both in its construction and operational phases, would impact on the defined special qualities of the Chilterns Area of Outstanding Natural Beauty (AONB). These are presented in the AONB's statutory management plan. Natural England advises that a significant adverse impact on a special quality of the AONB would impact on the area's capacity to deliver its statutory purpose."
- "The applicant should address potential mitigation measures for any identified impacts on the AONB, including loss of tranquillity. Whilst alternatives may prove unworkable for air safety and practical operational reasons, the need to explore such potential mitigation measures is fully justified by the designation status of the Chilterns AONB."*
- 1.1.5 These points are reiterated in the PADSS submitted by NE:
"There has been no assessment submitted which considers the impact of the application on the special qualities of the Chilterns AONB. There may be significant adverse effects on the purpose of the AONB's designation which have not been satisfactorily addressed. The applicants need to provide an assessment of the impact on the special qualities of Chilterns AONB and identify any mitigation and/or monitoring measures that can be provided."
- 1.1.6 In response to the above request, the Applicant agreed to prepare an assessment of the effects of the Proposed Development on the Special Qualities (SQ's) of the Chilterns Area of Outstanding Natural Beauty ('the Assessment').

- 1.1.7 The Applicant provided NE with a proposed methodology for the Assessment on 1 August 2023. This position was reflected in the Written Representations submitted by NE on 21 August 2023 (**Deadline 1 Submission - Written Representations [REP1-112]**) as follows:
- “Our position regarding nationally designated landscapes is as set out in our Relevant Representations (4.10-4.22) and Table 1. However, we have recently received a proposed methodology for carrying out an assessment of how the development scheme would affect the special qualities of Chilterns AONB which is being reviewed by our specialists.”*
- 1.1.8 NE provided comments on the proposed methodology on 22 August 2023. These comments and the Applicant's response to the comments are considered in Section 2 of this report.
- 1.1.9 The Assessment was discussed at Issue Specific Hearing 6 (ISH6) on environmental matters held on 29 September 2023. Further details are provided in Section 2.2 of this report.
- 1.1.10 The Assessment was discussed further at Issue Specific Hearing 8 (ISH8) on environmental matters held on 29 November 2023. This document is also provided in response to ISH8 Action Point 42 from the Examining Authority (ExA) **[EV15-013]**:
- “Submit draft of the assessment on the special qualities of the Chilterns National Landscape with completed report to be submitted at the following deadline.”*
- 1.1.11 A draft of the Assessment was submitted to the ExA at Deadline 6. This final version of the Assessment (this document) was submitted at Deadline 7.
- 1.1.12 ISH8 Action Point 43 from the ExA asked the Applicant to:
- “Review whether the special qualities assessment report can be accompanied by a table showing baseline overhead flights within the National Landscape compared to increased flights. If possible, this should include both the percentage increase and numerical increase split between different flight paths. In addition, the report to be accompanied by a map showing flightpaths over affected areas.”*
- 1.1.13 The Applicant has reviewed the data used in the preparation of the overflight contours shown in **Figures 14.14 to 14.17** of the **ES [REP4-037]**. A table showing baseline overhead flights within the AONB and the increase at each of the assessment phases at relevant locations is provided at Section 6.2 of this Assessment.
- 1.1.14 Maps showing flightpaths are provided as Figure 6.28 of the **Need Case [AS-125]** as is information on split of aircraft between each.
- 1.1.15 In November 2023 the UK Government announced that AONB's were to be renamed National Landscapes. As this document and all supporting information, correspondence and evidence considered as part of the application for development consent used the term 'AONB' and it remains common understanding this document continues to use the term AONB which should be taken as the same designation as National Landscape.

1.2 Structure of Report

1.2.1 The remainder of this document is structured as follows:

- a. Section 2: Stakeholder engagement;
- b. Section 3: Methodology;
- c. Section 4: Description and summary of SQ's;
- d. Section 5: Definition of Study Area and identification of relevant SQ's;
- e. Section 6: Assessment of effects on SQ's; and
- f. Section 7: Summary of effects on AONB SQ's.

2 STAKEHOLDER ENGAGEMENT

2.1 Current Guidance

- 2.1.1 There is no formal guidance for assessing the impacts of development on the SQ's of AONBs in England. Scottish Natural Heritage (SNH) has produced draft guidance for assessing the impacts of development proposals on Special Landscape Qualities (SLQs) of National Scenic Areas (NSAs) in Scotland (Ref. 1).
- 2.1.2 SLQ's and NSA's are comparable to SQ's and AONB's respectively in terms of the importance and purpose of their designation. The SNH draft guidance advocates a four-stage approach to the Assessment of impacts on SLQ's.

2.2 Engagement

- 2.2.1 The methodology proposed for the Assessment employs a similar approach to SNH, drawing on guidance from the Guidelines for Landscape and Visual Impact Assessment (GLVIA) (Ref. 2) where appropriate.
- 2.2.2 The proposed methodology was sent to NE for comment on 1 August 2023. NE provided comments on the proposed methodology on 22 August 2023. Table 2.1 describes the main matters highlighted by NE and how these have been addressed in the Assessment.

Table 2.1: NE comments on SQ proposed methodology

NE Comment	How this is addressed
NE welcome the precautionary approach proposed with relevant specialists to review the much longer list of SQs to confirm that they can be excluded from the assessment.	Noted. The full list of SQ's has been considered as part of this Assessment (refer to Section 5 of this report) to confirm which ones can be excluded from the Assessment.
NE agree with the applicant that there is no formal guidance for assessing the impacts of development on the SQs of England's AONBs, but that the methodology provided for Landscape and Visual Impact Assessment (LVIA) provides a helpful basis for assessing those effects. This, however, will be most applicable to those SQs which are expressed in terms of clear landscape features and characteristics which can be geographically delineated (perhaps concentrated within one or two Landscape Character Areas). It will struggle to work with characteristics and attributes (e.g., related to tranquillity and cultural/historic associations) which the LVIA approach is not designed to address directly. These SQs may	The Assessment acknowledges that there are limitations in applying an 'LVIA approach' to consider impacts on some SQ's (such as 'relative tranquillity' or 'industrial heritage') as specific criteria for assessing noise or cultural heritage impacts is required for these impacts. However, in the absence of a single, defined methodology for assessing such impacts, the LVIA approach is considered to most closely align with assessing impacts on the SQ's. Where there are limitations to employing this approach,

NE Comment	How this is addressed
<p>also be applicable to much of the designated area or even the whole of the AONB.</p>	<p>commentary is provided to explain these limitations and to assess the impacts on the SQ in question.</p>
<p>NE suggest that in addressing the 'Relative tranquillity' SQ the assessment needs to acknowledge:</p> <ul style="list-style-type: none"> • the difficulties of applying the proposed approach (whilst accepting that there is no immediately obvious or available alternative); • the challenges which any methodology would face in assessing the susceptibility of 'relative tranquillity' to increased air traffic over affecting the AONB ('relative tranquillity' being a very challenging baseline). • That significant effects could occur beyond those parts of the AONB where aircraft would be below 7,000 feet (and therefore beyond the LVIA study area) should also be acknowledged if there is any uncertainty about this. <p>This probably requires the assessment for this SQ to rely very heavily on a full narrative description of effects which factors in the above, plus the sensitivity of human receptors more widely across the AONB to increases in air traffic, to provide ourselves, the Conservation Board and ultimately the examining authority with the most helpful assessment possible</p>	<p>It is agreed that assessing the susceptibility of 'relative tranquillity' to increased air traffic over the AONB is challenging as there is no accepted method of evaluating the baseline situation for this quality.</p> <p>NE's comments regarding uncertainty about significant effects potentially occurring beyond those parts of the AONB where aircraft would be below 7,000 feet (and therefore beyond the LVIA Study Area) are noted. Commentary is provided in Section 6 of this report where relevant.</p>
<p>In terms of the proposed approach to assessing sensitivity, this section refers to the value attached to the SQ. That value, given that a SQ is a primary contributor to the character and quality justifying the area's national designation, should have a default of 'very high'.</p>	<p>It is agreed that the value of these SQ's is judged to be 'very high' (based on the criteria set out in the LVIA methodology).</p>

2.2.3 The ExA held an Issue Specific Hearing (ISH6) on 29 September 2023 to consider several environmental matters related to the application, including landscape and visual matters.

2.2.4 During the discussion on landscape and visual matters at ISH6 several parties indicated they wished to be consulted on the scope and content of the Assessment. These parties included:

- a. Chilterns Conservation Board (CCB);
- b. Natural England (NE);
- c. Central Bedfordshire Council (CBC);
- d. Hertfordshire Host Authorities (Herts.); and
- e. Luton Borough Council (LBC).

- 2.2.5 The Applicant agreed to consult with these parties on the Assessment. A first draft of the Assessment was issued to the above parties for comment on 23 October 2023. A meeting was held with these parties on 30 October 2023 to discuss the first draft of the Assessment.
- 2.2.6 Following the issue of the first draft of the Assessment and the meeting, the Applicant received several comments from these parties on the methodology, scope, findings and conclusions of the first draft of the Assessment. A full list of the comments received, and the Applicant's responses are provided at **Appendix A** of this report.
- 2.2.7 The ExA held a further Issue Specific Hearing (ISH8) on environmental matters on 29 November 2023. During ISH8 the Applicant provided the ExA with an update on the current status of the Assessment, details of the consultation held with the parties noted above, a summary of feedback provided, the current scope of the Assessment and timescales for submission. The ExA requested that a draft version of the Assessment be submitted to the ExA by Deadline 6, with a final version to be submitted to the ExA by Deadline 7.
- 2.2.8 A second draft of the Assessment was submitted to the ExA at Deadline 6 (**Applicant's Response to Issue Specific Hearing 8 Action 42 – Draft Chilterns Area of Outstanding Natural Beauty Special Qualities Assessment [TR020001/APP/8.144]**). The Applicant received comments from the CCB on 21 December 2023 on this draft. The CCB comments received on the second draft of the Assessment and the Applicant's responses are provided at **Appendix A** of this report.

3 METHODOLOGY

3.1 Overview

3.1.1 As noted in Section 2, the Assessment employs a four-stage approach as set out below:

- a. Stage 1: Description and summary of the special qualities of the Chilterns AONB.
- b. Stage 2: Definition of the Study Area and identify relevant special qualities for assessment.
- c. Stage 3: The assessment of:
 - i. the sensitivity of the AONB special qualities;
 - ii. the magnitude of impacts on the AONB special qualities; and
 - iii. the significance of effects on the AONB special qualities.
- d. Stage 4: Summary of effects on the AONB special qualities.

3.1.2 It is noted that NE are currently undertaking a review of the AONB boundary with a view to potentially extending the AONB to the east of Luton. If such an extension to the boundary of the Chilterns AONB is realised, this methodology could be applied to the newly extended AONB. However, the boundary review is at an early stage and therefore the potential extension area is not considered in this assessment.

3.1.3 A more detailed description of the proposed methodology is provided below.

3.2 Stage 1: Description and summary of the SQ's of the Chilterns AONB.

3.2.1 This stage sets out the special qualities of the AONB as defined in the Chilterns AONB Management Plan (Ref. 3).

3.3 Stage 2: Definition of the Study Area and identify relevant SQ's for assessment.

3.3.1 A Study Area for assessing the landscape and visual effects of the Proposed Development has been defined. The LVIA Study Area extends 5km from the perimeter of the Main Application Site (the existing airport area and the area immediately adjacent to the east of it into which the expansion works for the operational airport would extend) and includes land within the Chilterns AONB where aircraft would be below 7,000 ft (see **Figure 3.1** of this Assessment). The LVIA Study Area is considered sufficient in size and geographical extent as a basis for undertaking the Assessment.

3.3.2 The Main Application Site is located 3km from the AONB and it is therefore considered unlikely that the Proposed Development would have any significant effects on the special qualities which relate to the physical attributes and characteristics of the AONB. However, the special qualities will be reviewed by the relevant specialists (including heritage, ecology, air quality and noise) and professional judgment and experience applied to provide justified confirmation

as to whether they can be excluded from the Assessment, or further assessment based on the findings of the Environmental Impact Assessment is required.

3.3.3 This stage summarises the baseline conditions for the AONB within the Study Area, including a definition and description of Relative Tranquillity.

3.4 Stage 3: Assessment

Landscape Sensitivity

3.4.1 The sensitivity of a landscape receptor is considered by combining judgments about the susceptibility and the value attached to the landscape receptor.

3.4.2 Susceptibility to change means the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular area, or individual element and/or feature) to accommodate the Proposed Development without undue consequences for the maintenance of the baseline situation and/or the achievement of the landscape planning policies and strategies.

3.4.3 Professional judgements about the susceptibility of a landscape receptor to change are recorded as being high, medium or low, based on the criteria set out in Table 3.1.

Table 3.1: Landscape Susceptibility to Change

Classification	Typical Criteria
High	Receptors with an inability to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and / or the achievement of the landscape planning policies and strategies.
Medium	Receptors with some ability to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and / or the achievement of the landscape planning policies and strategies.
Low	Receptors with an ability to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and / or the achievement of the landscape planning policies and strategies.

3.4.4 Professional judgements about the value of a landscape receptor are recorded as being very high, high, medium, low or very low based on the information gathered in the landscape baseline (such as landscape quality (condition), scenic quality, rarity, representativeness, conservation interests, recreation value, perceptual aspects and associations. Table 3.2 provides some examples which help to distinguish between the different value thresholds.

Table 3.2: Landscape Value

Classification	Typical Criteria	Typical Scale	Typical Examples
Very High	High Importance (or Quality) and Rarity. No or limited potential for substitution.	International, National, Local	World Heritage Site, National Park, AONB.
High	High Importance (or Quality) and Rarity. Limited potential for substitution.	National, Local	Areas of Great Landscape Value, Conservation Area.
Medium	Medium Importance (or Quality) and Rarity. Limited potential for substitution	Regional, Local	Local designations such as Area of Local Landscape Value (ALLV) or undesignated but value perhaps expressed through non-official publications or demonstrable use.
Low	Low Importance (or Quality) and Rarity.	Local	Areas identified as having some redeeming feature or features and possibly identified for improvement or areas identified for recovery.
Very Low	Low or no Importance (or Quality) and Rarity.	Local	Areas identified for recovery.

3.4.5 The landscape sensitivity is dependent on the development under consideration and the ability of the existing landscape to accommodate the perceived changes. Landscapes vary in their capacity to accommodate different forms of development. In general terms, a landscape of very high sensitivity would have low ability to accommodate change of the type proposed and a landscape of low sensitivity would have some ability or likelihood to accommodate change of the type proposed.

Visual Sensitivity

- 3.4.6 The sensitivity of a visual receptor is considered by combining professional judgements about the value attached to a particular view and the susceptibility of the visual receptor to changes in that view.
- 3.4.7 As identified within GLVIA3, susceptibility is mainly a function of:
- a. the occupation or activity of people experiencing the view at particular locations; and
 - b. the extent to which their attention or interest may be focussed on views and the visual amenity they experience at particular locations.
- 3.4.8 Professional judgements about the susceptibility of a visual receptor have been recorded as being high, medium or low, typically reflecting the criteria set out in Table 3.3 (these criteria being based on the factors noted in para. 6.33 of GLVIA3). Such judgements may vary however depending on the nature of the receptor that would be affected and the extent to which their attention is likely to be focused on views or visual amenity.

Table 3.3: Visual Susceptibility to Change

Value	Typical Criteria
High	<p>Residents at home, although this depends on the rooms occupied during waking hours.</p> <p>People, whether residents or visitors, who are engaged in outdoor recreation, including users of public rights of way.</p> <p>Visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience.</p> <p>Communities where views contribute to the landscape setting enjoyed by residents in the area.</p> <p>Where travel involves recognised scenic routes awareness of views is likely to be particularly high.</p>
Medium	<p>Communities where views partly contribute to the landscape setting experienced by residents in the area.</p> <p>Travellers on road, rail and other transport routes where awareness of views is limited.</p>

Value	Typical Criteria
Low	<p>Communities where views do not contribute to the landscape setting experienced residents in the area.</p> <p>People engaged in outdoor sport and recreation which does not involve or depend upon appreciation of views of the landscape.</p> <p>People at their place of work whose attention may be focused on their work or activity, not on their surroundings, and where the setting is not important to the quality of their working.</p>

3.4.9 Professional judgements about the value attached to views experienced by a visual receptor are recorded as being high, medium or low, based on the criteria set out in Table 3.4.

Table 3.4: Visual Importance/ Value

Value	Typical Criteria
High	<p>Unique or identified view (e.g. shown as such on an Ordnance Survey map, guidebook or tourist map) or one noted in literature or art.</p> <p>A view where a landscape and/or heritage asset makes an important contribution to the view (e.g. open views of landscapes in sensitive or unspoilt areas which contribute to the visual amenity experienced by people).</p>
Medium	<p>A view where a landscape and/or heritage asset makes some contribution to the view (e.g. partial/ interrupted views of landscapes in sensitive or unspoilt areas which contribute to the visual amenity experienced by people or open views over moderately sensitive/ unspoilt landscapes).</p>
Low	<p>Undistinguished or unremarkable view (The view may contain detracting features which spoil the overall quality of the view and detract from the visual amenity experienced by people)</p>

Magnitude of Impact

3.4.10 The magnitude of impact on a receptor is described in further detail in Table 3.5, and has been assessed in terms of its:

- a. size or scale of change to the landscape or view;
- b. geographical extent - of the area over which the effect is evident;
- c. duration of the effect - (short 0-5 years/ medium 5-10 years / long term 10-25 years); and

d. reversibility – the ability of the Proposed Development to be reversed.

Table 3.5: Magnitude of Impact

Magnitude of Impact	Typical Criteria Descriptors (Landscape)	Typical Criteria Descriptors (Visual)
High adverse	Total loss or large-scale damage to existing character or distinctive features and elements, and/or the addition of new but uncharacteristic conspicuous features and elements.	The proposals would form a significant and immediately apparent deterioration to the scene that is likely to damage its overall character.
Medium adverse	Partial loss or noticeable damage to existing character or distinctive features and elements, and/or the addition of new but uncharacteristic noticeable features and elements.	The proposals would form a visible and recognisable new element that would deteriorate the overall scene to some extent and would be readily noticed by the observer.
Low adverse	Slight loss or damage to existing character or features and elements, and/or the addition of new but uncharacteristic features and elements.	The proposals would be perceptible but would not alter overall balance of features and elements that comprise the existing view or markedly deteriorate the overall quality of the scene.
Very Low adverse	Barely noticeable loss or damage to existing character or features and elements, and/or the addition of new but uncharacteristic features and elements.	Only a very small part of the proposals would be discernible, and / or the proposals would be at such a distance that it would form a barely noticeable feature or element of the view and consequently would result in very little deterioration to the scene.
No change	No noticeable loss, damage or alteration to character or features or elements.	No part of the project, or work or activity associated with it, would be discernible.
Very Low beneficial	Barely noticeable improvement of character by the restoration of existing features and elements, and/or the removal of uncharacteristic features and elements, or by the addition of new characteristic elements.	Only a very small part of the proposals would be discernible, and / or the proposals would be at such a distance that it would form a barely noticeable feature or element of the view and consequently would result in very little improvement to the scene.

Magnitude of Impact	Typical Criteria Descriptors (Landscape)	Typical Criteria Descriptors (Visual)
Low beneficial	Slight improvement of character by the restoration of existing features and elements, and/or the removal of uncharacteristic features and elements, or by the addition of new characteristic elements.	The proposals would be perceptible but would not alter overall balance of features and elements that comprise the existing view or markedly improve the overall quality of the scene.
Medium beneficial	Partial or noticeable improvement of character by the restoration of existing features and elements, and/or the removal of uncharacteristic and noticeable features and elements, or by the addition of new characteristic feature.	The proposals would form a visible and recognisable new element that would improve the overall scene to some extent and would be readily noticed by the observer.
High beneficial	Large scale improvement of character by the restoration of features and elements, and/or the removal of uncharacteristic and conspicuous features and elements, or by the addition of new distinctive features.	The proposals would form a significant and immediately apparent improvement to the scene that is likely to enhance its overall character.

Significance

3.4.11 The significance of an effect is assessed through professional judgement, combining the sensitivity of the receptor with the magnitude of impact. Judgements typically follow the rationale and criteria set out in Table 3.6.

Table 3.6: Significance of Effect

		MAGNITUDE OF IMPACT				
		No Change	Very Low	Low	Medium	High
SENSITIVITY OF RECEPTOR	High	No Effect	Minor	Minor / Moderate	Moderate/ Major	Major
	Medium	No Effect	Negligible/ Minor	Minor	Moderate	Moderate/ Major
	Low	No Effect	Negligible/ Minor	Negligible/ Minor	Minor	Minor / Moderate

3.4.12 Table 3.7 summarises the rationale for judgments for each significance criteria that could be applied to the proposals.

Table 3.7: Significance of Effects: Typical Criteria Descriptors

Significance	Typical Criteria Descriptors (Landscape)	Typical Criteria Descriptors (Visual)
Major adverse	The development would be at considerable variance with the character (including quality and value) of the landscape and substantially degrade or diminish the integrity of a range of characteristic features and elements and their setting and are likely to damage a sense of place. Such effects would be incapable of full mitigation and would degrade the integrity of a high-quality landscape.	The proposals would cause major deterioration to a view experienced by a highly sensitive receptor and would constitute a major discordant element in the view.
Moderate adverse	The development would conflict with the character (including quality and value) of the landscape and have an adverse impact on characteristic features or elements and their setting and are likely to diminish a sense of place. Proposals are likely to be out of scale with the existing	The proposals would cause obvious deterioration to a view experienced by a moderately sensitive receptor or perceptible damage to a view experienced by a more sensitive receptor.

Significance	Typical Criteria Descriptors (Landscape)	Typical Criteria Descriptors (Visual)
	topography, grain, scale and pattern of the landscape.	
Minor adverse	The development would not quite fit the character (including quality and value) of the landscape and is at variance with characteristic features and elements and their setting and are likely to detract from a sense of place. Effects may temporarily damage or does not logically complement the existing topography, grain, scale and pattern of the landscape to constitute an unsympathetic outcome.	The proposals would cause limited deterioration to a view experienced by a moderately sensitive receptor or cause greater deterioration to a view experienced by a low sensitivity receptor.
Negligible adverse/ beneficial	The proposals would affect minor landscape features which have no or limited value.	Only a very small part of the proposal would be discernible and / or would be at such a distance that it would be scarcely appreciated.
No effect	The development would maintain the character (including quality and value) of the landscape. The proposals would blend in with characteristic features and elements, enabling a sense of place to be retained.	No perceptible change to the view.
Minor beneficial	The development would complement the character (including quality and value) of the landscape and maintain or enhance characteristic features and elements and their setting enabling some sense of place to be restored. The proposals would enable moderate and / or short-term restoration of degraded landscape character, features and their setting.	The proposals would cause limited improvement to a view experienced by a receptor of medium sensitivity or would cause greater improvement to a view experienced by a receptor of low sensitivity.
Moderate beneficial	The development would improve the character (including quality and value) of the landscape and	The proposals would cause obvious improvement to a view experienced by a moderately

Significance	Typical Criteria Descriptors (Landscape)	Typical Criteria Descriptors (Visual)
	enable the restoration of characteristic features and elements partially lost or diminished as a result of changes from inappropriate management or development and thus enabling a sense of place to be restored. Such effects may be capable of further mitigation so as to maximize the benefits of the proposal.	sensitive receptor or perceptible improvement to a view experienced by a more sensitive receptor.
Major beneficial	The development would substantially enhance the character (including quality and value) of the landscape and enable the restoration of characteristic features and elements lost as a result of changes from inappropriate management or development thus enabling a sense of place to be enhanced. The proposals would fundamentally improve on previous condition through the introduction of integrated features and landscape design which would result in a more harmonious and distinctive landscape character. Such effects may be capable of further mitigation to maximize the benefits of the proposal.	The proposals would lead to a major improvement to a view experienced by a highly sensitive receptor.

3.5 Stage 4: Summary of effects on the AONB SQ's

3.5.1 This stage will provide a summary of the effects of the Proposed Development on the AONB SQ's. It will also provide details of any practicable mitigation measures which may be identified, and which are proportionate and appropriate in relation to the AONB SQ's.

4 DESCRIPTION AND SUMMARY OF SPECIAL QUALITIES

4.1 Overview

4.1.1 The AONB is located approximately 3km to the north and 5km to the west of London Luton Airport. It spans several administrative areas including North Hertfordshire (North Herts), Central Bedfordshire (Central Beds), Luton, Dacorum, Buckinghamshire (Bucks.), Three Rivers District, Oxfordshire and South Oxfordshire.

4.1.2 A summary of the significance of the AONB is set out on Page 7 of the Chilterns AONB Management Plan (Ref. 3) (the Management Plan):

“The Chilterns is a landscape of remarkable beauty and distinctive character with a unique interaction of geological, ecological and cultural heritage features. Designation of the Chilterns as an AONB was in 1965, with an extension in 1990. It now extends over 833km² of mainly privately-owned land. The Chilterns is a home and a workplace for over 80,000 people and some 1.6 million people live within 8km of the AONB”

“In particular the Chilterns was designated to protect its special qualities which include the steep chalk escarpment with flower-rich downland, woodlands, commons, tranquil valleys, ancient routes, villages with brick and flint houses, chalk streams and a rich historic environment of hillforts and chalk figures.”

4.1.3 The Management Plan also states that *“The single purpose of AONB designation is ‘to conserve and enhance the natural beauty of the area’* as defined in the following legislation and guidance:

- a. Countryside and Rights of Way Act 2000 (Ref. 4);
- b. Areas of Outstanding Natural Beauty: A guide for AONB Partnership members, Countryside Commission (Ref. 5); and
- c. Natural Environment and Rural Communities Act 2006 (Ref. 6).

4.2 Special Qualities

4.2.1 The SQ's of the Chilterns AONB are set out in pages 10 and 11 of the 2019-2024 Management Plan and are as follows:

- a. *“Panoramic views from and across the escarpment interwoven with intimate dipslope valleys and rolling fields.”*
- b. *“Significant ancient hedgerows, hedgerow and field trees, orchards and parkland weaving across farmland that covers approximately 60% of the Chilterns.”*
- c. *“Relative tranquillity and peace on the doorstep of ten million people, one of the most accessible protected landscapes in Europe; relatively dark skies, of great value to human and wildlife health; unspoilt countryside, secret corners and a surprising sense of remoteness.”*
- d. *“Nationally important concentrations of chalk grassland, extremely diverse in flora and fauna, and home to some scarce and threatened*

species. Once extensive, the chalk grassland now only covers 1% of the AONB mostly in small fragments. Species for which the AONB is particularly important include Chiltern gentian, wild candytuft, pasque flower, silver-spotted skipper and glow-worm."

- e. "One of the most wooded landscapes in England, with 23% woodland cover concentrated in the central and southern areas; 56% of the woodland is Ancient, a particularly rich, distinctive and prominent feature, including the Chilterns Beech Wood Special Area of Conservation; significant box, juniper and beech yew woods; many veteran trees and relict wood pasture."*
- f. "Nine precious chalk streams, a globally scarce habitat and home to some of the UK's most endangered species; associated UK BAP priority species include otter, water vole, reed bunting and brown trout; numerous chalk springs occur along the base of the escarpment."*
- g. "An extensive and diverse archaeological landscape, including ancient parish boundaries, medieval field patterns and iron age hillforts; extensive remnants of woodland heritage including sawpits, charcoal hearths and wood banks"*
- h. "A dramatic chalk escarpment, a globally rare landscape type which gives rise to rare ecology and distinctive cultural heritage."*
- i. "An industrial heritage around wood-working, furniture making, chalk quarrying, brick making, and food production with windmills and watercress beds."*
- j. "Over 2000ha of common land, heaths and greens, rich in wildlife and cultural heritage; 3700ha of open access land."*
- k. "Distinctive buildings made from local brick, flint and clay tiles; many attractive villages, popular places to live in and visit; many notable individual buildings and follies including stately homes, monuments and mausoleums; a wealth of medieval churches, many built from flint."*
- l. "A dense network of 2000km of rights of way; two national trails, the ridgeway and Thames path; notable regional routes such as the chiltern way and the chilterns cycleway."*
- m. "Numerous ancient routeways and sunken lanes including the Icknield Way, considered by many to be the oldest road in Britain."*

5 DEFINITION OF STUDY AREA AND IDENTIFICATION OF RELEVANT SPECIAL QUALITIES

5.1 Study Area

- 5.1.1 The Study Area for the Assessment must be large enough to capture all likely significant effects on the SQ's to be assessed. However, an overly large Study Area is considered disproportionate if it makes understanding the key effects of the Proposed Development on the SQ's more difficult by including extraneous baseline information, and receptors which are unlikely to be significantly affected by the Proposed Development.
- 5.1.2 The Study Area therefore defines a limit, based on the following:
- Guidance contained in GLVIA3 (Ref. 2);
 - CAP1616 Airspace Change Process (Ref. 7); and
 - Airports National Policy Statement (Ref. 8).
- 5.1.3 Professional judgement was also applied in considering areas beyond which it is considered unlikely for significant effects on the SQs to arise.
- 5.1.4 The Study Area defined in **Chapter 14 Landscape and Visual of the ES [AS-079]** is considered sufficient for the Assessment of impacts on the SQ's. The Study Area is shown on Figure 5.1 of this Assessment and comprises:
- an area 5km from the Main Application site; and
 - all land within the Chilterns AONB where aircraft would be below 7,000ft.
- 5.1.5 Regarding point b. above, the threshold height of 7,000 feet (ft) altitude derives from the Government's Air Navigation Guidance (Ref. 7) which requires effects on AONB's to be considered where overflying occurs below 7,000 ft. It is acknowledged that aircraft may still be perceptible above 7,000 ft but this is the recognised threshold set out in the relevant guidance and is considered appropriate for the assessment of likely significant effects. Occasional overflights would be above 7,000ft in other areas of the AONB and it is considered that there would be no or negligible effects on areas of the AONB outside this Study Area.

5.2 Baseline for AONB within Study Area

Landscape

- 5.2.1 The Management Plan defines four broad landscape types within the Chilterns AONB:
- Scarp Foothills and Vale Fringes.
 - Chalk Scarp.
 - River Valleys.
 - Plateau and Dipslope.

5.2.2 All four of these landscape types fall within the Study Area (see Figure 5.2).

5.2.3 The key characteristics and attributes of these areas are described in the Management Plan and reproduced below.

Scarp Foothills and Vale Fringes

5.2.4 The Management Plan describes this landscape character type as follows:

“Gently undulating chalk slopes with chalk springs between the base of the scarp and the clay vale to the west. Mainly managed within intensive agriculture with large fields and relatively few hedgerows, this landscape forms a narrow band only a few fields wide, towards the north of the AONB, but widens as it approaches the Thames in the south.”

Chalk Scarp

5.2.5 The Management Plan describes this landscape character type as follows:

“The ‘spine’ of the Chilterns is the chalk scarp that runs roughly north-east to south-west along the western side of the AONB. A spectacular ridge rises high above the vale to the west and dominates views over a wide area.

Combes and prominent hills, often locations for chalk figures, monuments, burial mounds or hillforts, form a deeply convoluted steep scarp edge which supports a mosaic of chalk grassland, woodland and scrub.”

River Valleys

5.2.6 The Management Plan describes this landscape character type as follows:

“The Chilterns contains a series of larger river valleys that cut through the scarp and dip slope. Arterial valleys run north west to south east and, create dramatic ‘wind gaps’ where they cut through the scarp, as at Tring and Wendover.

Often asymmetrical in shape these valleys contain the internationally rare, aquifer-fed chalk streams. As natural corridors through the Chiltern Hills, there is a long history of travel from ancient drovers routes, turnpikes and canals to modern day road and rail links. A number of large historic houses presiding over estates and parkland, are scattered throughout the valleys while settlements have grown up associated with the water supply, woodland industry, farming trade and transport links to London.”

Plateau and Dip slope

5.2.7 The Management Plan describes this landscape character type as follows:

“A large proportion of the AONB is covered by plateau and dip slope as the land gradually falls away to the east and Greater London. Though less visible and striking than the scarp, this landscape forms a key part of the classic Chilterns landscape.

The topography is complex, with areas of plateau dissected by long, narrow, often dry valleys. Extensive woodlands and arable fields interspersed with commons, villages, scattered farmsteads (often dating from medieval times)

and designed parklands characterise the plateau. Commons, heaths and greens would once have been far more extensive. Many Chilterns commons are wooded or former wood pasture, with areas of heathland, acid grassland, ponds and other open habitats. Grazed fields can still be found on the steeper valley sides and valley bottoms where settlements often formed around water sources or stretched out along the valley roads.”

5.3 Relative Tranquillity

5.3.1 Tranquillity is defined in GLVIA3 and in the Landscape Institute's Technical Information Note 01/2017 (TIN 01/17) (Ref. 9) as being ‘*a state of calm and quietude associated with peace, considered to be a significant asset of the landscape*’. (Ref. 7).

5.3.2 NE guidance (Ref. 10) lists indicators of relative tranquillity. It identifies several contributors to tranquillity including:

“presence and/or perceptions of natural landscape, birdsong, peace and quiet, natural-looking woodland, stars at night, stream, sea, natural sounds and similar influences.”

5.3.3 The guidance also identifies several detractors from tranquillity including:

“the presence and/or perceptions of traffic noise, large numbers of people, urban development, overhead light pollution, low flying aircraft, power lines and similar influences development, overhead light pollution, low flying aircraft, power lines and similar influences.”

5.3.4 It is beyond the scope of this assessment to describe and evaluate in detail where contributors to and detractors from relative tranquillity are present or absent within the Study Area. It is evident however that relative tranquillity within the Study Area varies. **Figures 6.7 to 6.10** of this assessment show tranquillity mapping provided by the Council for the Protection of Rural England (CPRE) overlaid with the Study Area. Relative tranquillity in locations adjacent to urban areas such as Luton, Dunstable, Tring and Berkhamstead is lower than other areas.

5.3.5 **Figures 6.11 to 6.14** of this assessment show dark skies mapping provided by CPRE overlaid with the Study Area. Darker skies are located in more remote areas within the Study Area and broadly align with the areas of greater tranquillity shown in **Figures 6.7 to 6.10**.

5.4 Identification of Relevant SQ's

5.4.1 Each of the SQ's have been reviewed by the relevant specialists (including landscape, heritage, ecology, air quality and noise) and professional judgment and experience applied to provide justified confirmation as to whether they can be excluded from the Assessment, or further assessment based on the findings of the Environmental Impact Assessment as reported in the Environmental Statement (ES) is required.

- 5.4.2 The review of the SQ's has had regard to both the Proposed Development and associated aircraft movements, and the key environmental aspects considered in the ES, including:
- a. A detailed description of the Proposed Development is set out in **Chapter 4 The Proposed Development of the ES [REP5-012]**.
 - b. The assessment of effects on air quality, described in **Chapter 7 Air Quality of the ES [AS-076]**;
 - c. The assessment of effects on cultural heritage, described in **Chapter 10 Cultural Heritage of the ES [AS-077]**;
 - d. The assessment of effects on biodiversity, described in **Chapter 8 Biodiversity of the ES [AS-027]**; and
 - e. The assessment of effects on noise, described in **Chapter 16 Noise and Vibration of the ES [REP1-003]**.

5.4.3 A summary of the screening exercise undertaken to determine which SQ's were scoped in for further assessment in this report are described in Table 5.1.

Table 5.1: Special Qualities Screening

Special Quality	Comment	Scope in/out
Panoramic views from and across the escarpment interwoven with intimate dip slope valleys and rolling fields	<p>This SQ centres on panoramic views from within the AONB. The Main Application Site is 3km from the AONB. Views of the Proposed Development are likely to be available from parts of the AONB closest to the Proposed Development and experienced as wide panoramic views typically extending over 180°. However, these will be long distance views.</p> <p>From other areas of the AONB the Proposed Development is likely to be wholly or partly screened by intervening landform, vegetation and/or built form views.</p> <p>The Proposed Development could potentially impact on this SQ and is considered for further assessment in Section 5 of this report.</p>	In
Significant ancient hedgerows, hedgerow and field trees, orchards and parkland weaving across farmland that covers approximately 60% of the Chilterns	<p>This SQ derives from the ancient hedgerows, hedgerow and field trees, orchards and parkland which cover a sizeable part of the AONB, important in landscape, ecological and cultural heritage terms.</p>	Out

Special Quality	Comment	Scope in/out
	<p>All aspects of biodiversity with the potential to be affected by the Proposed Development have been assessed. The Proposed Development would be located over 3km from the AONB and would have no significant landscape or ecological effects on these habitats, features and elements. Similarly, aircraft movements associated with the Proposed Development would not affect these physical features or ecological habitats.</p>	
<p>Relative tranquillity and peace on the doorstep of ten million people, one of the most accessible protected landscapes in Europe; relatively dark skies, of great value to human and wildlife health; unspoilt countryside, secret corners and a surprising sense of remoteness.</p>	<p>This SQ centres specifically on Relative Tranquillity within the AONB. Increased aircraft movements associated with the Proposed Development could affect this Special Quality as parts of the AONB are located in areas where aircraft would be below 7,000 ft. and therefore considered in Section 6 of this report.</p>	<p>In</p>
<p>Nationally important concentrations of chalk grassland, extremely diverse in flora and fauna</p>	<p>This SQ highlights the importance of nationally important concentrations of this feature within the AONB. All aspects of biodiversity with the potential to be affected by the Proposed Development have been assessed. There would be no impact on this SQ as the Proposed Development would be located over 3km from chalk grassland, whilst aircraft movement would not physically impact this feature.</p>	<p>Out</p>
<p>One of the most wooded landscapes in England, with 23% woodland cover concentrated in the central and southern areas</p>	<p>All aspects of biodiversity with the potential to be affected by the Proposed Development have been assessed. The Proposed Development would not affect this SQ as it would be located over 3km from these important landscape and ecological features. Similarly, aircraft movements associated with the Proposed Development would not affect these physical landscape features or ecological habitats.</p>	<p>Out</p>
<p>Nine precious chalk streams, a globally scarce habitat and home</p>	<p>All aspects of biodiversity with the potential to be affected by the Proposed Development have been assessed. The Proposed</p>	<p>Out</p>

Special Quality	Comment	Scope in/out
to some of the UK's most endangered species	Development would not affect this SQ as it would be located over 3km from these important landscape and ecological features. Similarly, aircraft movements associated with the Proposed Development would not affect these physical features, habitats and associated species.	
A dramatic chalk escarpment, a globally rare landscape type which gives rise to rare ecology and distinctive cultural heritage	<p>This SQ is recognised as having landscape, ecological and heritage importance. All aspects of biodiversity with the potential to be affected by the Proposed Development have been assessed. The Proposed Development would be located over 3km from this feature.</p> <p>The Chalk Escarpment is undoubtedly prominent and a strong component of the natural beauty of the areas noted by CCB. However, aircraft movement and other activities are already perceptible in these areas. For example, at Dunstable Downs, low flying gliders are evident as well as aircraft movement operating at a higher altitude. It is considered that any additional aircraft movements above the Chalk Escarpment would not materially affect the fundamental characteristics and/or qualities of the Chalk Escarpment.</p>	Out
An industrial heritage around wood-working, furniture making, chalk quarrying, brick making, and food production with windmills and watercress beds	This SQ is defined primarily by its heritage importance. All aspects of the historic environment with the potential to be affected by the Proposed Development have been assessed, including those encompassed within the AONB. The Proposed Development would not affect this SQ as it would be located over 3km from this feature whilst aircraft movements associated with the Proposed Development would not affect the industrial heritage of the AONB.	Out
Over 2000ha of common land, heaths and greens, rich in wildlife and cultural heritage; 3700ha of open access land	This SQ highlights the importance of the large areas of common land, heaths, greens and open access land within the AONB, noting these areas are 'rich in wildlife and cultural heritage'.	Out

Special Quality	Comment	Scope in/out
	<p>All aspects of biodiversity with the potential to be affected by the Proposed Development have been assessed. The Proposed Development would not affect this SQ as it would be located over 3km from these various types of open space and habitats, whilst aircraft movements associated with the Proposed Development would not affect the wildlife and cultural heritage value associated with this SQ.</p>	
<p>Distinctive buildings made from local brick, flint and clay tiles; many attractive villages, popular places to live in and visit; many notable individual buildings and follies including stately homes, monuments and mausoleums; a wealth of medieval churches, many built from flint</p>	<p>This SQ centres on the distinctive buildings and villages within the AONB which primarily derive from their architectural and historic importance. All aspects of the historic environment with the potential to be affected by the Proposed Development have been assessed, including those encompassed within the AONB. It is concluded that the Proposed Development would be located over 3km from these buildings and villages and would not impact on this SQ.</p> <p>The effects of Aircraft movement and noise on heritage assets are considered in Chapter 10 Cultural Heritage of the ES [AS-077]. Effects on the SQ's of the Chilterns AONB are not explicitly considered in the Cultural Heritage Assessment but heritage assets within a defined wider study area that may be impacted by the Proposed Development (either as a result of the physical presence of and/or by an increase in their existing noise environment) are. This includes assets within the AONB where they fall within this study area. The heritage study area was agreed with heritage stakeholders (including Historic England and CCB) as appropriate for identifying all potential impacts on designated and non-designated heritage assets.</p> <p>By way of example Section 10.9 of the ES [AS-077], assesses the effect of the Proposed Development on St. Paul's Walden Bury, a heritage asset of high value, located approximately 5km to the east of the Main Application Site. This heritage asset is</p>	<p>Out</p>

Special Quality	Comment	Scope in/out
	<p>located within the flight paths to the east of the airport.</p> <p>Para 10.9.86 of the ES states that “Aviation noise from overhead aircraft approaching the airport is part of the asset’s noise environment but the noise does not intrude to such an extent as to detract from the asset’s rural character”.</p> <p>Paras 10.9.88 and 10.9.89 of the ES conclude that the Proposed Development would result in a negligible change to the park’s noise environment and would not affect its setting or impact its heritage value. Based on the conclusions above and the fact that the heritage assessment identifies no significant effects on heritage assets in the AONB it is considered reasonable to conclude that any increase in aircraft movements would not affect the setting and/or heritage value of any heritage assets within the AONB.</p>	
<p>A dense network of 2000km of rights of way; two national trails, the ridgeway and Thames path; notable regional routes such as the Chiltern way and the Chilterns cycleway</p>	<p>The various rights of way, national trails and regional routes referred to in the description of this SQ would be located over 3km from the Main Application Site and would not be affected by the key elements of the Proposed Development or associated aircraft movements.</p> <p>However, some PRoW will be located in areas where panoramic views within the AONB are available. These PRoW were considered as part of the assessment of the Panoramic views SQ.</p>	<p>In (in part)</p>
<p>An extensive and diverse archaeological landscape, including ancient parish boundaries, medieval field patterns and iron age hillforts; extensive remnants of woodland heritage including</p>	<p>This SQ centres on the archaeological and historic landscape within the AONB. All aspects of the historic environment with the potential to be affected by the Proposed Development have been assessed, including those encompassed within the AONB.</p> <p>This includes individual assets and the wider heritage landscape. It is concluded that the Proposed Development would be located</p>	<p>Out</p>

Special Quality	Comment	Scope in/out
sawpits, charcoal hearths and wood banks	over 3km from this landscape and would not impact on this SQ. Similarly, aircraft movements associated with the Proposed Development would not affect this SQ.	
Numerous ancient routeways and sunken lanes including the Icknield Way.	<p>This SQ refers to the “numerous ancient routeways and sunken lanes including the Icknield Way”. The Proposed Development would be located over 3km from these routes and would not impact on this SQ.</p> <p>Views from some PRow are considered as part of the assessment of the Panoramic Views SQ in Section 6.3 of the Assessment. This includes consideration of perceptual qualities and the effects of overflying aircraft.</p>	In (in part)

6 ASSESSMENT OF EFFECTS ON SPECIAL QUALITIES

6.1 Relevant SQs

6.1.1 The following SQs are considered relevant to the Assessment and have been assessed in this section of the report:

- a. *“Panoramic views from and across the escarpment interwoven with intimate dip slope valleys and rolling fields”.*
- b. *“Relative tranquillity and peace on the doorstep of ten million people, one of the most accessible protected landscapes in Europe; relatively dark skies, of great value to human and wildlife health; unspoilt countryside, secret corners and a surprising sense of remoteness”.*
- c. *“A dense network of 2000km of rights of way; two national trails, the ridgeway and Thames path; notable regional routes such as the chiltern way and the chilterns cycleway”.*

6.1.2 The PRow SQ is considered as part of the Assessment of the panoramic views SQ as effects on this SQ would be limited to views from PRow within the AONB.

6.2 Overflights

6.2.1 This section provides overflight information in relation to Action 43 of ISH8. The Applicant has reviewed the data used in the preparation of the overflight contours shown in **Figures 14.14 to 14.17** of the **ES [REP4-037]**.

6.2.2 Estimated overflights below 7,000ft for each of the assessment phases at selected locations in the AONB are presented in Table 6.1. Figure 6.1 shows these locations in relation to the areas where overflights are below 7,000ft.

Table 6.1: Overflights below 7,000ft per day

	Overflights below 7,000ft per average 92-day summer daytime period (07:00-23:00)			
Location	2019 Baseline	Assessment Phase 1	Assessment Phase 2a	Assessment Phase 2b
ES VP1: Warden Hill	1	2	2	2
ES VP45 Ivinghoe Beacon	12	13	16	18
ES VP50 Beech Road, Stipers Hill	1	1	1	1

	Overflights below 7,000ft per average 92-day summer daytime period (07:00-23:00)			
Viewpoint A Dunstable Downs	3	3	4	4
Viewpoint B Pulpit Hill	10	11	13	15
Viewpoint C Telegraph Hill, Hitchin	7	8	9	10
Crown and Sceptre Public House (adjacent to Great Gaddesden Bridleway no. 37)	42	48	57	66

6.2.3 With the exception of the part of the Study Area covering Dacorum District and the southern tip of Central Bedfordshire, overflights within the Study Area are currently 20 per day or less.

6.2.4 The increase in the number of aircraft movements will vary depending on the location within the AONB. For example, at Pulpit Hill the number of overflights will increase to 15 overflights per day by Assessment Phase 2b. This is an additional 5 aircraft movements over this part of the AONB during the day in a location currently overflowed by 10 aircraft movements per day.

6.2.5 The number of aircraft movements over the Crown and Sceptre Public House in Dacorum District, is currently 42 per day. This will increase to 66 aircraft movements per day by Assessment Phase 2b, an increase of 24 overflights per day in this location. This is markedly higher than other areas in Table 6.1, but this increase should be considered in the context of a notably higher number of existing overflights in this location.

6.2.6 The increase in overflights within the Study Area are considered further in Sections 6.3 and 6.4 below.

6.3 Panoramic Views

Description of Views

6.3.1 The key attribute of this SQ is the panoramic views available from areas within the AONB, notably from and across the escarpment.

6.3.2 The escarpment runs roughly north-east to south-west along the western side of the AONB within the Study Area. Notable locations along the escarpment within the Study Area include Warden Hill (north of Luton) Whipsnade, Invinghoe Beacon and Whiteleaf Cross (near Princes Risborough).

- 6.3.3 **Chapter 14 Landscape and Visual of the ES [AS-079]** includes several Representative Viewpoints (nos. 1, 45 and 50) from within the Study Area. The location of these viewpoints is shown on **Figure 14.8** of the ES **[REP4-037]**. Photographs and descriptions of the views from these viewpoints are provided at **Appendix 14.6** of the ES **[AS-088 to AS-094 and AS-140]**.
- 6.3.4 Viewpoint 1 is in an elevated position on Warden Hill, located approximately 4.9km north northwest of the Main Application Site. The view from this location represents views experienced by users of PRoW within that part of the AONB including the Chiltern Way long distance footpath. Panoramic views of the surrounding landscape are available from this viewpoint, including the airport control tower and hangars on the horizon.
- 6.3.5 Viewpoint 45 is located at Ivinghoe Beacon approximately 10km to the west of the Main Application Site. The view from this location represents the view experienced by users of PRoW within that part of the AONB. Views from these areas are elevated and panoramic in nature though the airport is entirely screened due to intervening landform.
- 6.3.6 Viewpoint 50 is located approximately 8km west of the Main Application Site adjoining Beech Road on Stipers Hill. This is representative of the view experienced by users of PRoW within the AONB.
- 6.3.7 The view overlooks rolling arable farmland with stands of woodland and Dunstable Road visible on an adjoining ridgeline in the middle-distance. The existing airport hangars are discernible beyond intervening vegetation, in the distance and on the horizon in the centre-right part of the view.
- 6.3.8 Four additional views for inclusion in this Assessment were discussed with stakeholders at the meeting on 30 October 2023. One of these (Great Gaddesden, Hemel Hempstead, Dacorum) was removed from the Assessment as the viewpoint location did not appear to be publicly accessible whilst conducting a site visit to the area.
- 6.3.9 The photographs were taken to illustrate the panoramic views available from various locations within the Study Area. These are included purely for illustrative purposes and not intended or required to meet the technical standards set out in the LI Technical Guidance Note 06/19 (Ref.11). The three viewpoint locations are shown in Figure 6.1. The views are described below and shown in Figure 6.2.
- 6.3.10 Viewpoint A is located within Dunstable Downs (National Trust - Dunstable Downs and Whipsnade Estate), Central Bedfordshire. The viewpoint is located approximately 11.5km north west of the main application site. The view from this location represents views experienced by users of the PRoW: Bridleway 16 within this part of the AONB. Panoramic views of the surrounding landscape are available from this viewpoint including the Chalk Escarpment.
- 6.3.11 Viewpoint B is located at an elevated position at Pulpit Hill Hillfort, Buckinghamshire. The viewpoint is located approximately 33km west of the main application site. The view from this location represents views experienced by users of the PRoW: Footpath GLK/42A/2 within this part of the AONB.

Panoramic views of the surrounding landscape are available from this viewpoint, including scarp foothills.

- 6.3.12 Viewpoint C is located at an elevated position at Telegraph Hill, Hitchin, North Hertfordshire. The view is located approximately 8km north of the main application site. The view from this location represents views experienced by users of the PRow: Bridleway 009 within this part of the AONB. Panoramic views of the surrounding landscape are available from this viewpoint including the Chalk Escarpment.
- 6.3.13 All of the views described above are panoramic views of the surrounding landscape and enable people to understand and appreciate the 'natural beauty of the area' as defined in the AONB Management Plan.

Sensitivity

- 6.3.14 The value of this SQ is assessed to be very high. This is derived from the national importance of the AONB designation and the scenic quality of the views described above.
- 6.3.15 The susceptibility of this SQ is assessed to be high as users of PRow and other routes within the AONB would mainly be engaged in outdoor recreation where their attention or interest is likely to be focused on the surrounding landscape and on views.
- 6.3.16 Based on the value and susceptibility, the sensitivity of this SQ is assessed to be high.

Effects

Assessment Phase 1 and interim aircraft movement effects (c. 2023 - 2032)

- 6.3.17 Works would be entirely screened in views from the AONB during this assessment phase of development due to the appreciable distance, intervening landform and vegetation between viewpoints and the main application site.
- 6.3.18 There is only a very small change in the geographical extent of the overflight contours during this assessment phase (see **Figures 6.3 to 6.4** of this Assessment). The overflight data in Table 6.1 demonstrates that there would only be a very small increase in aircraft movements (1 or less overflights per day) over the panoramic viewpoint locations described above. Users of PRow within the Study Area would therefore not experience a perceptible increase in views of overhead aircraft. The magnitude of impact on this SQ is assessed to be very low adverse.
- 6.3.19 The increase in aircraft movements would be barely perceptible in views from within the AONB during this period. The significance of effect on this SQ is assessed to be **negligible adverse** which is **not significant**.

Assessment Phase 2a and interim aircraft movement effects (c.2033 - 2036)

- 6.3.20 Works would be not visible in views from within the AONB, save for views from the north in the vicinity of Ivinghoe Beacon where Works 3b (01) (New Terminal 2) may be perceptible on the horizon (see Representative Viewpoint 1 ES **Appendix 14.7 [REP3-009]**).
- 6.3.21 Users of PRoW within the Study Area may perceive a slight increase in views of overhead aircraft as a result of a small geographical increase in the extent of the overflight contours during this assessment phase (see **Figures 6.3 and 6.5** of this Assessment). The overflight data in Table 6.1 demonstrates that there would only be a small increase in aircraft movements (2 overflights or less per day) during this Assessment Phase compared to the baseline overflights at ES VP1 (Warden Hill), Viewpoint A (Dunstable Downs) and Viewpoint C (Telegraph Hill). The increase would be slightly higher at ES VP45 (Ivinghoe Beacon) where there would be 4 additional overflights per day compared to the baseline overflights. The magnitude of impact on this SQ is assessed to remain very low adverse.
- 6.3.22 The effect on this SQ is assessed to remain **negligible adverse**, which is **not significant**.

Assessment Phase 2b and interim aircraft movement effects (c.2037 - 2042)

- 6.3.23 Works would again be screened in views from within the AONB with the exception of views in the vicinity of Ivinghoe Beacon where Works 3b (01) (New Terminal 2), Work 4b (Hangars A and B) and Work 2d (Fire Training Ground) may be perceptible on the horizon.
- 6.3.24 Users of PRoW within the Study Area may perceive a slight increase in views of overhead aircraft as a result of a small geographical increase in the extent of the overflight contours during this Phase (see **Figures 6.3 and 6.6** of this Assessment). The overflight data in Table 6.1 demonstrates that there would be no further increase in aircraft movements at ES VP1 (Warden Hill) and Viewpoint A (Dunstable Downs) during this Assessment Phase, 1 additional overflight per day at Viewpoint C (Telegraph Hill) and 2 additional overflights per day at ES VP45 (Ivinghoe Beacon). The magnitude of impact on this SQ is judged to remain very low adverse.
- 6.3.25 A further increase in the number of overhead aircraft may be perceptible in views from within the AONB during this period. The effect on this SQ is assessed to rise to **minor adverse**, which is **not significant**.

Operation effects at the year of maximum aircraft movement capacity (c. 2043)

- 6.3.26 No additional works would be perceptible in views from within the AONB. The magnitude of impact on this SQ is judged to remain very low adverse.

- 6.3.27 The effect on this SQ at the year of maximum aircraft movement capacity is assessed to remain **minor adverse**, which is **not significant**.

Operation effects at the design year (c. 2056)

- 6.3.28 No additional works would be perceptible in views from within the AONB. The magnitude of impact on this SQ is judged to remain very low adverse.
- 6.3.29 The effect on this SQ at design year is assessed to remain **minor adverse**, which is **not significant**.

6.4 Relative Tranquillity

Description

- 6.4.1 The methodology for identifying the impact of noise (amongst other factors) on tranquillity for landscape receptors, including the AONB, is presented in **Chapter 14 Landscape and Visual of the ES [AS-079]**. However, as noted in NE's comments on the draft methodology and acknowledged by the Applicant, there are difficulties in applying the LVIA methodology to this SQ.
- 6.4.2 **Chapter 16 Noise and Vibration of the ES [REP1-003]** considers relative tranquillity and references to this chapter are included where appropriate in assessing the impacts on this SQ.
- 6.4.3 **Section 16.5** of the ES [REP1-003] explains that 'relative tranquillity' is considered with reference to NPPF paragraph 185b (Ref. 12) which requires planning decisions to "*identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason*". It goes on to explain that perception of relative tranquillity is dependent on the sensitivity of the receptor, its use or activity and other considerations such as the visual sense of relative tranquillity.
- 6.4.4 The baseline conditions in relation to relative tranquillity are set out in **Section 5.3** of this Assessment.

Sensitivity

- 6.4.5 The value of this SQ is assessed to be very high. This is primarily derived from the national importance of the AONB designation but also the contribution that tranquillity makes to the perceptual qualities of the landscape within the AONB.
- 6.4.6 Policies and guidelines for managing change in the AONB recognise that airport expansion could result in more aircraft over-flying the AONB and identify that this could harm the tranquillity of the AONB. The Proposed Development would not physically impact land within the AONB, but it could introduce changes that may impact on the perceptual and aesthetic characteristics of the landscape within the AONB, including relative tranquillity.
- 6.4.7 These changes would, in some instances, be experienced in locations where detractors from relative tranquillity such as traffic noise, aircraft noise, large numbers of people, urban development, overhead light pollution, low flying aircraft, power lines and similar influences are evident. Such locations tend to

be closer to urban areas but can include locations such as Dunstable Downs where low flying aircraft (i.e. gliders), aircraft operating at higher altitude and large numbers of people are present. In other instances, in more remote areas, the change would be experienced where contributors to relative tranquillity are evident.

6.4.8 Overall, the susceptibility of this SQ within the Study Area is assessed to be medium.

6.4.9 Based on the value and susceptibility, the sensitivity of this SQ is assessed to be high.

Effects

Noise Levels in relation to Relative Tranquillity

6.4.10 All of the locations identified in Table 6.1 experience noise levels from aircraft below the Lowest Observable Adverse Effect Level (LOAEL). At these noise levels, paragraph 005 of Planning Practice Guidance – Noise (Ref 13) states that *“Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.”*

6.4.11 The changes in number of overflights in Table 6.1 are consistent with the definition from aviation noise policy in that the changes in number of overflights may be perceptible but are only likely to slightly affect the acoustic character of these areas that are already regularly overflown.

6.4.12 This is also consistent with the assessment of noise including relative tranquillity in **Chapter 16** of the **ES [REP1-003]** which does not identify any likely significant effects during the daytime in gardens, public parks and local green spaces (see Table 16.7 of **Chapter 16** of the **ES**) from increases in noise due to increased aircraft movements.

Assessment Phase 1 and interim aircraft movement effects (c. 2023 - 2032)

6.4.13 The Proposed Development would bring about a gradual increase to aircraft movements over the Study Area during this assessment phase. The data in Table 6.1 shows that the increase in aircraft movements would be very small (1 overflight or less per day) during this Assessment Phase, except for the Crown and Sceptre Public House where overflights will increase by 6 movements per day. The geographical increase in the extent of the overflight contours during this Phase is very small as shown on the Tranquillity and Dark Skies mapping for this phase (refer to **Figures 6.7, 6.8, 6.11 and 6.12**). Further, the relative tranquillity of some parts of the Study Area is currently compromised due to noise from major roads and existing aircraft movements. Any views of aircraft landing lights would be fleeting. The relative tranquillity of the remainder of the AONB (i.e. areas outside the Study Area) would not be affected. The magnitude of impact on this SQ within the Study Area is judged to be very low adverse.

- 6.4.14 The effect on this SQ is assessed to be **minor adverse**, which is **not significant**.

Assessment Phase 2a and interim aircraft movement effects (c.2033 - 2036)

- 6.4.15 Aircraft movements would continue to increase over the Study Area during this assessment phase. However, the geographical increase in the extent of the overflight contours during this assessment phase would be small (refer to **Figures 6.7, 6.9, 6.11 and 6.13**).
- 6.4.16 The data in Table 6.1 shows that the increase in aircraft movements during this Assessment Phase would be small (4 overflights or less per day compared to the baseline overflights), with the exception of the Crown and Sceptre Public House where overflights will increase by 15 movements per day, though there are currently 42 overflights per day at this location and therefore relatively tranquillity is already impacted.
- 6.4.17 As noted above, the relative tranquillity of some parts of the AONB within the Study Area is currently compromised due to noise from major roads and existing aircraft movements. Any views of aircraft landing lights would be fleeting. The relative tranquillity of the remainder of the AONB would not be affected. The magnitude of impact on this SQ during this phase is judged to remain as very low adverse.
- 6.4.18 The effect on this receptor is assessed to remain as **minor adverse**, which is **not significant**.

Assessment Phase 2b and interim aircraft movement effects (c.2037 - 2042)

- 6.4.19 Aircraft movements would increase over the Study Area during this Assessment phase. However, the geographical increase in the extent of the overflight contours during this Phase would be small (refer to **Figures 6.7, 6.9, 6.11 and 6.13**).
- 6.4.20 The data in Table 6.1 shows that the increase in aircraft movements during this Assessment Phase would be small (6 overflights or less per day compared to the baseline overflights), with the exception of the Crown and Sceptre Public House where overflights will increase by 24 movements per day, though as noted above there are currently 42 overflights per day at this location and therefore relatively tranquillity is already impacted.
- 6.4.21 As noted above, the relative tranquillity of some parts of the Study Area is currently compromised due to noise from major roads and existing aircraft movements. Any views of aircraft landing lights would be fleeting. The relative tranquillity of the remainder of the AONB (i.e. outside the Study Area) would not be affected. The magnitude of impact on this SQ during this phase is judged to remain as very low adverse.
- 6.4.22 The effect on this receptor is assessed to remain as **minor adverse**, which is **not significant**.

Operation effects at the year of maximum aircraft movement capacity (c. 2043)

- 6.4.23 The number of aircraft movements over the Study Areas during this assessment phase would remain the same as those in Assessment Phase 2b. The magnitude of impact on this SQ is assessed to remain as very low adverse.
- 6.4.24 The effect on this SQ at the year of maximum aircraft movements capacity is assessed to be **minor adverse**, which is **not significant**.

Operation effects at the design year (c. 2056)

- 6.4.25 The number of aircraft movements over the Study Area during this assessment phase would remain the same as those in Assessment Phase 2b. The magnitude of impact on this SQ is assessed to remain as very low adverse.
- 6.4.26 The effect on this receptor at the design year is assessed to be **minor adverse**, which is **not significant**.

7 SUMMARY AND CONCLUSIONS EFFECTS ON AONB SPECIAL QUALITIES

7.1 Effects on AONB Special Qualities

7.1.1 This Assessment has assessed the effects of the Proposed Development on each of the SQs defined in the AONB Management Plan individually. The Proposed Development would have no significant effects on the SQs of the AONB. No changes to airspace are proposed and therefore the effects would be limited to increases in aircraft movements over areas already overflown. In most instances the increase in aircraft movements results in a small expansion of existing aircraft movement contours rather than the introduction of new aircraft movement contours. All other areas of the AONB would be located outside the Study Area where the SQs are considered to experience no or negligible effects, which are not significant.

7.1.2 Accordingly, the Proposed Development would not compromise the SQs of the AONB.

7.2 Effects on AONB reported in ES

7.2.1 The Assessment considers the effects of the Proposed Development specifically on the SQs of the AONB. **Chapter 14 Landscape and Visual** of the **ES [AS-079]** considers the likely effects of the Proposed Development on the perceptual and aesthetic qualities of the AONB. These qualities encompass a number of landscape facets such as scenic quality, recreation value, visitor experience as well as tranquillity. The ES concludes that there would be no significant effects on this receptor during Assessment Phase 1 and 2a and reports that significant effects on this receptor are anticipated to occur from Assessment Phase 2b onwards. The Assessment and the ES are assessing the likely effects on different (albeit related) receptors which results in different effects being reported.

7.2.2 A summary of the effects of the Proposed Development on the AONB SQ's is provided in Table 7.1 below.

Table 7.1: Summary of Effects on AONB SQ's

Special Quality	SQ Sensitivity	Magnitude of Impact	Significance of Effect
Panoramic views from and across the escarpment interwoven with intimate dip slope valleys and rolling fields	High	Very Low	Minor, not significant

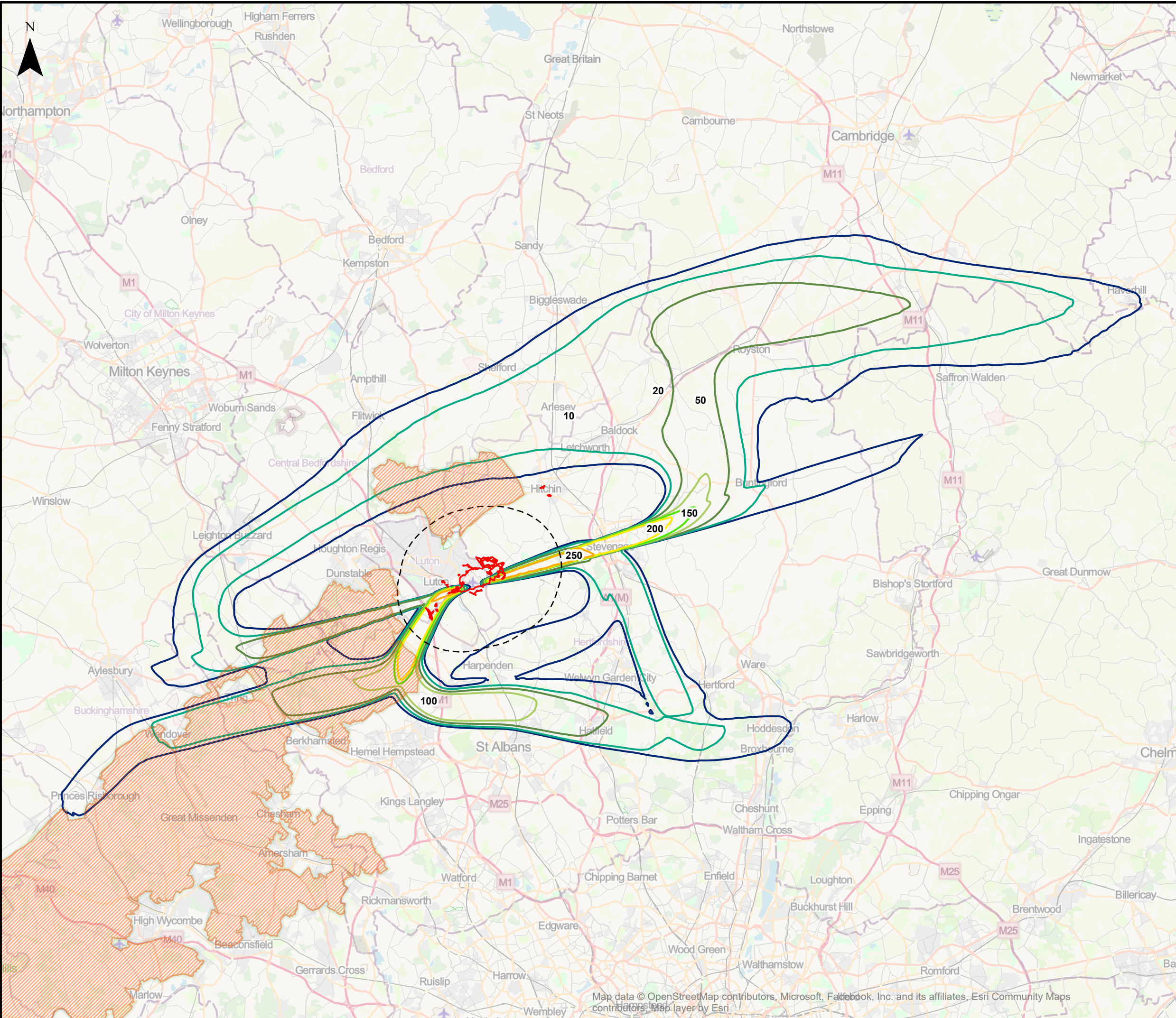
Special Quality	SQ Sensitivity	Magnitude of Impact	Significance of Effect
Significant ancient hedgerows, hedgerow and field trees, orchards and parkland weaving across farmland that covers approximately 60% of the Chilterns	Not assessed – physical characteristic that could not be affected by the Proposed Development due to distance from the AONB		
Relative tranquillity and peace on the doorstep of ten million people, one of the most accessible protected landscapes in Europe; relatively dark skies, of great value to human and wildlife health; unspoilt countryside, secret corners and a surprising sense of remoteness	High	Very Low	Minor, not significant
Nationally important concentrations of chalk grassland, extremely diverse in flora and fauna	Not assessed – physical characteristic that could not be affected by the Proposed Development due to distance from the AONB		
One of the most wooded landscapes in England, with 23% woodland cover concentrated in the central and southern areas			
Nine precious chalk streams, a globally scarce habitat and home to some of the UK's most endangered species.			
A dramatic chalk escarpment, a globally rare landscape type which gives rise to rare ecology and distinctive cultural heritage	Not assessed - any additional aircraft movements above the Chalk Escarpment would not materially affect the fundamental characteristics and/or qualities of the Chalk Escarpment.		
An industrial heritage around wood-working, furniture making, chalk quarrying, brick making, and food production with windmills and watercress beds	Not assessed – physical characteristic that could not be affected by the Proposed Development due to distance from the AONB		
Over 2000ha of common land, heaths and greens, rich in wildlife and cultural heritage; 3700ha of open access land			
Distinctive buildings made from local brick, flint and clay tiles; many attractive villages, popular places to live in and visit; many notable individual buildings and follies including stately homes, monuments and mausoleums; a wealth of medieval churches, many built from flint	Not assessed - increase in aircraft movements would not affect the setting and/or heritage value of any heritage assets within the AONB.		

Special Quality	SQ Sensitivity	Magnitude of Impact	Significance of Effect
A dense network of 2000km of rights of way; two national trails, the ridgeway and Thames path; notable regional routes such as the Chiltern way and the Chilterns cycleway	Physical routes not assessed as would not be affected by the Proposed Development due to distance from the AONB. Views from PRow assessed as part of Panoramic Views SQ		
An extensive and diverse archaeological landscape, including ancient parish boundaries, medieval field patterns and iron age hillforts; extensive remnants of woodland heritage including sawpits, charcoal hearths and wood banks	Not assessed – physical characteristic that could not be affected by the Proposed Development due to distance from the AONB		
Numerous ancient routeways and sunken lanes including the Icknield Way.	High	Very Low	Minor, not significant

GLOSSARY AND ABBREVIATIONS

Term	Definition
ALLV	Area of Local Landscape Value
AONB	Area of Outstanding Natural Beauty
Bucks	Buckinghamshire
CBC	Central Bedfordshire Council
CCB	Chilterns Conservation Board
Central Beds	Central Bedfordshire
DCO	Development Consent Order
ES	Environmental Statement
ExA	Examining Authority
ft	Feet
GLVIA	Guidelines for Landscape and Visual Impact Assessment
ISH	Issue Specific Hearing
km	Kilometre
LBC	Luton Borough Council
LVIA	Landscape and Visual Impact Assessment
The Applicant	Luton Rising (a trading name of London Luton Airport Limited ('the Applicant'))
mppa	Million passengers per annum
NSIP	Nationally Significant Infrastructure Project
NSA	National Scenic Areas
NE	Natural England
North Herts	North Hertfordshire
PADSS	Principal Areas of Disagreement Summary Statement
PRoW	Public Right of Way
SNH	Scottish Natural Heritage
SLQ	Special Landscape Qualities
SQs	Special Qualities

FIGURES



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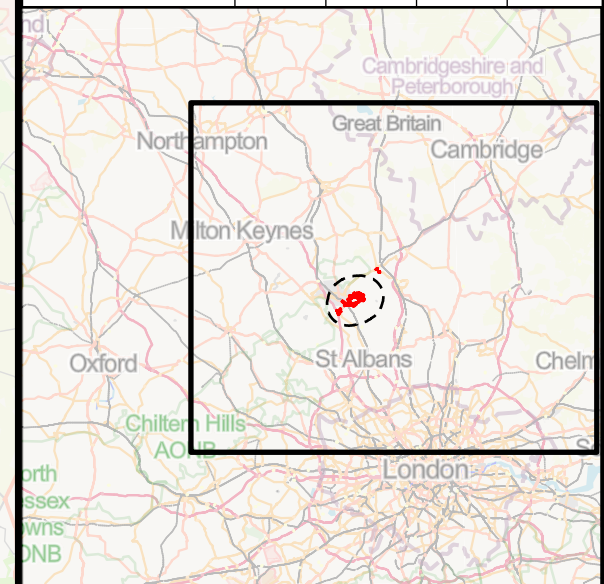
Legend

- Order Limits
- Main Application Site 5km Study Area
- Chilterns Area of Outstanding Natural Beauty (AONB)

Number of overflights per day (07:00 – 23:00) up to 7,000ft (Assessment Phase 2b)

- 10
- 20
- 50
- 100
- 150
- 200
- 250
- 300
- 350

Additional Submission Deadline 7	AB	DM	CS	09/01/24	P02
Revision History	Drawn	Checked	Approved	Date	Rev.



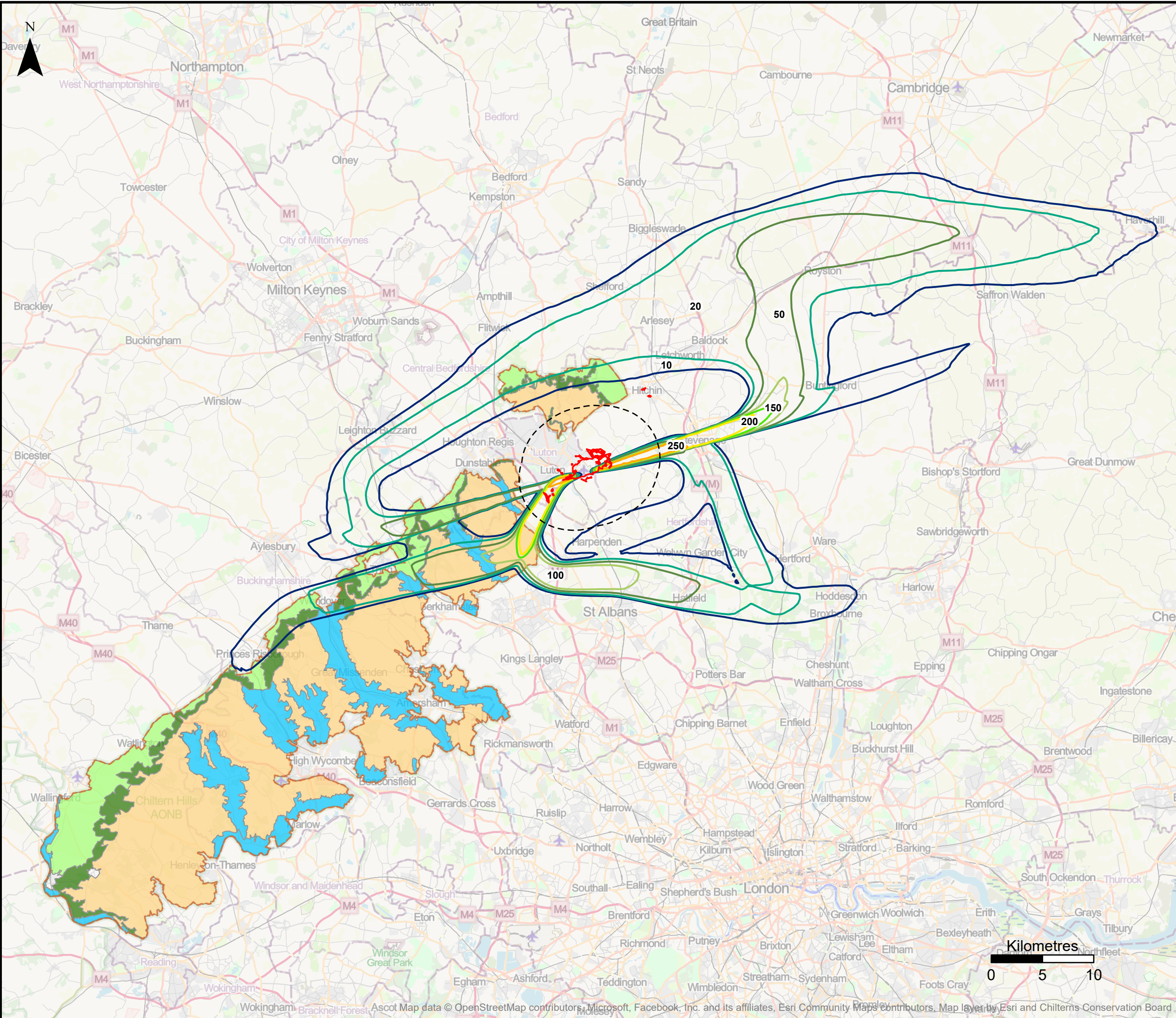
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Drawing Title
Figure 5.1 Special Qualities Study Area

Purpose of issue				Suitability	
Additional Submissions Deadline 6				S2	
Drawn	Checked	Approved	Date	Scale	Size
AB	DM	CS	09/01/24	1:300,140	A3
DCO Application Ref.		APFP Regulation		DCO Document Ref.	
TR020001		APFP 5(2)(a)		TR020001/APP/8.144	
Drawing Number					Revision
LLADCO-3C-ARP-00-00-DR-YE-0819					P02
Project - Phase - Originator - Asset/Zone - Sub Asset - Type- Discp. - Number					

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Legend

- Order Limits
- Main Application Site 5km Study Area
- Chilterns Area of Outstanding Natural Beauty (AONB)

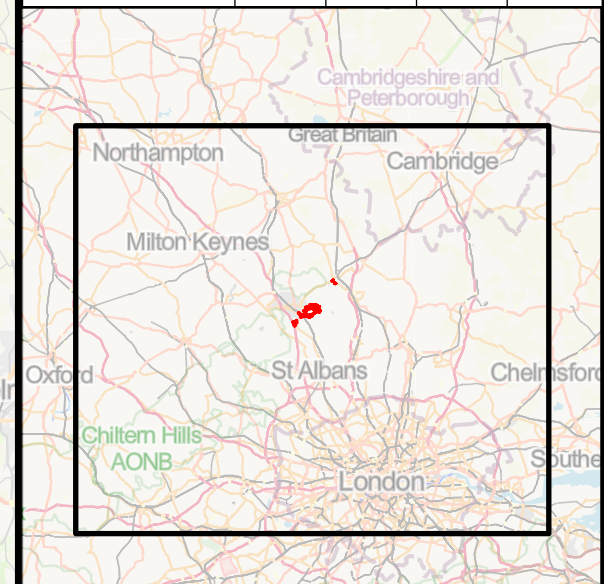
Chilterns main local landscape character areas

- Chalk Scarp
- Plateau and Dipslope
- River Valleys
- Scarp foothills and Vale fringes

Number of overflights per day (07:00 – 23:00) up to 7,000ft (Assessment Phase 2b)

- 10
- 20
- 50
- 100
- 150
- 200
- 250
- 300
- 350

Additional Submissions Deadline 7	AB	DM	CS	09/01/24	P02
Revision History	Drawn	Checked	Approved	Date	Rev.

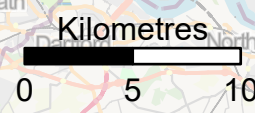


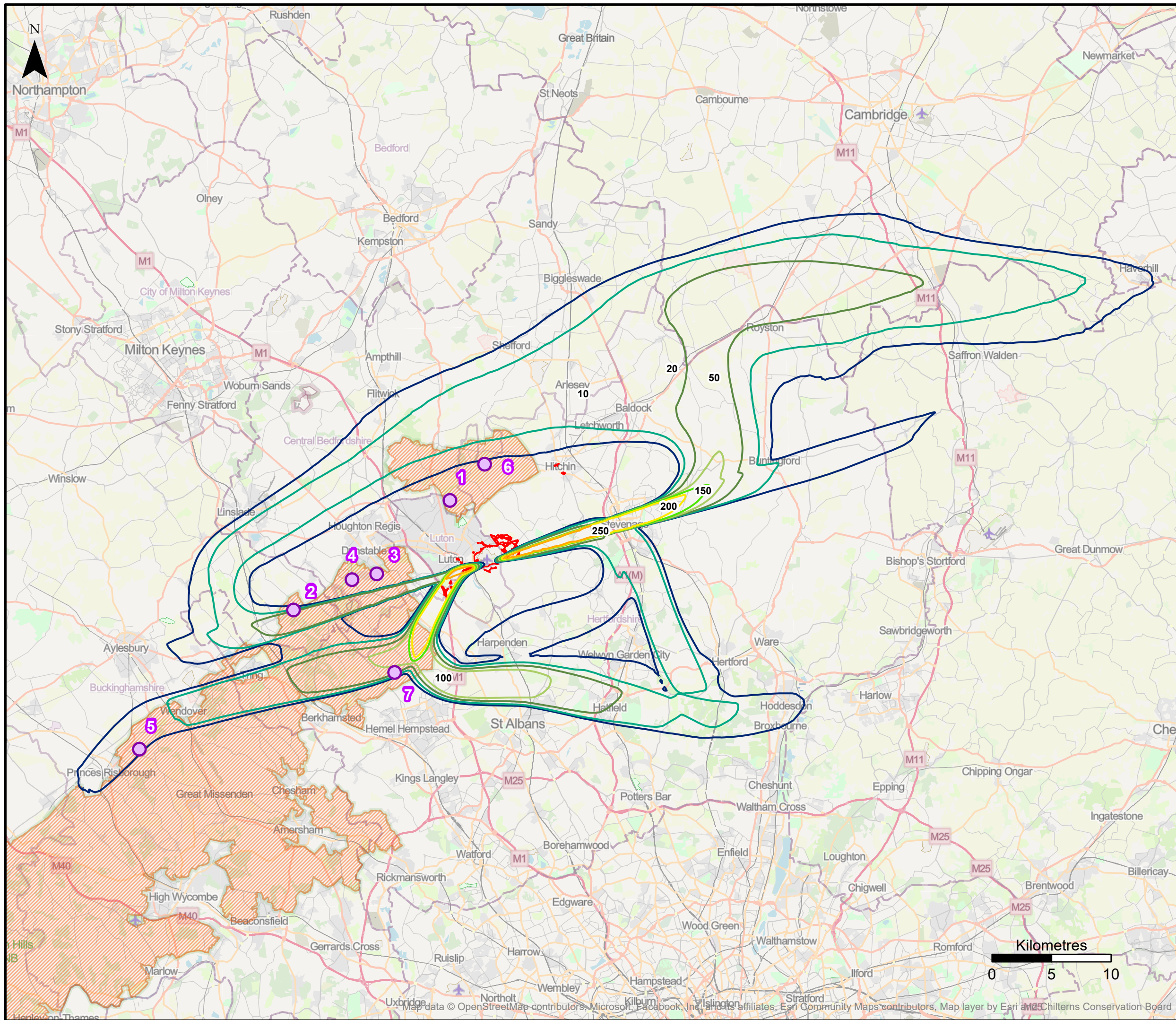
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Drawing Title
Figure 5.2 Chilterns Area of Outstanding Natural Beauty (AONB) Landscape Types

Purpose of issue				Suitability	
Additional Submissions Deadline 7				S2	
Drawn	Checked	Approved	Date	Scale	Size
AB	DM	CS	09/01/24	1:350,000	A3
DCO Application Ref.		APFP Regulation		DCO Document Ref.	
TR020001		N/A		TR020001/APP/8.144	
Drawing Number					Revision
LLADCO-3C-ARP-00-00-DR-YE-0820					P02
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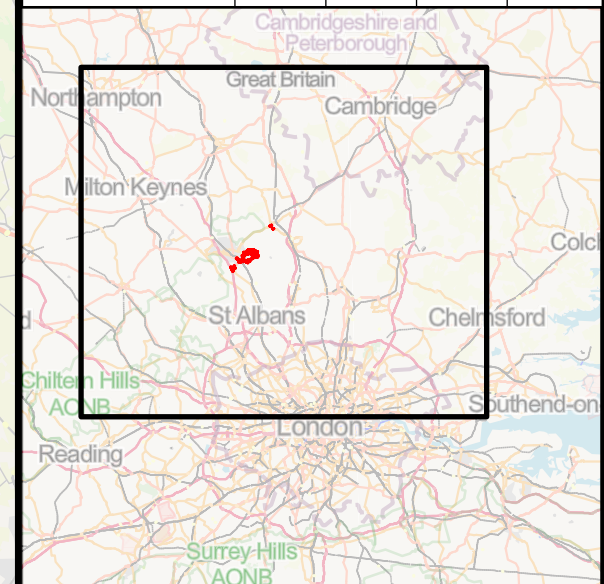
Legend

- Order Limits
- Viewpoint Locations
- Chilterns Area of Outstanding Natural Beauty (AONB)
- 20
- 50
- 100
- 150
- 200
- 250
- 300
- 350
- 10

Number of overflights per day (07:00 – 23:00) up to 7,000ft (Assessment Phase 2b)

No.	Viewpoint Location	Latitude	Longitude
1	ES VP1: Warden Hill	51.922319	-0.414943
2	ES VP45 Ivinghoe Beacon	51.842089	-0.608462
3	ES VP50 Beech Road, Stipers Hill	51.868088	-0.506162
4	Viewpoint A Dunstable Downs	51.864098	-0.536415
5	Viewpoint B Pulpit Hill	51.739213	-0.799019
6	Viewpoint C Telegraph Hill, Hitchin	51.949045	-0.371643
7	Crown and Sceptre Public House (adjacent to Great Gaddesden Bridleway no. 37)	51.793471	-0.48682

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Drawing Title
Figure 6.1 Special Qualities Assessment: Additional Viewpoint Locations

Purpose of issue				Suitability	
Additional Submissions Deadline 7				S2	
Drawn	Checked	Approved	Date	Scale	Size
AB	DM	CS	09/01/24	1:300,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	N/A	TR020001/APP/8.144

Drawing Number	Revision
LLADCO-3C-ARP-00-00-DR-YE-0818	P02

Project - Phase - Originator - Asset/Zone - Sub Asset - Type - Discp. - Number

Viewpoint A: View from Dunstable Downs (National Trust - Dunstable Downs and Whipsnade Estate), Central Bedfordshire.



Viewpoint B: View from Pulpit Hill Hillfort, Buckinghamshire



Viewpoint C: View from Telegraph Hill, Hitchin, North Hertfordshire.



Additional Submissions Deadline 7	AB	DM	CS	09/01/24	P02
Revision History	Drawn	Checked	Approved	Date	Rev.

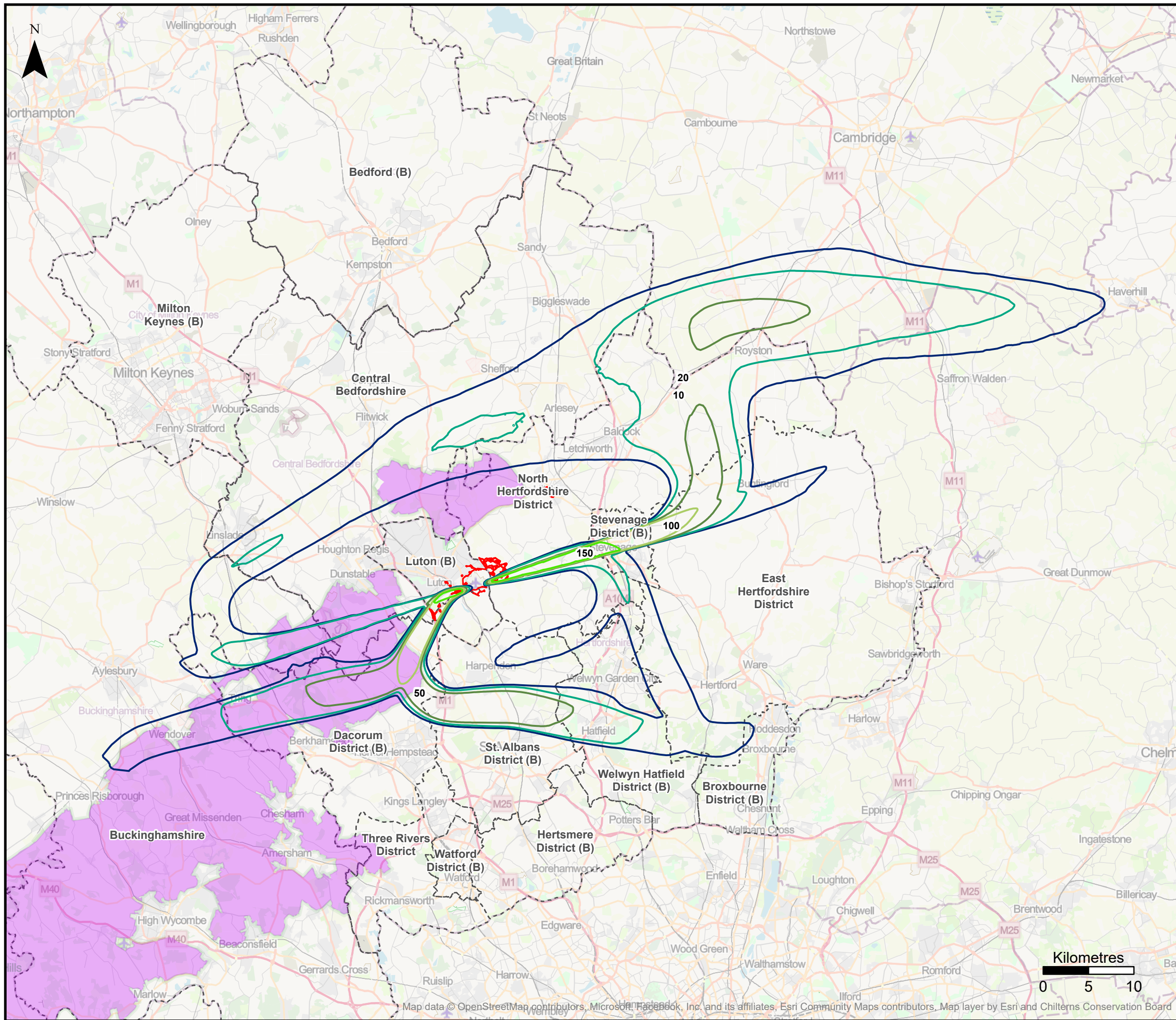
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Drawing Title
**Figure 6.2 Special Qualities Assessment:
Panoramic Views**

Purpose of issue				Suitability	
Additional Submissions Deadline 7				S2	
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AB	DM	CS	09/01/24	N/A	A3
DCO Application Ref.	APFP Regulation	DCO Document Ref.			
TR020001	N/A	TR020001/APP/8.144			
Drawing Number					Revision
LLADCO-3C-ARP-00-00-DR-YE-0817					P02
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- Legend**
- Order Limits
 - Local Authority Boundaries
 - Chilterns Area of Outstanding Natural Beauty (AONB)

Number of overflights per day (07:00 – 23:00) up to 7,000ft (2019 Do-Something) (2019 Baseline)

- 10
- 20
- 50
- 100
- 150
- 200
- 250
- 300
- 350

Additional Submissions Deadline 7	AB	DM	CS	09/01/24	P02
Revision History	Drawn	Checked	Approved	Date	Rev.

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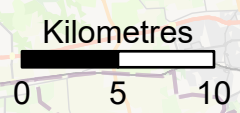
Drawing Title
Figure 6.3 Number of Aircraft Overflights per day up to 7,000ft (2019 Baseline)

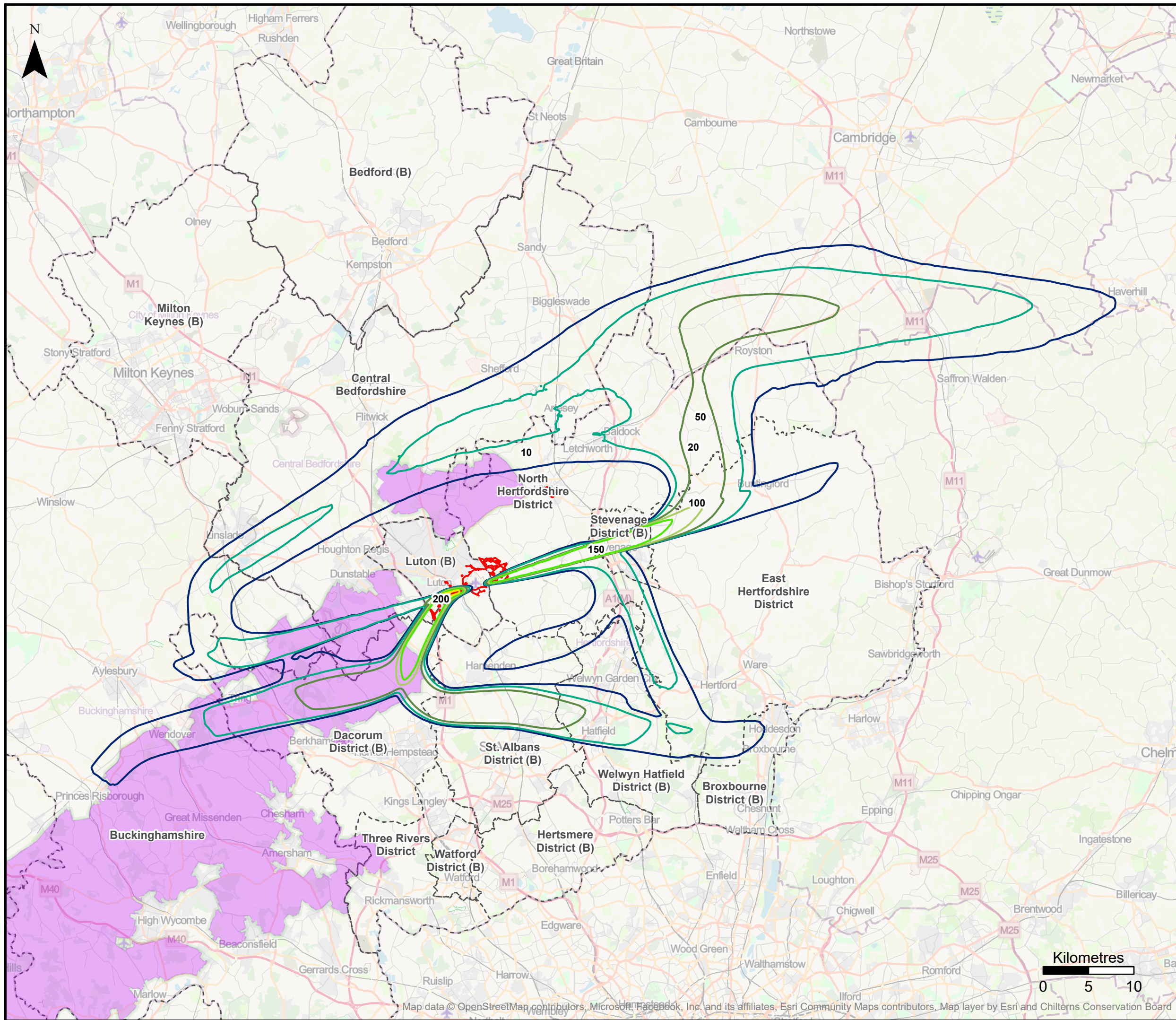
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Additional Submissions Deadline 7			S2		
Drawn	Checked	Approved	Date	Scale	Size
AB	DM	CS	09/01/24	1:300,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	N/A	TR020001/APP/8.144

Drawing Number	Revision
LLADCO-3C-ARP-00-00-DR-YE-0821	P02

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Legend

- Order Limits
 - Local Authority Boundaries
 - Chilterns Area of Outstanding Natural Beauty (AONB)
- Number of overflights per day (07:00 – 23:00) up to 7,000ft (Assessment Phase 1)**
- 10
 - 20
 - 50
 - 100
 - 150
 - 200
 - 250
 - 300
 - 350

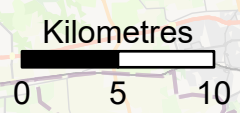
Additional Submissions Deadline 7	AB	DM	CS	09/01/24	P02
Revision History	Drawn	Checked	Approved	Date	Rev.

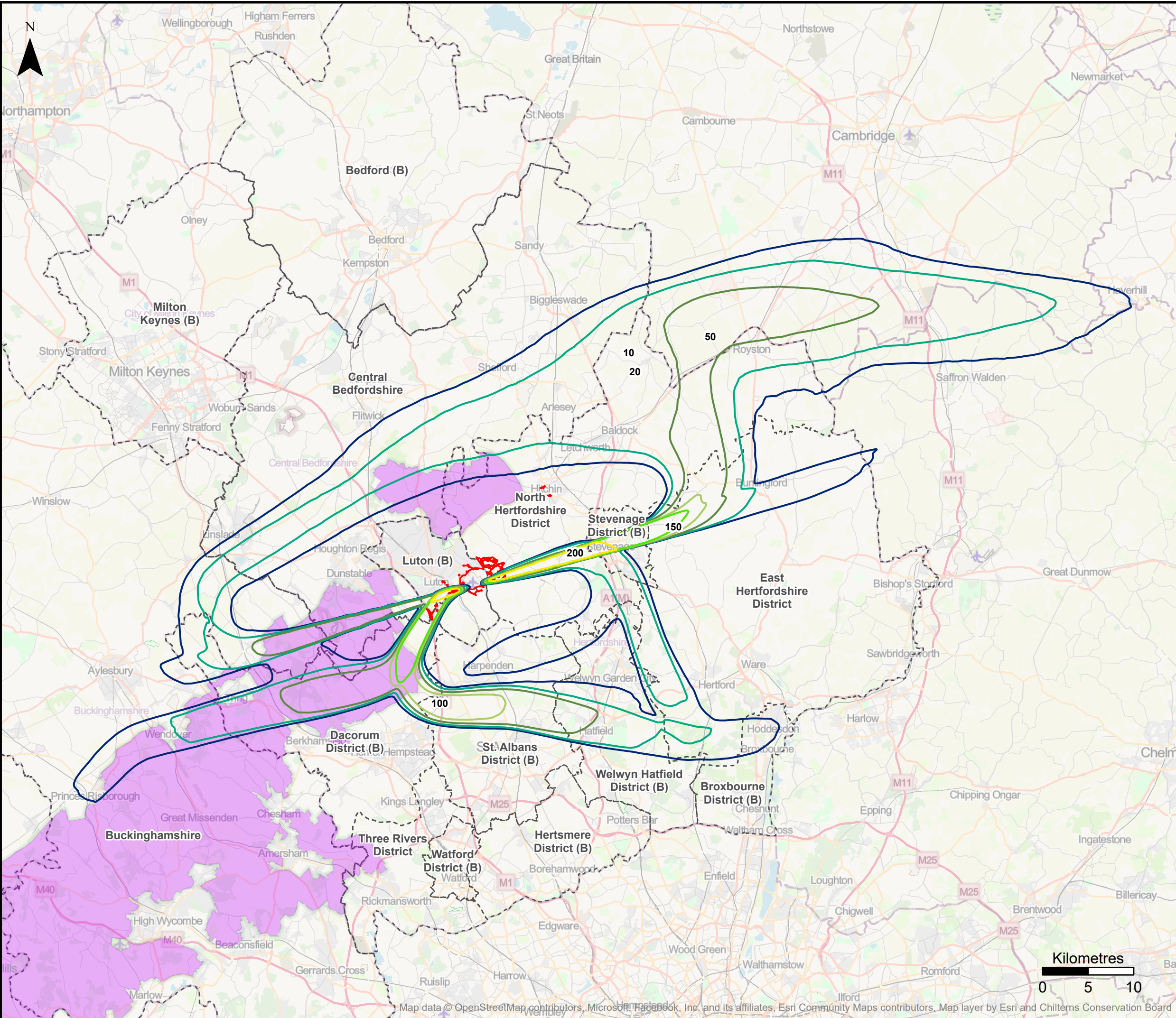
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Drawing Title
Figure 6.4 Number of Aircraft Overflights per day up to 7000ft (Assessment Phase 1)

Purpose of issue			Suitability		
Additional Submissions Deadline 7			S2		
Drawn	Checked	Approved	Date	Scale	Size
AB	DM	CS	09/01/24	1:300,000	A3
DCO Application Ref.	APFP Regulation	DCO Document Ref.			
TR020001	N/A	TR020001/APP/8.144			
Drawing Number					Revision
LLADCO-3C-ARP-00-00-DR-YE-0822					P02
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- Legend**
- Order Limits
 - Local Authority Boundaries
 - Chilterns Area of Outstanding Natural Beauty (AONB)

Number of overflights per day (07:00 – 23:00) up to 7,000ft (Assessment Phase 2a)

- 10
- 20
- 50
- 100
- 150
- 200
- 250
- 300
- 350

Additional Submissions Deadline 7	AB	DM	CS	09/01/24	P02
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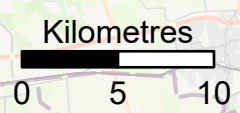
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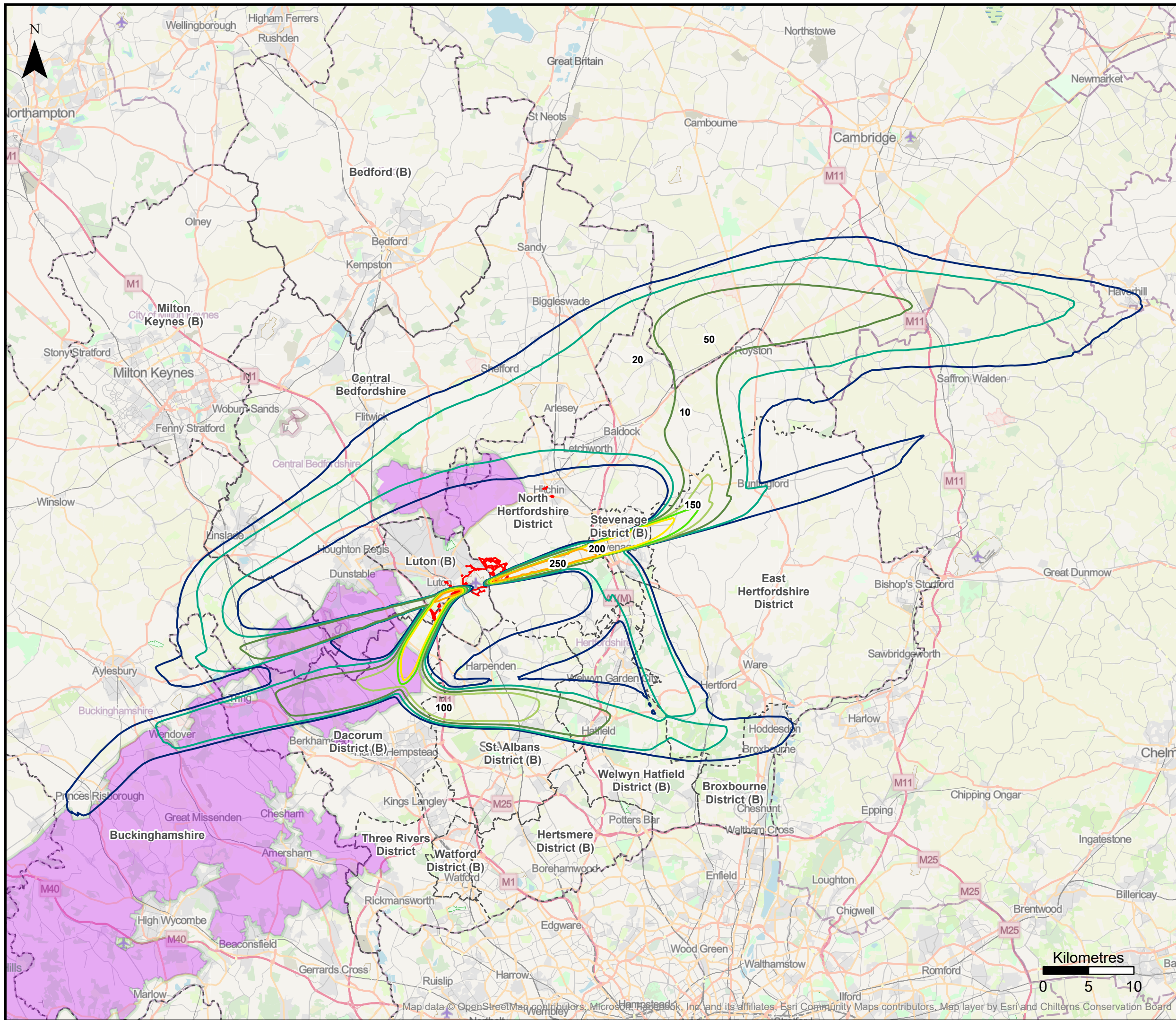
Drawing Title
Figure 6.5 Number of Aircraft Overflights per day up to 7000ft (Assessment Phase 2a)

Purpose of issue	Additional Submissions Deadline 7	Suitability
Drawn	Checked	Approved
AB	DM	CS
Date	Scale	Size
09/01/24	1:300,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	N/A	TR020001/APP/8.144

Drawing Number	Revision
LLADCO-3C-ARP-00-00-DR-YE-0823	P02





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Legend

- Order Limits
- Local Authority Boundaries
- Chilterns Area of Outstanding Natural Beauty (AONB)

Number of overflights per day (07:00 – 23:00) up to 7,000ft (Assessment Phase 2b)

- 10
- 20
- 50
- 100
- 150
- 200
- 250
- 300
- 350

Additional Submissions Deadline 7	AB	DM	CS	09/01/24	P02
Revision History	Drawn	Checked	Approved	Date	Rev.

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Drawing Title
Figure 6.6 Number of Aircraft Overflights per day up to 7000ft(Assessment Phase 2b)

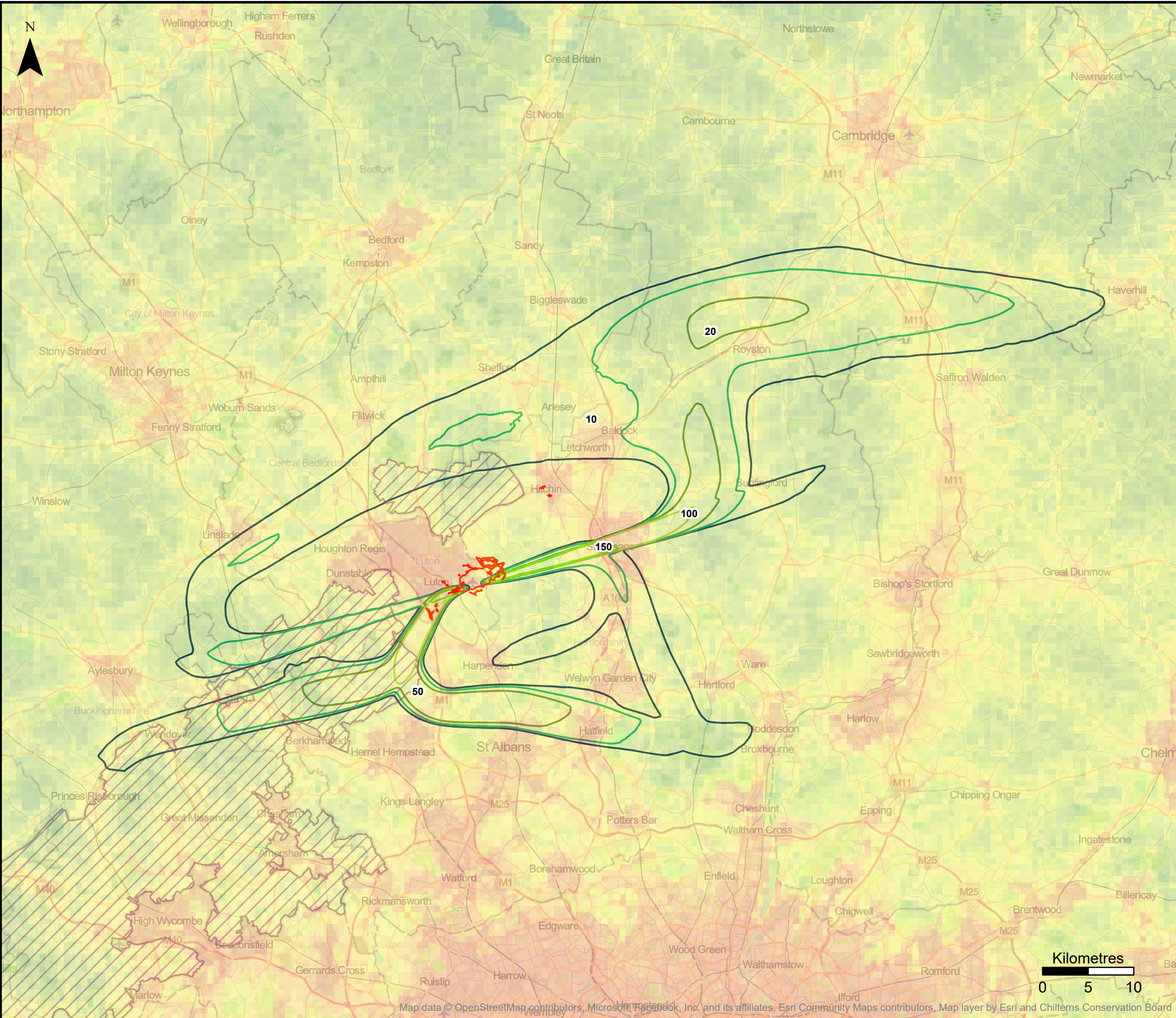
Purpose of issue				Suitability	
Additional Submissions Deadline 7				S2	
Drawn	Checked	Approved	Date	Scale	Size
AB	DM	CS	09/01/24	1:300,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	N/A	TR020001/APP/8.144

Drawing Number	Revision
LLADCO-3C-ARP-00-00-DR-YE-0824	P02
Project - Phase - Originator - Asset/Zone - Sub Asset - Type- Discp. - Number	

Kilometres





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Legend

- Order Limits
- Chilterns Area of Outstanding Natural Beauty (AONB)

Number of overflights per day (07:00 – 23:00) up to 7,000ft (2019 Do-Something) (2019 Baseline)

- 10
- 20
- 50
- 100
- 150
- 200
- 250
- 300
- 350

Tranquility

Least tranquil

Most tranquil

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Additional Submissions Deadline 7	AB	DM	CS	09/01/24	P02
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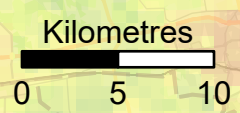
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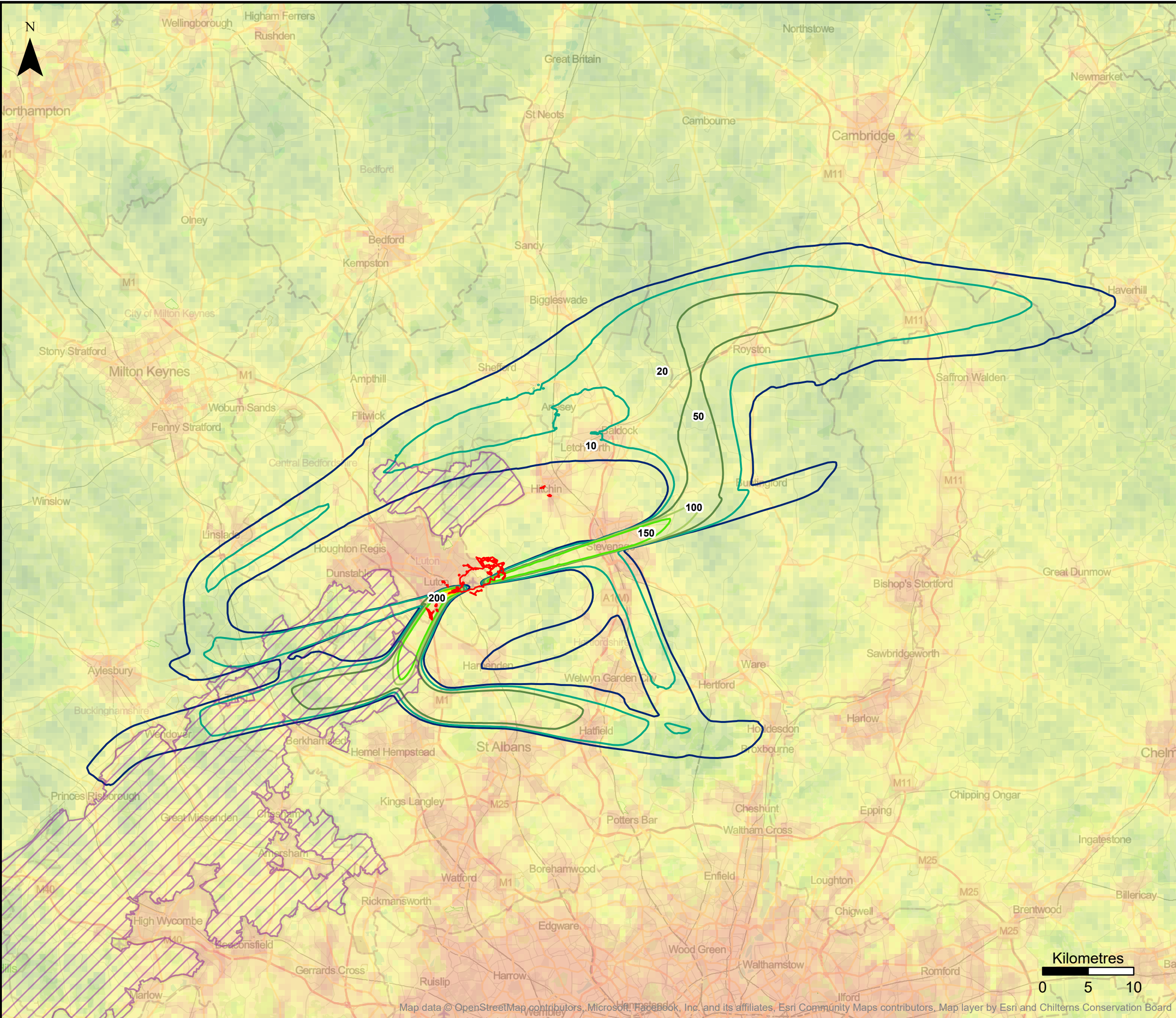
Drawing Title
Figure 6.7 Aircraft Overflights/Tranquility Mapping (2019 Baseline)

Purpose of issue	Additional Submissions Deadline 7	Suitability
Drawn	Checked	Approved
AB	DM	CS
Date	Scale	Size
09/01/24	1:300,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	N/A	TR020001/APP/8.144

Drawing Number	Revision
LLADCO-3C-ARP-00-00-DR-YE-0825	P02





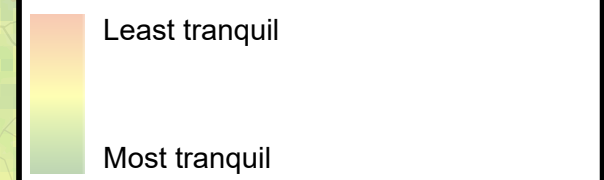
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Legend

- Order Limits
 - Chilterns Area of Outstanding Natural Beauty (AONB)
- Number of overflights per day (07:00 – 23:00) up to 7,000ft (Assessment Phase 1)**
- 10
 - 20
 - 50
 - 100
 - 150
 - 200
 - 250
 - 300
 - 350

Tranquility



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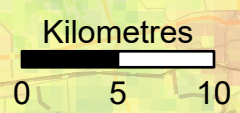
Drawing Title
Figure 6.8 Aircraft Overflights/Tranquility Mapping (2027 Assessment Phase 1)

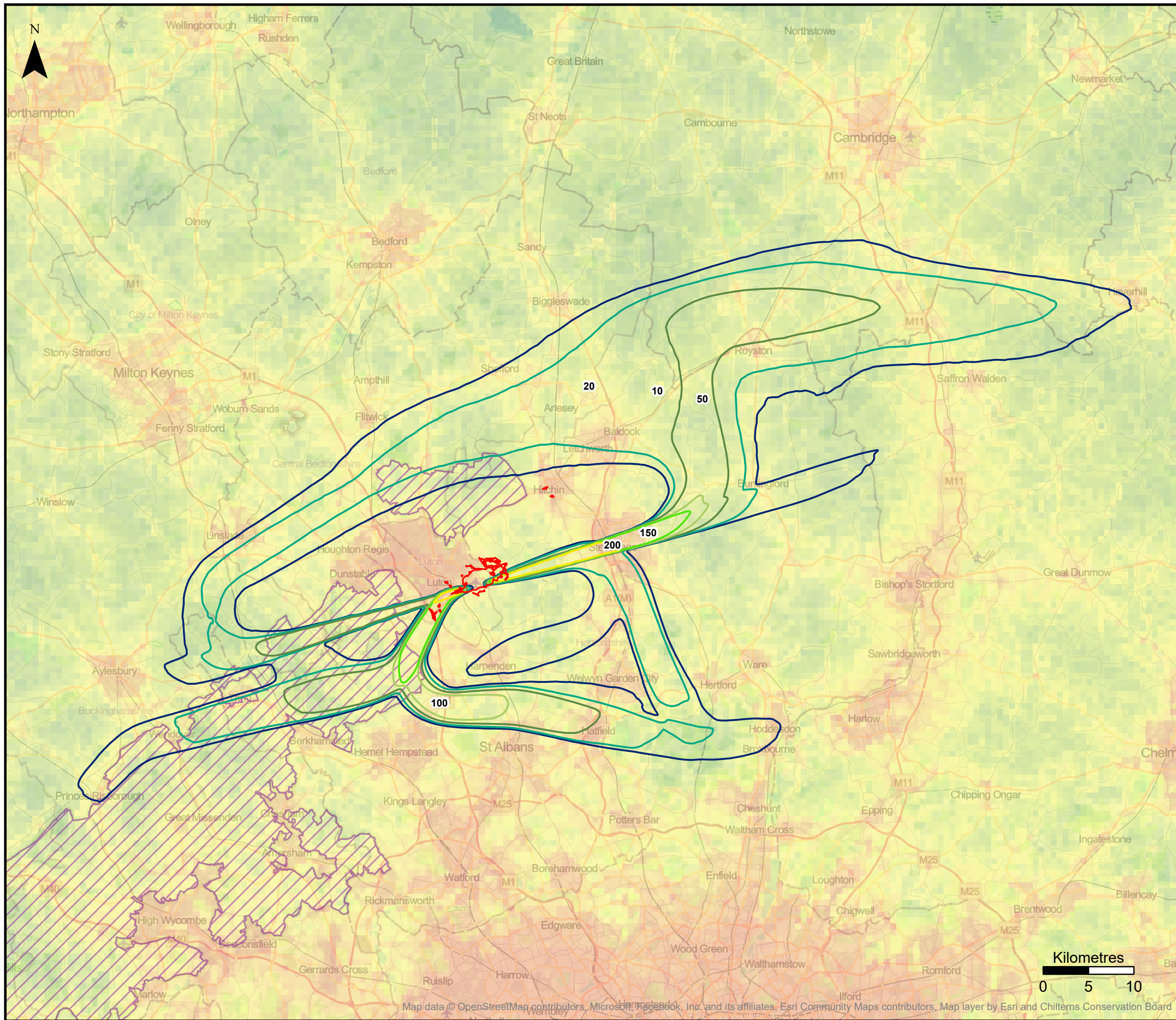
Purpose of issue				Suitability	
Additional Submissions Deadline 7				S2	
Drawn	Checked	Approved	Date	Scale	Size
AB	DM	CS	09/01/24	1:300,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	N/A	TR020001/APP/8.144

Drawing Number	Revision
LLADCO-3C-ARP-00-00-DR-YE-0826	P02

Project - Phase - Originator - Asset/Zone - Sub Asset - Type- Discp. - Number





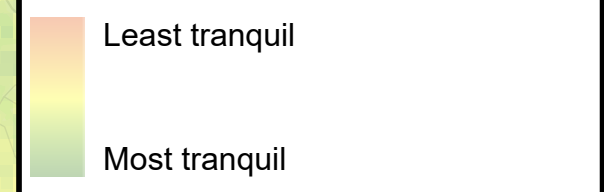
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Legend

- Order Limits
 - Chilterns Area of Outstanding Natural Beauty (AONB)
- Number of overflights per day (07:00 – 23:00) up to 7,000ft (Assessment Phase 2a)**
- 10
 - 20
 - 50
 - 100
 - 150
 - 200
 - 250
 - 300
 - 350

Tranquility



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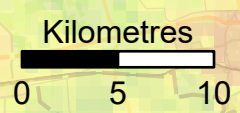
Drawing Title
Figure 6.9 Aircraft Overflights/Tranquility Mapping (2039 Assessment Phase 2a)

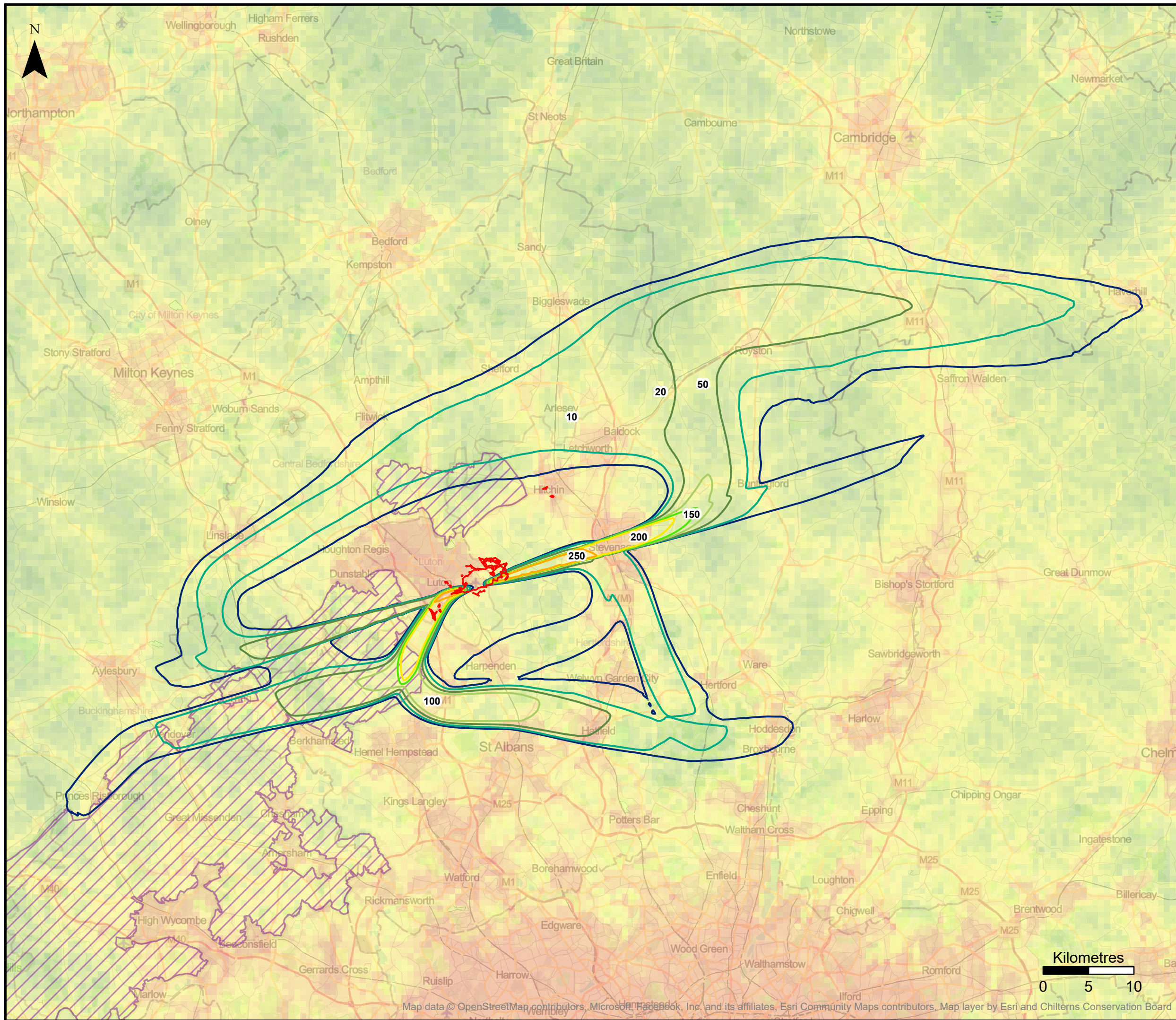
Purpose of issue			Suitability		
Additional Submissions Deadline 7			S2		
Drawn	Checked	Approved	Date	Scale	Size
AB	DM	CS	09/01/24	1:300,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	N/A	TR020001/APP/8.144

Drawing Number	Revision
LLADCO-3C-ARP-00-00-DR-YE-0827	P02

Project - Phase - Originator - Asset/Zone - Sub Asset - Type- Discp. - Number





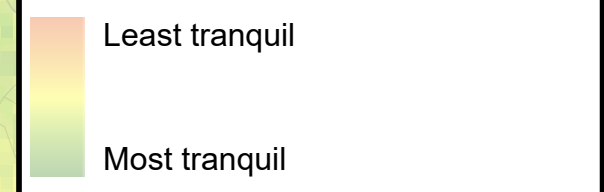
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Legend

- Order Limits
 - Chilterns Area of Outstanding Natural Beauty (AONB)
- Number of overflights per day (07:00 – 23:00) up to 7,000ft (Assessment Phase 2b)**
- 10
 - 20
 - 50
 - 100
 - 150
 - 200
 - 250
 - 300
 - 350

Tranquility



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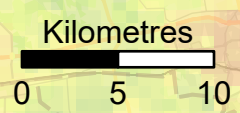
Drawing Title
Figure 6.10 Aircraft Overflights/Tranquility Mapping (2043 Assessment Phase 2b)

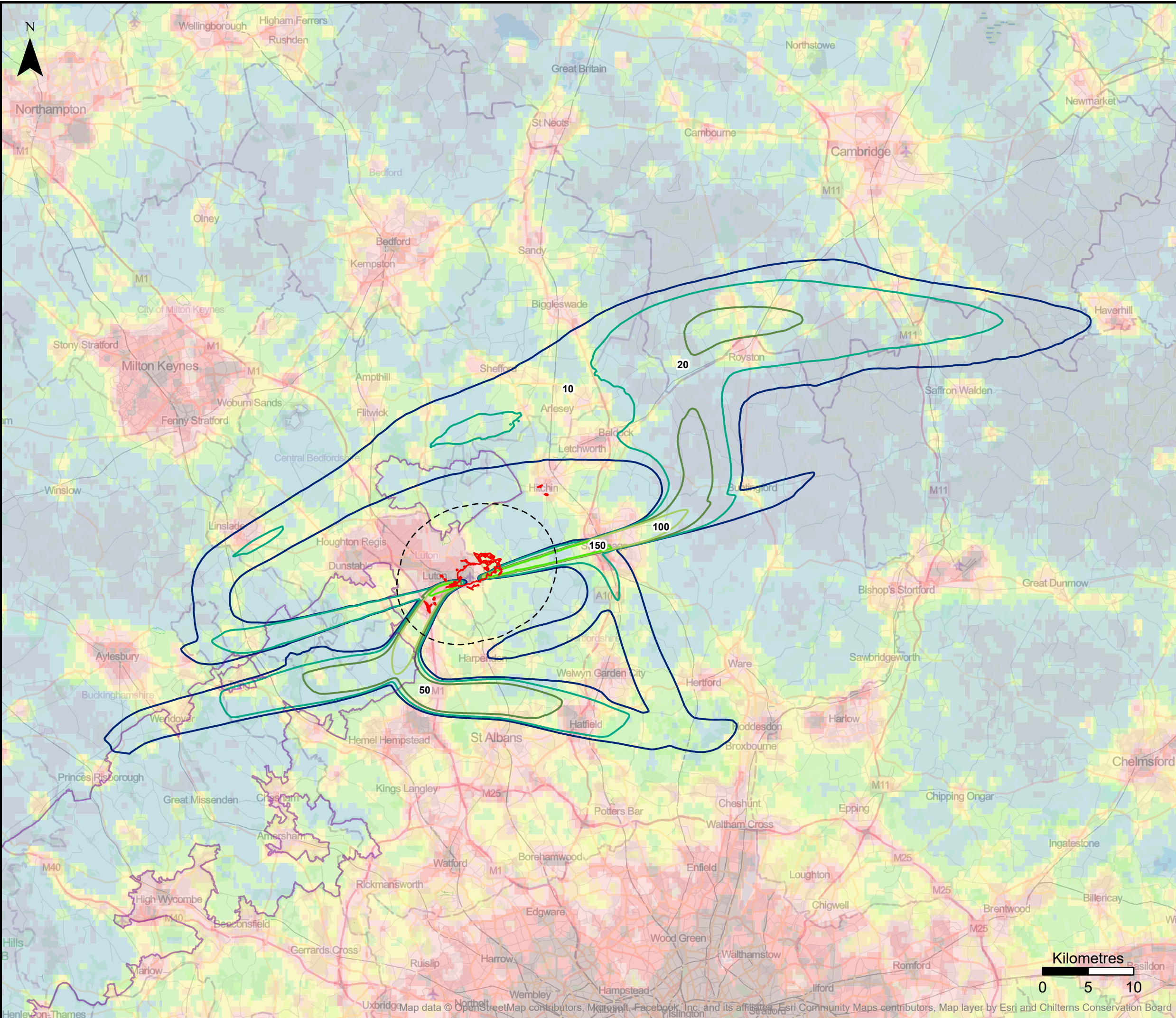
Purpose of issue				Suitability	
Additional Submissions Deadline 7				S2	
Drawn	Checked	Approved	Date	Scale	Size
AB	DM	CS	09/01/24	1:300,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	N/A	TR020001/APP/8.144

Drawing Number	Revision
LLADCO-3C-ARP-00-00-DR-YE-0828	P02

Project - Phase - Originator - Asset/Zone - Sub Asset - Type- Discp. - Number





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Legend

- Order Limits
- Main Application Site 5km Study Area
- Chilterns Area of Outstanding Natural Beauty (AONB)

Number of overflights per day (07:00 – 23:00) up to 7,000ft (2019 Do-Something) (2019 Baseline)

- 10
- 20
- 50
- 100
- 150
- 200
- 250
- 300
- 350

Night Lights

(NanoWatts / cm2 /sr)

- >32 (high)
- 16 - 32
- 8 - 16
- 4 - 8
- 2 - 4
- 1 - 2
- 0.5 - 1
- 0.25 - 0.5
- < 0.25 (low)

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Additional Submissions Deadline 7	AB	DM	CS	09/01/24	P02
Revision History	Drawn	Checked	Approved	Date	Rev.

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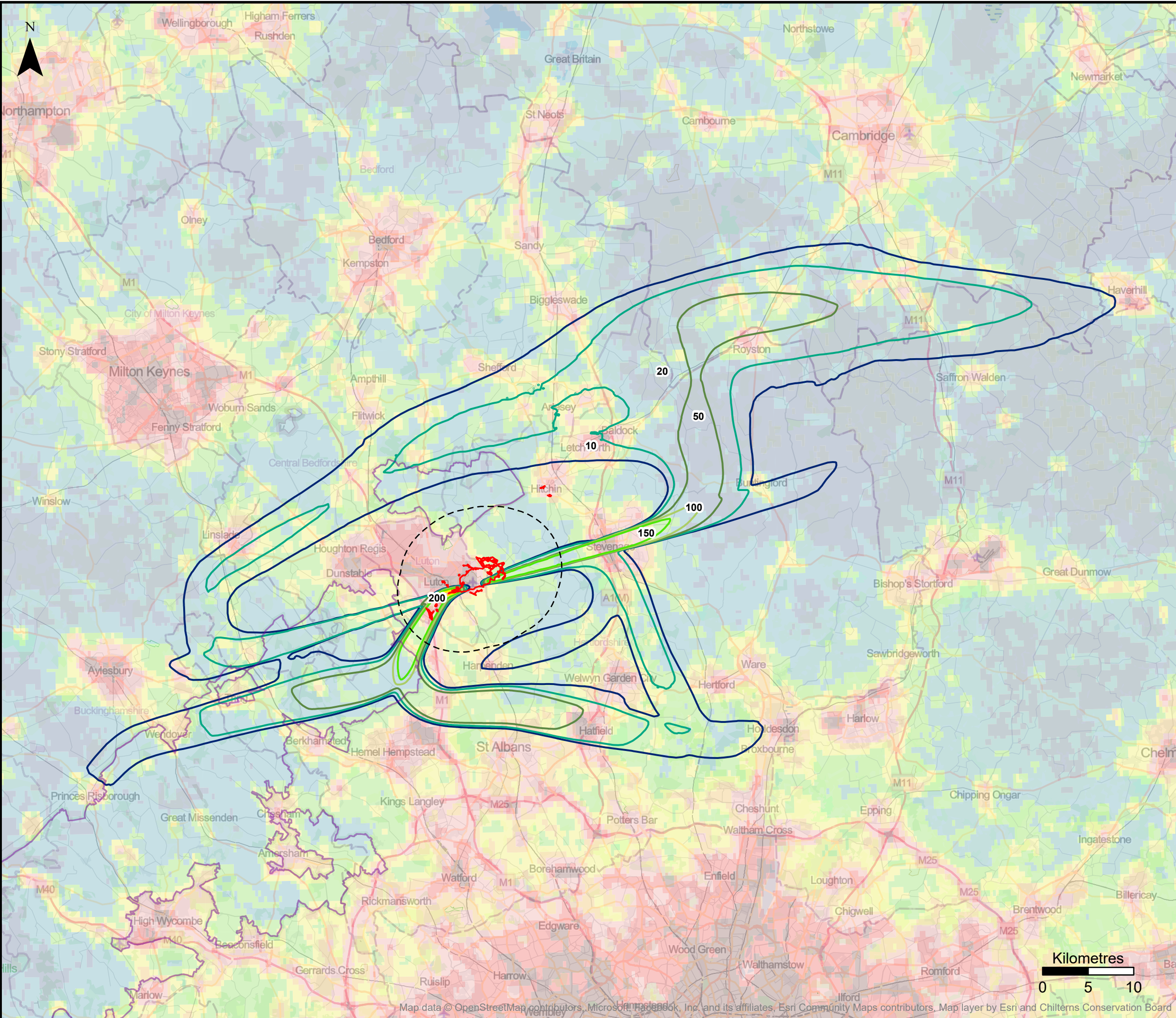
Drawing Title
Figure 6.11 Aircraft Overflights/Dark Skies Mapping (2019 Baseline)

Purpose of issue			Suitability		
Additional Submissions Deadline 7			S2		
Drawn	Checked	Approved	Date	Scale	Size
AB	DM	CS	09/01/24	1:300,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	N/A	TR020001/APP/8.144

Drawing Number	Revision
LLADCO-3C-ARP-00-00-DR-YE-0829	P02

Project - Phase - Originator - Asset/Zone - Sub Asset - Type - Discp. - Number



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- Legend**
- Order Limits
 - Main Application Site 5km Study Area
 - Chilterns Area of Outstanding Natural Beauty (AONB)

Number of overflights per day (07:00 – 23:00) up to 7,000ft (Assessment Phase 1)

- 10
- 20
- 50
- 100
- 150
- 200
- 250
- 300
- 350

Night Lights
(NanoWatts / cm² /sr)

- >32 (high)
- 16 - 32
- 8 - 16
- 4 - 8
- 2 - 4
- 1 - 2
- 0.5 - 1
- 0.25 - 0.5
- < 0.25 (low)

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Additional Submissions Deadline 7	AB	DM	CS	09/01/24	P02
Revision History	Drawn	Checked	Approved	Date	Rev.

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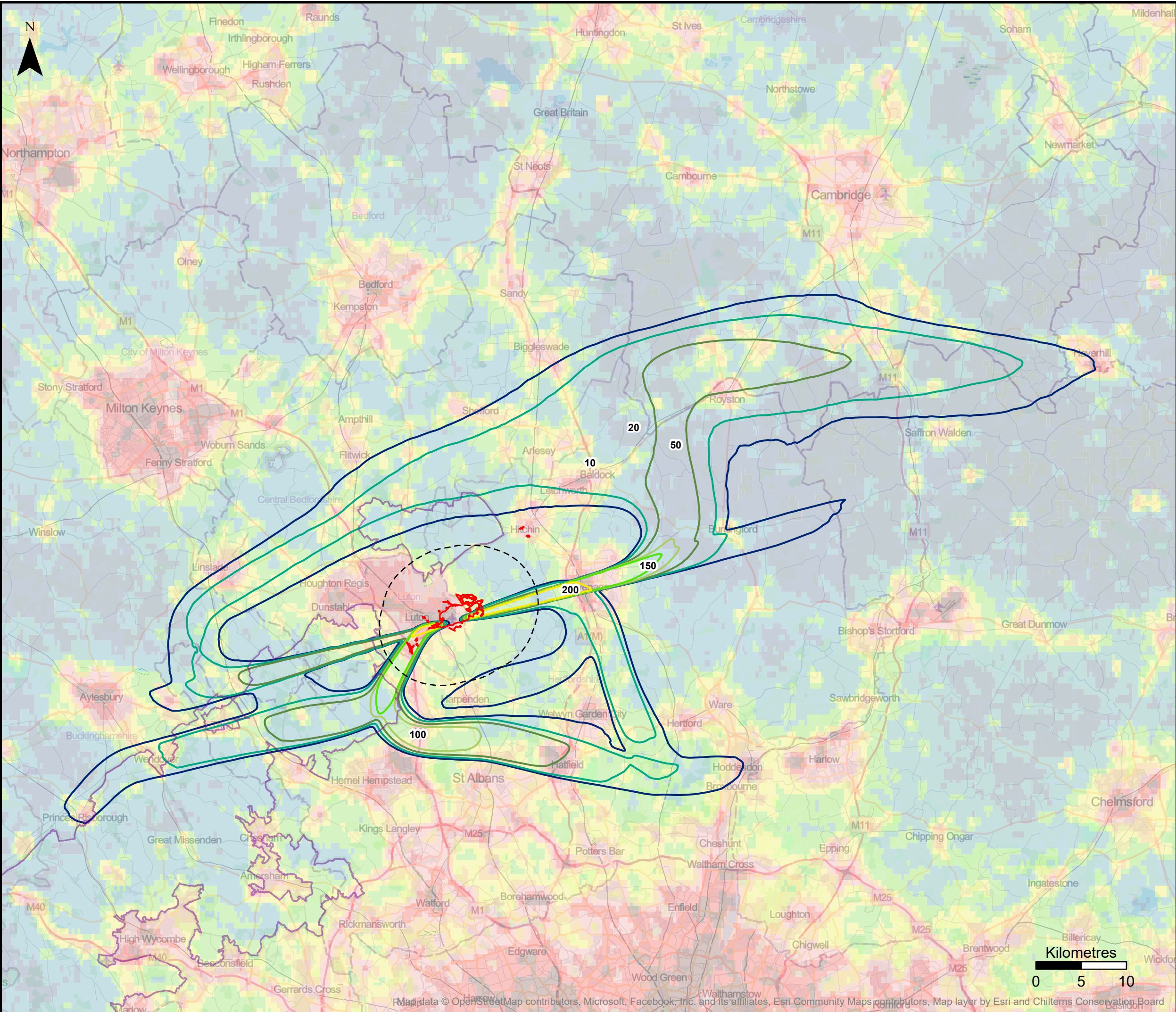
Drawing Title
Figure 6.12 Aircraft Overflights/ Dark Skies Mapping (2027 Assessment Phase 1)

Purpose of issue			Suitability		
Additional Submissions Deadline 7			S2		
Drawn	Checked	Approved	Date	Scale	Size
AB	DM	CS	09/01/24	1:300,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	N/A	TR020001/APP/8.144

Drawing Number	Revision
LLADCO-3C-ARP-00-00-DR-YE-0830	P02

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- Legend**
- Order Limits
 - Main Application Site 5km Study Area
 - Chilterns Area of Outstanding Natural Beauty (AONB)

Number of overflights per day (07:00 – 23:00) up to 7,000ft (Assessment Phase 2a)

- 10
- 20
- 50
- 100
- 150
- 200
- 250
- 300
- 350

Night Lights
 (NanoWatts / cm² / sr)

- >32 (high)
- 16 - 32
- 8 - 16
- 4 - 8
- 2 - 4
- 1 - 2
- 0.5 - 1
- 0.25 - 0.5
- < 0.25 (low)

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Revision History	Drawn	Checked	Approved	Date	Rev.

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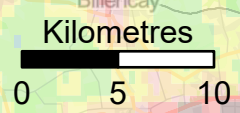
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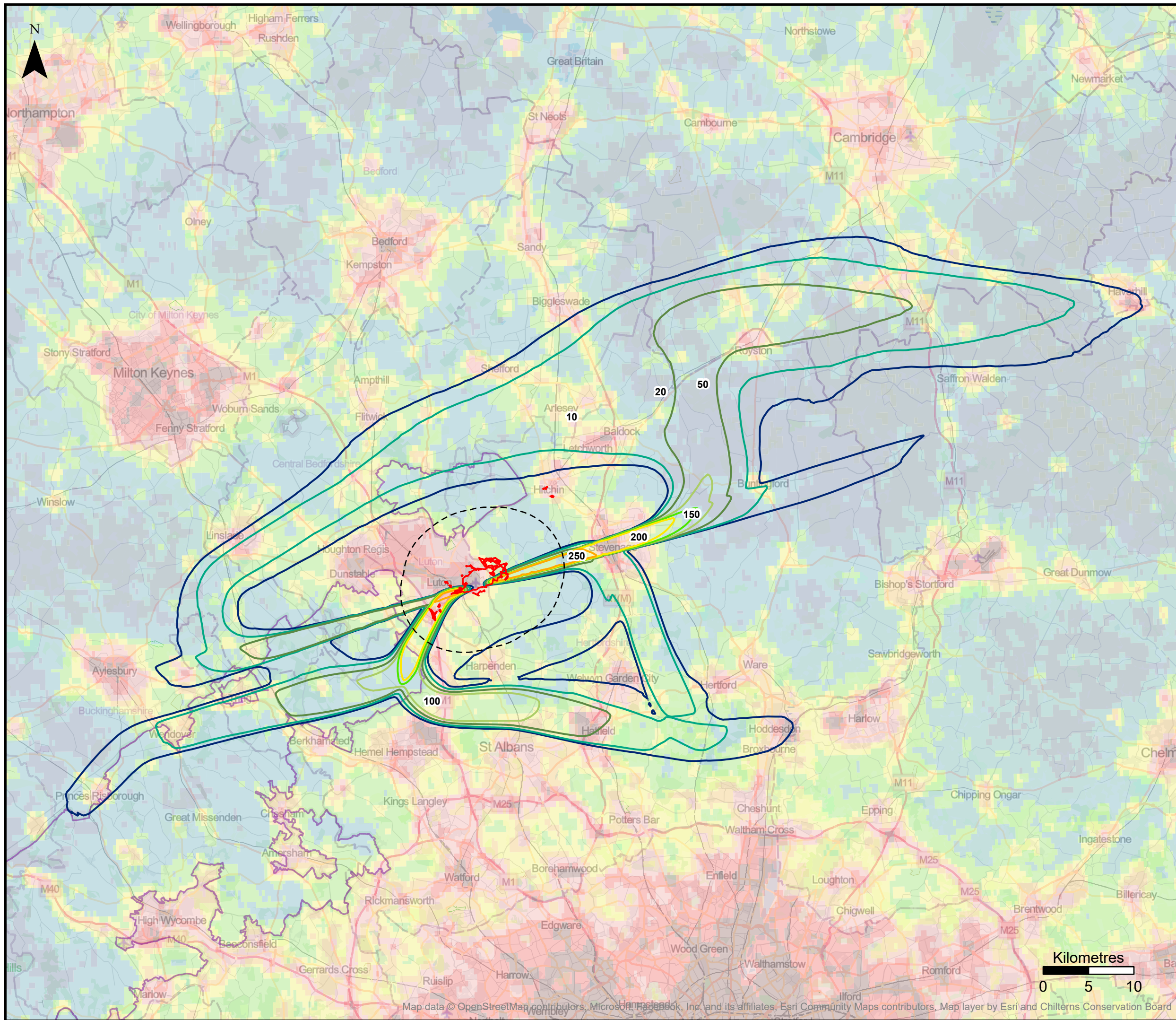
Drawing Title
**Figure 6.13 Aircraft Overflights/ Dark Skies Mapping
 (2039 Assessment Phase 2a)**

Purpose of issue				Suitability	
Additional Submissions Deadline 7				S2	
Drawn	Checked	Approved	Date	Scale	Size
AB	DM	CS	09/01/24	1:300,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	N/A	TR020001/APP/8.144

Drawing Number	Revision
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Legend

- Order Limits
- Main Application Site 5km Study Area
- Chilterns Area of Outstanding Natural Beauty (AONB)

Number of overflights per day (07:00 – 23:00) up to 7,000ft (Assessment Phase 2b)

- 10
- 20
- 50
- 100
- 150
- 200
- 250
- 300
- 350

Night Lights

(NanoWatts / cm² /sr)

- >32 (high)
- 16 - 32
- 8 - 16
- 4 - 8
- 2 - 4
- 1 - 2
- 0.5 - 1
- 0.25 - 0.5
- < 0.25 (low)

Earth Observation Group, NOAA National Geophysical Data Center. Data processed by LUC on behalf of CPRE.

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Drawing Title
Figure 6.14 Aircraft Overflights/ Dark Skies Mapping (2043 Assessment Phase 2b)

Purpose of issue				Suitability	
Additional Submissions Deadline 7				S2	
Drawn	Checked	Approved	Date	Scale	Size
AB	DM	CS	09/01/24	1:300,000	A3

DCO Application Ref.	APFP Regulation	DCO Document Ref.
TR020001	N/A	TR020001/APP/8.144

Drawing Number	Revision
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Project - Phase - Originator - Asset/Zone - Sub Asset - Type- Discp. - Number

APPENDIX A – RESPONSE TO COMMENTS ON AREA OF OUTSTANDING NATURAL BEAUTY SPECIAL QUALITIES ASSESSMENT

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1 Introduction	1
1.1 Overview	1
Glossary and Abbreviations	33

Tables

Table 1.1: Special Qualities Assessment: Stakeholders Comments Log and Responses

1 INTRODUCTION

1.1 Overview

- 1.1.1 A draft Assessment of the effects of the Proposed Development on the Special Qualities (SQ's) of the Chilterns Area of Outstanding Natural Beauty ('the Assessment') was prepared by London Luton Airport Limited, trading as Luton Rising ("the Applicant") in October 2023.
- 1.1.2 The draft Assessment was issued to several interested parties on 23 October 2023 for comment. A meeting was also held with interested parties on 30 October 2023 to discuss the methodology, scope, findings and conclusions of the draft Assessment.
- 1.1.3 Comments were received by the following parties on the draft Assessment:
- a. Chilterns Conservation Board (CCB) on 27 October 2023;
 - b. Natural England (NE) on 31 October 2023;
 - c. Central Bedfordshire Council (CBC) on 2 November 2023; and
 - d. Hertfordshire Host Authorities (Herts. Authorities) on 3 November 2023
- 1.1.4 A second draft of the Assessment was submitted to the above stakeholders and the Examining Authority (ExA) at Deadline 6 (**Applicant's Response to Issue Specific Hearing 8 Action 42 – Draft Chilterns Area of Outstanding Natural Beauty Special Qualities Assessment [TR020001/APP/8.144]**). The Applicant received comments from the CCB on this draft on 21 December 2023.
- 1.1.5 This document records the comments received by the parties above and the Applicant's responses to these comments.
- 1.1.6 Table 1.1 below reflects comments received from the CCB and the Applicant's response on both drafts of the Assessment. Sometimes, no comment or response was provided on that issue on that draft and so there is no substantive text provided at that point. For the benefit of the reader, where this was the case 'N/A' (not applicable) has been added, to make this position clear.

Table 1.1: Stakeholders Comments Log and Responses on Special Qualities (SQs) Assessment

ID	Section Comment Relates to	Stakeholder Comment on Draft 1 (Verbatim)	Applicant Response	Stakeholder Comment on Draft 2 (Verbatim)	Applicant Response
Chilterns Conservation Board					
1	Executive Summary 1.0. 'Matters outstanding'- This point links to Table 5.1: Special Qualities Screening.	Not Applicable (N/A)	N/A	<p>Omitted Special Qualities (SQs). The special qualities of an archaeological landscape and the dramatic chalk escarpment should be included in the 'yes' category, to be scoped. (CCB's recommendation for inclusion).</p> <p>A disagreement remains as to which special qualities linked to relative tranquillity are impacted by the proposed expansion. The CCB maintains that the setting of an archaeological and dramatic chalk escarpment along the Chilterns Ridge is impacted, for example, Bronze and Iron Age archaeology at Ivinghoe, Pitstone and Aldbury Nowers. The ExA visited Ivinghoe Beacon during their site visits on Tuesday 23rd May 2023. Aircraft overfly this landscape at or below 7,000ft. The ExA noted that <i>'the footpath leading to the Beacon is under the footpath'</i>. (Case Ref: TR020001 The Examining Authority's Note of an Unaccompanied Site Inspection). The sweeping escarpment of the Chilterns Ridge is rich in archaeology. To illustrate this point, we have pasted (below) Figure 3 from an English Heritage study in 2001, which shows the Bronze Age and Iron Age landscape of the Chilterns Ridge. The CCB is itself heavily engaged in the 'Beacons of the Past' National Lottery Heritage Fund project to record and improve the condition of the many Hillforts that pepper the escarpment, historically taking advantage of its topography and bequeathing what is now a strong place identity. In November 2023, Cholesbury Camp was removed from the Heritage-at-Risk register because of this work.</p>	<p>The Applicant maintains that the Proposed Development, and specifically increased aircraft movements, would not materially affect the archaeological landscape and the dramatic chalk escarpment of the AONB for the reasons set out in the Applicant's response to CCB's comments on this matter in Draft 1 of the Assessment (refer to ID 20 and ID21 of this table).</p> <p>The Figure from the English Heritage study is provided in CCB's comments on the second draft of the Special Qualities Assessment (copied to the Applicant in advance on 21 December 2023) to the ExA at Deadline 7.</p>

ID	Section Comment Relates to	Stakeholder Comment on Draft 1 (Verbatim)	Applicant Response	Stakeholder Comment on Draft 2 (Verbatim)	Applicant Response
2	Executive Summary 2.0. 'Matters outstanding' – This point links to Methodology and Overview 3.1 as a supplementary point of detail.	N/A	N/A	<p>Methodology, accommodating the boundary extension project - the Rochdale Envelope approach. In their detailed response to the CCB, the applicants do not pursue this point. The SQ study, notwithstanding its detail, does not countenance the AONB boundary review at all. The methodology adopted should be duly transferable within the wider Chilterns. If you take the land to the east of the existing airport and its AONB candidate status the metric or measures promoted should be readily transferable to this candidate land. CCB seeks a brief commentary on the methodology agreed for the SQ study, to confirm that it can be carried forward into the boundary review project, once in the public domain. (anticipated Spring 2024).</p>	<p>The Applicant maintains the position that no weight can be given to the potential extension of the AONB at present as the proposed boundary change plan is at an early stage (similar to the early stages of a Local Plan review).</p> <p>Given this position it is considered that the potential AONB extension area does not need to be considered in the SQs Assessment. If required, the same methodology could be applied to any area designated as AONB to extend the Chilterns and this is acknowledged in Section 3.1 of the Assessment. However the potential extension area is not considered in this Assessment as it is not within the AONB.</p>
3	Executive Summary 3.0. 'New matters welcomed' – This links to 6.3.17 + and the assessment of Effects.	N/A	N/A	<p>Landing Lights. This is mentioned, albeit briefly, at 6.4.12. The CCB's assumption that they are switched on below 10,000 ft remains unchallenged, and, therefore, we assume is correct.</p>	<p>The Applicant agrees that aircraft landing lights are switched on somewhere below 10,000 ft.</p>
4	Executive Summary 4.0. 'Matters Outstanding' – This links to 6.0+ dealing with the assessment of special qualities.	N/A	N/A	<p>The calibration of impacts upon the special quality of relative tranquillity. The applicants accept that the relative tranquillity of the Chilterns will be impacted. This is the key point. The applicants rely upon the language used by the Landscape Institute in their professional guidance. A material variation exists between the calibrated impacts upon relative tranquillity in the submitted ES and the draft SQ. We draw attention to this below. In essence, the SQ says that (red denotes directly attributable quotes from the SQ second draft or the updated ES):</p> <p>Phase 2(a) that (6.3.22) '<i>The effect on this SQ is assessed to remain negligible adverse, which is not significant</i>'.</p>	<p>The Applicant's response to CCB's comments is provided in response to ID5 below.</p> <p>With regard to the weight to be attributed to the ES and the SQs Assessment, this is ultimately a matter for the ExA to determine.</p>

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				<p>Phase 2(b) that (6.3.25) ‘A further increase in the number of overhead aircraft may be perceptible in views from within the AONB during this period. The effect on this SQ is assessed to rise to minor adverse, which is not significant’. (our emphasis)</p> <p>and continues that, (also 6.3.25) ‘A further increase in the number of overhead aircraft may be perceptible in views from within the AONB during this period’ (our emphasis)</p> <p>On relative tranquillity, (6.4.6) ‘Policies and guidelines for managing change in the AONB recognise that airport expansion could result in more aircraft over-flying the AONB and identify that this could harm the tranquillity of the AONB’.</p> <p>On Effects (6.4.12) ‘Aircraft movements would continue to increase over the Study Area during this assessment phase. However, the geographical increase in the extent of the overflight contours during this assessment phase would be small (refer to Figures 6.7, 6.9, 6.11 and 6.13). As noted above, the relative tranquillity of some parts of the AONB within the study area is currently compromised due to noise from major roads and existing aircraft movements. Any views of aircraft landing lights would be fleeting. The relative tranquillity of the remainder of the AONB would not be affected. The magnitude of impact on this SQ during this phase is judged to remain as very low adverse’. (our emphasis).</p> <p>The calibration of impacts in the SQ study is at variance with the submitted ES. The CCB drew attention to this at the 1st draft consultation stage, stating that (on the first draft), ‘Table 10:</p>	

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				<p><i>Summary of Effects on AONB SQ, is at variance with the Environmental Statement when dealing with overflying aircraft movements; for example, in examination document APP 040/AS079 at 14.9.20, at 14.9.22 and in Table 14.7 sensitivity analysis. We know the applicants will want to iron out these issues. The ES must prevail as a document already scrutinised in the examination'</i></p> <p>The applicants response to this in their second draft SQ appendix (stakeholder comments log and responses) is that,</p> <p><i>Chapter 14 Landscape and Visual of the ES [AS-079] considers the likely effects of the Proposed Development on the perceptual and aesthetic qualities of the AONB and concludes that significant effects on this receptor occur from Assessment Phase 2b onwards. The Assessment specifically considers 'Panoramic Views' and 'Relative Tranquillity' and the likely effects of the Proposed Development on these SQ's. The two reports are assessing the likely effects on different (albeit related) receptors which results in the 'variance' noted by CCB.</i></p> <p>To refresh, the ES deals with overflying aircraft at APP 040/AS079 at 14.9.20), 'The aesthetic and perceptual characteristics of the landscape within the Chilterns AONB, which is a high sensitivity receptor, is judged to experience an impact of low adverse magnitude in this assessment Phase 2b period. This is principally due to the noticeable increase in aircraft movements that are anticipated to pass over the AONB below 7,000 ft (AMSL) during this period, associated with an increase from 21.5mppa to 32mppa. and as identified on Figures 14.14 to 14.17 of this ES [TR020001/APP/5.03],</p>	

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				<p>which is judged to permanently deteriorate the sense of tranquillity perceived by those recreating within the AONB (APP 040/AS 079 at 14.9.22), this is calibrated as, 'moderate adverse, likely significant' effects.</p> <p>The ES accepts, rightly, that these operational effects constitute permanent, lasting effects, resulting from the increase in aircraft movements. This increase is calibrated across 3 phases of proposed growth in air traffic movements (21.5 mppa to 2027, 27mppa to 2039 and 32 mppa to 2043). Aesthetic factors cover the appreciation of landscape beauty in the Chilterns and its perceptual qualities, notably wildness and/or tranquillity. The CCB submits that the ES must be given greater weight due to its reliance on a methodology contained within a statutory instrument, whilst the SQ, even though welcomed, is an ad hoc assessment submitted to assist the examination.</p>	
5	<p>Executive Summary 5.0 'Matters Outstanding' – This point links to 6.0+ dealing with the assessment of special qualities.</p>	N/A	N/A	<p>Relative tranquillity calibration – principal point In the ES the applicants report that at phase 2(b) <u>a significant effect</u> will impact the perceptual and aesthetic qualities of the AONB. In the SQ tranquillity study overflying aircraft at phase 2(b) will impact upon the SQs as a minor impact, which is <u>not significant</u>. (our emphasis). The applicants encapsulate the difference as accountable due to different (albeit related) receptors. In our judgment, the receptors are the same, i.e. people walking/recreating in the landscape and experiencing a change in their perceptual and aesthetic appreciation of that landscape. The CCB would make the point that the SQ tranquillity study has recalibrated the ES's conclusion without any real rationale to support it. No real explanation is offered to justify the claim</p>	<p>The ES considers the effects of the Proposed Development on the perceptual and aesthetic qualities of AONB. These qualities encompass a number of landscape facets such as scenic quality, recreation value, visitor experience as well as tranquillity. The SQs Assessment assesses the effects of the Proposed Development on each of the Special Qualities defined in the AONB Management Plan individually. Further explanation and justification as to how the conclusion was reached is provided in Section 7 of the Assessment.</p> <p>Section 6.3 of the Assessment considers the effects of the Proposed Development on Relative Tranquillity within the study area. The effects of the Proposed Development on this</p>

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				<p>as to a material difference to receptors. If time permits, the CCB is grateful that this point is addressed.</p>	<p>SQ relate solely to the increase in the number of aircraft movements over the AONB. The increase in the number of aircraft movements will vary depending on the location within the AONB. Table 6.1 of the Special Qualities Assessment [TR020001/APP/8.144] (produced in relation to Action 43 of ISH8) provides estimated overflights below 7,000ft for each of the assessment phases at selected locations in the AONB. In some areas the increase will be relatively low (for example at Telegraph Hill and Pulpit Hill). In other locations, such as the Crown and Sceptre Public House, the increase in aircraft movements is markedly higher. However, this more substantive increase in aircraft movements should be considered in the context of a relatively high number of existing overflights in this location.</p> <p>In the absence of any defined or accepted methodology for measuring effects on tranquillity, professional judgement has been used to assess the effects of the Proposed Development on this SQ based on: the Relative Tranquillity indicators set out in Natural England’s Guidance for assessing landscapes for designation as National Park or Area of Outstanding Natural Beauty in England; the mapping provided in Figures 6.7 to 6.14 of the Assessment; and the overflights data contained in Table 6.1 of the Assessment.</p>
6		N/A	N/A	<p>Tranquillity Mapping Fig 6.7 to 6.10 is welcome. Dark Skies Mapping Fig 6.11 is welcome. Figures 14.14 to 14.17 of the ES are reproduced in the SQ. We have assumed that this information is the</p>	<p>Figures 6.3 to 6.6 of the Assessment are the same as Figures 14.14 to 14.17 of the ES [REP4-037]. The figures are reproduced in the Assessment for ease of reference.</p>

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				same, noting that the dates of production are different (now Dec 2023). Thus, we assume that 14.14 to 14.17 (ES) is the same as Fig 6.3 to 6.6 (SQ appx). CCB welcomes clarification on this point.	
7	(Section 1 page 3 para 1.1.7 and 1.1.8) Methodology.	<p>The CCB has not previously been a party to discussing the tranquillity assessment methodology. At the 29th of September 2023 Issue-Specific Hearing (6), we did raise the point that any methodology should also include consideration of the Civil Aviation Authority’s CAP 1616 Guidance (Airspace Change: Guidance on the regulatory process for changing the notified airspace design and planned and permanent redistribution of air traffic and on providing airspace information, 4th edition March 2021) and the Airports National Policy Statement (ANPS) at its 5.222, ‘Developments outside nationally designated areas which might affect then – The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The development should aim to avoid compromising the purposes of designation, and such projects should be designed sensitively given the various siting, operational, and other relevant constraints). Subsequently, we have discovered that the Department for Transport Air Navigation Guidance 2017 is also relevant.</p> <p>CCB recommends that these documents be included in this methodology.</p>	<p>The methodology used for the Special Qualities Assessment has considered Civil Aviation Authority’s CAP 1616 Guidance and the Airports National Policy Statement (ANPS). Specifically, the study area defined for the Assessment has had regard to CAP1616 which requires impacts upon tranquillity from changes to routes and/or traffic patterns to be considered where they may affect an Areas of Outstanding Natural Beauty (AONB).</p> <p>The Assessment has had regard to Paragraph 5.222 of the ANPS as it is considering the effects on the nationally designated area in question (the Chilterns AONB). Reference to the ANPS is provided in Section 5.1 of the Assessment.</p>	<p>This is now dealt with in section 5. This is now acknowledged, and we are grateful for this.</p>	Noted.
8		<p>TRANQUILITY is an acknowledged feature in the definition of natural beauty when AONBs are designated (Natural England’s guidance). We are mindful that a boundary extension of the</p>	<p>The Applicant has adopted a Rochdale (Design) Envelope approach to the design of the Proposed Development enabling a degree of flexibility in final design details to be maintained. This is</p>	<p>We could not find any discussion of the Rochdale envelope.</p>	<p>.The Rochdale envelope approach relates to the consideration of parameters of the Proposed Development to ensure a reasonable worst case is considered when</p>

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		<p>Chilterns AONB is ongoing. The CCB, in a 2013 report, promoted the land east of Luton for consideration. That point was recognised by PINS in their scoping opinion/consultation. A series of Landscape Character Assessments to the east, describe the series of ridges and valleys between Luton and Hitchin. This is a chalk landscape of great natural beauty. In the judgment of the CCB it fulfils a number of the NE’s published criteria for natural beauty. Natural England dealt with the special qualities (SQs) of the Chilterns in their written representations (Deadline 2, 22nd August 2023), requiring further information to evaluate the potential impacts on the special qualities of the AONB. A red flag raised by Natural England denoted a fundamental concern. We share that concern, and we ask that consideration be given to the forthcoming boundary extension. A strong candidate is the 17 landscape character areas to the south of the A505 and to the east of the airport. The CCB has promoted this land as a potential candidate since 2013.</p> <p>CCB recommends that the applicants adopt a Rochdale Envelope approach (i.e., a measure of reasonable flexibility in the final design delivery). It therefore follows that the boundary extension project is acknowledged. Any methodology as approved or promoted in this document would be transferrable to other land, should it be so designated.</p>	<p>explained in Section 5.4 of the Environmental Statement (ES).</p> <p>The extension to the AONB boundary is ‘potential’ rather than ‘forthcoming’. The potential extension to the AONB boundary is acknowledged and considered as part of a Sensitivity test at Appendix 14.9 of the ES. The sensitivity test is based on the ‘search area’ extents shown in the CCB application to NE.</p> <p>Notwithstanding the above it was acknowledged by CCB (and other parties) during an Issue Specific Hearing held on 29 November 2023 that limited weight should be applied to the potential extension of the AONB. The Applicant considers that no weight can be given to the potential extension as the proposed boundary change plan is at an early stage (similar to the early stages of a Local Plan review).</p>		<p>assessing effects of future engineering designs within that envelope, as explained in Section 5.4 of the Environmental Statement (ES) [APP-032]. It is not applicable to receptors or designated areas with defined boundaries, and not relevant to this Assessment.</p>
9	(Section 2, page 4 para 2.1.2. Stakeholder Engagement)	<p>We comment again on this, but apart from following the 4-stage approach advocated by Scottish Natural Heritage (SNH) in reference 1, no other detailed discussion focuses on this document, which resonates greatly with this study. The CCB comments further in section 6 (Assessment).</p>	<p>In the absence of any recognised methodology for assessing AONB Special Qualities, the four stage approach advocated by Scottish Natural Heritage (SNH) was considered an appropriate means of structuring the Special Qualities Assessment. The ‘assessment’ stage of this approach</p>	N/A	N/A

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			utilises LVIA methodology as explained below.		
10	(Section 2, page 4, Table 1: NE comment on SQ proposed methodology)	<p>(Table 1 - Box Two) - The commentary acknowledges limitations exist when applying a GLVIA/ LVIA approach to the consideration of special qualities, such as relative tranquillity. The commentary, however, goes on to fall back on a LVIA led approach due to the, 'absence of a single defined methodology', albeit with a caveat that the methodology will provide an appropriate commentary, 'to explain these limitations and to assess the impacts on the special qualities in question'.</p> <p>CCB promotes a far more ambitious approach (see section 6 Assessment methodology comments).</p>	<p>It is considered appropriate to use the LVIA methodology as a basis for the 3rd stage of the Assessment process in the absence of any accepted or defined approach to assessing the effects of the Proposed Development (particularly the effects of increased aircraft movements) on the Special Qualities of the AONB. The Applicant has reviewed the approach put forward by CCB to include greater consideration of relative tranquillity and has referenced this in Section 6.3 of the Assessment where appropriate.</p>	N/A	N/A
11		<p>(Table 1 – Box Three) – CCB fully accepts the point made by NE that measuring the susceptibility of relative tranquillity is a very challenging baseline. Yet NE provided a steer (22nd August written representation) stating that this requires a 'full narrative description of effects plus the sensitivity of human receptors more widely across the AONB to increases in air traffic to provide ourselves, the conservation board and ultimately the examining authority with the most helpful assessment possible'</p> <p>CCB proposes, in pursuit of the NE 'narrative description' approach (in their letter of 22nd August) a new tranquillity baseline, based upon two documents,</p> <p>(1) Natural England's 2011 Guidance on Assessing Landscapes for Designation as a National Park or AONB. This deals with relative tranquillity, defined as, 'the degree to which relative tranquillity can be perceived in the landscape'. The Landscape Institute (LI) define tranquillity as 'a state of calm and quietude associated with peace, considered to be a significant asset of</p>	<p>The documents referred to by CCB are noted.</p> <p>Regarding Natural England's 2011 Guidance on Assessing Landscapes for Designation as a National Park or AONB, the definition of Relative Tranquillity (as defined in Table 3 of the guidance) and the example sub factors and indicators have been considered in Section 6.3 of the Assessment.</p> <p>With regard to the sources quoted from Guidelines for Landscape and Visual Impact Assessment 3rd edition (GLVIA3) these have been factored into the criteria used in the methodology set out in Section 3 of the Assessment.</p>	N/A	N/A

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		<p>landscape'. (GLVIA 3rd edition glossary). (2) The GLVIA's glossary definition of perception, as 'combines the sensory (that we receive through our senses with the cognitive (our knowledge and understanding gained from many sources and experiences) and the Landscape Institute's guidance on 'susceptibility of visual receptors to change'. (GLVIA 3rd edition page 113 and para 6.33), that 'The visual receptors most susceptible to change are generally likely to include (second bullet), people, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focused on the landscape and on particular views'.</p>			
12		<p>In Table 1 - Box Three, we do not understand the consultant's answer (right-hand column). CCB recommends that the threshold height of 7,000 feet altitude needs to be explained and justified. NE also sought this in their 22nd August written representation. We assume this is derived from the Department for Transport's Air Navigation Guidance (2017). CCB recommends the need to assess the perceptual qualities of the landscape, based (for example) on CPRE's noise mapping, the PROW network and the LI's susceptibility threshold (i.e., at a higher level of expectation) and then an element of judgment based on site-specific perceptions of tranquillity.</p>	<p>The threshold height of 7,000 feet (ft) altitude derives from the Government's Air Navigation Guidance which requires effects on AONB's to be considered where overflying occurs below 7,000 ft. It is acknowledged that any effects arising may still be perceptible above 7,000 ft but this is the recognised threshold set out in the relevant guidance and is considered appropriate for the Assessment. This explanation has been added to Section 5.1 of Assessment. Perceptual qualities are considered via the Assessment of the effects on the AONB Special Qualities discussed in Section 6 of the Assessment.</p>	N/A	N/A
13		<p>We would anticipate a degree of mapping is undertaken with layers denoting AONB area, overflying contours, CPRE mapping data of dark skies and PROW/access/National Trust and 4 BBOWT or other open access land. We know that some Local Authorities are embarking on tranquillity</p>	<p>Following the meeting on 30 October CPRE (Council for the Preservation of Rural England) were contacted and provided under licence mapping data including tranquillity and dark skies. This has been reviewed and incorporated into Section 6.3 of the Assessment.</p>	N/A	N/A

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		<p>studies to inform their new Local Plans (for example, South Oxfordshire). Thus, such an approach is not entirely new within the landscape profession. This SQ study needs to set the methodology and, therefore, to include these criteria, as discussed previously.</p>			
14		<p>(Table 1 – Box Four) This acknowledges that value attached to the special qualities is very high. CCB supports this.</p>	Noted	N/A	N/A
15	<p>Section 3, page 6 para 3.1. Methodology – Overview</p>	<p>CCB recommends, in summary, (1) The CCB supports the x 4 stage approach advanced and aligned with the SNH methodology. However, no other technical details in the SNH study are included in the discussion of this methodology. The methodology now proposed (Oct 2023) is a more fulsome reworking of the original (31st July 2023) draft and is wholly based upon the Landscape Institute’s GLVIA approach, and (2) At stage (c) far greater mention/discussion needs to be made of susceptibility. Each stage of the x 4 stage process is explored in detail. However, this is almost wholly based upon the GLVIA/LVIA approach. The caveat mentioned at Table One – Box Two appears absent in the stage 3 discussions. That caveat was that, ‘The commentary, however, falls back on this LVIA methodology due to the, ‘absence of a single defined methodology’, albeit with a caveat that the methodology will provide an appropriate commentary, ‘to explain these limitations and to assess the impacts on the special qualities in question’.</p>	<p>The Applicant welcomes CCB’s support for using the approach set out in SNH guidance.</p> <p>As explained above, it is considered appropriate to use the LVIA methodology as a basis for the 3rd stage of the Assessment process in the absence of any accepted or defined approach to assessing the effects of the Proposed Development (particularly the effects of increased aircraft movements) on the SQ’s of the AONB.</p> <p>The Applicant has reviewed the approach put forward by CCB to include greater consideration of relative tranquillity and of susceptibility in Section 6.3 and 6.4 of the Assessment where appropriate.</p>	N/A	N/A
16	<p>Section 3, page 6 para 3.4.7 Methodology – Overview</p>	<p>The stage 3 discussions (paragraph 3.4.7 onwards) briefly touch on visual effects and susceptibility. 3.4.7, states that susceptibility is mainly a function of, ‘the occupation or activity of people</p>	<p>Reference to para 6.3.3 of GLVIA3 has been added to the text preceding Table 3.3 of the Assessment.</p>	<p>This is now acknowledged, and we are grateful for this.</p>	Noted

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		<p>experiencing the view at particular locations'. Table 4 (page 9) acknowledges that a high value may be attributed by 'people whether residents or visitors who are engaged in outdoor recreation, including users of PROW'. This is consistent with the Landscape Institute's GLVIA 3rd edition at its 6.3.3, which states that 'the visual receptors most susceptible to change are generally likely to include (second bullet)... People, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, who attention or interest is likely to be focused on the landscape and on particular views'.</p> <p>CCB recommends that this GLVIA guidance is quoted in the methodology.</p> <p>CCB recommends acknowledgement that such visual effects include overflying aircraft. That would be consistent with the caveat as mentioned at Table One – Box Two.</p> <p>CCB recommends further clarification, following the GLVIA 3rd edition approach, that the sensitivity of a visual receptor requires an assessment of the visual value of a view and the susceptibility of the visual receptor. In this case, the visual susceptibility is high and overflying aircraft impact that. CCB also deals with this in our comments dealing with Table 9 – Screening of the Special Qualities.</p>	<p>Reference to overflying aircraft (and their potential effects) are considered in Section 6.3 of the Assessment.</p>		
17	Section 4, page 16, para 4.2.1 Special Qualities.	<p>CCB supports this. It is worth stating in the text that this content is drawn from the 2019-2024 Management Plan, as these documents are periodically reviewed, and this project extends for some time into the future.</p>	<p>Text has been added to paragraph 4.2.1 of the Assessment to refer to the 2019-2024 Management Plan.</p>	<p>The AONB Management Plan is now acknowledged, and we are grateful for this.</p>	<p>Noted</p>

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18	Section 5, page 18, para 5.1.2 Special Qualities.	<p>This states that, 'The study area therefore defines a limit, based on guidance set out in GLVIA3 and CAP1616 and on professional judgement, beyond which it is considered unlikely for significant effects on the SQs to arise'.</p> <p>CCB recommends that the ANPS (Aviation National Policy Statement) is also included.</p> <p>Regarding CAP 1616, the key thrust of this point should be that such national aviation guidance seeks to avoid over-flying nationally protected landscapes.</p>	<p>The reference to ANPS is noted and has been included in para. 5.1.2 of the Assessment with CAP1616 guidance.</p>	<p>This is now acknowledged, and we are grateful for this</p>	<p>Noted</p>
19	Section 5, page 18, para 5.1.3 Study Area.	<p>5.1.3 (a), (b) and (c) report the criteria for the study area in the ES (landscape and visual – -examination documents AS086 and AS 087).</p> <p>The CCB would like to know why 7000 ft altitude is a threshold height for assessment. For example, we understand that aircraft landing lights are switched on at 10 000 ft. Natural England (their written representation of 22nd August 2023) also sought this clarification as to source and baseline reasoning. Are the SQ assessments and proposed viewpoint locations based on planes at less than 7,000ft rather than the airport site? Is the 7,000ft from sea level or ground level at individual locations? If this is derived from the Dept for Transport Air Navigation Guidance 2017? We welcome this clarification and further detail on the altitude at which landing lights are switched on.</p>	<p>The threshold of 7,000ft is Above Mean Sea Level (AMSL). This threshold is considered appropriate for the Assessment as the per guidance set out in CAP1616 and the Government's Air Navigation Guidance which require effects on noise and tranquillity to be considered where changes to aircraft movements are below 7,000 ft.</p> <p>The viewpoints (and views) considered in the Assessment are at key locations within the AONB where aircraft movements are below 7,000 ft. Aircraft landing lights are switched on somewhere below 10,000 ft rather than at 10,000ft.</p> <p>Any Aircraft landing lights would be visible on planes at an appreciable altitude above the AONB and any views of such lights would be fleeting/temporary in nature, as now described in Section 6.4 of the Assessment.</p>	<p>6.4.12. Landing lights – This is now included at 6.4.12</p>	<p>Noted</p>
20	Section 5, page 20, para 5.3	<p>A number of special qualities are incorrectly excluded:</p>	<p>The Chalk Escarpment is undoubtedly prominent and a strong component of the natural beauty of the areas noted by</p>	<p>Links to section 5.</p>	<p>The Applicant maintains its position on scoping this SQ out of the Assessment for the reasons set out in</p>

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	Identification of Relevant SQ's.	<p>Dramatic Chalk Escarpment, states, 'The Proposed Development would not affect this SQ as it would be located over 3km from this feature whilst aircraft movements associated with the Proposed Development would not affect these physical features, habitats and associated species'.</p> <p>CCB would recommend its inclusion because the escarpment at Ivinghoe Beacon / Pitstone and at Dunstable Downs, is impacted by overflying aircraft. In these areas the chalk escarpment is very much a part of the landscape and a strong component of the natural beauty and its perception and appreciation of the SQs of the AONB, The AONB countryside either side of Dunstable and Luton are already important for visitors and organisations such as the National Trust who do a lot to promote this, with in excess of 750,000 visitors a year to the NT's Chilterns Gateway visitor centre and the Dunstable Downs Kite Festival, 10,000 over the 2 days. The CCB's 'Chalkscapes' project (currently paused) seeks to engage underrepresented groups to visit the Chilterns in such locations.</p>	<p>CCB. However, aircraft movement and other activities are already perceptible in these areas. For example, at Dunstable Downs, low flying gliders are evident as well as aircraft movement operating at a higher altitude. It is considered that any additional aircraft movements above the Chalk Escarpment would not materially affect the fundamental characteristics and/or qualities of the Chalk Escarpment. Further justification has been added to Table 5.1 of the Assessment.</p> <p>The Applicant maintains its position that this SQ can properly be scoped out of the Assessment.</p>	<p>From our reading of this, the new section 5 deals with and at Table 5.1: Special Qualities Screening. Links to Table 5.1. Now included are panoramic views from and across the escarpment interwoven with intimate dip slope valleys and rolling fields. This is, however, scoped 'out' of the SQ methodology, i.e. deemed unaffected by overflying aircraft. Links to Table 5.1: Special Qualities Screening</p>	<p>its response to CCB's comments on draft 1 of the Assessment.</p>
21	Section 5, page 20, para 5.3 Identification of Relevant SQ's.	<p>Distinctive Buildings, Heritage & Archaeology states, 'Similarly, aircraft movements associated with the Proposed Development would not affect this SQ.</p> <p>Heritage and archaeology in this context covers "archaeological landscape", "industrial heritage", "distinctive buildings" and "ancient routeways". Heritage is one of the SQs excluded. CCB questions the exclusion of heritage. Overflying along a corridor between Aylesbury and Dunstable and at Warden Hill does impact settlements and heritage within the AONB. We refer to the ES Ch 14 figures 14.4 to 14.17,</p>	<p>The effects of Aircraft movement and noise on heritage assets are considered in Chapter 10 Cultural Heritage of the ES [AS-077].</p> <p>Effects on the SQ's of the Chilterns AONB are not explicitly considered in the Cultural Heritage Assessment but heritage assets within a defined wider study area that may be impacted by the Proposed Development (either as a result of the physical presence of and/ or by an increase in their existing noise environment) are.</p>	<p>Links to Table 5.1 now includes 'An extensive and diverse archaeological landscape, including ancient parish boundaries, medieval field patterns and iron age hillforts; extensive remnants of woodland heritage, including sawpits, charcoal hearths and wood banks'.</p> <p>This special quality is deemed 'out' of the SQ study methodology, i.e. deemed unaffected by overflying aircraft. Links to Table 5.1: Special Qualities Screening.</p>	<p>The Applicant maintains its position on scoping this SQ out of the Assessment for the reasons set out in its response to CCB's comments on draft 1 of the Assessment.</p>

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		<p>which denote contours and frequency. Two communities within the AONB at Markyate and Flamstead are acknowledged as affected.</p> <p>This was recorded in the papers supporting the recent Secretary of State’s decision on 13th October 2023 to allow 19 MPPA (see reference APP/B0230/V/22/3296455, para 18 and para 8.150. In that decision, we accept the Secretary of State and reporting Inspectors determined that the AONB was not negatively impacted at 19 MPPA. This proposal is distinguished by the much higher MPPA volumes being proposed in the Luton Rising proposal. Among the SQs of the Chilterns AONB that should not be excluded from the Assessment are those relating to heritage (see e.g. “archaeological landscape”, “industrial heritage”, “distinctive buildings” and “ancient routeways” on p.11 of the Chilterns AONB Management Plan 2019-2024). Aircraft movement and noise might be significant visual and aural detractors from the enjoyment of any of these SQs, whether or not they are designated heritage assets. With regard to this issue the online NPPG guidance observes that “the way in which we experience an asset in its setting is also influenced by other environmental factors such as noise, dust, smell and vibration from other land uses in the vicinity” (Paragraph: 013 Reference ID: 18a-013-20190723). The impacts on the appreciation of the significance of these heritage SQs could be addressed together rather than separately for each SQ. Historic England has produced a guidance note on the setting of heritage assets which would be of value as a source document to inform the assessment methodology, particularly in terms of how HE’s guidance addresses the NPPG guidance.</p>	<p>By way of example Section 10.9 of the ES [AS-077], assesses the effect of the Proposed Development on St. Paul’s Walden Bury, a heritage asset of high value, located approximately 5km to the east of the Main Application Site. This heritage asset is located within the flight paths to the east of the Airport.</p> <p>Para 10.9.86 of the ES states that <i>“Aviation noise from overhead aircraft approaching the airport is part of the asset’s noise environment but the noise does not intrude to such an extent as to detract from the asset’s rural character”</i>.</p> <p>Paras 10.9.88 and 10.9.89 of the ES conclude that the Proposed Development would result in a negligible change to the park’s noise environment and would not affect its setting or impact its heritage value.</p> <p>Based on the conclusions above it is considered reasonable to conclude that any increase in aircraft movements would not affect the setting and/or heritage value of any heritage assets within the AONB.</p> <p>The Applicant maintains its position that this SQ can properly be scoped out of the Assessment. This further justification has been added to Table 5.1 of the Assessment.</p>		

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		<p>To assist, this is available at https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/heag180-gpa3-setting-heritage-assets/)</p> <p>This guidance pays specific attention to the online NPPG guidance that “the way in which we experience an asset in its setting is also influenced by other environmental factors such as noise, dust, smell and vibration from other land uses in the vicinity” (Paragraph: 013 Reference ID: 18a-013-20190723)</p> <p>CCB recommends that these special qualities are impacted and should be included.</p>			
22	Section 5, page 20, para 5.3 Identification of Relevant SQ's.	<p>Public Rights of Way & Numerous Ancient Routeways and Sunken Lanes, states, ‘Similarly, aircraft movements associated with the Proposed Development would not affect this SQ’.</p> <p>The Ridgeway passes to the east of Tring (within the contouring in the ES Ch 14 figures 14.4 to 14.17 and would be impacted. CCB deems that these special qualities are impacted and Should be included. Many public rights of way crisscross the AONB within these contours. The CCB would recommend that a more holistic assessment of the perceptual qualities of the AONB, is adopted. The impact of overflying aircraft affects the perception of natural beauty, including tranquillity.</p>	Views from Public Rights of Way are considered in Section 6 of the Assessment. This includes consideration of perceptual qualities and the effects of overflying aircraft.	<p>Links to Table 5.1 – Overall point. This is a more detailed reporting of the Special Qualities than in the original (first) draft. The ‘in’ and ‘out’ points should, in our judgment, include the ‘archaeological landscape’ and ‘dramatic chalk escarpment’ as mentioned in Table 5.1.</p> <p>Of material relevance, we noted the inclusion of ‘Increased aircraft movements associated with the Proposed Development could affect this Special Quality as parts of the AONB are located in areas where aircraft would be below 7,000 ft. and therefore considered in Section 6 of this report’.</p> <p>Links to Table 5.1: Special Qualities Screening.</p>	The Applicant maintains its position on scoping these SQ's out of the Assessment for the reasons set out in its response to CCB's comments on draft 1 of the Assessment (refer to ID 20 and 21 of this table).
23	Section 6, page 25 ASSESSMENT.	The assessment of impacts in this section is primarily based on landscape views. Paragraph 6.2.7 does acknowledge that these views allow people to appreciate the natural beauty of the area. We agree with that. The CCB recommends that this section refers to the Environmental Statement as an agreed baseline of tranquillity impacts. For ease of reference, we	Additional views from within the AONB have been included in Section 6.2 of the Assessment. The viewpoint locations were discussed and agreed with CCB and other stakeholders at a meeting on 30 October 2023.	N/A	N/A

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		include our summary, which deals with tranquillity.			
24	AONB BASELINE	<p>Aesthetic and Perceptual Characteristics are highly material. (cross-reference to the ES Chapter 14 Examination document APP 040, superseded by AS079). A baseline is established in the Environmental Statement, but no AONB assessment methodology is advanced.</p> <p>Environmental Statement Chapter 14 on landscape and visual matters. APP 040 is superseded by AS079.</p> <p>The landscape assessment in the ES chapter 14 places great emphasis (which is applied at many points) on an appreciation of the 'aesthetic and perceptual characteristics of the landscape within the Chilterns AONB'. This baseline is applied in Ch 14 at APP040/AS079 14.9.4 section x 'landscape effects', in which such aesthetic and perceptual characteristics are deemed potentially sensitive to change, following the airport's expansion.</p> <p>When dealing with overflying aircraft movements (APP 040/AS079 at 14.9.20), The aesthetic and perceptual characteristics of the landscape within the Chilterns AONB, which is a high sensitivity receptor, is judged to experience an impact of low adverse magnitude in this assessment Phase 2b period. This is principally due to the noticeable increase in aircraft movements that are anticipated to pass over the AONB below 7,000 ft (AMSL) during this period, associated with an increase from 21.5mppa to 32mppa. and as identified on Figures 14.14 to 14.17 of this ES [TR020001/APP/5.03], which is judged to permanently deteriorate the sense of tranquillity perceived by those recreating within the AONB (APP 040/AS 079 at 14.9.22),</p>	<p>With regard to visual effects on the AONB the ES reported that these would be Negligible adverse during Assessment Phases 1 & 2a, rising to Minor adverse during Assessment Phase 2b and remaining as Minor adverse during the operational phase.</p> <p>As noted in the response above (ID 13) such lights would be visible on planes at an appreciable altitude above the AONB and any views of such lights would be fleeting/temporary in nature.</p>	<p>Links to Table 5.1: Special Qualities Screening</p> <p>In the second draft the authors are still wedded to 3 special qualities, as:</p> <p>a. "Panoramic views from and across the escarpment interwoven with intimate dipslope valleys and rolling fields".</p> <p>b. "Relative tranquillity and peace on the doorstep of ten million people, one of the most accessible protected landscapes in Europe; relatively dark skies, of great value to human and wildlife health; unspoilt countryside, secret corners and a surprising sense of remoteness".</p> <p>c. "A dense network of 2000km of rights of way; two national trails, the ridgeway and Thames path; notable regional routes such as the chiltern way and the chilterns cycleway".</p> <p>We are of the opinion that an archaeological landscape (for example as found at Ivinghoe Beacon) and a dramatic chalk escarpment (for example as found at Pitstone Hill) should be included in the methodology.</p>	<p>The Applicant maintains its position on scoping these SQ's out of the Assessment for the reasons set out in its response to CCB's comments on draft 1 of the Assessment (refer to ID 20 and 21 of this table).</p>

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		<p>this is calibrated as, ‘moderate adverse, likely significant’ effects. The ES accepts, rightly, that these operational effects constitute permanent, lasting effects, resulting from the increase in aircraft movements. This increase is calibrated across 3 phases of proposed growth in air traffic movements (21.5 mppa to 2027, 27mppa to 2039 and 32 mppa to 2043). Aesthetic factors cover the appreciation of landscape beauty in the Chilterns and its perceptual qualities, notably wildness and/or tranquillity.</p> <p>APP 040/AS 079 at Table 14.7 sensitivity analysis. The ES methodology accepts that tranquillity is affected when aircraft fly below a threshold of 7,000 ft. It is accepted in the ES that (at ES Ch 14 Table 14.7 ‘sensitivity analysis’) next-generation aircraft will result in ‘no change’ as to the likely effect when assessing landscape impacts. Our understanding is that most airline operators ask that pilots turn on landing lighting below 10,000 ft. So the impact is visual – permanently so – and the applicant’s accept that technological improvements cannot diminish this. In the language of the ES the impact will be ‘ moderate adverse, likely significant’ harm’ and this will be of a long-lasting impact upon the aesthetic and perceptual characteristics of the AONB. CCB is concerned that the calibration of impacts reported in the Special Qualities study appears to be at variance with the Environmental Statement. This text needs to be amended and assessment recalibrated to be consistent with the ES, for example, at 6.2.3, that, ‘a further increase in the number of overhead aircraft may be perceptible in views from within the AONB during this period. The effect on this special quality is assessed to be minor adverse, which is not significant’. (CCB’s emphasis)</p>			

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		<p>6.2.5. That by 2025 (the design year) the magnitude of impact will be 'very low adverse'. (CCB's emphasis).</p> <p>At 6.3.9, some areas are deemed 'compromised' due to 'noise from major roads (notably the M1) and existing aircraft movements'. (CCB's emphasis). CCB recommends that all these statements be cross-referenced or correlated with the ES, as cited above, and the correct ES conclusions are substituted.</p>			
25	Section 6, page 28 6.3 Relative Tranquillity	<p>CCB agrees with the SQ study that, 6.3.5 [...] 6.3.6.[...] 6.3.7.[...]</p> <p>As a logical follow-on from these statements, CCB recommends that these points are tied into the ES where it deals with such matters as, The aesthetic and perceptual characteristics of the landscape within the Chilterns AONB, which is a high sensitivity receptor, is judged to experience an impact of low adverse magnitude in this assessment Phase 2b period. This is principally due to the noticeable increase in aircraft movements that are anticipated to pass over the AONB below 7,000 ft (AMSL) during this period, associated with an increase from 21.5mppa to 32mppa. and as identified on Figures 14.14 to 14.17 of this ES [TR020001/APP/5.03], which is judged to permanently deteriorate the sense of tranquillity perceived by those recreating within the AONB (APP 040/AS 079 at 14.9.22), this is calibrated as, 'moderate adverse, likely significant' effects. The ES accepts, that these operational effects constitute permanent, lasting effects, resulting from the increase in aircraft movements. This increase is calibrated across 3 phases of proposed growth in air traffic movements (21.5 mppa to 2027, 27mppa to 2039 and 32 mppa to 2043). Aesthetic factors cover the appreciation of landscape beauty in the Chilterns and its perceptual</p>	<p>The Assessment considers the effects of the Proposed Development specifically on the Special Qualities of the AONB. Chapter 14 Landscape and Visual of the ES [AS-079] considers the likely effects of the Proposed Development on the perceptual and aesthetic qualities of the AONB. The ES concludes that there would be no significant effects on this receptor during Phase 1 and 2a and reports that significant effects on this receptor are anticipated to occur from Assessment Phase 2b onwards. The Assessment and the ES are assessing the likely effects on different (albeit related) receptors which results in different effects being reported.</p>	N/A	N/A

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		<p>qualities, notably wildness and/or tranquillity.</p>			
26		<p>CCB recommends that the Scottish Natural Heritage (SNH) study needs to be factored into the assessment methodology.</p> <p>The methodology requires an acknowledgement that ‘effects’ on the landscape are potentially felt outside the boundary of the designated area (SNH para 6), that special landscape qualities are ‘perceptual qualities and are about the way people respond to place’ (SNH para 11) and that ‘where the SLQs interact with each other (contributing to the experience in the study area) they are best presented and consider together as a group’. (SNH para 22). In fact, SNH para 22 also states that, ‘understanding where people go and how people move through and experience the landscape is crucial’. These points are fundamental building blocks for the SQ tranquillity assessment.</p> <p>CCB, therefore, recommends greater detail in the discussion of tranquillity. The SNH study makes the point that, ‘judgments on special qualities and on the level of the impacts on special qualities are based on (a) the sensitivities of the resource, (b) the nature of the effects, (c) the potential to avoid or mitigate the effects, and (d) limitations to carrying out mitigation’.</p>	<p>The SNH study is considered an appropriate means of structuring the Special Qualities Assessment (in the absence of any recognised guidance on assessing effects on AONB Special Qualities).</p> <p>The ‘assessment’ stage of this approach utilises LVIA methodology as explained below.</p> <p>It is considered appropriate to use the LVIA methodology as a basis for the 3rd stage of the Assessment process in the absence of any accepted or defined approach to assessing the effects of the Proposed Development (particularly the effects of increased aircraft movements) on the SQ’s of the AONB.</p> <p>The Applicant has reviewed the approach put forward by CCB to include greater consideration of relative tranquillity and has referenced this in Section 6.3 of the Assessment where appropriate.</p>	N/A	N/A
27		<p>CCB recommends that the methodology on tranquillity sets out a matrix for assessment, which includes the following.</p> <ul style="list-style-type: none"> • Volumes of overflying aircraft (cross-refer to ES) • Height of overflying aircraft/threshold heights, including if landing lights are on. 	<p>Further mapping and explanation has been provided with the Assessment.</p> <p>Using ZTV (zone of theoretical visibility) mapping to identify where planes would be visible would not generate meaningful results as the outputs are likely to demonstrate that aircraft is theoretically visible from all parts of the AONB, and beyond as they increase</p>	<p>Links to new section 6.2.</p> <p>CCB welcomes the introduction of new information in the submission of (new) section 6.2 Overflights. We are perfectly content with the locations derived from the ES, to be reported in Table 6.1 at Deadline 7, we assume. The breakdown of data across phases, including baseline data, is welcomed and is an</p>	Noted

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		<ul style="list-style-type: none"> • The nature of perceptual qualities, the number of special qualities and their cumulative impacts • Public rights of way, National Trust, and other accessible countryside land that is overflown. • Other metrics may apply, for example, dark skies mapping, heritage assets mapping and the mapping of the AONB itself. • It is possible to produce a digital map similar to that produced by DEFRA's MAGIC resource to show these layers. Completion of this is not required for this exercise, but the multi-layers of these data sets need to be set out in the methodology. Such data sets establish a tranquillity baseline from which a mitigation strategy may be informed. Such an output also coincides with Action 26 asking the applicants to, 'Confirm how achievable it is for the proposed increase in flights to avoid the AONB'. • Updated ZTV's (zones of theoretical visibility) to identify where planes would be visible (7,000ft above each location)? • Natural England in their 22nd August written representation, sought clarification on the basis of a flight elevation below 7,000 ft. We welcome the applicant's clarification as to why this elevation was chosen. Natural England's point to a lack of information has yielded further discussion on the delivery of an assessment methodology, to be agreed upon between Natural England and Luton Rising. To assist, tranquillity is impacted by, in this case the AONB, overflying, and the impact is a product of both noise and visual impacts. Below 7,000 ft, we assume, noise is audible and below 10,000 ft visibility is evident, and at that threshold, most aircraft pilots will turn on their landing lights. 	<p>altitude; therefore, the Applicant does not believe this is practicable and does not propose to update the ZTV.</p> <p>The Applicant acknowledges that dark skies are a constituent ingredient of tranquillity. Dark skies are considered in Section 6.4 of the Assessment.</p>	<p>action that focuses on the Panel's Action Point 43</p> <p>We agree with the selection of Viewpoints A, B and C, for example, which was discussed at the stakeholder meeting on 30th October 2023, as convened by the applicant's landscape team.</p> <p>16</p> <p>On public rights of way - Paragraph 6.3.16 states that based on the value and susceptibility, the sensitivity of this SQ is assessed to be high. This clarification is welcomed.</p> <p>CCB welcomes (in the appendices) the newly mapped data on tranquillity (Figs 6.3 to 6.6) and on Dark Skies (Fig 6.7). This is immensely useful.</p>	

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		<ul style="list-style-type: none"> To acknowledge that dark skies are a constituent ingredient of tranquillity. 			
28	Section 7, page 31, SUMMARY OF EFFECTS ON AONB SPECIAL QUALITIES	<p>Table 10: Summary of Effects on AONB SQ, is at variance with the Environmental Statement when dealing with overflying aircraft movements; for example, in examination document APP 040/AS079 at 14.9.20, at 14.9.22 and in Table 14.7 sensitivity analysis. We know the applicants will want to iron out these issues. The ES must prevail as a document already scrutinised in the examination.</p> <p>CCB recommends that the ES points on tranquillity and overflying are included in this study (as listed below)</p>	<p>Chapter 14 Landscape and Visual of the ES [AS-079] considers the likely effects of the Proposed Development on the perceptual and aesthetic qualities of the AONB and concludes that significant effects on this receptor occur from Assessment Phase 2b onwards.</p> <p>The Assessment specifically considers 'Panoramic Views' and 'Relative Tranquillity' and the likely effects of the Proposed Development on these SQ's . The two reports are assessing the likely effects on different (albeit related) receptors which results in the 'variance' noted by CCB.</p>	N/A	N/A
29		<p>We wish to draw attention to the helpful 'overflying' plans, figures 14.4 to 14.17 in the ES APP-152, superseded by AS-102. These baseline assessments (2019) and overflying projections for phases One, 2(a) and 2(b) are very useful in any discussion of tranquillity, associated with lighting and visual impacts. Reference should be made to them.</p>	<p>Reference to Figures 14.4 to 14.17 of the ES [REP4-037] is made in the Assessment where appropriate.</p> <p>Additional plans including the overflying contours are included in Section 6.3 of the Assessment.</p>	N/A	N/A
30		<p>Figure 14.14 provides a baseline of the number of aircraft (2019) per day up to 7,000 ft =150 per day (7-00 to 23-00) eastward over CCB's AONB candidate land & 10/20 west over the AONB (Bucks direction) & 10/20 north over the AONB (N Herts direction)</p>	Noted	N/A	N/A
31		<p>Figure 14.15 (phase one) = 150 per day (7-00 to 23-00) eastward over CCB's AONB candidate land & 10/20 west over the AONB (Bucks direction) & 10/20 north over the AONB (N Herts direction).</p>	Noted	N/A	N/A
32		<p>Figure 14.16 Phase 2 (a) increases to 200 per day eastwards over CCB's AONB candidate land & 10/20 west over the AONB (Bucks direction) & 10/20 north over the AONB (N Herts direction)</p>	Noted	N/A	N/A

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33		Figure 14.17 Phase 2(b) increases to 350 per day eastwards over CCB's AONB candidate land & 20/50 west over the AONB (Bucks direction) & 10/20 north over the AONB (N Herts direction)	Noted	N/A	N/A
34		N/A	N/A	<p>Links to Section 6 Assessment of Effects on Special Qualities</p> <p>As we read the new 'Effects' section, a good deal is new. Our comments are set out as,</p> <p>We are especially interested in the relationship between overflying aircraft and tranquillity. The metric or measure used here is one derived from landscape methodology (negligible, significant, and so on).</p> <p>Phase One states that:</p> <p>6.3.19 The increase in aircraft movements would be barely perceptible in views from within the AONB during this period. The significance of effect on this SQ is assessed to be negligible adverse which is not significant.</p> <p>Phase 2(a) that:</p> <p>6.3.22 The effect on this SQ is assessed to remain negligible adverse, which is not significant.</p> <p>Phase 2(b) that: 6.3.25 A further increase in the number of overhead aircraft may be perceptible in views from within the AONB during this period. The effect on this SQ is assessed to rise to minor adverse, which is not significant. Of interest, 6.3.25 states that, 'A further increase in the number of overhead aircraft may be perceptible in views from within the AONB during this period' (our emphasis)</p> <p>On relative tranquillity, 6.4.6 Policies and guidelines for managing change in the AONB recognise that airport expansion could result in more aircraft over-flying the AONB and identify that this could harm the tranquillity of the AONB.</p> <p>Effects</p>	<p>Section 14.9 Landscape and Visual [AS-079] of the ES considers the effects of the Proposed Development on the perceptual and aesthetic qualities of AONB. These qualities encompass a number of landscape facets such as scenic quality, recreation value, visitor experience as well as tranquillity.</p> <p>The SQs Assessment assesses the effects of the Proposed Development on each of the Special Qualities defined in the AONB Management Plan individually. Section 6.3 of the Assessment considers the effects of the Proposed Development on Relative Tranquillity within the study area. The effects of the Proposed Development on this SQ relate solely to the increase in the number of aircraft movements over the AONB. The increase in the number of aircraft movements will vary depending on the location within the AONB.</p> <p>It is beyond the scope of the Assessment to determine the extent to which traffic noise from individual roads affects tranquillity within the Study Area. However, it can be reasonably assumed that traffic noise from busy road corridors such as the M1 substantially affects existing levels of tranquillity in the study area.</p>

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				<p>Phase 2(b) that, 6.4.12 Aircraft movements would continue to increase over the Study Area during this assessment phase. However, the geographical increase in the extent of the overflight contours during this assessment phase would be small (refer to Figures 6.7, 6.9, 6.11 and 6.13). As noted above, the relative tranquillity of some parts of the AONB within the study area is currently compromised due to noise from major roads and existing aircraft movements. Any views of aircraft landing lights would be fleeting. The relative tranquillity of the remainder of the AONB would not be affected. The magnitude of impact on this SQ during this phase is judged to remain as very low adverse. (Our emphasis). We agree that existing aircraft movements are noticeable. The applicant would need to assist the ExA with which roads exert such an impact. This was mentioned by the applicant in the Issues Specific Hearing on 29th November 2023. No real explanation has been given on these roads, their location and how they impact upon relative tranquillity within the AONB/National Landscape. The conclusions in the SQ are at variance with the ES's conclusions on relative tranquillity. The applicants address this point in their comments on stakeholder consultation (their appendices). We comment in our summary (at the top of this paper), essentially that the same receptors (people walking in the landscape) are at stake in both the SQ and the ES's methodology</p>	
35	7.1. Mitigation Measures.	CCB welcomes mitigation but cannot see how overflying aircraft, with landing lights on, can be mitigated. Any discussion of mitigation must also refer to the decision-making duties set out in the Countryside and Rights of Way Act	It is acknowledged that there is no mitigation available to reduce any effects associated with increased aircraft movements over the AONB.	Links to appendix ID 27, page 21 (response to stakeholder consultation). CCB could not find any discussion of mitigation measures in the final chapter/conclusions. This was a matter raised by the ExA at Action 26. Confirm	In relation to Action 26 (Confirm how achievable it is for the proposed increase in flights to avoid the AONB), the Applicant provided a response to this Action in the

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		2000, section 85 (as amended). We do recommend, in any event, that the mitigation of tranquillity is discussed, and such limitations are placed in the public domain.	However, the Assessment concludes that the Proposed Development will not result in any significant effects on the SQ's of the AONB and therefore no specific mitigation measures are required.	how achievable it is for the proposed increase in flights to avoid the AONB. The applicants confirm, in their appendices when commenting on stakeholder consultation, that such mitigation by avoiding the AONB, cannot be delivered.	Applicant's response to Deadline 4 Hearing Actions [REP4-070] .
36		We would also draw attention to the enhanced status of AONB Management Plans following a Government amendment to the 'LURB' Levelling Up and Regeneration Bill (introduced on 21st September 2023 at the third Reading in the House of Lords). The LURB received Royal Assent on 26th Oct 2026.	The amendment to the Levelling Up and Regeneration Bill is noted. The Applicant has provided a response to this matter in a post submission note on ISH8. In summary it is not considered that the amendment affects the scope, findings and conclusions of the Assessment.		
37		N/A	N/A	Additional plans figures 6.3 to 6.6 (overflying) We have assumed that these are the same as those submitted in the ES. We ask because the dates have changed (now Dec 2023 on these plans). If they have been changed, that does present a dilemma in that the ExA and the stakeholders/statutory consultees will need to know if the originally submitted EA is being varied. CCB welcomes this clarification	Figures 6.3 to 6.6 are the same as Figures 14.14 to 14.17 of the ES [REP4-037] .
Natural England					
38	General	Natural England has reviewed the draft Chilterns AONB Special Qualities Assessment. We have also spoken to our colleagues at the Chilterns Conservation Board about the report and its conclusions. Natural England advised on the need for this report to support a fully informed determination of the Luton Rising scheme by the Planning Inspectorate and Secretary of State. We are, however, unable to provide a definitive independently produced view on whether the scope of the assessment and its conclusions are correct. It is normal practice in these circumstances for us to look to local partners with direct	Noted. The Applicant's responses to CCB's comments are provided above.	N/A	N/A

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		<p>local knowledge of the designated landscape to provide that level of analysis. That will be based on their detailed understanding of the development site’s relationship to the protected landscape, how the area’s special qualities are expressed, and stemming from that how the designation’s statutory purpose is delivered. In this case that local partner is of course the Chilterns Conservation Board (CCB), which is also a statutory consultee for this Nationally Significant Infrastructure Project.</p> <p>We have seen the CCB’s advice responding to the draft special qualities assessment and endorse all of the points and issues it raises. Headline issues include the need for a more considered approach to tranquillity, assessing effects on more of the area’s special qualities, factoring in elements of the SNH methodology and stronger recognition of the limitations of an LVIA based approach, and aligning the assessment and its conclusions with relevant findings in the Environmental Statement (where moderate adverse and therefore significant effects are identified). We therefore recommend that the advice provided by CCB is given full consideration and applied appropriately to produce the next iteration of the special qualities assessment.</p>			
Central Bedfordshire Council					
39	Section 2 Stakeholder Engagement 2.1.1 and 2.2.1	CBC acknowledge that there is no formal guidance for assessing the impacts of development on SQs and consider the approach to use SNH guidance is appropriate.	Noted	N/A	N/A
40	Section 3 Methodology	Accept the methodology approach as specified but there is no baseline study of tranquillity and no methodology as to how this has been assessed. This needs to be included in the methodology	Baseline Tranquillity is considered as part of the discussion on Relative tranquillity in Section 6.3 of the Assessment.	N/A	N/A

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		section. It would be beneficial to review CBCs Tranquillity Strategy.			
41		There has been no assessment of dark skies and therefore no methodology on this point. This needs to be assessed and the methodology updated to reflect the means of assessing.	Dark skies have been included in Table 5.1 (Special Qualities Screening) and as part of the consideration of effects on Relative Tranquillity in Section 6.3 of the Assessment.	N/A	N/A
42	Section 4 Description and summary of Special Qualities 4.2.1	Item d is acknowledged as an SQ but this is not assessed in Table 9 (page 20)	“Relatively dark skies...” has been included as part of the Relative Tranquillity Special Quality (The AONB Management Plan (P.10) considers these matters together).	N/A	N/A
43	Section 5 Definition of study area 5.2.1	A map should be provided to show the 4 landscape character areas to provide clarity.	A map has been included in Section of the Assessment (see Figure 5.1 of the Assessment).	N/A	N/A
44	Section 5 Definition of study area Table 9	A dense network of 2000km of rights of way; two national trails, the ridgeway and Thames path; notable regional routes such as the Chiltern way and the Chilterns cycleway. This assessment should also include reference to the impact on tranquillity and lighting.	Impacts on tranquillity are considered as part of the assessment of effects on Relative Tranquillity (Section 6.3 of the Assessment). Lighting/dark skies are also considered as part of the discussion on Relative Tranquillity.	N/A	N/A
45	Section 5 Definition of study area Table 9	Numerous ancient routeways and sunken lanes including the Icknield Way. It is acknowledged that there would be no physical impact but the assessment should consider the impact on tranquillity and lighting.	Dark skies have been assessed as part of the consideration of effects on Relative Tranquillity in Section 6.3 of the Assessment.	N/A	N/A
46	Section 6 Assessment 6.1.1	This section lists the SQs that are considered relevant to the assessment. This list should also include dark skies and ancient routeways, which should be scoped in.	Dark skies have been included as part of the consideration of effects on Relative Tranquillity. With regard to Ancient Routeways, increased aircraft movements several thousand feet above such routes would not directly affect this SQ. Panoramic views which may be available from any of these routes are considered as part of the Assessment of the Panoramic Views SQ.	N/A	N/A
47	Section 7 Summary Table 10	Ancient routeways are shown as not assessed but consideration should be	Dark skies have been included as part of the consideration of effects on	N/A	N/A

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		given to the impacts on tranquillity and dark skies.	Relative Tranquillity in Section 6.3 of the Assessment.		
48	Section 7 Summary Table 10	There is no assessment of dark skies.	Dark skies have been included as part of the consideration of effects on Relative Tranquillity.	N/A	N/A
49		Proposed Viewpoint Locations - CBC have assessed the viewpoint locations and are satisfied with the one proposed at Dunstable Down, Dunstable Road.	Noted	N/A	N/A
Hertfordshire Host Authorities					
50	Section 2 Stakeholder Engagement 2.1.1	Also note reference to Special Qualities in Notes and Clarifications on aspects of the 3rd Edition Guidelines on Landscape and Visual Impact Assessment (GLVIA3) P.14 PP. 5(12).	Noted	N/A	N/A
51	Section 2 Stakeholder Engagement 2.2.2 Table 1 NE Comments Row 2	Don't entirely agree with the NE comment that, "It will struggle to work with characteristics and attributes (e.g., related to tranquillity and cultural/historic associations) which the LVIA approach is not designed to address directly" , These attributes could be intrinsic to landscape character and would be considered as part of an assessment on landscape character. This would include an assessment of the extent to which the proposed development would be consistent with and influence prevailing landscape characteristics which would typically include perceptual qualities such as tranquillity.	Noted. The Assessment has considered the effects of the Proposed Development on perceptual qualities including relative tranquillity.	N/A	N/A
52	Section 2 Stakeholder Engagement 2.2.2 Table 1 NE Comments Row 3	The main issue is the relative lack of accepted methodologies to establish the baseline situation in relation to some of these characteristics eg. tranquillity. Without the meaningful establishment of baseline conditions the assessment outcomes will be less credible. There are some existing studies which may provide a source of useful reference material, including: South Downs National Park Authority Tranquillity Study 2017 and Broadly engaging with tranquillity in protected landscapes: A matter of perspective identified in GIS is published in the Journal of Landscape	The reference to existing studies is noted. However, such studies are not necessarily directly applicable to the Assessment. For example the South Downs National Park Authority Tranquillity Study states at paragraph 1.5 " <i>The tranquillity scores apply specifically for the South Downs National Park; they are therefore to be considered relative to the National Park area only. They are not intended to be comparative or considered in relation to Tranquillity scores for other National Parks or other areas of the country.</i> ";	N/A	N/A

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		and Urban Planning 158 (2017) 185-201 Elsevier, available at: https://www.winchester.ac.uk/research/our-impactful-research/research-in-business-and-digital-technologies/highlight-projects/tranquillity-project/ as well as the CPRE tranquillity mapping.	The Assessment methodology has drawn on information contained in Chapter 14 Landscape and Visual of the ES [AS-079] and on tranquillity and dark skies mapping provided by CPRE.		
53	Section 2 Stakeholder Engagement 2.2.2 Table 1 NE Comments Row 3	The Hertfordshire Host Authorities agree with the following statement by NE that, "That significant effects could occur beyond those parts of the AONB where aircraft would be below 7,000 feet (and therefore beyond the LVIA study area) should also be acknowledged if there is any uncertainty about this". The extent to which the aircraft movements/associated noise will be perceived beyond the area defined by flight paths should be considered in the assessment. The baseline should provide a more definitive description of the receptors which are likely to be affected. Although this is an assessment of special qualities effects on these aspects will be experienced by people and this should be acknowledged and addressed in the assessment.	It is acknowledged that aircraft movements/noise may be perceptible beyond those parts of the AONB where aircraft would be below 7,000ft. The threshold height of 7,000 feet (ft) altitude derives from the Government's Air Navigation Guidance which requires effects on AONB's to be considered where overflying occurs below 7,000 ft. This is the recognised threshold set out in the relevant guidance and is considered appropriate for the Assessment. Occasional overflights would be above 7,000ft and it is considered that there would be no or negligible effects on areas of the AONB outside the Study Area. However, it is considered unlikely that increased aircraft movements (and any associated noise) would give rise to significant effects in these areas.	N/A	N/A
54	Section 3 Methodology 3.1.1, 3.3.1 and 3.3.3	Study area definition should include allowance for potential for effects to be experienced beyond the areas immediately below flight paths. The range of landscape and visual receptors within this spatially defined area should be described and assessed. This factor should be considered in relation to some Special Qualities, for example, Distinctive buildings made from local brick, flint and clay tiles; many attractive villages, popular places to live in and visit; many notable individual buildings and follies including stately homes, monuments and mausoleums; a wealth of medieval churches, many built from flint. The attractiveness and setting of	It is acknowledged that there may be effects on SQs beyond the areas immediately below flight paths. However, it is unlikely such effects would be significant, particularly the examples cited by Herts Authorities. As noted in the response to CCB above (ID no. 15) it is considered that any increase in aircraft movements would not affect the setting and/or heritage value of any heritage assets within the AONB.	N/A	N/A

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		some of these places and features could be compromised.			
55	Section 3 Methodology 3.4.11 Table 7	The significance matrix conflates 'impact' and 'effect' as per the main LVIA chapter which is not in accordance with guidance in GLVIA3. Summary Table 11, P.31 uses 'magnitude of effect' which appears to be inconsistent with terminology earlier in the assessment.	This matter was addressed in the Applicant's response to Written Questions - Landscape and Visual Impacts [REP4-063] . 'Impact' has been used to assess magnitude to provide consistency with other chapters of the ES. The summary table (Table 7.1) in Section 7 of the Assessment has been updated to refer to 'magnitude of impact'.	N/A	N/A
56	Section 4 Description and summary of Special Qualities 4.1.2	Please check grammar/meaning in relation to, "A summary of the significance of the s AONB is set out on Page 7 of the Chilterns AONB Management Plan (Ref. [i]) (the Management Plan)."	Noted. This is a typo and has been amended.	N/A	N/A
57	Section 4 Description and summary of Special Qualities 4.2.1	More consideration should be given to the assessment of effects on "Relatively dark skies" which is likely to be affected by an increase in night-time flights. This matter should also be considered in relation to the baseline description.	"Relatively dark skies" have been added to Table 5.1 (Special Qualities Screening) of the Assessment and considered in Section 6.3 of the Assessment via the evaluation of the effects on relative tranquillity.	N/A	N/A
58	Section 5 Definition of study area 5.1.3	See comments for section 3.1.1, 3.3.1 and 3.3.3 in relation to spatial definition.	See response to ID44 above	N/A	N/A
59	Section 6 Assessment 6.2.1 onwards	Separate sections for ' <i>magnitude of impact</i> ' and ' <i>significance</i> ' with repeated headings for the different phases of development affects the legibility of the document. Consider simplifying the format by combining into one 'assessment of effects' section for each receptor at each phase.	This section of the Assessment has been amended in line with HCC's suggestion.	N/A	N/A
60	Section 6 Assessment 6.3.3	In relation to; "The assessment of relative tranquillity for the Proposed Development is a consideration of an existing noise source (aircraft noise) where the number of aircraft movements in areas currently exposed to aircraft noise would change, but the locations exposed to aircraft noise would not change." This is somewhat ambiguous please consider rewording to more	The wording of this paragraph is correct insofar as it relates to the relevant section of the ES. Additional text has been added after this paragraph of the Assessment to reference other factors which contribute to relative tranquillity.	N/A	N/A

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		succinctly describe which factors contribute to relative tranquillity, including noise, movement of aircraft, lighting etc.			
61	Section 6 Assessment 6.3.6	Susceptibility in relation to tranquillity is probably higher than 'medium'. Consider whether aircraft movements directly over the AONB are at 'capacity' and whether any further increase will result in a situation where special qualities will be fundamentally compromised. The assessment takes the position, to some extent, that further aircraft movements would be an incremental change to the existing situation and therefore justifiable.	<p>It is acknowledged that there are difficulties in attempting to evaluate susceptibility in relation to relative tranquillity. There will be some locations within the study area which may be considered to be relatively tranquil whilst in other areas there will be an absence of tranquillity due to traffic noise, aircraft noise, lighting etc.</p> <p>In order to ensure a proportionate approach to the assessment of the Proposed Development on this SQ, the Assessment has considered susceptibility in relation to the relative tranquillity of the study area overall as a receptor and therefore assigned a value of 'medium'.</p>	N/A	N/A
62	Section 6 Assessment 6.3.8	"The relative tranquillity of the remainder of the AONB would not be affected". In reality there will be a transitional area where effects will progressively diminish with distance away from areas more directly affected. This should be acknowledged and defined. It would be beneficial to have more detailed narrative description regarding the areas/receptors which will be affected and details regarding the change they will experience.	<p>It is acknowledged that there is a transitional area where any effects on SQ's progressively diminish with distance.</p> <p>The Assessment has been updated to note this. It is impractical for the Assessment to attempt to define such an area as the geographical extent of such an area is difficult to quantify (for instance defining an area where effects on relative tranquillity diminish to a point where no effect is experienced).</p>	N/A	N/A

GLOSSARY AND ABBREVIATIONS

Term	Definition
AMSL	Above Mean Sea Level
ANPS	Airports National Policy Statement
AONB	Area of Outstanding Natural Beauty
CBC	Central Bedfordshire Council
CCB	Chilterns Conservation Board
CPRE	Council for the Preservation of Rural England
ES	Environmental Statement
ft	Feet
GLVIA	Guidelines for Landscape and Visual Impact Assessment
Herts Authorities	Hertfordshire Host Authorities
LVIA	Landscape and Visual Assessment
NE	Natural England
SNH	Scottish Natural Heritage
SQ	Special Qualities
The Applicant	Luton Rising

REFERENCES

- Ref 1 Scottish Natural Heritage, Guidance for Assessing the Effects on Special Landscape Qualities – Working Draft, 9 November 2018 <https://www.dpea.scotland.gov.uk/Document.aspx?id=862684>
- Ref 2 Landscape Institute and Institute for Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment (GLVIA3) – Third Edition
- Ref 3 Chilterns Area of Outstanding Natural Beauty Management plan 2019–2024, Chilterns Conservation Board. Available at: <https://www.chilternsaonb.org/what-we-do/future-proofing-the-chilterns/management-plan>
- Ref 4 Section 82 2 Countryside and Rights of Way Act 2000
- Ref 5 Areas of Outstanding Natural Beauty: A guide for AONB Partnership members, Countryside Commission, CA24, November 2001
- Ref 6 Natural Environment and Rural Communities Act 2006: Section 99
- Ref 7 Civil Aviation Authority (2021) Guidance on the regulatory process for changing the notified airspace design and planned and permanent redistribution of air traffic, and on providing airspace information (4th edition [Accessed August 2023]
- Ref 8 Department for Transport (June 2018) Airports National Policy Statement
- Ref 9 Landscape Institute (2017) Technical Information Note 01/17 'Tranquillity – An Overview'
- Ref 10 Natural England (2011), Guidance for assessing landscapes for designation as National Park or Area of Outstanding Natural Beauty in England
- Ref 11 Landscape Institute (September 2019), Technical Guidance Note 06/19 Visual Representation of Development Proposals
- Ref 12 Ministry of Housing, Communities & Local Government (2021) National Planning Policy Framework
- Ref 13 Department for Communities and Local Government (2019), Planning Practice Guidance: Noise.